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The Upward Crawling Peg:
An Economic Evaluation

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This paper proposes to review the arguments in favor of the proposal that the upward crawling peg be recognized under the Fund's procedure and become available as an optional exchange-rate arrangement to its members. It will not consider the general case for the symmetrical crawling peg. Instead, it will be limited to the merits of the view that upward changes in parities on a step-by-step basis might be less disruptive, under some circumstances, than a sizeable one-for-all parity change every few years, especially for those countries which, in Dr. Emminger's words, "deliberately opt out of the international price trend" (i.e. seek greater stability in their domestic price level).1/

The key conception common to such proposals is the introduction of some sort of bias, either in international procedures or in presumptive criteria, which would make it easier for the surplus country to come to a decision to change its parity and, hence, would help to reduce the strains within the international system produced by protracted delays to make parity adjustments. Under this arrangement, downward crawls could occur but they would be subjected to more restrictive rules or criteria. This paper will review the economic arguments in favor of such an approach.

1/ Otmar Emminger, "The exchange rate system re-examined," <u>Euromoney</u>, August 1969, p. 6.

What is contemplated in this paper, then, is a system under which only a limited number of currencies would be considered candidates for a crawl at any time and not a system under which all countries might be expected to crawl on a regular basis, without discrimination as to direction, as needed. Even if a convincing argument can be advanced on economic grounds in support of such an arrangement, however, the question of <u>how much</u> asymmetry as between upward and downward crawls should be introduced into formal international procedures would still have to be settled.

Within the established principles on consultations between the Fund and its members on any exchange-rate action, a preference would be introduced in favor of a discretionary upward-crawl option by a surplus country, either to correct an existing "surplus disequilibrium" or to forestall one. From an international point of view, an important purpose of the upward-biased crawl would be to reduce a devaluation bias now presumed to exist in the international financial mechanism. To this end, international agreement would be needed not only on the procedures for international consultation under which surplus countries could use this facility but also on the terms and conditions under which deficit countries would be authorized to crawl down. These questions are outside the scope of this particular paper.

<u>Summary of the main proposals</u>

The upward-crawl option of the crawling peg was first proposed by the Council of German Economic Experts in their Report for 1966-67 as a means of easing Germany's particular difficulties of maintaining domestic price stability in a inflation-biased world economy. Their suggestion was at first rather neglected but began to receive attention once the Franco-German deadlock over exchange-rate action in November-1968 had demonstrated that the price disparities among the industrial countries had longer-run implications for exchange-rate policy among them.

Perhaps the first rounded defense of this approach was Professor Fellner's proposal for a "three-fold limited exchange-rate flexibility" in a paper in mid-May 1969 prepared for the Burgenstock group of academic and private economists and banking officials.[1/] Specifically, he suggested that the form of limited exchange-rate flexibility which appeared to have the best chance of being considered by policy makers would be "limited in <u>extent</u> ..., limited to <u>upward</u> flexibility <u>in relation to the dollar</u>, and limited to a <u>very small number</u> of currencies for which this gradual upward flexibility would be put into effect by specific policy decision." (Italics in original.)

1/ William Fellner, "A 'Realistic' Note on Threefold Limited Flexibility of Exchange Rates" in <u>Approaches To Greater Flexibility of Exchange Rates: The Burgenstock Papers</u> edited by George N. Halm (Princeton: University Press, 1970) pp. 237-244.

In his original article, Fellner had discussed the upward crawling peg primarily as a means by which a limited number of European countries could terminate their unwanted dollar accruals in a way acceptable both to them and to the United States.[1/] A downward crawl was specifically excluded. But he has since broadened his proposal to recommend that the Bretton Woods system be modified to assure a greater flexibility of exchange rates. During the transition, "the promising candidates for a start" would be "the countries whose currencies, at the time of the changeover to greater flexibility, would be tending upward in relation to the dollar."[2/] Countries with a record of stability with the dollar could join without creating the risk of "instability" for the new system; but countries with a record of overvaluation followed by discrete devaluations ought to "acquire a different record <u>before</u> introducing market flexibility" (i.e. of the "band-and crawl" variety) into the relation of their currencies to the dollar (p. 19).

Dr. Emminger of the German central bank based his advocacy of a discretionary upward crawl option for surplus countries on the same grounds as the Council of Experts: a German sensitivity to inflation which makes it a special case among the industrial countries.[3/] Since

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<u>1</u>/ <u>Ibid</u>., pp. 11-13.

<u>2</u>/ William Fellner, "Specific Proposal for Limited Exchange-rate Flexibility" (to be published in <u>Weltwirtschaftliches Archiv</u> March 1970), mimeograph, p. 19.

<u>3</u>/ Otmar Emminger, "The exchange rate system re-examined," <u>Euromoney</u>, August 1969, pp. 5-7.

1962, Germany had enjoyed better price stability than the average of industrial countries: the disparity in favor of Germany during this period -- as measured by the cost of living, by wholesale prices, and by export unit values -- was a rough order of magnitude of about 7 per cent on the average among these countries. He maintained that public opinion in Germany was not prepared to accept average annual price increases greater than 2%; hence, the persistent tendency for prices to rise more rapidly than this in the United States and elsewhere left German policymakers with a choice between unwanted reserve accruals and a D-mark revaluation. Furthermore, he was convinced that repeated *ad hoc* revaluation, such as would be required under the adjustable peg, would not be tolerable. Accordingly, he recommended a process of step-by-step adjustment of parities over an extended period for surplus countries; but he would have inflation-prone countries authorized to crawl downward only under very special circumstances and under close surveillance by the IMF.

Dr. Holtrop supported the Emminger approach as a policy option for a surplus country on the basis of his long-standing conviction that the adjustment process, as it has worked over the past decade, has had an unacceptable inflationary bias for surplus countries. In his view, the surplus countries have "generally lived up to the prescription of the Brookings Institution Report and allowed their economies to be inflated by their surpluses without putting up too much resistance"1/ but the deficit countries have not accepted a symmetrical adjustment responsibility. Hence, he wrote:

> "I would certainly rejoice in seeing an innovation in the system that would bring to a potential surplus country the option between either combining a less inflationary behavior with a gradually rising parity, or sticking to a fixed parity, but then accepting on one's own responsibility the inflationary consequences thereof." 2/

As a technical measure rather than an alternative adjustment mechanism, Chittenden has proposed a limited change in exchange rate practice which could be a supplement to either an adjustable-peg or to any variant of the crawling or sliding parity.3/ Fund members would be given the option of enlarging the band at its upper limit by 2% but be required to hold the lower limit for the spot rate unchanged. Under this proposal, the authorized margin of fluctuation for the spot rate would remain 1% below, but could become 3% above, the par value at the option of the country during periods when the balance of payments was strong or when unwanted capital inflows were threatening the existing parity. This approach is intended to reduce the severity of the recurrent

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1/ M. W. Holtrop, "The Balance of Payments Adjustment Process, Its Asymmetry, and Possible Consequences for the International Payments System," in Approaches to Greater Flexibility, op. cit., p. 138.

2/ Ibid., p. 143.

3/ George H. Chittenden "Asymmetrical Widening of the Bands Around Parity" in Approaches to Greater Flexibility, Ibid., pp. 245-249.

crises of under-valued currencies and to discourage temporary short-term capital inflows into such currencies during such episodes.

The case for an upward crawling peg

The arguments in favor of allowing surplus countries to move their parities upward in small steps can be grouped under five main headings. Such an arrangement would:

a. Help correct a devaluation bias presumed to be found in current exchange-rate arrangements;

b. Recognize the asymmetry, in their international competitive aspects, between appreciation and devaluation;

c. Have the advantage over a symmetrical crawling peg of avoiding what is regarded as a greater probability of a disorderly adjustment process with a downward than with an upward crawl;

d. Have the further advantage of avoiding situations of a double interest-rate constraint because two partner-currencies might crawl in an opposite direction under the two-way crawling-peg system; and

e. Provide the surplus country with an option more satisfactory than those available under the adjustable peg in those cases where its internal prices have been advancing, and are confidently expected to continue to advance, more slowly than those of its trading partners.

Devaluation bias under adjustable peg

The argument that there is a devaluation bias under the adjustable-peg system is usually put in terms of the number and direction of exchange-rate actions. Between 1945 and 1970, the changes in par value by members of the Fund were one-sided: some 60-odd devaluations and only five revaluations.1/ But this evidence must be qualified in at least two major respects. First, the devaluations of the major European and numerous other currencies in September 1949 might be excluded on the grounds that they were unavoidable transitional adjustments to the near-term effects of World War II: they were, in essence, differential rates of revaluation of the dollar against the principal European currencies. On the other hand, they would reflect a devaluation bias in those cases where the amount of devaluation could be regarded with hindsight to have been excessive. Secondly, there was a marked contrast after 1950 between the less-developed countries which made relatively frequent use of devaluations as an instrument of external payments adjustment and the more-developed countries which sought, especially up to mid-1967, to avoid exchange-rate action altogether, either upward or downward.2/

1/ See, for example, the speech of U.K. Chancellor of the Exchequer Roy Jenkins at I.M.F. Annual Meeting in Washington, on September 30, 1969.

2/ For a summary of the use by Fund members of exchange rate adjustment between 1946 and 1965, see Margaret G. de Vries "Exchange Rate Adjustment" in The International Monetary Fund 1945-65, Vol. II: Analysis (I.M.F., Washington, 1969) pp. 90-121.

The actual changes in par value among the industrial and selected less-developed countries between 1950 and 1969 are summarized in Table 1. Among the Group of Ten countries, there was similarity in terms of frequency of adjustment after 1949 -- three instances of devaluation (France in 1957-58; the United Kingdom in 1967; and France in 1968) and three of revaluation (Germany and the Netherlands in 1961; and Germany in 1969). In magnitude, the devaluations ranged between 11 and 29% and the appreciations between 5 and 10%. (See Table 1.) Even if we exclude the French devaluations in 1957-58 and limit our attention to exchange-rate actions only between the years, 1960 and 1969, we find a net weighted change in par value in a downward direction, the coefficient of the weighted change being -1.03, according to estimates of the International Monetary Fund. (See Table 2.) Outside the Group of Ten, there were no appreciations among the other European or selected non-European countries shown in Table 1; the devaluations ranged from 8 to 24% among the European, and from 20 to 37% among the non-European, countries. (See Table 1.)

<u>Changing views about role of changes in parity</u> - Among the Group of Ten countries, the adjustment process under the adjustable-peg system, as it was interpreted in practice, operated primarily through domestic monetary and fiscal restraints and selective controls on private capital flows (combined with substantial international emergency credits) and not through changes in existing par values, either downward or upward. There was a deliberate attempt among them to remove the exchange rate as a major instrument of adjustment policy.

Table 1

Changes in par value in selected countries, 1950 to 1969

	Country	Date of Action	Change in par value (in U.S. cents per unit of local currency)	Percentage change: Appreciation	Percentage change: Depreciation
I.	Group of Ten Countries:				
	France	[1957 (Aug. 11)	[From 28.571 to 23.810 U.S. cents		[(16.7)
		1958 (Dec. 28)]	From 23.810 to 20.255 U.S. cents]		(14.9)]29.1
		1969 (Aug. 10)	From 20.255 to 18.0044 U.S. cents		11.1
	Germany	1961 (Mar. 6)	From 23.8095 to 25.000 U.S. cents	5.0	
		1969 (Oct. 26)	From 25.000 to 27.3224 U.S. cents	9.3	
	Netherlands	1961 (Mar. 7)	From 26.316 to 27.624 U.S. cents	5.0	
	United Kingdom	1967 (Nov. 18)	From 280.000 to 240.000 U.S. cents		14.3
II.	Other European countries:				
	Denmark	1967 (Nov. 21)	From 14.478 to 13.333 U.S. cents		7.9
	Finland	1967 (Oct. 12)	From 31.250 to 23.810 U.S. cents		23.8
	Ireland	1967 (Nov. 18)	From 280.000 to 240.000 U.S. cents		14.3
	Spain	1967 (Nov. 20)	From 1.6667 to 1.4286 U.S. cents		14.3
III.	Selected other countries:				
	India	1966 (June 6)	From 21.000 to 13.333 U.S. cents		36.5
	New Zealand	1967 (Nov. 20)	From 139.045 to 112.000 U.S. cents		19.5
	Mexico	1954 (Apr. 19)	From 11. 5607 to 8.000 U.S. cents		30.8

Source: International Monetary Fund International Financial Statistics (monthly). A summary of the magnitude of depreciation by the 105 members of the Fund by degree of depreciation between end-1948 and end-1965 is found in The International Monetary Fund, 1945-1965, Volume II: Analysis, (I.M.F.: Washington, 1969), Table 3, p. 112.

Table 2

The Balance Between Revaluations and Devaluations Among Industrial Countries, 1960-69
(in per cent)

Date and Country		Change in par value	Country share in exports of industrial countries a/	Weighted change in par value (1) x (2) / 100
		(1)	(2)	(3)
1961	Germany	+ 5.0	15.2	+ 0.76
	Netherlands	+ 5.0	5.2	+ 0.26
1962	Canada	-11.8 b/	7.3	- 0.86
1967	United Kingdom	-14.3	10.4	- 1.49
	Denmark	- 7.9	1.8	- 0.14
1969	France	-11.1	8.3	- 0.92
	Germany	+ 9.3	16.1	+ 1.50
			Net weighted change in par values of industrial countries, 1960-69	- 0.89

Source: The Role of Exchange Rates in the Adjustment of International Payments, International Monetary Fund, Washington, 1970, p. 39.

a/ In year of parity change.

b/ Par value adopted in May 1962, compared with level of floating exchange rate in January 1960.

But this policy emphasis was altered after mid-1967. Since then, officials in the Group of Ten countries have been willing to accept more flexibility in exchange rates than they had earlier been prepared to do. Hence, the 1958-1967 experience is not a guide to the choices among adjustment policies likely to be made during the 1970's.

Parity changes and the adjustable peg - Apart from the record of actual changes in parity, economic theory has recognized that, under any fixed exchange-rate system, the incentives for devaluation can be much more powerful than those for revaluation. In other words, the deficit country (which is the reserve loser) is more likely to be forced unwillingly to devalue than the surplus country (which is the reserve-gainer) is to be forced unwillingly to appreciate. Further, officials in the devaluing country tend to select a new parity which is low enough to allow a margin for absorbing the effects on domestic prices and costs of the devaluation itself and also to appear to the market to be defensible; by contrast, officials of a revaluing country have an incentive to limit the increase in parity, both on international competitive and on domestic political grounds.1/

As a practical matter, this pattern of incentives is much reinforced by the wide acceptance of the view that the burden of adjustment falls, and should fall, more heavily on the deficit than on the surplus country. In President Blessing's words,

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1/ This comparison is further amplified on pages 17 and 20-21.

> "It has been asked whether it would not be more appropriate for the sick to devalue than for the healthy to revalue ... Until a few years ago, it had been my opinion that the sick ought to undergo an operation and not the healthy. 1/

Gradually, as he faced the domestic inflationary effects of Germany's enormous export surpluses, Herr Blessing came to change his mind: in 1968 he was led to recommend the revaluation of the DM because, in his words,

> "I have since been forced to admit that we live in a world which is not longer ... prepared to accept really severe disinflationary measures, and that the healthy can protect himself against inflation only by means of a change in parity." (Ibid.)

But the practical or moralistic judgment that deficit, and not surplus, countries ought to initiate adjustment action was to be repeatedly expressed in the debate over revaluation in the German election campaign in September 1969. It was, in fact, a major argument advanced to justify opposition to a revaluation of the DM. As it turned out, advocates of revaluation assumed Federal power after the election. Had the parties which opposed revaluation been returned to office, a DM appreciation might not have occurred. In short, the German decision in 1969 to revalue depended on a course of domestic political events there which might easily have turned out differently.

For this reason, the willingness of the German authorities to revalue on two occasions since 1960 cannot be regarded as evidence

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1/ Herr Karl Blessing, President of the Bundesbank, speech before the German Cooperatives at Mainz on October 10, 1969.

that there is no devaluation bias in current international financial arrangements. But a devaluation bias, to the extent that it exists, can probably be found only among the exchange rates of a small number of industrial countries. So far as exchange-rate practices among the less developed countries are concerned, as Woodley has pointed out, "the principal policy question ... is why less-developed countries almost consistently err on the side of maintaining over-valued currencies."[1/]

<u>World price effects of a devaluation bias</u> - An unwillingness of surplus countries to revalue (even in a position of "fundamental disequilibrium") enough to offset fully international price disparities, or any general tendency for deficit countries to devalue more than would be needed merely to offset them, would have at least two major adverse implications for the world economy: (a) they would accelerate the rate of increase in international prices; and (b) they would threaten the U.S. dollar with progressive overvaluation.

To the extent that the upward crawl option did in fact encourage surplus countries to make greater use of revaluation than they would have done without it, it would help to reduce the domestic price effects in those countries from "imported inflation." These effects have been the basis for the inflationary bias for surplus countries which Holtrop has found in current international financial arrangements.

1/ W. John R. Woodley "Some Institutional Aspects of Exchange Markets in the Less-Developed Countries" in <u>The International Market for Foreign Exchange</u>, edited by Robert Z. Aliber (New York: Praeger, 1969), p. 177.

On the other hand, a reluctance by surplus countries to revalue would force trading partners to devalue either more often, or in greater amounts, than they otherwise would. Any "excess" devaluation would merely add further upward pressures on domestic prices in the devaluing country. When they are generalized by any worldwide tendency toward "excessive" devaluation in a number of countries, these pressures would have a ratchet effect on price levels in all trading countries.

An unwillingness on the part of chronic surplus countries to revalue might also encourage deficit countries to seek to avoid measures of additional domestic deflation and to choose instead direct controls or devaluation to strengthen the balance of payments. Governments in deficit countries might be further encouraged by such a policy to depend too heavily on restrictions or on changes in the exchange rate, and too little upon internal discipline, in their national policies. It was largely on the basis of this fear that Emminger proposed that a downward crawl be authorized only after the policies of the deficit country had been the subject of careful international scrutiny but that upward crawls be more freely permitted.

Effects on U.S. external payments position - The initiative for exchange rate adjustment within the international monetary system will continue to lie with countries other than the United States, so long as the dollar is the major reserve and vehicle currency. In this situation, even if the U.S. price performance was no worse than the average of other industrial countries, there would be danger of a progressive overvaluation of the dollar to the extent that surplus countries were unwilling to revalue (even in a position of "fundamental disequilibrium") as readily as deficit countries were prepared to devalue. U.S. goods would then face intensified competition in foreign markets from the products of surplus countries which had achieved consistently lower annual rates of cost or price increases and from countries that devalued excessively.

Competitive factors and changes in parity

Recognition of the asymmetry, in their international competitive aspects, between an appreciation and a devaluation is a second argument in favor of an upward crawling peg option. The act of devaluation has the immediate effect of worsening the competitive position of one's trading partners in international trade (even though it may be fully justified by a prior loss of competitiveness on the part of the devaluing country), and the prevention of any cycle of competitive devaluation was set forth as a major objective of the International Monetary Fund. In the decision about the level of any new parity, officials in a country desiring to devalue must consider the effects of the action on trading partners and often attempt to get in advance some estimate of the tolerances which those partners would consider to be reasonable. In this sense, international consultation -- whether systematic or *ad hoc* and whether multilateral or bilateral -- can be regarded as an integral part of the process through which officials in a major industrial country would reach a decision to devalue the currency.

By contrast, appreciation by a major industrial country could not worsen the competitive position of any of its trading partners. For this reason, officials have no competitive reason for prior consultations with partners in the case of a decision to appreciate. The Emminger proposal that the process of multilateral surveillance be much stricter and more explicit for a downward-, than for an upward-, crawl can be regarded in part as a recognition of these practical facts.

The case for less I.M.F. control over upward, than over downward, changes in par value is further supported by the fact that a deficit country whose prices are advancing more rapidly than those of its neighbors had the alternative of terminating this process by a more effective domestic stabilization effort; but a surplus country whose prices are rising more slowly than those of its trading partners is in the position where, in Blessing's words, "the healthy can protect himself against inflation only by means of a change in parity."[1]

1/ Blessing, *op. cit.*

<u>Upward and downward crawls: effects on expectations</u>?

The third argument in favor of an upward crawling peg maintains that the effects of a crawl upon expectations are more likely to be destabilizing when the crawl is downward than it is when the crawl is upward. The crawling peg is unique among variants of a par-value system in that the spot rate is in motion in periods of <u>imbalance</u>. That is, the exchange rate would be in motion when it was needed to keep -- or to restore -- a sustainable balance in a country's external payments. But we cannot assume that the movement of the exchange rate under the crawling peg from one par value to another will always be orderly and without disturbance. In practice, the stability of that adjustment process may largely depend on the question: will the crawl itself have effects on expectations which are stabilizing or destabilizing?

There are two grounds to support the proposition that exchange-market uncertainties would be less likely to be substantial when the spot rate was crawling upward than they would be when it was crawling downward. In the first place, it is easier for a country to postpone -- or avoid -- a revaluation than a devaluation. That is, under any variant of a par-value system, the surplus country (which is the reserve-gainer) is less likely to be forced unwillingly to appreciate than the deficit country (which is the reserve-loser) is to be forced unwillingly to devalue.[1/]

1/ The pressures on the deficit country would be reduced under the crawling peg to the extent to which recycling or other financing commitments were introduced.

Secondly, the adjustment process under an upward crawl can accommodate policies of internal expansion or, as a minimum, less rigorous policies of restraint than would be needed if no change were made in the parity, whereas measures of restraint are required to support a downward crawl because of the inflationary effects of the devaluation itself. Because of the expansionary factors associated with a reduced exchange parity, a devaluation is never an "easy option" or an alternative to domestic restraint but can succeed only when it is supported by an effective program of demand management.

The fact that measures of expansion are more popular than those of internal restraint makes it easier to pursue appropriate internal policies with an upward-, than would be the case with a downward-, crawling currency. Even when the authorities recognize the need for effective stabilization to support a downward crawl, doubts could arise either about (i) their will (or powers) to control domestic spending aggregates or to apply an incomes policy; or (ii) the effectiveness of the measures they actually take to do so. These doubts would be much strengthened when the country whose currency was crawling down had over an extended period experienced a deterioration in its cost and competitive position and/or short-term miscalculations in demand aggregates. Under the adjustable peg, the effects of such uncertainties were apparent in the U.K. devaluation in 1967 when the British stabilization effort, despite its broad base, was not fully effective in strengthening expectations. On the other hand, this line of analysis would not be a valid basis for denying the option of a downward crawl to a country which could reasonably be expected to maintain confidence in its proposed crawl.

Avoidance of double interest-rate constraint

It has been widely recognized that, to forestall short-term capital movements under a crawling peg, the central bank might find it necessary to neutralize the incentive to transfer funds elsewhere by adjusting local interest rates to offset the crawl incentive. How much of a constraint on domestic monetary policy this factor might actually prove to be has recently been the subject of some differences of view among economists.1/

For our present purposes, questions about the degree of constraint to be expected, whether formulated in general terms or in terms of a specific situation, are of secondary importance. There are in general four ways of dealing with, or offsetting, the effects on domestic credit policies of any such incentive for movements of funds:

a. To accept the constraint by adjusting domestic monetary policy;

b. To adjust domestic monetary strategy to permit needed changes only in selected short-term interest rates;

1/ See, as an example, Thomas D. Willett, Samuel I. Katz and William H. Branson, Exchange-Rate Systems, Interest Rates and Capital Flows, Princeton Essays in International Finance No. 78, January 1970.

c. To use fiscal devices and selective controls to offset the incentive; or

d. To negotiate intergovernmental recycling credits to finance any crawl-induced private capital flows.

The fourth argument in favor of an upward crawling peg is arithmetical in its simplicity: that the difficulties of adjusting to a crawl-incentive factor would be much less substantial where only an upward movement could take place than they would be where two currencies were able simultaneously to move in different directions (against the dollar). The conflicting adjustments between the French franc and the DM needed to restore external balance in late 1968 may serve to illustrate how the latter situation could arise.

Anticipated price disparities and revaluation

Its usefulness as an option to deal with anticipated near-term price disparities of a particular character is the fifth argument in favor of the upward crawling peg. The adjustable peg imposes an undesirable rigidity in adjustment policy in the particular circumstances of the surplus country whose prices have been advancing, and are expected to continue to advance, more slowly than those of its trading partners.

Such a country has a special difficulty under the adjustable peg in using revaluation as a balance-of-payments corrective. If the authorities select a new par value which merely corrects existing price disparities, they might soon face a second revaluation. In Emminger's words,

> "When a revaluation of the Deutsche mark recently was under discussion in Germany, it was justly argued that an up-valuation would correct only the already existing disparity and that it would not prevent a new disparity in favour of the Deutsche mark from arising in the near future. Thus the process of *ad hoc* revaluation would have to be repeated from time to time, *a proposition which is simply unacceptable*. (Italics in original). 1/

Under the adjustable peg, the country could avoid this tendency toward repeated parity changes only by choosing an amount of revaluation in the new parity which also corrected for anticipated near-term price disparities. But such an action could intensify post-revaluation private capital outflows to the point where the magnitude would come to be regarded as excessive; it could also impose disruptive adjustments on the domestic economy both through worsening the competitive position of exports and through introducing deflationary impulses on business activity. It could also aggravate the political opposition to any exchange-rate action whatsoever.

In analytical terms, of course, a similar line of argument can be applied to a country whose prices have been advancing, and are continuing to advance, more rapidly than those of its trading partners. In practical terms, however, the difficulties of selecting a sufficiently

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1/ Emminger, *op. cit.*, p. 6.

large change in parity under the adjustable peg are somewhat less serious in the case of a devaluation than in one of revaluation. For the authorities are usually encouraged, in a devaluation situation, to select a new par value which is lower than would be needed merely to correct <u>existing</u> price disparities. They usually choose a lower par value on four grounds: to avoid a second devaluation; to anticipate the inflationary feedback of the devaluation process on local prices/costs; to obtain the support of the business community which will welcome the improved competitive position of exports in foreign markets; and to induce short-term capital inflow (on the basis of expectations that the country will be able to maintain the reduced parity).

These considerations are much altered in the case of a revaluation. In the case of an appreciation, the authorities can:

a. Be less fearful of a second revaluation than the authorities in a devaluing country need be of a second devaluation;

b. Select a lower increase in parity to the extent that they anticipate the deflationary feedback from the revaluation;

c. Anticipate that the business community (fearing domestic deflation and loss of foreign competitiveness) will be more critical, the larger the amount of the revaluation; and

d. Expect capital outflows -- not inflows -- after revaluation, which would be larger, the greater the appreciation.

In situations of continuing differential price trends, in brief, the authorities have difficulties in selecting any sustainable parity under the adjustable peg. For such circumstances, the symmetrical crawling peg, moving in either direction as appropriate, appears to offer some advantages as compared with the adjustable peg. The case for a preferential option in favor of an upward crawl would have to rest on the proposition that it is somewhat more difficult under the adjustable peg for the surplus country to compensate for such price disparities through exchange-rate action than it is for the deficit country.

Concluding observations

The desirability of a careful analysis of proposals to make it less difficult for surplus countries to come to an early decision to revalue is underscored by the recent German experience. For the delayed decision to act produced a massive build-up of private capital inflows, which were subsequently reversed, and an accumulation of domestic inflationary pressures which had not begun to diminish several months after revaluation.[1/]

Special factors in German experience - Three special factors contributed to substantial German reserve losses after revaluation. They included: (a) the acute credit stringency in the United States, which contributed to high yields on Euro-dollar deposits; (b) the strengthening of confidence in other parities so that sterling and

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1/ Monthly Report of the Deutsche Bundesbank, February 1970, p. 8.

French franc assets which had not been promising despite high yields, because of the exchange-rate risk, became attractive again; and (c) the delay in the German decision to revalue.

The protracted internal debate over revaluation contributed to an unprecedented accumulation of "hot money" in DM assets which was certain to be highly volatile. These accumulations were over an extended period and were so substantial as to raise doubts about the true level of Germany's reserves at the time of revaluation. The subsequent outflows comprised the liquidation of speculative claims -- estimated by the Bundesbank at around DM 19 to 20 billion (p. 5) -- and post-revaluation German capital exports as well.

The delay in revaluing helped inflationary pressures to build up in the domestic economy. The massive export boom after 1966 produced two clear time-paths of inflationary reaction within the economy:

a. From the spurt in export demand to the peak in investment and then in consumer demand; and

b. From the overheating of the labor market, set off by excess demand, to an eventual crest in the wage spiral.

The wage spiral was a delayed process and its momentum might have been reduced, or avoided, had corrective action been taken sooner. Furthermore, once underway, a wage-price spiral tends to acquire a momentum of its own. Price and wage advances may continue for a substantial period after the expansion in aggregate demand has slowed down, or even halted. In this way, a price-wage spiral may slow down only with a significant time-lag, once it acquires an independent momentum.

<u>General aspects of German episode</u> - At the same time, the options open to the German authorities were limited under existing exchange-rate arrangements. Short-term influences, associated in part with the extended debate over the decision to revalue, obscured the facts about Germany's underlying economic position and made it more difficult to agree on the parity for the DM appropriate for the longer term. Once the par value had been selected, on the other hand, the same speculative capital inflows which had previously strengthened the DM would begin to be repatriated and become a source of weakness for the DM in the post-revaluation period. These uncertainties were exacerbated by the fact that Germany had been achieving a superior price performance for an extended period, compared to its major trading partners, and was widely expected to continue to do so. As a result of these expectations, there was talk of "the possibility of another revaluation of the mark, though this will definitely not be in 1970"[1/] even before the German and the international economy had adjusted to the revaluation.

In summary, the German experience underscores the importance of trying to find ways by which surplus countries -- when they wish to

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1/ The Financial Times (London), January 9, 1970, p. 1. The <u>Neue Zuercher Zeitung</u> later reported that in Germany "specialists in economic trends are now talking of the next mark revaluation" (April 29, 1970, p. 15, as summarized in I.M.F. <u>Morning Press</u>, May 4, 1970.

do so[1/] -- could more readily in the future than in the past be able to employ revaluation as a means of reconciling domestic and international stabilization objectives. One such procedure, the introduction of an upward-biased crawl, would be _intended_ to give a surplus country an alternative to the large one-step parity change under present international arrangements. Where the alternative to the utilization of an upward crawl would either be no revaluation, or one excessively delayed, such an option might clearly be advantageous for the international financial community in general. On the other hand, surplus countries would have to be interested in using this option; authorization of such a procedure could, by itself, do no more than promise to make it a little less difficult for a surplus country to decide on a change in parity in the future than they have found it to be in the past.

1/ The heavy costs involved in delays in making needed changes in parities were stressed by the Fund's Managing Director Schweitzer in a speech on "The Changing International Monetary System," I.M.F. _International Financial News Survey_, May 29, 1970, p. 171.