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EBS/84/232

November 16, 1984

To: Members of the Executive Board

From: The Secretary

Subject: Formulation of Exchange Rate Policies in Programs Supported
          by the Fund

There is attached a paper on formulation of exchange rate
policies in Fund programs which provides background to the discussion
on the review of conditionality (EBS/84/227, 11/7/84), scheduled for
Wednesday, December 5, 1984.

If Executive Directors have technical or factual questions
relating to this paper prior to the Board discussion, they should
contact Mr. G. G. Johnson (ext. (5)8671).

Att: (1)

INTERNATIONAL MONETARY FUND

Formulation of Exchange Rate Policies in Programs Supported by the Fund

Prepared by the Exchange and Trade Relations Department

(In consultation with other departments)

Approved by C. David Finch

November 15, 1984

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I. Introduction

The role of exchange rate policy in economic adjustment has been widely studied and is the subject of numerous theoretical and empirical papers produced both within and outside the Fund. 1/ The effectiveness of adjustment programs incorporating an active exchange rate policy has also been extensively reviewed by the Fund staff in the context of comprehensive reviews of experience with stand-by and extended arrangements. 2/ While these reviews have made clear the nature and effectiveness of exchange rate policy in adjustment programs, they have not, in general, included detailed discussions of the process by which exchange rate policy in Fund programs is formulated. 3/ In response to requests by Executive Directors, this paper examines the methodology of formulating exchange rate policy in adjustment programs, as well as the actual experience with formulation of exchange rate policy in programs approved by the Fund in 1983.

Section II of the paper summarizes some basic conceptual issues relating to exchange rate policy in adjustment programs. Section III briefly reviews past experience with exchange rate adjustment in Fund-supported programs, noting the growing use of active exchange rate policies in recent years. Section IV considers the various types of indicators that are available for identifying a need for exchange rate adjustment and quantifying its amount. Against that background, Section V reviews the actual process of formulation of exchange rate policies in upper tranche stand-by and extended arrangements approved in 1983. An annex includes case studies describing the formulation of exchange rate policies in the 1983 programs of Ecuador, Ghana, and Sri Lanka.

1/ The most comprehensive study recently produced in the Fund is "Exchange Rate Policies in Developing Countries" (SM/82/8, 1/11/82).

2/ The most recent review is "Upper Credit Tranche Stand-By and Extended Arrangements Approved in 1981" (EBS/83/216, 10/4/83).

3/ "Real Responses Associated With Exchange Rate Action in Selected Upper Credit Tranche Stabilization Programs," (Donal Donovan, Staff Papers, Volume 28, December 1981), which is mainly concerned with measuring the real responses associated with exchange rate action in selected Fund programs, includes a brief survey of the factors that went into the decision to include exchange rate action in the programs considered.

II. Exchange Rate Policy in Adjustment Programs:
Conceptual Issues

Whenever a country undertakes a program of balance of payments adjustment, it needs to consider whether a change in the exchange rate is required to achieve a viable external position and a reasonable rate of economic growth over the medium term. The ways in which exchange rate policy works to correct balance of payments problems and to improve the allocation of resources are well known and need no repetition here. To provide a setting for the discussion in the remainder of the paper, however, this section briefly considers three conceptual issues: (1) the use of indicators to assess the appropriateness of the exchange rate in adjustment programs; (2) the role of exchange rate policy in relation to other program policies; and (3) the extent to which exchange rate stability should in itself be a proximate policy objective in adjustment programs.

In considering these issues, it is useful to bear in mind that they are being discussed in the context of situations that are usually characterized by both excess demand and incorrect relative prices. It should also be borne in mind that almost all of the countries undertaking Fund-supported adjustment programs in recent years have been developing countries, where the level of institutional and statistical development constrains the range of policy choice and the feasible types of economic analysis. A third salient characteristic of program countries is that, by and large, they maintain severe restrictions on external transactions. The presence of such restrictions makes exchange rate analysis difficult. Since in almost all cases restrictions bear more heavily on the demand side than the supply side of the market for foreign exchange, moreover, the implication is that the currency depreciation consistent with efficient allocation of the country's resources would need to go beyond that indicated by the need to deal with the immediate problem with the external accounts.

1. The use of indicators to assess the appropriateness of the exchange rate in the context of adjustment programs 1/

An essential aspect of the formulation of adjustment programs is assessment of the appropriateness of the exchange rate, 2/ and this paper is largely devoted to a discussion of the indicators that the Fund uses for this purpose. Such indicators may be used to evaluate the medium-term implications of a given exchange rate. They may also

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1/ General questions of exchange rate assessment have recently been considered in "Issues in the Assessment of Exchange Rates of Industrial Countries in the Context of Their Economic Policies" (SM/83/263, 12/28/83) and in "Determining the Appropriate Levels of Exchange Rates for Developing Economies: Some Methods and Issues" (Ahsan Mansur, Staff Papers, December 1983).
2/ Or, more generally, the time path of the rate.

be used directly to determine the amount of exchange rate action taken at the outset of the program, as well as the timing and amount of further exchange rate action to be taken during the program.

Where the exchange rate is freely determined by market forces, indicators are not needed to decide on the amount of exchange rate action. They still play an important role, however, being used to assess both the likely future path of the rate and its consistency with the other objectives of the program. Such an assessment might not raise questions about exchange rate policy as such, but could suggest a need to adjust other policies to produce a rate that is more appropriate from a medium-term perspective.

Full market determination of the exchange rate seldom takes place as Fund-supported adjustment programs. Fund resources are provided to ease the process of adjustment, and in that sense are effectively available for intervention in the exchange market. 1/ Such support may, of course, be provided in a form broadly consistent with the principal of market determination, as when quantitative limits are imposed on the amount of intervention during a given period. Most Fund members, however, particularly the developing countries, go further and follow exchange rate arrangements where the rate is determined administratively. 2/ In these cases, a basis needs to be found to determine any initial devaluation and to serve as a guide to further exchange rate action during the program period. The indicators discussed in the paper serve this purpose.

Indicators are necessarily imperfect, and there is always a danger that they give misleading signals as to the appropriate rate. In a restriction-free system, however, deviations from the market-clearing rate will show up in a need for intervention, which provides an automatic check on the signals provided by indicators. Restrictions on external transactions interfere with the operation of this corrective mechanism. The fact that few Fund programs provide for early elimination of restrictions means that exchange rate policy in such programs relies on indicators to a greater extent than would otherwise be the case, reinforcing the emphasis that needs to be given to carefulness in their use.

1/ Market-determined exchange rates are likely to be particularly volatile in the initial stages of adjustment programs, when market participants may not yet fully understand the implications of the new policies or be fully convinced that they will be sustained.

2/ In part this reflects a preference for a more stable exchange rate than is likely to be the case when the rate is basically market determined. This question is discussed in Subsection 3, below.

2. The proper role of exchange rate policies in relation
    to other policies in adjustment programs 1/

The policy mix chosen to restore a sustainable external position
depends on the size and nature of the external imbalance as well as the
economic efficiency and sociopolitical implications of the various
policy instruments. In some instances, a relative price adjustment may
not be needed, and a sustainable external position can be restored
through a reduction in aggregate expenditure without unacceptable short-
term losses in output and employment. 2/ Similarly, where a moderate
improvement in competitiveness is needed, it may be feasible to carry
out the necessary correction of relative prices through demand restraint,
particularly if supported by incomes and other policies. Where a major
improvement in competitiveness is required, however, exclusive reliance
on demand restraint and related policies involves large costs in terms
of foregone output and unemployment, particularly where costs and prices
are relatively unresponsive to such policies. An exchange rate adjust-
ment, on the other hand, produces an immediate correction of the price
misalignment and permits adjustment to take place at higher levels of
economic activity. The desired change in relative prices generally
shows up in an immediate increase in the price level, but the increase
will be limited if supporting policies are appropriate. 3/ Although the
superiority of exchange rate policy as a means of correcting major
price misalignments is likely to be empirically valid for all countries,
the optimum policy mix, and the extent of reliance on exchange rate
policy, will be considerably influenced by a country's individual
characteristics, such as the extent to which it is feasible to use
incomes policy to adjust relative prices. If price inflation tends to
be passed through to wages, for example, a given improvement in competi-
tiveness will require a larger devaluation than when wages are less
intimately linked to prices.

The weights assigned to various policy objectives will also
influence the policy mix. For instance, concern over inflation and the
distributional effects of a devaluation may lead a country's authorities
to choose adjustment policies that rely heavily on demand restraint.

1/ "Exchange Rate Policies in Developing Countries" (SM/82/8, 1/11/82)
provides a comprehensive review of the general issues of exchange rate
policy that are touched on here.

2/ This would be the case, for instance, if the external imbalance
has resulted from a rise in government imports, which can be reversed
without significantly compromising other policy objectives, such as
growth.

3/ Effective demand management is a necessary aspect of any successful
exchange rate action. Note that the exchange rate action and associated
price increases, through their effects on the real value of financial
assets, themselves contribute to reducing excess demand.

In doing so, they will weigh any such benefits against the lengthening of the adjustment process and the associated costs in terms of output and employment. They also need to bear in mind that distributional effects are an inherent part of any adjustment program, whatever the policy mix, although they may appear more gradually in a program that emphasizes demand restraint. (High unemployment has particularly severe implications for income distribution, of course.)

Any assessment of exchange rate policy thus needs to be carried out in the context of an assessment of the overall policy package. Indicators of the appropriateness of the rate cannot be applied in any automatic fashion, even when they are free of the various conceptual and statistical weaknesses noted in Section IV, since the extent of the needed exchange rate action also will depend on the stance of other policies.

A policy objective that has particularly intimate ties to exchange rate policy relates to restrictions on external transactions. Insofar as restrictions are used to maintain the exchange rate at a level other than that consistent with market clearing (after allowance for any stabilizing intervention), the rate cannot be considered to be fully appropriate. Consistent with the Fund's emphasis on the avoidance of restrictions on external transactions (particularly on current exchange transactions), Fund-supported adjustment programs generally aim at reducing such restrictions. In severe cases, however, the extent of the needed policy adjustment is often so great that action on restrictions is postponed, but the process of adjustment cannot be considered complete while restrictions remain, and any assessment of the appropriateness of the exchange rate needs to take this into account.

3. Exchange rate stability as a
   proximate policy objective

Aside from wishing to avoid whatever costs may be associated with short-term exchange rate volatility, for many countries intervention to stabilize the exchange rate is a means of reducing the impact on the economy of short-term real (as opposed to monetary) shocks. In most developing countries, moreover, exchange markets are thin and financial markets undeveloped, increasing both the volatility of market-determined rates and the cost of hedging against future fluctuations. 1/ In any case, virtually all developing countries exercise some degree of exchange rate management.

Pegging a currency involves a particularly strong commitment to exchange rate stability. The formal commitment to the peg can promote stabilizing capital flows, provided that exchange market transactors have confidence that other policies will be consistent with maintenance

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1/ These disadvantages of market-determined rates would be alleviated by the development of new mechanisms and institutions if markets were permitted to operate freely.

of the rate. Commitment to a peg also has more general stabilizing effects. Since the currencies chosen as pegs typically belong to stable, low-inflation countries, maintenance of the peg implies that the pegging country has to follow stable financial policies. 1/

An important issue for exchange rate policy in adjustment programs is the extent to which a member's wish to maintain a pre-existing peg should be respected, even when the need for adjustment of relative prices suggests that exchange rate flexibility, at least to the extent of a change in the peg, would be desirable. The dilemma is clear from the discussion above: when there is a great need for enhancement of competitiveness, programs that rely exclusively on demand management will involve heavier costs in terms of foregone output and employment over a prolonged period. On the other hand, to the extent to which developments and policies have not irreparably shaken confidence in the viability of the rate, maintaining the peg may encourage public acceptance of the adjustment measures and enhance their effectiveness. Where such confidence can no longer be plausibly asserted, as in cases of severe inflation, or where the rate is supported by restrictions on external transactions, devaluation is clearly necessary.

From the viewpoint of Fund policy, the question of the weight to be attached to exchange rate stability assumes particular importance in two polar cases: countries that have a particularly strong institutional commitment to fixed rates, as in the case of members of currency unions, and, at the other extreme, countries that have experienced very frequent changes in exchange rates, as in the case of many countries with a history of high inflation. Some aspects of this question are examined in Section V.

1/ In a world of generalized floating, a fixed exchange rate against any particular currency will imply floating with that currency against other major currencies. To avoid being tied too closely to the fortunes of a particular currency, countries often peg to a basket of currencies.

III. Exchange Rate Action in Adjustment Programs
Supported by the Fund—the Historical Experience

Since the first stand-by arrangements were granted by the Fund in the 1950s, Fund policies regarding the programs supported by such arrangements have consistently emphasized the need for an appropriate structure of relative prices to promote the attainment of a viable balance of payments. In the relatively stable economic environment of the 1950s and 1960s there was relatively more emphasis on adjustments through demand management, and most programs could exclude exchange rate action without seriously compromising their objectives; there was also a general commitment to fixed rates. In the 1970s the economic environment changed and, partly in response, commitment to fixed exchange rates was regarded as less important than before; exchange rate action began to figure in a majority of programs. This trend has continued in the 1980s, when the difficult economic environment together with the need to correct serious distortions resulting from policy failures has meant that the incidence of exchange rate action in Fund-supported programs has continued to increase.

1. The par value era—emphasis on demand management

In the 1950s and 1960s, most stand-by arrangements were granted in support of programs designed to correct balance of payments problems that were of moderate proportions and not complicated by structural distortions in the economy, and in view of the prevailing emphasis on maintaining par values, the adjustment process tended to rely mainly on demand management. Even in this period, however, there were many instances of stand-by arrangements that were granted to overcome payments difficulties of a more deep-seated character, often where balance of payments pressures had persisted for several years. These cases met the requirement under the par value regime that exchange rate changes were to occur only in the event of "fundamental disequilibrium." Exchange rate action was thus a central element in such programs.

The first of the series of comprehensive reviews of the experience with stand-by arrangements covered the period 1963-1972. 1/ Of 85 upper credit tranche stand-by arrangements approved during these years, 26, or 31 percent, involved exchange rate action, including cases of reform of the exchange system (Table 1). Of the programs that did not include exchange rate action, about half were designed to correct overexpansionary demand management policies and the remainder were intended to facilitate external debt rescheduling or to deal with problems such as the impact of recession and temporary shortfalls in export receipts for which exchange rate action was not considered a necessary solution.

1/ "Experience with Programs of Balance of Payments Adjustment" (Thomas M. Reichmann and Richard T. Stillson, DM/76/56, 6/21/76; later published in Staff Papers, Volume 25, June 1978). The study excluded arrangements where significant net purchases (not less than one half of a credit tranche) did not occur.

Table 1. Exchange Rate Action in Programs Supported by the Use of
Fund Resources in the Upper Credit Tranches, 1963-1983

	1963-1972	1973-1980	1981-1983	1981	1982	1983
	(Number)					
Programs supported by:						
Stand-by arrangements	85 1/	77	69	17	21	31
Extended arrangements	--	17	16	10	2	4
Total	85	94	85	27	23	35
Of which: with members of currency unions 2/	(4)	(9)	(19)	(7)	(4)	(8)
Programs involving exchange rate action:						
Stand-by arrangements	26	39	43	9	12	22
Extended arrangements	--	11	11	6	2	3
Total	26	50	54	15	14	25
	(Percent)					
Proportion of programs involving exchange rate action:						
Stand-by arrangements	31	51	62	53	57	71
Extended arrangements	--	65	69	60	100	75
Total	31	53	64	56	61	71
Excluding members of currency unions 3/	(32)	(59)	(82)	(75)	(74)	(93)

Source: Executive Board papers.

1/ Excludes arrangements where significant net purchases (not less than one-half credit tranche) did not occur.

2/ Includes countries for which a foreign currency is legal tender.

3/ No programs with members of currency unions involved exchange rate action.

2.   1973-1980—increasing emphasis on medium-term
     structural adjustment

     With the growing strains in the par value system at the end of the
1960s, the Fund began to place more emphasis on flexibility in exchange
rate policy. In 1970, for example, the first comprehensive review by
the Fund of the mechanism of exchange rate adjustment noted that "In the
past, adjustment of parities has often been considered appropriate only
when evidence of fundamental disequilibrium has become overwhelming. If
it were desired to increase the likelihood that necessary exchange adjust-
ment would be prompt and to reduce the risks of delay, such adjustment
might be implemented as soon as evidence of fundamental disequilibrium
had become substantial, rather than overwhelming." 1/ The sharp shifts
in terms of trade, economic activity, and inflation rates associated
with the major changes in oil prices in the 1970s meant that for many
countries exchange rate action was a virtual necessity for return to
viability in the balance of payments. At the same time, however, the
ready availability of international finance permitted many of them to
postpone adjustment longer than they had been able to do in earlier
periods. The continuing preference of many members for avoiding exchange
rate action, moreover, was evident. For example, in concluding that the
objectives of five of the 1973-75 programs (out of a total of ten not
involving a depreciation) could have been better served if they had
included a currency depreciation, the paper reviewing the programs noted
that "Because of the impact of exchange rate depreciation on prices and
real incomes, the change of the external value of the currency has been
a sensitive issue of stabilization programs. If any doubt existed, ex-
change rate action was postponed and instead the program relied on demand
management policies to cope with the balance of payments problem." 2/
Nonetheless, throughout the period from 1973 to 1980 exchange rate action
figured in 51 percent of programs supported by upper credit tranche stand-
by arrangements, a considerably higher proportion than in the previous
decade.

     The increased incidence of exchange rate action reflected a growing
emphasis on medium-term adjustment through structural reform. Fund-
supported adjustment programs had always been oriented toward restoration
of viability to the balance of payments over the medium term, but in most
cases it was envisaged that the measures adopted in an initial one-year
program would be adequate to do so, provided financial policies remained

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     1/ "The Role of Exchange Rates in the Adjustment of International
Payments—A Report by the Executive Directors," 1970.
     2/ "Experience with Stabilization Programs Supported by Stand-By
Arrangements in the Upper Credit Tranches, 1973-75" (G.G. Johnson
and Thomas M. Reichmann, DM/78/16, 2/28/78).

appropriate. The establishment of the Extended Fund Facility gave explicit recognition to the need for a longer period of program imple- mentation in situations where structural reforms were necessary. Of the 17 extended arrangements approved from the inception of the facility in 1974 through 1980, 11 involved exchange rate action. Taken together with stand-by arrangements, the overall proportion of programs with exchange rate action in the years 1973-80 amounted to 53 percent. There was considerable emphasis on the need for continuing adjustments of the exchange rate; more than half the stand-by arrangements involving exchange rate action, for example, envisaged action during the program period in addition to any initial devaluation. In many of the programs without exchange rate action, moreover, the Fund considered that such action would have been desirable. In four of the 1980 programs, for example, the paper presenting to the Board the request for the arrangement made it clear that, in the view of the staff, action was needed, but that the authorities needed more time to study the question. In each case under- standings were to be reached on exchange rate policy at the time of the mid-term review.

3.   1981-83--prevalence of exchange rate action

Reflecting the adverse circumstances of the non-oil developing countries in the early 1980s, the number of adjustment programs supported by use of Fund resources in the upper credit tranches has increased sharply in recent years. The overall incidence of exchange rate action in 1981-83 was 64 percent. In contrast to earlier years, a large number of programs have involved members of currency unions (or countries in which a foreign currency was legal tender), where exchange rate action would require major changes in the country's institutional arrangements. Excluding such countries, only 18 per cent of programs did not involve exchange rate action. Some of these followed up other programs that had included exchange rate action, and in some other cases subsequent programs included such action. Overall, very few countries aside from members of currency unions that have undertaken Fund-supported adjustment programs in recent years have not taken exchange rate action. The inci- dence of such action was particularly marked in 1983, when only two pro- grams with countries not members of currency unions did not include it. In both cases longstanding parities vis-à-vis the U.S. dollar resulted in an emphasis on stability of the exchange rate as a proximate policy objective akin to that of members of currency unions.

The increasing incidence of exchange rate action reflected the continuing deterioration of the circumstances of the non-oil developing countries at a time when the availability of external finance was declining sharply. This deterioration can be seen both in balance of payments developments 1/ and in various indicators of developments in

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1/   Most recently summarized in "World Economic Outlook - General Survey" (EBS/84/177, 8/16/84).

relative prices, some of which are set out in Table 2. Domestically, inflation rates remained high, and in each of the years 1979-83 the median inflation rate involved a rise in consumer prices of at least 2.6 percent relative to the industrial country average. Despite the large number of countries undertaking exchange rate action during these years, most countries lost competitiveness. The median real effective exchange rate increased each year to reach a level, by 1982, almost 10 percent above that of 1978, and for one quarter of developing countries the increase approached or exceeded 20 percent. Inflation rates declined in both developing and industrial countries in 1982 and 1983, but in the latter year the decline was relatively much sharper in the industrial countries, and the median increase for the developing countries involved a relative increase of over 6 percent. More vigorous exchange rate action in 1983, however, brought about some decline in the median real effective exchange rate, though it remained substantially above its 1978 level and the upper quartile continued to increase. In each of the years 1980-82 the terms of trade for non-oil developing countries deteriorated, and with only a slight recovery in 1983 the cumulative deterioration since 1978 was over 10 percent.

As countries needing adjustment could no longer postpone it through new external borrowing, in most cases an active exchange rate policy was essential both to reverse the inflation-induced erosion of profitability in the traditional tradable goods sectors and to provide incentives for the production of new tradables to counter the unfavorable external developments. The growing international experience with the efficacy of exchange rate adjustment may also have allayed some of the earlier misgivings about the use of this instrument, and there may have been a lessening of concern that changing the exchange rate would be construed as an admission of failure of economic policies.

Table 2. Non-Oil Developing Countries:
Selected Indicators of Relative Prices

	1979	1980	1981	1982	1983
Median 1/ increase in consumer price index relative to average increase for industrial countries (percent)	2.7	2.6	3.5	3.8	6.1
Real effective exchange rate (1978 = 100)					
Median	100.0	101.0	106.3	109.3	106.6
Upper quartile	103.0	106.6	114.5	119.4	123.3
Average terms of trade (1978 = 100)	100.7	96.9	91.9	88.9	89.6

Sources: World Economic Outlook; and Information Notice System.

1/ Use of the median instead of the mean avoids giving too much weight to a few very high inflation countries.

IV. Indicators Used in Exchange Rate Assessment

The objective of Fund-supported adjustment programs is to bring about a viable balance of payments in the medium term. The formulation of exchange rate policies in Fund programs is thus carried out in a medium-term context, taking into account the overall stance of domestic and foreign policies as well as prospective internal and external conditions. Such an analysis can bring out the implications of various exchange rate policies, or, conversely, may be used to indicate the exchange rate policy consistent with a given set of assumptions about exogenous developments and the stance of other policies. While a medium-term approach has always been a feature of the Fund's work on adjustment programs, in recent years it has been set out more formally by the staff in the medium-term scenarios used in discussions with authorities and presentations to the Board.

A variety of exchange rate indicators are available for use in such a framework to indicate both the need for an exchange rate action and its broad order of magnitude. They also can provide a basis for determining the amount of the action. If the rate is to be managed, indicators are needed as a guide to what the exchange rate should be, or how it should change over time. Even where the rate itself is to be determined by the market--that is where the rate is floated--indicators play an important role in indicating the sustainability of the rate in light of the medium-term objectives of the program, thus helping to guide the formulation of other program policies.

While no one indicator is wholly reliable for assessing the exchange rate, if a number of them are used in combination and if proper account is taken of their statistical and methodological limitations, an informed judgment can be made. Since they are being interpreted in the context of a medium-term program of adjustment, conclusions drawn from them need to be modified in the light of other developments and the stance of other policies, and, of course, the objectives of the program. In particular, all indicators are in some sense based on historical experience or the particular historical structure of the economy, so conclusions drawn from them need to be modified in light of the extent to which structural changes in the economy are required.

1. Elasticities

Any analysis of the effects of the exchange rate on the balance of payments makes use of the concept of elasticities, and in that sense elasticities are integral to the formulation of exchange rate policies. Often their use is implicit. A medium-term scenario, for example, may be expressed in terms of there being general consistency between the various values projected; the test of consistency, in effect, is that the implied elasticities be reasonable.

Elasticities may also be employed more formally, through econometric estimation followed by simulation, to arrive at a recommendation on the exchange rate, given a set of objectives and policies in other areas. Such estimation can be performed with varying degrees of sophistication. A simple and commonly employed approach relies on reduced-form export supply and import demand functions to derive the effects of specified exchange rate adjustments on the current account. By influencing domestic relative prices, an exchange rate adjustment exerts real effects on import demand and export supply. The elasticity of demand for tradable goods, which partly determines the import demand and export supply responses, will largely depend on the income effects of the devaluation and the accompanying policies, since the elasticity of substitution between tradable and nontradable goods is likely to be small. In addition, the elasticities of import demand and export supply will depend on the supply response in the tradable goods sector. Econometric estimates of supply elasticities vary widely depending on the choice of country and commodity, the period covered, and the methodology. Hence, an evaluation of the expected supply response needs to take into account the country's particular circumstances. Specifically, the size and speed of the supply response depends on the extent to which it results from (i) utilization of previously idle resources; (ii) increased productivity through more intensive use of resources; (iii) movement of resources from the nontradables to the tradables sector; and (iv) movement of resources, within the tradable goods sector, to more productive employment (e.g. from previously protected import substitutes to exports). The supply response will be quicker and more substantial where the first two prevail than in cases where a transfer of resources, and an associated contraction in other sectors, is required. The supply response will also be more favorable in countries where resource mobility is high, which depends on, among other things, the flexibility of markets and the adequacy of infrastructure.

In contrast to the indicators of competitiveness discussed below, elasticity analysis has the advantage that it is not limited to comparison with a particular base period. It also lends itself to formal modelling of the way other factors besides the exchange rate affect the balance of payments. Like indicators of competitiveness, however, it is based on historical experience, and thus needs to be qualified in the presence of structural change. Data limitations, moreover, often make econometric estimates of elasticities problematic.

2. Indicators of competitiveness

a. Real effective exchange rates 1/

The indicator of competitiveness most commonly employed in deter-
mining the appropriate level of the exchange rate is the real effective
exchange rate (REER)—an index of the nominal effective exchange rate
adjusted for movements in prices or costs at home relative to those
abroad. An increase 2/ in a country's REER index since a base period
when the external position was considered adequate thus provides an
indication that external competitiveness has deteriorated. Restoration
of competitiveness to its base period level can be achieved through
a change in the nominal exchange rate, a change in the level of domestic
prices or costs relative to those abroad, or some combination of the
two.

REER indices can be constructed with various patterns of partner
country weights and with various indicators of costs or prices. The
country weights used in indices employed by the staff typically reflect
bilateral non-oil trade flows, although in some instances they reflect
the importance of export competitors in foreign markets. In developing
countries, the consumer price index is commonly used as an indicator of
cost developments domestically and abroad, as better indicators, such
as unit labor costs, are not usually available. The CPI is generally
preferable to the wholesale price index, another widely available index,
because it gives a larger weight to nontraded goods, thereby reflecting
more fully developments in costs and prices of domestically produced goods
and services, and because it is an important determinant of labor costs.

Certain features of consumer price-based REER indices need to be
kept in mind in interpreting changes in them. First, in the presence of
differing productivity trends across countries and across sectors, they
are only meaningful as proxies for short-run changes in relative costs
and relative prices. Second, in cases where exchange rate adjustments
and other policy changes are being undertaken to correct a previously
inappropriate exchange rate, the desired adjustment of relative prices
is likely to involve a divergence between unit labor costs and consumer
prices, particularly if traded goods are prominent in the latter. Under

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1/ A recent comprehensive review of the concept of real effective
exchange rates is "'Real' Effective Exchange Rate Indices: A Re-
Examination of the Major Conceptual and Methodological Issues" (Edouard
B. Maciejewski, Staff Papers, September 1983).

2/ All references to exchange rates in this paper refer to the price
in foreign currency of the domestic currency; increases in the REER
imply a real effective appreciation.

these circumstances, an increase in consumer prices might be associated
with a successful process of adjustment of an overvalued currency, and
would not necessarily indicate a need for further adjustment. On the
other hand, where the exchange rate is rigid or sluggishly adjusted in
the face of relatively high domestic inflation, the same argument suggests
that the extent of real appreciation might be understated by the index.
Third, wage or price controls also give rise to divergences between
movements in unit labor costs and consumer prices, and need to be taken
into account in interpreting the indices. Fourth, REER indices reflect
only indirectly the profitability of the primary producing sectors that
figure largely in the economies of many countries, particularly the
developing countries. Movements in relative unit labor costs or relative
CPIs do not reflect changes in profitability that may result from large
fluctuations in primary commodity prices or changes in nonlabor costs.
Furthermore, the CPIs often reflect the cost of living in the urban
sector, and may be less closely related to rural cost and price develop-
ments. Such considerations need to be reflected in any assessment of
the implications of these indices for competitiveness in primary producing
sectors.

While the limitations of REERs, like those of other indicators, need
to be kept in mind in using them, REERs have an important advantage in
that competitiveness--relative profitability--as a concept is relatively
easy to interpret and discuss. It thus facilitates discussions with
country authorities. Other indicators, such as elasticities, may have
less intuitive significance.

In using REER indices, however, it will often be necessary to empha-
size the need to go beyond restoring competitiveness to that prevailing
in some base period when the country's external position was regarded as
sustainable. If domestic and foreign policies and conditions are more
adverse than in the base period, as through a deterioration in the terms
of trade which results in a decline in real income and an external im-
balance, there will normally be a need for both a decline in real domestic
absorption and, through an improvement in competitiveness beyond that of
the base period, an expansion in the tradable goods sector in relation to
its previous size. In many cases, moreover, long-standing disequilibrium,
during which the balance of payments deficit has been held to financeable
levels only through severe restrictions, means that competitiveness
needs to be enhanced beyond the level recorded in any recent period.

b. Internal terms of trade

The internal terms of trade index (ratio of traded goods to nontraded
goods prices) is an indicator of the traded goods sector's internal com-
petitiveness, i.e., its ability to compete with the nontraded goods sector
for scarce factors of production. Such a relative price index has the
advantage that it reflects adverse developments in external prices, which
are likely to be particularly important in the case of primary exporting
countries.

While traded goods price indices are relatively easy to obtain
(e.g., import and export unit values), nontraded goods price indices are
more difficult to obtain since commonly available price indices, such
as CPIs, WPIs, and GDP deflators, do not, in general, separately identify
nontraded goods. Consequently, movements in the ratio of traded goods
prices to any of these price indices would tend to understate changes
in the internal terms of trade.

Internal terms of trade indices share many of the limitations of
REER indices. For instance, changes in the internal terms of trade
that result from differing productivity trends among sectors are not
indicative of changes in the profitability of the traded goods sector.
As with REER indices, moreover, internal terms of trade indices focus
on changes in competitiveness since some base period and do not allow
for other developments that also affect a country's external position.

3. Commodity-specific analysis

In most developing countries production of tradables is concentrated
in a few key commodities. Analyses of developments for particular commo-
dities may thus avoid the aggregation problems inherent in broad indicators
of competitiveness. Such analyses can be used retrospectively to deter-
mine the change in the exchange rate needed to restore the profitability
of production of particular commodities to that observed in some base
period, but can also be helpful in considering what the response to
different exchange rates is likely to be.

Commodity analyses can obviously be carried out with varying degrees
of sophistication. The domestic resource cost approach 1/ is particularly
appropriate under conditions of widespread distortions in costs and prices
in the context of publicly administered prices and resource allocation.
Under these conditions, an exchange rate action, even if accompanied by
proper macroeconomic policies, would not direct resources via price to
the most productive uses, and competitiveness indicators yield biased
results to the extent that such indicators reflect distortions in the
economy.

The domestic resource cost approach derives the domestic cost of
producing export and import-substituting commodities per unit of
foreign exchange earned or saved, after correcting for all price
distortions and netting out taxes and subsidies. This provides for
each commodity an implicit exchange rate (local currency per unit of

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1/ "A Supply Framework for Exchange Reform in Developing Countries:
the Experience of Sudan" (Karim Nashashibi, Staff Papers, March 1980),
provides an example of the use of the domestic resource cost approach.

foreign currency) allowing a ranking of activities according to the country's comparative advantage and an assessment of the prevailing exchange rate. A structural reform based on such information would ensure that government decisions on prices and allocation of resources to particular activities were consistent with the country's comparative advantage. Furthermore, the information on implicit exchange rates, in conjunction with estimates of the potential output of individual traded goods, would allow the construction of a supply curve of exportable and importable commodities as a function of the exchange rate. The appropriate exchange rate could then be determined on the basis of a more comprehensive analysis that takes into account demand conditions and the balance of payments objectives.

An important advantage of the domestic resource cost approach is that it focuses directly on profitability, the key consideration in production decisions. Its data requirements, however, mean that it can seldom be rigorously applied in practice. Moreover, by focusing exclusively on major commodities, it may tend to divert attention from other aspects of the balance of payments and from the way in which the exchange rate interacts with other policies. It is particularly important to guard against the temptation to resort to piecemeal adaptations of policies with respect to specific commodities rather than comprehensive adjustment of price and exchange rate policies. Even more than other indicators, therefore, its results need to be checked against other relevant information.

4. Parallel markets

None of the indicators discussed so far directly reflect market forces, and thus there is no guarantee that they accurately reflect the opportunity cost of foreign exchange. Even where the exchange rate continues to be set administratively, indicators based on market developments can be helpful in exchange rate management.

The existence of a parallel or secondary market, where a portion of current transactions takes place at floating exchange rates that are more depreciated than the rate in the official market, is prima facie evidence of the inappropriateness of the official exchange rate. A distinction may be made between legal and illegal parallel markets. A legal parallel market is typically introduced when the authorities, instead of proceeding with a uniform devaluation to correct an external imbalance, decide to establish, often as a transitional measure, a dual (or multiple) exchange rate system wherein certain essential imports and specified export transactions are effected at the relatively appreciated official rate, while other transactions, including in some cases capital transactions, are assigned to a legal secondary market. If the exchange rate in the secondary market is floating, it can be helpful

in determining the appropriate level of unified rate, although its significance depends on the importance of the secondary market and the extent to which it is free to reflect market forces. The smaller the size of the secondary market (as measured by the value of foreign exchange transactions) relative to the official market, and the higher the demand and supply elasticities of foreign exchange in the official market relative to the secondary market, the closer the equilibrium unified rate is likely to be to the official rate. On the other hand, if there is a large unsatisfied demand in the official market which cannot be diverted to the parallel market because of administrative restrictions the equilibrium rate in a unified market would tend to be closer to the parallel market rate, or could even be beyond it.

The rate prevailing in an illegal parallel market is a less reliable indicator of the restriction-free equilibrium exchange rate. The supply of foreign exchange to that market can stem from a variety of sources such as proceeds from smuggled goods, overinvoicing of imports, underinvoicing of exports and from workers' remittances. With a strict enforcement of the foreign exchange controls, the penalty costs of dealing in such a market can be substantial, reducing the total (i.e., official and parallel market) demand and supply of foreign exchange relative to their restriction-free levels, and limiting the size of the parallel market. In general, the exchange rate in an illegal parallel market will be more depreciated than the restriction-free exchange rate. 1/ Due to the likely thinness of an illegal market, the rate is also likely to be subject to significant fluctuations.

An intermediate situation is that of an illegal but tolerated parallel market. Since participants in such a market typically operate outside normal channels, transactions costs are likely to be higher than in a legal parallel market though lower than in a strictly illegal one. A strictly illegal market often develops into a tolerated one as its scope of operations expands and the authorities recognize its relative benefits and inevitable character.

1/ Depending on whether the penalty costs are higher on the supply or the demand side, it has been shown in some of the economic literature that the parallel rate can be either higher or lower than the restriction-free equilibrium rate. However, these theoretical results, based on partial equilibrium analysis, assume that the existence of exchange controls does not affect consumer preferences and that expectations are unchanged; in fact, the imposition of exchange controls by itself and the emergence of expectations of further depreciation are likely to increase the demand and reduce the supply of foreign exchange, thereby resulting in the parallel rate being more depreciated than the restriction-free equilibrium rate.

5.   Other considerations

This section has emphasized the fact that the indicators discussed cannot be considered in isolation. The recommendations that result from them need to be developed in the context of the objectives of the program and the other policies it includes. In doing so, the recommendations need to take account of other developments that may not be fully captured by particular indicators. For example, as noted above, a deterioration of the terms of trade from some base period implies a need to enhance competitiveness beyond that recorded in the base period. Similarly, indicators of exchange market pressures, such as persistent intervention in one direction, rising foreign borrowing, growth of arrears, or stricter rationing of foreign exchange, can provide qualitative guidance. The following section brings out some of the ways in which conclusions derived from main indicators are modified in the light of such circumstances.

V. Formulation of Exchange Rate Policies in
Adjustment Programs Approved in 1983

In considering formulation of exchange rate policies in actual practice, the 35 adjustment programs which were supported by the Fund with upper credit tranche stand-by or extended arrangements approved in 1983 were examined in some detail. 1/ A high proportion of the programs-- 71 percent--included action on the exchange rate.

Ten arrangements approved in 1983 did not include exchange rate action. Six of these involved members of currency unions--Central African Republic, Grenada, Mali, 2/ Niger, Senegal and Togo--while in two others, Liberia and Panama, the U.S. dollar is legal tender. Since exchange rate changes in such countries would involve major institutional changes (in the case of currency unions, changes that would require joint action with other countries), there is a strong presumption that, if at all possible, adjustment should be carried out without resort to exchange rate action. The programs with Guatemala and Haiti also excluded exchange rate action, as the apparent need for it was not considered great enough to require departure from the long- standing parities vis-à-vis the U.S. dollar exhibited by those countries' currencies. These ten cases where no exchange rate action was taken are discussed separately below.

The other 25 programs involved exchange rate action (Table 3). In 11 cases, frequent small depreciations were already a feature of exchange rate policy, though in each of these the program involved some modification in previous policy, and in most there was a significant discrete devaluation at the outset. (Details of the new policies are set out in Table 5, later in this section.) In the other cases, the currency was pegged to another currency or currency basket. In eight of these, one or more substantial depreciation had taken place in the previous year or two. Only five programs involved a change in a longstanding peg. Fifteen arrangements followed immediately or not long after previous arrangements. In several of these, the policy to be followed was largely a continuation of that implemented in the previous program; but, in most of them, problems in achieving the objectives of the previous program, either because of diffi- culties in policy implementation or because of further deterioration of the external environment, occasioned major shifts in exchange rate policy.

1/ As no arrangements for centrally planned economies were approved in 1983, programs with two such countries in other recent years are discussed later in the section.

2/ Mali was not a member of a currency union at the time the program was approved, though its accession to the West African Monetary Union took place during the program period. In view of the similarity of its institutional arrangements to those of other CFA franc countries, it is classified here with members of currency unions.

Table 3. Fund-Supported Adjustment Programs Approved in 1983 that Included
Exchange Rate Action 1/
(Classified by exchange rate policy prior to
change in policy associated with program)

	Type of Program 2/	Date of Approval	Program Period (Months)	Time Elapsed Since Previous Program 3/ (Months)
1. Flexible policy—frequent adjustment of exchange rate				
Argentina	SBA	01/24/83	15	...
Bangladesh	SBA	03/28/83	6	9
Brazil	EA	02/28/83	36	...
Korea	SBA	07/08/83	21	17
Morocco	SBA	09/16/83	18	5
Philippines	SBA	02/25/83	12	16
Portugal	SBA	10/07/83	17	...
Sri Lanka	SBA	09/14/83	10	...
Turkey	SBA	06/24/83	12	—
Uganda	SBA	09/16/83	12	1
Uruguay	SBA	04/22/83	24	9
2. Pegged—one or more substantial devaluations in recent years				
Ecuador 4/	SBA	07/25/83	12	...
Kenya	SBA	03/21/83	18	7
Madagascar	SBA	12/23/83	15	5
Malawi	EA	09/19/83	36	1
Mauritius	SBA	05/18/83	15	5
Sudan	SBA	02/23/83	12	9
Zaire	SBA	12/17/83	15	18
Zambia	SBA	04/18/83	12	9
3. Pegged—no changes in recent years				
Chile	SBA	01/10/83	24	...
Dominican Rep. 4/	EA	01/21/83	36	...
Ghana	SBA	08/03/83	12	...
Solomon Islands	SBA	06/22/83	12	13
Western Samoa	SBA	06/27/83	12	...
Zimbabwe	SBA	03/23/83	18	...

Source: Executive Board papers
1/ See Table 5 for details of the action taken.
2/ SBA—upper credit tranche stand-by arrangement; EA—extended arrangement.
3/ Time elapsed since previous program expired or became inoperative.
(...)—no program in place within previous 24 months.
4/ Previous arrangement involved pegged official rate with floating parallel rate.

In reviewing the process of exchange rate policy formulation in the 1983 programs, this section begins with a discussion of the considerations which formed the basis of the staff's recommendations on exchange rate policy. This is followed by discussion of the process by which agreement was reached on the exchange rate policies contained in the programs; the mechanism through which the exchange rate adjustment was implemented; adaptations of policies in response to the particular circumstances of members; and the way in which the Executive Board was informed of the exchange rate policy content of programs.

Besides frequent references in the text to the experience in individual cases, three case studies are annexed to the paper. These include Ghana, where the need for exchange rate action was evident from the outset yet negotiations were protracted; Sri Lanka, where a long history of discussions on exchange rate policy between the Fund and the country authorities meant that the examination of the issues was relatively detailed; and Ecuador, where market mechanisms played a large role in the adjustment of the exchange rate.

1. The process of formulating recommendations
   on exchange rate adjustment

In considering the process through which recommendations on exchange rate adjustments were formulated in the 1983 programs, it is important to bear in mind that, when the staff formally begins work on an adjustment program, in most cases a general understanding of the nature of the problem already exists and indeed there has often already been extensive detailed analysis. The objectives and constraints faced by the authorities will be familiar to the staff, and there will be a general idea of the feasible range of demand management and other policies. From this starting point a framework of analysis is developed which considers exchange rate policies in relation to other policies and in relation to the whole range of program objectives. This section does not attempt to deal with the full complexity of the formulation of exchange rate policies in individual programs, let alone address the issue of the overall design of programs. 1/ Rather, it focuses on three main aspects: the circumstances facing the countries at the time they undertook exchange rate adjustment; the major ways in which exchange rate action was expected to improve the allocation of resources, both to correct the balance of payments and, more generally, the overall functioning of the economy; and, finally, the way in which the amount of adjustment of the exchange rate was determined, once the broad orders of magnitude had been established through the analyses outlined above.

1/ The papers prepared for the current annual review of conditionality consider this broader aspect ("Review of Upper Credit Tranche Arrangements and of Some Conditionality Issues" (EBS/84/227, 11/7/84) and "Experience with Adjustment Policies" (EBS/84/228, 11/13/84)).

a. Circumstances facing countries undertaking
   exchange rate adjustment

Most of the 25 countries that followed an active exchange rate policy
in their 1983 programs had, like most other developing countries, been
affected by a deterioration in external conditions, as reflected in a
weakening of their external terms of trade, a rise in international
interest rates, and an increasing reluctance of financial institutions
to increase their exposure to developing countries. Moreover, most of
them had followed financial and exchange rate policies that had resulted
in a loss of external competitiveness. Table 4 provides information on
a few indicators which capture certain essential aspects of these coun-
tries' external performance. The data refer to 1982, the year in
which work began on the design of most of the programs approved in
1983. The indices in the table measure changes since the year 1978,
when most developing countries faced external conditions considerably
more favorable than in the early 1980s.

Most of the 25 countries that followed an active exchange rate
policy had experienced a significant terms of trade deterioration between
1978 and 1982. The only exceptions were Argentina and Ecuador, which were
self-sufficient in energy, and Zimbabwe, which benefited from the effects
of the lifting of trade sanctions on the prices of its exports and im-
ports. The deterioration in the terms of trade had exceeded 10 percent
in all but one of the other countries, and had been particularly severe,
exceeding 20 percent, in 13 of them. 1/ In addition, developments
since 1980 in the international capital markets had adversely affected a
large group of countries that had relied on external commercial borrowing
to finance their current account deficits. 2/ The rise in real interest
rates had sharply increased the burden of debt service for a large number
of these countries, particularly those in the Western Hemisphere, while,
since 1982, there had also been a sharp cutback in external financing
provided to the major borrowers among these countries by foreign commer-
cial banks.

The deterioration in external conditions suggested a need for exchange
rate and demand management policies consistent with an enhancement of com-
petitiveness, but most of the 25 countries had experienced excess demand
and real appreciation of their currencies. 3/ The real appreciation

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1/ Over the same period, the terms of trade for the net oil importers
among the developing countries deteriorated on the average by 15 percent,
compared with a deterioration of 10 percent for industrial countries.
2/ Including Argentina and Ecuador, which had not been adversely
affected by an increase in oil prices.
3/ The second quarter of 1982 rather than the whole year is chosen
as the reference period for real effective exchange rates because
shifts in exchange rate policy in a number of program countries began
in the second half of 1982.

Table 4. Selected External Sector Indicators--Countries That Took
Exchange Rate Actions in 1983 Programs

(Indices, 1978 = 100, unless otherwise noted)

	Terms of Trade (1982)	REER Index (Second Quarter 1982)	Current Account Deficit in percent of GDP (1982) 1/	Gross Official Reserves, End of 1982 (In Months of Imports)	Import Volume (1982)	Export Volume (1982)
Argentina	117	106	4.4	5.9	127	96
Bangladesh	76	92	8.2 2/	0.6 2/	135	119
Brazil	61	105	4.5	-- 3/	79	147
Chile	76	143	10.3	6.4	91	137
Dominican Republic	79	109	5.4	2.2	92	87
Ecuador	147	109	9.1	3.4	98	81
Ghana	50	256	--	5.1	75	77
Kenya	77	95	6.2	1.8	55	83
Korea	83	106	3.9	2.7	109	136
Madagascar	87 2/	128	10.7	0.6	58 4/	94 4/
Malawi	76	96	6.7	0.9	62	109
Mauritius	82	96	5.9 2/	1.1 2/	69	106
Morocco	81	88	8.7	0.8	107	126
Philippines	71	120	8.5	3.9	99	124
Portugal	84	104	13.2	8.1	133	152
Solomon Islands	86	122	6.6	6.1	139	160
Sri Lanka	80	136	11.9	2.1	141	108
Sudan	49	69	...	0.1	81	93
Turkey	69	73	2.3	1.5	98	187
Uganda	46	78	1.6 5/	...	83	132
Uruguay	83	168	8.7	2.6	93	117
W. Samoa	65	104	7.2	1.0	80	132
Zaire	98	65	6.7	0.2 6/	76	71
Zambia	72	109	17.3	0.4	115	106
Zimbabwe	113	109	11.5	1.8	181	92

Sources: World Economic Outlook data base; Information Notice System; and Executive
Board Papers.

1/ Including official transfers.
2/ 1981/82 (July-June).
3/ Usable reserves.
4/ 1979 = 100.
5/ 1982/83 (July-June).
6/ Excluding gold, most of which is pledged.

since 1978 had exceeded 10 percent for seven of the countries. A
beginning had been made toward real depreciation in previous programs
for nine countries, but in only five of them had the real depreciation
been more than 10 percent. 1/

Given the combination of deteriorating terms of trade and lack of
real depreciation, it is not surprising that most of the countries con-
cerned were encountering severe current account problems. 2/ Eighteen
countries had deficits exceeding 5 percent of GDP in 1982, a level which
was not likely to be sustainable for most of them, given the deteriorating
access of most countries to foreign private capital, the unfavorable
prospects for concessional aid, and problems of capital flight. In many
of these countries, moreover, the deficit was held to that level only
through severe demand restraint or exchange and trade restrictions. Of
the countries with smaller deficits, Argentina and Brazil were beginning
to encounter such severe deterioration in their access to capital markets
that even seemingly moderate deficits were not financeable. In Ghana
and Uganda, small deficits reflected a total lack of access to foreign
capital and intense use of exchange restrictions. Two other countries
with relatively modest deficits, Korea and Turkey, had both adopted
outward-looking development strategies which required close attention to
the maintenance of competitiveness; moreover, Korea was reducing import
duties, while Turkey had very large external debt and was engaged in a
major dismantling of the restrictions that had developed during a pro-
longed period of balance of payments strain.

The severity of the crises facing most of these countries is also
indicated by their low levels of international reserves. In several,
reserves had been virtually exhausted; in 18 cases, they amounted to
less than three months of an already depressed level of imports. Another
indication of the severity of the problems confronting these countries
is the behavior of import volumes. Between 1978 and 1982, import volume
had declined in 16 of the 25 countries, in most of them by substantial
amounts. 3/ In view of the relatively limited potential for import sub-
stitution in most of these countries, declines in import volumes tended
to be associated with declines in economic activity and levels of con-
sumption. This particular development perhaps best illustrates the

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1/ Note that severe external imbalance and overvaluation of the
currency had already characterized these countries' positions in 1978.
   2/ While, for purposes of comparison, the discussion here focuses on
the ratio of current account to GDP, it must be recognized that the
severe distortions of relative prices in many of these countries make
interpretation of such figures problematic.
   3/ Over the same period, imports by all non-oil developing countries
rose in volume terms by 12 percent.

circumstances calling for an active exchange rate policy: such a policy would place a relatively greater emphasis on the expansion of exports and on a more market-oriented allocation of imports as a means of achieving external adjustment, thereby reducing the need for policies that are detrimental to growth.

Most of the countries had had some success in increasing their export volumes, but, in nine of them, export volumes had declined between 1978 and 1982, and by more than 10 percent in the cases of Ecuador, Kenya, Ghana and Zaire. In eight cases, the increase in export volume was higher than the average for all non-oil developing countries, 29 percent, but this had still not been enough in most cases to avoid serious current account problems. The largest increase, 87 percent, was registered by Turkey, which, having started with a severe external imbalance and a low level of exports, had made considerable progress toward adjustment by 1982. A major factor in Turkey's strong export performance was the real depreciation of 35 percent that had taken place since the end of 1979.

b. Expected consequences of exchange rate action

Given the severity of the situations faced by most of the countries, it is not surprising that exchange rate adjustment needed to be considered. Before a firm conclusion could be reached, however, the way the adjustment would contribute to achieving the country's policy objectives in each particular instance needed to be examined in detail. This subsection provides a summary of the expected effects of exchange rate adjustment emphasized in particular cases, either as stated explicitly in the papers presenting the requests for arrangements or as indicated implicitly in analyses of balance of payments problems in the request papers or consultation reports. The description is illustrative rather than exhaustive, noting aspects that were highlighted in particular cases. In practice, of course, each favorable effect would be present in some degree in almost all cases, but the relative magnitudes would vary widely.

At the most general level, most of the papers presenting the programs stressed the importance of exchange rate adjustment both as a means of reducing the balance of payments deficit and as a means of improving resource allocation, objectives which are of course closely related. In connection with both of these, the need to improve the competitiveness of the country's tradable goods sectors was emphasized in almost all cases.

Given the fact that for most countries there had already been a sharp reduction or at best little increase in imports in recent years, programs seldom emphasized the role of exchange rate adjustment in reducing import demand in the short run (aside from the way in which

its expenditure reduction effects facilitated demand restraint more generally). The opportunity for import substitution over the medium term, when it depended on new investment to create additional production capacity, was commonly noted. In most cases, assessment of the impact of the exchange rate on import demand was made difficult by the fact that the recent behavior of imports had been strongly influenced by, on the one hand, excess aggregate demand that was to be corrected by the program and, on the other, restrictions that had prevented actual imports from reflecting changes in the amount demanded.

The main improvement in the trade balance was usually expected to come from recovery or new growth of exports, and in most cases detailed studies of key exports were an essential component of the underlying analysis. Often, in fact, as in Bangladesh, Ghana, Sri Lanka, Sudan and Zambia, the need to restore the profitability of key export industries was the most striking indication of the need to undertake exchange rate action. In the case of primary producing countries, moreover, it was considered essential that there be some diversification into manufactured exports. This was generally predicated on new investment and was expected to take time, so that, as with import substitution, the objective was of a longer-range character. Where the main objective was to reverse a previous decline in traditional primary exports, on the other hand, the response was often expected to be rapid.

Invisible transactions were also expected to respond to exchange rate action. For some types of transactions, such as tourism (and, in the capital account, direct investment), enhancement of competitiveness was emphasized. Other types involved more complex considerations of short-run expectations. Problems with emigrants' remittances or capital flight, for example, were often considered due to a widely held view that the exchange rate was unsustainable, so that there was a strong incentive to avoid repatriating funds prior to the expected exchange rate adjustment. Workers' remittances were emphasized in Bangladesh, Portugal, Sudan and Uganda. Capital flight was a widespread problem, and where there had been large capital outflows, as in Argentina, Chile, Ecuador, Portugal, and Uruguay, reversal of these flows was considered to be a means of obtaining a quick improvement in the balance of payments. Over- and underinvoicing of trade transactions was a common means of capital flight in these and many other countries.

Rationalization of the trade and payments system so as to remove excessive import protection and encourage exports was a major reason for undertaking exchange rate action. In the case of Turkey, in fact, the major reason for further real depreciation was to facilitate liberalization of the exchange system, although there was also a need to deal with large debt obligations in the medium term. The roll-back of recently imposed restrictions was often emphasized, as for example in Morocco and

Portugal. Steps to reduce effective protection were often taken, notably in Korea. On the other hand, temporary increases in restrictions were adopted in particularly difficult situations (Sudan), though the long-term goal of liberalization was reaffirmed. In some cases, moreover, import duties were increased as a partial substitute for stronger action on the exchange rate (Kenya). In all cases of multiple rates, unification of the system was an eventual goal. Exchange rate action was also expected to facilitate the elimination of payments arrears.

While this summary survey has necessarily focused on how exchange rate adjustment in itself was expected to improve the balance of payments and the allocation of resources, in each case these effects were considered in the context of an overall policy program. In most cases, it was clear from the outset that it was not feasible to bring about the needed adjustment in relative prices through demand management policies alone, though in a few cases where the misalignment of relative prices was not particularly large or entrenched, the decision to take exchange rate action emerged only after the sort of detailed consideration that has been summarized in this section.

c. Determining the amount of exchange rate adjustment

The general process of analysis described above often established not only the need for exchange rate action, but also the broad order of magnitude of the needed change; it still remained to establish a definite figure for the amount of adjustment, or to select a mechanism which itself determined the amount. 1/ A simple solution was to permit the rate to be set largely by market forces, as was done in the 1983 programs in Chile, 2/ Uruguay, and Zaire. In some other cases, discussed below, the adjustment incorporated lesser elements of market determination. In most cases, however, management of the rate continued and the amount of adjustment was determined through an examination of indicators.

Models of the balance of payments incorporating elasticities with respect to the exchange rate played a limited role in the specification of the amount of exchange rate adjustment in the 1983 programs. Although experience amply demonstrates the effectiveness of exchange rate adjustment in changing exports and imports, estimates of elasticities, as noted in Section IV, are subject to wide margins of error. This is particularly the case in developing countries, where accurate data are often lacking. In countries where there has been rapid structural change, quantification of the potential impact of exchange rate action

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1/ As discussed in subsection 3, below, the adjustment usually involved both an initial devaluation and subsequent gradual depreciation.
2/ Initial devaluation only.

is particularly imprecise. In the case of Chile, for example, estimates
of import and export elasticities were available but were not considered
to be very useful, given the major changes that had occurred in recent
years in the economic structure and the policy framework. Where
countries already have a fairly developed manufacturing sector, the
responsiveness of production can be gauged with more confidence.
Estimates of elasticities were more useful in Korea, for example,
than in many other countries.

In 16 programs, 1/ indicators of competitiveness were the primary
basis for the recommended amount of exchange rate action. In some cases,
such as Malawi, an earlier program was considered to have brought the
exchange rate to an appropriate level, and the 1983 program involved
restoration of the real effective exchange rate to the previously
acceptable level. Where no such convenient reference point was avail-
able, it was necessary to select some historical period. Since most
of the countries were facing terms of trade that were extremely adverse
by historical standards, it was clear that the real rate had to be
considerably lower than it had generally been in the past. One standard
that was sometimes applied was to match the lowest rate that had occurred
in recent experience. In Brazil, for example, the initial devaluation
was sufficient to restore the real rate to that recorded following the
maxi-devaluation of early 1979.

In many of these cases the consideration of competitiveness
indicators was supplemented by detailed studies of the profitability
of key export industries (where one or two primary exports predominated)
or by the elasticities estimated for manufacturing exports in general
(in countries such as Korea and Portugal). In one country, Zambia,
copper mining was so critical for both external and fiscal balance
that the amount of exchange rate adjustment was determined largely
on the basis of restoring the profitability of that industry.

These results were checked against developments in parallel market
rates. Four programs went further, taking convergence of official and
legal parallel markets as the basis for the action. In Argentina, the
initial action was based on unification of the dual exchange system at
the more depreciated of the two rates. In Sudan, the free market
accounted for one third of transactions, and the initial exchange rate
action was based on narrowing by 60 percent the gap between the official
rate and the rate prevailing at that time in the parallel market. In
the Dominican Republic, where severe political constraints made change

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1/ Bangladesh, Brazil, Ecuador, Ghana, Kenya, Korea, Madagascar,
Malawi, Mauritius, Morocco, Philippines, Portugal, Solomon Islands,
Sri Lanka, Western Samoa, Zimbabwe.

in the official rate infeasible, limited depreciations were accomplished through movements of certain transactions to the parallel market. In Uganda, both convergence and shifts of transactions took place, with unification to occur by the end of the program period. 1/

In Turkey, the amount of real devaluation, 10 percent over the program period, was chosen as a reasonable figure consistent with the objective of a gradual liberalization of the exchange and trade system.

In most cases where the exchange rate was permitted to largely reflect market forces, there continued to be some degree of management of the parallel market or restrictions on access to it, so that the rate was not a true market rate. The appropriateness of the rate thus continued to be checked against the other indicators used in exchange rate assessment.

While a particular basis for the amount of action in each of the 1983 programs can thus be identified, it must be borne in mind that the broad order of magnitude of the action was established within a complex framework of analysis and the overall design of the program, and the role of these indicators was generally limited to selecting a figure in the appropriate range. Given the uncertainties inherent in economic analysis and forecasting, the decision on the amount of devaluation will always be to some extent arbitrary. Provided that their limitations are kept in mind when applying them, indicators such as these are extremely useful in reaching a decision.

2. Discussions between staff and authorities
   on the amount of exchange rate adjustment

The discussion so far has largely related to the way in which the staff's recommendation on exchange rate adjustment is determined. As noted earlier, before the precise recommendation is reached there will generally have been a history of discussions between staff and author- ities, and the views of the Executive Board will also have been reflected in the conclusions of consultations and the granting of previous financial arrangements. The staff's recommendation will thus take account of the authorities' policy objectives and perceived constraints, and usually the way in which the recommendation is presented (e.g., in terms of the real effective exchange rate) will be

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1/ Movements toward unification of multiple rates also played a role in a number of other cases, discussed below under the heading of the mechanism of adjustment.

selected because of its familiarity to and acceptability by the author-
ities. The authorities, too, will generally be aware of the broad
outline of the staff's position before detailed discussion begins.

Ideally, there is full agreement from the outset. In the 1983
program with Korea, for example, the staff accepted the exchange rate
action initiated by the authorities prior to the negotiations as
adequate for the program. In other cases, enough common ground had
been established that the amount of devaluation was not at issue when
formal negotiations began.

In most cases, however, convergence of the positions of staff and
authorities occurred gradually in the course of the discussions.
Initial differences often reflected differing perspectives, as a larger
devaluation will, other things being equal, permit adjustment to occur
at higher levels of production and employment, but perhaps at the cost
of more immediate and visible effects on income distribution. Over the
medium term, there are clear advantages to the stronger action; but
the immediate political consequences may be more severe. 1/ Still, a
lesser action may well be consistent with adequate adjustment, albeit
achieved more slowly and painfully, and this provides an element of
flexibility in discussions. Beyond that range of flexibility, any
shortfall involves either trade-offs for stronger policies in other
areas, temporary postponements of part of the exchange rate action,
or weaker programs.

Four examples from the 1983 experience provide illustrations of
the way in which modifications in the amount of exchange rate adjust-
ment reflected other changes in the design of the adjustment program.
In formulating the 1983 program for Kenya, the staff's initial assess-
ment suggested that an exchange rate adjustment of 20 percent was
called for. Agreement was eventually reached on a 15 percent depre-
ciation in combination with an increase in import tariffs, which
would have the effect of further reducing the budget deficit and
achieving some of the expenditure switching effects of depreciation,
though at some cost in terms of efficient allocation of resources.
In Madagascar, the staff recommended a one-step depreciation at the
beginning of the program, but also stressed the need for full

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1/ Note that both approaches involve judgments that are in some
sense "political," but with different time horizons. The political
environment will be more favorable in the medium term if income and
employment are better maintained, and over the medium term, the income
distribution effects are likely to be similar under either approach to
adjustment. High unemployment itself has adverse effects on income
distribution, of course.

pass-through to domestic prices, unlike the case in previous programs when prices had not been adjusted fully to reflect exchange rate changes. The authorities found it difficult to implement the pass-through with a large immediate depreciation, but were willing to do so with a gradual phasing of part of the exchange rate adjustment. When formulating the program for Sudan, the initial staff view was that the official exchange rate should be moved to bring it close to the free market rate. A depreciation which closed the gap by 60 percent was accepted as an initial step because the price effect of the exchange rate on imports was reinforced by increases in customs duties (again at some cost in efficiency), and additional incentives were provided to exports through elimination or reduction of export taxes. Furthermore, subsidies on essential goods were abolished, which would not have been socially and politically acceptable in combination with a larger exchange rate adjustment. In Sri Lanka, a smaller depreciation than initially envisaged was accepted because the authorities had implemented additional increases in import duties and reductions in export taxes. There were also further reductions in the budget deficit, and the authorities undertook to implement certain structural reforms after certain studies were completed.

In a number of programs, part of the exchange rate adjustment was postponed till later in the program (see the discussion in the next subsection on the mechanism of adjustment). As with cases of lesser amount of adjustment, these compromises came at some cost in foregone output and employment.

In a number of cases, the programs were considered to be less than ideal, but as they involved a significant first step toward adjustment, arrangements were granted in support of them. Often such arrangements were of shorter duration, envisaged further actions following mid-term reviews, and involved less financing so that more would be available for what was likely to be particularly prolonged periods of adjustment.

3.   The mechanism of adjustment

Ideally, the full adjustment of the exchange rate takes place at the outset of the program. This provides a decisive signal to producers of tradable commodities on which they can base their production plans, and at the same time signals the authorities' intention to pursue policies consistent with maintenance of the new rate. This assumes that the real effective exchange rate is not expected to be eroded by inflation during the program period beyond the price increases expected

to result from the exchange rate action itself. 1/   In most of the
1983 programs inflation was expected to be a continuing, though
gradually moderating, problem. Most programs, therefore, envisaged
further action during the program to maintain the real depreciation
achieved by the initial devaluation. In some cases the subsequent
action was to go further, reflecting compromises that called for part
of the real depreciation to be carried out during the program, rather
than at the outset. In general such gradual action leads to greater
losses in terms of income and unemployment for a given amount of real
depreciation. Where there is particular uncertainty as to the appro-
priate amount of adjustment, gradual action may be desirable, though
again at the risk of prolonging the adjustment period or running up
against the financing constraints.

Most of the programs involved a substantial initial exchange rate
action. Many of these prior actions were implemented through a gradual
process; often they were completed sometime before the arrangement
was approved by the Fund (Table 5). Table 6 indicates the real effec-
tive change from the month before the prior action began to the month
the program was approved (or the subsequent month, where substantial
action took place in the month of approval); it also indicates the
subsequent adjustment during the program period. 2/ Note that, even
where little change occurred, there often was a significant nominal
adjustment that at least prevented real appreciation from occurring. 3/

1/   The change in relative prices associated with the devaluation
will normally imply some increase in the average price level, but with
appropriate financial policies the increase will be limited.   The
prospective increase needs to be allowed for in determining the amount
of nominal depreciation needed to achieve a given real depreciation.

2/   These measurements are based on information notice system REER
indices, which are not necessarily the same as those used in the
design and monitoring of the programs.

3/   As noted in Section IV, a real effective exchange rate index may
underestimate the extent of real depreciation produced by devaluation
because of the effect of the latter on prices of tradable goods which
may have a significant weight in the consumer price index.

Table 5. Mechanism of Exchange Rate Adjustment in Programs Approved in 1983

Country (Date of Board Approval)	Prior Action	Subsequent Adjustment Called for in Program 1/
Argentina (1/83)	On 7/5/82, a dual (commercial and financial) market was established. The commercial rate was adjusted daily. The financial rate was allowed to float for several weeks and then pegged at a rate that was more depreciated than the commercial rate. The two markets were unified at the financial rate on 11/1/83, after which the unified rate was depreciated daily.	U.S. dollar rate for the peso to be adjusted in line with domestic inflation as measured by Argentina's WPI. This would result in a real depreciation of the peso against the U.S. dollar equivalent to U.S. inflation.
Bangladesh (3/83)	Following the start of negotiations in 6/82, the taka continued to be gradually depreciated. In 1/83 the intervention currency was changed from the pound sterling to the U.S. dollar.	Policy of following a basket of currencies asymmetrically (i.e. except when an appreciation in terms of the U.S. dollar would be involved) to be continued. Real effective appreciation to be avoided.
Brazil (3/83)	In addition to small daily adjustments, the cruzeiro was devalued by 23 percent on 2/21/83.	Depreciation against the U.S. dollar by the amount of domestic inflation, as measured by a specific index. This would result in a real depreciation of the cruzeiro against the U.S. dollar U.S. dollar equivalent to U.S. inflation.
Chile (1/83)	On 6/15/82, the peso was depreciated and a 12-month exchange rate schedule was announced. On 8/5/82, the peso was allowed to float resulting in a sharp allowed to float resulting in a sharp depreciation. From 9/29/82, a policy of gradual depreciation relative to the U.S. dollar equal to the difference between the previous month's rate of change of domestic CPI and the external rate of inflation (estimated at 1 percent per month) was adopted. (On 9/3/82, a preferential rate was established to be applied on foreign debt service payments and adjusted daily relative to the U.S. dollar on the basis of the change in the CPI in the previous month.)	Continuation of 9/29/82 policy until March 1983. Beyond that date, real value of the peso to be kept constant. In addition, unification of exchange rate system by end-1983.
Dominican Republic (1/83)	In 10/82, the parallel foreign exchange was further institutionalized by permitting bank participation. In 11/82, incentives to traditional exports were given through a system of exchange certificates.	Scope of the parallel market to be widened through the shift of specified amounts of import transactions from the official market.
Ecuador (9/83)	In 3/83, the sucre in the official market was devalued by 21 percent and was subsequently depreciated in relation to the U.S. dollar by about 0.1 percent per working day. In 6/83, 30 percent of proceeds from nontraditional exports and an equivalent value of imports were transferred to the parallel market.	Depreciation of the sucre in the official market to continue with the expectation that the two rates would be unified by mid-1984.
Ghana (8/83)	In 4/83 a dual exchange rate system was introduced resulting in a weighted average depreciation of 89 percent relative to the U.S. dollar.	The two exchange rates to be depreciated quarterly so that the weighted average exchange rate would remain constant in real effective terms. Unification of the rates at a realistic level by the end of the program period.
Kenya (3/83)	The shilling was devalued by 15 percent relative to the SDR between December 1982 and early January 1983.	Exchange rate to be adjusted during the program period taking into account relative price developments, the reserve position of the Central Bank and the restrictiveness of the import and payments system
Korea (7/83)	Between 11/82 and 3/83, the won was depreciated by about 5 percent relative to the U.S. dollar.	Exchange rate to be managed flexibly to protect the competitiveness of the export sector and achieve the balance of payments objectives.
Madagascar (12/83)	In 10/83, the franc was devalued by 9.5 percent against the currency basket to which it was pegged.	Adjustment of the rate so as to maintain the REER at the level established in 10/83.
Malawi (9/83)	The kwacha was devalued by 11 percent in 9/83.	Peg to the SDR to be replaced by one to a trade-weighted basket whose U.S. dollar weight would be lower. Exchange rate to be maintained at the real level established after the adjustment in 9/83.
Mauritius (5/83)	In 2/83 the rupee was delinked from the SDR and pegged to a trade-weighted currency basket.	Flexible management of the exchange rate to maintain competitiveness. 2/

Table 5 (Concluded). Mechanism of Exchange Rate Adjustment in Programs Approved in 1983

Country (Date of Board Approval)	Prior Action	Subsequent Adjustment Called for in Program 1/
Morocco (9/83)	The dirham was devalued by 10 percent in 8/83.	Phased nominal effective depreciation of the dirham by 7 percent by end-July 1984.
Philippines (2/83)	Between 4/82, when negotiations started, and 2/83 the peso was gradually depreciated by 8 percent relative to the U.S. dollar.	Nominal effective depreciation of 18 percent during the program period, implying an expected real depreciation.
Portugal (10/83)	The escudo was devalued by 12 percent in 6/83. after a predetermined crawl of 1 percent monthly depreciation against a trade-weighted basket.	Continuation of crawl at a rate that could be adjusted in consultation with the Fund.
Solomon Islands (6/83)	In 8/82, the dollar was devalued by 14 percent; the settlement currency-weighted basket peg was replaced by a trade-weighted one; and the Central Bank was empowered to make changes of up to 2 percent on either side of the peg in any four-week period.	Nominal effective depreciation by 10 percent during the remainder of 1983, so as to prevent loss in competitiveness.
Sri Lanka (9/83)	The rupee was depreciated against the U.S. dollar by 8.4 percent during the period 12/82 to 6/83 and by an additional 5 percent in 7/83.	Exchange rate to be adjusted on the basis of a real effective exchange rate formula to maintain competitiveness at the level achieved after the 7/83 adjustment.
Sudan (2/83)	In 11/82 the pound in the official market was depreciated by 31 percent in terms of the U.S. dollar. U.S. dollar.	Flexible exchange rate policy taking into account the behavior of the U.S. dollar, domestic inflation, and BOP developments. 2/
Turkey (6/83)	The 1983 SBA was immediately preceded by a 3-year SBA during which there had been a real effective depreciation of 11 percent.	Real depreciation by 10 percent during the program period.
Uganda (9/83)	In 7/83 non-oil cash imports and exports other than coffee and cotton were shifted from Window I (where the rate was set by the authorities) to Window II (where the rate was auction-determined). Minimum central bank sales in Window II were increased.	Exchange rate at Window I to decline faster so as to decrease, and eventually eliminate, the spread between the two rates. Understandings on the unification of the two rates to be reached in a mid-term review.
Uruguay (4/83)	Replacement of a preannounced crawling peg with a free floating system without central bank intervention in 11/82.	Continuation of free float until the peso found a stable equilibrium level. Subsequently, exchange rate to be managed flexibly either through a continued float with central bank intervention or through the introduction of a crawling peg system.
Western Samoa (6/83)	The tala was depreciated by 17.5 percent in nominal effective terms between February and May, 1983.	Flexible exchange rate policy to maintain competitiveness. 2/
Zaire (12/83)	In 9/83, the zaire was depreciated by 78 percent in terms of the SDR and a temporary dual exchange rate system was introduced. Initially, the free market rate was set by the commercial banks in consultation with the Central Bank; beginning in 10/83, it was set on an interbank foreign exchange market and the spread between the two rates was reduced from 10 percent to less than 5 percent.	Continued float in the free market, with unification at that rate to be completed by end-February 1984.
Zambia (4/83)	In 1/83, the kwacha was devalued by 20 percent.	Depreciation by 10 percent relative to the SDR during the program year.
Zimbabwe (3/83)	In 12/82, depreciation by 17 percent relative to the U.S. dollar; further depreciation by 5 percent in 1/83. In 12/83 the basket peg was changed to reflect trade weights rather than settlement weights (resulting in smaller weight for U.S. dollar).	Periodic adjustments to prevent real appreciation.

1/ In some cases actual policy deviated from these understandings. Note that in addition to specific understandings, programs generally provided for re-examination of exchange rate policy in the context of mid-term reviews.
2/ Nonspecific commitment to be monitored in mid-term review.

Table 6. Implementation of Exchange Rate Policy in
Programs Approved in 1983: Developments in Real Effective Exchange Rates

	REER Index 1/			Changes in Percent		
	(Month Preceding Prior Action)	(Month of Board Approval)	(Month of Expiration of Arrangement)2/	Prior Action 3/	Subsequent Change 4/	Total Change
Argentina	(6/82) 100	(1/83) 70	(4/84) 94	-32	34	-6
Bangladesh	(5/82) 92	(3/83) 90	(9/83) 93	-2	3	1
Brazil	(1/83) 103	(3/83) 79 5/	(2/86) 84	-23	6	-18
Chile	(5/82) 145	(1/83) 95	(1/85) 106	-34	12	-27
Dominican Republic 6/	(9/82) 110	(1/83) 110	(1/86) 138	--	25	25
Ecuador 6/	(2/83) 118	(7/83) 110	(7/84) 97	-7	-13	-18
Ghana	(3/83) 478	(8/83) 83	(8/84) 105	-83	27	-78
Kenya	(11/82) 101	(3/83) 89	(9/84) 96	-12	8	-5
Korea	(10/82) 110	(7/83) 103	(3/85) 101	-6	-2	-8
Madagascar	(9/83) 134	(12/83) 125	(3/84) 119	-7	-5	-11
Malawi	(8/83) 106	(10/83) 97 5/	(9/86) 103	-8	6	-3
Mauritius	(1/83) 98	(5/83) 98	(8/84) 95	--	-3	-3
Morocco	(7/83) 86	(9/83) 80	(3/85) 80	-7	--	-7
Philippines	(3/82) 120	(2/83) 110	(2/84) 101	-8	-8	-16
Portugal	(5/83) 97	(10/83) 90	(2/85) 97	-7	8	--
Solomon Islands	(7/82) 124	(6/83) 106	(6/84) 101	-15	-5	-19
Sri Lanka	(11/82) 141	(9/83) 139	(7/84) 161	-1	16	14
Sudan	(10/82) 85	(2/83) 69	(2/84) 93	-35	68	9
Turkey	(....) ... 7/	(6/83) 73	(6/84) 70	...	-4	-4
Uganda	(6/83) 58	(9/83) 53	(9/84) 31	-9	-42	-47
Uruguay	(10/82) 176	(4/83) 100	(4/85) 106	-43	6	-40
Western Samoa	(1/83) 102	(6/83) 92	(6/84) 89	-10	-3	-13
Zaire	(8/83) 126	(12/83) 34	(3/85) 33	-73	-3	-74
Zambia	(12/82) 119	(4/83) 103	(4/84) 85	-13	-17	-29
Zimbabwe	(11/82) 116	(3/83) 93	(9/84) 97	-20	4	-16

Source: Information Notice System
1/ 1978 = 100
2/ The value of the index refers to August 1984 in the cases of arrangements which had not expired by that date.
3/ Change between the month preceding a prior action and the month of Board approval.
4/ Change between the month of Board approval and the final month of the arrangement (or August 1984 where the arrangement had not expired by that month)
5/ The month following Board approval has been taken as the reference month so as to fully reflect the effects of an exchange rate action taken in the month of Board approval.
6/ Official rate only.
7/ The 1983 SBA was immediately preceded by a 3-year SBA.

In most of the programs, the initial adjustments aimed at achieving the full desired real depreciation; the subsequent adjustments were to be based on maintaining the real rate in the face of inflation, or on responding to market forces. Argentina and Brazil undertook to adjust frequently the U.S. dollar rate in line with the domestic inflation rate. (This would have the effect of producing some real depreciation against the reference currency, as there would be no offset for inflation in the United States. The real effective depreciation would depend on the behavior of the dollar relative to the currencies of other trading partners.) 1/ For Chile, daily depreciations would be carried out on the basis of relative inflation. The mechanism for Ghana was similar, except that it involved quarterly adjustments on the basis of relative inflation during the preceding quarter. For Bangladesh, Malawi, and Sri Lanka, depreciations were expected to take place so as to prevent appreciation of the REER, though, as these countries had relatively moderate inflation, the timing was more discretionary. In the cases of Kenya, Korea, Mauritius, Western Samoa, and Zimbabwe it was also understood that the exchange rate would be kept under review with the aim of preserving competitiveness, but the understandings were less specific. 2/ For Ecuador, Portugal, Solomon Islands, and Zambia, a rate of depreciation was prespecified largely on the basis of anticipated inflation. In Uruguay, the exchange rate was initially determined without central bank intervention to give time for the exchange rate to find a stable equilibrium level; subsequently, the exchange rate was to be managed flexibly, through either a continued float with central bank intervention to prevent excessive fluctuations or the adoption of a crawling peg system. Specific understandings were reached with Morocco on the phasing of discrete actions during the program period.

In the remaining cases, a phased real depreciation was envisaged, sometimes following an initial adjustment. In some of these cases, the phased approach taken was integral to the design of the program. Turkey's liberalization of restrictions, for example, was accompanied by a phased depreciation over and above adjustments to offset inflation. Similarly, in Madagascar's program, discussed in the previous subsection, the weakening through phasing of the exchange rate action was offset by a strengthening through faster pass-through to prices. In other cases of phased real depreciation, it was recognized that the change could mean slower progress toward achieving full economic adjustment. In the case

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1/ Argentina, like some of the other 1983 program countries, was unable to follow through with its original policy intention. The real appreciation which took place during the program period largely reversed the effects of the large initial devaluation.

2/ In some of these cases specific understandings on gradual adjustments were reached at the mid-term review.

of the Philippines, there was particular concern about the social and political consequences of a substantial initial devaluation, so the action was phased during the program period. In the case of Sudan it was expected that further depreciations would be taken from time to time in the context of program reviews. The basic adjustment mechanism in the Dominican Republic, Uganda, and Zaire involved multiple exchange rates.

The principal elements in each program's adjustment mechanisms are as set out above, but in many cases other elements were present that reflected the particular circumstances of the country. Besides the three multiple exchange rate cases already noted, other countries that used multiple rates as part of their adjustment mechanisms included Ecuador, Ghana, and Sudan. As with the other three, the adjustment mechanism in these cases generally involved movement toward unification at the more depreciated rate. In the cases of Korea and Turkey, exchange rate policy was to take account of the implications for competitiveness of realignments of major currencies. Given the critical importance of copper exports for the Zambian economy, further depreciations were to be undertaken if wage increases in the copper sector exceeded projections. In all cases, exchange rate policy was to be re-examined in the context of formal program reviews, and in many cases the key elements of the review were specified in advance.

Overall, 13 programs achieved a real depreciation in excess of 10 percent by the end of the program period; 1/ seven had smaller real depreciations, and four had real appreciations. (Over the whole period from 1978, however, only seven had depreciations in excess of 10 percent, while eight had real appreciations.) In seven instances, the initial action was reversed or substantially eroded by subsequent real appreciation. Some of the cases, where real depreciation was less than expected, reflected failure of implementation; external events, such as the unexpected appreciation of the U.S. dollar, was also a factor in some cases.

4. Adaptations of policies in response to
   members' special circumstances

The Fund is required to follow the principle of uniformity of treatment, while at the same time recognizing the special circumstances of members. In the context of adjustment programs, this means that the programs must be consistent with the basic objectives of the Fund, but may allow for variations in the importance attached by individual members to particular policy objectives and institutional arrangements. There is general acceptance of the importance of price stability, for example, but members vary widely in the vigor with which they pursue that objective, given the real or perceived trade-offs with other objectives. Similarly,

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1/ Or up to August 1984, where programs had not yet expired by that date.

some members attach particular importance to stability of the exchange rate because of their institutional arrangements. Members also vary widely in the extent to which they use planning mechanisms and direct controls, as opposed to relying on market forces, to manage their economies—central planning being the strongest of this type of institutional arrangement. This subsection examines some of the issues involved in the formulation of exchange rate policies in such special circumstances.

a. Close links to other currencies

With the evolution away from the par value system, most members have gradually come to place less emphasis on exchange rate stability as an overriding objective of economic policy. However, where a country is prepared to follow demand management and related policies consistent with maintaining an existing peg, the Fund is generally supportive, even where it could be argued that adjustment could be achieved more efficiently with exchange rate action; but when distortions of relative prices have become so severe that they cannot feasibly be corrected through demand management, exchange rate action needs to be taken.

The differing preferences of members with regard to maintaining an existing peg are, of course, reflected in the choice of the mix of policies in all cases, but for two categories of members exchange rate stability continues to have particular importance: members of currency unions 1/ and countries with long-standing close links to a major currency. The members in these categories that did not adjust their exchange rates in adjustment programs they undertook in 1983 are listed in Table 7, which presents for these countries the data corresponding to those presented in Table 4 for the other program countries. (The Dominican Republic, which had already begun to depart from its traditional link to the U.S. dollar, did undertake exchange rate action through expansion of its parallel market, though the traditional parity with the dollar was maintained for the official rate.) In each case, the appropriateness of the level of the exchange rate was considered, but it was concluded that a feasible program could be designed without exchange rate action. All but Panama had suffered severe deterioration of the terms of trade, but in other respects their situation was not as critical as in the countries that took exchange rate action.

1/ Issues involved in exchange rate policy in currency unions were reviewed in "Currency Unions" (SM/82/183, 8/31/82).

Table 7. Selected External Sector Indicators--Countries That Did Not
Take Exchange Rate Action in 1983 Programs

(Indices, 1978 = 100; unless otherwise noted)

	Terms of Trade (1982)	REER (Second Quarter 1982)	Current Account Deficit in Percent of GDP (1982) 1/	Gross Official Reserves In Months of Imports (End 1982)	Import Volume (1982)	Export Volume (1982)
Central African Republic	71	108	4.8	3.4	102	108
Grenada	72	121	17.7 2/	1.2 2/	129	105
Guatemala	75	109	4.2	2.1	73	104
Haiti	83	115	4.6 3/	1.3 3/	105	95
Liberia	85	122	6.5 2/	0.2 2/	65	86
Mali	85	...	10.3	0.5	78	118
Niger	60	103	8.3	0.9	88	172
Panama	98	101	11.3	3.1	128	97
Senegal	71	89	12.4	0.1	92	139
Togo	78	101	21.7	7.3	60	83

Sources: World Economic Outlook data base; Information Notice System; and
Executive Board Papers.

1/ Including official transfers.
2/ 1982/83 (July-June).
3/ 1981/82 (Oct.-Sept.).

For four countries with strong ties to the U.S. dollar, reversal of the real appreciation between 1978 and 1982 was expected to occur eventually when the U.S. dollar reversed its recent rise. In the case of Haiti, where the gourde had been pegged to the U.S. dollar at an unchanged rate since 1929, financial policies were considered adequate to deal with the external imbalance. The improvement in public finances together with a tightness of credit policies under an immediately preceding stand-by arrangement had eased the pressures on the balance of payments and markedly reduced the discount on the gourde in the parallel market that had developed. In the case of Guatemala, where the authorities had a commitment to maintain a long-standing link to the U.S. dollar, no significant relative price misalignment was believed to exist and the external imbalance was to be tackled with a tightening of financial policies and the introduction of export incentives through fiscal measures. In Liberia and Panama, where the dollar was legal tender, changing the peg would have involved a major institutional change. In the case of Panama, moreover, the problem was neither a deterioration of the terms of trade nor embedded inflation, so adjustment through demand management was in any case the preferred route.

The currencies of five African countries were pegged to the French franc in the context of monetary unions. 1/ The maintenance by these countries of exchange systems free of restrictions on current transactions had made it possible to avoid major cost-price distortions. Real appreciation since 1978 thus had generally been small (negative in the case of Senegal) and real depreciation could be expected to occur if the French franc depreciated further.

The tenth country without exchange rate action was Grenada, whose currency was the East Caribbean dollar, issued by the East Caribbean Central Bank. The current account deficit and substantial real appreciation, coming at a time when the terms of trade had deteriorated severely, made a strong presumptive case for devaluation. Grenada's high rate of inflation and a large share of countries other than the United States in its trade and tourism meant that its real effective appreciation had been considerably larger than those of the other members of the ECCB. The staff stressed the adverse implications of the exchange rate for the prospects for adjustment. The authorities undertook to review the regional exchange rate level and system with the other member governments. On the strength of that commitment, a program without exchange rate adjustment was supported by the Fund.

1/ Mali acceded to the West African Monetary Union during the program period.

b. <u>Countries with a history of high inflation</u>

At the opposite extreme with regard to exchange rate flexibility
are those countries that have learned to live with high inflation
through frequent quasi-automatic devaluations. In such cases the usual
political resistance to devaluation has virtually disappeared, and in
contrast to the experience with other countries, it is often the exchange
rate question that is most easily settled in discussions of the program
between staff and authorities. It is generally understood from the
outset that continuing depreciation will at least offset inflation, and
there is little problem in accelerating the rate slightly to produce a
real depreciation.

While the desirability of real depreciation in such cases, or at
least the avoidance of real appreciation, is not in doubt, the question
may be raised as to whether some degree of nominal exchange rate stability
should be an important proximate goal of exchange rate policy, to be
brought about through, for example, strong incomes policy in association
with financial restraint, as opposed to continuing ratification of high
rates of inflation through rapid depreciation. The relative efficiency
of these quite different approaches to adjustment goes beyond exchange
rate policy into the area of the overall design and implementation of
programs, and is thus beyond the scope of this paper; but there is no
doubt that the thrust of Fund policy is that programs should envisage an
eventual return to exchange rate stability. In fact, the programs with
high inflation countries generally did envisage a gradual slowing of
inflation, implying a declining rate of nominal depreciation of the
currency, though in practice many of them did not succeed in doing so.

c. <u>Planned economies</u>

All Fund members use administrative action to limit the extent to
which economic developments are influenced by market forces. To the
extent that such administrative controls prevail, prices, production,
trade, and income distribution may be more or less insulated from the
effects of exchange rate changes. An important aspect of exchange
rate policy is thus the extent to which changes in the exchange rate
are passed through to the rest of the economy, and such considerations
always need to be borne in mind in designing Fund programs involving
exchange rate action.

In this respect there is no sharp distinction to be drawn between
countries formally described as having "planned economies" and others.
Hungary, for example, in some respects permits the exchange rate to
have more pervasive domestic effects than many countries that are
nominally market economies but insulate key domestic producer and
consumer prices from developments abroad. Other planned economies

are also placing increasing emphasis on market-related mechanisms in implementing their plans.

It is nonetheless true that for planned economies limits on the use of market mechanisms are often an integral part of the countries' institutional structures, 1/ while for most other developing countries such limits tend to arise as ad hoc responses to particular developments (usually with respect to income distribution) that are seen as undesirable from a social or political point of view. One important aspect of this difference is that ad hoc administrative responses tend to be biased against the development of a country's potential to benefit from the gains from trade, resulting in an increasingly inward-looking pattern of growth. Planned economies, on the other hand, often make deliberate efforts to expand their external sectors, though unless decisions to do so are based on a proper appraisal of opportunity costs, the expansion may not be carried out efficiently. In any case, the fact that market mechanisms are, in principle, allowed only a limited role in such economies may have some effects on the formulation of exchange rate policies.

As there were no programs with planned economies approved in 1983, the process of formulation of exchange rate policies in the 1982 and 1984 programs with Hungary and the 1981 program with Romania was reviewed. In the case of Hungary, the experience was similar to that with many of the 1983 programs reviewed above. The key elements in the quantification of the exchange rate action were the profitability of key export industries, as well as estimates of elasticities which were used to calculate the exchange rate consistent with the current account objectives. Developments in the real effective exchange rate were considered, but the extensive restructuring of domestic relative prices which had taken place meant that the index was of limited usefulness.

The case of Romania, on the other hand, did present a number of special features, although there, too, the program was developed in the context of a major price and exchange reform which the authorities had embarked on prior to the implementation of the program. A key element of this reform was the abolition of the "equalization" system that had previously been used to insulate the domestic prices of traded goods from developments in international prices, effectively setting a separate variable exchange rate for each commodity. This was replaced by a system of 27 exchange rates, which meant that changes in world prices would be reflected directly in the profits and losses of trading enterprises, provided they were not offset by adjustments in taxes and subsidies.

1/ See "Prices, the Exchange Rate and Adjustment in Planned Economies" (Mark Allen, DM/82/34, 5/19/82).

Adjustments to the exchange rate and further simplification of the system took place in the second and third years of the program, leading to the unification of the commercial exchange rate on July 1, 1983. The amount of adjustment was largely based on REER developments, though interpretation of the REER was made problematic by the price reforms which were going forward. The staff nonetheless considered that the increase in the REER understated the loss of competitiveness, in view of the existence of repressed inflation. Given the nature of the economic decision-making process, a full domestic resource cost analysis on a commodity-by-commodity basis would have been helpful. The traditional emphasis on a case-by-case approach in Romania, however, tended to treat each individual commodity as a separate case, and it did not prove possible to assemble the data in the uniform fashion required to carry out a domestic resource cost analysis. Market indicators were similarly not available; as there was no immediate intention to liberalize exchange restrictions the relevance of such indicators would have been limited in any case. The implication of the institutional reforms being undertaken by Romania was that the exchange rate changes were to be passed through to domestic prices to a significant degree, but the complexity of the pricing system, together with the absence of detailed commodity analyses, made it exceptionally difficult to develop and monitor policies in this key area.

While a full appraisal of the formulation of exchange rate policies in planned economies would go well beyond the scope of this paper, 1/ experience suggests that allowance for the special circumstances of such members poses few conceptual difficulties. There are, however, some problems of an essentially informational character. Where a country relies on market mechanisms in achieving the desired effects of exchange rate changes, it is possible to predict with reasonable confidence the responses of the economy, even without detailed sector-by-sector information. To the extent that planned economies themselves make use of market mechanisms, the same conclusion applies. Where decisions on prices and production are made administratively, however, it is necessary to be able to trace on a case-by-case basis the ways in which the exchange rate will enter into those decisions. This may imply a need for detailed analysis of the planning process for each industry or sector. At a more general level, a thorough understanding of the way the overall plan is formulated and executed is required to provide an adequate basis for appraising the consistency of exchange rate policies with other policies. These types of analyses would require a major input of staff resources as well as the provision by the authorities of

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1/ A forthcoming study of the design of adjustment programs in planned economies will go into this and other issues in more depth.

exceptionally detailed statistical and other information and interpretation. In addition, because of uncertainties concerning the channels through which exchange rate changes make their impact, the policy understandings required in adjustment programs may need to be exceptionally far-reaching, as well as precise.

5. Reporting to the Executive Board

Executive Directors have, on occasion, expressed a wish to see more complete exposition in papers presenting requests for Fund arrangements of the formulation of exchange rate policies. The following remarks relate to such requests.

a. Analysis of the need for exchange rate adjustment

The ways in which the exchange rate action are expected to affect the country's situation are usually discussed in request papers in general terms such as "restoring competitiveness." A more detailed discussion of the nature of the expected effects of the exchange rate action might be helpful in some cases.

A recent innovation which can help to indicate the consequences of exchange rate action is the medium-term scenario, particularly where the implications of alternative exchange rate policies are explored. Such analyses are particularly important in bringing out the fact that adjustment solely through demand management and related policies would not be feasible.

b. Mechanism of adjustment

Request papers are usually quite specific on the mechanism of adjustment of the exchange rate during the program period, but there are some important exceptions, usually related to questions of the need to preserve confidentiality with respect to future policy.

(1) Last minute prior actions

Often the authorities intend to take an exchange rate action and want the Fund to be in a position to act promptly on the request once the action is taken, but feel a need to maintain confidentiality until then. Request papers in such cases are necessarily incomplete in describing exchange rate policy; the description is usually supplemented through a written or oral statement by the staff at the time the request is considered by the Board. The analysis and projections in such request papers generally give a full picture of the adequacy of the program, since they are predicated on the action being taken.

Occasionally the change actually made at the last minute by the country may differ from that originally understood between staff and authorities, and incorporated in the analysis in the request paper. Such actions generally involve a strengthening of exchange rate policy, since otherwise the objectives of the program would be imperiled and the request would need to be reconsidered. Such changes could also be dealt with through supplements, though often there is not enough time to prepare one; but in general, since they represent a strengthening, there is little reason to question their appropriateness.

(2) Confidential understandings on future action

Often adjustment programs include explicit understandings on future discrete or gradual depreciations that it is considered to be kept confidential. Performance under such understandings is usually monitored through the need to reach understandings at the time of reviews. Request papers generally describe such policies in very general terms such as preventing real appreciation, preserving or increasing competitiveness, and so forth. A number of the 1983 programs included such understandings, relating to the discrete or gradual depreciation to be taken during the program period; these were set out in technical memoranda or confidential letters to management before the program went into effect. In some cases, indications of the nature of the understandings were provided through oral statements by the staff at the time of the Board discussion.

While it would be helpful in presenting the staff's analysis of the program in the request paper to describe such understandings explicitly, the overriding need for confidentiality on exchange rate issues would seem to necessitate a continuation of current practices.

(3) Extent of expected real depreciation

In some cases the policies have implications for the future real rate that could be stated more explicitly. Where exchange rates are to be adjusted in light of absolute, rather than relative, inflation, for example, it could be pointed out that this implies a certain real depreciation. Similarly, nominal depreciation against a particular currency or basket could imply a different rate of nominal depreciation in effective terms.

c. Staff views on the adequacy of policies

The staff often has reservations about the adequacy of the exchange rate policies being followed. These are seldom noted in request papers, though sometimes subsequent staff reports do so. It might be helpful to indicate explicitly the favorable assumptions needed if a weak action is to prove successful, or compensating actions taken such as lesser amount in arrangement, shorter program period, or tighter review clauses.

I. Formulation of Exchange Rate Policies in
1983 Programs: Ecuador

1. The stand-by arrangement

A one-year stand-by arrangement was approved by the Executive Board
on June 1, 1983, for an amount of SDR 157.5 million, equivalent to
150 percent of the existing quota. This was the first stand-by
arrangement with Ecuador since 1972.

2. Exchange rate developments

Ecuador has maintained a dual exchange market since November 1971.
The free market was limited to most private sector services and certain
private sector capital transactions. The spread between the free market
rate and the official exchange rate remained small until late 1981 when
the two rates diverged by 35 percent. The free market exchange rate had
depreciated to S/. 33 per US$1 compared with the official rate of S/. 25
per US$1. The exchange rate in the free market continued to depreciate
thereafter reaching S/. 84 per US$1 by March 1983. In the official market
the sucre was depreciated in May 1982 to S/. 33 per US$1 and again to
S/. 42 per US$1 in March 1983 when it was announced that it would be de-
preciated by S/. 0.04 per US dollar per working day until further notice.
In June 1983 this rate of depreciation was increased to S/. 0.05 per
U.S. dollar per day.

3. Balance of payments problems

The balance of payments, which had been in surplus since 1976
recorded large deficits in 1981 and 1982. The current account deficit
reached US$1.0 billion in 1981 and US$1.2 billion by 1982. The major
factors underlying this deterioration were a weakening of export receipts
from petroleum, due both to rising domestic consumption of refined
products, and since 1980, lower international prices, a continued high
level of imports despite an intensification of restrictions, and a
sharp growth in interest payments on public sector debt. Net capital
inflows declined by 25 percent in 1982 and there were major changes in
the composition of the capital account. While the public sector reduced
its long-term foreign borrowing sharply, there was an increase in the
use of short-term credits against future oil exports. Amortization
payments increased and there was a very large net outflow of private
sector capital (about US$135 million) compared with a small inflow in
1981; this reflected a declining confidence by both the private sector
and foreign banks. By end-1982, gross official reserves had declined
to US$457 million, compared with US$678 million at end-1981, and arrears
on external payments began to accumulate. In November 1982 the importa-
tion of a large number of commodities was prohibited for an indefinite
period.

The behavior of nonpetroleum exports over a long period gave particular cause for concern as the volume of these exports had either stagnated or declined. However, much of the impact of this decline on the balance of payments had been masked until recently by the bouyancy of petroleum exports. The decline was at least in part attributable to the loss in Ecuador's international competitiveness over the previous decade. The real effective exchange rate had appreciated almost continuously from 1970 and there had been a sharp appreciation in 1981 as a result of the strength of the U.S. dollar, to which the sucre is linked, and a pickup in domestic inflation.

An adjustment of the exchange rate was therefore judged important on two grounds. First, as an immediate signal that the authorities were taking firm action to reverse the deteriorating economy and re-establishing confidence; and secondly, as an instrument to change the structure of relative prices to revive the incentives in the traditional traded goods sectors and to permit a reduced reliance on import restrictions.

4.   Determining the amount of exchange rate adjustment

The need for an active exchange rate policy had been discussed at length with the Fund staff during the 1982 Article IV consultation discussions in mid-1982. The 24 percent depreciation in the official market in May was not sufficient to re-establish the long-term competitiveness of the Ecuadorian economy, as measured by the real effective exchange rate prevailing in 1970. 1/ The base date was chosen as representative of a period of balance of payments equilibrium and prior to the major changes in oil output and prices. On the basis of this indicator the staff calculated that the official exchange rate for the sucre would need to be depreciated to S/. 40 per US$1 as of mid-1982.

In addition to the need to restore international competitiveness, the authorities were faced with an immediate need to reduce the spread between the official and free market exchange rates, particularly to reduce speculative capital outflows, the resources for which were being generated by under- and over-invoicing of exports and imports and to ensure that over time competitiveness was not eroded further. Thus, another important objective of exchange rate policy was to ensure a convergence of the two exchange rates and an ultimate unification at a realistic rate. This was to be achieved by a combination of gradual depreciation of the official exchange rate and a shifting of transactions from the official to the free market.

1/   The real effective exchange rate was calculated using import-weighted and trade-weighted indices deflated by Ecuador's CPI relative to that of the relevant trading partners.

5.   Discussions between staff and authorities on the
     amount of exchange rate adjustment

     Discussions on an adjustment program which had begun during the
Article IV consultation discussions in mid-1982 extended over several
months with exchange rate policy proving one of the more sensitive areas.
The staff's initial position was for an immediate unification of the two
foreign exchange markets with the exchange rate subsequently determined
in a flexible manner either in the form of a freely floating rate or of
a crawling peg. A second best solution was seen as retention of the
existing dual exchange rate system with a gradual narrowing of the differ-
ential between the two markets through the adoption of a crawling peg
system in the official exchange market and a shifting of transactions
from the official to the free market.

     The option of immediate unification was not acceptable to the author-
ities. With the second option, the exchange rate in the free market
would continue to be determined by market forces, while in the official
market the exchange rate would be set by the Central Bank and depreciated
gradually through the establishment of a crawling peg system so that
the differential between the official and the free rates would be no
more than 5 percent by the end of 1983. During the first half of
1983, the official rate was to be depreciated according to an agreed
schedule, and by the end of May, would be no less than S/. 40 per US$1,
the exchange rate needed to return the real trade-weighted index to
that in 1970. During the second semester of 1983, the rate of deprecia-
tion of the sucre would be determined by the objective of reducing the
spread between the official and the free rates to 5 percent. The
coverage of the official market would be reduced by transferring
periodically transactions to the free market.

     However, the authorities also had difficulties with this second
proposal, particularly the transfer of transactions to the free market
and the rate of depreciation. During the course of a further mission in
February 1983, and despite continuing depreciation of the exchange rate
in the free market, negotiations again proved difficult. The mission no
longer requested an immediate unification, but argued that an official
exchange rate of S/. 40 per US$1 should be immediately established and
a crawling peg instituted with the aim of eliminating the spread by
mid-1984 as well as a significant transfer of transactions from the
official to the free market.

6.   The mechanism of exchange rate adjustment

     Agreement was eventually reached and the sucre was devalued in
March 1983 by 21 percent to S/. 42 per US$1 with a preannounced rate
of depreciation of S/. 0.04 per working day; this rate was adjusted
to S/. 0.05 per day in June. Also in June, the authorities transferred
to the free market 30 percent of foreign exchange proceeds from petroleum

and petroleum-related exports and an equivalent value of imports.
Other measures to improve competitiveness and the efficiency of resource
allocation were undertaken. A restrained public sector wage policy was
announced and certain domestic prices were raised with the intention of
eliminating subsidies. These included prices for petroleum derivatives
and for major items of consumption such as wheat and milk. Another
important element of the adjustment program was a substantial reduction
in the fiscal deficit, from 6.8 percent of GDP in 1982 to 4.2 percent in
1983, through a combination of tax measures and expenditure restraint.

7. Reporting to the Executive Board

        The deterioration in the balance of payments and the trend behavior
of the REER were clearly described in the stand-by request paper,
emphasizing the need to return the real effective exchange rate close
to that prevailing in the early 1970s. The desirability of reducing
the spread between the official and free market exchange rates was
also covered, and the emphasis on shifting transactions to the free
market in order to narrow the scope of the official market and thereby
effectively move closer to a more realistic exchange rate was well
explained. The mechanism of adjustment was well documented in the stand-
by request, including the understanding on the expected increase in the
monthly rate of depreciation. The stand-by arrangement also contained a
review clause which referred specifically to the modification of the
exchange system and the need to ensure that the spread between the two
exchange rates was significantly narrowed by the end of the program
period.

II. Formulation of Exchange Rate Policies in
1983 Programs: Ghana

1.   The stand-by arrangement

On August 3, 1983, the Board approved a one-year stand-by arrangement for SDR 238.5 million (150 percent of quota). At the same time, a request was approved for a purchase of SDR 120.5 million (76 percent of quota) under the CFF on account of a shortfall in export receipts during the calendar year 1982. Another one-year stand-by arrangement for SDR 53 million (50 percent of quota) had been approved in January 1979, but became inoperative following a change of government in June 1979 and a failure to complete a mid-term review.

2.   Exchange rate developments

From February 1973 until mid-1978 Ghana maintained the exchange rate of the cedi against the U.S. dollar at ¢ 1.15 = US$1. During June-August 1978, the exchange rate of the cedi was gradually moved to ¢ 2.75 = US$1, representing a cumulative devaluation by 58 percent in terms of the U.S. dollar. No further changes were made in the exchange rate until April 1983.

As part of the adjustment program, the Ghanaian authorities on April 21, 1983, introduced, as a transitional measure, a system of bonuses and surcharges on the official rate of ¢ 2.75 = US$1, which effectively resulted in two rates, ¢ 23.375 = US$1 and ¢ 29.975 = US$1. The weighted average of these rates was about ¢ 25 = US$1, representing a depreciation of 89 percent in foreign currency terms. The relatively appreciated rate applied to about one half of total payments, including imports of essential items and capital goods, and to traditional exports, accounting for about 80 percent of total receipts.

3.   The balance of payments problem

The need for exchange rate adjustment had already become apparent in 1980, when discussions with the Fund for a stabilization program started. Since then, while the internal and external imbalances had been exacerbated, successive governments had eschewed corrective action because of the perceived political consequences. The resistance was finally overcome in 1983 in the face of a steady deterioration in the economic situation as a result of systematic efforts by the Government to educate the public on the need for a major adjustment program.

The need for a large exchange rate adjustment had been made apparent by the severe balance of payments difficulties which were largely the result of expansionary financial, particularly fiscal, policies and, to a lesser extent, a deterioration in the terms of trade on account of adverse movements in oil and cocoa prices. As inflation rose sharply, particularly since 1981, the maintenance of a fixed official exchange rate in terms of the U.S. dollar resulted in a large and growing overvaluation of the

cedi. Efforts by the Government to contain the rise in the cost of living through price controls and the shortages of imports led to a decline in economic activity as well as the development of a large parallel market. Exports of cocoa, the major export commodity, declined steadily reflecting reduced producer incentives and smuggling to neighboring countries. An increase in producer prices for cocoa in 1981 to counter these developments was financed through the budget thereby raising further the fiscal deficit and fueling inflation. The erosion of fiscal revenues and the decline in foreign aid due to the foreign governments' growing disenchantment with Ghana's policy performance resulted in the curtailment of investment expenditures and the gradual obsolescence of the country's productive base. The influx of about one million returnees from Nigeria and continued drought conditions put severe pressure on food supplies in early 1983 resulting in a sharp increase in prices of basic food staples.

4.   The methodology used to determine
      the amount of adjustment

Although the need for exchange rate adjustment was obvious, the precise amount of the needed adjustment was more difficult to determine because of the limited data base and widespread distortions in the economy. In 1981 the staff undertook an exchange rate study and employed a set of indicators to arrive at a judgment regarding an adequate level of exchange rate adjustment. 1/ The implications of alternative exchange rates for the balance of payments, price level, and the government budget were also analyzed. On the basis of these analyses the staff recommended an exchange rate of about ¢ 15 = US$1, involving a devaluation of 82 percent in foreign currency terms. However, no exchange rate action was taken at the time.

During the course of discussions in the following two years, the staff's recommendations needed to be revised repeatedly as economic circumstances continued to deteriorate. During the final stage of the negotiations in early 1983, the staff based its recommendations with respect to the exchange rate adjustment largely on developments in the real effective exchange rate and the profitability of exports, particularly cocoa. In reviewing developments in the real effective exchange rate, the staff utilized a trade-weighted basket deflated by relative consumer prices in Ghana and its major trading partners. The staff's recommendations of a change to ¢ 25 = US$1, which was partly based on what the authorities considered acceptable, involved a restoration of competitiveness to the level attained after the last exchange rate adjustment in 1978. 2/

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1/   The extent of the overvaluation of the cedi was analyzed in terms of intercountry price comparisons, movements in the real producer prices and profitability of major exports, parallel market exchange rates and role of parallel markets in the economy, and projections of the performance of the economy over the medium term.

2/   In view of the real appreciation of the cedi since late 1980, a considerably larger devaluation would have been required to achieve a real rate consistent with the recommendations in the 1981 study.

Cocoa production had suffered a steady decline due to an erosion of the real producer price due mainly to the sharp rise in domestic costs. The revitalization of the cocoa sector required the restoration of the real producer price to at least its 1975 level. This implied an increase in the producer price from ¢ 12,000 per ton (in effect since October 1981) to ¢ 20,000 per ton. Given the world market prices for cocoa and the above adjustment in the producer price, financial viability of the Cocoa Marketing Board (CMB) necessitated a depreciation of the exchange rate to at least ¢ 16 = US$1. However, as the CMB operational surplus accrues to the Government, an exchange rate of ¢ 25 = US$1 was considered appropriate in view of the budgetary outlook.

One of the major objectives of the exchange rate adjustment was to attract resources to the official market from the large parallel market and improve the recorded balance of payments and the tax base immediately. Therefore, developments in the parallel market rate were also reviewed in determining the official appropriate exchange rate. The parallel market exchange rate, which was around ¢ 80 = US$1 at the beginning of 1983, was not considered to represent the equilibrium rate because of the risk premium and the imperfections in that market. However, in view of the extent of the parallel market activity and the need to divert it into official channels, a large spread between the official exchange rate and the parallel exchange rate was not considered appropriate.

5.   The mechanism of adjustment

On the basis of the above analysis, the staff recommended a depreciation of the exchange rate from ¢ 2.75 = US$1 to no less than 25.0 = US$1. Although the authorities accepted the need for an adjustment of such magnitude, they believed that the general public needed some time to understand and accept the implications of a large straightforward exchange rate adjustment. Therefore, they proposed a multiple exchange rate system, as a transitional arrangement, based on a system of bonuses and surcharges on the official exchange rate, which resulted in two rates of ¢ 23.375 = US$1 and ¢ 29.975 = US$1 and a weighted average rate of ¢ 25.0 = US$1. The staff was willing to support the multiple exchange rate regime as a transitional rate on the basis of commitments that were made regarding exchange rate policies to be followed during the program. The effective exchange rate was to be kept constant in real terms and the rates were to be unified at a realistic level by the end of the program period. The policies contained in the program were thus that the authorities would: first, announce the rates resulting from surcharges and bonuses as the new official exchange rates by October 1, 1983; second, depreciate the two exchange rates quarterly so that the weighted average exchange rate would move in accordance with an index measuring the differential between indices of the inflation rates in Ghana and Ghana's major trading partners; and third, unify the exchange rate at a realistic level by the end of the program period. To this end, the less depreciated rate was to be adjusted faster than the more depreciated rate. Furthermore, the operation of the exchange system was to be reviewed with the Fund

during the two reviews under the stand-by arrangement. The completion
of these reviews constituted a performance criterion.

6.   <u>Discussion of exchange rate policy in the request paper</u>

The staff report on Ghana's request for a stand-by arrangement in-
cluded a description of developments in the real effective exchange rate.
The transitional multiple exchange rate arrangement was justified and the
exchange rate policy to be pursued during the course of the program was
explicitly stated. In discussing the indicators used in reaching the
amount of the needed adjustment, the report highlighted the real effective
exchange rate calculations. (As noted above, developments in the profit-
ability of the export sector and the parallel market and a forward-looking
assessment also had a major influence on the staff's recommendations.)

Formulation of Exchange Rate Policies in
1983 Programs: Sri Lanka

1.   Stand-by arrangement

A stand-by arrangement was approved on September 14, 1983 for the
period through July 31, 1984 in an amount of SDR 100 million or 56 per-
cent of quota. 1/ Following the introduction of significant structural
reforms in late 1977, the Fund had previously granted a one-year stand-
by arrangement in December 1977 and an extended arrangement in January
1979, which covered the period to December 1981; Sri Lanka made all
scheduled purchases under these two previous arrangements.

2.   Exchange rate developments

In November 1977, a major reform of the exchange and trade system
was effected involving a unification of the dual exchange rate system
at a depreciated level, 2/ with the exchange rate determined thereafter
by a policy of managed floating, and a liberalization of the import
and payments system. The rupee was steadily depreciated from
SL Rs 16.00 = US$1 in November 1977 to SL Rs 21.32 = US$1 at the end of
1982. However, these exchange rate adjustments were not adequate to pre-
vent a substantial real appreciation of the rupee due to the relatively
high domestic rate of inflation. As a prior action under the program
supported by the 1983 stand-by arrangement, the rupee was further depre-
ciated by 7.4 percent during the first half of 1983 and an additional
5 percent (to SL Rs 24.20 = US$1) on July 4, 1983. In addition, the
authorities undertook under the program to adjust the exchange rate at
frequent intervals during the program period so as to preserve Sri
Lanka's external competitiveness, as measured by an agreed real effec-
tive exchange rate index.

1/   Sri Lanka's purchases under the stand-by arrangement amounted to
SDR 50 million. The arrangement became inoperative because the mid-term
review could not be completed as understandings on exchange rate and
other policies could not be reached for the second half of the program
period.
   2/   The unification of the exchange rate system at the initial level of
SL Rs 16.00 = US$1 represented a devaluation of 46 percent in terms of the
official rate in effect until then and 11 percent in terms of the paral-
lel rate. However, the effect of the large devaluation of the official
rate on the prices of traditional exports and essential imports, to
which it applied, were initially almost entirely neutralized through,
respectively, higher export taxes and import subsidies.

3.   The balance of payments problem

    Following the liberalization measures of late 1977, Sri Lanka's
external position deteriorated as reflected in the swing of its current
account balance 1/ from a surplus equivalent to 2 percent of GDP in 1977 2/
to a deficit equivalent to 15 percent of GDP in 1982. This weakening
stemmed from several factors. First, a sharp rise in the volume of imports
reflecting both an increase in public investment expenditures and the
effects on private imports of import liberalization and expansionary
financial policies. Second, a deterioration in the terms of trade by
about 25 percent between 1977 and 1982, mainly due to the oil price
rises in 1979-80 and a decline in tea prices from a peak level reached
in 1977. Third, a continued stagnation in volume terms of traditional
exports (tea, rubber, and coconuts) which was due to weak management of
state-owned estates and inadequate producer margins. The latter had
accounted for the low level of investment in that sector and had also
contributed to the managerial problems due to the low salary and wage
structure that it implied. Fourth, a lack of export diversification as
a result of the establishment and perpetuation of inefficient manufacturing
units protected by high import tariffs, of tax incentives which had
favored sectors other than manufacturing, and of an exchange rate policy
that had eroded competitiveness. The growing current account deficits
were partly financed by increased concessional aid, but particularly
since 1980, substantial commercial borrowing was also undertaken. However,
despite the deterioration in its external position, Sri Lanka continued
to maintain an exchange system virtually free of restrictions on current
transactions. 3/ Projections prepared by the staff indicated that the
current account deficit recorded in 1982 (15 percent of GDP) was not
sustainable in the medium term because of its debt-servicing implications
and pointed to the need for corrective measures. Similar staff projections
indicated that a reduction in the current account deficit over the medium
term to about 5 percent of GDP would result in a sustainable external
position; this level of current account deficit was essentially based on
an assessment of prospects for aid flows and was consistent with a
significant reduction in commercial foreign borrowing.

    Discussions about a stand-by arrangement started even before the
expiration of the extended arrangement in 1981, continued during 1982,
and intensified in January 1983. Presidential and parliamentary elections
that took place in the latter half of 1982 prevented the Government from

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    1/ Excluding official transfers.
    2/ It should be noted that the favorable current account position in
1977 was associated with a low level of economic activity prior to the
liberalization measures and unusually favorable external terms of trade.
    3/ With the exception of limitations on travel allowances.

focusing on needed adjustment measures, but early in 1983 a beginning
was made on corrective measures. A depreciation of the rupee by 7.4 per-
cent during the first half of 1983 took place; administered prices were
raised; new tax measures equivalent to 2.5 percent of GDP were introduced
in the 1983 budget presented in March 1983; 1/ and the growth of public
capital expenditure, which had been judged excessive by the staff of both
the Fund and World Bank, was reduced. The balance of payments was expected
to improve in 1983 because of a reduction in oil prices (by 12 percent),
a strong recovery in export prices for tea, rubber, and coconuts (by 22 per-
cent on average), and projected substantial increases in emigrants' remit-
tances and aid flows. On the other hand, the impact of a severe drought
on the production of major export commodities was becoming manifest and
private import demand had picked up following the return of business
confidence after the elections. Moreover, the fiscal measures were
expected to produce only a slight decline in the budget deficit, which
would remain above 16 percent of GDP. It thus appeared that only a
modest external adjustment would take place in the absence of further
measures.

4.   Choice of policy instruments

Given the nature and the sources of Sri Lanka's problems in the
external sector, a combination of the following measures was considered:
(1) an exchange rate action so as to directly improve competitiveness;
(2) reform measures, including rehabilitation of the state-owned tree-crop
estates; (3) a streamlining of the tariff structure so as to remove
the excessive effective protection and reduce the anti-export bias of
the trade system; (4) and tighter financial policies so as to both reduce
imports in the short term and improve competitiveness over time through
a reduction in domestic inflation.

The potential for exclusive reliance of financial policies to
achieve a sustainable external position was limited. Planned public
sector investment expenditure (which had a high import content) could
not be significantly reduced without disrupting the largely concessionally
financed investment program. Reliance on demand management to reduce
nongovernment imports would involve large costs in terms of a reduction
in economic activity. Furthermore, the domestic rate of inflation was
projected at over 10 percent on the basis of cost-push factors, and the
reliance on demand restraint policies to improve competitiveness would,
in view of the low inflation rate projected in Sri Lanka's trading part-
ners, involve large costs of adjustment. On the other hand, measures
to increase the efficiency of the state-owned estates and reduce effec-
tive protection would be facilitated by an exchange rate action.

1/   These included increased import duty rates by an average of about
3 percentage points and higher general sales and turnover tax rates.

5. Quantification of exchange rate action

In arriving at the precise amount of exchange rate depreciation, the staff made use of a wide variety of indicators of competitiveness. The results were included in a study which was presented to the authorities. In addition to an assessment of the profitability of main export products, the competitiveness of the <u>export sector</u> was evaluated on the basis of two types of real effective exchange rate indices. The first type was based on bilateral export weights (1979-81 data). The second type was based on weights which reflected the shares in foreign markets of third countries competing with Sri Lanka in nine major products (tea, rubber, coconuts, garments, fuel, gems, shellfish, fruit juices, and ceramics) Real effective exchange rate indices were estimated for each product, while an overall index for the export sector was obtained as a weighted average of the nine commodity indices, the <u>import-substituting sector</u> was evaluated on the basis of a real effective exchange rate based on bilateral import weights. Finally, the competitiveness of the whole <u>external sector</u> was measured by a real effective exchange rate index based on trade (import plus export) weights. The nominal effective exchange rates were in each case deflated by relative consumer and wholesale prices. In the staff's view, the CPI was a better cost indicator for Sri Lanka because it was a determinant of wages (in view of the wage indexation) and less influenced by traded goods prices. The WPI, on the other hand, largely reflected the international prices of export goods such as tea, rubber, and coconuts; a decrease in the prices of such goods would represent reduced profitability of that sector rather than reduction in domestic costs. In addition, the WPI incorporated the effects of various taxes and tariffs on intermediate goods, which were not in fact charged to exporters using these goods. For this reason, although real effective exchange rate indices based on both types of price indices were estimated, the staff mainly based its recommendations on the CPI-based indices.

Despite the use of different country weights, CPI-based real effective exchange rate indices presented a consistent picture. In particular, the trade-weighted REER showed that between 1978-79 and May 1983, there had been a real appreciation of about 25 percent. However, the rise in the CPI during this period was believed to have exaggerated the loss in competitiveness, since it reflected in part lagged adjustments in administered prices following the November 1977 devaluation; these adjustments were anticipated and were taken into account when the magnitude of the 1977 devaluation was decided upon. For this reason December 1980, when the REER had reached its lowest value since the last quarter of 1979, was selected as a more appropriate base period. 1/

1/ During the third year of the 1979-81 extended arrangement, exchange rate policy had also aimed at reaching that level by the end of the year (in the event, that level was not reached).

With December 1980 used as a base, the estimated real appreciation as of
May 1983 was still 13 percent, despite the accelerated rate of depreci-
ation during the first four months of 1983. Data on the profitability
of the public sector tree-cro⌐ estates also indicated that a restoration
of competitiveness to its December 1980 level (implying a 12 percent
depreciation from SL Rs 23.00 to SL Rs 26.00) would generate a surplus
adequate to finance needed investment in that sector.

6.   Exchange rate action and supporting policies

The authorities indicated that they were not prepared to devalue
by such a large amount, but that they were prepared to take compensating
measures in other areas and pursue a flexible exchange rate policy
during the program period. While considering such a package to be less
than ideal, the staff took into account the favorable effect on the
balance of payments and the budget (although at some cost of production
efficiency) of the increase in import tariffs, mainly through application
of import duties of previously exempt items (resulting in an increase
in the average import duty by about 3 percentage points). There was
also a decrease in export duties on tea, which, in conjunction with a
projected increase in the prices of traditional exports, would improve
substantially the profitability of these exports. 1/ Thus, a 5 percent
devaluation to SL Rs 24.2 per U.S. dollar was effected on July 4, 1982.

During the program period, the authorities undertook to adjust the
exchange rate at frequent intervals in order to at least maintain com-
petitiveness at the level reached after the July 1983 exchange rate
adjustment. The changes were to be made on the basis of a trade-weighted
exchange rate index deflated by relative wholesale price indices in
Sri Lanka and its major trading partners. The staff considered the con-
sumer price index a better indicator of cost developments in Sri Lanka.
The authorities, however, argued that the WPI better reflected producer
costs in export industries, since it included imported inputs. In
constructing the real effective exchange rate index, the prices of Sri
Lanka's major export commodities (tea, rubber, and coconuts), which
are determined on world markets, were excluded from the Sri Lanka
wholesale price index. Observance of these undertakings was treated
as a quantitative performance criterion, the test dates being end-August
and end-November 1983. In addition, understandings on exchange rate
and other policies, including an assesment of the appropriateness of
the adopted exchange rate formula, were to be reached at a mid-term
review of the program to be completed before January 31, 1984.

1/ The average export duty, however, would be reduced only by a
small amount reflecting the progressivity of the export tax system.

A number of other features of the program directly affected
competitiveness. Among the measures taken to reduce the overall budget
deficit by about 2 percent of GDP, for example, was a freeze of the
monthly wage indexation scheme for public sector employees for six
months and a shift to semiannual adjustments after September 1983. 1/
In addition, public sector estates producing tea, rubber, and coconuts
were to undertake investment and introduce performance-related incentives
for managers and workers in the beginning of 1984 based, respectively,
on investment plans and management studies to be completed by October
1983. Similarly, the authorities undertook to implement a phased import
tariff reform starting in the 1984 budget on the basis of a study to be
completed by October 1983.

7.   Reporting to the Board

The nature of the balance of payments problems was clearly dealt
with in the staff report, which also included data on the real effective
exchange rate and the profitability of the traditional export sector.
Since the Board's consideration of the request for the stand-by arrange-
ment was combined with the conclusion of the Article IV consultation,
additional detailed discussion of the external sector was available in
the recent economic developments paper.

1/   However, a monthly wage increase of SL Rs 100 was granted to all
employees earning less than SL Rs 1,100 per month in order to compen-
sate for the six-month freeze.