

On Terms, Concepts, Theories and Strategies in the Discussion of Greater Flexibility of Exchange Rates

I am known, or even perhaps notorious, for my fondness of semantic exercises. Some of my friends will probably wince at reading this lead sentence and will mutter under their breath, "There he goes again!" Fear not! I shall not unravel 57 varieties of meaning of flexibility, 15 of band, 14 of crawl, and 13 of peg. I shall try to do only the most necessary cleaning-up job preparatory for a discussion in which the participants will not want to waste time by misunderstanding one another as they use words in ambiguous ways.

Not that I shall attempt to dictate to anyone in which of the possible meanings he should use an ambiguous term. There should be freedom of speech, even freedom of vague and ambiguous speech. Still, it may help if we know where some of the semantic traps are hidden; for we can then be on guard and, if we *want* to be understood, we can steer clear of the most likely confusions.

Besides these objectives, my comments are intended to serve still other purposes. In some instances I shall propose distinctions that seem helpful in getting a sharper focus on the issues before us. Finally, I shall warn against exaggerated claims which partisans sometimes make for the faultless working of a recommended system, new or old. The question is not of perfection but only of comparative troublesomeness.

Pegs and Parities

Since a great deal is said in the current discussions about pegs and parities, we ought to decide whether we understand these words to mean the same thing or different things.

Since John Williamson spoke about crawling pegs where James Meade spoke about sliding parities, one would be justified in regard-

ing the two terms as synonymous. Yet, there are many currencies (more than 20) for which no par value (parity) has been established but whose exchange value in terms of the dollar has been "pegged" by the respective monetary authorities; and there are other currencies (about 15) for which the par value agreed with the International Monetary Fund has been disregarded, yet the dollar exchange rate has been "pegged" (though the peg was changed from time to time). Thus, we had better accept the fact that in many situations the peg is not a parity and the parity is not the peg.

If we use the word peg to denote the intervention rate, that is, the exchange rate at which the monetary authorities of a country intervene in the market in order to keep the currency from falling or rising in the foreign-exchange market, then we should really speak of two pegs: a selling price and a buying price of the dollar. Where the band between the maximum selling price and the minimum buying price is narrow — say, 2 per cent, as stipulated in the Fund Agreement — it would perhaps be excessive pedantry to speak of the "two pegs" around the parity. But if the band is widened, it may be quite practical to speak of the two extreme official intervention rates as a pair of pegs.

We cannot legislate about the "correct" use of these words. In most instances we shall not be greatly mistaken if we understand pegs to be parities or close to parities, and parities to be maintained by means of pegs. But we ought to be on guard for exceptional situations in which pegs and parities are not the same. In what follows here I shall go slow on the word "peg" and speak mostly of parities. But I want it to be understood that these need not be par values agreed with the Fund, but may be average intervention rates fixed for longer or shorter periods.

For a certain class of countries a very particular system of adjusting the exchange rate has developed. In countries in which the rate of price inflation has been so fast that long delays in exchange-rate alignment would lead to intolerable misallocations of productive resources, frequent readjustments of exchange rates are strongly indicated. Some of these countries have no fixed parities (or have disregarded what was once announced as the "par value" of their currencies). They may, however, have official exchange rates, pegged temporarily and changed periodically, perhaps as often as once or twice a month. Such a change cannot be described as a glide (or crawl) of the peg, because it is too big to qualify for these descrip-

tions. On the other hand, the designation "jumping peg" is also out of place, since "jump" has the connotation of a sudden abrupt change after a long delay. Borrowing from the vocabulary employed to characterize the rate of price increase as creeping, trotting, and galloping price inflations, some commentators speak of the "trotting peg" as descriptive of the system that provides for fast movements of the official exchange rate for currencies in a process of trotting inflation.

The trotting peg will not concern us much in a discussion that is chiefly designed to deal with the currencies of countries with only creeping price inflations. These countries usually have valid official par values of their currencies and for these countries the choice is between jumping or gliding parities.

Alternative Exchange-Rate Systems

It will be helpful to have terminological consistency in talking about alternative exchange-rate systems. I propose that we distinguish systems with *unchangeable* parities, *abruptly adjustable* parities, *gradually adjustable* parities, and *no* parities. The phrase "fixed parities" ought to be avoided, because it covers both unchangeable and adjustable parities, and is therefore ambiguous. Alternative designations would be "jumping parities" for abruptly (or discretely) adjustable parities, and "gliding parities" for gradually adjustable. The category of no parities includes freely flexible (floating) exchange rates, but it includes also exchange rates influenced by unsystematic official interventions in the exchange market and by restrictions on certain types of transactions, so that the absence of official parities is not equivalent to "free flexibility".

Perhaps a comment on unchangeable parities is in order. Parities are unchangeable only under gold-coin standards where gold coins comprise a substantial part of the monetary circulation. Under the gold-bullion standard, where gold does not circulate as currency but is bought and sold only by the monetary authorities, the official price of gold can be changed and parities are no longer unchangeable. To be sure, there can be systems that prescribe, by means of unchangeable legal requirements, fixed ratios between the supply of money and the official gold holdings (with an unchangeable price of gold). Such orthodox gold-standard systems would be compatible with unchangeable exchange rates, but could endure only if the

people in the countries concerned were willing to forget about stable rates of employment, economic growth, and several other national objectives. It is a waste of time to discuss this theoretical possibility. Whether we like it or not, it is not in the cards. This reduces the choices to three: jumping, gliding, or no parities.

Rate of Crawl and Width of Band

When is a change a *jump* and when is it a *glide*? Or, in more formal language, what is a *discrete* adjustment of the parity and what is a *gradual* one?

There is no historical precedent to guide our terminological decision. Economic theory suggests that we call changes in foreign-exchange rates *gradual* if the effects that confident expectations of such changes would have upon the foreign-exchange market could be offset by relatively modest differentials between the interest rates prevailing in the countries concerned. I propose to use 3 per cent per year and 1 per cent at a time as the watershed and to call adjustments of exchange rates that exceed these limits discrete or abrupt. In a stricter sense, adjustment of a parity can be called gradual only if the upper limit of the rate of change is a small fraction of 1 per cent per week or month. The most widely cited plan for a gliding parity proposes as an upper limit for adjustments $1/26$ of 1 per cent per week (which, if continued in the same direction, would cumulate to a little over 2 per cent a year). A recent variant would set the upper limit at $1/10$ of 1 per cent for any half-month (which would cumulate to a maximum change of about $2\frac{1}{2}$ per cent per year).

Discrete changes in the parities of major currencies, under the Bretton Woods rules, have varied from the 5 per cent upvaluations of the German mark and the Dutch guilder in 1961 to the 38.7 per cent devaluation of the French franc in 1949. Most of the parity jumps came as weekend gambols, usually after months of persistent rumors, private speculations, and official disavowals.

Both with discrete and with gradual adjustments of the parity, the exchange rates may be allowed to deviate from parity to some extent. The band of permissible or permitted fluctuations may be wide or narrow. These adjectives call for specification. Since the Fund Agreement permits fluctuations of up to 1 per cent on either side of parity, that is, a band of 2 per cent of parity vis-à-vis the dollar, one might speak of a "wider" band whenever its total width

exceeds 2 per cent. Since Switzerland, however, permits — on paper, though usually not in practice — fluctuations within a band of 3 per cent, it is more convenient to take this as the starting point for any "widening" of the band. A wider band will mean, therefore, one with a total width of more than 3 per cent. Most discussions of a wider band visualize spreads of 4, 5, 6, 8, or 10 per cent.

To define the band in terms of total width rather than in such phrases as "x per cent either side of parity" is preferable, because it would be possible to have asymmetrical distances from parity. Some monetary authorities may wish to allow the price of the dollar in their own exchange market to fall by 4 per cent, but to rise by only 2 per cent from parity. This would still be a band 6 per cent wide, but the parity would not be in its center.

On what kind of considerations would one favor a band with the parity off center, that is, a band with asymmetrical distances of the edges from the parity? Evidently such an arrangement would appeal only to a monetary authority that regards deviations of the exchange rate of its currency from parity more likely to be in one direction than in the other. German economic experts, for example, would probably not think that the market rates of the German mark will fall below parity so often and stay there for so long a time as they may rise and stay above parity. If then, because of comparative rates of demand inflation at home and abroad, the pressure of the free market is expected to be far more consistently in the direction of a strong posture of the German mark, there is sense in providing more leeway for the market value of the mark to rise than to fall.

If the differences in the rates of demand inflation persist for several years, a band around parity, however wide and however asymmetrical, would not provide flexibility for very long. The exchange rate of the German mark would reach the upper edge of the band and stay there, forcing the German monetary authorities to accept "imported inflation". The only escape would be a crawl, or glide, of the parity. With the differences in inflation rates always in the same direction, the glide would be in one direction only: upward.

The idea of a gliding parity has little appeal to bank and Treasury officials in countries with consistently higher-than-average rates of inflation. They fear the downward glide of the parity might accelerate the price inflation and create a lasting inflationary bias in the policies of business and organized labor. If the system of the gliding

parity is more readily acceptable in countries with strong aversion to price inflation than in countries unable to avoid higher speeds of creeping inflation, the one-way crawl may have better chances of realization than two-way variability of the parity.

If the parities of various currencies are expressed in terms of the dollar, a band of x per cent for fluctuations of the dollar-exchange rate of any currency implies that the exchange rates between any two other currencies can fluctuate by $2x$ per cent. If, for example, at some date the French franc were at the upper edge of the band vis-à-vis the dollar, and the Italian lira at the lower edge, and subsequently the franc were to fall to the lower edge and the lira to rise to the upper edge, each therefore moving across the entire band, the cross-rate between franc and lira would have changed by a percentage twice the width of the band for dollar-rate fluctuations. This large spread in permissible cross-rates makes some practitioners shudder when they hear proposals to widen the band for the dollar-rate to 10 per cent: it would mean 20 per cent for the exchange rates between any two currencies for which the 10 per cent band vis-à-vis the dollar is used.

Greater Flexibility

"Greater" in the expression "greater flexibility" is intended to mean "more than exists at present" but "less than unlimited". If variations of exchange rates are to be limited, this implies the need for interventions by the monetary authorities through buying or selling the chosen "intervention currency", usually the dollar, whenever its price threatens to rise above or fall below the chosen limits. These limits would be set by the upper and lower edges of the band around the parity or by the maximum allowable adjustment of the parity, or both. Some monetary authorities believe that it is expedient, or even necessary, for them to intervene in the exchange market even well within the limits. Other authorities disagree, and both sides claim that their views (theories) are firmly based on practical experience. Without attempting here to argue one or the other side of the controversial question, I want to explain an expression used by economists: they speak of "managed flexibility" if the monetary authorities intervene in the market by buying or selling foreign exchange before the edges of the band or the limit to an allowed change of parity are reached.

A compromise regarding the scope of market interventions has been proposed in the form of a band within a band. The inner band, say, 3 per cent of parity, would be entirely unmanaged, a range for free-market forces to operate, without any official sales or purchases; the two surrounding rims or border-bands, each, say, $1\frac{1}{2}$ per cent wide, would be the ranges in which the monetary authorities could play in the market in order to meet their obligation to keep the market "orderly" (or to satisfy their feeling of importance, as the free-marketeers would put it). This would represent managed flexibility around a core of unmanaged flexibility.

Changes in parity would always be managed in the sense that only market interventions would assure that the change is of a particular magnitude, not more and not less. In a system that combines a wider band with a crawl of the parity, the move of the parity may be within the band around the previous parity, so that it would be possible for the actual exchange rate to remain unchanged despite the official adjustment of the parity. In such a case the authorities would not have to intervene at all, unless they wanted to for some reason, real or apparent. In any case, an adjustment of the parity, however small, would move the band of *permissible* exchange-rate fluctuations, even if the *actual* exchange rate, being well inside the band, were unchanged.

I have said that greater flexibility still meant limited flexibility and, therefore, implied a scope for official interventions in the exchange market through buying or selling foreign currency. The limits to the exchange-rate variations thus far discussed would be set by the width of the band and/or by the maximum crawl-rate of the parity. A very different system of greater flexibility would not limit the variations of exchange rates but would, instead, limit the authority of monetary authorities to prevent variations of exchange rates through interventions in the market. This limitation of official buying or selling in the foreign-exchange market could take the form of setting limits to the changes in the monetary reserves held by the authorities. If the authorities have intervened by selling foreign currency and have thus prevented an excess demand for foreign exchange from reducing the exchange value of the domestic currency, their net reserves would have declined. A limit to the extent of permissible depletion of reserves would stop further official sales of foreign exchange. If the authorities have intervened by purchasing foreign currency and have thus prevented an excess supply

of foreign exchange from raising the exchange value of the domestic currency, net reserves would have increased. A limit to the extent of permissible accumulation of reserves would stop further official purchases of foreign exchange.

A system of this sort was used for several years in Canada, and successfully so, according to the testimony of the most qualified analysts. The limits to permissible changes in official reserves were set by the monetary authorities themselves, not by any international agreement. With appropriate institutional provisions this kind of "limited invariability" of exchange rates might well work on an international scale. The basic idea is relatively simple: since continuing large accumulations or decumulations of foreign reserves are indications of misaligned exchange rates (fundamental disequilibrium), countries should be committed to stop these accumulations or decumulations; as they stop intervening in the exchange market, exchange rates will be allowed to adjust themselves to the market forces. The scheme is properly regarded as one of "greater flexibility of exchange rates" in that it prevents the authorities from keeping exchange rates for too long a time rigidly misaligned.

Types of Gliding-Parity Systems

Formerly I used to distinguish two types of gliding-parity systems: one with discretionary adjustments, the other with formula-determined adjustments. Recent discussions have taught me that clearer exposition required four sets of distinctions: the changes in parities could be:

- I. either prophylactic or therapeutic,
- II. either discretionary or formula-determined,
- III. either equilibrating or disequilibrating, and finally
- IV. spontaneous, presumptive without sanctions for nonconformance, presumptive with sanctions for nonconformance, or mandatory.

A change in parity, or rather a sequence of small and continuous changes in parity, is prophylactic if it is intended to prevent imbalances of payments from arising or from worsening; it is therapeutic if it is designed to remove or reduce existing imbalances. When the German Council of Economic Experts proposed a few

years ago that the German mark be upvalued by 2 per cent a year, this glide of the parity was meant to be prophylactic. For, as the Germans were planning to limit the rate of their price inflation to 2 per cent a year but expected most of their important trading partners to inflate by at least 4 per cent a year, an unchanged exchange rate would produce a payments surplus with a consequent expansion of effective demand resulting in a higher rate of domestic price inflation than had been planned — a so-called "adjustment inflation". The proposal was not accepted and the German mark became badly undervalued. The upvaluation in October 1969 was primarily therapeutic.

A change in parity is discretionary if the decision is made on the basis of an *ad hoc* judgment by the authorities and not on the basis of a rule or formula adopted in advance. (A prophylactic change is always discretionary in that it involves a judgment of future developments, not a reliance on recorded data of the past. A therapeutic change may be discretionary or formula-determined.) A formula-determined change in parity is guided by a set of rules that tell which statistical data should be taken into account to indicate when, in what direction, and by how much the parity should be changed. The indicators most widely discussed for this purpose are the spot rates in the foreign-exchange market recorded during the preceding period (six months or more), the movements of forward-exchange rates, changes in net foreign reserves, changes in the basic balance of payments, and the trend in the current account. There are many strong reasons why formulas confined to these data may at certain times lead to very wrong results. More studies of past performance and of hypothetical cues given by various alternative formulas (rules of thumb) will probably improve the instruments of navigation in these still insufficiently explored waters. My hunch is that exchange-rate variations within a wider band will be better indicators than variations within the narrow band permitted in the past; they must be combined, of course, with data on official interventions, which may have concealed the effects of free-market forces, and possibly also with data on presumably temporary (or even reversible) movements of private capital funds.

The third set of distinctions, between equilibrating and disequilibrating changes of parity, may apply either to intentions or to actual effects. Some intentionally equilibrating changes may turn out to be disequilibrating in their actual effects. This can happen

even in formula-determined adjustments, where the data used as indicators are unreliable, incomplete, or ill-chosen. It is easy to imagine a situation in which the adopted formula dictates a change in the wrong direction or to a wrong extent, or indeed a change when none is "indicated" in the actual circumstances. Unintentional disequilibrium can of course occur also through discretionary changes in parity, where the insight or judgment of the authorities is faulty. All therapeutic changes are intended to be equilibrating; they attempt an adjustment of an existing disequilibrium. Prophylactic changes are likewise intended to be equilibrating, not with reference to an existing but rather to an incipient disequilibrium, that is, to one that would emerge if the parity were not adjusted to an ongoing change in relative incomes and prices. Parity changes that are disequilibrating by intention could conceivably be the result of pressures by export industries and industries competing with imports. These changes would be in the nature of competitive devaluations, designed to create a payments surplus, to accumulate foreign reserves, to increase domestic employment or to "export unemployment". Operational criteria for the distinction may be found in the balance sheets of the banking system, especially the central bank. A downward adjustment of the parity may be intended to adjust for a past or ongoing expansion of the portfolio of domestic assets acquired by the banks and thus to stop or avoid the resulting loss of foreign assets; on the other hand, it may be intended to produce an increase in foreign assets. In the former case, the change is equilibrating, an adjustment to an overexpansion of domestic credit; in the latter case, the change is disequilibrating, designed to engineer an expansion of domestic liquidity and effective demand by means of a more active foreign balance (more exports, fewer imports).

The fourth set of distinctions refers to the voluntary or involuntary character of parity adjustments, all of the intentionally equilibrating kind. (A formula-determined change may still be entirely voluntary if it is neither imposed nor strongly urged by foreign or international bodies.) We may distinguish four degrees of outside influence, ranging from zero to 100 per cent. The parity adjustment is spontaneous if no foreign influence has been exerted in its favor. The adjustment is presumptive — this is Cooper's term — if, on the basis of previous agreements or understandings, this move can be expected as the appropriate reaction to the performance of certain indices and indicators. The presumption may be backed only by

moral force, the adjustment being "the right thing to do", or it may be backed by certain sanctions imposed by other countries or international agencies in order to make nonconformance more unpleasant. Finally, the adjustment may be mandatory, perhaps not only in the sense that the country in question is firmly committed to it under international rules but also that other countries or an international agency have ways and means to enforce the move, for example, by interventions in the foreign-exchange markets (1).

Flexible, Stable, Invariant

Flexibility is often confused with instability. This is understandable since, if flexibility is the opposite of inflexibility or rigidity, it means that it permits variations, and wide variations represent instability. Two illegitimate steps are contained here: one, from permissible potential variations to actually occurring variations; the other, from variations to wide variations. Moreover, two ideas are missing: one, the distinction between variations around a point — oscillations — and trend-like variations in one direction, and, secondly, the indispensable reference to the time period involved — changes from day to day, year to year, or over several years.

Civil engineers know the difference between rigidity and flexibility of materials for use in the construction of high buildings exposed to winds of variable strength, and they must provide flexibility in order to avoid the eventual collapse of the structure. While such analogies may contribute to the comprehension of word meanings, they do not settle the question whether flexible or rigid exchange rates will be more stable in the long run. And this, after all, is one of the questions before us.

History tells us little about the relationship between flexibility and instability of exchange rates. Of course, many countries had very unstable exchange rates in periods when they had flexible rates, but in these periods fixed rates would not have worked at all. History provides examples of very stable flexible rates, and many examples

(1) The international reserve pool (settlements account or conversion account) that I proposed elsewhere was to be empowered to adjust the exchange rates of currencies according to continuous and large accumulations or decumulations of the deposits that the countries in question hold in the pool. See FRITZ MACHLUP, *Remaking the International Monetary System* (Baltimore: Johns Hopkins Press, 1968), pp. 117-118.

of very unstable rates fixed and refixed over time. Certainly, in the long run, fixed rates need not be stable, and flexible rates need not be unstable. Confusion between flexibility and instability must not be tolerated.

This prohibition does not rule out speculation about the effects of greater flexibility in exchange rates upon the psychology, determination, and diplomacy of central bankers. Some hold that heavy losses of foreign reserves under inflexible exchange rates serve as effective warning signals to monetary authorities hard pressed by spendthrift governments and investment-minded businessmen, and that these signals are indispensable for monetary discipline. Others, however, hold that depreciations of the currency in the foreign-exchange market serve as even better warning signals, coming on sooner (if rates are flexible) and more conspicuously. Unfortunately, neither reading the record of the past nor analyzing views and attitudes expressed at present will solve the argument about the future comparative effectiveness of the two kinds of warning signals in inducing greater discipline in monetary and fiscal policy. The question, nevertheless, remains meaningful and relevant even if we cannot answer it now.

A purely semantic question regarding flexibility can and should be cleared up here. Since a foreign-exchange rate necessarily involves two currencies, and since the fixing and pegging of a rate may be the concern of only one of the two countries involved while the other country perhaps does not care whether the rate is held invariant or not, it is logically permissible to say that the exchange rate is fixed from one country's point of view, but flexible from the other country's point of view. This other country, as, for example, the United States, does neither intervene nor hold the rate-pegging country to its interventions in the exchange market; the exchange rate could therefore vary as far as the United States is concerned. Not doing anything to keep the rate from varying, the United States may regard the rate as flexible even if it is in fact inflexible as a result of the pegging operations of the fixed-rate country.

This subjective interpretation of flexibility has probably more often confused than elucidated the issue. It is simpler to regard an exchange rate as flexible only if neither of the two countries in question undertakes to keep it invariant within narrow limits. Since the dollar is the most widely used intervention currency, one should understand, of course, that the decisions about greater flexibility are

up to the countries other than the United States. It should also be understood that a system of greater flexibility does not imply universal flexibility; it means merely that countries are not discouraged from opting for greater flexibility of their dollar-exchange rates. Perhaps only a few countries would find it advantageous to do so. Too many participants in the worldwide discussion of the issue seem to assume that a system of greater flexibility would *compel* their own countries to give up the exchange practices to which they have become accustomed. This is neither implied nor presumed. Countries would be free to fix or flex their exchange rates as they pleased.

Overvaluation, Undervaluation

The reason why some countries may prefer to opt for greater flexibility of the exchange rate of their currency is the realization that a rate fixed at one time at an equilibrium level is unlikely to remain an equilibrium rate very long. All sorts of things happen to transform a correct exchange rate into an incorrect one, at which the balance of payments is chronically in surplus or in deficit — unless adjustment is engineered through inflating or deflating effective demand.

An exchange rate at which a country's basic balance of payments is chronically in surplus may be said to undervalue its currency; an exchange rate at which its basic balance of payments is chronically in deficit may be said to overvalue its currency. Undervaluation is most quickly corrected by means of upvaluation, overvaluation by means of devaluation; but an abrupt change of parity is unlikely to hit upon the correct rate. Moreover, since upvaluations and devaluations involve difficult political decisions, they are usually deferred for too long a time, causing the basic disalignment and imbalance to worsen. Gliding adjustments of the parity are supposed to be easier, causing fewer political difficulties and smaller economic shocks, but this is not my concern at this juncture. The question to which I seek an answer is whether there are any clear criteria of undervaluation and overvaluation, apart from payments surpluses and deficits.

Let us immediately reject as useless the merely impressionistic contentions of so-called experts who give us their own intuitive judgments of the relative values of currencies. Next we must reject the naive valuations by tourists based on their experiences in shopping,

dining, and lodging abroad and at home; the price comparisons of tourists are badly biased and have, in any case, very limited relevance for the balances of payments of large countries. Next in line for rejection are the price-index comparisons by economists who have misunderstood the purchasing-power-parity theory; they have not learned or have forgotten, that the relative prices of internationally traded goods reflect the actual exchange rates, however disaligned, and that the relative prices of consumer goods, the cost of living, do not reflect the relative competitiveness of the countries' industries in foreign trade. Even very special indices, such as wholesale prices of domestic products, labor cost per unit of output, or unit cost of export articles, may tell little about changes in relative competitiveness. Indeed, even if all the price indices of all the countries in question had remained unchanged or had increased by an equal proportion, this would say nothing about the competitiveness of the industries that are most important in the trade of the nations.

The search for criteria is perhaps hopeless, since the concept of competitiveness is not adequate for our purpose as long as it is silent on the attainable sales volumes. At particular prices and exchange rates, a country may be able to "push out" a certain quantum of exports and "pull in" a certain quantum of imports, but its net export surplus may or may not be sufficient to finance the country's capital outflows and unilateral payments. A country's currency may at the same time be regarded as "undervalued", if the country needs no more than an even balance of trade, and "overvalued", if the country needs a surplus sufficiently large to meet payments due on its foreign debts or to finance its direct investments abroad. Any change in net financial transfers (capital balance and balance of unilateral payments) changes the equilibrium value of the currency and therefore transforms a "correct" valuation into an over- or undervaluation.

Several respected theorists in international economics object to this formulation. They prefer to develop definitions under which over- and undervaluation of a country's currency, and under- and overcompetitiveness of its industry, are independent of the financial transfers made and received (or payable and receivable). If there is no agreement on the meanings of these terms, it may be best to forego their use. As a matter of fact, some of us tried hard in our discussions to avoid using any of the ambiguous expressions, but we did not always succeed. Questions came up: "Is the pound sterling

still (or again) overvalued?", "Can the overvaluation of the French franc be remedied, at a tolerable social cost, through adjustment of effective demand?", "Would gradual upvaluations of the German mark suffice to take care of its present undervaluation?". In these and similar questions, the blacklisted expressions popped up and proved irrepressible. (The discussions took place before the franc and the mark were re-aligned.)

Believers in the definitiveness of the verdicts of the free market can point to rather simple criteria: Whenever the supply of foreign currencies is such that a country's monetary authorities have to buy them in order to prevent their prices from falling, these prices evidently overvalue the foreign currencies; for, at the given exchange rates, private demand is not sufficient to take all that is offered in the market. Whenever the demand for foreign currencies is such that a country's monetary authorities have to sell out of their foreign reserves in order to prevent their prices from rising, these prices evidently undervalue the foreign currencies; for, at the given exchange rates, supply from private sources is not sufficient to satisfy the private demand.

The verdict "disequilibrium" on the evidence that the monetary authorities have to buy or sell foreign currencies in order to keep the rates from falling or rising, and thus on the ground of official reserves increasing or decreasing, suggests the kind of evidence that would support a verdict of "equilibrium". The suggestion, however, is wrong. If the exchange rates stay at the announced level while the monetary authorities neither buy nor sell in the foreign-exchange market and their reserves, therefore, remain unchanged, this is not sufficient evidence that the exchange rates are equilibrium rates. For there are several auxiliary techniques that can be used to hide excess supply or excess demand in the market, for example, corrective measures that are taken in the hope that adjustment of effective demand as well as adjustment of exchange rates can be avoided. These corrective measures are ordinarily regarded as only temporary or stop-gap measures, either because they could not be continued very long, or because their continuance would be deemed undesirable. Examples are special intergovernmental transactions and arrangements among central banks; tax incentives or disincentives affecting private capital movements; regulations requiring discrimination in interest rates payable on foreign and domestic accounts; swap agreements (repurchase agreements) between central banks and

commercial banks, shifting foreign currencies from official to private holdings and back; various other devices to attract or repel the inflow of funds, or to encourage or discourage outflows; restrictions or prohibitions of capital exports; restrictions and controls of imports of goods and services.

In resorting to measures of this sort, a government implicitly recognizes that the official exchange rate overvalues or undervalues its currency. For several years I have characterized some of the restrictive measures taken by the United States as "concealed partial devaluations" of the dollar. German government officials have spoken of the border-tax arrangements enacted at the end of 1968 as *Ersatzaufwertung* (substitute upvaluation) of the German mark. Still, the spot rates in the foreign-exchange market remain unchanged and accretions or losses of foreign reserves are avoided or reduced below the volume that would correspond to the extent of the overvaluation or undervaluation.

If then the recorded changes in official foreign reserves do not — as long as corrective measures, restrictions and controls are employed to affect supply and demand in the foreign-exchange market — fully reflect existing over- or undervaluations of the currency in question, what statistical adjustments can be made to get a more reliable picture of the situation?

For a country with an undervalued currency one begins, of course, with the reported increase in official net reserves (minus any new allocations of unearned reserves such as Special Drawing Rights), but has to add the following items: any increase in liquid foreign balances held by commercial banks under swap arrangements with the central bank; all special intergovernmental transactions that made use of official reserves (such as prepayments of foreign loans); outflows of private capital induced by special incentives and inflows averted by special disincentives; imports of goods and services induced by special tax or tariff abatements and exports prevented by special tax levies. (The last items can only be estimated, but such estimates should periodically be furnished by the governments appraising the assumed effectiveness of their balance-of-payments measures.)

For a country with an overvalued currency one has to add to the decrease in official net reserves any new allocations of unearned reserves; any decrease in liquid foreign balances held by commercial banks under swap arrangements with the central bank; all special intergovernmental transactions that augmented official reserves; pri-

vate capital inflows induced by special incentives and outflows averted by special disincentives; outflows of capital prevented by prohibitions and controls; exports of goods and services induced by special tax incentives or other forms of subsidies, and imports prevented by special taxes, tariff increases or surcharges, quota restrictions, or foreign-exchange controls. (Again, several of these items would be estimates, but a requirement for governments to furnish estimates of the effectiveness of their balance-of-payments measures would be very wholesome: if the estimates were low, the restrictive measures would obviously not be justified; if they were high, however, the degree of overvaluation of the currency would be made a matter of record and the fundamental disequilibrium calling for exchange-rate adjustment would become manifest.)

This is still not all. If one recognizes that the balance of payments can be affected by temporary (or even reversible) changes, one will attempt to separate ephemeral items from recurring ones and adjust the balance of official sales and purchases of foreign exchange by the net balance of presumably non-recurring transactions. The verdict of over- or undervaluation of particular currencies will then depend on the experts' judgments as to which items and what amounts can be expected to continue and, thus, to make up the long-run supply and demand in the foreign-exchange market. Of course, such judgments have to be supported by reasoned argument.

The comments on the problem of sizing up the over- or undervaluation of a currency should be relevant for considerations of any kind of exchange-rate adjustment, discrete or gliding, discretionary or formula-determined. However, if so much estimating, guessing, and judging goes into some of the variables employed, the distinction between discretion and formula becomes rather questionable.

The Dilemma of Advocacy: Hard-Sell or Modesty

The advocates of greater flexibility of exchange rates are faced with a dilemma. If they want to "sell" their plans, they must present them with enthusiasm and describe in glowing terms how well they would work; at the same time they may have to make compromises and be satisfied with stripped-down versions of greater flexibility so little different from the inflexible system of today that they cannot achieve what is promised. On the other hand, if the

advocates refrain from making exaggerated claims, if they promise neither perfection nor solution of all pressing problems and, moreover, if they insist on sufficient flexibility to have it contribute decisively to real adjustment in cases of hitherto chronic deficits and surpluses in the balances of payments, then they may not be able to win acceptance for their plans.

Believers in price flexibility thus have a difficult choice to make. Either they encourage the adoption of an insufficiently flexible system, which will consequently disappoint their clients and compromise the theory of flexible exchange rates, or if they are unwilling to make exaggerated claims for their system and to make concessions, they will be unable to get their ideas across. It takes no courage to choose the second alternative: the uncompromising and therefore unsuccessful advocate will always be able to take pride in his fidelity to principles; he will not be blamed for having promised more than could have been delivered; and he can at every crisis tell the world how short-sighted the authorities had been in rejecting his advice. To choose the first alternative is to take several calculated risks, for only with a good deal of luck will the system with less inflexible, but still insufficiently flexible, exchange rates avert some of the crises that would have occurred under the system of "fixed" (abruptly adjustable) rates; regarding any crisis that is averted, it will be impossible to prove that there would have been a crisis had exchange rates been even less flexible; and regarding any crisis that is not averted, it will be impossible to convince the critics that the crisis is the consequence of too little flexibility and not of too much.

Assume, to illustrate the point, that the men in charge of international monetary arrangements are willing to accept a band of a total width of 4 per cent with no glide of parity. What are the chances for such a system of "greater flexibility" to work? Since the effects of such small variations in exchange rates upon the flow of goods and services (real adjustment) are probably not very large and only some effects upon capital flows (financial correctives) can be expected, the slightly widened band would be only a minor improvement. It would be ineffective in preventing progressive disalignments that result from a consistent divergence in the rates of price inflation in different countries. Thus, while a few difficulties arising from minor disturbances might be mitigated or avoided, the problem of fundamental disequilibrium unadjusted for many years would remain. When then the inevitable crisis of confidence arrives,

some "authorities" would no doubt blame the crisis on the departure from the good old system of the narrow band.

Is this risk worth taking? The advantages of a band only slightly widened are probably too small relative to the risk of having the "experiment" wrongly interpreted. What degree of flexibility should the believer in greater flexibility of rates regard as the minimum acceptable? To decide how flexible he ought to be in accepting a compromise, he might consider the relative probabilities of disequilibrating changes to be large or small, continuing or reversible, reinforced or offset by policy measures.

It must be taken for granted that there will always be disequilibrating changes. To mention the most likely ones, there will be discrepancies between national rates of demand inflation as well as price inflation (2); there will also be different rates of growth, with different income elasticities of demand for imports and with different biases toward import-competing, export-oriented, and foreign-trade-indifferent industries; in addition, there will be shifts in demand, in labor supply, and several other things affecting the flow of goods and services at given exchange rates; and, last not least, there will be changes in the international flow of capital. All these changes can be countered by monetary and fiscal policies adjusting aggregate demand. However, adjustment through absolute deflation of effective demand in deficit countries is practically impossible for social and political reasons, and adjustment through price inflation in surplus countries is not very popular either. The question is now whether in most instances the effects of the disequilibrating changes can be effectively countered by alterations in exchange rates within the range of flexibility afforded by the band or crawl conceded by the monetary authorities. If the bulk of the rate adjustments that would be required by the disequilibrating changes can with ease be accommodated by the compromise arrangement, the system will work almost as well as if it allowed even greater flexibility. If, however, most of the required rate adjustments would be too big to be accommodated by the permitted flexibility, there will be troubles similar to those arising at inflexible (abruptly adjustable) rates. The troubles under more flexible rates may be just a little less severe, because of the greater

(2) I stress the distinction because demand inflation may be much more effective in causing deficits in the balance of payments than price inflation, which in fact is mitigated by the deterioration of the balance of trade. In open economies prices need not rise as the excess demand spills over into other countries.

risk for speculators and the modicum of adjustment achieved in the more elastic fringes of the current account.

The relative importance of wider band or gliding parity depends on which type of disequilibrating change will be dominating. If we believe that discrepancies in the rates of demand inflation will be the most persistent causes of imbalance and that the inequality in the tempo of inflation will be consistent — say, that there will be consistently less inflation in Germany than in France — then a gliding parity would be more important than a much wider band. If we believe, on the other hand, the disequilibrating changes will take turns in pushing particular economies first one way and then another, a wide band would be the thing to have.

Judging from the experience of the past few years, one may say that a realist should vote for a glide of parity with a wider band, that is, a gliding widened band. And, to be more specific, he should vote for a glide of about $1/26$ of 1 per cent a week, which would add up to some 2 per cent a year, and for a band of a total width of no less than 5 per cent of parity. In explaining his vote, he should make clear that even this degree of flexibility cannot take care of all eventualities. Revolutionary wage boosts, ratified by a policy of demand expansion, cannot be fully countered by exchange-rate variations within the voted limits, unless they are followed by a wage stop at home and demand expansions abroad. Likewise, it may not be possible by means of exchange-rate adjustments of the specified extent to equilibrate the foreign-exchange markets in the case of sudden large shifts in international capital movements.

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