International Monetary Reform and the Stabilization Problem

J. Marcus Fleming

Introduction

When the assignment to write about international monetary reform and the stabilization problem was accepted, it was hoped that by the time this paper had to be submitted the main features of a comprehensive and well-balanced reform of the international monetary system would have been determined.

Unfortunately, things have not worked out that way. The reform proposals, as set forth in the Outline of Reform[1] accompanying the report which the Committee of Twenty, at its final meeting on June 13, 1974, approved for submission to the Governors of the Fund, fall into three categories, differing in the degree of approval which they have received from the Committee. Part I of the Outline indicates the general direction in which the Committee believes the international monetary system "could" evolve in the future. It consists, in the main, of a broadly worded statement of principles, with a brief presentation of alternative solutions for some of the main problems. Part II of the Outline sets out the steps which the Committee is agreed should be taken immediately. It adopts certain of the principles of Part I, sometimes in modified form, as suitable for immediate application, approves certain institutional changes, calls for certain matters to be studied, and asks that draft amendments of the Articles of Agreement be prepared on certain topics. Finally, the Outline contains several Annexes, with illustrative schemes and operational detail relating to various aspects of Part I. These have been prepared by the Chairman and Vice-Chairmen of the Deputies, but have not been approved by the Committee.

At this point, it appears likely that the reform of the international monetary system will be a long drawn out, piecemeal affair which may

J. Marcus Fleming is Deputy Director of the Research Department, International Monetary Fund, Washington, D.C.

[1]See *IMF Survey*, June 17, 1974.

take any one of a number of different shapes. Nevertheless, it is of interest to ask what may be the consequences for stabilization and stabilization policies if the reform in fact proceeds along one or other of the lines of possible development sketched out in the Outline. The present paper will focus on these aspects of the reform which are germane to these objectives.[2]

What is the meaning of "stabilization" in such phrases as "stabilization problems," "stabilization policies"? Stabilization seems to be a complex, multi-dimensional concept. It may refer to prices, to output, to employment. In the case of prices it may imply constancy in the price level or in the rate of increase of prices. In the case of output and employment it implies steadiness in the rate of growth, but one would usually add "at a satisfactory level."

The main ways in which international economic arrangements could contribute to stabilization in any country in the senses described above would be through their effects on (i) the attainment by national governments of a level of aggregate demand that appears optimal in view of the existing trade-off between full employment and price constancy in the country concerned, (ii) the terms of that trade-off, and (iii) the stability of demand for the products of particular industries, especially in the foreign trade sector.

The aspects of the international monetary reform that appear most relevant to the generation of such effects are (a) the international liquidity regime, (b) arrangements with respect to long-term disequilibrium in international payments, and (c) arrangements with respect to short-term disequilibria.

Supply of International Liquidity

(a) *Relevance to stabilization*

The supply of international liquidity is of importance for stabilization insofar as it affects the demand management policies of national governments. Most academic economists, who tend to look upon international liquidity in general and unconditional liquidity (monetary reserves) in particular as analogous to private domestic liquidity and money, respectively, would probably see the main significance of international control over the creation of international liquidity as lying in this sphere. It is doubtful, however, whether this is so, particularly for conditional credit facilities but even for reserves. Except possibly in circumstances of deep depression it would not occur to any monetary economist that the supply of money should be increased for the purpose of increasing the

[2]More comprehensive treatments of reform issues will be found in a speech by Mr. Jeremy Morse, Chairman of the Deputies, at Williamsburg on June 7, 1974 entitled "The Evolving Monetary System" (see *IMF Survey*, June 17, 1974) and in another paper by the author entitled "Reflections on the International Monetary Reform" (IMF: DM/74/63 dated June 27, 1974).

real liquidity of individuals rather than to affect demand; on the contrary, the faster money was issued, the lower would be the stock of real liquidity. In the international sphere, however, though enhanced reserves and reserve growth probably exercise some positive influence on demand, particularly in deficit countries, this influence is indirect and unlikely to be strong. Of greater importance are likely to be, for example, an enhancement of real reserve ease, with a consequential relaxation of restrictions on imports and capital exports, an increase in exchange stability in the face of short-term payments imbalances, and a tendency for the value of currencies to rise more, or fall less, relative to reserve assets — tendencies which, according to circumstances, might improve or worsen the adjustment process. In a previous paper[3] I have sought to justify the assumption that increases in the money value of reserves lead to increases in real reserves on the grounds that governments have demand management targets from which they are not easily swayed. But the answer depends partly on the size and openness of the economies concerned; the smaller and more open the economy the more the monetary model becomes applicable to the reserve problem also.

(b) *Reform proposals*

It has always been one of the functions of the Bretton Woods system to ensure the provision of an adequate but not excessive supply of international liquidity. From the beginning members of the Fund were entitled to draw on Fund resources within certain limits to meet balance of payments deficits provided that they adopted appropriate corrective policies enabling them to undertake repayment within a short period of years. This is sometimes called "conditional liquidity." Unconditional or freely disposable liquidity, in the form of gold or foreign exchange reserves, however, was not subject to any kind of international control; its supply as measured in currency equivalent depended on impersonal economic forces determining (a) gold production and consumption, (b) the balance of currency devaluations and revaluations relative to gold, (c) the payments deficits of reserve currency countries, and (d) the willingness of other countries to hold their reserves in currency form. These forces, though not entirely unfunctional, were far from giving rise to an optimal supply of reserves. With the establishment of the Special Drawing Account of the Fund in 1969, however, the supply of unconditional liquidity also began to come under a measure of international control. The Fund was now in a position to relieve any reserve stringency that might exist by creating and distributing among its members in proportion to their quotas a new international fiduciary reserve asset, the SDR. This asset derived its value, ultimately, from the obligation of participating countries to purchase it, if designated to do so, for convertible currencies, at a fixed price,

[3]"Reserve Creation and Real Reserves," *International Reserves — Needs and Availability*, International Monetary Fund (Washington, D.C.), 1970 pp. 521-52.

namely, parity with the U.S. dollar. Since, however, the SDR was simply added to pre-existing types of reserves, the supply of which continued to be determined by unregulated economic forces, it could do little, despite the theoretical possibility of canceling SDRs, to prevent an excessive expansion of total world reserves. Such an excessive expansion did, in fact, take place, as a result of the enormous payments deficit of the United States, over the years 1970-73.

When the wholesale reform of the system came to be studied in 1972, one of the principal objectives was to achieve a better control over the supply of reserves. The most radical suggestion for achieving this objective was the proposal to establish a system of mandatory asset settlement. Under that system reserve centers, as well as other countries, would settle their payments supluses and deficits by the transfer or receipt of reserve assets. This contrasts with the Bretton Woods system of "on demand" convertibility under which a reserve center might lose reserves by conversion in amounts greater or less than its deficit. Two main mechanisms for achieving asset settlement have been considered: (l) a centralized settlement system under which any net increases in a country's reserve liabilities would be redeemed through a periodic transfer of SDRs from the reserve center to countries designated by the Fund and any net decline in reserve liabilities made good by the Fund acquiring and holding claims on the reserve center in exchange for newly created SDRs, or conceivably by a transfer of reserve currency to centers designated by the Fund; and (2) arrangements under which each country — or at least all the main ones — would demand conversion of any accruals of currency acquired in intervention and reconstitute any balances used for intervention. Those adhering to this strict line of thought would permit variations in the liability financing of payments deficits, and the associated variations in the holding of reserve claims on countries or on international institutions only when these took place under internationally approved credit arrangements.

Another school of thought, strongly represented in North America, put less emphasis on a tight control over global liquidity or reserves and more emphasis on the need for a flexible response to variations in the need for international credit. This led them to advocate a system of "on demand" convertibility (rather than asset settlement) in which conversion need not take place if both parties were agreeable to waive it and, indeed, would not be allowed to take place if the creditor had accumulated gold and SDRs up to a "holding limit" to be prescribed for each country. Reserve centers would be protected against net declines in their own reserves, if they so desired, by a centralized settlement system, such as that described above, but the main protection against an excessive growth in the currency reserves of other countries would lie in an improved mechanism of adjustment which would check disequilibrium at an early stage. These differences have not been resolved in the Outline of Reform,[4] though

[4]Outline, paragraphs 20 to 22, and Annexes 5 to 7.

certain compromise arrangements have been suggested in Annexes 5 and 6 of that document.

Even if it had been possible to agree on a reasonably tight system of asset settlement, with no more than a moderate degree of flexibility, the effectiveness of international control over reserve supply would have continued to be threatened from another side, namely, from changes in the effective currency-equivalent of existing gold reserves. Though it has not proved possible to agree on any solution to the problem of gold valuation, all of the solutions proposed in the Outline[5] have in common that they would permit the sale of monetary gold to the market at market prices, so that the effective value of gold reserves would be much higher than their nominal value and would, moreover, be liable to fluctuate substantially. The proposals differ in that some of them would permit gold to be bought by central banks at market prices from other central banks, or even from the market, thus tending to withhold monetary gold from the market and promote still further increases in the effective value of reserves. It seems likely that no proper control over international reserve supply will be possible until monetary gold has been completely segregated from the market and is once more transferred at a conventional price or, more probably, until all national gold reserves have been surrendered to the Fund in exchange for SDRs created for the purposes.

Stabilization and Longer-term Payments Disequilibria

(a) *Relevance to stabilization*

Let us now consider the bearing on stabilization problems of the reform discussions insofar as they relate to international payments disequilibria and their correction.

International disequilibria are likely to give rise to significant stabilization problems less through their existence as such than through the disturbing manner in which they come into existence or through the way in which they are handled by governments. Broadly speaking, international arrangements regarding payments disequilibria will contribute to stabilization insofar as:

(i) they inhibit official actions which disturb both international equilibrium and also internal stability in other countries;

(ii) they discourage official actions which, while tending to correct international disequilibrium, are disturbing to stability in other countries;

(iii) they mitigate other shocks, disturbing both to international equilibrium and domestic stability, which national economies receive from abroad;

(iv) they facilitate effective policy responses to destabilizing developments, whether arising from foreign or domestic sources, by making such responses compatible with international equilibrium; and

[5]Outline, paragraph 28.

(v) they mitigate the failure of stabilization policies by spreading the effects of autonomous disturbances as widely as possible among countries.

As we shall see in considering shorter-term disequilibria, arrangements that are good from standpoint (iii) are generally bad from standpoint (v) and vice versa — a circumstance which enhances the importance of the other criteria.

It is useful for practical purposes though somewhat arbitrary, to retain the distinction between "fundamental" and non-fundamental disequilibria which plays an essential part in the par value system of the Fund's Articles, and which may be interpreted in practice as a distinction between disequilibria relating to periods comprising at least four years, and shorter-term disequilibria arising from cyclical or shorter-term influences. These disequilibria may be expressed overtly in movements in reserves or official financing, or may be suppressed by restrictions or other measures that distort or deflect international transactions. Interestingly enough, the distinction between fundamental and other disequilibria is nowhere explicit in the reform proposals contained in the Outline, but is implicit in several of them, such as (a) the retention of a system of par values, changes in which require the consent of the Fund, presumably on the basis of existing criteria related to fundamental disequilibrium,[6] (b) a provision that capital controls will not be used to maintain inappropriate exchange rates,[7] (c) the use of a structure of reserve levels — symptomatic of the persistence of overt disequilibrium — to help indicate the need for adjustment action,[8] and (d) a suggestion that graduated pressures should be applied to countries in large *and persistent* imbalance.[9] Indeed, one might say that the major part of the reform proposals is concerned with various aspects of the process of bringing about adjustments to these longer-term disequilibria.

Per contra, longer-term international disequilibria probably constitute less of a threat to stabilization under present conditions than shorter-term ones. Their main importance in this context would arise (i) if they were precipitated by aggressive action on the part of governments, particularly through competitive exchange alterations, through the introduction of import or export restrictions, or through regulated increases in export prices, (ii) if deficit countries responded to difficulties in financing their deficits by an undue restriction of aggregate demand, (iii) if reserve accrual by surplus countries led to expectations of exchange appreciation and hence an influx of funds too large to be offset by the monetary system, or (iv) if fundamental disequilibria were corrected only at longish intervals by large and sudden exchange rate adjustments involving disturbances in the competitive conditions of industries in different countries.

[6]Outline, paragraph 11.

[7]Outline, paragraph 15.

[8]Outline, paragraph 6 and Annex 1.

[9]Outline, paragraph 10.

(b) *Reform proposals*

The reform proposals achieve little advance on the Bretton Woods system — or rather on the post-World War II system with respect to monetary, commercial, and commodity policy — in dealing with (i), (ii), and (iii) above. They are, by contrast, largely focused on achieving improvements with respect to (iv), and on achieving such improvements not only for countries in general but for reserve currency countries in particular.

As regards (i), under the post-World War II system, countries were required not to engage in competitive exchange depreciation, not to alter their exchange rates without the concurrence of the Fund, not to restrict imports except to meet temporary balance-of-payments difficulties, and not to restrict current payments except with the concurrence of the Fund. International agreements affecting prices and trade in primary commodities were, according to certain principles adopted by resolution of the ECOSOC, to be made under arrangements in which decision-making powers were shared between producers and consumers. Not too much attention was devoted to all of this in the early stages of reform discussions, and all that Part I of the Outline asserts is "a strong presumption" against the use of controls on current account transactions for balance-of-payments purposes, and the United States would like to subject all such restrictions to the consent of the Fund. However, acting out of a desire to forestall the danger of an epidemic of restrictions in the wake of the oil price increase and under the prodding of the United States, the Committee of Twenty envisaged, under "Immediate Steps," the issuance of an invitation to countries to pledge themselves, for a period of two years, not to introduce current account restrictions for payments purposes without a finding of justification by the Fund. The possibility of an amendment to Fund Articles giving permanent force to this pledge was also envisaged.

As regards (ii) and to some extent (iii), the problem was dealt with under the Bretton Woods system by the application of a regime of temporarily fixed par values, adjustable in case of fundamental disequilibrium, with the consent of the Fund.

As a result of experience in the inter-war period, it was accepted that to entrust the correction of fundamental disequilibria to market forces while maintaining fixed exchange rates might involves either chronic depression in deficit countries or recourse to restrictions on trade and payments. It was therefore regarded as permissible, though not mandatory, for a country to react to fundamental disequilibrium by maintaining demand and employment and adjusting its par value.

In practice, the Fund did not regard exchange rate adjustment as the only means of meeting fundamental disequilibria. Indeed, it was expected that small disequilibria could be corrected or prevented from appearing by cautious demand management policies — which might mean no more than refraining from inflation in an inflationary world — exchange devaluation being reserved as a weapon of last resort to deal with disequilibria which somehow or other had been allowed to grow too large.

This approach to dealing with basic disequilibria by means of demand policy punctuated at longish intervals by fairly substantial discrete exchange devaluations worked not badly for quite a long time after the devaluations of 1949, except in some hopelessly inflationary less developed countries where Fund officials were very soon pressing the governments concerned to give up their unrealistic fixed rates and keep adjusting their exchange rates or allowing them to float, more or less *pari passu* with the rise in domestic prices and costs. For industrial countries and the stabler primary producers, however — with the significant exception of Canada — exchange rate changes were few and far between during the 1950s and much of the 1960s. In a generally expansionary environment, and with the United States presenting the rest of the world with a fairly continuous payments surplus, most countries were able to stay in line by a relatively mild manipulation of domestic demand.

As time passed, however, the system of the adjustable peg began to attract increasing criticism on the part first of academic economists and then of officials also. It was alleged that the system led to undue delays in making adjustments, that the delays led to speculative crises, and that the crises led to adjustments which, when they came, were excessive. It seemed fairly obvious, with benefit of hindsight, that the devaluations of 1949 had been too large. Moreover, the world economic environment was changing in ways that tended to accentuate the weaknesses of the system. In the first place cost-push factors were becoming more important relative to demand-pull factors in the causation of inflation. This meant that whereas previously differences in rates of inflation could be curtailed or made compatible with payments equilibrium at a relatively small cost in terms of unemployment, later on these differences, whether arising from differences in labor aggressiveness, in productivity growth, or in degree of money illusion, became more and more difficult to control by demand management and thus had increasingly to be offset by exchange rate alteration. Secondly, the tremendous increase in the international and intercurrency mobility of capital not only had great importance for the cyclical behavior of payments balances but also magnified the volume of speculative funds that were liable to shift between countries and currencies in response to changing expectatations. These developments made it necessary to change exchange rates more often and increased the penalties of stubbornness and procrastination in this regard. This lesson was driven home by the defeat, in 1967, of the long struggle to defend the parity of sterling and by the adjustments which took place in the following years in France, Germany, and Canada.

The bulk of academic opinion had by this time turned against the par value system and in favor of floating rates, or more or less automatic crawling pegs, geared either to reserve changes or to changes in market rates within the permitted margins. In 1970, when the Executive Board of the Fund examined "The Role of Exchange Rates in the Adjustment of International Payments," it rejected both of these solutions. They rejected the crawling peg largely because it would be responsive to short-run and

not necessarily to underlying or fundamental disequilibria, and because they thought that national authorities might in fact refuse to be bound by the automatic indicators, and either refuse to allow the rate to crawl or insist on its jumping. I think they were right and that the crawling peg in any of the imperfect forms in which it might conceivably have been accepted would have been as apt as the par value system to generate disequilibrating capital flows. Floating rates were rejected for essentially similar reasons — because rates would be unduly affected by temporary and speculative factors, because governments would insist on intervening in the market and their interventions would be difficult to subject to international control, and because exchange fluctuations would be damaging to international trade. But it was acknowledged that there might be a case for temporary floating under international surveillance as a way of making a transition from one par value to another. In general, the Executive Directors reaffirmed their belief in the par value system, but urged that par value changes, while remaining linked to fundamental disequilibria, should be made more promptly, in which case they would be likely to be smaller and more frequent. In other words, par value changes were no longer regarded as an instrument of last resort.

The events of 1971 — the recognition that the United States was in fundamental disequilibrium, the run on the dollar, the abandonment of dollar convertibility, the upward floating of the yen and several European currencies, and the restoration of parity relationships on a provisional basis, with wider margins and an inconvertible dollar — all these seemed to focus attention on two new problems of basic adjustment: (i) that of ensuring that the U.S. dollar, like other currencies, could be adjusted downward when necessary, and (ii) that of ensuring that currencies of countries in payments surplus adjusted upward as readily as those of countries in deficit adjusted downward.

These preoccupations were reflected in the 1972 Report on the "Reform of the International Monetary System" by the Executive Directors of the Fund.

Despite the shake-up which the par value system had received in 1971, the 1972 Report reaffirmed the validity of that system and made little advance over the 1970 Report in its attitude towards slightly wider margins of fluctuation around par, and the possible desirability of legitimizing temporary floats designed to facilitate the transition between one par value and another. It did, however, lay much more emphasis on countries' obligation to change their par values when in fundamental disequilibrium, and on the need to maintain continuous surveillance over the structure of exchange rates of the principal countries so as to facilitate appropriate adjustment of relative rates. It suggested, in this connection, (a) that the Fund might be given a power of initiative to suggest changes in rates, or at least the need for measures of some sort to correct fundamental disequilibria, which it did not have in the Bretton Woods Articles, and (b) that use might be made of objective statistical indicators to create a presumption of the need for adjustment.

The problem of giving the United States greater freedom to adjust to fundamental disequilibria had to be approached indirectly in the 1972 Report since, of course, the United States had always had the formal right to devalue its currency if in fundamental deficit. The problem was to ensure that the United States was not shielded from the need to make such adjustments by its ability to finance its deficits through the expansion of reserve liabilities to other countries, and that other countries did not frustrate its actions by continuing to peg their currencies to the dollar at the old rate. The problem of preventing liability financing by the United States was clearly connected with the problem of establishing international control over the expansion of world reserves and was tackled, as explained earlier, by the suggestion to establish arrangements for asset financing including the setting up of a substitution facility. The problem of preventing the frustation of U.S. adjustments by the actions of other countries was tackled, partly by the emphasis on intensified and more synoptic surveillance of exchange rate adjustment, and partly by the suggestion, advanced in the 1972 Report for the first time, that the system whereby all the principal and many of the lesser countries pegged their currencies to the U.S. dollar by market intervention in dollars, should be replaced by a more symmetrical system of intervention.

In the later stages of the reform discussions, when they came under the auspices of the Committee of Twenty, the idea of symmetrical intervention, at least among the principal currencies, gained increasing favor, initially in the form of multicurrency intervention, though later support developed, particularly among less developed countries, for intervention in terms of SDRs. The Outline[10] comes out for a "more symmetrical" intervention system, and gives both varieties of it an airing in Annex 3. It seems likely that if and when there is a return to par values, it will take the form of a symmetrical, probably multicurrency, intervention system, so far, at least, as the principal currencies are concerned.

The idea of multicurrency intervention is that the issuers of all the main currencies would undertake to maintain symmetrical margins around parity against each other and to defend these margins by standing ready to buy and sell indefinite amounts of each other's currencies. Market intervention within the margins would be possible but would be subject to rules and restrictions including the need to get consent of the issuer of the intervention currency. Currency balances thus accumulated would normally be settled by the transfer of SDRs or other reserve assets, but whether this should be mandatory or not has been a matter of dispute. Nonparticipating countries would defend margins around parity against some or all participating currencies by intervening in one or more of them.

The alternative system of SDR intervention has been less well worked out. Countries, or at least the principal countries, would defend margins against each other's currencies by standing ready to buy and sell SDRs

[10]Outline, paragraph 12.

against domestic currency at margins half as great as the currency margins. The SDRs would be transferred between central banks only, but the transactions would be arranged through commercial banks operating to make an arbitrage profit.

The point of these proposals, apart from making it possible for reserve centers to enjoy a margin of fluctuation around par as wide as that enjoyed by other countries, was to make it easier for the dollar to float without interference, and for other currencies to maintain a unified structure of par values among themselves, if at any time under the reformed system the United States should be unable to maintain convertibility.

Two other aspects of the reform discussions are of importance in connection with the adjustment of basic disequilibria. First is the increasing emphasis that has been placed, in response to American insistence, on the use of statistical reserve indicators in the concept of adjustment and the surveillance of the adjustment process. In Part I of the Outline the maintenance of reserves within agreed limits is presented as an aim either coordinate or identical with the avoidance of protracted disequilibria.[11] Whether these limits, and the indicators that measure them, are flow limits or stock limits is in principle left open in Annex 3, and the language used in paragraph 7 to characterize situations of imbalance ("there has been a disproportionate movement in official reserves") suggests a flow criterion. Nevertheless, the only indicator system worked out in any detail (in Annex 3) relates to a stock indicator. These indicators, or at least the disproportionate movements of reserves which they indicate, are to be used, along with other procedures, to trigger the examination of particular country imbalances, and are to be taken into account by the Fund in assessing the need for adjustment and in considering the application of financial pressures. In the immediate future (part II of the Outline) reserve indicators will be used only on an experimental basis, and any finding as to a "disproportionate movement of reserves" will be in the light of reserve objectives to which the countries in question have agreed. There is an obvious difficulty here in that reserve levels reflect past rather than present or future disequilibria, but the argument is that the fear of pressures and penalties arising if reserves get too far out of line will provide an incentive for the application of corrective policies at an earlier stage.

The other development arising in the course of the reform discussions was the recognition of floating under Fund authorization and surveillance as a legitimate way of life for countries in "particular situations," and no longer as a doubtful expedient for temporary use in moving from one par value to another. It is not surprising that this alternative to the par value regime should be offered in the first (1973) version of the Outline at a time when the quasi-par value system set up at the Smithsonian Agreement of December 1971 had broken down, the dollar and the European "snake" were floating relative to each other, and many countries — Canada, the United Kingdom, Italy — were floating independently. In the last

[11]Outline, paragraph 4(b).

stages of the reform discussions, as is indicated below, interest focused on the question of establishing rules of international good behavior for floating currencies, and the big question was whether these would have to be confined to the encouragement of defensive and discouragement of aggressive intervention or whether intervention and other balance-of-payments policies could be evaluated in relation to some broad notion of when the medium-term equilibrium exchange rate of a floating currency might be presumed to be. If the latter approach should be possible, it would allow something to be saved of the distinction between longer- and shorter-term payments imbalances and the measures of adjustment appropriate to each.

Stabilization and Shorter-term Payments Disequilibria

(a) *Relevance to stabilization*

The arrangements discussed under the monetary reform for dealing with short-term payments imbalances have a more intimate connection with the stabilization problem than those dealing with more fundamental disequilibria. By short-term imbalances I am including not only those of a seasonal or speculative but also of a cyclical character. Of course, certain speculative instabilities are themselves by-products of delays in adjusting to more fundamental disequilibria and would be reduced by any success the reform proposals might have in improving the process of adjusting to those more basic disequilibria. However, there remain many causes for temporary payments imbalances, some of them connected with the vagaries of commodity prices, others with the increasing importance of internationally mobile funds, others with disparate timing of cyclical developments of the differential impact of stabilization policies in different countries.

The last-mentioned cases are of particular theoretical interest from the standpoint of stabilization. In the interest of general demand stability, arrangements for dealing with international disequilibria should be such that factors tending to transfer demand pressures from one country to another are as far as possible offset, that inflationary or deflationary tendencies arising in particular countries from causes outside the control of national authorities are spread as widely, and therefore as thinly, as possible over the world rather than being confined to the country where they arise, but that as much as possible of the effect of inflationary or deflationary measures undertaken by national authorities should be retained at home rather than being dissipated abroad. The first of these propositions is obvious. The second rests on the assumption that random inflationary or deflationary shocks, if rendered small in any one country by being spread, are as likely to be welcome as to be unwelcome, both at home and abroad, and if unwelcome are the more easily counteracted for being small. The third proposition rests on the assumptions (a) that any stabilizing action by national authorities is likely to be appropriate to the circumstances of the country in question, (b) that since such action may involve costs and difficulties, economic or political, the incentive to undertake such policies will be greater if the demand effects are, so far as possible, kept within the national territory, and (c) that since the outside world may be deviating from stability in the same direction as, or in the opposite direction from, the country whose government is adopting the policy in question, it is uncertain whether any demand effects that spill over into foreign territory will exercise a stabilizing or a destabilizing influence there.

Now, the three main types of arrangements that have been advocated in various combinations for dealing with short-term payments imbalances are: (1) official financing including reserve movements and official borrowing, (2) the gamut of measures designed to influence private capital flows, comprising capital restrictions, dual markets, fiscal market intervention, and even Mundellian fiscal/monetary mixes, and (3) floating exchange rates.[12] We shall consider the comparative effects under these three types of arrangements of (i) localized changes in autonomous demand conditions, (ii) demand shifts between the products or securities of one country and the products or securities of another, and (iii) the application for anti-cyclical demand management policies.

Suppose an increase in the incentive to invest in A, to which the authorities respond by maintaining constancy in domestic credit extended by the banking system, in tax rates, and in public expenditure. Investment, income, consumption, and demand for foreign trade goods will rise in A. Under fixed exchange rates imports also will increase and the trade balance will most probably deteriorate, thus dampening the boom. Demand for money in A will increase and interest rates will rise. Because of this, and possibly as a direct result of the rise in A's profit rate, investable funds will be attracted into A from non-A. If the international mobility of these funds in response to interest differences is low, A's overall balance of payments will deteriorate; if it is high, the overall balance will improve. In the former case there will be a net decline, in the latter case a net increase in A's money supply, with a corresponding dampening or reinforcing effect on the boom. In either case the imbalance will be financed through reserve flows or official credit operations.

Non-A will derive from the improvement in its balance of trade a stimulus to demand, corresponding to the dampening of the boom in A. If A's overall balance of payments deteriorates, and that of non-A correspondingly improves, an additional stimulus to demand in non-A will come from the expansion in non-A's money supply; the rate of interest in non-A may even decline. If, however, the mobility of funds is such that A's balance of payments improves, non-A's money supply will tend to deteriorate, and its interest rates to rise; in the extreme case, as Mundell has shown,[13] these rates may rise so much that the decline in investment and

[12] Trade restrictions are not considered here since, though still sometimes used for temporary balance-of-payments equilibration, their use is widely condemned on the grounds of resource allocation. Perhaps capital restrictions should be similarly condemned, but so far they have not been.

[13] R. A. Mundell, *International Economics*, (London: Macmillan Co., 1968), p. 265.

consumption in non-A outweighs the improvement in the foreign balance, leading to a decline in income.

In brief, under fixed rates, booms and slumps tend to spread elsewhere — and be weakened at home — through the current account. Whether this spreading and weakening effect is counteracted or reinforced through the overall balance and the money supply depends on the international mobility of capital funds. Where such mobility is very high indeed, a boom in one country may exercise a net depressing effect elsewhere, even in the absence of anti-cyclical measures in the boom country.

Now, suppose that A, while maintaining fixed exchange rates, keeps its balance of payments in equilibrium by various measures to alter or deflect the flow of capital between A and non-A without affecting aggregate demand. In that case the boom in A will affect incomes in A and non-A solely through the effect on the trade balance and not at all through any flow of reserves and transfer of money supply from A to non-A (if capital mobility is below the critical point at which, in the absence of capital-flow-deflecting measures, the deterioration of A's current account would have been exactly balanced by the improvement in its capital account) or from non-A to A (if capital mobility is above that point). These measures thus tend, under conditions of high capital mobility, to ensure that booms and slumps originating in any country will spread more to other countries, and develop less strongly at home, than under a system of official financing.

Finally, suppose A's currency to be floating freely in such a way as to prevent any net imbalance in payments from emerging; such floating, like the capital-flow-deflecting measures described above, will prevent any impact on the money supply either in A or in non-A as a result of reserve changes.

Effects on the current account, however, will be different in the two cases. Under floating rates a cyclical increase in the incentive to invest in A will cause the value of A's currency to rise or fall according as capital mobility exceeds or falls short of the critical point referred to above. Those writing about these problems in the early post-war period generally assumed a degree of mobility lower than this critical point and therefore assumed that local booms would be more firmly bottled up under floating than under fixed rates.[14] Nowadays, however, it is more frequently assumed that capital mobility would exceed the critical level, at least among industrial countries, so that A's exchange rate would be more likely to rise than to fall.

On this assumption, and assuming the exchange rate to exercise immediately its full effect on the balance of trade, the autonomous expansionary tendencies in A would cause A's trade balance to deteriorate more, and its income to rise less, under a floating than under any kind of

[14]It is noteworthy, however, that some writers in the 1930s, notably Haberler (*Prosperity and Depression*) and Williams (*International Monetary Organization and Policy*,1936), were aware of the possibility of either outcome.

fixed rate regime, even one in which an influx of reserves was prevented by capital-flow-deflecting measures. For corresponding reasons the expansionary effect of A's boom on incomes in non-A would be stronger under floating than under fixed rates. Cyclical conditions would thus tend to spread from country to country even more strongly under floating than under fixed rates.

Price/cost effects and terms-of-trade effects would operate in the same direction. Foreign trade prices would rise more in A and less in non-A under floating than under fixed rates with possible repercussions on wage push and on inventory accumulation in the two areas. A's terms of trade would probably be better, non-A's worse, under floating than under fixed rates. All these factors would tend to damp down the expansion in incomes and prices in A, accentuate them in non-A.

These conclusions may, however, be modified when two simplifying assumptions are removed. In the first place, speculative capital outflows from A to non-A may be generated by expectations of a future decline in the value of A's currency, stimulated by the current deterioration in A's trade balance. Bearish expectations for the longer run would not necessarily be irrational, because the non-speculative capital inflow attracted to A by its prosperity would be likely to be reversed at a later stage of the cycle while some of the trade effects might be more permanent. If such speculative effects were important they might even be strong enough to cause the value of A's currency to decline rather than to rise. In this event the boom in A would give rise to less, if any, deterioration in A's trade balance under floating than under fixed exchange rates; as described in the early post-war analyses, floating rates would tend to bottle up and thus accentuate the boom in A and to reduce or prevent its spread to non-A. Unfortunately, there is little evidence of any systematic relationship connecting the relative demand pressures in different countries and the direction of reserve flows between them under fixed rates, so that it is difficult to say whether boom conditions are more likely to give rise to exchange appreciation or exchange depreciation under floating rates.

The second assumption that requires qualification is that the change, in whichever direction, in A's exchange rate will immediately exercise its full effect on the trade balance. In reality it may take up to three years to these effects to manifest themselves in full: the price effects, which are favorable in the case of revaluation, unfavorable in the case of devaluation, appear first; the quantity effects, which are favorable in the case of devaluation, unfavorable in the case of revaluation, and which in the longer run outweigh the price effects, take longer to appear. The value effects, which are a combination of the two, will therefore be "perverse" in the first six months to a year and become favorable only later. This means that in the more normal case in which a boom in A leads to an appreciation of A's exchange rate under floating rates, the dampening effect of the appreciation in incomes in A will at first be absent — though the dampening *price* effects will be present from the start — and will manifest

themselves only after a time lag which may be quite significant in the context of a cyclical fluctuation.

For both of these reasons, then — the vagaries of exchange rate speculation and the time lag of the current account effects of exchange rate alteration — it is very difficult to make any simple statement about the likely effects of floating versus fixed rates on the extent to which a localized boom in A will be bottled up in A or spread to non-A.

A less ambiguous picture emerges as regards the relative effects of the different systems of correcting payments imbalances on demand stability within countries when the disturbing cause lies in temporary international switching of demand among countries or in localized variations in supply rather than in localized variations in demand. For example, suppose a temporary switch in demand from the products of non-A to the products of A leading, under fixed rates with official financing, to an improvement in A's current account vis-à-vis non-A, and a rise in income and interest in A, and fall in non-A. Interest arbitrage, and possibly expectations of a rise in the value of A's currency, will promote a flow of capital from non-A to A which, unless offset, will add to the rise of income in A and fall in non-A. The application of capital-flow-deflecting measures to keep payments in balance by promoting an outflow of capital could obviate the transfer of money from non-A to A and the secondary transfer of incomes arising therefrom. But a freely floating exchange rate will do still better since it will, from the start, tend to prevent not only money transfer effects, but also the inflationary price effects which would otherwise occur in A and after a time lag will also restore something close to the original current account balance between A and non-A.

The comparison is less favorable to floating rates if the disturbing factor should be one which tends to bring about a deterioration in A's, and improvement in non-A's, capital account. Here the deflationary effect in A and inflationary effect in non-A are mediated through the decline in the supply of money alone — there is no trade balance effect, Thus, capital-flow-deflecting measures to the extent that they are effective would provide complete protection against the transfer of demand pressure. A floating exchange rate in A, while it would provide equal protection against monetary disturbances, would after a time tend to bring about inflationary income effects in A and deflationary ones in non-A through the improvement in A's balance of trade.

Floating rates appear to have a clear advantage with respect to the efficiency of demand management policies, at least so far as monetary policy is concerned. Let us, however, first consider the effects of a change in budgetary policy, conceived of as a variation in public expenditure or in tax rates, the volume of domestic credit extended by the banking system being held constant. The effects of changes in budgetary policy on the balance of payments will be very similar to those of changes in the incentive to invest. Increases in public expenditures or declines in tax rates will lead to a deterioration in the trade balance and an improvement in the capital

account which may go so far as to involve under fixed rates an influx of reserves and a rise in the supply of money. The bearing of different systems of balance-of-payments management (fixed rates, fixed rates with capital-flow-influencing measures, floating rates) on the demand effects of their policies will thus be very similar to their bearing on the demand effects of changes in the incentive to invest. To the — somewhat doubtful — extent to which floating rates would permit a greater dissipation or wider spreading of deflationary or inflationary tendencies originating in A than fixed rates, the same would hold true of deflationary or inflationary changes in budgetary policy; but what would be a merit of floating rates in the case of an autonomous demand tendency would be a demerit in the case of an act of policy.

It is when demand management for stabilization purposes takes the form of a change in monetary policy — i.e., of changes in bank credit and money supply — that the full advantages of floating rates appear. For example, under fixed rates without capital-flow-deflecting measures the effects of expansionary monetary policy will be partly (at the limit, almost entirely) dissipated over the world at large through an adverse shift in the balance of payments on capital account, reinforced (to the extent that the expansion of money supply nevertheless continues to be localized at home) by an adverse shift in the current account. Under fixed rates, backed by measures to influence capital flows in an equilibrating direction, reserves and money supply will no longer leak abroad, but the domestic effect of the expansionary monetary policy will nevertheless be weakened (to the same extent as expansionary fiscal policy in the same circumstances) by an adverse shift in the balance of trade. Under floating rates, however — and this is true, in some measure, so long as capital is not completely immobile internationally — not only will there be no leakage of reserves and money, but the decline in the value of the currency resulting from the tendency of capital to flow out will eventuate, after a time lag, in an improvement in the balance of trade. Even in the short run the price effects of depreciation will probably provide some speculative stimulus to demand. Thus, monetary policy will have an effect on the domestic economy under floating rates that is not only stronger, whether for expansion or contraction, than it would have under any other balance-of-payments regime, but even stronger than it would have been in closed economy.

This last-mentioned fact raises a possibility that the domestic effect of monetary policy under floating rates may be deemed excessive since it involves an opposite effect on the rest of the world, so that if non-A should happen to be suffering from the same inflationary or deflationary malady as A, A's monetary policy may worsen non-A's situation. Monetary policy under floating rates may even be considered to be a "beggar-my-neighbor" policy. It is better, however, not to include it in this category. True beggar-my-neighbor policies, such as the application of trade restrictions for demand management reasons, are those which, *if generalized*, would harm

all countries without moving either the world level or the international distribution of demand in the desired direction. If, however, the world is suffering generally from inflation, the general adoption of national deflationary policies under the incentive provided by the feature of floating rates that we have been examining would obviously shift the level of world demand in the desired direction. Nevertheless, it cannot be denied that the operation of stabilizing monetary policy in A under floating rates may have disturbing effects both on general demand and on the stability of foreign trade goods industries in non-A before the governments in the latter area have time to react. If, as suggested below, excessive divergencies of floating rates from their medium-term norm are resisted by market intervention and capital-flow-deflecting policies, countries will be protected against undue shocks from their neigbors' monetary policies.

Comparing the different international payments regimes with respect to various aspects of relevance to the stabilization problem — their effect in dampening autonomous localized demand fluctuations, in offsetting disturbances directly affecting the balance of payments, and in strengthening the domestic impact of demand management policies — we see that floating rates have considerable merits in the two last-mentioned respects provided that countries are willing to give sufficient weight in demand management to monetary policy. If capital is highly mobile and speculation not too strongly geared to the current account, floating rates may come off best in the first-mentioned respect also. Measures to influence capital flows in an equilibrating sense, to the extent they can be made sufficiently watertight and flexible, seem to provide a second-best solution in most circumstances, and a first-best remedy for disturbances that are confined to the capital account. The qualification, however, is of vital importance, since in practice it has seldom been possible to check large speculative movements without changing the rate of exchange. To this favorable verdict for floating rates, however, there is one big qualification, relating to the time lag with which exchange rate variation exercises its effects on trade quantities and hence on incomes. Because of this lag the desired effects on incomes may not appear at the time when they are most useful for stabilization purposes.

Such advantages as the system of floating exchanges may have from the standpoint of general demand stabilization may be bought at a price in terms of the stability of particular foreign trade industries and occupations. This is particularly the case where exchange rates vary in response to local booms and slumps and to variations in monetary policy response to such booms and slumps. The time lag in the current account effects of exchange rate variations, together with short-term speculative capital flows evoked by the movement of rates, tend to intensify such rate fluctuations and the consequential instability in foreign trade industries. This provides a certain justification even from the stabilization standpoint in seeking to set limits, through intervention and capital-flow-deflecting policies, to the fluctuations that would otherwise take place under free floating.

(b) *Reform proposals*

Generally speaking, the tendency of the reform discussions has been to rely increasingly on exchange rate variation as the appropriate instrument for dealing with temporary payments imbalances. In this, official opinion may be said to have followed in the wake of events.

It has already been mentioned that attempts have been made in the reform, largely on the initiative of the United States, to institute a tighter control over restrictions on current transactions and payments for balance-of-payments purposes, i.e., even those designed to meet temporary disequilibria in the balance of payments.

In the Bretton Woods Articles restrictions on capital transactions were fully permitted to all members and might indeed be required of a member as a condition for the continued use of Fund resources. In the Outline such controls are still permitted, but they are hedged round by certain qualifications, such as that they should not be used for the purpose of maintaining inappropriate exchange rates or, more generally, of avoiding appropriate adjustment action, that they should be applied without excessive administrative restriction, and that they should not be retained longer than needed.[15] This presumably implies that capital restrictions should not be employed either permanently or temporarily in a disequilibrating sense. In the course of the reform discussions, a good deal of attention was paid to the various ways in which temporary payments imbalances arising out of disruptive short-term capital movements could be handled. In the course of this examination, capital exchange markets, forward exchange market intervention, payments controls, regulation of the external position of banks and other enterprises, the international coordination of monetary policies, and other measures for influencing capital flows were studied, but no concrete agreement as to the employment of these measures in an equilibrating sense was arrived at, or even attempted. However, under the guidelines which the Fund has adopted for the management of floating exchange rates the use of such measures will be subjected, in principle, to encouragements and restraints analogous to those applicable to exchange market intervention having the same effects on exchange rates. This means, broadly speaking, that capital-flow-deflecting measures having an equilibrating tendency in the short run will be encouraged, those having a disequilibrating effect restrained.

As regards official financing, one of the traditional ways of coping with temporary payments disequilibria, the attitude of the Outline is a balanced one. On the one hand, asset settlement arrangements, to the rather limited extent to which they are adopted in the Outline,[16] tend to cut off a source of easy financing for issuers of intervention currencies in the form of the non-conversion by other countries of accruing balances in

[15]Outline, paragraph 15.

[16]In paragraph 20 and Annex 5.

their currencies. On the other hand, credit facilities are approved particularly as a means of meeting disequilibrating capital flows, and the Fund is adjured to establish new facilities as necessary especially for countries without sufficient access to existing facilities.[17] The reform discussions, however, never did get to the point of formulating concrete proposals as to the nature of any new credit facilities that might be established to deal with shorter-term fluctuations. Apart from formal credit facilities, Annex 6 contains a suggestion, originally advanced by the United States, that each country should be assigned a primary asset holding limit which would force countries whose surpluses accumulated beyond a certain point to extend credit to the issuers of intervention currencies, which — under the multicurrency intervention system at any rate — would be deficit countries.

The main practical contribution made by the Outline towards the solution of the problem of short-term imbalances probably lies in the permissive attitude adopted towards various types of exchange rate flexibility. The Outline provides[18] that margins of exchange rate fluctuation around parity should no longer be fixed by the Articles of Agreement, but should be variable by decision of a qualified majority. The margins envisaged in the illustrative Annex 3 are of the order of magnitude of those set up by the Smithsonian Agreement, namely, 4-1/2 percent above or below parity as between pairs of currencies. But whereas, under that Agreement and under the par value system in general, the margin effectively available to the United States as the issuer of the ultimate intervention currency was only half of that available to countries pegging on the dollar, this discrepancy is to be resolved, under the reformed system, by the adoption of a more symmetrical intervention system.[19]

Most important of all the changes suggested in the Outline in the direction of exchange flexibility is the proposal to enable the Fund to authorize floating exchange rates in what are called "particular situations."[20] What "particular situations" are has not been defined, but they have been understood to include not merely temporary floating as a technique for changing from one par value to another, or floating to accommodate differential rates of inflation, but also floating in situations of the Canadian type where the potentiality for large variations in the capital account makes the balance of payments under fixed rates particularly uncertain. With the rise of Euro-currency markets and other channels for international capital flows the condition of most of the industrial countries and some of the primary producers also has been rapidly approximating

[17]Outline, paragraph 21.

[18]Outline, paragraph 12.

[19]For details, see Outline, Annex 3.

[20]Outline, paragraph 13.

the Canadian model. Thus, though in theory the reformed system as envisaged in the Outline would be based on par values, the possibility obviously exists for the continuation of floating on a widespread scale.

As already indicated, it has not been contemplated that floating would be authorized only if it were of the perfectly clean variety. On the contrary, intervention in certain circumstances would be allowed and even encouraged. Short-term payments imbalances would thus be handled by a combination of exchange rate variation and reserve use, which is a form of official financing. The precise way in which these techniques would be combined would, of course, depend to a large extent on the policies of individual countries, but also presumably to some extent on any rules or guidelines for the management of floating exchange rates that might be adopted internationally. The Executive Directors of the Fund with the blessing of the Committee of Twenty have adopted certain guidelines that would be applicable in present circumstances of generalized floating and which, it is hoped, may provide a basis for rules that would be applicable to individual floaters under a reformed system.[21]

There have been broadly two views on the nature of appropriate intervention policies for the conduct of a floating exchange rate. On one view a country should confine itself to smoothing out rate fluctuations from day to day or week to week and to slowing down somewhat market tendencies of longer duration ("leaning against the wind"). On another view the authorities should have a concept of the normal exchange rate over the medium term, i.e., over a period of the order of, say, four years, and should offer increasing resistances, through market intervention and other balance-of-payments policies, the farther the actual exchange rate diverges from this norm. Under both of these approaches, particularly the second, it is the currency's effective rate (i.e., its rate vis-a-vis a relevant average of other currencies) rather than its rate vis-a-vis the intervention currency that is important. In determining the amount of intervention to be undertaken under either of these approaches, account can be taken of the level of the country's reserves related to some estimate of its needs. There have, however, been differences of view between countries with respect to the amount of attention that should be paid to this consideration which is, of course, linked to the more general question of the role of a structure of reserve norms in the adjustment process.

Under a system in which market intervention (other than day-to-day smoothing) and capital-flow-deflecting measures were confined to "leaning against the wind," balance-of-payments variations of a cyclical kind would be contained or dealt with, as under "clean" floating, almost entirely by exchange rate variations. Under a system of exchange management oriented towards the medium-term normal rate, cyclical fluctuations would

[21]See Outline, paragraph 13, Annex 4, and Fund Press Release No. 74/30 of June 13, 1974 on the subject of Guidelines for the Management of Floating Exchange Rates; all in *IMF Survey*, June 17, 1974.

be dealt with only partly in this way and partly through reserve movements or capital-flow-deflecting policies, while more fundamental disequilibria, to the extent they did not respond to demand management or incomes policies, would be corrected through the gradual shifting of the norm around which market exchange rates would fluctuate. This last solution, which might be described as a "a crawl with soft margins," appears to me greatly preferable on a number of counts. Nevertheless, any system of managed floating which goes beyond a mild "leaning against the wind" involves considerable dangers. There is no guarantee that the exchange rate targets of countries will be compatible with each other or with any reasonable concept of international equilibrium. Ambiguities arise as to the nature of such a reasonable equilibrium, particularly with regard to the legitimacy of current account targets achieved by different means.

The Guidelines, in the tentative form in which they have in fact emerged, strike something of a compromise on this issue. Countries are permitted but not required to resist rate movements; however, they may be "encouraged" by the Fund to resist a movement away from which the Fund considers to be a reasonable estimate of the normal rate, and not to resist a movement towards such a norm. Countries are required not to act aggressively (i.e., not to force the rate to move in any particular direction) unless both the country and the Fund consider this to be in the direction of the normal rate.

Another issue has been the extent to which the criteria applicable to exchange market intervention should apply also to capital-flow-deflecting measures, such as capital restrictions, forward exchange intervention, and monetary policies. In the Guidelines as they have emerged the same criteria have been applied to both types of action on exchange rates.

The system of exchange rate management envisaged in the Guidelines, being in a sense a mixture of fixed and floating rates, may create some problems for stabilization policy in that it calls for a mixture of fiscal and demand management policies that will be none too easy to apply in practice. Broadly speaking, so long as exchange rates are somewhere in the vicinity of a reasonable estimate of the medium-term norm a country should respond to any expansionary or recessionary tendencies by the combination of monetary and fiscal policies that would be appropriate to a closed economy. As the exchange rate diverges from such a normal zone, however, increasing emphasis should be placed in the determination of monetary policy on the objective of international equilibrium, and fiscal policy should take over correspondingly more of the responsibility for stabilization. In view of the slowness with which exchange rate movements evoke equilibrating forces in the current account, and the possible weakness of equilibrating speculation in the capital account, it would be prudent not to overestimate the extent to which floating, thus limited, will free monetary policy for the task of domestic stabilization.

Discussion

Peter B. Kenen

Discussants are appointed to prevent premature consensus at the conference table. I am therefore duty-bound to discover reasons for disagreeing with Marcus Fleming, even though I much admire the manner in which he has discharged a difficult assignment and concur in most of his conclusions. I shall dwell on three points at which his argument seems incomplete or inconclusive. First, he does not sufficiently emphasize the control of inflation as a dimension of stabilization policy. Second, his views on international liquidity and reserve creation appear to contain an inconsistency or, at the very least, an ambiguity. Third, his extended comparison between fixed and flexible exchange rates is based upon premises that many observers, including highly placed government officials, do not accept.

Early in his paper, Fleming draws attention to the implications of international monetary arrangements for the trade-off between full employment and price stability. Unhappily, he does not return to the point, to ask whether fixed or flexible exchange rates are more conducive to the reconciliation of those two aims. Furthermore, his comments on stabilization evoke preoccupations of an earlier decade; his argument is cast in terms resembling those that he and Robert Mundell made famous in the early 1960s. Domestic policy is aimed at stabilizing output or employment, not the price level.

The defect, if it be one, is not unique to Fleming's paper. We do not know about the dynamics of inflation. We know even less about the processes by which price fluctuations are transmitted from one country to another, or about the manner in which alternative exchange-rate regimes affect these processes. We link our national models by trade matrices, emphasizing real flows, not by describing participation in fully specified world markets, emphasizing global price determination.

The primitive state of our thinking on these questions is dramatized by some of the mistakes we make and is perpetuated by our use of naive theories. The most common and egregious error is the one that was

Peter B. Kenen is Professor of Economics at Princeton University, Princeton, New Jersey.

broadcast — but literally — a few years ago, when a prominent economist who also held high public office assured the American people that devaluation of the dollar would not add significantly to inflationary pressure in the United States. Foreign trade, he explained, is still very small in relation to U.S. gross national product. We have learned to our dismay, however, that an economy's propensity to import inflation is different from its propensity to import unemployment. It depends on the size of the tradable-goods sector, not on trade volume itself. A country that exports one bushel of wheat connects the domestic price of wheat to the world price. A country that imports one automobile connects the prices of domestic cars to the prices of imported cars (although the connection may not be as strong as with an undifferentiated product like wheat).

Our theories are naive because they are static and abstract from asymmetries in economic behavior. Textbooks tell us that flexible exchange rates can insulate a country from foreign price trends and, obversely, can protect the world as a whole from inflation in one country. They analyze the short-term dynamics of inflation and currency markets using the long-term comparative-statics of purchasing-power-parity theory. Yet even when we set aside capital mobility, the subject which Fleming treats so thoroughly in the later sections of his paper, we cannot be sure that a flexible exchange rate will move at the pace — and to the extent — required to offset divergent trends in national prices. We forget, among other things, that an inflation in one country does not arise spontaneously. It reflects the presence of excess demand, and because markets do not leap to new equilibria, excess demand will spill directly into international markets, raising world prices, before it is checked by movements in exchange rates.

I am especially concerned about our ignorance of mechanics and dynamics in the foreign-exchange markets. What little we know now about J-curves and such should tell us that merchandise trade does not respond rapidly to changes in prices, including changes in exchange rates, so that the movements in exchange rates required to clear the currency markets in the short run are different from those that would compensate perfectly for divergent movements in national prices. The problem is compounded when capital is mobile, and there is need to modify Fleming's analysis to take account of differences in the speeds with which investors react to interest rates and traders react to prices. If, for example, the fastest effect of easier money in the United States is to cause a capital outflow, the sequence of events under flexible exchange rates may be somewhat different and less satisfactory than the one which Fleming and others have described. Because the adjustment of merchandise trade to a depreciation is apt to be long-lagged, the advent of easier money and the resulting capital outflow could cause a very large depreciation of the dollar, with immediate inflationary implications for the United States. Only later, after trade volume has responded to the large depreciation, will we see the improvement in the trade balance and the stimulus to output we usually

associate with the combination of easier money and flexible exchange rates. To assume any other evolution is to make some strong assumptions concerning the ability and willingness of speculators to stabilize foreign-exchange markets.

Finally, we cannot ignore the virtual certainty that changes in exchange rates will exacerbate inflationary trends. A country that imports some of its wage goods is likely to suffer a more rapid increase in money wages, accelerating its inflation, when its exchange rate depreciates as a consequence of rising prices for domestic output. And a country that exports a wage good — wheat for example — could encounter a similar problem. I am somewhat skeptical, moreover, of models and arguments which treat symmetrically the domestic price effects of depreciation and appreciation. For reasons that reside in business behavior and in political processes, not only in the stubbornness of trade unions, a depreciation may raise domestic prices, validating and amplifying the depreciation faster and more fully than an appreciation can reduce domestic prices.

I have no firm conclusions to offer on these issues. I do not mean to suggest, for instance, that the worldwide inflation of the last two years can be blamed on the advent of floating exchange rates. If, indeed, I were forced to identify cause and effect unidirectionally, I would regard the shift to more flexible exchange rates as a defensive response to inflation. It should be clear, however, that it has been an imperfect defense, and we need to do more work, theoretical and empirical, before we can make a long-term choice between exchange-rate systems.

My second point pertains much more directly to Fleming's paper, not to the general and sad state of our art. Early in his paper, Fleming suggests that academic economists have attached too much importance to the size of the stock of international money. A shortage of reserves, he says, may perhaps deter a deficit country from the pursuit of full employment, but this influence will not be strong. In consequence, a general increase in reserves is not apt to alter directly or importantly the vigor with which governments pursue their domestic aims. Unlike an increase in private liquidity — the stock of cash balances held by firms and households — an increase in official reserves will not cause a spending spree, adding to global inflationary pressures.

I am inclined to agree with Fleming, and especially to welcome his warning against simple-minded analogies between the motives of governments and households. The money machine run by the International Monetary Fund, which prints SDRs for central banks, is not apt to have the same effects on aggregate demand and prices as the money machine run by the Federal Reserve, which prints high-powered dollars for commercial banks. I would go somewhat further than Fleming — to argue that very few deficit countries have been deterred for long from the pursuit of domestic aims. Sooner or later, but sooner these days, they have sought the freedom they desired by devaluing or floating the exchange rate.

I wonder, however, what Fleming can mean when, a few pages later, he talks about optimal growth in the stock of reserves and extols proposals in the *Outline of Reform* to regulate comprehensively the global stock of reserves. A very slow growth of reserves would not be optimal if, as he suggests, it would lead to the widespread use of trade or capital controls by countries seeking to capture more reserves for themselves. But what criterion is Fleming using when he says that the U.S. deficits of 1970-71 led to an excessive increase in reserves?

The question contains some of its own answer, pointing as it does to the way in which that particular increase took place and to the domestic problems it caused for the countries that gained the reserves. The issue, I submit, is not so much the size of the increase in reserves but the manner in which reserves were created in 1970-71 — the fact that they reflected a massive imbalance in the U.S. balance of payments and led to a large increase in commercial-bank reserves in the principal surplus countries.

Let me put this same point more argumentatively. Those who were most distressed by the increase in reserves during 1970-71 would have been much less upset if, by a stroke of somebody's pen, the price of monetary gold had been raised sufficiently to cause the same increase in total reserves measured in U.S. dollars. There is, indeed, much sentiment for raising that price now, although this would add hugely to reserves already swollen by the events of 1970-71. An increase in this form would not cause an increase in bank reserves and private liquidity like the one that was occasioned by the U.S. deficit. It would not interfere with monetary management. In brief, I suggest that most of the concern about excessive reserve creation derives from the fact that, in the past, reserve creation has affected the domestic liabilities of central banks, not just their external liabilities.

But why, one might ask, do central banks object to the creation of Special Drawing Rights — a mode of reserve creation that would not have this overwhelming disadvantage? There is, I believe, a pervasive desire to limit the foreigner's freedom of action — to curb *ex ante* his ability to interfere with domestic policies. This desire may reflect a general psychological asymmetry in international monetary relations — a belief that the foreigner, whoever he may be, is more prone to make inflationary errors. It may reflect a special and objective asymmetry — the large size of the United States and its unique capacity to affect international capital markets. The latter is the more plausible explanation and serves to illuminate much of the debate on international monetary reform.

There would be little point in limiting the reserve-creating power of the United States — in asking for full asset settlement — if one did not also limit U.S. access to newly created SDRs. The stock of reserves must not be allowed to grow at a rate which would free the United States to pursue whatever monetary policy it desires for its own domestic reasons. Limitations on reserve creation are required if reform is to accomplish an important aim of many major countries — to diminish the financial influence of the United States so as to acquire more domestic autonomy.

Discussions which abstract from this basic issue miss the point of the debate about the optimal stock of reserves and the rate of growth of global liquidity.

The same desire for more autonomy, especially for insulation from the influence of the United States, is an explanation for other recent trends, including the abortive effort at European monetary unification (which would have increased the internal influence of jointly managed monetary policies), the recrudescence of capital controls, and the recent shift to flexible exchange rates (which, whatever their other defects, allow central banks to assert control over their external assets and, therefore, the stock of high-powered money). It is also the cause for my third disagreement with Marcus Fleming.

Apart from my earlier comments on lags and dynamics, I have no quarrel with Fleming's taxonomy of internal policies, exchange-rate systems, and degrees of capital mobility. It is, in fact, superior to earlier taxonomies because it takes complete account of money-stock effects induced by movements in reserves under fixed exchange rates. I am not quite sure that the high-mobility case is the "normal" one for all times and countries, but this is a matter of fact, to be resolved by measurement. My reservations arise in respect of the criteria Fleming uses to rank the outcomes and to appraise exchange-rate arrangements.

Fleming appears to prefer international arrangements that would allow countries to share our instability. Thus, he is inclined to favor fixed exchange rates when capital is immobile, because a boom in one country would be spread to others by the usual Keynesian route, diminishing its local impact, but he has reservations about fixed rates when capital is mobile, because the increase in the interest rate caused by the boom would attract capital from other countries, and, in the high-mobility case, would increase the money stock, fueling the boom. Similarly, Fleming is not happy with flexible exchange rates when capital is immobile, because they would bottle up a domestic boom, but he is content with them when capital is mobile, because the capital inflow would steady the exchange rate, allowing the trade balance to deteriorate and the boom to spread.

These same preferences, however, are the cause of the dilemma with which Fleming struggles for so many pages. When fixed exchange rates send disturbances abroad through the trade balance, they also deprive fiscal policy of its chief domestic impact. And when flexible exchange rates do the same things, they also dissipate the influence of policies. When, conversely, flexible exchange rates give domestic policies the largest local impact, they also bottle up spontaneous disturbances, instead of sharing them with other countries. What is good from the standpoint of efficacious policy is bad from the standpoint of spreading one's misfortunes.

But do we really want to share disturbances? Or, more germanely, will governments agree to do so? Some observers say that they will — or should — because, when foreigners are made to bear some part of domestic instability, the impact on residents is reduced and they are less likely to turn the government out of office. Consider, however, the corollary

to this supposition. Is there no danger that citizens will blame their governments for failing to protect them from foreign disturbances? And if, as I fear, this danger is real, will governments not respond by blocking the channels through which disturbances flow? A system that allows one to export instability may provoke damaging attack when it comes to import instability.

Remember, moreover, what I said before about asymmetrical views and asymmetrical impacts in international financial relations. If governments believe that foreigners are irresponsible, they may not want to share the foreigners' disturbances, believing that they will suffer more than they will. And if economies differ in size and strength, sharing can never be symmetrical, even if the governments of the largest countries are more responsible and better-endowed with the instruments for stabilization.

It should of course be clear from what I said before that no exchange-rate system can provide complete insulation from foreign disturbances, and those which may do so most effectively in respect of output or employment may not always do so most effectively in respect of prices. It should also be clear from Fleming's own paper that some of the difficulties faced by major countries in recent years were not due to the international monetary system, but to institutional and political imperfections in the conduct of domestic policies, especially in monetary policies. At this particular time, however, it may be prudent to base one's choice between exchange-rate systems on the sad fact of mutual distrust and the desire for autonomy, not on an assumption of neighborly willingness to share mistakes and to abide by the rules of the system at any price. We may need a theory of optimum disintegration — a generalization of the theory of optimum currency areas — to tell us how much distance we must put between economies. If integration is too intimate, governments are likely to lash out at the system. Sovereignty at bay is apt to snarl.

Discussion

Richard J. Herring

Because Peter Kenen has ably articulated most of my reservations about Fleming's analysis of the impact of reserves on international stability, I shall confine my remarks to two subjects. First, I would like to round-out the sketch of the low capital mobility case in Fleming's extension of his classic 1962 analysis. Second, I would like to note some of the conflicts between this kind of analysis and the received view of capital flows.

I was particularly interested in Fleming's analysis of the three fundamental policies toward external imbalances — reserve financing, capital controls and flexible exchange rates. He asserted that the ideal policy: (i) would spread domestic demand disturbances widely over many nations; (ii) would offset international shifts in demand; and (iii) would concentrate domestic policy shocks nationally. He followed current theoretical practice in emphasizing the implications of a high degree of capital mobility. I, too, find this assumption plausible, but I think that we should note that it is not consistent with what little empirical evidence we have on the subject. For example, consider the results of recent simulations of the TRACE model of the Canadian economy by Carr, Jump and Sawyer. The simulation experiment involved increasing government spending by C$ 1/2 billion and observing the results under three different exchange rate regimes. After two years the following changes in the interest rate (i) and in the level of income (Y) were observed:

	Δi (%)	ΔY (C$ billions)
a. Floating Rates	.257	.801
b. Fixed rates with sterilization of the monetary base	.074	.464
c. Fixed rates with no sterilization	.326	.366

These results are qualitatively identical to the results one would expect from the Fleming analysis of an economy with low capital mobility. They are surprising because they apply to Canada, an economy which is usually

Richard Herring is Assistant Professor of Finance at the University of Pennsylvania, Philadelphia, Pennsylvania.

assumed to have a very high degree of capital mobility. Thus, since there is some empirical support for the assumption, it may be useful to make explicit Fleming's present analysis for the case of relatively low capital mobility. I shall concentrate on localized disturbances to demand and policy changes, since it is in these areas that the differences are most striking.

With regard to localized shocks in private demand (such as an investment boom), under high capital mobility Fleming found that reserve financing of imbalances (without sterilization) tended to intensify the boom at home, and, in the extreme case of perfect capital mobility, to depress demand abroad. The leakage through the current account was more than offset by the induced capital inflow thus adding an expansionary monetary impact to the increase in demand. Thus financing gets poor marks with regard to dissipating disturbances abroad. However, if capital mobility is low, the conclusions are much different. The induced deterioration in the current account is not offset by a capital inflow. The leakage of demand through imports is reinforced by a monetary leakage through loss of reserves. Much of the boom is spread abroad both through an expansion of export demand and an increase in the monetary base abroad. Indeed, in the extreme case where capital flows are not responsive to interest rates, the boom may be completely cut off through leakage of reserves.

Under floating exchange rates, changing the assumption concerning capital mobility also reverses the conclusion. With high capital mobility, Fleming found that the current account leakage would be intensified through an appreciation of the exchange rate and thus the investment boom would be more widely spread. But with low capital mobility, the investment boom leads to a depreciation of the exchange rate (since the induced current account deficit exceeds the induced capital inflow), stimulating larger exports, discouraging imports and thereby intensifying the boom at home. Thus if capital mobility is low the relative merits of the three policies in dissipating local disturbances change; financing is best, capital controls are second best; and floating rates are least desirable.

With regard to changes in monetary and fiscal policy, under a high degree of capital mobility Fleming found that flexible exchange rates tended to intensify the effects of monetary policy while rendering the effects of fiscal policy less strong than under fixed rates. Indeed, if capital is perfectly sensitive to changes in the interest rate, fiscal policy is totally ineffective in altering the equilibrium level of income in that the expansionary impact is entirely offset by the induced appreciation of the exchange rate. However, if the degree of capital mobility is low, both monetary and fiscal policy are more effective than under a regime of fixed exchange rates. Expansionary monetary policy is reinforced by an induced depreciation of the exchange rate (as in the case of high capital mobility), but in addition, so is fiscal policy. In a country with low capital mobility, an expansionary fiscal policy leads to an incipient deficit and a depreciation of the exchange rate.

Thus if the degree of capital mobility is relatively low, the choice of external policies must involve a trade-off between two of Fleming's objectives. Financing short-run disturbances assures that they are more widely dissipated, while flexible exchange rates enhance the effectiveness of monetary and fiscal policy. Nonetheless, there is some consolation in the fact that the same forces which reduce the effectiveness of fiscal policy under fixed exchange rates also tend to reduce the disruptive impact of domestic disturbances to demand by spreading them more widely abroad. Similarly, the same factors which intensify the disruptive domestic impact of localized shocks to demand under flexible exchange rates, also tend to enhance the effectiveness of fiscal policy. Fortunately, when fiscal policy is relatively weak, demand disturbances will be less disruptive, while when demand disturbances become most intense, fiscal policy will be commensurately more effective.

Finally, I think it is important to note that Fleming's model (and the elaborations I have just outlined) are implicitly based on the flow view of capital movements — that is, the view that the rate of capital flow responds to *levels* of interest rates. It is a useful simplifying assumption and, indeed, it is perfectly compatible with the way investment is treated in the simple IS-LM system inasmuch as the flow of investment is assumed to be a function of the *level* of the interest rate. It is not, however, consistent with the portfolio adjustment view of capital movements which holds that capital flows result from *changes* in interest rates. The most comprehensive treatment of these issues to date is, of course, Bill Branson's contribution to this conference. The usual reconciliation of the flow model with the portfolio approach is to say that the capital flows being analyzed are stock shifts in response to changes in interest rates. Branson's latest results, however, make it necessary to add yet an additional qualification — namely, that the capital flow is independent of the level of income. Otherwise, Branson has shown that with the real sector endogenous, changes in monetary policy have an ambiguous stock shift impact on capital flows.

But with these provisos, does the flow model provide results which are consistent with the short-run, stock-shift implications of portfolio theory? Since most of our empirical evidence indicates that the stock-shift in response to changes in interest rates takes place over several quarters, is the flow model an adequate approximation for short-run, qualitative results?

For short-run analysis under fixed exchange rates the answer is probably yes, chiefly because capital flows impinge on the domestic equilibrium only through their impact on the *stock* of foreign exchange reserves and thus on the level of the domestic monetary base. It is the total stock shift, not the timing of the flow that matters. However, for short-run analysis under floating rates, the timing of the capital flow is of paramount importance. Thus the short-run implications of the flow model and the stock adjustment model may be quite different. For example, in a

regime of floating exchange rate and high capital mobility, an expansionary fiscal policy causes an *appreciation* of the exchange rate since the induced capital inflow exceeds the induced deterioration in the current account. In terms of the flow theory the exchange rate would stay at the new equilibrium level until further disturbed. In contrast, in terms of the portfolio view of capital flows the change in the exchange rate is temporary, inasmuch as pressure on the exchange market will diminish as investors achieve a new portfolio equilibrium. Indeed, if there is negligible growth in portfolio size (and if we ignore exchange rate expectations and the impact of exchange rate changes on wealth), after the stock adjustment is complete the exchange rate will actually *depreciate* below the initial level. This will occur because the increased import demand will remain, while the induced capital inflow will have vanished.

Thus we must be quite judicious, as indeed Fleming has been, in drawing inferences about floating rates from a flow model. What is needed is a convenient way to represent stock-adjustment results in the Fleming model. In the meanwhile we are fortunate to have had a further development of the Fleming model from the master himself.

Discussion

Emil-Maria Claassen

Being the second discussant of J. Marcus Fleming's contribution, I shall concentrate my comment on the second half of his paper. Under the section "Stabilization and Shorter-Term Payments Disequilibria" Fleming discusses three different international payments regimes:

(1) a regime of fixed rates where external imbalances will be financed by reserve movements (or by official borrowing or lending);
(2) a regime of fixed rates where external imbalances will be corrected by "capital-flow-deflecting measures";
(3) a regime of floating rates.

To determine which of the three regimes [which deal with short-term payments imbalances either by financing them — case (1) — or by eliminating them — cases (2) and (3)] is the best one from the point of view of the *internal stabilization of the economy,* two alternative criteria may be chosen:

(I) which international payments regime is the best one for the internal stabilization of the economy of a single country;
(II) which international payments regime is the best one for the internal stabilization of the economy of all countries within the international economy.

There are "dilemma cases" where criterion (II) may lead to an "optimal" payments regime different from that under criterion (I). This problem is discussed by Fleming, but his main criterion is that of type (I).

The traditional analytical technique for selecting the optimal international payments regime according to criterion (I) is that of comparative statics by asking what is happening to the internal equilibrium situation of a country, under alternative payments systems:

Emil Claassen is Professor of Economics at the University of Paris, Dauphine, France.

(A) when there is an internal disturbance;
(B) when there is an external disturbance;
(C) when internal policy actions ("demand management measures" as Fleming calls them) are undertaken.

The optimal payments regime will be that which guarantees simultaneously:

(a) an "export" of the internal disturbance to the rest of the world such that the domestic economy is hardly affected by its internal shocks;
(b) a protection against external shocks such that the domestic economy is functioning as if it is a closed economy;
(c) a full impact of the stabilization policies on the attainment of the desired internal objectives.

Fleming comes to the conclusion that in all three cases the system of floating exchange rates will be relatively better than the two other payments regimes: it will be *better* in particular under the assumptions of high capital mobility, low speculative capital flows with respect to the future current account, and under the assumption of a rather immediate effect of a change in the exchange rate on the trade balance; it will be better only *relatively* because floating rates have negative side effects as for instance in terms of a certain instability with respect to the activity of particular foreign trade industries.

Fleming's results are derived from the Keynesian literature of the 1960s (respectively, from the Mundellian literature of the early 1960s). Our comment is concerned with the question whether the same results hold if one chooses another analytical framework for the *world economy* which is that of the "monetary approach" (or "monetarist" approach) to internal and external stabilization of an economy and which has been developed in the later 1960s and early 1970s by Harry Johnson, Robert Mundell and their disciples.

In the present context the two main differences between the Keynesian and the monetary view of the *international economy* are that:

- from an empirical point of view, in the last 10 to 15 years the world economy (being largely at full employment) has become integrated to such a degree that the only closed economy is the world economy, the member countries being like regions among which differences in prices of tradable goods and in interest rates cannot last and will be eliminated by goods-arbitrage and by interest-arbitrage, respectively.
- from a theoretical point of view, a surplus or deficit in the balance of payments is a monetary phenomenon to the extent that it is reflected (not necessarily caused) by an excess stock demand for money or by an excess stock supply of money, respectively; the rate of exchange is equally a monetary phenomenon to the extent that it corresponds to the ratio between the internal and foreign price level (of tradable goods).

The question now is to what extent Fleming's arguments have to be modified under this "old" view (i.e., Wicksellian-Casselian view) on the "new" world.

I begin with Fleming's example of an internal disturbance in terms of an autonomous increase in the domestic demand for goods. Fleming's reasoning is along Keynesian lines according to which the following changes will take place: (i) Increase in national income, either in domestic output or/and in internal prices; trade balance deficit as an increasing function of the degree of "commercial openness" of the economy dampening the impact effect on national income. (ii) Increase in the domestic interest rate; capital balance surplus as an increasing function of the degree of "capital openness" (interest sensitivity of capital flows) of the economy. (iii) If there is an overall balance-of-payments surplus (deficit):

in regime (1):	inflow (outflow) of reserves; rise (decline) in the money supply reinforcing (dampening) the impact effect on national income.
in regime (2):	balance-of-payments equilibrium because the trade balance deficit is compensated by a surplus on the capital account.
in regime (3):	upvaluation (devaluation) deteriorating (improving) the trade balance and, by this, dampening (reinforcing) the impact effect on national income.

Thus, in case of high capital mobility involving a balance-of-payments surplus, a floating exchange rate permits the highest absorption of internal income fluctuations by the rest of the world.

The picture looks different if one accepts the monetary (or monetarist) scenario. Because the monetary view postulates a total equilibrium/disequilibrium approach (in contrast to the Keynesian "partial" equilibrium approach), an excess demand for goods must be accompanied by an excess supply of other "goods."

If the excess demand for goods equals a (flow) excess supply of money — because the stock demand for money has fallen or the stock supply of money has risen and where the stock excess supply of money will be normally higher than the flow excess supply of money due to usual stock adjustment behavior (à la Archibald and Lipsey) — there will be a trade balance deficit for the following reasons. In a world of full employment the excess demand for goods is satisfied partly by internal output increases and mainly by imports. Since the prices of tradable goods are determined on the world market, they will increase in proportion of the domestic excess demand to the world demand for tradables, for a given degree of full employment in the world economy. In the extreme case of

no output changes, either at home or abroad, the real transfer of goods to the domestic economy is made possible because the demand for money in the rest of the world increases as a consequence of the rise in prices — and consequently foreign hoarding decreases foreign absorption. One could take into account an additional aspect which concerns the non-tradable goods. Their prices will rise equally because one part of the excess demand for goods may be directed towards the non-tradable sector on the one hand and because an increase in the price level of tradable goods induces a substitution effect in favor of the non-tradable goods pushing their prices upwards until the relative prices between tradable and non-tradable goods have been restored.[1]

There will be a temporary balance-of-payments *deficit* in the amount of the trade deficit:

in regime (1): outflow of reserves and decline in the money stock until the moment where the stock demand for money equals the stock supply of money.

in regime (2): capital-flow-deflecting measures are only conceivable to the extent that direct capital controls are imposed in order to get an overall balance-of-payments equilibrium; however, this measure would push up world prices to an even higher level because the only equilibrating trade-balance mechanism works through the demand for money which has to be higher, abroad and at home, in the absence of any change in the foreign and domestic supply of money.

in regime (3): devaluation eliminating the trade balance deficit; it involves an increase in the internal price level of tradable goods by the amount of the devaluation rate (and an increase in the price level of non-tradable goods according to the above reasoning in terms of the substitution effect).

A floating exchange rate system would "internalize" the internal shock — a radically opposite view to Fleming's results. Remember that he arrives at the conclusion that under the hypothesis of an extremely high degree of capital mobility, there will be an upvaluation which could neutralize via the trade balance the internal shock for the domestic economy. Even though we have operated with the same "small-country hypothesis" with respect to the current account and the capital account, one of the main

[1]Another (extreme) case is where the domestic excess demand for goods is equal to a domestic (flow) excess supply of securities. The arguments run now in terms of the world interest rate. An increase in this latter rate leads to a stock adjustment in asset holdings by foreigners such that they decrease their absorption which permits an increase of securities holdings by foreigners such that the trade balance deficit is approximately equal to the capital balance surplus (by neglecting any side effects of the change in the interest rate on other macroeconomic variables) so that the balance of payments will not be affected.

contentions of the monetary approach is that the nature of the exchange rate does not represent a relative price between domestic and foreign output, but is a *nominal* price of foreign currency. To the extent that the expansionary shock affects mainly the price level — which is a reasonable assumption of a world of full employment — changes in the exchange rate are caused by, or lead to, a relative change in the domestic price level with respect to the foreign price level. In order to "externalize" the internal shock, the best international payments system will be regime (1) provided that the country disposes of sufficient reserves.

This may seem a rather trivial statement, but is most important, at least in the context of the "small-country hypothesis." It is equally applicable for the two other analytical experiments discussed by Fleming: external shocks and internal policy actions. With respect to external disturbances take the case of an increased foreign price level which is transmitted to the internal price level of tradable goods because of the monetary assumption of integrated markets. In a fixed exhange rate system there may be a temporary trade balance surplus via the real-balance effect (higher domestic price level — real balances are lower than the desired real balances — reduction in absorption — inflow of reserves — increase of money supply) and via the substitution effect (switching the demand from tradables to non-tradables. If, however, policy actions are undertaken in the sense of a lower monetary expansion rate than that of the rest of the world, these internal policy actions will be effective in terms of a lower domestic price level than the foreign one provided that the country adopts a floating exchange rate system.

With the *new* tools of the monetary approach (total equilibrium approach and the exchange as a nominal variable for a highly integrated world economy in a situation of full employment) one comes to the *old* conclusion that a fixed rate regime is better for "externalizing" internal disturbances and that a floating rate regime is better for protecting the domestic economy from external disturbances and for achieving a higher autonomy of domestic stabilization policies. Taking into account an additional fact of our (western) world economy which consists of small (dependent) economies, medium-size (interdependent) economies and one super-size (independent) economy, the issue of fixed versus floating exchange rates — in terms of an optimum international payments regime — could be best solved by the theorem of optimum currency areas, at least from the point of view of the internal stabilization of the concerned economies.

Reply to Professor Claassen's Discussion

J. Marcus Fleming

I hope, for the sake of economics, that the Keynesian and monetarist approaches do not lead to such opposite results as Professor Claassen supposes. I believe, in fact, that Professor Claassen imputed to a difference in economic analysis what is really due to a difference in the situations under examination.

The situation which Professor Claassen examines in his comment is one which in Keynesian terms could be described as an autonomous decline in liquidity preference. The situation I was examining was an increase in the incentive to invest. If I had started from a decline in liquidity preference I would have reached — on quite Keynesian lines — results very similar to Claassen's. I chose to examine disturbances in the incentive to invest because I think them more important as a rule than disturbances in liquidity preference, but in the future, I shall take account of both sorts.

Incidentally, the situation examined in the footnote of Claassen's comment is much closer to the one I had in mind. But I believe he has failed to analyze it completely. The capital balance surplus, in a situation of perfect interest arbitrage, could not conceivably stop short at the point at which it merely offset the trade balance deficit unless the excess demand for goods from which you start were confined to tradables. Otherwise there would necessarily be a rise in domestic prices, which would evoke an increase in the stock demand for money and an additional flow demand for money and supply of securities to the foreigner. This will ensure a surplus in the overall balance of payments.

If I may be permitted to add a historical comment, my results do not derive from the Keynesian literature of the 1960s, but go back to the literature of the 1930s, in particular to Haberler's *Prosperity and Depression,* for which I helped to write the international trade chapter.