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To: Members of the Executive Board

From: The Secretary

Subject: Target Zones

Attached for consideration by the Executive Directors is a paper on target zones which is an accompanying piece to the paper on review and assessment of the system of floating exchange rates (SM/86/6, 1/10/86) which has been scheduled for discussion on Wednesday, February 12, 1986.

Mr. Goldstein (ext. 7678) is available to answer technical or factual questions relating to this paper prior to the Board discussion.

Att: (1)

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INTERNATIONAL MONETARY FUND

Target Zones

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(In consultation with other departments)

Approved by Wm. C. Hood

January 9, 1986

Contents

I. Introduction

At its meeting in Seoul on October 6-7, 1985, the Interim Committee requested the Executive Board "... to study the issues raised in these reports [the reports on the international monetary system presented by the Group of Ten and the Group of Twenty-Four] with a view to facilitating a substantive consideration by the Committee at its next meeting." 1/ This paper, and the overview paper on "Review and Assessment of the System of Floating Exchange Rates," (SM/86/5), are among a series of papers prepared in response to that request. The present paper identifies key issues surrounding the advisability and practicality of adopting "target zones" for the exchange rates of major currencies.

After weighing the target-zone proposal, the majority (of Deputies) in the Report of the Group of Ten (hereafter, the G-10 Report) 2/ agreed that "... the adoption of target zones is undesirable and in any case impractical in current circumstances." 3/ Some other Deputies, however, felt that "... there could be merits in this proposal and suggested that the technical aspects of a target zone approach should be further explored at an appropriate time." 4/ The Report of the Group of Twenty-Four (hereafter, the G-24 Report) was considerably more favorably disposed to the target-zone proposal. 5/ It concluded that "the adoption of target zones for the exchange rates of major currencies could help achieve the objective of exchange rate stability and sustainable levels of payments balances. The proposal needs to be further studied and pursued in order to gain general acceptance." 6/

The prevailing wide differences in view about the desirability and practicality of adopting target zones reflect at least three factors: first, different assessments of the performance of the existing exchange rate system; second, different evaluations of whether a system of target zones could indeed remedy the perceived weaknesses of the existing system; and third, different conceptions of the preferred form of target zones.

1/ "Communiqué of the Interim Committee of the Board of Governors of the International Monetary Fund," paragraph 10. International Monetary Fund, Press Release No. 85/33, October 7, 1985.

2/ "The Functioning of the International Monetary System: A Report to the Ministers and Governors by the Deputies of the Group of Ten," June 1985, circulated as EBD/85/154, Supplement 1.

3/ G-10 Report, paragraph 32.

4/ G-10 Report, paragraph 31.

5/ "The Functioning and Improvement of the International Monetary System: Report of the Deputies of the Group of 24," August 1985, circulated as EBD/85/228.

6/ G-24 Report, paragraph 5.

The purpose of this paper is not to make the case either for or against the adoption of target zones. Rather, the intention is to raise and discuss factors that should be considered in any serious discussion of the topic. As such, the paper not only outlines potential strengths and potential weaknesses of various versions of the target zone approach, but also confronts operational questions that would have to be faced if the target zone approach to exchange rate management were adopted.

The rest of the paper is organized as follows. Section II addresses four fundamental questions concerning the definition of and the rationale for target zones: first, what is generally meant by a "target zone" approach to exchange rate management and how can "hard" and "soft" versions of this approach be defined; second, what are the perceived deficiencies in the existing exchange rate system which motivate the call for the adoption of target zones; third, how might target zones remedy these deficiencies; and fourth, what factors are behind much of the skepticism over and opposition to target zones. Some of the ground covered in this section will be familiar to Directors from earlier debates on fixed versus flexible exchange rate systems, from recent appraisals of the present exchange rate system (IMF [1984c] and the G-10 and G-24 Reports themselves), and from the discussion in the overview paper, "Review and Assessment of the System of Floating Exchange Rates," (SM/86/5). Nevertheless, the issues raised are central to an evaluation of the advisability of adopting target zones.

Section III deals with a series of operational questions and issues of a more technical and specific nature that weigh heavily on the practicality of implementing a target zone approach. The issues discussed are the following: how would the target zones be calculated; what currencies would be included in the system of target zones; how wide should the target zones be and how frequently should they be revised; what policy instruments would be employed to keep actual exchange rates within the target zones, and what are the likely consequences for other policy objectives; how could a target-zone approach be incorporated into G-5 multilateral surveillance; and how would initial misalignments be handled in a transition to target zones? A reading list on target zones and on related subjects appears as Section IV of the paper.

Finally, four caveats relevant to the nature and scope of this study should be mentioned. First, there should be no presumption that advocates of target zones see this as the <u>only</u> proposal for improving exchange rate stability. Indeed, most advocates of target zones would also rely on stronger surveillance of a broader nature to help reach that objective. Second, since the paper does not attempt to compare the target-zone proposal to other proposals (presented in the G-10 and G-24 Reports) for improving exchange rate stability, there should likewise be no presumption that the strengths and weaknesses outlined here are more or less significant than those associated with other proposals. In this connection, it is perhaps useful to indicate that the main overview paper

on "Review and Assessment of the System of Floating Exchange Rates," (SM/86/5) contains a discussion not only of the target zone proposal but also of several other proposals for improving exchange rate stability. Third, since many of the precise operational features of a system of target zones remain largely conjectural (e.g., which currencies would be included, how target zones would be calculated, etc.), the views expressed on these operational features should be seen more as aids to discusssion and debate than as definite conclusions. Fourth, although the paper focusses on the issues raised in the G-10 and G-24 Reports, it also considers views on target zones from other sources. For this reason, terms such as "proponents," "supporters," "skeptics," and "opponents" should not necessarily be associated with the G-10 and G-24 Reports unless specifically indicated.

II. The Meaning and Rationale for Target Zones

1. What are target zones?

Target zones mean different things to different people. Perhaps the easiest way to think of them is as a hybrid exchange rate system that combines some of the attributes and characteristics of both pegged and flexible exchange rate systems. 1/

A. How does a system of target zones differ from other exchange regimes?

Target zones differ from a pure system of clean floating in that the authorities are permitted (and indeed are likely) to intervene in the exchange market, and more generally, are encouraged "to take a view" on the desirable level of the exchange rate. Target zones differ from the present system of managed floating in at least two principal respects: 2/ (i) the authorities establish a target zone for the exchange rate for some future period; and (ii) the authorities are expected to keep more of an "eye" on the exchange rate in the conduct of monetary policy

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1/ In the G-10 Report, target zones are described as follows: "... the authorities concerned would define wide margins around an adjustable set of exchange rates devised to be consistent with a sustainable pattern of balances of payments." (paragraph 31).

2/ Another way of summarizing the difference between a system of target zones and the present system of managed floating would be as follows. Under target zones, authorities must come to a mutually agreed view on the appropriate zones for major-currency exchange rates. In contrast, under the present system, authorities have not generally expressed their own view on appropriate zones for exchange rates, let alone come to a common view with other authorities.

so as to keep the actual exchange rate within the target zone. 1/ Compared to the adjustable peg system, target zones need not entail a formal commitment to intervene in all circumstances in the exchange market to keep actual rates within the zone. Indeed, the only concrete intervention guideline that is typically mentioned is that the authorities refrain from "destabilizing intervention," i.e., buying their own currency when it is above the top of the zone and selling it below the bottom of the zone. This specific guideline was also included in the Fund's 1974 "Guidelines for the Management of Floating Exchange Rates." Finally, target zones differ from a pure system of rigidly fixed exchange rates in that, in addition to the lack of a formal intervention obligation, the zones themselves are to be occasionally reviewed and changed if deemed necessary.

B. How can "hard" and "soft" versions of target zones be defined?

In general, various versions of target zones can be distinguished by reference to the following four characteristics:

(i) width of the target zone (outside of which the exchange rate is viewed as "out of line");

(ii) the frequency of changes in the target zones;

(iii) the degree of publicity given to the zones. In this context, one may distinguish between public announcement of the target zones and confidential disclosure in official circles (for purposes of exchange rate surveillance, intervention, multilateral policy coordination, and consultation), i.e., "loud zones" versus "quiet zones;" and

(iv) the degree of commitment to keeping exchange rates within the zone.

1/ Target zones are intended to reflect estimates of real equilibrium exchange rates because it is the real exchange rate that is most relevant for resource allocation decisions and for balance of payments adjustment; however, it is usually assumed that for operational purposes, these real rate calculations would be translated into nominal exchange rate zones. The assumption is that the authorities can alter real rates by operating on nominal rates. Also, whereas a breach of the target zone is expected to initiate a review of the whole range of a country's macroeconomic and structural policies, most target zone proposals assume that monetary policy will carry the primary responsibility for managing the exchange rate.

Obviously, these characteristics define a spectrum of possible approaches to target zones. At one end, a "hard" version of target zones might entail a monetary policy that is heavily geared to maintaining the exchange rate within the narrow, infrequently revised, and publicly-announced zone. At the other end of the spectrum, lies a "soft" version of target zones that might be characterized by a monetary policy paying only limited attention to the level of the exchange rate, and by zones that are wide, frequently revised, and kept confidential. The hard and soft poles, in turn, may serve as useful benchmarks for the analysis and evaluation of intermediate versions of target zones.

The "hard" version of target zones shares some of the attributes of the existing European Monetary System (EMS). In particular, hard target zones can be considered a close relative of the EMS' fixed but adjustable rates with narrow margins and a "divergence indicator." However, unlike the EMS, hard target zones do not entail a formal commitment for exchange rate intervention; nor need there be an analogue to the credit facilities of the EMS. The "soft" version of target zones differs from existing Fund surveillance procedures (e.g., the requirement for reporting real exchange rate changes in excess of 10 percent to the Executive Board) in that the former introduces a more explicit and formal framework for defining the appropriate pattern of exchange rates and for establishing the links between exchange rates and macroeconomic policies. 1/

2. What considerations underlie the call for the adoption of target zones?

Proponents of target zones proceed from two basic perceptions: first, that the present system of managed floating has exhibited serious deficiencies; 2/ and second, that the adoption of a system of target zones could remedy at least some of these deficiencies. 3/

Among the alleged deficiencies, four have received the most attention:

1/ Existing procedures do not, of course, rely on the assessment of appropriate zones but rather use as a starting point the last occasion on which exchange rate developments were brought to the attention of the Executive Board. Also, this reporting and monitoring procedure has not led to any Board discussions.

2/ "The experience with the present exchange rate system has not been satisfactory." G-24 Report, paragraph 2.

3/ "Adoption of target zones... could help achieve the objective of exchange rate stability and sustainable levels of payments balances." G-24 Report, paragraph 5.

A. Exchange rates have been highly volatile and unpredictable

Whether measured in real or nominal terms, bilateral or effective terms, the short-run variability of exchange rates over the period of managed floating has been high--indeed, significantly higher than during the previous Bretton Woods system. In addition, most exchange rate changes have been unpredictable (as suggested by market indicators like forward exchange rates). While high short-term volatility and unpredictability of exchange rates is usually deemed to be less serious than longer-term "misalignments," this volatility is still regarded as costly because it generates uncertainty, and hence leads to lower levels of investment and trade. 1/ Further, developing countries are alleged to be especially hurt by this volatility because they do not have well-developed financial markets (particularly forward cover arrangements). 2/

B. Exchange rates of major currencies have been subject to large and persistent misalignments

A second complaint against the present system is that exchange rates of major currencies have been subject to large and persistent "misalignments" over the past dozen years. Such misalignments are commonly measured by cumulative departures from purchasing-power parity, or by the sheer magnitude of changes in real exchange rates themselves, or by departures from more comprehensive concepts of the "equilibrium" real exchange rate (e.g., the exchange rate that yields a cyclically-adjusted current-account balance equal to normal net private capital flows). Not surprisingly, charges of misalignment have been particularly pronounced over the past four years. A representative estimate of misalignment is provided by Williamson [1985]. He estimates that by the end of 1984, the extent of misalignment in the real effective exchange rate was 39 percent (overvaluation) for the U.S. dollar and 19 percent (undervaluation) for the Japanese yen. Such misalignments are, in turn, deemed costly because they impact adversely on resource allocation, induce adjustment costs (including unemployment), distort optimal levels of capital formation, and encourage protectionism. 3/

1/ "It [volatility of exchange rates] has discouraged investment and trade by adding to financial risks for investors and traders." G-24 Report, paragraph 61.

2/ "Exporters and importers in these countries (developing countries) are exposed to high exchange risks in the absence of well-developed financial markets, especially forward cover arrangements," G-24 Report, paragraph 63.

3/ "Misalignment inevitably produces either idle resources or wasteful shifts back and forth between tradable and nontradables. It becomes a potent source of pressures for protectionism," G-24 Report, paragraph 62.

C. Under the existing exchange rate system, macroeconomic policies in major industrial countries have been undisciplined and uncoordinated 1/

Perhaps the chief criticism by the proponents of target zones is that the existing system of floating exchange rates lacks an effective mechanism for ensuring policy discipline and coordination. 2/3/ As supporting evidence, the critics cite, inter alia, the doubling of industrial-country average inflation rates as between 1963-72 and 1973-85, and the tripling of the ratio of industrial countries' government fiscal deficits to GNP over the same period. On lack of coordination, they point to the frequent conflicts among the major industrial countries on both the stance and mix of macroeconomic policies, as well as on the need for structural reform. Also, despite the efforts made at coordination, critics emphasize the absence of binding agreements during the floating-rate period on either rates of monetary expansion or exchange rate norms. Undisciplined and uncoordinated policies, in turn, are said to be costly because such behavior is incompatible with financial stability and sustainable growth, and also because such policies are the main driving force behind both short-term volatility and longer-term misalignment of exchange rates. 4/

1/ In what follows, coordination may be thought of an encompassing all international influences on domestic policy-making; see Polak [1981]. Although discipline and coordination are distinct concepts, this paper follows the practice in the G-10 and G-24 Reports and discusses them together.

2/ "a mechanism has to be divised to enhance policy coordination among the major industrial countries." G-24 Report, paragraph 5. "... the system has not promoted sound and consistent policies." G-10 Report, paragraph 15.

3/ It might be regarded as the chief criticism because short-term volatility and longer-term misalignment of exchange rates are generally regarded as manifestations of this lack of discipline and coordination.

4/ "It [the present exchange rate system] has not prevented inadequate policies and divergent economic performance which have contributed to a high degree of short-term volatility of nominal exchange rates and to large medium-term movements in real exchanges rates." G-10 Report, paragrah 5. "This [improved functioning of the exchange rate system] implies greater effort on the part of the developed countries to achieve a substantial degree of discipline and coordination in the conduct of their national policies." G-24 Report, paragraph 65.

D. IMF surveillance under the existing exchange rate system has been largely ineffective in respect of major industrial countries, resulting in asymmetry in the international adjustment mechanism

Yet a fourth alleged weakness of the existing system is that IMF surveillance has not been sufficiently effective in respect of the very industrial countries whose policies have the most significant "spillover effects" on the world economy, thereby producing, among other things, an asymmetric distribution in the burden of adjustment. As evidence for this position, the critics cite the magnitude and persistence of current account imbalances in the United States and Japan, especially over the past three years. The seeming inability of surveillance to bring about a correction of the structural U.S. budget deficit is regarded as another striking example of this lack of symmetry. Further, it is argued that an inappropriate mix of macroeconomic policies in the major industrial countries during the early 1980s resulted in high real interest rates and in sluggish economic activity. A consequence of this was that developing countries faced (during 1981-83) a sharp increase in debt-service requirements, a significant decline in export earnings, a compression of their imports, and unusually slow growth. 1/ Thus, so it is argued, adverse "spillover effects" from poor policies in industrial countries were substantial, and the burden of adjustment fell disproportionately on the developing countries.

3. How would the introduction of target zones for the major currencies remedy these four perceived deficiencies of the existing exchange rate system?

A central argument advanced by proponents of target zones (see, for example Roosa [1984]) is that their introduction would restore some of the useful characteristics of the Bretton Woods system without being subject to the flaws that led to the collapse of that system.

A. Restoring an anchor for medium-term exchange rate expectations

It is often argued that one reason why exchange rates have been so volatile under the present exchange rate system is that market participants lack an "anchor" for medium-term expectations about exchange rates. In such an environment, new information, rumors, or announcements can lead to large revisions of expectations about the future which in turn induce

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1/ "In the recent past, their [industrial countries] uncoordinated efforts to disinflate led to excessive emphasis being given to monetary restriction relative to other instruments. The result was a halting process of recovery with high real interest rates and low commodity prices having particularly adverse effects on the developing countries." G-24 Report, paragraph 72.

"large" changes in current exchange rates. Furthermore, under some circumstances, such events may set the stage for the emergence of "bandwagon" effects and speculative "bubbles," that can dominate the evolution of the exchange rate and divorce it increasingly from "fundamentals".

It is claimed that target zones will reduce exchange rate volatility and misalignment on two counts. First, the obligation (albeit an informal one) or the intention to keep the exchange rate within the zone provides market participants with useful information about the likely conduct of future macroeconomic policies, especially monetary policy. The easier it is to make an informed judgment about the future course of policies, the less one can expect the erroneous extrapolation of short-term events and the more forgiving will be the market of short-term deviations of policy.1/ Second, the publication of target zones provides market participants with information on the authorities' collective estimate of future equilibrium exchange rates. Therefore, it is said to reduce the risk that market participants use the "wrong model" in translating (even perfectly foreseen) future policy changes into forecasts of future exchange rates. 2/

B. Restoring discipline and coordination to the conduct of macroeconomic policies

Target zones are said to restore discipline to macroeconomic policy-making for two reasons. First, if exchange rates are maintained within the target zones, then macroeconomic policies, again particularly monetary policy, are disciplined by the exchange rate constraint. Second, even if the authorities opt to alter the target zone rather than their policies, they would still be obliged both to negotiate a new zone and to explain why a new zone is appropriate. These obligations themselves are said to introduce stronger peer pressure into policy formation.

Turning to the coordination of policies, two points are noteworthy. First, the very fact that a system of target zones has to be negotiated and must display mutual consistency of cross exchange rates is said to enhance the degree of international policy coordination. 3/ Under a system of target zones, so it is argued, the exchange rate implications of alternative stances and mixes of policies would be directly confronted,

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1/ "They [some deputies] further believe that credible commitments to target zones would contribute to stabilizing market expectations." G-10 Report, paragraph 31.

2/ "Some Deputies made the proposal to introduce target zones... because they believe that convergence of economic performance, while necessary, may not always be sufficient to achieve lasting exchange rate stability." G-10 Report, paragraph 31.

3/ "... commitment to [target zones]...would promote greater international policy consistency." G-24 Report, paragraph 66.

thereby ending the undersirable current practice whereby exchange rates emerge as a "residual" of other policy actions of individual countries. 1/ Second, the requirement that target zones be negotiated and mutually agreed is said to reduce the risk of competitive devaluations.

And to the extent that target zones do restore discipline and coordination to the conduct of macroeconomic policy, they will reduce misalignment and volatility of exchange rates.

C. Increasing the effectiveness of IMF surveillance and reducing the asymmetry in the adjustment process

Proponents of target zones argue that the need to negotiate, to ensure consistency, and to revise the zones could provide a natural focal point for multilateral IMF surveillance. Just as important, such surveillance procedures when applied to target zones will be aimed at the policies of the major industrial countries that, in turn, are likely to constitute the membership of the target zone system. It is alleged therefore that target zones will remove the Achilles heel of the present surveillance procedures, namely, the inability to effect a meaningful change in policies of large industrial countries. Since the asymmetry of adjustment is said to depend critically on policy behavior in industrial countries, more effective surveillance of them would also produce more symmetrical adjustment.

The remedial properties of a target zone approach would obviously depend on the particular version adopted. The "harder" versions, by virtue of being closer images of the Bretton Woods regime, clearly offer a stronger dose of external pressure on domestic policy. But, as is discussed in subsequent sections, the alleged benefits associated with the harder versions may also entail higher costs.

Proponents of the "softer" versions of the target zone approach argue that their adoption would enhance the surveillance process for at least three reasons. First, even if the zones were wide and were frequently revised, they would exert some disciplinary force on the most flagrant and persistent cases of inappropriate policies. Thus, while soft target zones may not do much to catch misalignments on the order of 10 percent or less, they will, so their supporters argue, catch the 20-40 percent real exchange rate misalignments that do most damage to the system. Second, even if the

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1/ They [target zones] could "... trigger consultations that would induce step by step, more direct links between domestic policies and exchange rate considerations." G-10 Report, paragraph 31. "Exchange rate stability should be an important objective of policy instead of being a residual of other policy actions of individual countries, as is the case at present." G-24 Report, paragraph 65.

zones were not announced to the public, they still are likely to provoke helpful discussion and analysis of policy interdependence among officials of participating members. Also, such "quiet" zones provide another channel for peer pressure against inappropriate policies. Third, since the Fund's current practices in any case involve evaluating the appropriateness of members' exchange rates, supporters argue that even unpublished zones may prove useful in generating a more concrete framework for evaluating exchange rate implications of alternative macroeconomic policies. 1/

D. Escaping the same fate as the Bretton Woods system

Supporters of target zones acknowledge that many of the factors associated with the collapse of Bretton Woods have not gone away (e.g., high international mobility of capital, larger financial resources for private speculators than for central banks, existence of large and suddenly changing interest rate differentials across countries, etc.). Nevertheless, they contend that a system of target zones can survive pressure from "hot money" flows. They argue that so long as policy adjustments are made when necessary or so long as the target zones are revised frequently to reflect inflation differentials and needs for real exchange rate adjustment, expectations of large and discontinuous exchange rate adjustments that provide the motive for speculative attacks will seldom arise. In their view, the viability of the EMS provides testimony that it is possible to operate an adjustable peg system in the 1980s provided that there is sufficient political commitment, active exchange market intervention policies, and a presumptive indicator for adjustment. Since a target zone system shares many of these characteristics, it too is viable. 2/

4. What factors are behind much of the skepticism about and opposition to target zones?

Opposition to the adoption of target zones stems from: first, a more sanguine appraisal of the performance of the existing system; second, doubts about the capacity of target zones to remedy alleged deficiencies; and third, concerns that target zones would introduce new problems. Each of these elements is discussed in turn.

1/ "... arriving at a judgment about the appropriateness of the exchange rate of a currency is part of the current practices of the IMF." G-10 Report, paragraph 31.

2/ See Ungerer et al. [1983] for a review of the EMS experience during the 1979-82 period. Most studies of the EMS conclude that it has contributed to greater stability of nominal and real exchange rates of member countries. Its effect on convergence of financial and economic policies is more controversial.

A. Has the existing system failed?

(1) Exchange rate volatility

While the short-run volatility of both nominal and real exchanges has indeed been high during the period of managed floating, this begs the question of whether that volatility was "excessive." In this connection, opponents of target zones raise two points.

First, the period since 1973 has witnessed great turbulence in the world economy and great uncertainty about the future course of economic and political events. In this environment, all asset prices, not only exchange rates, have shown high volatility. In fact, exchange rate changes have been smaller than changes in prices of other assets (e.g., national stock market prices, changes in short-term interest rates, changes in commodity prices). As such, conclusions about the excessive nature of exchange rate fluctuations depend upon the specific yardstick selected.

Second, they note that there is an intrinsic difference between asset prices on the one hand and wages and goods prices on the other hand. The former are auction prices that depend heavily on expectations about the future whereas the latter are more sticky in the short run, reflecting in large part contractual arrangements made in the past. Thus, wages and prices of national output may not serve as a proper yardstick for assessing exchange rate volatility. Indeed, some would say that it precisely because wages and prices are so slow to adjust to current and expected economic conditions that it is desirable to allow for "excessive" adjustment in exchange rates.

As regards the unpredictable nature of exchange rate changes under the present system, opponents of target zones note that the foreign exchange market is one in which risk can be covered relatively easily (e.g., via access to forward markets, options markets, etc.). 1/ For this reason, it is argued that it may be preferable to concentrate the disturbances in this market rather than transfer them to other markets, such as labor markets, where dealing with them would be more difficult.

Turning to the cost of short-run volatility of exchange rates, opponents point to the sporadic nature of the evidence linking exchange rate volatility to the volume of international trade and investment. 2/

1/ "... foreign exchange markets appear to have developed effective hedging techniques available to most operators to reduce the risks associated with exchange rate volatility, generally at comparatively little cost." G-10 Report, paragraph 16. In addition, it might be argued that so long as developing countries have sufficient access to well-developed financial markets (e.g., the eurocurrency market), they can hedge against exchange risk even if they themselves don't have such markets.

2/ IMF [1984a].

They also argue that it is doubtful that the system of pegged rates could have survived in the turbulent environment of the last 15 years without severe limits on trade and capital movements being imposed by many countries. 1/ Such restrictions on trade and capital flows could well, in turn, have been more costly for the world economy than the short-run volatility of exchange rates experienced under the present system.

(2) Exchange rate misalignment

Almost all observers, even many staunch opponents of target zones, agree that there have been serious misalignments of major-currency exchange rates during the last few years, particularly as regards the sharp real appreciation of the U.S. dollar. Opponents of target zones suggest however that in evaluating both the extent and the cost of such misalignments, several factors ought to be recognized.

First, changes in real economic conditions requiring adjustments in the relative prices of different national outputs occur all the time (e.g., continuing inter-country differences in growth of labor productivity, permanent changes in the terms of trade, inter-country shifts in both the marginal productivity of capital and the propensity to save, etc.). Under a system of pegged rates, relative price adjustments are achieved through the slow changes of national price levels and through occasional changes of parity. Under floating rates, adjustments in the relative price of different national outputs occur rapidly and in anticipation of changes in economic conditions rather than after the need for adjustment has become apparent. In the absence of an explicit specification of relative costs, there is no general presumption that slow adjustment of relative prices is preferable to rapid adjustment, or that price adjustments should not occur in anticipation of events requiring such adjustments. Hence, what may seem to be misalignments may in part represent equilibrating changes. 2/

Second, critics of target zones argue that one should not overlook the fact that significant misalignment of major currency exchange rates also occurred during the Bretton Woods period, especially in its later years. In this connection, they caution that misalignment of real exchange rates can derive from too little nominal exchange rate flexibility as well as from too much. The frequency of misaligned real

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1/ See, for example, Bryant [1983] and Obstfeld [1985].

2/ "Changes in real exchange rates are appropriate when they facilitate desirable adjustments by reflecting changes in underlying economic conditions and in inducing corrections in policies." G-10 Report, paragraph 17.

exchange rates in countries with "pegged" exchange arrangements, where there is often a reluctance to alter nominal rates in the face of large inflation differentials, should stand as a warning to the dangers involved. 1/

Third, the size of the current misalignment in major-currency exchange rates is, according to defenders of the present system, highly uncertain. To take but one example, calculations of misalignment done by Williamson [1985] and others are strongly affected by the assumption that "normal" net capital flows are zero for the United States. This assumption is important because the equilibrium exchange rate is defined in such calculations as the exchange rate that would produce a current account balance equal to the assumed normal net private capital flow. But a country that is a "normal" net capital exporter under one set of macroeconomic policies, tax considerations, and political events abroad may became a natural importer under others. In this connection, a judgment that normal net private capital flows for the United States were say, $30 billion annual inflow (to reflect high expected profitability, relatively low domestic savings, and safe-haven considerations) rather than zero, would reduce the estimated misalignment considerably; 2/ yet the theoretical reasons for preferring the latter estimate to the former are, so the critics argue, debatable at best.

Fourth, defenders of the present system argue that explanations that attribute misalignment of the U.S. dollar to a speculative bubble are highly questionable. They point out that the (narrow) theoretical models that are frequently used to generate a speculative bubble in the exchange rate (i.e., a fully expected continuous price change not justified by fundamentals) also imply that such a bubble could prevail for only a short period of time--certainly not for four years or so (i.e., since 1981).

(3) Discipline and coordination

Defenders of the current exchange rate system question the allegation that it exerts less discipline than regimes with greater fixity of exchange rates. As a theoretical matter, it is pointed out that changes in exchanges rates are highly visible and are transmitted promptly into domestic prices. As a result, the consequences of undisciplined macroeconomic policies are readily apparent. In contrast, undisciplined policies under fixed exchange rates show up only in reserve changes, and then usually become public only after a significant delay. Therefore, it is argued, the supposed superior disciplining force of a

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1/ "... Deputies are fully aware that attempts to maintain exchange rates at levels not in line with economic fundamentals and market forces can be very damaging, both to the countries concerned and to their trading partners." G-10 Report, paragraph 21.

2/ This assumes that such an order of magnitude is compatible over the long run with a reasonable build up of debt and with an acceptable maturity profile.

fixed rate regime is not obvious. Furthermore, as an empirical matter, the 1979-83 policy experience in industrial countries can be viewed as evidence that anti-inflationary discipline can be restored without fixed exchange rates. Indeed, the deceleration in growth rates of narrow and broad money that took place in the face of high unemployment in most of the major industrial countries in 1979-82 coincided with relatively high variability of both nominal and real exchange rates.

As for coordination, defenders of the present system note that there have been some successful coordination efforts during the past decade. In this context, they mention the U.S. dollar support package of November 1, 1978, agreements on short-term exchange rate management policies (e.g., intermittent joint countering of disorderly market conditions), the agreements of the Bonn economic summit of 1978, and most recently (September 22, 1985), the Group of Five agreement in New York on foreign exchange intervention and other policies. 1/

In addition, it can be argued that the optimal degree of coordination is less than complete. For example, the perception of independent monetary policy may be necessary in some countries for sustaining confidence that monetary policy will not be inflationary in the long run (particularly if not all potential partners in a target zone system have a track record of consistently sound monetary policy). 2/

In sum, the very point of departure for the proponents of target zones, namely, the overall appraisal that the existing system has failed, is itself not universally accepted. Opponents of target zones acknowledge that the present system has weaknesses but do not see these weaknesses as more serious than those demonstrated by earlier systems. In addition, opponents emphasize that the present system has demonstrated some "valuable strengths." Specifically, exchange rate changes are viewed as having made a positive contribution to securing effective external payments adjustment over the medium to long run. 3/ The present system is also credited with having maintained a mechanism of conflict resolution (namely, the foreign exchange market) that has not involved either suspension of currency convertibility or large-scale restrictions on trade and capital flows; 4/ indeed, supporters of the present system claim that floating

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1/ Critics of the present system might reply that the G-5 New York agreement was a reaction to the absence of coordination and the large misalignments fostered by the present system.

2/ See Solomon [1982] on this point.

3/ "Exchange rate flexibility has made a positive contribution to external payments adjustment." G-10 Report, paragraph 14.

4/ "Exchange rate flexibility has made a positive contribution to ...the maintenance of an open trade and payments system in a period of massive external shocks." G-10 Report, paragraph 14.

rates allowed the removal of certain restrictions. Furthermore, it is argued that independent monetary policy, facilitated by the existing exchange rate system, permitted the application of successful disinflationary policies. 1/ Finally, it is argued that no exchange rate regime would have emerged unscathed from the combination of shocks, portfolio shifts, and structural and institutional changes that occurred during the years of managed floating. 2/

B. Would the introduction of target zones improve matters?

(1) Would target zones provide an anchor?

As noted earlier, one of the central arguments for the introduction of target zones is that such zones would provide an anchor for medium-term exchange rate expectations. But would it, and at what costs? Skeptics make the following points.

First, if the absence of an anchor stems from lack of information about future government policies, then it is not clear that publication of target zones, rather than announcement of the future course of policies themselves, is the preferred way to provide that information. Obviously, if the zones are not published (i.e., quiet zones), then their adoption will not alleviate the policy uncertainty-problem at all. 3/

Second, if the source of uncertainty is that market participants do not possess information on the model linking government policies with the consequent levels of exchange rates, then target zones (loud zones) do indeed provide the missing information. This presupposes, however, either that the government has superior information about the "true model" or that the government carries enough credibility to convince market participants that it will adjust its policies to consistently maintain exchange rates within the announced zone (i.e., it will adjust its policies to make the exchange rate forecast come true). Opponents of target zones see no evidence that governments have such superior information or knowledge about such a model. Further, they point out that experience with pre-announced exchange rate targets in Latin America suggests that countries would probably find it difficult to adhere to such targets. 4/

1/ "It [exchange rate flexibility] can help countries, especially the larger ones, to insulate their domestic price levels from inflation abroad, and can facilitate the pursuit of sound monetary policies, geared more directly to domestic conditions." G-10 Report, paragraph 14.

2/ "... it is questionable whether any less flexible system could have survived the strains of the past decade..." G-10 Report, paragraph 14.

3/ Some observers also doubt whether in practice quiet zones could be quiet for long. They argue that it is not possible for the Fund and national authorities to know what target zones are without this information leaking out.

4/ See Calvo [1983].

Third, even if the target zones were credible for some period of time, critics argue that the occasional need for revision of the target zones will invite the same type of one-way bet for speculators that ultimately felled the Bretton Woods system. 1/ Of course, since governments are not formally committed to defend the target zones, they may choose to allow exchange rates to depart from the zone (while subsequently announcing a revised zone). But in that case, the zones themselves would soon lose their credibility.

Fourth, even if the zones are announced, critics contend that "soft" versions of target zones characterized by wide and frequently revised zones are not likely to provide a strong and reliable anchor because they will not sufficiently narrow expectations about the future rate. 2/ Yet such wide and frequently revised zones are said to be necessary (by critics) to account for our measure of ignorance about the equilibrium exchange rate and for changing real conditions.

Fifth, even if the anchor is credible and durable, its introduction may be costly. The argument here is that the volatility or misalignment of exchange rates is not the likely source of difficulties but rather a manifestation of the prevailing package of macroeconomic policies. Without introducing a significant change into the conduct of policies, a manipulation of exchange rates to satisfy the zones may not improve matters at all. In fact, the absence of the exchange rate as a market gauge for assessing policies will then only confuse matters and reduce the information essential for policy-making.

(2) Would target zones provide discipline?

It is widely agreed that misalignment of real exchange rates arises to a large extent from undisciplined and uncoordinated macroeconomic policies. Hence, the ability of target zones to reduce misalignment rests in good measure on their ability to enhance discipline. Skeptics put forward five points.

First, experience suggests to them that national governments are unlikely to adjust appreciably the conduct of domestic policies so as to satisfy the constraints imposed by the exchange rate regime. Rather, it is argued, it is more likely that the exchange rate regime adjusts to

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1/ "Markets would inevitably test the zones, thereby adding to instability, and efforts to maintain exchange rates at levels incompatible with market sentiment could prove costly and ultimately unsuccessful." G-10 Report, paragraph 32.

2/ "Given our imperfect knowledge of the determinants of exchange rate movements, the target zones would have to be too wide to serve as an anchor for expectations." G-10 Report, paragraph 32.

whatever discipline national governments choose to have. As an illustration, it is pointed out that other external pressures aimed at restoring discipline to policy in major industrial countries (e.g., individual Article IV consultations, IMF Executive Board discussions of the World Economic Outlook, G-5 surveillance meetings, OECD country reports, and the like) have met with only limited success. Why then should target zones succeed where other similar measures have produced such limited results?

Second, evidence from earlier periods during which exchange rates were more rigid does not suggest that greater fixity of exchange rates induced either lower average external imbalances, or more rapid adjustment of such imbalances, or greater symmetry of adjustment as between either surplus and deficit countries, or between reserve and non-reserve currency countries. 1/ Why then should target zones provide the impetus to discipline when exchange regimes with greater formal commitment have not consistently done so?

Third, in a related vein, it is argued that by focusing attention on exchange rates rather than on the root cause of misalignment, namely, the stance and mix of macroeconomic policies, one may lessen the pressures for corrective action on the ultimate sources of the problem.

Fourth, critics argue that if the nominal target zones reflect rigid targets for real exchange rates, they can destabilize the price level. Take, for example, the case of a country that experiences an unexpected wage push that raises its price level relative to that abroad. Its real exchange rate will then have appreciated relative to its initial level. If the authorities attempt to restore the original real exchange rate by announcing a more depreciated nominal target zone, then the implied expansion in monetary policy (needed to keep the actual exchange rate within the new target zone) will increase the price level. In short, critics warn that while a rigid real exchange rate may be helpful for preventing trade balance deteriorations due to eroding competitiveness, it can also present new dangers for controlling inflation. 2/ More broadly, monetary policy is not the appropriate policy response to all types of disturbances.

1/ See IMF [1984c], Tables 2 and 3.

2/ "Above all, the constraints imposed on domestic policies by target zones might undermine sound and stable policies in a medium-term framework." G-10 Report, paragraph 32.

Fifth, critics point out that while target zones can supply information on inter-country divergences in policy, they don't provide guidance on the right stance of policy within a country. For example, if two countries each inflate at 10 percent, the exchange rate may be stable but few would argue that monetary policy in either country was appropriate. Again, so the critics argue, target zones do not ensure discipline.

(3) Would target zones enhance coordination and strengthen surveillance?

In appraising the effects of the adoption of target zones on policy coordination and on IMF surveillance, skeptics make the following observations.

First, whatever the exchange rate regime, there are strong barriers to coordination for at least two reasons: (i) exchange rates are by their very nature "competitive" in the sense that one country's gain is frequently the other's loss; (ii) various compromises on growth, inflation, and income distribution at the national level often leave little room for further compromise on policies at the international level. 1/ Target zones, so say their critics, cannot overcome these barriers.

Second, the process of negotiating target zones could produce dangerous frictions among the negotiating parties and could lead ultimately to a reduced level of coordination in this and other areas.

Third, one cannot rule out the possibility that the cumbersome negotiation of target zones would land the system back in the management delays of the latter days of the Bretton Woods system, with adverse effects on the desired flexibility of real exchange rates. 2/ 3/ With target zones, one loses the "safety valve" provided by the market place for foreign exchange as an "objective" method for resolution of conflicts.

Fourth, to the extent that the adoption of target zones results in a significant loss in independence in the conduct of domestic monetary policy, the authorities may be tempted to adopt discriminatory trade practices and other measures of protectionism in order to compensate for the loss of a powerful policy instrument.

1/ See Polak [1981].

2/ "Most Deputies, however, are of the view that reaching a consensus on the range of desirable exchange rates [for target zones] would prove extremely difficult." G-10 Report, paragraph 32.

3/ Proponents of target zones might reply that the recent (September 22, 1985) Group of Five agreement in New York reduces the strength of this argument.

Finally, the use of target zones as a possible focal point for IMF surveillance raises three related potential problems. First, the use of the exchange rate as a primary indicator of disequilibria in macroeconomic policies could send misleading signals. Critics note that the more general Fund practice as applied to adjustment programs and financial programing is to employ a whole set of macroeconomic indicators for diagnostic purposes. These indicators, in addition to the exchange rate, include the rate of domestic credit expansion, the budget deficit, wage-price movements, structural rigidities, etc. Put in other words, would exchange rate movements vis-a-vis the target zone constitute a "sufficient statistic" for monitoring macroeconomic policies? If one believes that the answer to that question is negative, then orienting Fund surveillance around that single indicator, in addition to possibly diverting attention from the root causes of disequilibria, may jeopardize the quality of surveillance. 1/

The second problem raised by skeptics is that the target zone approach is agnostic about which policy instruments should be used to respond to departures of exchange rates from the zone. The usual presumption is that it will be monetary policy. 2/ However, if the root cause of the disequilibrium is an inappropriate monetary-fiscal policy mix, then an excessive emphasis on monetary policy could produce compliance with the target zones and yet leave the fundamental problem unsolved. In short, critics argue that the calculation of the target zones would have to be based on an appropriate and broad set of indicators to avoid sending false signals about both the need for adjustment and the appropriate corrective measures.

Third, critics contend that target zones do not resolve the problem of how to allocate and enforce the burden of adjustment among member countries. When more than one member's (effective) exchange rate leaves the zone, it will be necessary to specify who does what if an effective and coordinated policy response is to take place. But target zones, so its critics argue, offer no solution to this "N-1 problem."

1/ "... a wide range of factors beyond exchange rate developments should also be taken into account in assessing national policies and the need for consultation and policy discussion." G-10 Report, paragraph 30.

2/ Most proposals for target zones (e.g., Williamson [1985]) assume that fiscal policy is not well suited to be an instrument of exchange rate policy because it is too inflexible and because its (alleged) comparative advantage (vis-a-vis monetary policy) is in influencing domestic demand rather than the balance of payments.

(4) Could target zones escape the fate of the Bretton Woods system?

Opponents of the target zone approach to exchange rate management remain unconvinced that target zones could escape the fate of Bretton Woods. They make essentially three arguments. First, technological advances in transferring funds across national boundaries, in combination with absence of parallel growth in official reserves, means that the capital mobility problem (hot money flows) is now even more formidable than in the early 1970s. Second, difficulties associated with negotiating mutually-consistent target zones would as before produce large discontinuous changes in exchange rates, thus motivating strong speculation. In addition, if the timing of exchange rate changes were done unpredictably to prevent such speculation, this would destroy the raison d'etre of the target zone scheme itself. Third, the viability of the EMS owes much to the unusual political commitment behind it, to capital controls imposed by some members, and to the structural characteristics of its members. 1/ None of these factors would, according to the critics, necessarily transfer to an exchange rate arrangement among a larger and more heterogeneous group of countries. 2/ As such, to them, the viability of the EMS does not imply much about the viability or desirability of a target zone system.

III. Operational Questions associated with the Possible Implementation of Target Zones

1. How would the target zones be calculated?

An important implicit assumption in the target zone approach to exchange rate management is that the authorities can identify the equilibrium (real) exchange rate to a useful degree of approximation. But what methods or techniques are available for doing so? Three methods deserve explicit consideration.

The first method is the purchasing-power-parity (PPP) approach. If the authorities can identify a base period when the country was in external

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1/ See Ungerer [1984] for a discussion of the implications of the EMS for the likely success of a return to a system of fixed but adjustable exchange rates.

2/ "... the Deputies recognize that the system [the EMS] cannot be dissociated from the particular political and economic environment in which it operates and therefore cannot be readily extended to a broader and more heterogeneous context characterized by the presence of a plurality of reserve currencies. Such a system would run a much greater risk of being exposed to pressures similar to those which arose during the final phase of the par value system." G-10 Report, paragraph 24.

balance, then the equilibrium value for the nominal exchange rate in the current period is the value of the exchange rate in the base period adjusted for the inter-country difference in inflation rates as between the current and base periods. This is equivalent to restoring the value of the real exchange rate in the base period. Since the real exchange rate, in turn, is often viewed as a measure of the country's competitive position, the PPP approach can be regarded as analysis of competitiveness as well.

The exchange rate used for such calculations would typically be an index of effective exchange rates using bilateral trade weights or more sophisticated combinations of trade weights and trade price-elasticities (e.g., MERM weights). Inflation differentials could be measured by consumer price indices, or more likely, by indices of either unit labor cost or prices in manufacturing.

The PPP approach carries the advantage of simplicity and ease of computation. Arrayed against this however, are several rather serious disadvantages for use in a target zone context.

First, PPP will be a suitable indicator of the equilibrium exchange rate when all disturbances between the base and current periods are monetary in origin. In this case, general price levels will be altered but relative prices (of imports and exports, or of tradables and nontradables, or of individual tradables like food or fuel) will not. In contrast, when disturbances are real and do alter relative prices, then it will be desirable to have a departure from PPP (i.e., a change in the real exchange rate). This point is relevant because there have been numerous real disturbances over the past 13 years of managed floating (e.g., large changes in oil prices, changes in savings and investment propensities, etc.), and there is little reason to believe that such real disturbances will not occur in the future. This means that if a PPP formula were used to compute the equilibrium rate in a target zone, there would probably have to be a manual "override option" to permit departures from PPP whenever there were real disturbances to the system. But this override option robs PPP of its simplicity and computational facility. On the other hand, if one doesn't override PPP whenever there are real disturbances, then the PPP method will yield the wrong answer.

A second disadvantage of the PPP approach is that actual exchange rates of major currencies during the 1970s and early 1980s have not followed the paths implied by PPP--and this both for the short and long run. 1/ To most observers, the empirical failure of PPP in the

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1/ See Frenkel [1981]. Of course, to the extent that actual exchange rates have been subject to misalignments, one would not want the actual rates to closely follow a PPP path. However, divergencies from PPP have so marked and so persistent as to raise doubts about the credibility of exchange rate forecasts based on PPP.

short-run is attributable to an intrinsic difference between exchange rates and prices of national outputs. The former are jumpy, forward-looking, auction prices that move in anticipation of future events whereas the latter are sticky, backward-looking, administered prices that largely reflect previous events. In the long-run, structural changes and permanent supply shocks may cause PPP to miss the mark. In any case, the poor empirical track record of PPP suggests that exchange rate forecasts based on PPP might not be credible to market participants.

Yet a third difficulty with PPP is that the results themselves appear to be quite sensitive to the choice among alternative price indices and base periods, to the income levels and income growth rates of the countries involved in the comparison (i.e., the so-called productivity-bias in PPP), 1/ and to the level of aggregation in the data (manufacturing versus the entire economy). 2/ Such sensitivity, in turn, makes it difficult to speak with confidence about all but very large misalignments.

A second method of calculating equilibrium exchange rates for target zones is to employ an estimated structural model of exchange rate determination that relates the (nominal) exchange rate to "fundamentals." Two popular such models are the monetary model and the portfolio balance model. In the monetary model, the change in the exchange rate is usually explained by changes in the ratio of home to foreign money supplies and by changes in the ratio of the demand for money at home to that abroad (where the demand for money is a function of, inter alia, real income, nominal interest rates, etc.). The portfolio balance model relates the (nominal) exchange rate to the stocks of assets denominated in the home and foreign currency (where these asset stocks include money supplies as well as interest-bearing securities). Since the stocks of financial assets can be related to cumulative budget deficits, cumulative current account imbalances, open-market operations, and exchange market intervention, the portfolio balance model provides a direct role for such policies in influencing exchange rates. In the monetary model, such policies affect exchange rates only to the extent that they affect the supply or demand for money.

Given estimates for such a structural model of exchange rates, the equilibrium exchange rate could be defined as the rate corresponding to the desired path of the explanatory fundamentals in the equation (i.e., money supplies, real income, interest rates, budget positions, etc.). This estimate of the equilibrium nominal exchange rate, combined with some assumed consistent path for prices at home and abroad, could then be translated into an estimate of the equilibrium real exchange rate.

1/ See Balassa [1964].
2/ See IMF [1984b].

This structural approach has three advantages: (i) it is forward-looking and thus compatible with the intrinsic nature of the price behavior of assets such as securities denominated in different currencies; (ii) it provides a direct link between macroeconomic policy variables and exchange rates; and (iii) it recognizes that in today's world of high international mobility of capital, the proximate determinants of exchange rates, at least in the short run, probably lie in asset markets rather than goods markets. At the same time, the structural-exchange rate equation approach is subject to at least two serious deficiencies.

The first and most serious shortcoming is that all known structural models of exchange rate determination have been shown to have very limited forecasting ability. In fact, extensive empirical testing over the past few years has demonstrated that the out-of-sample performance of structural exchange rate models is frequently no better than that yielded by "naive" models (e.g., a random-walk model). 1/ With the benefit of hindsight, it seems that the key reason for the poor performance of the various models is the nature of exchange rates as asset prices. As indicated above, exchange rates are very sensitive to expectations concerning future events and policies. Periods that are dominated by rumors, announcements, and "news" which alter expectations are likely to induce a relatively large degree of exchange rate volatility. Since by definition "news" cannot be predicted on the basis of past information, it follows that by and large the resulting fluctuations of exchange rates are unpredictable. In a way, this asset market perspective suggests that one should not expect to be able to forecast accurately exchange rate changes with the aid of simple structural models. The role of the simple structural models is to account for the systematic component of the evolution of exchange rates. In cases where the systematic, predictable component is relatively small, one may expect to account for only a small fraction of the variability of exchange rates. The main message of all this is that target zones based on exchange rate forecasts from such models might not carry sufficient credibility to act as an anchor.

The second problem with the structural exchange rate models is that the explanatory variables can be difficult to measure and interpret on a timely basis. For example, the portfolio balance model requires measurement of asset stocks by currency, by country of issuance, and by residence of the holder. But such data only become available much after the fact and estimates based on extrapolation of benchmark figures may introduce substantial error into the calculations. Similarly, in the monetary model one faces the problems of which monetary aggregate to use (in view of financial market innovations), how to forecast that aggregate over the relevant time horizon, and how to distinguish short-term movements in velocity from trends. For these reasons, the prospects of obtaining timely forecasts (target zones) from these models are not encouraging.

1/ Meese and Rogoff [1982].

The third method for calculating equilibrium exchange rates is the underlying balance approach. In this approach, the (real) equilibrium exchange rate is defined as the rate that would make the "underlying" current account (i.e., the actual current account adjusted for temporary factors) equal to "normal" net capital flows during the next two or three years, given: (i) anticipated macroeconomic policies in the subject countries, (ii) the delayed effects of past exchange rate changes, and (iii) a number of other expected developments. Furthermore, the equality between underlying current accounts and normal capital flows must not be achieved either by wholesale unemployment, or by artificial incentives to incoming or outgoing capital, or by undue restrictions on trade. 1/ If after accounting for these factors, "underlying" current accounts are calculated to be quite different from "normal" capital flows, the implication is that either planned macroeconomic policies or present exchange rates need to change to prevent such undesirable balance of payments scenarios from taking place.

This underlying balance approach to exchange rate assessment was developed by the Fund staff in the early 1970s (see IMF [1984b]); it similarly serves as the framework for calculation of "misalignments" in Williamson [1985]. The inputs for the calculations come from various sources. Estimates of "anticipated macroeconomic policies," and their associated real growth and inflation paths, can be obtained from national projections or from World Economic Outlook projections. Estimates of "normal" net capital flows typically come from an analysis of past trends adjusted for expected future structural developments (e.g., capital liberalization measures). Finally, estimates of the effect of exchange rate changes on current accounts can be derived from either of the Fund's two operating trade models, namely the Multilateral Exchange Rate Model (MERM) or the World Trade Model (WTM). 2/

For application in a system of target zones, the underlying balance approach carries three advantages. First, it recognizes that judgments about the appropriateness of current exchange rates cannot be divorced from either future anticipated macroeconomic policies, or from delayed effects of past exchange rates that are not yet visible but are likely to emerge in the future, or from particular factors (e.g., dock strikes) that are temporary in nature. In this sense, it not only focuses attention on the root cause of misalignment (i.e., inappropriate policies) but also addresses the "time dimension" in the misalignment problem.

1/ This description of the real equilibrium exchange rate is a close relative of those outlined in Nurkse [1945], IMF [1970], and the G-24 Report, paragraph 69.

2/ See Artus and McGuirk [1981] and Deppler and Ripley [1978].

Second, the underlying balance approach appreciates that a desirable or sustainable payments position need not imply a zero current account balance. Specifically, it recognizes that a country with a relatively low domestic savings rate but with relatively attractive domestic investment opportunities can run a persistent current account deficit by drawing on foreign savings if: (i) it invests those foreign savings wisely; and (ii) the return on domestic investments is not artificially high (because of special incentives for or restrictions on international capital flows, or because of unsustainably high government borrowing).

A third advantage of the underlying balance approach is that, at least in principle, it ensures that the computed equilibrium exchange rates are consistent across countries. 1/ This is so because the trade models that underlie such exchange rate calculations are specifically designed to be used in a multilateral setting. Since target zones must be mutually consistent, this is not a trivial consideration.

Moving to the negative side of the ledger, the underlying balance approach is subject to a number of problems.

First and foremost, the concept of "normal" net private capital flows is a particularly ambiguous one; yet estimates of these capital flows play a key role in the estimate of the equilibrium real exchange rate. The reasons why the concept is so slippery include the following: (i) While private saving rates are reasonably stable over time and across countries, the geographic loci of perceived investment opportunities are not; the latter depend on a wide set of expected policies in both the origin and host countries--many of which can change precipitately. (ii) Various controls on capital flows make it difficult to determine what is "normal," especially when these controls change over time. (iii) Acquisition of foreign assets subjects the holder to risks (e.g., expropriation risk) that are fundamentally different from those associated with domestic assets, and therefore consideration of such risks may limit exposure even when average real rates of return on foreign assets are high. (iv) Large changes in government fiscal positions, and drastic shifts in private portoflio composition, can lead to large swings in observed capital flows, the duration of which is highly uncertain. The end result of all this is that estimates of "normal" net capital flows for the likely participants in a target zone system are subject to a considerable margin of error.

1/ This advantage must be qualified in view of the large global discrepancy in current account positions. This discrepancy makes it harder to reach agreement on what consitutes an equilibrium pattern of current account positions.

A second problem with the underlying balance approach is that it is not well suited to the analysis and diagnosis of the mix of macroeconomic policies. In general, macroeconomic policies influence the equilibrium exchange rate in this approach via their effect on anticipated real output and inflation paths over the next two to three years. Thus, the model will produce different estimates of the equilibrium exchange rate for different real output and inflation paths. But it cannot distinguish among policy mixes that yield the same output and inflation paths. This must be regarded as a shortcoming since the cause of misalignment may lie more with an inappropriate mix of policies (e.g., overly loose fiscal policy cum overly tight monetary policy) than with an inappropriate stance of policies (e.g., excessively expansionary monetary and fiscal policy).

The third difficulty with the underlying balance approach is that it is operationally complex. Data requirements are substantial, computations depend on large-scale trade models, the rationale behind some of the calculations is not transparent, and estimates of some key parameters (e.g., short and long-run trade elasticities) are uncertain. 1/ All of this, in turn, might be burdensome for agreement on, and continuous revision of, target zones.

Fourth, the large-scale trade models that are likely to be used in this approach do not pay sufficient attention to either financial variables or to the important distinction between expected and unexpected values of key economic variables. These omissions render this approach somewhat remote from the mechanisms usually associated with the determination of market exchange rates. Therefore, target zones based on forecasts from the underlying balance approach may again be questioned by market participants.

To summarize, each of the three methods of calculating equilibrium exchange rates has strengths and weaknesses. It might however not be necessary to follow just one method. Instead, one could construct a "consensus" forecast on the basis of estimates from several methods. Such an exercise would also provide information on the comparative performance of each method which, in turn, could aid in the ultimate selection of the proper calculation method. Finally, in appraising the methods of calculating equilibrium exchange rates, it is important to recognize that such methods are already being applied to some degree whenever the Fund "takes a view" on the appropriateness of major-currency exchange rates. In this sense, the problems raised are not new ones. The differences are that in a system of target zones (especially the "harder" versions) the method of calculating equilibrium exchange rates would be more explicit and subject to greater scrutiny, and that the results of such calculations would be shared with the market.

1/ See, for example, Goldstein and Khan [1984].

2. What currencies should be included in the system of target zones?

Another central issue for a system of target zones is the number and choice of currencies to be included. Four considerations seem paramount.

First, for administrative efficiency, it is desirable that membership should be kept fairly small. This is because the complexity of negotiations, and the danger of conflicts that might bring about a collapse of the system, can be said to increase rapidly as the number of partners rises. This position is consistent with the view that centralized management of exchange rates is feasible only when the number of decisions to be made is reasonable small. 1/ In this connection, it is useful to recall that although a large number of currencies were managed under the Bretton Woods system, countries took the initiative for par value changes, the Fund could only concur with or object to par value changes proposed by a number, and par values were changed rather infrequently. 2/ Similarly, the present system of managed floating is a decentralized system that permits "market-based" decisions to act as a safety valve when more centralized decisions about adjustment responsibilities and exchange rate alignments do not prove possible. In short, since international decision-making on exchange rates is likely to be difficult, one should not unduly burden the system with too many players.

Second, for a target zone system to have an appreciable impact on conditions in foreign exchange markets, it is desirable that the membership include major-currency countries. Although the vast majority of countries currently maintain some form of "pegged" exchange arrangements, the largest trading countries maintain either "limited flexibility" (e.g., the EMS) or " more flexible" exchange arrangements, including "independent floating" by 4 of the largest industrial countries (Canada, Japan, the United Kingdom, and the United States). 3/ Reflecting this, it has been estimated that about two thirds to four fifths of world trade is conducted at floating rates. 4/ The key to progressing toward more

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1/ Of course, exchange rates established in a target zone would have clear implications for nonparticipants to which they would have to adjust and/or react.

2/ The Bretton Woods system also had the U.S. dollar as the numeraire. With the dollar as anchor, exchange rate decisions could take place one-at-a-time. When this was no longer the case (e.g., August-December 1971), negotiations over exchange rates were much more difficult. It is not clear what currency or currency-basket would serve as numeraire in a target zone.

3/ It is worth recalling that the currencies of EMS members float against currencies of many non-members.

4/ See IMF [1984c] and the G-10 Report, paragraph 9.

fixity in exchange rates therefore lies not in inducing many countries to adopt constraints on exchange rate flexibility--this is already a fact of life--but rather in inducing the largest trading countries to accept such constraints. This consideration has no doubt influenced the leading proposals (e.g., Roosa [1984]) that the key members of a target zone be either the three largest industrial countries or the G-5 countries.

The third consideration is the characteristics of the potential member countries. These characteristics, emphasized in the literature on so-called optimal currency areas, are relevant not for choosing the right number of countries for a target zone but rather for assessing the likely membership.

The more important country characteristics are the following:

(i) the openness of the economy - This criterion suggests that relatively open economies should prefer greater fixity of exchange rates because exchange rate fluctuations induce larger domestic price changes in more open economies, thereby complicating the task of domestic stabilization policies.

(ii) the size of the economy - Small economies are said to be more inclined to join currency unions because, in the absence of such monetary integration, their effective economic size would be sub-optimal. This of course begs the question of to whom to peg.

(iii) the degree of commodity diversification - Highly diversified economies are deemed more likely candidates for greater fixity of exchange rates because their diversification provides some natural insulation against a variety of shocks; hence, there is less need for the insulation properties of a flexible exchange rate.

(iv) the degree of factor mobility - Countries between which there is a high degree of factor mobility are viewed as better candidates for currency unions because factor mobility provides a substitute for exchange rate flexibility in promoting external adjustment. Since factor mobility is in turn likely to diminish with geographic distance, this criterion is often used to justify currency unions between small neighboring states.

(v) similarity of inflation rates - The argument here is that countries with similar tastes for inflation--and more important, similar histories of inflation--will tend to prefer greater fixity of exchange rates. There is however a chicken-and-egg problem: do member countries of a currency union have similar inflation rates because they belong to the union, or have they joined the union because of their similar capacities to combat inflation?

Obviously, these country characteristics do not all point in the same direction. For example, the criteria of openness, size, and factor mobility suggest that the United States, the Federal Republic of Germany, and Japan would have relatively weak incentives to join a target zone, relative say, to the smaller European countries that are members of the EMS. On the other hand, the criteria of commodity diversification and similarity of inflation rates lean perhaps the other way.

The fourth and final consideration is the relationship to existing currency blocs. In thinking about the potential membership of a target zone system, it is important to recognize that most countries are already part of a currency bloc, be it via pegging to a single currency or currency basket, or via participation in an arrangement with limited exchange rate flexibility (e.g., the EMS). This raises three points: (i) in cases where members of the target zone system are also members of other (regional) currency blocs, provision would have to be made for ensuring consistency of cross exchange rates and for coordinating intervention practices between the "core" target zone and "satellite" currency blocs; (ii) countries that already have non-exchange-rate linking arrangements (e.g. a customs union) may be reluctant to undertake additional linkages (i.e. target zones) for fear of restricting too tightly their room for independent action; and (iii) if the most natural and profitable opportunities for currency union are exploited first, then it is likely that a target zone system among major-currency countries may have to operate with more flexibility (e.g., wider margins and more frequent revision of central rates) than satellite currency blocs.

3. How wide should the target zones be and how frequently should they be revised?

The equilibrium exchange rate--also sometimes referred to as the central rate--represents only one of several parameters that characterize target zones. Two others are the width of the zones surrounding the central rates and the frequency by which the zones are revised. What considerations bear on the determination of these latter two parameters?

Concerning the width of the zones, four factors are relevant. First, the zones must be wide enough to accommodate transitory disturbances that do not alter long-run equilibrium real exchange rates. In this sense, the zone may be viewed as providing a buffer. The buffer not only guards against costly shifts in resources due to excessively frequent changes in central rates but also provides the authorities with breathing space to sort out permanent from transitory shocks. Second, the zone should be wide enough to reflect uncertainties about the equilibrium central rate itself. As noted earlier, there are various approaches to calculating the real equilibrium exchange rate and there are uncertainties about the parameter values in each

model. To many observers, little is gained by acting as if equilibrium exchange rates could be assessed with great precision. Recognizing this, some proposals for target zones recommend initial zones on the order of 10 percentage points on each side of the central rate (see, for example, Williamson [1985]). The third factor to be considered is speculation. A well-known weakness of fixed exchange rates is that frequently they offer speculators "one-way bets" about the direction of changes in parities. Target zones must therefore be sufficiently wide to allow for occasional changes in central rates within the zone without provoking one-way speculation. Fourth, if central rates were specified in terms of a numeraire currency, then the width of the target zone linking non-numeraire currencies will in general be different to that between each currency and the numeraire.

Also, there is no reason why the width of the zones should be constant over time. For example, if uncertainty about the equilibrium real exchange rate and about the nature of disturbances diminished with experience, then narrower zones could be adopted. On the other hand, if turbulence increased over time, wider zones could be adopted. Finally, as a corollary of the above arguments, there is no logical presumption that the width of the zone should be the same for all members. In this connection, it is relevant to note the experience of the EMS in which the currency of Italy, a country that has had relatively high inflation in the past, is subject to wider margins than other currencies. Similarly, it has been suggested that if the United Kingdom were to join the EMS, special provision should be made in the form of wider margins for the pound sterling to reflect the influence of oil price developments on the exchange rate.

Turning to the frequency of adjustment, five points need to be considered. To begin with, the frequency with which the central rates (and zones around them) are adjusted should reflect the frequency of changes in real economic conditions, as well as, of course, the size of inflation differentials across member countries. Examples of changes in real economic conditions would include permanent changes in the terms of trade, continuing inter-country differences in labor productivity, and inter-country shifts in saving and investment propensities. Because such changes in real economic conditions generally do not occur at close intervals, they are unlikely to induce frequent changes in the target zones. The size of inflation differentials depends primarily on how successful target zones are in inducing harmonization of members' macroeconomic and structural policies, particularly monetary policy. The second factor governing the desired frequency of adjustment is the flexibility of macroeconomic policy instruments. Specifically, since a change in real economic conditions can be reconciled either by a change in macroeconomic policies with an unchanged zone or by a change in the zone

with unchanged policies, it follows that inflexible policies call for higher frequency of zone adjustment, and vice-versa. Third, there is the credibility issue. Frequent revisions in the zones reduce credibility of the zones and thereby reduce their value as an anchor for expectations. On the other hand, frequent changes in macroeconomic policies designed to sustain the zones may also reduce credibility--but this time of the policies. 1/ Therefore, the optimal frequency of adjustment from a credibility viewpoint involves balancing between these two considerations. Fourth, some have argued that if target zones are adjusted frequently for inflation differentials and the need for balance of payments adjustment, speculative attacks will be discouraged since they are motivated by large discrete changes in exchange rates. Fifth, the frequency of adjustment must obviously be constrained by the availability of the data necessary for computations.

4. How would exchange rates be kept within the zones and with what consequences for other policy objectives?

For a system of target zones to operate successfully, it is necessary that exchange rates be kept within the agreed zones, at least most of the time. But how would participating countries assure this result? Four policy instruments should be considered.

The first and most obvious instrument is domestic monetary policy. Indeed, as indicated in Section II, a differentiating characteristic of target zones is that the authorities pay more attention to the exchange rate in the conduct of domestic monetary policy than they do under the present system of managed floating. What this means is that participating members will have to seek greater coordination of monetary policies, with a consequent reduction in the ability to independently control the money supply. For example, a member of the system that sees its nominal exchange rate fall to the bottom of the zone would be expected to slow its money growth rate and to increase its domestic interest rate vis-a-vis those of other members; 2/ in this way, it

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1/ A counter-argument is that changes in macroeconomic policies in response to real changes in the economy could act at times to enhance the credibility of policy if they were perceived as responsive to these changes.

2/ It is not clear what form monetary intervention would take. Members could intervene in domestic financial markets (exchanging money for debt of the same currency of denomination) or in international financial markets (exchanging monies of different currency denomination). If the latter were envisaged, questions could arise about the adequacy of intervention assets and about sterilization operations.

would induce an appreciation in its nominal exchange rate, thereby keeping its exchange rate within the target zone. Assuming that the pass-through of nominal exchange rate changes into domestic prices is less than complete, the same monetary policy action would allow the member to satisfy its target for the real exchange rate as well. 1/

There is little doubt about the ability of major industrial countries to influence nominal and real exchange rates in the medium term using domestic monetary policy. 2/ The key question concerns the willingness to do so given the implied reduction in their ability to then use domestic monetary policy for internal objectives. To many observers, it is simply naive to believe that the United States, Japan, and the Federal Republic of Germany would be willing to override internal objectives for exchange rate targets in the formulation of domestic monetary policy. Under this view, "soft" target zones are the strongest commitment one can reasonably envisage for the three largest potential members. Others argue, however, that the independence of monetary policy is far from complete under the present system, even for those countries classified by the Fund as "independently floating." To take but one recent example, the U.K. authorities reacted to the large decline in the dollar/pound rate in early 1985 by encouraging large increases in domestic interest rates--and this even though there was strong domestic pressure for lower interest rates to help reduce unemployment. For this reason, supporters of target zones argue that all countries already have implicit target zones beyond which they are willing to sacrifice internal objectives for the exchange rate. It is argued therefore that the loss of monetary independence at the margin would be minimal.

A second possible policy instrument for keeping exchange rates within target zones is sterilized exchange market intervention (i.e., exchange market intervention that leaves the monetary base unchanged). Its main attraction of course is that, if effective, it would permit the authorities to influence exchange rates while simultaneously maintaining control of the domestic money supply.

1/ Obstfeld [1985] reports that month-month correlations between nominal and real exchange rates for the 1976-85 period were above .95 for the U.S. dollar, the Japanese yen, and the deutsche mark.

2/ In the long run (say, three to five years), the ability to use monetary policy to affect the real exchange rate will be more modest. Also, even in the medium-term, this ability will be lower for the smaller, more-open, more highly-indexed industrial countries than for the larger, less-open, less-indexed ones. See Goldstein and Khan [1984] for a survey of estimates of these "pass-through" effects.

Unfortunately, the prognosis for using sterilized exchange market intervention as the primary instrument for controlling exchange rates is not favorable. 1/ The Jurgensen Report [1983], for example, supports the view that sterilized intervention by itself is unlikely to be an effective tool for influencing the level of the exchange rate over the medium or long-term. 2/ Similarly, recent empirical work on exchange-rate-determination indicates that while domestic and foreign-currency assets may well be imperfect substitutes--a necessary condition for sterilized exchange market intervention to be effective--risk premia in exchange markets are not well explained by relative asset supplies (the very variables affected by exchange market intervention). 3/ In short, the effects of sterilized intervention on market exchange rates are likely to be small and uncertain in size. Nevertheless, sterilized intervention may have a useful role to play in dampening short-term volatility of exchange rates, in countering disorderly market conditions, in complementing and supporting other policies, and in expressing an attitude toward exchange markets.

Capital controls represent a third instrument for keeping exchange rates within target zones. This is however generally not regarded as an attractive option for two reasons. 4/ First, even aggressive capital control programs, such as those of the early 1970s, were not able to stem private capital flows, and the subsequent development of offshore banking markets suggests even lower effectiveness today. Second, capital control programs are most effective in altering exchange rates when they cover all types of capital transactions. But in that case, there is no presumption that the resource allocation costs of impeding the international flow of capital would be less serious than departures of exchange rates from the zones themselves.

The preceding discussion suggests that the primary instrument for keeping exchange rates within target zones is likely to be monetary policy. If this is so, then a second relevant question emerges: with monetary policy geared more to external objectives, what policy instruments will be assigned to internal balance (i.e., price stability and high employment)?

1/ "Neither capital controls nor intervention can be relied upon to attain lasting stability of exchange rates." G-10 Report, paragraph 27.

2/ "Intervention will normally be useful only when complementing and supporting other policies." Jurgensen Report [1983], p. .

3/ See, for example, Dooley and Isard [1983].

4/ "The Deputies agree that controls on international capital flows do not offer a desirable or effective means of achieving greater exchange rate stability." G-10 Report, paragraph 25.

One logical answer is fiscal policy. 1/ Here, the key question is not so much whether fiscal policy can affect aggregate demand in major industrial countries. Experience suggests that it can. Rather, the issue is whether fiscal policy is a sufficiently flexible policy instrument to be used for stabilization policy in a world in which some countries have medium-term targets for reducing the share of government expenditure in overall economic activity, some are contemplating large structural changes in their tax system, some are commited to given levels of social programs and defense spending, some are wedded to preannounced public-sector borrowing requirements, and some are facing legislatures that can take years (not months) to enact significant cuts in budget deficits.

A second policy option (favored for example by Meade [1984]) is to use labor-market policy for internal balance. In brief, the idea is to lower the money wage rate in any sector which has excess supply of labor and to raise it where there is excess demand. The problem of course, recognized by supporters, is that the implementation of such a policy would involve the substantial reform of labor-market institutions. In short, although sound in its internal logic, it begs the central question of how to bring such a labor-market policy into being in advanced industrial economies. The slow progress in reducing structural rigidities in European labor markets bears testimony to the difficulties involved.

In sum, because of the limitations of other policy instruments, monetary policy is often called on to serve both external and internal objectives. If a move to target zones were made, it would require shifting more of the emphasis toward external objectives. This might not create a major problem if all members of the target zone geared monetary policy toward price stability; or if coordinated, sterilized exchange-market intervention could ease the external obligations of monetary policy; or if fiscal policy could be made flexible enough to deal effectively with internal balance. However, since none of these three outcomes is likely to be fully realized, members of a target zone system would probably still be faced with serious conflicts between external and internal balance. At the same time, the constraints on macroeconomic policies induced by a target zone system might make a contribution to the realization of these three outcomes.

5. How would initial misalignments be handled in a transition to a target zone system?

The operational issues discussed thus far are relevant for the possible implementation of target zones. There is the additional issue however of how a transition to a target zone system might be managed.

1/ Fiscal policy also has a role to play in achieving a given real exchange rate on a sustainable basis.

This is especially relevant in present conditions of apparent large misalignment of several key-currency exchange rates. Two options are noteworthy.

The first option would be to impose preconditions that must be satisfied prior to the implementation of the target zone system. Specifically, it could be required that each country's actual exchange rate fall within the calculated target zone prior to the formal adoption of the system. For some countries, this would imply a significant change in the mix of current and anticipated macroeconomic policies, and just as important, the reflection of such policy changes in market exchange rates.

The logic for such preconditions is threefold: (i) it would provide an early test of the seriousness that member countries attach to the commitments involved in participating in a target zone system; (ii) it would avoid saddling the new system a with large initial disequilibrium that could lead to early collapse for reasons unrelated to the system itself; and (iii) it would generate an early reading of how large differences in estimates of central rates and of target zones would be, and of how such differences could be resolved. A possible disadvantage is that when current misalignments are very large, they may exaggerate the difficulties involved in operating such a system under more normal circumstances.

The second option would be to gradually phase-in the target zone system by allowing for a transition period during which problem countries have wider zones and more frequent adjustment of central rates. 1/ The logic behind this option is: (i) it recognizes that large turnarounds in macroeconomic policy, particularly fiscal policy, are difficult to accomplish in the short-term; (ii) it still may provide some impetus to discipline in the conduct of macroeconomic policies; and (iii) the wider zones, and possibilities for more frequent adjustment, would reduce the frictions associated with the uncertainty and diversity of estimates about the equilibrium central rate. The disadvantages are that it may slow down the necessary adjustment of policies, that it may raise questions about "equal treatment" of members, and that it would not provide an early test of government commitment.

1/ "Target zones would be phased in progressively." G-10 Report, paragraph 31.

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