Alternative Approaches to International Surveillance of Exchange-Rate Policies

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I. Introduction

How can we best attempt to ensure that national governments do not abuse the freedom generated by floating-exchange rates by engaging in beggar-thy-neighbor policies to overdepreciate their exchange rates or unduly retard the operation of the international adjustment process by maintaining an overvalued exchange rate? The major purpose of this paper is to develop a basis for choosing among the major alternative approaches which have been proposed for the international surveillance of national exchange-rate policies. The following section attempts to characterize the basic logic of the alternative approaches and isolate the major causes of differences of views among the advocates of alternative approaches. Emphasis is placed on political as well as technical economic considerations. In the third section, I briefly discuss my own views of the evidence on several economic issues which lead me to personally favor the judgmental case-history approach which has been adopted by the International Monetary Fund. The final section emphasizes the importance of strengthening the role of the I.M.F. in the international surveillance process if the judgmental approach is to be effective.

The major alternative approaches which have been suggested for the international surveillance of national exchange-rate practices under managed floating can be functionally classified under five categories:

1) reserve indicators
2) target zones
3) reference rates
4) leaning against the wind
5) judgmental assessment or the case-history approach

Proposals for allocating current-account positions will be discussed as a variant of the target-zone approach.

As a first approximation we can consider the major objective of all of these proposals to be to limit the emergence and persistence of disequilibrium or incorrect exchange rates. All of the proposals are concerned with the possibilities of government policies creating such disequilibrium. Some are also concerned with possible deficiencies in private market behavior, for example, due

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to poorly behaved private speculation or externalities, which would require government intervention to establish correct exchange rates. The supporters of the various proposals have different views about the relative seriousness of these two types of causes of incorrect exchange rates, about methods of attempting to detect or estimate disequilibrium and correct exchange rates, and about the political and management problems involved in attempting to implement the alternative proposals.

The *reserve-indicator* approach takes reserve movements as the best indicator of government-induced disequilibrium in the foreign-exchange market and seeks to set limits on the amount of such intervention. A reserve-indicator approach to international surveillance of the adjustment process was advocated by the United States in the early stages of the post-floating negotiations on international monetary reform. It has a history going back at least to Keynes and was recommended by Mikesell and Goldstein in their recent analysis of rules for a floating-rate regime.[1]

The *target-zone* and *reference-rate* approaches seek to establish internationally agreed levels or zones for appropriate exchange rates. The target-zone approach focuses on requiring intervention to keep market rates from moving outside of the zone and thus is closely akin to the old Bretton Woods adjustable peg system. A version of the target-zone approach was advocated in the 1974 I.M.F. Guidelines for Floating (which have been repealed by the 1977 set of Principles for Exchange Rate Policies) and enjoys a great deal of support in Europe.[2] The reference-rate approach turns the Bretton Woods procedures on their head and prescribes when intervention is prohibited rather than when it is required. Leading advocates of the reference-rate approach include Eithier and Bloomfield, Fred Hirsch, and John Williamson.[3]

The *leaning-against-the-wind* approach essentially prohibits aggressive official intervention, that is, selling domestic currency when its value is falling in the exchange markets or buying domestic currency when its value is rising. The proposition that official intervention only be allowed to lean against the wind can be included as an element of reserve indicator or judgmental

[1]Raymond F. Mikesell and Henry N. Goldstein, *Rules for a Floating Rate Regime,* (Princeton Essays in International Finance, No. 109, April 1975). For discussions and references to the literature on reserve indicator proposals, see Thomas D. Willett, *Floating Exchange-Rates and International Monetary Reform,* (Washington: American Enterprise Institute, 1977) ch. 4, and John Williamson, *The Failure of World Monetary Reform, 1971-1974* (New York: New York University Press, 1977) ch. 5.

[2]See, for example, Samuel I. Katz (ed.), *U.S.-European Monetary Relations* (Washington: American Enterprise Institute, forthcoming).

[3]See Wilfred Eithier and Arthur I. Bloomfield, *Managing the Managed Float* (Princeton Essays in International Finance, No. 112, Oct. 1975) and "The Reference Rate Proposal and Recent Experience," Banca Nazionale del Lavoro *Quarterly Review* (forthcoming); Fred Hirsch, "International Guidelines and Principles for National Financial and Exchange Rate Policies: Commentary," in Jacob S. Dryer, Gottfried Haberler and Thomas D. Willett (eds.), *Exchange-Rate Flexibility* (Washington: American Enterprise Institute, 1978); and "I.M.F. Surveillance Over Exchange Rates: Comment," in Robert A. Mundell and Jacques J. Polak (eds.), *The New International Monetary System* (New York: Columbia University Press, 1977); and John Williamson, "The Future Exchange Rate Regime," Banca Nazionale del Lavoro *Quarterly Review,* June 1975, and *The Failure of World Monetary Reform,* ch. 9.

approaches, and is a generally accepted common-law principle. Its major violations occur when countries have intervened in dollars to meet obligations under the European snake arrangements or to counter movements in trade-weighted exchange-rate indices. Thus there have been many instances in which other countries have sold dollars even though the dollar was falling against their currency or have bought dollars even though it was rising. While such practices are inconvenient from the standpoint of the United States and have probably contributed somewhat to the variability of the dollar, cases of more broadly based aggressive intervention have been quite rare.

Perhaps the most notable alleged case concerned the plunge of the pound below $2.00 in 1976, but it is somewhat unclear whether the beginning of this decline was deliberately engineered or was a mistake based on operating procedures which called for intervention in dollars based on movements in the Bank of England's trade-weighted index. In any event, such aggressive intervention lasted at most for one day. During most of the subsequent drop of the pound against the dollar, the Bank of England was buying pounds to slow the fall. For the purpose of this paper, I will assume that the principle that countries should not usually intervene aggressively is generally accepted.[4] The discussion of this category below will concentrate only on whether it is sufficient to obviate the need for other procedures. Recent discussion of the leaning against-the-wind approach has been presented by Cooper (who refers to it as the "smoothing and braking strategy" as contrasted with the "tracking strategy" of the target-zone and reference-rate proposals), Grubel, Tosini, and Wonnacott.[5]

The *judgmental* or *case-history* approach was strongly advocated by the United States in the later stages of the reform negotiations and was adopted in essence in the 1977 I.M.F. Principles for the Guidance of Members' Exchange Rate Policies. Advocates of various varieties of the judgmental approach have included Artus and Crockett, Cooper, Roosa, Whitman, and Willett.[6]

The first best argument for a judgmental approach is based on the view that desirable balance-of-payments and exchange-rate behavior is too complex to be adequately captured by a set of exchange-rate or reserve indicators

[4]"Aggressive" intervention might be desirable when a country needed to recoup severe losses. A more controversial rationale for desiring to intervene aggressively is the so-called "bear squeeze" in which a central bank attempts to punish speculators who have been "too pessimistic" about the outlook for the currency.

[5]See Richard N. Cooper, "I.M.F. Surveillance Over Exchange Rates," and Herbert G. Grubel, "How Important Is Control Over International Reserves," both in Mundell and Polak (eds.), *The New International Monetary System;* Paula A. Tosini, *Leaning Against the Wind: A Standard for Managed Floating* (Princeton Essays in International Finance, No. 126, December 1977) and Paul Wonnacott, *The Floating Canadian Dollar* (Washington: American Enterprise Institute, 1972).

[6]See Jacques R. Artus and Andrew D. Crockett, *Floating Exchange Rates and the Need for Surveillance* (Princeton Essays in International Finance, No. 127, May 1978); comments by Richard Cooper and Robert Roosa in E.M. Bernstein, *et. al., Reflections on Jamaica* (Princeton Essays in International Finance, No. 115, April 1976); and Sam Y. Cross, "The Role of the I.M.F. under the Amended Articles of Agreement," and commentaries by Marina Whitman and Thomas D. Willett in Dreyer, Haberler and Willett (eds.), *Exchange Rate Flexibility.*

and that acceptable norms must be built up over time based on the cumulative treatment of concrete situations. The second best argument for the judgmental approach is that it represents the best fallback available when sovereign national governments are not prepared to agree on a more highly structured approach to international surveillance.

There are, of course, many variants under each of these categories, and sometimes variants under different categories merge into one another. Thus, for example, efforts to ensure that leaning-against-the-wind intervention policies are applied symmetrically on the up and down sides are likely to merge into a reserve-indicator approach. Similarly, some of the European proposals for target zones represent something of a halfway house between the pure target-zone and reference-rate approaches. For example, C.J. Oort has proposed a system of consultation points.[7] If exchange rates move outside of these points, multilateral consultations to discuss intervention are called for, while intervention on the wrong side of the consultation points would be prohibited. Target-zone proposals with asymmetrical intervention requirements have also been put forward, reflecting a greater concern with "excessive" depreciation than with excessive appreciation.[8]

In the following section I shall attempt to lay out the rationales for the various approaches in more detail. As will be discussed, advocates of the various approaches tend to differ greatly in their judgments about such issues as the behavior of exchange markets, the ability of governments to determine "correct" or equilibrium exchange rates and secure international agreement on them, and the social costs of exchange-rate variability and government exchange-rate manipulation.

One important point which should be kept in mind is that the best guidelines for international surveillance may differ from the best strategies for national intervention policies. A good set of international procedures should not rule out desirable national intervention strategies, but the purpose of international procedures is to place limits on the ability of national governments or the private market to produce anti-social outcomes which harm the international community. Thus, for instance, while reserve changes are probably a better indicator for national exchange-rate policies than are reserve levels, it may be more appropriate to use reserve levels to set bounds on the range of permissible national behavior.[9] Likewise, as shall be argued in section III, I do not believe that the available evidence indicates that foreign-exchange

[7]See, for example, Oort's presentation in Katz (ed.), *U.S.-European Monetary Relations.*

[8]An example is the recent OPTICA Report, Commission of the European Communities, *Inflation and Exchange Rates: Evidence and Policy Guidelines for the European Community* (Brussels, 1977). For extensive discussion of the OPTICA proposal see Katz (ed.) *U.S.-European Monetary Relations,* and Giorgio Basevi and Paul De Grauve, "Vicious and Virtuous Circles," *European Economic Review,* 1977, pp. 277-301.

[9]Willett, *Floating Exchange Rates,* ch. 4. See also, Williamson's, *The Failure of World Monetary Reform,* ch. 5. This distinction is overlooked by Richard Cooper and Peter Kenen in their advocacy of flow over stock indicators. See Richard N. Cooper, "Comment on the Howle-Moore Analysis," *Journal of International Economics,* November 1971; Peter B. Kenen, "Floats, Guides and Indicators," *Journal of International Economics,* May 1975 and the papers by Cooper and Kenen in Mundell and Polak (eds), *The New International Monetary System.*

markets have operated in a manner that would make systematic leaning against the wind an optimal national intervention strategy, but I believe that barring exceptional circumstances, only intervention which leans against the wind should be internationally approved.

I should also note that this paper does not explicitly deal with issues of monetary and macroeconomic policy coordination. Where underlying conditions are highly variable, equilibrium exchange rates will display great variability and this can impose serious economic costs. Where private speculation is working reasonably well, attempts to substantially limit exchange-rate variations through exchange-market intervention are dealing with the symptoms rather than the basic cause of the problem. I believe that having a strong system of international surveillance of exchange-rate policies is important. But the creation and maintenance of relatively stable national macroeconomic policies and conditions are even more important for promoting international monetary stability. It is quite appropriate that a session at this conference be devoted to discussion of surveillance of exchange-rate policies, but we should be careful not to mislead ourselves into believing that effective surveillance of exchange-rate policies is a sufficient condition for the restoration of international monetary stability.

The officials of the International Monetary Fund have been well aware of this point, and perhaps the major focus of their attention recently has been on trying to induce more stable and better coordinated macroeconomic policies. Indeed a major aspect of the agreements among the major industrial countries at Rambouillet which cleared the way for international monetary reform was the emphasis on the need for more stable underlying economic policies if one hoped to obtain exchange-rate stability. However, there is still sufficient controversy about various aspects of proposals for narrowly defined exchange-rate policies to deter me from attempting in this paper to tackle the problems of international surveillance of macroeconomic policies as well.

I should also stress that although the International Monetary Fund has adopted one of the proposed alternatives for surveillance, I believe that it is quite appropriate that the alternative possibilities still be reviewed. It is certainly within the normal domain of policy research to focus on evaluating past decisions, as well as future possibilities. Adoption of the new I.M.F. guidelines has certainly not quelled advocacy of the alternative approaches. Obtaining a better understanding of the rationales for the alternative approaches is also quite important for understanding different points of view about national exchange-rate policies. Furthermore, as will be argued below, even when some of these proposals are rejected in their pure form, they still may have important, although less formal, potential roles to play in the implementation of the I.M.F.'s judgmental approach. And little appears to have been decided so far about how the new I.M.F. guidelines will be implemented.

II. The Logic of the Various Approaches

A. The Reference-Rate and Target-Zone Approaches

Advocates of the target-zone and reference-rate approaches tend to

assume that 1) "correct" or equilibrium exchange rates can be calculated relatively accurately, but that speculation in the foreign-exchange market is not sufficiently well behaved to keep market rates "close enough" to these "correct" rates, 2) that because correct rates can be calculated relatively accurately it will not be excessively difficult to achieve agreement among national governments as to what these rates or zones are and 3) that these figures can be renegotiated relatively promptly when changes in underlying conditions warrant.

In both of these approaches the idea is that officials can systematically do a better job of determining exchange rates than the market can, that official announcements of exchange-rate objectives will help to stabilize private speculative behavior. The advocates of the two approaches differ in their views of the costs of exchange-rate variability, however, as the reference rate supporters focus only on prohibiting beggar-thy-neighbor official intervention while the target-zone approach seeks to limit both national beggar-thy-neighbor policies and excessive exchange-rate fluctuations.[10]

On purely logical grounds the target-zone advocates appear to make a stronger case than do supporters of the reference-rate approach. If, indeed, officials can calculate and secure international agreement on correct exchange rates within relatively narrow bands, why should it not be as important to avoid incorrect exchange rates resulting from market forces as it is for those resulting from government manipulation?

It seems likely that reference-rate advocates may tend to be somewhat less confident than target-zone advocates of the ability to reach internationally negotiated agreements on exchange-rate norms that tend to be systematically better than market rates. Such a belief could justify a looser target-zone or consultation points approach which does not require mandatory intervention in opposition to strong market sentiments.[11] Reference-rate advocates could also believe that while the private market and government intervention may both lead to wrong exchange rates at times, there is a stronger tendency for incorrect rates to persist as a result of national policies than of market behavior. Such a tendency would be sufficient to establish a rationale for greater international concern with limiting national governmental behavior than with limiting market behavior.

In the first several years after the oil shock, a great deal of attention was focused on the allocation of the resulting oil deficits and a number of propos-

[10]Thus, as Eithier and Bloomfield stress ("The Reference Rate Proposal and Recent Experience,") it is not correct to group reference-rate proposals with target-zone proposals together as being on the pegged as opposed to flexible end of the spectrum of guidelines for floating. The pure reference-rate approach is much further toward the free-floating end of the spectrum than proposals that would impose a presumptive obligation for official intervention to lean against the wind.

[11]There is a considerable range of opinion among reference-rate advocates about whether fairly heavy official management is desirable because of deficiencies in the behavior of private speculation. Both Fred Hirsch and John Williamson have argued that a fair amount of official intervention is needed, while Eithier and Bloomfield appear to have been less concerned about the behavior of private speculation. Thus the characterization of the reference-rate advocates as believing that governments can determine correct exchange rates better than the market would apply more directly to Hirsch and Williamson than to Eithier and Bloomfield.

als were put forward to assign current-account targets to each country in order to avoid a beggar-thy-neighbor scramble for surplus positions which were not collectively feasible.[12] Functionally, comprehensive current-account allocation proposals may be considered a variant of the target-zone approach in which calculations of the exchange-rate norms are based on estimates of what is required to achieve the current-account norms. Proponents of the current-account allocations approach assume either that other policies can be adjusted to remove differences between the exchange rates which would yield overall payments balance and the current-account target or that, in the case of conflicts, achieving the current-account target is more important. Comprehensive versions of the current-account allocation entail the same types of problems of implementation as the more general target-zone approach (although most of the discussions have focused on the need to avoid a scramble for current-account surplus and how current-account targets should be allocated, with little explicit attention to the problem of achieving such targets once they had been accepted). Advocates of the judgmental approach would also argue that it will often be important to give considerable attention to current-account positions as well as overall payments but would tend to argue that this cannot usefully be done in a simple mechanical manner.

B. Leaning Against the Wind

Critics of the reference-rate and target-zone approaches tend to challenge the validity of all three of the propositions listed at the beginning of the previous subsection. Advocates of a leaning-against-the-wind approach are dubious of the ability to set internationally agreed accurate sets of exchange-rate norms, but usually assume that free markets will tend to display excessive volatility because of badly behaved private speculation and/or externalities resulting from exchange-rate fluctuations.[13] Since they tend to be skeptical of the desirability of freely floating rates, advocates of leaning against the wind tend to support this approach both as a norm for national behavior and of international surveillance and would tend to be tolerant of fairly large reserve changes in support of efforts to reduce the magnitude of exchange-rate fluctuations.[14]

The adoption of the proposal to allow only leaning-against-the-wind intervention as a complete solution to international surveillance implies a primary concern with avoiding aggressive beggar-thy-neighbor policies. However, while the avoidance of such aggressive actions is certainly to be

[12]See, for example, Andrew D. Crockett and Duncan Ripley, "Sharing the Oil Deficit," *I.M.F. Staff Papers,* July 1975; Robert Solomon, "The Allocation of 'Oil Deficits'," *Brookings Papers on Economic Activity,* No. 1 (1975); Thomas D. Willett, *The Oil Transfer Problem and International Economic Stability,* (Princeton Essays in International Finance, No. 113, December 1975); and John Williamson, "The International Financial System," in Edward R. Fried and Charles L. Schultze (eds.), *Higher Oil Prices and the World Economy* (Washington: Brookings Institution, 1975).

[13]See, for example, Cooper, "I.M.F. Surveillance over Exchange Rates," and Tosini, *Leaning Against the Wind.*

[14]Advocates of leaning against the wind have usually not made clear to what extent, if any, they believe it should be a positive international obligation.

desired, this has not really been a major problem since the 1930s. It is quite understandable that with the 1930s fresh in their memory, the architects of the Bretton Woods monetary system considered the avoidance of such aggressive beggar-thy-neighbor policies as a major rationale for adopting the adjustable-peg exchange-rate system. However, in my view, the much more serious problem of national government policies creating disequilibrium under both the adjustable-peg and managed floating has been not by overt exchange-rate changes, but rather through government policies which maintained exchange rates or allowed them to adjust only slowly in circumstances in which equilibrium exchange rates were changing by substantial amounts, in other words, through excessive leaning against the wind rather than aggressive policies.[15]

C. Reserve Indicators

To attempt to limit this problem, some type of provisions for symmetry between the extent of leaning in an upward and downward direction would need to be introduced into leaning-against-the-wind proposals for international surveillance. The most obvious method is to adopt bounds on the amount of net cumulative intervention in either direction. In her recent analysis of leaning against the wind, Paula Tosini accepts the proposition that intervention should be symmetrical over the long run but argues against quantitative limitation on cumulative reserve changes. She argues that such limitations would encourage the use of alternative methods of influencing the exchange rate and would increase exchange-rate volatility.

The existence of substitutes for intervention such as official borrowing from private markets, monetary policy, capital controls, and official guidance of private-capital flows clearly indicates that quantitative limits on reserve changes are not sufficient to eliminate the possibility of beggar-thy-neighbor policies, but it does not establish a case against the use of quantitative limits on cumulative reserve movements in conjunction with supplementary guidelines concerning the use of intervention substitutes. To argue against quantitative indicators on this score would require additional arguments such as that intervention substitute policies are so easy to adopt and would be so quantitatively important that it wouldn't be worth the trouble to attempt to negotiate reserve indicators or that agreement on quantitative reserve indicators would inappropriately deflect international attention away from the use of intervention-substitute policies.

The second type of argument cuts more directly against the basic case for

[15]Some advocates of leaning against the wind argue that an essential part of this approach is that exchange rates must be allowed to move in the face of strong market pressures (although not by a market clearing amount). Such a provision would reduce the problem of cumulatively mounting disequilibrium which resulted from the excessive rigidity of the adjustable peg system.

I should also note that following the tradition of most discussions of the leaning-against-the-wind approach, I have assumed that monetary policy is set independently of exchange-market intervention, i.e., that reserve flows under managed floating are fully sterilized. As Richard Sweeney has pointed out to me, an alternative type of defense of leaning-against-the-wind policies would be as a guide to monetary policy. This would, of course, imply that reserve flows should not be sterilized, at least not fully. This is an intriguing idea which deserves more consideration. Along somewhat similar lines, see Ronald I. McKinnon, *A New Tripartite Monetary Agreement* (Princeton Essays in International Finance, No. 106, Oct. 1974).

reserve indicators. Tosini's assumption is that private speculation does not work well so that limitations on official intervention will reduce the ability of governments to counteract the excessive volatility of the private market. As I have argued elsewhere, the basic logic of the reserve-indicator approach rests on the opposite assumption that private speculation usually works fairly well.[16]

In the case of well-behaved private speculation and no intervention substitute policies, reserve changes or cumulative intervention would measure the extent to which national governments have caused exchange rates to diverge from their equilibrium levels.[17] Quantitative limitations would then be set on the basis of how much discretion would be given to national authorities to use exchange-market policies to achieve domestic objectives such as reducing inflation, stimulating employment, or correcting for externalities caused by exchange-rate movements.

Presumably these limitations would be set more stringently, the less important externalities from equilibrium exchange-rate movements were judged to be, and the more willing countries were to accept limitations on their own scope for discretionary action in return for similar limitations on the actions of others. Similar considerations would influence the width of exchange-rate bands under the target-zone and reference-rate approaches. In such a world, the width of reserve bands or permissible cumulative reserve changes would be determined purely by the trade-offs involved between the costs and benefits of international policy coordination in the exchange-rate area.

When the possibility of clearly recognizable poorly behaved private speculation is introduced, this would suggest a widening of the limitations on reserve changes in order for governments to combat disequilibrium movements in exchange rates, or the establishment of an international intervention authority with a mandate to intervene only to offset destabilizing speculation or make up for an insufficiency of stabilizing speculation. As the latter alternative seems unlikely to be a serious candidate for adoption over the foreseeable future, let us concentrate on the case in which the limitations on the extent of possible cumulative net national interventions are widened as views about the magnitude of private speculative deficiencies increase. As a set of statistical rules cannot distinguish between intervention in response to imperfections in private market behavior and interventions to achieve national objectives, countries can be given greater scope to reduce excessive market volatility only at the risk of giving them more potential scope to engage in exchange-rate manipulation as well.

[16]Willett, *Floating Exchange Rates,* ch. 4, and "The Emerging Exchange Rate System," in Katz (ed.), *U.S.-European Monetary Relations.*

[17]Because of nonmarket transactions such as interest earnings on official foreign currency holdings and some types of military payments, figures for reserve changes and net official intervention over the same period will not necessarily coincide. The appropriate standard would be to have such nonmarket transactions put into the market. For example, the interest earnings on foreign official dollar holdings should be sold in the foreign-exchange market to acquire the foreign countries' currency. Otherwise foreign official dollar holdings would grow even in the absence of any exchange-market intervention.

Thus the adoption of a reserve-indicator approach may make a lot of sense if private exchange markets work fairly well. If they work very poorly, reserve limitations sufficiently tight to set strong constraints on exchange-rate manipulations also would be likely to result in excessive exchange-rate volatility, while limitations broad enough to allow the elimination of excess volatility caused by poorly behaved private speculation might provide little effective check on the scope of exchange-rate manipulation by national governments. It is thus not surprising that Mikesell and Goldstein, who believe that the exchange markets work fairly well, recommend a relatively tight reserve indicator system, while Tosini, who assumes that the exchange markets work poorly, is highly critical of Mikesell and Goldstein's recommendation.

Two other types of economic objections to reserve indicators should also be briefly discussed. One is the argument that a reserve-indicator system might encourage disruptive private speculation. When reserves were close to their permissible limit, the market would know that future exchange-rate changes would be much more likely to be in one direction than the other and this tendency would be exaggerated in the face of rules that required some proportion of interventions to be reversed within a given time period. In reply it can be argued, however, that the prospect of such developments would place a healthy discipline on national governments to refrain from intervening so much that they get themselves out on such a limb. Obviously such an argument is much more persuasive to those who believe private markets work fairly well and are concerned primarily about excessive government intervention, than to those who believe that the private market works poorly and a considerable amount of official intervention is desirable. It should also be noted that the perverse speculative incentives which might be generated by a poorly working reserve-indicator system are unlikely to be as bad as the one-way speculative option which developed under the adjustable-peg system and which critics believe would be likely to reemerge if a target-zone approach were adopted.

The second additional objection concerns the feasibility of determining reasonable mechanics and quantitative values for the reserve-indicator approach. How should stock and flow considerations be combined? How tight should the quantitative limitations be and how should this vary for stock and flow indicators? How should base levels and rates of growth of reserve norms be selected? Such questions are the analogs for the reserve-indicator approach to the problem of deciding upon exchange-rate norms under the target-zone and reference-rate approaches.

While at first glance, it would seem that the technical difficulties involved in implementing the exchange-rate norm approaches are a good deal less than for the reserve indicator approach, it is not clear that this is really so. For example, would norms be set for each set of bilateral exchange rates or would it be sufficient to use some type of composite exchange-rate index for each country? And if it is granted that it may be appropriate at times for reserve deficient countries to recoup reserves (for example, the United Kingdom during 1976 and 1977) or for some reserve countries, such as Germany and Japan, to reduce their reserve holding (for example, the sales of some of their recently

accumulated dollar holding at the beginning of the floating-rate period in 1973), then reserve considerations must be taken into account in the calculation of equilibrium exchange rates. This implies that, in fact, the determination of correct exchange rates may not be less difficult conceptually than the determination of optimal reserve levels and flows.

Furthermore, optimal reserve positions may not tend to change as rapidly as equilibrium exchange rates. Thus once adopted, the need for frequent revisions might well be less of a problem with the reserve-indicator approach than with the exchange-rate norm approaches. It also seems likely that where mistakes are made in calculating norms or norms are not adjusted promptly in the face of changing circumstances, incorrect reserve norms will cause less severe problems than incorrect exchange-rate norms, especially where the norms are used to require as well as prohibit intervention.

While the above considerations make me skeptical of arguments that problems of implementation are substantially less for the exchange-rate norm than for the reserve indicator approach, I find the technical difficulties involved in implementing either approach to be quite impressive. Recognition that such norms do not necessarily have to be optimal to be helpful reduces these difficulties, but not in my view to a manageable level.

D. The Judgmental Approach

This belief that the issues surrounding appropriate norms for exchange-rate behavior are too complex to be adequately captured in calculations of the exchange rate or reserve norms is the major basis for first best arguments for the judgmental or case-history approach. Advocates of this approach tend to be doubtful that government experts can forecast correct exchange rates sufficiently accurately to make such estimates a sound basis for internationally agreed intervention guidelines. As noted above, the accuracy requirements necessary to make a target-zone approach of mandatory intervention work well are greater than for the reference-rate approach. Conceptually, as the magnitude of expected official forecast errors increased, the appropriate response would be to widen the target zone or consultation points, just as one would increase the width of reserve indicators in response to increases in the magnitude of poorly behaved speculation. In both cases, however, one reaches a point in which the reserve or exchange-rate bands are so wide that at best they become almost meaningless and at worst they may become counterproductive by diverting attention from more important aspects of surveillance.

Advocates of the judgmental approach do not necessarily believe that it is inappropriate for national governments or international organizations to attempt to estimate appropriate exchange-rate zones and perhaps even to make these estimates public. They tend to be doubtful, however, that the market frequently behaves so obviously poorly that one could reach international agreement in advance on meaningful limits to possibly appropriate exchange rates.

Apart from the technical difficulties in estimating correct exchange rates, proponents of the judgmental approach also tend to emphasize the difficulties

in reaching international agreement among governments on such estimates, and once having reached agreement, being able to revise such norms sufficiently quickly when unanticipated developments lead to changes in estimates in equilibrium levels or rates of change of exchange rates. The greater the variability in the underlying economic and financial environment, the greater this problem becomes.

If there were some simple set of calculations which gave good estimates of equilibrium exchange rates, these problems of political implementation might not be very serious. For example, if some standardized set of Purchasing Power Parity (PPP) indices gave good approximations of medium-term equilibrium exchange rates, then political negotiations would need only to focus on choosing the formula to be used. Calculations of exchange-rate norms could be automatically updated as new price data became available. Indeed, it is probably not coincidental that many of the advocates of the target-zone approach appear to believe that various types of PPP calculations can provide a reasonable normative guide to appropriate exchange rates.[18]

In such circumstances, there would probably be some initial hard political bargaining over just what formula to use, as many countries attempted to secure an agreement which they believed was more likely to see their currency a little undervalued than a little overvalued. As will be discussed in section III various PPP calculations can give an extremely wide range of values. Still there is a fairly high probability that such political negotiations could be reasonably successfully concluded. Unfortunately, however, as will also be discussed in section III, there are serious questions whether PPP calculations can give a good guide to appropriate exchange rates. Even holding the degree of accuracy of forecasting constant, the more complicated are the procedures for forecasting, the greater is the extent to which the outcome of international negotiations over exchange-rate norms would be likely to reflect political bargaining strength rather than economic analysis. And as the ability to forecast accurately declines, the political component in negotiations would rise still further.

Perhaps even more significant, the less simple and accurate is the technical economic analysis, the more difficult it would be to renegotiate a new set of norms when underlying fundamentals change. In such circumstances a target-zone approach could easily take on the type of status quo bias which led to the breakdown of the Bretton Woods adjustable peg exchange-rate procedures. Critics argue that it is difficult enough to determine what equilibrium exchange rates are at any one point in time, much less to estimate the equilibrium pattern of exchange rates which will hold over a substantial period into the future. But if the latter cannot be done or some automatic formula for updating norms cannot be adopted, then the international community might well be in almost continuous negotiation over exchange-rate norms.

E. Negotiating Costs and Problems of Implementation

Advocates of the judgmental approach would argue that international cooperation and the time of top-level policy makers are very scarce and valua-

[18]See, for example, the OPTICA Report.

ble resources. Where the technical issues are complicated, the use of a less formal judgmental approach allows a much more economical use of these scarce resources, concentrating them on the international economic issues which seem of greatest overall importance. It is a frequent, but unfortunate, characteristic of many proposals for international monetary reform to treat the supply of high-level attention and international cooperative behavior as if it were a free good.[19]

In general, advocates of the judgmental approach tend to give greater weight to questions of the allocation of policy-making resources and the willingness of countries to compromise than do advocates of the exchange-rate or reserve norm approaches. Under the ideal circumstances for the application of these objective norm approaches, these questions largely disappear. But as conditions begin to deviate from these ideals, then questions of international decision-making costs become increasingly important. This in turn increases the difficulties with the objective norm approaches more rapidly than on the basis of technical economic considerations alone.

It is also important to recognize that concerns with the maintenance of traditional areas of national sovereignty and appearances to their electorates (who are not international economic experts) will often keep national governments from engaging in as much international cooperative behavior as many international economic experts would judge to be desirable. While continuing to press the case for greater degrees of cooperative behavior over the long run, this leaves technical experts with the short-run problem of seeking second or n-th best solutions which utilize the currently available supply of cooperative behavior as effectively as possible.

An ideal system of surveillance would have a clear-cut set of rules and a well-specified schedule of penalties for violations of these rules. This explains much of the attractiveness of the exchange-rate and reserve norm approaches. They contain objective rules and lend themselves easily to graduated sets of penalties for violations of these rules. But even apart from the difficulties of finding objective rules which would be describable in practice, it may not be possible to get national governments to agree to give up traditional sovereignty in the interests of similarly constraining the range of behavior of other countries. In my judgment this had at least as much to do with the failure to agree on a set of reserve indicators during the earlier phase of the monetary reforms negotiations as did technical economic problems with the indicator proposals.

F. Precision and Sovereignty

As I argued in my earlier analysis of international surveillance issues,[20] it appears that at present many countries are willing to behave more cooperatively in actual practice than they are willing to accept explicit formal constraints on their behavior. It seems quite likely that adoption of an informal judgmental approach to international surveillance would make it more difficult to secure agreement to grant substantial explicit sanctioning authority to

[19]The importance of international decision-making costs is one of the major points of emphasis in a study being prepared by Robert Tollison and myself on *The Challenge of Economic Interdependence: A Public Choice Perspective.*

[20]Willett, *Floating Exchange Rates,* ch. 4.

a surveillance body. On such issues, countries often tend to engage in worst-case analysis, making them very hesitant to give great power to international authorities. And the incentives against granting such power are greater, the more scope there is for discretion in the application of such power.

Thus I believe it should be granted by advocates of the judgmental approach that under such procedures the International Monetary Fund is unlikely to be given many additional powers to sanction explicitly the behavior of countries deemed to be engaging in beggar-thy-neighbor policies. (At Bretton Woods, the Fund was given the power to expel a country from membership and to authorize discriminatory trade measures against any country whose currency has been judged to be scarce, but these sanctions proved to be much too blunt to be useful in practice as methods of penalizing moderate beggar-thy-neighbor behavior.)

If my previous assessment of the willingness of countries to behave cooperatively is correct, however, then it seems likely that even without formal sanction, the informal judgmental approach may be the way to achieve the greatest amount of cooperative behavior under present circumstances. In practice, the moral suasion generated by international surveillance under the judgmental approach may be a much more potent method of inducing countries to refrain from or modify beggar-thy-neighbor policies than the more legalistically appealing blueprints for explicit rules and sanctions.

Again, political and economic considerations interact. The case for the judgmental approach becomes stronger, the less well simple explicit rules would conform to ideal surveillance norms and the stronger are political biases against the acceptance of formal contraints and penalties.

Even if it were believed that the greatest amount of effective cooperative behavior in the short run would be induced by the judgmental approach without formal sanctions, there are possible grounds for opposing this approach, however. The hope of the advocates of the informal judgmental approach is that this will not only maximize the effectiveness of surveillance in the short run, but also will be an effective forum for continuing to strengthen cooperative tendencies over time. It is also possible, however, that the judgmental approach could serve as a cover to hide fundamental disagreements and weaknesses in the surveillance process. This could breed a false sense of complacency and achieve the appearance of greater international harmony in the short run at the expense of the development of more serious difficulties over the longer term. While I am personally somewhat more on the optimistic side on this question, the history of international surveillance efforts over the postwar period contains enough examples of national and international officials giving primary concern to the public appearances rather than the substance of surveillance policies that the more pessimistic possibilities cannot be prudently overlooked.[21]

[21]See, for example, the excellent chapter on multilateral surveillance in Susan Strange, *International Monetary Relations* (London: Oxford University Press, 1976). Strange concludes with respect to I.M.F. surveillance over the United Kingdom that "... the weight to be attached to particular instruments of Fund surveillance, and even the effectiveness of the surveillance itself, must remain to some extent a matter for subjective judgment ... All that may be said with some confidence is that both parties were a great deal more concerned with appearances than with realities." (p. 146)

In this section, I have attempted to sketch out what I see as the basic logic of the major alternative approaches to surveillance and the major economic and political factors on which their relative desirability depends. In the following section I shall briefly comment on two of the major technical economic issues relevant to the choice among the alternative approaches, the alleged excessive volatility of free market exchange rates and the ability to calculate reasonably accurate exchange-rate norms.

III. Some Technical Economic Considerations

A. Badly Behaved Speculation

Excessively volatility of exchange rates may result from two different sources. The most frequently discussed source is poorly behaved private speculation. Actively destabilizing private speculation would, of course, generate socially undesirable fluctuation in exchange rates. Recently a good deal of attention has also been focused on the possibility that while private speculators may generally behave in a stabilizing manner, such factors as excessive risk aversion, barriers to entry, and government regulation may cause the supply of stabilizing speculative funds to be insufficient to smooth out temporary fluctuations in nonspeculative demand and supply in the foreign-exchange market or to avoid unnecessary short-run exchange rates resulting from J-curve effects in the trade accounts. There are still some technical ambiguities to be resolved concerning the conditions under which the absence of a perfectly elastic supply of speculative funds is not a sign of market inefficiency because of rational risk aversion. Thus, for example, a finding that the forward rate is a biased predictor of future spot rates is evidence that the supply of speculative funds is less than perfectly elastic, but not necessarily that there are imperfections in the foreign-exchange market.[22] Likewise, equilibrium is not an entirely unambiguous concept. Still, I think we may usefully think of destabilizing or insufficiently stabilizing speculation as examples of inefficiencies in the foreign-exchange market which cause free-market exchange rates to deviate from equilibrium rates.[23]

It is fairly generally agreed that where exchange-rate fluctuations result from such private speculative inefficiencies that can be clearly identified, they should be offset by official intervention to maintain or establish equilibrium rates. The particular difficulties in implementing such a strategy, of course, are to what extent public authorities can correctly identify such speculative

[22]See, for example, Richard James Sweeney and Thomas D. Willett, "Concepts of Speculation and Efficiency in the Foreign Exchange Market," OASIA Research Discussion Paper, U.S. Treasury, 1976. A later version will appear in Richard James Sweeney and Thomas D. Willett (eds.), *Studies in Exchange-Rate Flexibility* (Washington: American Enterprise Institute, in preparation), and Steven W. Kohlhagen and Thomas D. Willett, "Risk Premium and Biases in Forward Rates," in *ibid.*

[23]One of the major ambiguities in defining equilibrium is the time dimension involved. Real world speculation, whether by the public or private sectors, will never be as farsighted as ideals which can be imagined. For the purposes of this paper, we might think of equilibrium as a medium-term concept based on the assumption of speculation which is not "excessively" short sighted. This is obviously a topic which could use a great deal of refinement.

inefficiences, and whether in practice imperfect government intervention will reduce or add to the deviation between market and equilibrium rates caused by imperfect private speculation.

I have reviewed the empirical studies on the behavior of speculation under the current float recently, and this is the topic of another paper at this conference as well, so I shall just briefly record my own conclusions based on the evidence available so far.[24] I should begin by noting that it has been common to draw strong conclusions about the behavior of speculation from the presentation of one or more hypotheses about speculative behavior combined with a few facts that are consistent with the hypothesis in question. The difficulty is that often the facts presented will also be consistent with other major hypotheses as well. Thus, for example, the fact that we have great variability of exchange is certainly consistent with hypotheses such as bandwagon effects or insufficient stabilizing speculation. However, at this level of specificity, it is also quite consistent with alternative major explanations such as the Dornbusch hypothesis of efficient exchange-market speculation leading to exchange-rate overshooting in the face of monetary shocks and sluggish adjustments in the domestic economy, or with models of rational expectations and efficient adjustment in all markets under conditions of great variability in past and expected future underlying conditions.

At this level it is easy to put forward a limited set of facts consistent with any of these hypotheses. What is needed is less grand generalization about speculation and more careful empirical work which considers more systematically the behavior of exchange rates and their relation to an alternative hypothesis about the behavior of speculation. I have in mind here the type of empirical work being done by economists such as Artus, Arndt and Pigott, Bilson, Cornell and Deitrich, Dooley and Shaffer, Fieleke, Frankel, Giddy and Dufey, Kolhagen, Levich, and Logue, Sweeney, and myself.[25] Such studies employ a wide variety of approaches including direct attempts to model the foreign-exchange market, investigations of the predictive behavior of forward exchange rates, patterns in exchange rates which would be consistent with various hypotheses about badly behaved speculation, the behavior of bid-ask spreads, the relationships between sets of variables such as exchange rates and monetary aggregates and price-level movements and the search for episodes in which there is presumptive evidence that market rates differed from the expectations of a substantial majority of exchange-market dealers and experts.

[24] Willett, *Floating Exchange Rates,* ch. 2.

[25] For extensive references to the empirical studies on the behavior of flexible exchange rates see, Steven W. Kohlhagen, *The Behavior of Foreign Exchange Markets: A Critical Survey of the Empirical Literature* (New York University Monograph Series in Finance and Economics, 1978); Richard M. Levich, "On the Efficiency of Markets for Foreign Exchange" in Rudiger Dornbusch and Jacob A. Frenkel (eds.) *International Economic Policy* (Baltimore: John Hopkins University Press, 1978) and "Further Results on the Efficiency of Markets for Foreign Exchange" (this volume). Dennis E. Logue, Richard James Sweeney, and Thomas D. Willett, "Speculative Behavior of Foreign Exchange Rates during the Current Float," *Journal of Business Research,* No. 2, 1978; Susan Schadler, "Sources of Exchange-Rate Variability: Theory and Empirical Evidence," *I.M.F. Staff Papers,* July 1977; and Willett, *Floating Exchange Rates,* ch. 2.

No one of these studies could hope to be definitive, but as part of a cumulative process they offer the prospect of substantially improving our empirical knowledge of the behavior of speculation and the foreign-exchange markets. As is not surprising, the evidence so far is somewhat mixed. I believe that the studies to date have been sufficient to disconfirm some of the more extreme hypotheses about badly behaved speculation. The available evidence does not generally support the views that there are large systematic tendencies for speculation to behave inefficiently. The possibility of smaller systematic inefficiencies or occasional large sporadic inefficiencies in some exchange markets cannot be ruled out, but neither has really strong presumptive evidence for their existence been presented either, especially if one exempts the early days of generalized floating as a transition period.

In my own judgment based both on the results of the empirical studies available so far and direct observation of the behavior of participants in the foreign-exchange market, private speculation has been reasonably well behaved under the current float. The market is certainly not always right, but it is not so easy to tell when it is wrong. Most of the charges of significant episodes of badly behaved speculation, I believe, have been based on oversimplified views of what should determine equilibrium exchange rates.

B. Forecasting Equilibrium Rates

Frequently such judgments are made on the basis of comparison with various types of Purchasing Power Parity calculations. There is little evidence to support the view that such calculations can present reasonable normative criteria for determining equilibrium exchange rates. At the simplest level, different price indices can yield widely different parity calculations. For example, calculations presented in Morgan Guaranty *World Financial Markets* showed a range of over 20 percent for the United States, 14 percent for the United Kingdom, 25 percent for Italy and over 40 percent for Japan.[26] And there is no one single theoretically correct price index to use for these purposes. More seriously from an analytical viewpoint proponents of PPP calculations as normative criteria must assume that short-run exchange-rate deviations from PPP will tend to be self-reversing.[27] Even apart from the problems of calculating trade competitiveness, we would expect PPP relationships to hold only if equilibrium trade or current accounts did not change over time and nonprice factors (such as income effects) did not have significant long-run influences on trade balances. Such factors are likely to have substantial quantitative importance at times, however. For example, one cannot explain the magnitude of the fall of the dollar that began toward the end of 1977 in terms of either past or reasonable expectations of future inflation differentials. (The direction, but not the magnitude, of the decline can be

[26]Morgan Guaranty Trust Company of New York, *World Financial Markets,* May 1978.

[27]Recent empirical work by Charles Pigott and Richard Sweeney suggests that there has not been a strong tendency for deviations from PPP to be self-revising during the current float. See Pigott and Sweeney, "Purchasing Power Parity and Exchange Rate Dynamics," Claremont Economic Discussion Papers, 1978. For recent discussions of PPP see the symposium in the *Journal of International Economics,* May 1978 and Lawrence H. Officer, "The Purchasing Power Parity Theory of Exchange Rates: A Review Article," I.M.F. *Staff Papers,* March 1976.

explained in terms of such expectations.) However, when one takes into account the effects of a lowering of expected growth rates abroad and increased pessimism about the outlook for reducing oil imports, and perceptions of increased riskiness of investing in the United States, then it becomes easy to explain a quite sizable drop in the dollar in terms of the change in the real exchange rate necessary to restore a current-account position which would be sustainable over the medium term, especially if one is not an elasticity optimist.[28]

Such shifts in expectations cannot be easily modeled, but I believe that they are often important in determining equilibrium exchange rates. The past history of balance-of-payments forecasting does not offer strong support for the view that official estimates of equilibrium exchange rates can be calculated with the degree of accuracy necessary to make either reference rates or target zones desirable as a general system at present. My beliefs in the importance of nonprice determinants of the balance of payments and of shifts in expectations which cannot be adequately proxied by mechanical methods make me doubtful that our forecasting technology can be improved sufficiently in the near future to make these approaches attractive.[29] I also believe, however, that it is important to push on as rapidly as possible with efforts to improve our technical capacity for balance-of-payments and exchange-rate analyses and forecasting and that such efforts should play an important, though informal, role in international surveillance discussions.

Returning to the issue of the behavior of speculation, the available evidence convinces me that beliefs that the market always tends to exaggerate movements in equilibrium exchange rates are themselves greatly exaggerated. Thus I am dubious that it would be a wise policy for national authorities to systematically follow leaning-against-the-wind intervention policies in hopes of keeping market-exchange rates more in line with equilibrium ones. On the other hand, I do not believe that the available evidence in support of beliefs that speculation is almost always well behaved is sufficiently strong that arguments against a relatively tight reserve-indicator system can be confidently rejected.

C. Externality Arguments for Intervention

The arguments against adopting a tight reserve-indicator system are reinforced when the second possible source of excessive exchange-rate variability

[28]See Thomas D. Willett, "Economic Fundamentals, Purchasing Power Parity, and the Decline of the Dollar," Claremont Economic Discussion Papers, 1978. For an interesting treatment of the effects of increased riskiness resulting from monetary expansion see Richard J. Sweeney "Risk, Inflation and Exchange Rates" presented at the Fall Academic Conference, Federal Reserve Bank of San Francisco, November, 1978.

[29]For examples of the huge errors which have been made in recent years in forecasts of trade and current-account balances, see Willett, *Floating Exchange Rates,* pp. 121-122 and 139-142. On the current state of the art in balance-of-payments and exchange-rate modeling and forecasting, see Jacques R. Artus, "Methods of Assessing the Long-Run Equilibrium Value of an Exchange Rate," *Journal of International Economics,* May 1978, pp. 277-299; Peter Isard, *Exchange-Rate Determination: A Survey of Popular Views and Recent Models,* (Princeton Studies in International Finance, no. 42, May 1978); Steven W. Kohlhagen, *The Behavior of Foreign Exchange Markets,* and Susan Schadler, "Sources of Exchange-Rate Variation."

is considered. This second possible source of excessive variability has only begun to be discussed explicitly in the last few years. It is the argument that even when speculation in the foreign-exchange market is itself fully efficient, exchange-rate variations may cause important domestic externalities which make the market equilibrium rate differ from the welfare maximizing rate. Often discussions of the costs of exchange-rate variability have not adequately recognized that these costs will vary depending upon the cause of the exchange-rate variations. Indeed, in many common circumstances exchange-rate variations are required in order to reduce both the uncertainty and resource distortion costs of disturbances.[30] Thus despite the frequency with which it is done, it is quite erroneous to treat the costs of floating exchange rates as a simple function of the amount of exchange-rate variability.

Such a treatment is usually the closest to being accurate, however, when the cause of the exchange-rate variability is badly behaved speculation. As Richard Sweeney and I have argued, most of the discussions of the various costs of exchange-rate variability assume (often implicitly) that the variability was "unnecessary," resulting from speculative inefficiencies which create disequilibrium exchange rates.[31] When exchange-rate variations are the result of efficient speculative responses to underlying economic conditions, most of the costs traditionally assumed to accompany exchange-rate variation disappear. In these conditions, what are commonly called the costs of the variability of equilibrium exchange rates are usually really the costs of the underlying conditions which cause exchange-rate variations. To suppress the symptoms by intervening to limit such exchange-rate variations would decrease rather than increase economic welfare unless externalities were present.

The explicit discussion of such possible externalities in the face of an efficiently functioning foreign-exchange market is still very much in its infancy, and treatments to date have been quite cryptic. So far discussions of such possible externalities have focused primarily on the effects of exchange-rate variations on domestic inflationary pressures and on the frictional cost of resource reallocation. Richard Cooper has argued that the welfare-maximizing exchange rate will generally show less variability than the monetary equilibrium rate because of the effects of such variations on unemployment. This would hold, he argues, "to the extent that labor can be dismissed and will remain unemployed because of downward stickiness in wages or because rational individual search behavior in a world of imperfect information leads to a period of frictional unemployment."[32] In other words, exchange-rate variations are likely to cause some at least temporary unemployment as resources are reallocated. As exchange-rate variations often will be reversed even in an efficient foreign-exchange market, there may be a case for systematically

[30]See, for example, Charles Pigott, Richard Sweeney, and Thomas D. Willett, "The Uncertainty Effects of Exchange Rate Variations," OASIA Research Discussion Paper, U.S. Treasury, 1976. A revision which treats the effects of exchange-rate variability on both uncertainty and distortions in price and exchange-rate signals will appear in Sweeney and Willett (eds.), *Studies in Exchange-Rate Flexibility*.

[31]See Sweeney and Willett, "Concepts of Speculation and Efficiency."

[32]Cooper, "I.M.F. Surveillance Over Exchange Rates," p. 72.

intervening to slow down exchange-rate variations, i.e., lean against the wind, to reduce reallocation costs even when private speculation in the foreign-exchange market is efficient.

The conditions when this will be so have not been well worked out, however. The problem is one of specific applications of the theory of the second best. When some markets do not behave fully efficiently, and this condition cannot be corrected directly, then there may be a second-best case for government intervention in other markets.[33]

At this level, the possibility that intervention may be desirable is not a useful guide to desirable government policy. This requires rigorous analysis of just what types of intervention policies would be called for in the face of various types of Pareto relevant externalities. In this regard, Cooper's analysis is quite helpful in terms of emphasizing the importance of such questions, but it falls far short of conclusively establishing the premise that leaning-against-the-wind intervention would usually be desirable.[34] For example, even if additional unemployment is generated by a free exchange rate, this cost would have to be balanced against the efficiency cost of distorting price signals which would arise from government intervention in an efficient exchange market.

While the price distortion costs of moderate leaning-against-the-wind intervention might not be great, the avoidable unemployment costs of exchange-rate variations may not be as large as many have argued either. Often scenarios are presented in which it is envisioned that large amounts of resources are wrenched back in the face of rapidly fluctuating exchange rates. But unless businessmen are extremely inept, they will recognize that where rates are highly variable, there is a great deal of uncertainty about what future rates will be, and will in consequence slow down the speed with which they reallocate resources. Even though the current rate reflects the best guess of future developments, this may be the mean of a very wide distribution of possible future outcomes. Where there are substantial reallocation costs, there will be incentives to private enterprise to slow down their adjustments to changes in prices or exchange rates in order to lower costs and increase profits.

The case for government intervention to slow the adjustment process must assume either that the private market systematically underestimates the likelihood that exchange-rate changes will be reversed, or that economic

[33] I am indebted to my colleague, Richard Sweeney, for suggesting that this question be analyzed as an example of the theory of the second best.

[34] I would also conclude that Grubel's attempt to justify systematically leaning against the wind in an efficient foreign-exchange market was not successful ("How Important is Control Over International Reserves"). Grubel bases his argument on the proposition that systematically leaning against the wind would reduce exchange-rate variance. He fails to consider, however, that whether economic welfare would be increased by reducing exchange-rate variability would depend on the causes of the variations. In his model, exchange-market inefficiencies have been ruled out and he does not consider externality arguments explicitly. Grubel also fails to consider the possible need of intervention to rebalance cumulative reserve changes resulting from leaning-against-the-wind intervention. If the need for such rebalancing is taken into account, then it is possible that attempts to lean against the wind could end it, increasing the range of exchange-rate variation because aggressive intervention may be required when one is at the end of the feasible range of reserve variations.

decision-makers are not faced with all of the relevant marginal costs of adjustment. On the first question, I don't think there is a strong a priori reason to suspect that economic decision-makers will on average tend to systematically over or underestimate the probability of exchange-rate reversals. On the second question, there is a presumption that businesses would not fully take into account the cost of resource reallocations on labor and the taxpayer who provides unemployment insurance payments. It is not clear to me how strong a case for systematic intervention such externalities present, however. This is a question which deserves a great deal more attention.[35]

The same holds for the conditions under which exchange-rate variations increase domestic inflationary pressures. Again, discussions frequently have not sufficiently recognized the extent to which the domestic inflationary effects of exchange-rate changes vary depending upon the cause of the exchange-rate change.[36] This has been particularly true of many of the popular discussions of the hypothesized vicious circle of exchange-rate depreciations and inflation.

An exchange-rate depreciation may generate negative externalities by putting additional pressures on monetary authorities through causing a worsening of the short-run inflation unemployment trade-off. As with the case of effects on resource allocation and unemployment, this is most likely to be true where the decline is caused by destabilizing speculation. On the other hand, in a neoclassical economy, with rational expectations, an exchange-rate depreciation resulting from expansionary macroeconomic policies will not be a source of additional inflationary pressures at all (at least in comparison with a closed economy benchmark).[37] Measured inflation can, of course, always be held down in the short run by, in effect, subsidizing imports through running down reserves. But if these reserve losses must eventually be recouped, then the major effect would be to transfer inflation to later periods.

In between the extremes of destabilizing speculation and depreciations in a completely rational expectations world, there are many complicated cases resulting from disturbances such as shifts in asset preferences and from the dynamics of price and exchange-rate markets in which all markets are not efficient. In particular circumstances, some episodes could justify official intervention even when speculation in the foreign-exchange market is efficient. Indeed, even in a world of rational expectations and complete *ex ante* efficiency in all markets, there may be cases in which official intervention would be justified. Suppose that a government is determined to launch a strong anti-inflation program after a history of past unsuccessful attempts. The market will quite rationally discount the probability that such policies will really be

[35]I am now working on the development of a more rigorous analysis of these questions in collaboration with Richard Sweeney and Edward Tower.

[36]See Willett, *Floating Exchange Rates,* pp. 57-68 and Charles Pigott, John Rutledge, and Thomas D. Willett, "Some Difficulties in Estimating the Inflationary Impact of Exchange-Rate Changes," Claremont Economic Discussion Papers, 1978 (presented at the June 1978 meetings of the Western Economic Association in Hawaii. A revision of this paper will appear in Sweeney and Willett (eds.), *Studies in Exchange-Rate Flexibility.*

[37]See Pigott, Rutledge, and Willett, "Some Difficulties."

carried through and this in turn will make it more difficult for the anti-inflationary policies to take effect. If the government is really determined to carry through, however, such "insider" information can make it a reasonable strategy for the government to bet on itself through exchange-market information as a way of slowing down inflation more quickly.[38]

While such considerations present a legitimate argument for official intervention, these arguments should be applied with caution. In practice, there is probably at least as great a danger of governments being overly optimistic, as of markets being overly pessimistic. And where expectations aren't formed rationally, the use of such intervention could increase the incentives to generate domestic business cycles for political advantage, the so-called political business cycle.[39]

Thus one should be cautious about assuming that government actions always have benign intentions, or that the government has superior foresight. For example, in a recent paper, Pentti Kouri and Jorge Braga de Macedo conclude that where long-term expectations do not have a stable anchor, "there is a presumption that 'efficient' speculation has macroeconomic costs."[40] The example on which they base their presumption, however, is one in which an anticipated monetary disturbance does not occur. They argue, "This mistake in speculation is compatible with 'efficiency' in the foreign exchange market but it imposes macroeconomic costs by forcing unnecessary adjustments in output and labor markets. Offsetting action by the central bank may thus be necessary."[41]

Whether offsetting actions should be attempted or not would have to depend on whether the government could reasonably be expected to have better expectations than the market. Kouri and de Macedo have assumed implicitly that the government can know ahead of time that the disturbance will not occur while an efficient market does not. As discussed above, there are circumstances in which government expectations may diverge from the market's and this may at times present a case for the desirability of official intervention. But the causes of divergent expectations need to be explained in more depth than in the Kouri-de Macedo analysis.

Furthermore, Kouri and de Macedo did not draw the correct logical conclusion from their example. They did show that there are cases in which the

[38]See, for example, Willett, *Floating Exchange Rates*, pp. 57-68.

[39]The incentives for the political business cycle result from the difference between the long-run and short-run inflationary effects of expansionary policies coupled with a high time rate of discount for governments concerned primarily with winning the next election. By reducing the initial inflationary effects of expansionary policies, official intervention to prop up exchange rates may thus increase the incentives for politically motivated manipulation of the economy. The basic article on this subject is William Nordhaus, "The Political Business Cycle," *Review of Economic Studies*, 1975.

For references to the growing literature on this subject, see Leroy Laney and Thomas D. Willett, "The Political Business Cycle and U.S. Monetary Expansion," Claremont Economic Discussion Papers (in preparation).

[40]Pentti J. K. Kouri and Jorge Braga de Macedo, "Exchange Rates and the International Adjustment Process," *Brookings Papers on Economic Activity*, no. 1, 1978, p. 149.

[41]*Ibid.*, p. 142.

free market can create additional macroeconomic costs ex post even when speculation is efficient ex ante. They did not establish that there is a general presumption that efficient private speculation creates additional macro costs in an unstable inflationary environment, however. To establish such a presumption, the whole range of significant types of possible disturbances would have to be considered. This is an important area for further research.

I hope that this brief discussion has been sufficient to illustrate the complexities involved in analyzing such questions. I do not believe that we have a good idea yet of how much intervention might be desirable in the face of efficient foreign-exchange markets. Recent work has established that there may be such cases, but the practical advisability of intervention strategies based on externality arguments needs much more consideration. A considerable amount of technical economic analysis remains to be done and the danger of abuse of such rationales by national governments must be recognized.

We can hardly expect national governments to stop taking policy actions until more economic research can be completed, but it would seem reasonable to attempt to make such rationales for intervention the subject of especially close attention in the international surveillance process. This is, in fact, already done to some degree because the funds for the official intervention accompanying domestic stabilization efforts are frequently made available through international stabilization loans in which the borrower often must convince the lender of the credibility of his intentions.

I would conclude that the complexities involved in the externality arguments for official intervention policies even when exchange-market speculation is efficient, further increase the case for a judgmental case-by-case approach to international surveillance as opposed to more formal exchange-rate or reserve norm approaches. We just do not have sufficient understanding yet of these issues to allow them to be incorporated adequately in the determination of formal exchange-rate or reserve indicators.

IV. Concluding Comments: Strengthening I.M.F. Surveillance

In this paper I have attempted to lay out a framework for evaluating the major alternative approaches to the international surveillance of exchange-rate policies and indicate briefly why I believe that the judgmental approach adopted in the new I.M.F. principles for surveillance represents the best strategy given our current knowledge about the major economic and political factors involved.[42] It is important to stress, however, that merely adopting the judgmental approach does not resolve the various technical complexities discussed above, nor does it ensure informal political cooperation.

If there is to be effective international surveillance of exchange-rate policies, the I.M.F. must play an important role in attempting to analyze the many

[42]These principles were adopted by a decision of the Executive Board of the I.M.F. on April 29, 1977. They appear in *Annual Report of the Executive Directors for the Fiscal Year Ended April 30, 1977* (Washington: International Monetary Fund), appendix II and are reprinted in Artus and Crockett, *Floating Exchange Rates and the Need for Surveillance,* and Willett, *Floating Exchange Rates.*

complexities of distinguishing between appropriate and inappropriate exchange-rate policies on a case-by-case basis. It must become a forum for international discussions of complaints about national exchange-rate policies and a leader in the exertion of moral suasion to secure the abandonment of policies which are judged to be seriously antisocial.

So far there is discouragingly little public evidence that the I.M.F. is beginning to play a substantially expanded role in the international surveillance process. It is hard for an outsider to judge accurately whether much progress is being made, for sometimes the most effective exertion of moral suasion is that which is kept the quietest. (Publicity may at times stiffen the backs of offenders and make it more difficult on domestic political grounds to appear to give in to foreign pressures.) I wish that there were more substantial external signs of progress, however. There are many unsettled issues concerning both economic analysis and political and administrative feasiblity which assure that we shall not quickly solve all of the questions concerning optimum surveillance, and it could discredit the whole process if the I.M.F. tried to push too quickly to enforce standards for which there is not reasonably widespread international acceptance, but if the I.M.F. does not move relatively swiftly to establish itself as a major forum for the discussion of the economic and political issues involved, it may miss an important opportunity for strengthening the international surveillance of exchange-rate policies and the adjustment process.

An important early step in this process should be the establishment of an extensive monitoring system which contains the latest available information on exchange-rate movements, official intervention, and reserve changes, and the many other types of policies which may influence exchange rates such as official borrowing from the international financial markets, controls and other measures which may influence private capital flows, etc.[43]

One of the most important issues in the implementation of surveillance will be the respective roles of the Managing Director and senior staff, the Executive Directors, and the successor to the Interim Committee within the I.M.F. framework and the interrelationships between these and the surveillance activities which take place through other organizations such as the OECD and the BIS and bilateral and the less structured multilateral forums such as the recent series of Economic Summits. Again this is an area where an initial detailed blueprint would not be sensible. These relationships will have to evolve gradually over time. But it is important that the progress be begun with all deliberate speed. In this regard, I would favor that the management of

[43]Obtaining needed data is not a trivial problem. Most countries have been much more reluctant than the United States to make public data on their intervention activities even with a considerable lag and even on the strictest confidential basis and most major central banks have been hesitant to make available to the Fund the kind of information on exchange-market developments and official intervention which they exchange among themselves on a daily basis. Since the major function of the Fund would be surveillance over the broad course of policies, access to such information on a current daily basis would not be necessary, but it is important that the Fund be given access to more intervention information on a regular basis than it currently receives (or at least than it received when I left the U.S. Government in August 1977).

the Fund be allowed substantial independence in exerting moral suasion concerning countries' exchange-rate policies.

It is clear that any formal reports or sanctions concerning the surveillance process should be the result of collective decisions of the representatives of national governments, but I believe that it would be useful to treat the Fund (i.e., its senior management) as an independent actor to a large extent in the early stages of surveillance investigations. Thus, for example, I think it might be well worthwhile for the Fund staff to begin to more formally estimate and update on a timely basis sets of reference rates or zones for a number of countries. To economize on scarce negotiating resources and to allow prompt adjustments, no attempt should be made to secure formal political agreement on the set of rates or their revisions. When any sizable amount of intervention contrary to the reference rate estimates takes place, however, discussions including both political and technical level representatives should be initiated on the reasonableness of the Fund staff's rate calculations and analysis of the national authorities in question. This will allow higher level attention to focus on the issues which appear to be most important.

Likewise, I believe it would be useful to begin to develop a presumption that national authorities should be called upon to justify cumulative net exchange market intervention which exceeds some order of magnitude and that the intensity of such discussions should increase as the size of the cumulative net intervention increases. Over time such discussions may lead to the development of widely accepted rules of thumb. In such ways I believe that elements of the reference rate and reserve indicator approaches could play an important role in the implementation of the judgmental approach.

There are a thousand and one more important questions concerning the implementation of I.M.F. surveillance. For example, should estimates of reference rates be made public and should this vary with the stage of surveillance? And should I.M.F. surveillance focus only on discouraging government actions which are impeding the efficient operation of the adjustment process or should it also to some extent attempt to encourage official intervention to offset the effects of poorly behaved private speculation? But this paper is already overly long. Adoption of the judgmental approach is just the beginning, not the end, of the search for the most effective operational principles and mechanisms for the international surveillance of exchange-rate policies.

Discussion

Jacob A. Frenkel*

In late April 1977 the Executive Board of the International Monetary Fund (IMF) approved the details of the second amendment to Article IV of the amended Articles of Agreement dealing with the principles and procedures for surveillance of exchange-rate policies. Willett's paper "Alternative Approaches to International Surveillance of Exchange Rate Policies" provides a comprehensive review and analysis of the various approaches that were suggested for the implementation of surveillance. Willett classifies the various approaches into five categories: (i) reserve indicators, (ii) target zones, (iii) reference rates, (iv) leaning against the wind and, (v) judgmental assessment or the case-history approach. After analyzing the principal arguments for and against each of the approaches, Willett concludes that he favors the Fund's decision to adopt the fifth approach according to which surveillance should be a judgmental matter based on a case-by-case study. My remarks deal with the general topic of surveillance and they are divided into four parts. The first contains comments on some of the approaches for surveillance; the second deals with some procedural and conceptual aspects of the principles which were adopted; the third discusses issues of implementation; and the fourth contains concluding remarks.

I. Comments on Approaches for Surveillance

I.1. International Reserves

One of the most popular approaches for surveillance views movement in international reserves as the indicator of the nature of national exchange-rate intervention policies. According to this indicator a decumulation of international reserves indicates that the country in question is intervening in the foreign exchange market in support of its currency. This approach, however, can be criticized on several grounds. In addition to the weaknesses pointed out by Willett, three are noteworthy. First, not all movements in international reserves reflect countries' attempts to manipulate exchange rates. Empirical studies on the demand for international reserves suggest that, even in the recent period of managed float, there is a relatively stable demand for international reserves. This would suggest that changes in the stock of reserves might

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just reflect the process by which individual countries attempt to attain their desired stock of reserves. It follows, therefore, that identifying changes in reserve holdings as the indicator for foreign-exchange intervention can be misleading if not coupled with an analysis of the patterns of countries' demand for international reserves. Therefore, implementing the reserve indicator approach requires a decomposition of reserve changes into those that are associated with attaining the equilibrium level of reserves and those which are not. This issue is similar to the one raised in the discussion concerning monetary indicators in the context of macroeconomic policies and the discussion concerning "free reserves" and "excess reserves" of the banking system.

A second difficulty concerns the formal definition of international reserves. The present definition does not include borrowing from the IMF, nor does it include agreements concerning various swap arrangements among central banks. In practice, countries may use these instruments to finance intervention in the market for foreign exchange that will not be reflected in changes in the official holdings of international reserves. The third difficulty involves the practice of foreign-exchange intervention. Central banks do not need to intervene directly since intervention can be carried out through intermediaries and through various agencies that operate on behalf of the central bank. Under these circumstances the extent of the intervention (including the indirect one) will not be reflected in changes of the official holdings of international reserves.

I.2. Target Zones, Reference Rates and Leaning Against the Wind

The common characteristic to the three approaches — target zones, reference rates and leaning against the wind — is a degree of skepticism with regard to the efficiency of the free market for foreign exchange. This skepticism may arise from doubts concerning the ability of the market to find the "equilibrium" exchange rate, or doubts concerning the ability of the market to move in the "correct" direction or at the "correct" speed without going through "unnecessary" and costly overshooting. I will return to these issues in Section II.

How much foreign-exchange intervention could be expected under the target zones or the reference rates approaches? The answer to this question depends on the efficiency of the market for foreign exchange. When the reference rates or the target zones are known in advance, it is very likely that private speculators would take positions whenever exchange rates move towards the region which would otherwise call for government intervention. These transactions would be undertaken by private speculators in anticipation of official intervention and, thereby, could render the intervention itself unnecessary. The degree to which private transactions reduce the need for government intervention to secure the target zone or the reference rate depends on the efficiency of the market in eliminating unexploited profit opportunities. The evidence concerning the efficiency of the foreign-exchange market suggests that a credible commitment to secure the target zone or the reference rate might yield the circumstances that require a relatively low degree of intervention.

II. The Principles of Surveillance

II.1. The Document

In evaluating the content of the document concerning the principles and procedures for the guidance of member countries with respect to exchange-rate policies and for the exercise of the IMF surveillance over those policies, it is important to recognize that the final text is the result of many iterations and of numerous earlier drafts. It replaces an earlier document on Guidelines for Management of Floating Exchange Rates (1974) which was modified through negotiations in various forums including the meetings of the Deputies of the Group of Ten, the Ministers of the Group of Ten, the Rambouillet summit and the Interim Committee in Jamaica. The final text represents therefore the ultimate political and legal compromises mainly between the interests and views of France and the United States. As a result, the language is occasionally vague and the precise operational meaning of some of the guidelines is left unclear.

The document starts with the general principle that "The Fund shall exercise firm surveillance over the exchange rate policies of members." A principal objective is "to assure orderly exchange arrangements and to promote a stable system of exchange rates." Along with the global international interest, the document recognizes that, to a large extent, economic policies are guided by national interests and thus

> These principles shall respect the domestic social and political policies of members, and in applying these principles the Fund shall pay due regard to the circumstances of members.

The Principles for the Guidance of Members' Exchange Rate Policies are also broad and somewhat vague.

> A member shall avoid manipulating exchange rates or the international monetary system in order to prevent effective balance of payments adjustment or to gain an unfair competitive advantage over other members.
> A member should intervene in the exchange market if necessary to counter disorderly conditions . . .
> Members should take into account in their intervention policies the interests of other members, including those of the countries in whose currencies they intervene.

These Principles attempt to express the notion that the Fund recognizes the potential conflict between national domestic interests and global international interests, but the resolution of this conflict is left unclear. For example, what is the definition of "an unfair competitive advantage"? What are "disorderly conditions"? How can a country determine that intervention is "necessary"? What is the operational meaning of "taking into acount" the "interests of other members"?

According to the Principles, the Fund determines that a country pursues policies that might be in violation of the Principles if there is

> (i) Protracted large-scale intervention in one direction in the exchange market; (ii) an unsustainable level of official or quasi-official borrowing, or excessive and prolonged short-term official or quasi-official lending, for balance of payments purposes; (iii) (a) the introduction, substantial intensification, or prolonged maintenance, for balance of payments purposes, of restrictions on, or incentives for, current transactions or payments, or (b) the introduction or substantial modification for balance of payments purposes of restrictions on, or incentives for, the inflow or outflow of capital; (iv) the pursuit, for balance of payments purposes, of monetary and other domestic financial policies that provide abnormal encouragement or discouragement to capital flows; and (v) behavior of the exchange rate that appears to be unrelated to underlying economic and financial conditions including factors affecting competitiveness and long-term capital movements.

In these Principles of Fund Surveillance some key concepts like large-scale, unsustainable, excessive, substantial intensification and the like remain undefined. Furthermore, by emphasizing countries' intentions, the Principles assign to the Fund the impossible task of identifying the motives which underlie the various policy choices and thus, the same set of policies may or may not be regarded as being in violation of the Principles depending on whether or not they are carried out "for balance of payments purposes." I turn now to a discussion of some conceptual issues related to surveillance.

II.2. Conceptual Aspects of Surveillance

The central conceptual issue can be phrased in the question "how can the Fund recognize a violation when one occurs?" Since countries are permitted to intervene to counter "disorderly conditions," one should specify in greater detail what these conditions are and what is meant by the concept of "intervention."

It is clear that "disorderly conditions" or "excessive fluctuations" or "overshooting" are all concepts which compare the actual path of exchange rates with the equilibrium path (or with the socially optimal path). Therefore, prior to implementing the surveillance principles there should be an agreement on the equilibrium path of the exchange rate or, equivalently, on the most appropriate model for the analysis of exchange-rate determination. At the present such a consensus (at least among academic economists) is clearly lacking. A related question is whether, in evaluating the path, one should look at the nominal exchange rate, the effective (trade-weighted) exchange rate, or the effective real exchange rate (effective exchange rate adjusted for inflation). As a matter of fact, the extent of fluctuations, and probably the implied inference concerning overshooting, may depend heavily on the definition of exchange rate. For example, at the present (October 4, 1978) the German mark/U.S. dollar exchange rate shows an appreciation of 47.9 percent since March 1973 while, during the same period, the effective German mark exchange rate rose by 32.3 percent and the effective real exchange rate appre-

ciated by only 2.2 percent (the above is based on inflation in wholesale prices of manufactured goods, excluding food; the Morgan Guaranty Trust Company of New York did the computation). This example illustrates the difficulties involved in justifying intervention on the basis of (poorly defined) characteristics of the path of exchange rates. It may also be noted in passing that the choice of the relevant definition of exchange rates is not trivial. Among the relevant questions would be the choice of weights in the construction of effective exchange rates. For example, in computing the effective exchange rate for the U.S. dollar, should the Canadian dollar receive the high weight that is implied by the large share of Canadian-U.S. trade? A second and somewhat deeper question involves the comparison of effective and bilateral exchange rates. Would those who emphasize the need for stability of the weighted exchange rate rather than the stability of bilateral rates also place less emphasis on the cost of fluctuations of individual relative prices as compared with fluctuations of the aggregate price level? These and other questions suggest that some further reflection might have been warranted.

Even if there could be an agreement concerning the choice of the model and the definition of the exchange rate, there still remains the question of whether large fluctuations justify government intervention in the foreign-exchange market. As an analytical matter, the mere fact that exchange rates have fluctuated can clearly not be used as the rationale for intervention. If the only problem was that of fluctuations, the optimal system would have been that of fixed exchange rates. To make the case for intervention one has to demonstrate that the market is either inefficient or that social and private costs differ. As an empirical matter there is overwhelming evidence that the foreign-exchange market is efficient in the sense that it does not seem to entail (ex ante) sure unexploited profit opportunities. Therefore, the case for intervention must rest on the supposition that social and private costs differ and thus that the free market yields sub-optimal outcomes from the social viewpoint. While such a possibility may not be ruled out on a priori grounds, the optimal policy should be directed at eliminating the source of the difference between social and private cost rather than taking the form of intervention in the market for foreign exchange.

The previous discussion concerning the necessity of evaluating the path of exchange rates relative to the prediction of the model, suggests that it would be useful to distinguish between anticipated and unanticipated fluctuations since the case for intervention may arise from the latter and not from the former. It also seems that if the source of the cost is lack of information that can be provided at a relatively low social cost, then the optimal policy should provide that information rather than intervene directly in the market. As a practical matter it would be very difficult to evaluate the benefits from intervention yielding increased stability of exchange rates without knowledge of the resulting increased fluctuations elsewhere in the economy. Putting the argument differently, there are two ways of dealing with socially costly fluctuations; the first involves interventions which reduce the extent of fluctuations and the second involves the provision of information which reduces the cost of given fluctuations by turning unanticipated changes in exchange rates

into anticipated ones. The design of optimal policies should consider the costs and benefits associated with alternative degrees of fluctuations rather than concentrating only on the extent to which exchange rates fluctuate without regard to alternative cost.

Whether or not intervention is warranted, the question that remains is how can the Fund determine if a country is "manipulating" its exchange rate? Put more generally, what is the definition of "exchange rate policies" and of "foreign exchange intervention"? These questions are of prime importance since they determine the scope of the Fund's surveillance. If exchange-rate policies are defined as all policies through which the authorities can affect exchange rates, then the domain of policies over which the Fund should exercise its surveillance consists of the entire range of macroeconomic policies including all fiscal and monetary policies which affect interest rates, the supply of money, credit, and the like. It is clear that no sovereign government would delegate such an authority of a meaningful surveillance to an external body. If, on the other hand, intervention is defined more narrowly, then the restrictions on policies that are imposed by the Principles for the Guidance of Members' Exchange Rate Policies and by the Principles of Fund Surveillance over Exchange Rate Policies could be easily evaded through the use of other indirect policies which are not covered by the Surveillance. I conclude that a successful surveillance seems doubtful. These issues are similar to those raised in connection with the principles of GATT concerning commercial protectionist policies. Since tariffs can be replicated by a combination of domestic excise taxes on and subsidies to production and consumption, it became clear that the principles of GATT could not be implemented unless they covered such aspects of excise taxes and subsidies.

In a sense the emphasis on surveillance over exchange-rate policies (in the narrower sense) might be somewhat counterproductive since it might convey the impression that exchange-rate policies can be discussed independent of the entire range of macroeconomic policies. One of the major advances of the theory of exchange rates in recent years has been the recognition that exchange rates and the balance of payments can not be viewed as an appendix to the entire system but rather that they are an integral part of it. Therefore, it is important that policy discussions incorporate this notion and recognize that an effective surveillance over exchange-rate policies must mean surveillance over the entire spectrum of macroeconomic policies.

III. The Implementation of Surveillance

The text of the statement on Surveillance over Exchange Rate Policies states that if the Managing Director considers a country to be in a possible violation of the Principles,

> he shall raise the matter informally and confidentially with the member, and shall conclude promptly whether there is a question of the observance of the principles. If he concludes that there is such a question, he shall initiate and conduct on a confidential basis a discussion with the

> member under Article IV, Section 3(b). As soon as possible after the completion of such a discussion, and in any event not later than four months after its initiation, the Managing Director shall report to the Executive Board on the results of the discussion.

The question that is not discussed in great detail concerns the means by which the Fund can deal effectively with violations. It seems that the Fund might be able to deal effectively with deficit countries who need to rely on it for borrowing. Among the deficit countries the Fund might have even greater power in dealing with less-developed countries than with developed countries since the latter group has some access to alternative world commercial capital markets. It is less likely that the Fund will have great enforcement powers in dealing with lenders and with surplus countries. Experience suggests that the instrument of "moral persuasion" cannot be relied upon and that international cooperation can be productive only in the absence of conflicts of interest. It is noteworthy that a similar asymmetry between deficit and surplus countries was also a characteristic of the Bretton Woods system in which the burden of adjustment fell mainly on the deficit countries. A question, however, is whether this allocation of the burden of adjustment is optimal from the global viewpoint.

The distinction between deficit and surplus countries and between developed and less-developed countries is not reflected in the principles of surveillance "which apply to all members whatever their exchange arrangements and whatever their balance of payments position." Since the needs for, and the optimal degree of intervention may differ from country to country, it would have been useful to recognize that there is an intimate connection between each country's optimal degree of managed floating and the principles of surveillance that are most appropriate for that country. Among the considerations relevant for the determination of the specific set of surveillance principles would be the degree of capital mobility, the extent of diversification of production, the degree of trade dependence, the degree of policy harmonization, the degree of similarities of preferences concerning the "desired" or the "tolerable" rate of inflation, the dependence of domestic shocks, and other arguments that are relevant for the determination of each country's optimal degree of exchange-rate flexibility. The fundamental lack of symmetry in the world economy suggests that a homogeneous set of surveillance principles may not be the most appropriate one. This could have provided the ultimate justification for the decision that surveillance is being viewed as a judgmental matter which is implemented by adopting a case-by-case approach.

In specifying the policies that member countries are required to undertake, the principles determine that countries should intervene to counter disorderly conditions. As a practical matter the question is whether the authorities of each member country can be relied upon to recognize the occasions which call for intervention and to implement the intervention policies in a way which increases stability rather than contributes to instability. The track records of central banks' intervention policies have not been too promising. It seems that for most of the major central banks interventions in the foreign-

exchange markets entailed losses which indicate that in many cases the policies of intervention did not contribute to increased stability.

IV. Concluding Remarks

In analyzing the issues concerning surveillance over exchange-rate policies it is important to note that the final draft of the amendments is the outcome of a compromise among diverse views. In particular it represents a compromise between the French who desired to return to a system with greater fixity of exchange rates and the Americans who wished to maintain flexibility. As a result important issues have been left somewhat vague and only time will show what the practical content and interpretation of the various principles are. In this context it is interesting to quote from Mr. de Larosiere's speech at the IMF-World Bank meeting (September 1978). In his first speech as managing director, Mr. de Larosiere said that there is a pressing need to eliminate the differences in the rate of economic growth and inflation among industrial countries. He argued that only if divergent growth and inflation rates are brought into line, can greater stability be achieved in foreign-exchange markets. It is noteworthy that the elimination of divergent growth and inflation rates creates precisely the circumstances which are essential for the smooth operation of a system of fixed-exchange rates.

The analysis of surveillance in the above pages did not deal with a potentially important development which might make the whole surveillance issue obsolete. Current discussion among the European leaders might lead to the formation of a new European Monetary System, the creation of which would probably change the entire set of rules of the game. It might lead to a creation of a European Monetary Fund (EMF) which might also wish to have some power of surveillance. Under those circumstances many new questions would have to be answered; for example, should Germany accept the authority and follow the advice of the IMF surveillance or of the EMF surveillance? Since such developments are not entirely unlikely, it would have been useful for the IMF to consider them prior to the development of the detailed bureaucratic machinery needed for the implementation of the principles of surveillance.

In the last several years, the issue of IMF surveillance has been subjected to many critiques and praise. To gain perspective it is noteworthy that similar discussion took place during the shaping of the final drafts of the documents which laid the foundations for the Bretton Woods system. In conclusion, it is instructive to recall John Maynard Keynes' remarks in his closing speech to the Bretton Woods Conference:

> I am greatly encouraged, I confess, by the critical, skeptical and even carping spirit in which our proceedings have been watched and welcomed in the outside world. How much better that our projects should *begin* in disillusion than that they should *end* in it.

Discussion

Jacques R. Artus*

The paper by Thomas Willett provides us with a fairly extensive review of the possible approaches to exchange-rate surveillance and a conclusion that the judgmental case-by-case approach is the one most suited to present circumstances. I broadly agree with this conclusion, and, rather than discussing minor aspects of his argumentation, I would like to use the few minutes allocated to me to consider some of the problems that will have to be faced in implementing such an approach. After all the judgmental case-by-case approach has now been officially chosen by the international community. So where do we go from there?

Two main problems arise in the implementation of surveillance. The first problem results from the fact that there is no broad consensus concerning the appropriate role of the exchange rate. There are basically two views. The first view — the free market view — is that the exchange rate is an endogenous variable that is not, cannot be, and should not be under the control of the authorities, and whose main role is to keep external transactions in balance. The second view — the interventionist view — is that the exchange rate is the proximate determinant of the domestic price level, and, therefore, that, one way or another, the authorities must keep the exchange rate under control. Advocates of the free-market view do not argue that the exchange rate has no effect on the domestic price level; they only point out that normally both the exchange rate and the domestic price level are jointly determined by the monetary and fiscal policies of the authorities — policies that should not be influenced by exchange-rate developments per se. Advocates of the interventionist view do not deny that the exchange rate influences external transactions; they are only less hesitant to advocate the use of official compensatory borrowings, capital controls, liquidity squeezes, and other such means to relax the external constraints in the short run while relying on "structural adjustments" to take care of them in the longer run.

The April 1977 decision that specifies how surveillance is to be implemented does not take the side of either of the two views; it only outlaws the most radical versions of these views. Countries cannot follow a benign neglect policy; they must intervene to counter disorderly market conditions. They cannot either control the exchange rate to the extent of preventing effective

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The views expressed here are the author's; they are not to be interpreted as indicating the position of the Executive Board or of the officials of the Fund.

balance-of-payments adjustment. In practice, it may, however, be difficult to decide when intervention is warranted. Of course, some cases are cut and dried. A deliberate attempt by a country to depreciate its exchange rate to increase an already large trade-balance surplus so as to export unemployment, for example, would not raise any issue. Those cases, however, do not seem prevalent at present. In most of the cases that do occur, it is difficult to decide where the freedom of a country to follow either view stops, and where the violation of the obligations not to hinder the working of the external adjustment process and to avoid disorderly market conditions begins. Take a prevalent case — the one of a country that resists a depreciation of its exchange rate because it considers that this would be inflationary. It is understood that such a policy would be appropriate only if the domestic policies of the country were such that the prevailing exchange rate is not inconsistent with the maintenance of external balance in the longer run. The problem is that as long as the external position of a country is not absolutely untenable, it may well find supporters among countries that tend to follow the interventionist view by pleading the need to fight inflation; and once it has become absolutely untenable, who needs surveillance?

The second problem is that, while surveillance takes into account the overall policy stand of the country, the focus is mainly on its exchange-rate policies. In the case of most countries, this makes sense because a wrong exchange-rate policy — for example, too much or too little intervention in the foreign-exchange market, or too much or too little use of official compensatory borrowings — can cause a great deal of harm to the country in question or to its trading partners. In the case of the largest industrial countries, the United States, the Federal Republic of Germany, and Japan, in particular, one may doubt, however, that the authorities can significantly influence their exchange rate other than in the short term by having recourse to intervention in the foreign-exchange market or to other similar measures. The reason is simply that private capital transactions are potentially so large that they can always swamp official transactions. If the authorities cannot affect their exchange rates by using such measures, they can hardly be blamed for using them or not using them. This, of course, does not mean that the authorities cannot be held responsible for what is happening to their exchange rates, it only means that they are responsible only because their exchange rates reflect their domestic policies. If the international community is unhappy about what happens to the U.S. dollar, the deutsche mark, or the yen, then it should logically be unhappy about the domestic policies of the United States, of the Federal Republic of Germany, or of Japan. Surveillance over domestic policies is what is involved, rather than surveillance over exchange-rate policies. It is obvious, however, that countries are not all enthusiastic about seeing their domestic policies subjected to surveillance by the international community. So that here again it will not be easy to implement firm surveillance so as to bring about more orderly exchange-market developments.

The problems involved in implementing exchange-rate surveillance are considerable, but there is also little doubt that the need for it is great. The

breakdown of the Bretton Woods system has given much influence to market forces and much freedom to national authorities as far as exchange-rate policies are concerned. The risks of destabilizing speculation and of exchange-rate manipulations by national authorities have led the international community to agree on a surveillance mechanism. It is to be hoped that the pressure of the events will now give to national authorities the will to give substance to that agreement. Progress in that direction will require that some form of consensus be reached on the issue of the proper role of the exchange rate. It will also require that dominant countries be willing, if only to a limited extent, to see their domestic policies examined by the international community.