The need for macroeconomic adjustment arises when a country has an imbalance between domestic demand and supply, reflected in a growing external deficit, inflationary pressures, and slowing growth. The imbalances can be caused by external factors (such as worsening terms of trade and a rise in foreign interest rates), as well as domestic policies that expand demand too rapidly and reduce the growth of productive capacity. In principle, a country can avoid adjustment by borrowing abroad or imposing controls on trade and payments. However, this type of strategy carries some well-known costs. These include overvaluation of the exchange rate, loss of international competitiveness, reduced economic growth, increased foreign debt, and inefficient allocation of resources because of distortions in relative prices.

Sooner or later, these pressures will ensure that the imbalance has to be corrected. If the correction comes because a country loses its creditworthiness, recent experience has shown that forced adjustment is likely to be very disruptive. The essence of a macroeconomic adjustment program is to ensure that the supply-demand imbalance is eliminated in an orderly way, before the economy becomes seriously distorted and external finance is exhausted. The program therefore has to include a variety of policies that reduce demand and increase the availability of resources. Following Khan and Knight (1982, 1985), these policies can be grouped according to where their primary impact will be: on absorption—demand management policies; on current and potential output—structural policies; on the composition of absorp-
tion and production between tradable and nontradable goods—exchange rate policies; and on capital flows—external financing policies. The purpose of this article is to describe how these policies can be expected to affect the targets to which they are directed and thereby achieve the goal of macroeconomic adjustment, characterized by a sustainable current account position, a reduced rate of inflation, a stable and high rate of economic growth, and a manageable level of foreign debt.

**Demand Management Policies**

Macroeconomic adjustment is often viewed as synonymous with policies to restrain demand, so they have received considerable attention in the literature.¹ The two main instruments for controlling demand are monetary policy and fiscal policy. (The demand-side effects of exchange rate policies will be treated separately later.)

**Monetary Policy**

In the traditional closed economy model, interest rates are the transmission mechanism between monetary policy and aggregate demand. When the money supply expands, individuals buy real and financial assets in an attempt to restore portfolio balance. This lowers market interest rates and stimulates those components of aggregate demand that are sensitive to interest rates. In a small open economy, in contrast, the transmission mechanism is described in versions of the monetary approach to the balance of payments (see Frenkel and Johnson 1976 and IMF 1977). This approach holds that, with fixed exchange rates, an expansion of domestic credit induces the public to dispose of surplus cash by buying foreign goods and securities, leaving domestic output and prices unaffected. With flexible exchange rates, a similar expansion in domestic credit results in an increase in the money supply, a proportional depreciation of the exchange rate, and a corresponding rise in the domestic price level.

Neither of these models is directly applicable to most developing countries, where financial markets are underdeveloped, foreign exchange controls are in force, interest rates are set below market-clearing levels by the government, and a relatively free curb market operates.² In these conditions, how does monetary policy work?

If exchange controls are effective, the authorities can determine the monetary base through their control over the availability of foreign exchange and over credit from the central bank. Starting from portfolio equilibrium, a fall in the supply of bank credit to the private sector will cause borrowers to turn to the curb market, pushing up interest rates there. Since those rates represent the marginal cost of finance in the economy, the interest-sensitive components of aggregate demand will
decline. In particular, the implicit value of real assets will fall relative to their production costs, and demand for such assets will be reduced.\(^3\) The decline in aggregate demand would then put downward pressure on inflation.\(^4\) Similarly, a decrease in the money supply leaves the private sector with too little money in its portfolio relative to loans and real assets. As a result, the supply of curb market loans falls, leading to a rise in curb market interest rates. Again, demand for real assets is reduced, and downward pressure is put on prices.

If exchange controls are ineffective, however, monetary policy has less power to affect aggregate demand. Some of the effects of a reduction in the money supply would be offset by changes in foreign exchange claims or liabilities, weakening the impact on the curb market interest rate and on the demand for real assets. And where there are no exchange controls, of course, the standard monetary approach to the balance of payments becomes the relevant form of analysis.

Even when credit and foreign exchange are rationed, it is possible to argue that changes in the growth of money would be neutral in the long run. During the adjustment process, however, a restrictive monetary policy would be associated with a fall in capacity utilization and a rise in unemployment, since prices tend to be sticky downward.\(^5\) The size and duration of the deflationary effect would naturally depend on how demand and supply respond to a tighter monetary policy. The relevant factors would include (a) the speed with which the initial monetary disequilibrium is offset by movements in international reserves (which in turn depend on the presence and effectiveness of exchange controls); (b) the stickiness of domestic prices, which will be determined by wage-setting behavior and the degree of slack in the economy; (c) the effect on investment of changes in the cost or availability of credit; and (d) the extent to which policies were anticipated when wage contracts were negotiated.\(^6\) Both the theoretical and empirical validity of these factors need to be explored to establish the effects of monetary policy on demand.

**Fiscal Policy**

The direct effects of changes in public expenditures are fairly well accepted. Public spending on goods and services is itself a component of domestic expenditure, and as such it contributes directly to absorption. If government purchases are limited to nontradable goods, they add to the aggregate demand for domestic goods. Public purchases of traded goods, however, have no effect on real aggregate demand or on output and inflation; they only worsen the trade balance.

It is the indirect effects of public sector purchases that have generated controversy. At issue is the extent to which an increase in public spending reduces or increases private spending, thus resulting in a rise
in total spending different from the original increase in government expenditure. There are several mechanisms through which private spending could fall when public spending rises. For example, increased public spending could boost domestic economic activity and thereby the private sector’s demand for money. If interest rates rise to maintain portfolio equilibrium, they would, other things being equal, tend to reduce the interest-sensitive components of demand—the familiar “financial crowding-out” proposition. Even if interest rates do not rise immediately and portfolio imbalances persist, the excess demand for money may cause households to spend less in order to accumulate cash (see Khan and Knight 1981).

Private spending can also be reduced if extra public expenditure increases the private sector’s tax liability, either in the present because of higher taxes now or in the future because of the need to retire public debt. This is the well-known “Ricardian equivalence” proposition developed by Barro (1974). Finally, if nominal wages are flexible, or if the extra public spending was foreseen when wages were negotiated, domestic prices could rise enough to reduce private spending by the same amount that public spending rose, thereby leaving aggregate demand unchanged. Rational expectations models of public and private spending have yet to be tested for developing countries, and the debate has remained largely theoretical.

Tax receipts from the private sector have no direct effect on absorption. They do, however, affect private disposable income and may thereby indirectly affect private spending. The effect is likely to depend on whether the tax is viewed as permanent or temporary (temporary taxes are expected to reduce saving); the characteristics of the recipients, including demographic factors such as age and household size (since these affect the marginal propensity to consume out of current income); and the nature of the financial system (which will affect the extent to which taxpayers’ liquidity is constrained). As transfers are essentially the obverse of taxes, their effects on domestic absorption will be the opposite of the tax effects described above. A transfer should increase private absorption—though not necessarily total absorption—since that effect will depend on how the government finances its transfers.

In summary, the effects of fiscal policy on aggregate demand appear more complex than Keynesian theory suggests, and it is debatable whether a restrictive fiscal policy would reduce domestic demand. Ultimately, the issue requires more empirical testing.

**Structural Policies**

Structural policies differ from demand management in two respects. First, they place more emphasis on growth rather than on the control of domestic demand and an immediate improvement in the current
account. In developing countries the goal of achieving a more efficient allocation of resources and faster growth may sometimes conflict in the short run with that of reducing the current account deficit. Since these countries import most or all of their capital goods, structural programs often have different current account objectives in the early years of adjustment than do programs aimed primarily at curbing demand. In particular, to the extent that supply-side improvements require an initial rise in investment, reductions in current account deficits would not necessarily be sought in the early years of a program. Second, structural policies may take a long time to show results. They usually require a significant rise in investment in the more efficient sectors, combined with the release of capital and labor elsewhere. Such major adjustments take longer to achieve than a program to reduce demand, and thus structural programs have to have a longer time horizon.

Structural policies can take many forms depending on the nature of the economy and the types of problems it faces. Such policies can, however, be put into two broad groups: (a) policies to improve efficiency and resource allocation and (b) policies to expand productive capacity of the economy.

Efficiency

This category includes all measures to reduce the distortions that drive a wedge between prices and marginal costs. Such distortions can arise, for example, from price controls, imperfect competition, taxes, subsidies, and trade restrictions. The attractiveness of policies that improve efficiency is their potential for increasing output from a given stock of resources without reducing consumption. Nevertheless, attempts to eliminate major distortions present practical difficulties. First, if capital and labor do not move easily from sector to sector, changes in relative prices and incentives may produce unemployment for a long period before adjustment can be completed. Second, many government policies that create distortions may have been intended to achieve objectives other than economic efficiency—such as job creation, consumer subsidies, price controls on basic commodities, and restrictions on certain types of imports. Changes based purely on efficiency need to take account of political realities. Finally, microeconomic policy measures suffer from certain theoretical weaknesses: a well-known one suggested by the theory of the second best is that, if an economy has many significant distortions, eliminating only some of them will not necessarily produce an increase in efficiency in the economy overall.

By their nature, distortions tend to be microeconomic and country specific. Nevertheless, two sources of inefficiency with macroeconomic
significance have recently become more important. One is the inefficiency caused by artificial barriers to foreign trade. Tariffs, quotas, and other restrictions on trade and payments reduce the amount of trade and specialization and tend to foster import-substituting industries that lack efficiency and flexibility. Several studies—for example, Balassa (1982) and Krueger and others (1981)—have shown that, at the broadest level, countries with outward-looking strategies have fared better in terms of growth, employment, and adjustment to external shocks than those with an inward-looking approach. The outward-oriented strategies have been characterized by incentives for domestic producers to export their goods or to compete with imports. The relative success of these policies has prompted considerable efforts to encourage developing countries to liberalize their trade (see Edwards 1984 and Krueger 1985).

A second source of inefficiency in some developing countries is the distortion associated with price controls. For example, governments often fix the prices of agricultural commodities at levels different from those in world markets. Such policies have a powerful effect on the level and allocation of agricultural production and on consumption. In many developing countries state marketing boards buy most of the farmers' output. If a marketing board tries to increase its revenues (or reduce its losses) by holding the prices it pays below world levels, it is effectively taxing output. This creates disincentives to both domestic production and exports and can increase imports and cause budgetary problems for the government. Empirical evidence suggests that increasing producer prices tends to stimulate output, particularly in the longer term (see Bond 1983). The same applies to energy prices. If they are held below world market prices, the government has to absorb the cost of subsidies in its budget, and the country will be slow to shift to less energy-intensive production and consumption.

**Capacity**

The rate at which an economy's capacity can be expanded depends, among other things, on the split between consumption and investment, as well as on the nature and quality of the capital stock being added (see Krueger 1986 and Sen 1983). For this objective the appropriate structural policies are those that favor investment and savings. Because investment in developing countries is largely constrained by a shortage of capital, policies to promote public and private savings have a special role in adjustment programs that emphasize growth. For the public sector such policies should aim to improve the fiscal position; in the case of private savings the focus has mainly been on interest rate policies.
Interest rate policies influence not only short-run changes in spending, inflation, and external finance but also the longer-term accumulation of financial assets and the level and composition of investment.\textsuperscript{10} The basic theory is illustrated in figure 1, in which the horizontal axis measures real private savings and investment, and the vertical axis measures the real return on saving and the real cost of capital; the volume of investment (I) is assumed to be inversely related to the cost of capital (r).\textsuperscript{11} The total supply of finance for domestic investment consists of domestic savings, $S_d$, plus foreign saving (capital inflows), $S_f$. The horizontal sum of saving from the two sources ($S_d + S_f$) is assumed to be an upward-sloping function of the real return.\textsuperscript{12} Both the investment and savings curves are drawn for a constant level of real income.

Suppose that, as a result of domestic inflation plus ceilings on interest rates, the real return on savings is initially equal to $r_0$. At this interest rate the total supply of savings available for domestic private investment is equal to OD, while the private demand for savings is equal to OC. Since the amount of private investment that can actually be undertaken is limited by the supply of savings, the interest rate ceilings imply that the economy will be stuck at point A, where there is a continuous excess demand for investment funds equal to DC. If interest rate ceilings were eliminated, equilibrium would occur at some real interest rate $r_e$ above $r_0$; thus, to the extent that the supply of either domestic or foreign savings is interest elastic, savings would increase. The new equilibrium at E would involve both a higher real domestic interest rate, $r_e$, and a higher equilibrium level of both savings and private investment, OH. The private sector's current account deficit would rise from FD to GH; but this larger deficit would reflect a higher level of private investment, financed by foreign savings, rather than a lower rate of total savings. This analysis suggests that removing interest rate ceilings would yield a higher rate of domestic private investment.

In many developing countries the financial system is tightly controlled by government, and ceilings are placed on nominal interest rates. With inflation, such controls have resulted in strongly negative real rates of interest (defined as the nominal interest rate adjusted for anticipated inflation). Real financial savings have therefore grown less rapidly than the real economy; and disintermediation, particularly through parallel or curb markets, has been a serious problem. Such developments can sharply restrict the availability of credit through the financial system and thereby inhibit the level and efficiency of investment. Since available credit is often allocated first to large firms and
state enterprises, finance for small and medium-size firms and for households can be severely rationed; as a result, uneconomic projects are often undertaken at the expense of more efficient ones.

To increase the volume of credit, interest rates need to be raised and the financial system made more efficient. This requires, at a minimum, considerable judgment about inflation during the program. In particular, a government has to reassure domestic savers that they will earn real returns that are competitive with those abroad. This assurance is an essential step to promoting balance of payments adjustment, increasing foreign investment, and preventing capital flight. It should be noted, however, that the empirical evidence for developing countries indicates that the effect of variations in interest rates on savings can be quite small (Khan and Knight 1985). As such, to raise the rate of savings significantly may require quite large increases in real interest rates.

Changes in interest rates and reforms of the financial system must be coordinated with the other measures in a stabilization program. Experience suggests that this coordination is especially important during the early phases of the program. In particular, certain combinations of policies can disrupt a financial system that is undergoing structural change. The fiscal accounts must be brought under control to avoid sharp changes in the flow of funds in and out of the financial system. And interest rate policy has to be coordinated with exchange rate policy to ensure that capital movements do not destabilize the financial reform.

Although attention has been paid to the relationship between savings (financial and real) and rates of return, other aspects of savings behavior have also to be considered. One is the relationship between public and private savings: if public and private savings were pure substitutes, an adjustment program that required more public savings (as most programs do) would cause a corresponding reduction in private savings, and total domestic savings would remain unchanged. A second issue is the effect that capital inflows have on domestic savings, both public and private. If extra foreign savings—that is, an increase in the current account deficit—were to reduce domestic savings, the total resources available to the country would be unchanged. In general, if the supply curve for foreign capital is upward sloping, the level of domestic savings (and investment) will depend directly on the amount of foreign savings. Even though such offsets are unlikely to be complete, governments need to ensure that other policies, such as raising real rates of return and widening the range of savings instruments, can compensate for the possible negative effects of public and foreign savings on domestic private savings.

Despite the weight put on private investment in the adjustment process, much uncertainty surrounds the factors that influence invest-
ment decisions in developing countries. The rich theoretical literature on investment yields a well-defined class of models, generally of the flexible accelerator type. There is, however, a large gap between this theory and the models that have been specified for developing countries. The standard investment models have to be adapted for the structural features of developing countries—the absence of well-functioning financial markets, the relatively large size of government in the investment process, distortions created by foreign exchange controls, wage rigidities—and the adaptation has not been easy (see Blejer and Khan 1984). What is needed is a clearer idea of the theoretical and empirical links between policy variables and private investment, so as to evaluate the influence that government can exercise over the private investment decisions that change current and future growth rates.

Assuming that investment is successfully increased, what impact would it have on growth? This question can be addressed through a model that relates economic growth to increases in the factors of production, as well as technical progress and the use of imported inputs. Attempts at this type of analysis have been only partially successful. One problem is that the identifiable factors listed above can account for only a relatively small proportion of the variation in growth rates over time or across countries. The rest remains unexplained; it could reflect changes in the efficiency of investment, changes in human capital (education, skills, and health), or exogenous events. Identifying these factors and deciding whether they can be influenced by government policies is a task facing researchers.

Exchange rate action to improve international competitiveness and increase the incentive to produce tradable goods is often the centerpiece of any adjustment effort. Since devaluation, in the terminology of Johnson (1958), is simultaneously an expenditure-reducing and expenditure-switching policy, it affects both domestic absorption and domestic supply and thus contains elements of both demand management and structural policies.

The demand-side and supply-side aspects of devaluation have been discussed extensively (see, for example, Guitian 1976 and Dornbusch 1981). Consider, for example, a country in which excess real domestic demand shows up in a current account deficit. A devaluation increases the level of foreign prices measured in domestic currency terms and thus, in the domestic economy, the price of tradable goods relative to nontraded goods. On the demand side, the effect of a devaluation on domestic absorption is unambiguously negative: the rise in the price level reduces the real value of private sector financial assets and also of those factor incomes whose nominal values do not rise proportionally with the devaluation. On the supply side, however, devaluation
will boost output if the prices of (variable) domestic factors of production rise less than proportionately to the domestic currency price of final output in the short run (see Khan and Knight 1982).

Thus, both the demand and supply effects of a devaluation work to reduce excess demand and the current account deficit. The question of whether total output rises or falls as a result of the devaluation obviously hinges on whether the contractionary effects on demand are outweighed by the stimulus to supply. This depends, among other things, on the relative price elasticities of imports and exports, on the shares of tradable and nontradable goods in total production, and on the other policies adopted at the same time.

This analysis is, of course, straightforward, but it highlights the importance of getting the “right” real exchange rate. Four issues are involved: (a) determining the degree of overvaluation and therefore the size of the real depreciation required, (b) achieving the target value for the real exchange rate, (c) establishing the effects of a change in the real exchange rate, and (d) deciding what exchange rate regime or rules to adopt.

Determining the Extent of Adjustment

The issue of determining how far an exchange rate is overvalued is an extremely complicated one, even for industrial countries. In developing countries it has become common practice to employ purchasing power parity (PPP) calculations, such as indexes of real exchange rates based on some combination of export and import weights. These indexes are especially useful when prices are rising considerably faster at home than abroad; in those circumstances, judgments about the broad scale of devaluation that is needed can be reasonably sound. However, it would be wrong to attach great importance to small changes in such indexes, and the usefulness of any index is limited unless it is considered along with additional information. Judgments about the required scale of devaluation are usually based on the assumption that a particular rate in the past was “correct” and is therefore the basis for a target; such reasoning should not, however, ignore the influences of economic events that have occurred in the meantime.

To these complications should be added the fact that a real exchange rate is an endogenous variable that responds to several factors. For example, as shown by Khan (1986), exogenous foreign shocks such as a worsening of the terms of trade, an increase in foreign real interest rates, or a slowdown in the world economy will all tend to depreciate the long-run real exchange rate. Similarly, domestic supply shocks will alter the equilibrium real rate. In judging the appropriateness of the real exchange rate the factors affecting its long-run behavior have to be taken into account.
Achieving a Target Rate

Once a target for the real exchange rate has been set, policies to achieve it must be chosen. In principle, it would be possible to hold the nominal exchange rate constant and adopt deflationary policies to force down domestic prices and wages. In practice, prices and wages tend to be sticky, so deflation by itself would likely cause substantial falls in output and employment. Nor would a nominal devaluation be enough on its own: without supporting policies that limit the increase in domestic prices, it would have only a transitory effect on the real exchange rate. In the long run domestic prices will rise by the full amount of the devaluation, returning the real exchange rate to its original level. The extent to which nominal exchange rate action affects the real exchange rate—and for how long—depends directly on the supporting measures—fiscal, monetary, trade, and wage policies—that are adopted.

To calculate the effects of a devaluation on the real exchange rate requires information on substitution elasticities between tradable and nontradable goods in consumption and production and on the share of tradable goods in total expenditure. This is the first-round effect, which will be sustained only if supporting policies are implemented. To determine the real exchange rate in the long run requires detailed information on these other policies; without it, the real exchange rate, for a given nominal devaluation, cannot be predicted with certainty.

Establishing the Effects of Devaluation

One of the standard arguments against devaluation as a policy of adjustment is that it increases unemployment and tends to induce stagflation (see, for example, Diaz-Alejandro 1965, Cooper 1971, Krugman and Taylor 1978, and Hanson 1983). This is by no means a foregone conclusion: as long as devaluation alters the real exchange rate by raising product prices in domestic currency relative to factor incomes, it will raise output to the extent that the short-run marginal cost curves of the tradable goods industries are upward sloping. The longer a real devaluation persists, of course, the greater the benefits. Furthermore, if the wealth and distributional effects of devaluation stimulate savings and investment, they may produce a long-run gain of increased capacity.

Despite the controversy over the output and employment effects of devaluation, the empirical evidence on the subject is surprisingly thin—and inconclusive (see, for example, the studies described in Khan and Knight 1985). Basically, the direction and magnitude of the growth effects depend on such issues as the extent and duration of the real exchange rate change, the structure of production, and the re-
sponses of trade to relative price changes. If devaluation does alter the
distribution of income (as it is designed to do), it will not be com-
pletely costless to some sectors. There is no strong empirical evidence,
however, that devaluation necessarily reduces the overall growth rate
and increases unemployment. Of more relevance are the short- and
long-term effects of devaluation on trade; here the empirical evidence
points to relative price elasticities that satisfy the Marshall-Lerner
conditions. What needs exploring is whether the result extends to the
case where imported inputs loom large in the production of exports
and where those imported inputs are constrained by the availability of
foreign exchange.

Deciding on Exchange Rate System

Very few developing countries operate a freely floating exchange
rate. Most either maintain fixed parities or follow some type of crawling peg rule.\(^5\) Although there may be advantages in fixing the rate,
there are several disadvantages, which have been described at length
in the literature. One is that a fixed rate is vulnerable to speculative
attacks, producing exchange rate crises if the authorities are unwilling
to alter the rate (see, for example, Blanco and Garber 1986).

At the other extreme, high-inflation countries have continual deval-
uation built into their economic system. For them, devaluation can
often be regarded merely as one form of indexation. The key decision
is at what rate the domestic currency should depreciate; this depends
on several considerations, especially monetary and fiscal policies.

Recently some economists have questioned the use of exchange rate
rules, arguing that they increase fluctuations in output or increase
inflation and thus are inconsistent with macroeconomic stability (see,
for example, Dornbusch 1982). Also at issue is how and when rules
that are designed to keep the real exchange rate constant (or depre-
ciating slowly) should change when circumstances dictate.

Confronted with persistent balance of payments problems, some
countries have resorted to a dual exchange system rather than devalu-
ing to a uniform exchange rate. Under the dual system, some transac-
tions take place at an official exchange rate maintained by interven-
tion, with the rest at a generally lower ("free" or "parallel") exchange
rate, which is usually determined by market forces. Dual exchange
markets have not always been successful in achieving their objectives.
In particular, they have been largely ineffective in preventing specula-
tive outflows of capital and the over invoicing of imports and under-
 invoicing of exports (if there is a large differential between the rates).
In addition, dual exchange rates are equivalent to a series of implicit
subsidies and taxes that may be undesirable in themselves. For exam-
ple, commodities that are assigned to the official market face an
implicit tax on exports—from a government that may be seeking to promote exports.

It is generally thought that, because developing countries face a scarcity of capital, they should be net foreign borrowers. The rate at which they borrow abroad—the “sustainable” level of foreign borrowing—depends on the links between foreign and domestic savings, investment, and growth. The main lesson of the “growth with debt” literature is that a country can and should borrow abroad as long as the capital produces a return to cover the cost of the borrowing (see McDonald 1982). In that case the borrower is increasing capacity and expanding output with the aid of net foreign savings.

In theory it may be possible to calculate the sustainable level of foreign borrowing, based, for example, on information about the terms, maturity, and availability of foreign capital. In practice this is a nearly impossible task, since such information is not readily available. Using such ratios as debt to exports or debt to GNP can be helpful guides. However, it is very difficult to determine the “sustainable” level of such ratios. A country that can profitably use foreign savings that are large relative to domestic savings will have a debt to exports ratio that is higher than that of a country less able to use foreign savings profitably. The equilibrium level of such ratios will vary from country to country and for a given country over time. It has not proved possible, even after the fact, to measure the factors that predict sustainable ratios with any accuracy.

Perhaps the chief practical value of empirical measures is that they give warning when debt might grow explosively. If extra borrowing increases the debt service burden more than a country’s capacity to carry the burden, this must be reversed through expanding exports or cutting imports. If it is not, and conditions do not change, more borrowing will be needed to make payments, and debt will grow faster than the capacity to service it. A convenient way of stating this condition is that the real interest rate on new loans must be less than or equal to the expected growth in the volume of exports.

Although it may be difficult to see how indicators of debt capacity relate to the criteria for foreign borrowing discussed in the theoretical literature, there are circumstances in which the proxies can be useful. For example, an unexpected rise in the real interest rate on foreign debt can make the service payments excessive relative to the perhaps unchanged outlook for a country’s exports. Moreover, a country’s debt service capacity could deteriorate because of unwise domestic policies that damage its export performance. Finally, less favorable external factors—such as the slow growth of trading partners or a fall in the terms of trade—might produce an explosive growth of debt. In
practice, therefore, the theory of real resource transfers is probably most useful as a warning of when the various debt ratios are changing or are expected to change rapidly.

In recent years the sharp decline in the supply of foreign capital has created adjustment difficulties for many developing countries. When private creditors have already decided that a country's position may not be sustainable, the short-term outlook for its current account depends on the availability of official financing. To the extent that the country cannot influence its receipts of official finance, it can do little to decide how to adjust its current account. The issue remains, however, as to what policies will allow a quick and relatively costless return to normal borrowing.

The theory of growth with debt is not an ideal guide for policy during such transitions (see Selowsky and van der Tak 1986). The obvious, but not very helpful, criterion is that the necessary adjustment should be accomplished with the least possible loss of output. One practical consideration is that imports should not be compressed to a point which causes an unnecessary loss of output and (to the extent that exports require imported inputs) exports. It should be recognized that there may be little room to maneuver when credits from private sources are withdrawn—though official finance obviously plays an important role. However, if an adjustment program carries credibility for the medium- and long-term, it can hasten the restoration of a country's creditworthiness.

Most discussion of capital flows to developing countries has focused on foreign borrowing, but some recent research has drawn attention to capital flowing the other way—"capital flight"—and the problems this has caused for developing countries (see, for example, Dornbusch 1985 and Khan and Ul Haque 1985). Dornbusch (1985) contends that capital flight has increased gross foreign debt, eroded the tax base, and (to the extent that there was a net real transfer of resources from the countries) reduced investment and growth. If foreign borrowing has merely financed capital flight rather than productive investment, then what is to prevent future loans from leaking out in the same way?

Although there is some theoretical support for the notion that expected devaluations and negative interest rate differentials drive capital abroad, the effects of macroeconomic changes are seldom so straightforward. Such changes will generally be recognized by both residents and nonresidents at the same time, limiting the incentives for trade between them. Some market imperfection is usually needed in order to make transactions happen. For example, where a government is maintaining an unrealistic exchange rate and the private sector cannot acquire domestic securities denominated in foreign currencies, outflows of private capital would be expected.
In addition to the macroeconomic causes behind capital flight, there are many influences on where and how investors hold their wealth: actual and expected taxes, subsidies, and controls that various governments impose on private wealth. The effort to impose a differential tax on investment income, for example, will be counterproductive since revenue can rapidly disappear as the tax base shrinks. That said, it should be recognized that a government is most unlikely to prevent all private capital outflows even in the best of circumstances, since many of the causes of capital flight are beyond its control.

This article has had two purposes: to identify the policies needed for a macroeconomic adjustment and to describe the links between them and the ultimate objectives of an improvement in the balance of payments, slower inflation, and faster economic growth. The resulting policies would be designed simultaneously to reduce demand and raise supply (especially of tradable goods). This article has shown that the links between policies and objectives are complex, with large gaps in knowledge on both theoretical and empirical grounds.

The set of policies proposed in this article would be broadly acceptable to most economists concerned with macroeconomic adjustment in developing countries. For example, in one of the few concrete expositions of an adjustment strategy, Diaz-Alejandro (1984) suggests a package containing many of the elements described here. Considering a country with an unsustainable current account deficit and high inflation, he proposes: fiscal and monetary restraint to reduce aggregate demand; elimination of distortions; guidelines on incomes and wages; gradual liberalization of imports; incentives for exports; a crawling peg regime, with the real exchange rate undervalued to support export promotion and import liberalization; and positive real interest rates to encourage savings. The "real economy" approach advocated by Killick and others (1984) is another example of specific proposals for adjustment that are consistent with the package described here. Their approach basically emphasizes structural policies at the sectoral level, in addition to measures to curb excess demand.

Although economists may agree on the policies to be implemented, they disagree on how these policies work to achieve their goals. This is especially true of measures that are essentially microeconomic but have macroeconomic implications. It has to be recognized that the analytical basis for some micro policies in an adjustment program is relatively weak. The theory underlying the effects of eliminating distortions (real and financial) is not well suited to policymaking, as it quickly raises welfare issues. For example, whether removing consumer subsidies will raise overall efficiency and production is still an open question; the same is true of a devaluation.

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Even on the macroeconomic front, some serious theoretical and empirical issues are still unresolved. This article has shown, for example, that the effects of fiscal policy on demand are ambiguous. Another example is the issue of savings: since raising private savings is central to programs emphasizing long-term growth, it is crucial to establish the theoretical and empirical links among private and public savings, interest rates, and exchange rates. Finally, and perhaps most important, there is still much to be learned about what drives growth in developing countries and in particular about the relationship between short-run stabilization policies and long-run growth.

Many of these questions will have to be answered through concerted empirical analysis. Even when the theoretical underpinnings of the relevant relationships are clear, economic theory provides a guide only to the basic equilibrium relationships. It does not give information on how long it takes for a change in an exogenous variable or policy instrument to affect the endogenous variable. Such questions concerning dynamics and lags in adjustment obviously have to be approached from an empirical standpoint, and thus empirical analysis will be crucial in designing an adjustment package.

This article has provided only general guidelines on the type of measures to be included in an adjustment program. It has not defined the appropriate mix of demand management, structural, exchange rate, and external financing policies, or the sequencing of these policies. An analysis of these issues would require detailed theoretical and empirical knowledge of the relationship between policies and objectives. However, this would not in itself be enough, since the ways in which policies are combined depend on several other factors—including the relative weights assigned to a program's objectives. If, for example, an improvement in the current account is considered a high priority, more stress would be put on demand management and exchange rate policies; whereas the achievement of faster medium-term growth would involve more emphasis on structural policies. Equally important in deciding on the mix of policies would be the initial conditions—the external payments of foreign debt, the rate of inflation, and the level and growth of per capita income—when the program is implemented. The period over which adjustment is to be achieved also has an obvious bearing on the choice of policies. Since structural policies generally act with a lag, the longer the adjustment period, the easier they are to adopt. Finally, the choice of policies would be dictated by the characteristics of the country in question. For example, in countries where indexation is important and inflation has become ingrained, policies to restrain demand may turn out to be very costly in terms of output and employment.

Although countries differ, all need to have an analytical framework for their adjustment programs. Such a framework is possible. But as
this article has tried to show, many issues are still up in the air. Until they are settled, programs will have to rely on a great deal of judgment about the ultimate consequences of policy actions.

A comprehensive macroeconomic adjustment program is expected to have the following objectives: a sustainable current account position, a stable and high rate of economic growth that would allow for a steady rise in per capita consumption, a reduced rate of inflation, and a manageable level of foreign debt. The package designed to meet these objectives would typically include policy measures that simultaneously restrain aggregate demand and increase the availability of resources. These policies may be grouped as follows: demand-management policies, structural policies, exchange rate policies, and external financing policies. This article describes how these policies can be expected to achieve the goal of macroeconomic adjustment. The focus is primarily on the theoretical and empirical links between policy instruments and ultimate objectives. An examination of these links is necessary before issues of the appropriate mix of demand-management, structural, exchange rate, and external policies, and the sequencing of these policies in a program, can be properly addressed.

The author is grateful to Willem Buiter, Mansoor Dailami, Indermit Gill, Nadeem Ul Haque, Malcolm Knight, Anne Krueger, Ricardo Martin, and Peter Montiel for helpful comments and suggestions. The views expressed are the sole responsibility of the author and do not reflect those of the World Bank or the International Monetary Fund.

1. Adjustment programs of the International Monetary Fund (IMF), for example, are described by some observers as being primarily demand-oriented. See Dell (1982) and Diaz-Alejandro (1984). While demand-side policies were stressed in earlier IMF work on financial programs, namely by Polak (1957) and Robichek (1967), this is not necessarily a valid description of contemporary programs.

2. The assumption of the curb market allows one to analyze interest rate effects on aggregate demand. In the absence of such a market, monetary policy would have only wealth effects.

3. This is basically Tobin's well-known Q mechanism.

4. Additional wage and price policies, including price freezes, may well be called for if inflation has an inertial component that is unrelated to excess demand pressures.

5. The consequences of macroeconomic policies on the labor market in developing countries is not well established at the theoretical level, so there is also very little empirical evidence on this relationship.

6. It has been argued by Lucas (1972), among others, that the more that changes in monetary policy are anticipated by the private sector, the smaller the effect on output. For a discussion of the applicability of rational expectations models to developing countries, see Corden (1985).

7. For a discussion of this effect in the context of developing countries, see Corden (1985).

8. This "policy neutrality" has come to be known as the Lucas-Sargent-Wallace (LSW) proposition; see Lucas (1972) and Sargent and Wallace (1975).

9. Even the empirical evidence for industrial countries does not suggest that changes in public saving are entirely offset by private saving.

10. This view is generally referred to as the McKinnon-Shaw hypothesis; see McKinnon (1973).

11. This analysis is taken from Khan and Knight (1982).
12. Even if domestic savings are relatively unresponsive to the rate of interest, the economy could obtain a larger proportion of world savings and thus increase total savings ($S = S_D + S_F$).

13. The simple analysis of figure 1 assumed that foreign and domestic savings were independent.

14. A limiting case is that of constant prices of nontradable goods. The impact of a devaluation on domestic prices is then simply the product of the exchange rate change and the share of tradable goods in expenditure. The depreciation of the real exchange rate would, therefore, be equal to the nominal devaluation adjusted for the resulting increase in domestic prices. See Khan and Lizondo (1987).

15. The 1985 annual report of the IMF lists fifty developing countries as having fixed pegs to a single currency; thirty-eight as being pegged to a currency composite; twenty-nine as following an exchange rate rule; and only seven countries as floating.

16. Furthermore, any such calculation depends on assumptions about the effect of future interest rates on existing and new debt. What might be considered sustainable at a given interest rate may prove unsustainable at a higher rate. Since most commercial debt carries a floating interest rate, calculations based on some fixed rate are bound to be conjectural at best.

17. Strictly speaking, this result assumes that the growth rate of imports is less than or equal to the growth rate of exports.

References


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