FOR AGENDA

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June 12, 1986

To: Members of the Executive Board

From: The Secretary

Subject: Indicators Relating to Policy Actions and Economic Performance

The attached paper on indicators relating to policy actions and economic performance is scheduled for Executive Board discussion on Monday, July 14, 1986.

Mr. Crockett (ext. 8982) 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

Indicators Relating to Policy Actions and Economic Performance

Prepared by the Research Department

(In consultation with the Area Departments, the Exchange and Trade Relations Department, and the Fiscal Affairs Department)

Approved by Wm. C. Hood

June 11, 1986

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I. Introduction

The April 1986 Interim Committee Communique contains the following reference to the possible usefulness of indicators in implementing Fund surveillance (paragraph 6).

> "...To improve the multilateral setting for surveillance, the Committee asked the Executive Board to consider ways in which its regular reviews of the world economic situation could be further adapted to improve the scope for discussing external imbalances, exchange rate developments, and policy interactions among members. An approach worth exploring further was the formulation of a set of objective indicators related to policy actions and economic performance, having regard to a medium-term framework. Such indicators might help to identify a need for discussion of countries' policies. The Committee noted that increased emphasis would be given in the World Economic Outlook to policy interactions among industrial countries in order to strengthen the basis for assessing the international repercussions of the policies and objectives of the major industrial countries, and also to help promote the further development of recent initiatives to enhance policy coordination among these countries..."

In the Tokyo Economic Declaration, the Heads of State or Government of the seven Summit countries, with the representatives of the European Community...

> "...reaffirm [ed] the undertaking at the Versailles Summit to cooperate with the IMF in strengthening multilateral surveillance particularly among the countries whose currencies constitute the SDR, and requested that, in conducting such surveillance and in conjunction with the Managing Director of the IMF, their individual economic forecasts should be reviewed, taking into account indicators such as GNP growth rates, inflation rates, interest rates, unemployment rates, fiscal deficit ratios, current account and trade balances, monetary growth rates, reserves, and exchange rates."

This paper is an initial response to the Interim Committee's request, which also takes into account some of the specific suggestions made in the Tokyo declaration. The paper begins, in Section II, by assessing the purposes that indicators might be expected to serve. Section III then presents an analytical framework for discussing policy interactions among countries. In Section IV, some suggestions are offered concerning the nature of the specific indicators that might be helpful in this connection. Section V considers the procedural aspects of extending

the use of indicators in the Fund's surveillance work. Finally, Section VI identifies a number of issues on which further guidance from the Board is needed.

It may be helpful to note at the outset certain restrictions that have been placed on the scope of the present paper. First, the paper is preliminary in nature: it describes an approach to the use of indicators, but it does not attempt to apply the approach. It is expected that application will take place, particularly in the context of World Economic Outlook and Article IV discussions, after the issues raised in the present paper have been thoroughly reviewed. Second, the analysis is developed with the larger industrial countries in mind. This corresponds to the focus in the Interim Committee and Tokyo communiques, and reflects the fact that it is the large countries that have the greatest impact on global economic conditions. Moreover, if indicators are to be discussed from the perspective of international interactions, there is a practical limit to the number of countries that can be covered in an initial assessment. Nevertheless, many of the principles and issues that are discussed have applications for countries outside the major industrial group. Third, no attempt has been made to develop new or unfamiliar indicators. This is largely because the range of indicators that are customarily used in analysis seems broad enough to meet the needs of a more intensified assessment of international interactions of policies and performance. Moreover, since the objective is to develop a procedural and analytical framework that enables issues of coordination to be viewed in a fresh perspective, it seems desirable not to burden the analysis with unnecessary complexity in the choice of variables to be employed.

The limitations placed on the present paper need not, of course, preclude subsequent analytical developments. The staff has already done a considerable amount of work on the interaction of economic performance and policies, some of which has been presented in the context of World Economic Outlook exercises. 1/ Research work is continuing on relationships between economic policies and performance, and this may lead over time to refinements in the use of indicators.

II. Purpose of Indicators

The use of indicators in the assessment of economic performance has a long history, both in the Fund and elsewhere. The basic purpose of economic indicators is to give quantitative content to governments'

1/ See, for example, "Effects of Exchange Rate Changes in Industrial Countries," World Economic Outlook, Staff Study, SM/86/49, Supplement 4; "The Transmission of Economic Influences from Industrial to Developing Countries," World Economic Outlook, Staff Study, SM/86/49, Supplement 5.

economic aims and achievements, both in the realm of policies and performance. Indicators can thereby be used as a guide in helping judge the realism and appropriateness of objectives, and their consistency with international goals such as efficient adjustment, stability in trade flows, and sustainability of capital movements. 1/ They can also be used to publicize governments' commitments to a particular course of policy, and thus to improve the basis for private sector decision taking.

The recent statements of the Interim Committee and the Summit participants, as well as the earlier reports of the Group of Ten and Group of Twenty-Four, 2/ suggest at least three ways in which existing uses of indicators might be extended: (i) through a more explicit focus on the international repercussions of developments in individual countries; (ii) by casting objectives and policies into a medium-term framework; and (iii) by the development of standards against which developments in the various indicators can be appraised.

Indicators can be used both ex ante, in formulating objectives, policies and projections, as well as ex post, in monitoring progress toward desired objectives. In a forward-looking sense, indicators can help define a government's economic objectives and the policies through which it hopes to achieve those objectives. Economic objectives include variables such as output, employment, and balance of payments and price stability. The policies which are available to foster these objectives include: fiscal policy, i.e. the level and structure of government revenues and expenditures; monetary policy, i.e., the rate of growth of monetary and credit aggregates and the setting of other monetary instruments; and structural policies, such as the degree of regulation in particular industries and markets. There are, in addition, intermediate variables that are neither ultimate goals of policy nor direct policy instruments, but which nevertheless have an important bearing on the interaction of policies among countries. These variables include real and nominal interest rates, exchange rates, and the relative growth rates of domestic saving and investment. Normally countries will have expectations or forecasts of how such variables might evolve, based on their assumptions about the channels through which policies work to influence the outcome for broader economic objectives.

1/ A report prepared for the Committee of Twenty by the Technical Group on Indicators discussed a number of technical problems concerning indicators in the adjustment process. (See "Documents of the Committee of Twenty," pp. 51-77, IMF, 1974.)

2/ Report of the Deputies of the Group of Ten on the "Functioning of the International Monetary System" (EBD/85/154, Sup. 1, 6/21/85, and Report of the Deputies of the Group of Twenty-Four on the "Functioning and Improvement of the International Monetary System - Transmitted to the Interim Committee (EBD/85/228, 8/30/85).

A second way in which indicators can be used is in a retrospective or monitoring sense. Indicators can define how the economy has performed in some past period, and what the stance of policies has been. Used in this way, however, they need to be complemented by some standard, or frame of reference, against which to judge whether policies have been appropriate and performance has been successful. Such a standard can be the set of indicators and projections formulated at the outset of a policy period. It has to be recognized, however, that when an expected time path is specified for a large number of interconnected variables, some indicators may show deviations while others remain on track. A framework is therefore required for judging the significance, in particular circumstances, of departures from expected developments.

Both of the purposes of indicators that have just been described can be (and often have been) used in a purely national context without reference to international interactions. However, indicators can also be used for purposes of assessing the intercountry consistency of developments and prospects. In the framework of surveillance, this is likely to be an aspect of indicators that assumes increasing importance. Two kinds of consistency are important from an international standpoint: first, the projections being made by individual countries should be arithmetically consistent with those of other countries, for example, with respect to anticipated rates of growth of exports and imports. Second, and more fundamentally, projected developments should be compatible with the medium-term objectives of a stable system. These objectives would include sustainable balance of payments positions, combined with satisfactory performance with respect to growth and inflation.

A further use of indicators, which will not be dealt with in depth in this paper, is as a triggering or enforcing device, i.e., in requiring automatic or quasi-automatic responses by policy authorities. An example of such a use of indicators is the "hard" version of target zones, whereby a given exchange rate development would require a prescribed form of policy response, such as intervention, or a change in monetary or fiscal policies. Use of indicators in this fashion is feasible only when the primary objective of the authorities is congruent with the indicator being used (e.g., the exchange rate in a fixed rate system). or when there is a strong consensus about the relationship between specific policy actions and a given economic result.

To be effective in serving the purposes of analyzing and interpreting developments, economic indicators must be timely, quantifiable, relatively easy to interpret, and adequately comparable, both across countries and in relation to objective standards. It has to be recognized of course, that few indicators will be satisfactory in all

these respects. In particular, single-valued indicators are generally unable to capture the complexity of the economic situation they are being used to portray. Most economic variables, for example, reflect a combination of underlying and persistent influences, as well as transitory phenomena. It is important in analysis to distinguish between such influences, so that responses are not triggered to developments that eventually prove self-reversing. Thus, while tractability requires a limited number of relatively straightforward indicators, it should be recognized that additional analysis will usually be needed to provide an adequately rounded picture of economic developments, policies and prospects.

III. An Analytical Framework for the Use of Indicators in Surveillance

1. Overview

As noted in the Interim Committee communique, a key objective of the use of indicators in surveillance is to "strengthen the basis for assessing the international repercussions of the policies and objectives of the major industrial countries, and also to help promote the further development of recent initiatives to enhance policy coordination..." Against this background, it seems appropriate to focus explicitly on how developments in the policies and economic performance of individual major countries influence the opportunities and constraints faced by other industrial countries, and the international community at large.

The principal point of interaction between national economies is trade and capital flows. These flows are influenced by the level and structure of demand growth in the various countries, by relative expected rates of return on assets, and by relative national price levels adjusted for exchange rates. The role of multilateral surveillance is to help countries move toward better and more consistent developments for all these variables. Indicators can assist in this process by providing a framework in which the evolution of policies and economic performance can be measured against their desired or expected path.

All countries have, as ultimate economic objectives, an optimal rate of utilization of existing factors of production, satisfactory growth of output over time, and reasonable price stability. However, the achievement of these objectives will be significantly affected by developments in the external sector. Trade in goods and services can help bring about a more efficient allocation of global resources, as countries concentrate production in industries in which they have a comparative advantage. Capital flows can help improve the volume and

distribution of international investment, since they permit flows of real resources from countries where savings exceed investment opportunities to countries where the reverse prevails.

The potential benefits of international trade and investment flows can be reduced, however, when policies and developments among countries are inadequately harmonized. Inappropriate or uncoordinated national policies can lead to trade and capital flows that do not reflect comparative advantage or relative scarcities. Such flows, in turn, can generate volatility and uncertainty concerning the future path of interest rates, exchange rates, and payments flows. Added costs may be incurred when resources have to be shifted back and forth between uses in response to unnecessary or reversible changes in competitive conditions. Lastly, and perhaps most important, protectionist pressures can be created when international trade is perceived to be influenced by factors that seem to be unrelated to more fundamental supply and demand considerations.

In analyzing economic interactions, it is therefore of central importance to distinguish between those developments which promote the efficient international allocation of trade and capital flows and those which give rise to economic adjustments that run counter to efficient resource allocation. A satisfactory conceptual framework for making such a distinction must have at least two components. First it must be able to identify the channels by which domestic policies and developments affect the balance of payments and exchange rates. Second it must provide some basis for judging whether such effects, in given circumstances, are desirable or undesirable from an international standpoint. These two elements of the conceptual framework may be discussed in turn.

2. Factors influencing the balance of payments

The primary determinants of the current account of a country's balance of payments are (i) relative demand levels in the domestic economy and in its trading partners, and (ii) relative competitiveness. This much is not controversial and provides a useful framework for analyzing balance of payments developments--though it has to be recognized that the relevant relationships cannot be established with a high degree of precision. The recent and prospective evolution of the trade and current accounts can be assessed with reference to past and anticipated developments in demand and competitiveness. 1/ If forecasts are available for rates of domestic demand growth in the major countries over the relevant time horizon, estimates can be made

1/ See "Issues in the Assessment of the Exchange Rates of Industrial countries," IMF Occasional Paper No. 29, July 1984.

of how the current account might evolve (other things held equal). Similarly, given an assumed evolution of domestic costs and prices and the pattern of exchange rates, estimates can be made of how these competitiveness factors will affect payments flows. 1/ By adjusting the existing payments position for the estimated effects of lagged changes in exchange rates and of prospective changes in cyclical positions, it is thus possible to come to an assessment of the "underlying" balance of payments. The key indicators needed to make such an assessment are as follows: (i) a measure of economic activity (demand or output); (ii) a measure of domestic inflation (costs or prices); and (iii) a measure of the effective exchange rate.

The first two of these indicators can be projected on a country-by-country basis using standard forecasting techniques. The third (the exchange rate) can be easily observed ex post, but has proved difficult to project in any satisfactory manner. It is nevertheless of considerable interest to develop a framework for analyzing exchange rate developments and prospects, especially if judgments are required concerning whether a given pattern of exchange rates is to be regarded as sustainable and/or desirable. To do this, it is necessary to understand (and try to develop indicators for) the factors that underlie shifts in capital flows so as to provide a more comprehensive account of international economic interactions. This is a difficult exercise, in part because expectations (which are inherently hard to observe or model) play such an important role in determining the desire to acquire or dispose of external assets. A logical place to begin is by looking at the factors that influence the balance of domestic savings and investment (and therefore the net acquisition of foreign assets). These include developments in the fiscal position (which represents the net saving or dissaving of the public sector) as well as developments affecting the willingness of the private sector to save or invest. Indicators that may be useful in this context include: (i) a measure of the overall fiscal position; (ii) gross private savings flows; (iii) gross private investment; and (iv) real interest rates.

3. Criteria for assessing the sustainability of payments balances

The calculation, as described above, of a set of "underlying current account balances" that is implied by existing policies and exchange rates can be a helpful focus in international surveillance. To the extent that such a set of payments balances is felt to be unsustainable,

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1/ For purposes of projections, the staff often assumes that there will be no change in competitiveness from some base date. It is nevertheless of considerable importance to estimate how the lagged effects of changes in competitiveness that occurred prior to that date will affect balance of payments patterns.

it could trigger discussions of whether remedial action is required. (Remedial action could be of a positive character, in the sense of a deliberate change of policy in one or more countries, or more passive, in the sense of acquiescence in exchange rate movements needed to restore sustainability.)

A key issue in interpreting underlying payments balances is thus how to establish criteria for what should be considered sustainable. This is a particularly difficult analytical subject, on which it will undoubtedly be necessary to proceed gradually. A basis for approaching the issue is provided by the identity which equates the current account position (surplus or deficit) and the balance between domestic saving and investment. A sustainable current account position could therefore be defined as one in which the domestic savings and investment position of a country is sustainable, given the corresponding preferences of other countries, and the need to avoid an excessive buildup of external liabilities or assets.

The domestic saving/investment balance can in turn be decomposed into the net financial balance of the public sector and the net financial balance of the private sector. The former is derived from the fiscal balance, which is an important indicator and policy tool in its own right. The latter is influenced by all the factors that affect private saving and investment decisions, including interest rates, the level and growth rate of real incomes, the return on physical capital, and demographic factors. The determinants of gross private saving and investment are subject to empirical estimation, although it has to be recognized that robust relationships are not always easy to establish.

The foregoing analysis suggests that the appraisal of policy interactions among industrial countries could be based on an analytical framework in which "underlying" current account positions (based on existing policies and exchange rates) would be compared with "sustainable" positions (derived from an assessment of the medium-run determinants of savings and investment). It is to be emphasized that international consistency of balance of payments positions is a necessary condition for their sustainability. 1/

The existence of a large divergence between the underlying and sustainable positions would be a signal that further discussions might be useful. Such discussions might of course lead to the conclusion that either the underlying or sustainable position had been mis-estimated, and that no divergence requiring correction existed.

1/ This means that the "statistical discrepancy" in world balance payments statistics would have to be appropriately allowed for.

Alternatively, it might lead to the conclusion that there was indeed a potential problem, and that remedial action was needed.

The various possibilities for remedial action are suggested by the factors that determine current and capital account flows. These flows may be altered through factors that bring about shifts in competitiveness, changes in relative growth rates, or structural changes that influence trading patterns, as well as by measures that affect domestic saving and investment positions. The choice of the particular means for restoring sustainability will depend on the extent to which, in given circumstances, particular indicators of domestic policies and performance in individual countries diverge from agreed or projected paths.

This last point implies that the setting and monitoring of objectives with respect to domestic variables is a matter of international concern, at least to some extent. The choice of whether a balance of payments disequilibrium should be corrected by exchange rate movement or a shift in relative rates of economic growth requires, for example, a view on the rate of growth in an individual country that should be considered attainable.

IV. Types of Economic Indicator: Uses, Scope, and Limitations

Against the background of the foregoing discussion, this section provides an analysis of various indicators that are useful in assessing the policies and developments that lie behind balance of payments and exchange rate trends. It also considers ways in which such indicators can be adapted to make them more useful for the kind of comparative analysis that is required to improve the effectiveness of multilateral policy discussions among countries. Section V will then offer some more concrete suggestions concerning how surveillance procedures can be adapted to make more effective use of indicators.

Indicators can be classified into three types: indicators of economic performance, which broadly speaking cover the more fundamental objectives of economic policy, i.e., economic growth, employment, and balance of payments and price stability; indicators of economic policy, which cover variables over which the authorities have fairly close control, but which are not themselves components of economic welfare, i.e., monetary growth, exchange market intervention, the fiscal deficit, etc; and indicators of intermediate variables, which are variables through which policies influence performance--savings and investment levels, interest rates, and exchange rates. Although the distinctions between these three different types of variable can sometimes be blurred, it is convenient to discuss them separately.

1. Indicators of economic performance

(a) The balance of payments

The balance of payments can be considered either an objective of policy or an intermediate variable. For the major currencies with floating exchange rates, it is not an objective in the sense that these countries have quantified aims for the structure of their balance of payments. However, most countries would probably subscribe to the objective of restoring or maintaining a "sustainable" external payments structure, so as to limit the dangers of protectionist pressures and to minimise the costs and uncertainties that are involved when an unsustainable position emerges and has to be corrected. Moreover, from the point of view of surveillance, the restoration and maintenance of a balance of payments pattern that is adequately consistent with the domestic policies and priorities of all members must be considered a key objective.

A widely used indicator related to the balance of payments is the current account surplus or deficit, and it seems appropriate that the current account account remain the primary indicator of developments in the external sector. 1/ As noted in the previous section, however, a satisfactory analytical framework for judging the sustainability of a given exchange rate pattern would involve an assessment of the "underlying," as well as the actual, current account position. It may be useful, therefore, to include in staff analyses estimates of how the underlying current account balance differs from the recorded or projected position. This would involve making adjustments for the effects of recent exchange rate changes that had not yet been fully reflected in trade flows, for the impact on imports and exports of cyclical divergences from "normal" employment levels, and for any other special factors affecting payments flows in a given period.

Presentation of underlying balance of payments estimates would facilitate multilateral discussions of the sustainability of the external positions implied by current policies and prospects. A sustainable balance of payments position can be defined as one in which the underlying current account surplus or deficit is matched

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1/ The trade balance is another indicator of external developments that often attracts attention, particularly in the context of the need for trade liberalization and market access. The trade balance is also useful as a leading indicator of developments in the overall current account, since data related to trade are usually available on a more timely basis. In general, however, there seems little economic reason for drawing a distinction between trade in goods and trade in services.

capital outflows or inflows that correspond to a country's desire to accumulate foreign assets or debts, and its capacity to service its external debt out of current foreign exchange earnings. For such a position to be internationally appropriate, it must also be compatible with the savings/investment preferences of other countries, and reasonably full employment of factors of production.

(b) Real output

Concerning domestic economic performance, perhaps the most widely used indicator is the rate of growth of GNP. As an indicator, GNP has the merit of comprehensiveness, widespread familiarity, and comparability across countries. Given the multiplicity of purposes for which it is employed, however, it should not be surprising that it is not equally suited for all purposes. As a measure of welfare, absorption per head would be a better indicator, while as a measure of efficiency, output per unit of factor input might be superior.

For the purpose of analysing the international interaction of trends in output and demand, which is the natural focus of multilateral surveillance, the chief drawback of the GNP indicator is its level of aggregation. In particular, it is often desirable to distinguish the relative contribution of domestic and foreign sources of demand growth to any given change in overall GNP. It is therefore proposed that, while GNP remain the principal indicator of developments in the real economy, it should be supplemented with systematic presentation of developments and prospects in final domestic demand.

A more difficult issue than the choice of which indicator to use is the establishment of criteria by which objectives with respect to growth are to be judged, and performance assessed. Specifically, what rate of growth should be considered sustainable, given the constraints a country faces, its other objectives, and its obligations toward its trading partners? Such a calculation will involve, as a first step, estimation of the underlying rate of growth of productive potential. This is not a simple estimate to make, since it depends not only on the rate of increase in available factors of production (the aggregate supply of labor and capital) but also on hard-to-observe variables such as the quality of factor inputs and the speed of technological progress. A second step would be to judge how large is the gap between existing and potential output levels and how quickly it is feasible to close such a gap. These are also difficult estimates to make, since they depend on factors such as the nature and extent of rigidities in goods and labor markets, the risk of igniting inflationary pressures, and the existence of other objectives (such as fiscal strengthening) that might legitimately constrain governments' freedom of maneuver. However, techniques for making judgments in these

areas exist that enable the attainable rate of growth to be defined as the sum of (i) the growth in underlying capacity and (ii) the rate of absorption of economic slack.

(c) Employment

An indicator of economic performance that is closely related to GNP growth is employment. There are a variety of possible indicators in the employment field. The rate of increase in numbers employed is sometimes used as an indicator of "success in creating jobs." By this token, however, an economy with a rapidly growing population and labor force could appear to be more successful in the employment field than one with a slower growing population, even though the latter might have a lower rate of involuntary unemployment. A measure of labor market conditions that avoids this particular difficulty is the rate of unemployment, which is also in many respects a more visible objective for government policy. It has to be recognized, however, that the rate of unemployment is itself not always an effective measure of involuntary unemployment. There may be categories of discouraged jobseekers (longer-term unemployed, young people remaining in education, women remaining in household work) not captured in published unemployment statistics.

As with GNP growth, a labor market indicator such as the unemployment rate needs a standard by which assessments can be made as to whether changes in the unemployment rate are satisfactory or not. A considerable literature exists on the "natural" rate of unemployment or the "nonaccelerating inflation rate of unemployment" (NAIRU). Although neither of these concepts is easy to apply in practice, they do provide a framework in which, for a given institutional setting, the existing unemployment rate can be judged too high (or, possibly, too low). A medium-term objective of policy would presumably be to move toward the NAIRU, and to do so at a pace that does not have seriously adverse consequences for other economic objectives, such as inflation control. It is also possible that governments may have medium-term objectives to reduce their NAIRU, say by structural measures that improve the flexibility of labor markets, and enable price stability to be maintained with a lower level of joblessness. To the extent that such structural goals can be quantified, it should be possible to factor them into medium-term employment objectives.

(d) Inflation

Another important indicator of economic performance is the rate of inflation. From a domestic standpoint, the key objective in most countries is probably to come as near as practically feasible to stability in consumer prices. Internationally, it may be more important to identify differentials in cost inflation (and where possible, reduce

them), so as to facilitate the task of judging whether movements in nominal exchange rates are appropriate from the perspective of efficient adjustment. While costs and prices often move together, there can be differences in underlying trends. In an economy that is enjoying a more rapid rate of productivity increase in its manufacturing than in its service sector (as was the case, for example, in Japan in much of the postwar period), it is possible that domestic price inflation could be higher than in trading partners, while cost inflation in traded goods industries might be lower. This need not pose insuperable difficulties for the development and use of indicators, provided that the disparities are properly identified and allowed for.

In this connection, efficient adjustment requires that any trend divergence in production costs in traded goods industries be compatible with corresponding exchange rate trends. An inflation measure that has proved particularly useful in analysis is the rate of change of unit labor costs in those sectors of the economy that are most exposed to international competition. Being a measure of costs, it is more relevant to international competitiveness, and thus is better able to identify inflationary trends that have implications for balance of payments flows.

The foregoing discussion suggests that the inflation indicator that would be most useful in discussing external imbalances, exchange rate developments, and policy interactions is not necessarily the one that will be most familiar in a domestic economic context. Movements in the consumer price index contain adventitious elements that are only incidentally related to international competitiveness and underlying inflationary pressures. The GNP deflator is a superior indicator in many respects, although it still does not capture some important elements related to international competitiveness. A measure of labor costs per unit of output, perhaps normalized for differences among countries in cyclical position, would have important advantages. Its main drawbacks would be: (i) such an index is available only for the manufacturing sector of the economy; (ii) the data from which it is compiled are produced with a lag; and (iii) the concept is less familiar to policymakers. To some extent, however, it might be possible to reduce these shortcomings if it were decided to focus on such a measure as a central feature of surveillance.

2. Indicators of economic policy

For expositional convenience, domestic macroeconomic policy can be divided into its monetary and fiscal aspects. In addition, countries that do not maintain either fully floating or rigidly fixed exchange rates have discretion in their management of reserves or exchange rate policies. Finally, the increased focus in recent years on structural

policies suggests that it may be desirable to consider the possibilities of developing indicators in this field also.

(a) Monetary policy

In the area of monetary policy, the most widely used policy indicator in the major industrial countries is the rate of growth of some monetary or credit aggregate. The specific aggregate that is used varies from country to country depending on the institutional characteristics of the country concerned and the robustness of empirical relationships.

Several issues arise in developing meaningful indicators for use in cross-country analysis. The first concerns whether the same measure of the money stock should be employed for all countries. On the one hand, it could be said that different definitions of monetary variables inhibit comparability across countries. Some monetary authorities have selected a monetary target primarily on grounds of controllability; while others have preferred to target an aggregate that is closely linked with developments in the economy, even though the target itself cannot be closely controlled. Differences in criteria for the selection of monetary targets might cause difficulties in circumstances when the monetary authorities were attempting to concert their policy stance - e.g., to keep aggregate growth in the world money supply within some range, or to engage in offsetting policy responses to unwanted exchange rate developments.

Nevertheless, it would seem desirable to adapt the definition of monetary indicators to take account of conditions in particular countries. Generally speaking, when the authorities of a particular country have chosen a monetary aggregate for policy or monitoring purposes, this represents a careful choice based on analysis of the strength and stability of empirical relationships. It is likely to facilitate a meaningful dialogue, without undue loss of effective comparability, if the definitions used for purposes of international surveillance accord with those used for domestic policy formulation.

A second issue in the choice of monetary indicators concerns whether real or nominal variables should be used. It can be argued that it is the real money stock that determines the perceived liquidity of the private sector and therefore influences the willingness to spend. On the other hand, developments in the real money stock can be an ambiguous indicator. Under conditions of rising inflation, wealth-owners will seek to economize on real money balances and the real money stock will be observed to fall. Indeed, a systematic increase in the growth of the nominal money stock, causing an acceleration of inflation, will almost certainly lead to a decline in the

real money stock. For this reason, and because the central goal of monetary policy is to keep inflation in check, it seems more appropriate to define monetary indicators (whether used as targets or as monitoring instruments) in nominal terms.

A third potential issue lies in how to handle unexpected shifts in the demand to hold money balances. If an upward shift in money demand can be identified, measured, and precisely offset by an equivalent adjustment in supply, it could be said that the stance of monetary policy has been kept unchanged. It would therefore be desirable to have an indicator that is adjusted for the effect of known shifts in the demand for money. The difficulty is, of course, that changes in demand are very hard to identify, particularly at the time they are occurring. One possibility would be to use interest rates as an indicator of a change in the balance between supply and demand in money and capital markets. But interest rates are also an ambiguous criterion, since an increase in interest rates may reflect a shift in the demand for money at given income levels, or an increase in credit caused by an incipient increase in nominal output. The implication of the foregoing is that the possible alternatives to the use of money growth rates as a primary indicator of the stance of policy all have drawbacks. A money stock indicator is still probably the best indicator of monetary policy in countries that use monetary targets, but it must be used with caution and in the light of surrounding developments.

Not all countries use monetary targets, of course. In countries with fixed exchange rates, the domestic money stock cannot be closely controlled by the authorities, since liquidity can enter or leave the country via overall balance of payments surpluses or deficits. Even in countries where there is greater freedom for exchange rate movement, monetary policy may be managed in the light of exchange rate and interest rate developments rather than to achieve target monetary objectives. For countries that do not have objectives for monetary aggregates, an alternative indicator of changes in monetary conditions will be necessary. One possibility, which would have the merit of facilitating international comparisons, would be to use interest rate differentials with major international currencies.

(b) Fiscal policy

While the medium-term goal of monetary policy can be defined as the restoration and maintenance of an appropriate degree of price stability, the aims of fiscal policy are both macroeconomic and structural. At the macroeconomic level, governments have objectives for the budget deficit, related to the need for economic stabilization, as well as to a desire to limit the government's claims on the saving

available for private investment. At the structural level, there may also be objectives for the structure and level of taxation and expenditure, with a view to enhancing incentives for efficient resource allocation, and limiting the absolute volume of real resources absorbed by the government.

In choosing how the macroeconomic objective relating to fiscal balance should be defined, a number of questions arise. These include: whether fiscal objectives should be established for the entire public sector, the general government, or for the central government alone; whether the objective should be for the actual fiscal deficit or for the "underlying" deficit (i.e., whether the "policy-induced" fiscal change should be separated from the change attributable to purely cyclical factors); and whether or not the deficit that is monitored should be inflation corrected. Beyond these definitional issues, of course, lies the more fundamental question of what the fiscal objective should be, and whether independently determined objectives (e.g., zero deficits) are internationally consistent in terms of their impact on balance of payments flows.

The choice of whether the fiscal deficit that is measured should extend beyond the central government depends, to a considerable extent, on the scope of public sector activities that fall under the control of the fiscal authorities. Whichever level of government is selected as the primary focus for the fiscal indicator, however, it is important that the value of the indicator not be undermined by shifts in the classification of transactions (e.g., from central to local government) that have substantial effects on the chosen indicator but little economic significance.

Concerning the choice of actual or cyclically corrected fiscal deficits, it is relevant to note that most governments express their aggregate fiscal objective in terms of some stated level for the actual fiscal deficit. This, indeed, is the indicator that most accurately measures the extent of the government sector's claims on financial markets. However, movements in the actual fiscal deficit can give a misleading impression of the thrust of fiscal policy in circumstances where output is growing significantly faster or slower than its medium-term trend. In a phase of relatively rapid cyclical expansion, revenues tend to grow faster than expenditures and thus the budget deficit can shrink, even though policy-related fiscal measures may be tending to increase the deficit. Similarly, when the economy is stagnating, the weakness of tax revenues may cause a budget deficit to widen even though the measures introduced by the authorities may in themselves be tending to strengthen the fiscal position. It seems desirable

therefore to use indicators both of the actual and of the cyclically adjusted fiscal position. 1/

Adjustment for inflation poses some potentially more difficult issues. On the one hand, it can be argued that inflation effectively reduces the value of a government's outstanding debt with effects on wealth-holders that are similar to taxation in an environment of stable prices. On the other hand, inflation adjustment can sometimes define away a real problem, as when the fiscal deficit itself is an important source of the pressures that give rise to inflation. In circumstances when inflation is low and stable, inflation adjustment is not needed to permit a meaningful comparison of fiscal conditions across countries or over time.

A more difficult issue than defining the fiscal deficit to be monitored is that of evolving criteria for assessing the appropriateness of countries' medium-term objectives in the fiscal field. While a country's objective for its fiscal deficit is intimately related with the domestic social and political priorities, it also has international implications. Changes in public sector saving or dissaving have consequences for the overall saving/investment balance in a country, and thus for its balance of payments situation. This is an area in which technical criteria are not easy to establish, and in which, therefore, it will be particularly useful to generate a multilateral dialogue.

(c) Exchange market policies

In the area of exchange market policies, possible indicators include the exchange rate and some measure of exchange market intervention. Since most of the major industrial countries pursue flexible exchange rate policies, the exchange rate itself is not regarded as a proximate instrument of policy. It is better viewed as an intermediate variable, and as such it is discussed further in the following section. Exchange market intervention, on the other hand, is a policy instrument that can be measured in terms of the size of reserve movements over given intervals. It should be remembered, however, that exchange market intervention can sometimes take place in ways that do not affect reserves (e.g., through borrowing and lending in foreign exchange by public sector entities). Moreover, the impact of intervention depends importantly on whether it is sterilized or nonsterilized.

Concerning the criteria according to which exchange market intervention is to be assessed, it would seem reasonable to assume that

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1/ For a review of the staff methodology for making cyclical adjustments to changes in the fiscal position, see "A Review of the Fiscal Impulse Measure," by Peter S. Heller, Richard D. Haas, and Ahsan S. Mansur, IMF Occasional Paper No. 44, May 1986.

reserve levels would, over time, tend to move toward some stable relation to external transactions (say, imports). For most major countries, it is unlikely that there would be any systematic ex ante intention to accumulate reserves, or run them down, in significant quantities. There would therefore be no prior standard (other than "no change") against which actual reserve movements would be compared. It would, however, be useful to compare intervention activities by one country with any offsetting activity on the part of trading partners; and to view exchange market intervention in the light of accompanying movements in exchange rates and interest rates.

(d) Structural policies

Indicators of structural policies are, by their nature, hard to devise. The structural policies that have been the focus of most attention in recent years have been those relating to deregulation, labor market rigidities, and trade restrictions. With regard to deregulation, it is possible to list the number of regulations eliminated or modified, and it is possible to provide analytical judgements about the effects of deregulation (e.g., in terms of reduced prices or increased volume of transactions in the markets concerned). On the whole, it seems more practical to analyse the process of deregulation through ad hoc empirical studies, rather than through an attempt to devise specific and quantified indicators of objectives and performance. Labor market rigidities are thought to be manifested in a variety of ways, including inadequate flexibility of wages; wage levels that are too high; lack of geographical and occupational mobility; and inadequate training facilities. While many of these factors are not amenable to quantitative measurement through indicators, it does seem desirable to use the indicator of unit labor costs described earlier to help in reaching judgments of whether developments in real wage rates are warranted by movements in labor productivity. As far as trade restrictions and protectionism are concerned, there is again no fully satisfactory way of developing quantitative indicators. There is thus little alternative to continuing to analyse the impact of trade restrictions in qualitative (albeit specific) terms, while to the extent possible including staff judgements of their quantitative significance.

3. Indicators of intermediate variables

The channels by which policy variables affect the ultimate objectives of policy are not direct, nor are they fully predictable. For these reasons, it can be of value to develop indicators of those intermediate variables through which policy works to influence more fundamental objectives. Intermediate variables are not, in general, controlled directly by the policy authorities. However, they can be used to check whether the behavioral assumptions underlying the formulation of policy is an adequate representation of reality, and

whether economic developments are following their anticipated path during the interval before measures have their effect on ultimate objectives. Intermediate variables can also be used to identify emerging problems of international consistency of policies.

(a) Interest rates and exchange rates

An important channel by which policies influence ultimate economic objectives is through their effect in conditions in financial markets. In this connection, a key role is played by money and capital markets and the foreign exchange market. It is therefore of considerable interest to monitor developments in interest rates and exchange rates.

With regard to interest rates, a major determinant of the incentive to save or invest is probably the level of the real interest rate. Notwithstanding the fact that inflationary expectations can only be measured indirectly, it nevertheless seems desirable to use some estimate of the real interest rate as the primary indicator for monitoring purposes. A helpful approximation in this connection, that is generally not seriously misleading, is to deduct from the nominal interest rate the rate of change in the GNP deflator over some recent period. While the level of real interest rates is of importance as an indicator of the incentive to save and invest, it is less significant than interest differentials in determining incentives to capital movements, and therefore exchange rate pressures. In monitoring real interest rates, it is therefore necessary to pay attention to international differentials in rates as well as to absolute levels.

As far as exchange rates are concerned, the indicator that is most relevant for purposes of international competitiveness and adjustment is the real effective exchange rate. This can be obtained by combining a measure of the nominal effective exchange rate (using currency weights derived from, say, the Multilateral Exchange Rate Model) with a relative inflation estimate from the inflation indicator described above.

Since both interest rates and inflation rates are intermediate variables, it would be unrealistic to expect policy authorities to prescribe in advance any precise path for their expected evolution. Nevertheless, to the extent that the analysis of other indicators reveals underlying disequilibria in foreign exchange and capital markets, this analysis could signal the direction of possible changes in interest and exchange rates.

(b) Saving and investment balances

As already implied, movements in interest rates and exchange rates are in turn influenced by underlying shifts in domestic saving

and investment. Indeed, it is movements in interest and exchange rates that give causal content to the identity that makes the current account of the balance of payments equal to the domestic savings minus domestic investment.

Any ex ante inconsistency at the global level between countries' balance of payments objectives or forecasts must be reflected in a similar global inconsistency between projected saving and investment trends. It may therefore be useful to keep track of actual or expected trends in savings and investment, in order to provide advance warning of possible inconsistencies. As noted earlier, the aggregate saving/investment balance of a country can be divided into the balance attributable to the public sector and that attributable to the private sector. The financial position of the public sector is, of course, the fiscal balance and has been discussed above. This can be complemented, for analytical purposes, with supplemental indices of saving and investment in the private sector.

V. Procedures for Using Indicators in Surveillance

The use of indicators to facilitate discussion of international economic interactions has two aspects beyond the development of an analytical framework and the definition of a set of indicators to be used. These additional aspects are: (i) the establishment of procedures that allow indicators to be monitored effectively, both at the initial stage when objectives are being set and subsequently when performance is being assessed; and (ii) the devising of criteria that would help the international community decide when given developments are a matter of concern.

The present paper does not seek to fully resolve these issues. To some extent, it can be expected that the way in which indicators are used will evolve over time, through the accumulation of theoretical and empirical evidence, as well as through experience with their practical application in surveillance. The suggestions made in this section should therefore be seen as preliminary, designed to launch an exercise in the more systematic use of indicators, rather than as a firm set of proposals. The suggestions themselves relate to ways in which indicators might be used in surveillance undertaken by the Fund. They do not address directly the questions of how indicators would be used in other forums, such as those referred to in the Tokyo declaration. Nevertheless, the procedures described below could, if desired, be adapted to these other contexts.

1. Procedures for monitoring indicators

Discussions on the role of Fund surveillance have sometimes drawn a distinction between Article IV consultations, undertaken with all

member contries, and the assessment of global economic developments and interactions undertaken in the context of the World Economic Outlook. It has been recognized, of course, that both kinds of discussions are integral to an effective process of multilateral surveillance. In what follows, however, primary attention is devoted to exploring procedures for the use of indicators in the context of global economic assessments.

It is proposed that assessments of international economic prospects, whether in the World Economic Outlook or other papers, should systematically include projections for the major variables discussed above. These projections would be based, in the first instance, on countries' own forecasts, and grounded in the staff's continuing contacts with member authorities. While the main focus of the projections would inevitably be on their immediate implications for policy, it would be important for the projections to be framed against the background of governments' stated medium-term objectives. To the extent that national forecasts for specific variables were not available, the staff could fill gaps on the basis of judgments about the interrelationships among variables.

In preparing statistical and analytical material for multilateral policy discussions (whether in the Executive Board, at the Interim Committee, or in other forums), the staff would attempt to highlight two possible sources of concern: (i) international inconsistency of objectives or forecasts, and (ii) weaknesses in domestic economic performance or policy. International inconsistency would arise if the anticipated exchange rate or balance of payments consequences of developments projected by one country could not be reconciled with the corresponding projections of its trading partners. Domestic weaknesses could be considered to exist when domestic economic performance or objectives fall short of what was considered attainable, having regard to a medium-term framework. An example of the latter would be where a country was envisaging economic growth at a pace considered to be below what would be sustainable without rekindling inflationary pressures.

Where international inconsistencies exist, a question that arises is how far any set of projections presented by the staff should attempt to include a reconciliation of such inconsistencies. In the World Economic Outlook Exercise, the approach that has traditionally been followed has been to make explicit assumptions about economic conditions (which usually include "unchanged policies," constant exchange rates, etc.), and then adjust the projected path of economic variables in all countries to an internationally consistent (although not necessarily desirable or sustainable) pattern. While it would seem appropriate to retain this approach for short-term forecasts, it

may be possible to experiment with a more "unconstrained" approach in appraising the medium-term framework in which countries are framing their objectives. Thus, the staff could base its statistical presentation on national projections (even where these embodied international inconsistencies), and could focus the surrounding analysis on the various alternative ways in which the inconsistencies could be reconciled.

Discussions among member countries could carry this process a stage further by identifying the developments that would be needed to produce consistency and sustainability in balance of payments patterns. Consistency can be defined as ensuring that projected developments in individual countries are arithmetically compatible, in the sense that international trade and capital flows satisfy necessary adding-up constraints. Sustainability refers to the compatibility of projected developments with medium-term objectives; such as ensuring the stable evolution of the system and promoting efficient international resource allocation.

To be effective in promoting a fruitful dialogue among the major countries on the compatibility of their policies, the analytical material prepared for discussions must satisfy three conditions. First, the projections that are being used must be the ones that countries themselves recognize as reflecting their economic policies and objectives. Second, the criteria for assessing policies and their sustainability must be acknowledged to be broadly appropriate. Third, the nature of possible inconsistencies, as well as alternative means for reconciling them must be clearly set out. To achieve this it may be useful to provide for additional direct contact between key member countries and the staff responsible for preparing the analysis, preparatory to the issuance of a paper for Board discussion. Such contact would serve the purpose both of clarifying the basis on which projections were made and of uncovering concerns that individual countries might feel about policies and developments in major trading and investment partners.

The analysis so far in this section has dealt with the issue of obtaining and presenting projections for the various indicators that have been described. Other issues arise concerning the monitoring of these indicators through time. One avenue for such monitoring is obviously the periodic World Economic Outlook and Article IV consultation discussions. It is to be expected that staff papers for these meetings will include an analysis and evaluation of developments with respect to all the indicators previously discussed. In addition, there could be a more frequent monitoring of developments in certain key variables. (The staff already prepares for internal use a fortnightly

updating of key indicators for the five major countries. 1/ This could be given a wider circulation, and, if found useful, extended as necessary to additional countries and indicators.) Other possible avenues include extending the use of information notices to additional variables and more frequent mini-discussions of the world economic situation.

2. Procedures for modifying targets or policies

Beyond the issue of procedures for the monitoring of indicators is the more important question of substance. How is the international community to decide whether a departure from the expected or target value for an indicator constitutes a matter of international concern? Under what circumstances should indicators be changed in response to new evidence?

In judging how to respond to departures from expected values of indicators, it is helpful to make use of the distinction discussed above between policy variables, performance variables, and intermediate variables. Policy variables are those which the authorities can control in the short run. Thus departures from targets or objectives can be presumed to be deliberate, or at least conscious. This differentiates policy variables from performance variables, which are much harder to control in the short run. If a country departs significantly from agreed policy targets during a given short-run period, this would be a prima facie case for consultations, even if there was not yet any evidence of economic performance deviating seriously from expectations. On the other hand, a short-run deviation from expected economic performance (say, a sudden slowdown or acceleration in GNP) would not necessarily be a cause for international concern, provided that economic policies remained on the intended track. Placing emphasis in this way on the stability of policy and on indicators that pertain to major and critical policies would help to avoid the risk of "fine-tuning" that might arise if undue weight was given to ephemeral developments in performance indicators. The use of policy indicators could thus strengthen the consultation process by allowing for a more continuous monitoring of the implementation of the policies described by the member. Supplemental consultation would provide an opportunity for the member to describe (and other members to assess) why a different strategy seems preferable or what actions are being considered to correct the deviations.

Of course, the longer the time period considered, the more important it becomes to ensure that performance is on track rather than policies. A continuing deviation of performance from the desired path, while policies remain on track, indicates that the assumed relationship between policies and outcomes has been misinterpreted, and a revision is necessary in policy settings.

1/ These indicators are: GNP; industrial production; consumer prices; unemployment rates; trade and current account balances; effective exchange rates; short-term interest rates; narrow and broad money; and leading economic indicators.

Intermediate variables can be of use in this connection in providing advance indication of changes in assumed relationships. For example, if interest rates and/or the exchange rate rise unexpectedly, this may be taken as an indication that monetary conditions are tighter than expected. Whether a change in policy targets (or at least flexibility in their implementation) is required will depend on a judgment as to whether other factors may have contributed to the observed market developments. However, to the extent that the intermediate variable is itself an object of policy (e.g., the desire to avoid inappropriate exchange rate movements, or undesired fluctuations in interest rates) it may be necessary to manage a policy variable in a more active way, so as to undertake short-term smoothing of market-induced fluctuations.

VI. Issues for Discussion

This paper has identified a number of issues on which the views of Executive Directors will be helpful in developing the use of indicators for surveillance purposes. A first set of issues concerns the analytical framework within which the analysis of indicators is to be set. A second concerns the nature of the indicators that are to be used. And a third concerns the procedural arrangements for discussions.

(a) Analytical focus

The staff has argued that indicators should emphasize the international interactions of economic policies and performance, and should have regard to the medium-term framework in which policy are set. For these reasons, it is proposed that a major focus of analysis should be prospective balance of payments developments and their relationship with a sustainable position. This focus could be assisted by explicit consideration of the determination of domestic saving and investment balances. Directors may wish to give their views on the appropriateness of this emphasis in surveillance.

(b) Nature of indicators to be used

It has been argued that any variable that affects the level, distribution, or price of domestic output has implications for payments balances and exchange rates. Nevertheless, to be helpful in the surveillance process, indicators must be limited in number, quantifiable, timely, and relatively easy to interpret. The staff believes it is useful to distinguish among: policy indicators; performance indicators; and intermediate variables. As policy indicators, it is proposed to use the rate of growth of the monetary stock; the fiscal

deficit ratio (on an actual and a cyclically adjusted basis); and changes in the level of gross reserves. Performance indicators would include the growth of domestic demand and GNP; and the rate of change in the GNP deflator and in unit labor costs; and the current account of the balance of payments. Intermediate variables would be real interest and exchange rates, and the investment and saving ratios. Comments are invited from Directors concerning both the choice of the variables included in the list and the comprehensiveness of the list.

(c) Monitoring and procedures

The monitoring of indicators would appear to involve the following steps:

(i) the development of a mechanism for collecting and analyzing national forecasts.

(ii) the establishment of procedures for discussing multilateral consistency of objectives and policies.

(iii) "follow-up" procedures for discussion when developments diverge from what is desired or expected.

The staff has proposed the following procedures: (i) An initial paper would be prepared, in consultation with member authorities, setting forth the expected evolution of economic developments in member countries. Particular attention would be devoted in this paper to the international consistency of projected developments in individual countries, and to any other aspects of the projection that could be considered grounds for international concern; (ii) Discussion of members' objectives and policies would take place in the Executive Board and the Interim Committee, and would be aimed at improving the consistency of policies with medium-term objectives; and (iii) Subsequently, economic performance would be monitored by comparing actual developments with those targeted or projected. This would take place in subsequent World Economic Outlook or Article IV reports, or in other ways. These subsequent reports would give attention to assessing developments in indicators, considering possible modifications, and "rolling forward" the medium-term horizon.

Directors are asked for their views on whether these procedural arrangements seem appropriate, and for comments on how they might be implemented in practice.