Overview of Macroeconomic Adjustment and Structural Reform
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I. WHAT IS ADJUSTMENT?

Macroeconomic adjustment involves correcting the imbalances in a nation’s economy—typically defined as major differences between supply and demand or significant distortions in one or more sectors that affect the entire economy. Adjustment entails the application of policies to improve the outcome of key macroeconomic variables, such as the inflation rate or the external current account balance. In many cases adjustment requires changes in existing policies, such as a reduction in the fiscal deficit and growth rate of broad money, a depreciation in the country’s exchange rate, or a shift from a fixed to a floating exchange rate.

A. Economic Imbalances: Internal and External

As noted above, what prompts adjustment is an economic imbalance that affects an economy’s overall performance. Traditionally, imbalances are classified as either internal or external, although, as this chapter will show, external imbalances often reflect a domestic resource gap or savings-investment imbalance. Strictly speaking, an internal imbalance occurs when the economy is operating either in excess of, or significantly below, potential output—the level at which existing resources in the economy are essentially fully utilized without giving rise to inflationary pressures. An internal imbalance can arise, for example, when aggregate demand exceeds potential output, in which case inflation is likely to emerge. In many developing countries monetary financing of large fiscal deficits is an important source of internal imbalances, causing inflation and, sometimes, slowing growth. However, an internal imbalance can also emerge when aggregate demand falls noticeably short of potential output. In this case the economy often experiences high unemployment, sluggish growth, or even recession.

In addition to internal imbalances, a country can experience external imbalances, meaning imbalances in its accounts with the rest of the world. Traditionally, the most studied external imbalance is that of the current account, where the sum of a country’s balance on goods and services and net official and private transfers differs significantly from zero. A current account deficit means that the sum of these accounts is negative, requiring some combination of net capital inflows and net reserve drawdowns to finance the deficit. A current account surplus, by comparison, enables the country to accumulate international reserves or send capital abroad on a net basis. External imbalances can also result from a heavy external debt service burden. When combined interest and principal (amortization) payments on external debt reach a high percentage of exports of goods and services, countries have difficulty meeting their external debt obligations without severely constraining imports of goods and services. During the 1970s and 1980s heavy debt service burdens that reflected prior borrowing, often aggravated by a decline in real commodity prices, led many countries to seek debt relief or default on their scheduled obligations. Mexico’s celebrated default on its external debt obligations in 1982 triggered the infamous “debt crisis” of the 1980s that affected not only Latin America, but also many African countries.
The string of crises beginning with Mexico in 1994–95 and continuing through East Asia, Russia, and most recently, Brazil, has shown that economic imbalances can also arise because of capital flight or in response to large-scale capital flows, where dependence on capital inflows makes the country vulnerable to their reversal. In many of the East Asian countries, for example, short-term capital inflows had played a major role during 1991–96 in financing investment spending that in turn represented a major share of GDP and a prime force for economic growth. When these countries began to experience large capital outflows, after the floating of the Thai baht in July 1997, bank lending and investment spending fell sharply, leading to substantially lower imports and significant declines in GDP, which triggered loan defaults, bankruptcies, and mass layoffs as exchange rates plunged. The large net capital outflows also forced a massive adjustment in external current account balances, causing countries such as Thailand to shift from large current account deficits to surpluses in less than a year.

B. The Relationship Between External Imbalance and the Domestic Resource Gap

The experience of many developing countries, including those in Asia, underscores a point often overlooked in analyzing economic imbalances: that external imbalances often reflect a domestic resource gap—an imbalance between domestic spending and available resources (or national saving and investment)—that can be addressed through changes in domestic policies. This can be seen from examining basic identities relating national income and the total resources available to a country for consumption and investment. GDP can be defined as the sum of consumption, investment, and net exports (exports minus imports) of goods and nonfactor services, including expenditures of both the government and nongovernment sectors in each term to eliminate the need for a separate term for government expenditure:

$$\text{GDP} = C + I + (X - M)$$

where $C$ represents consumption, $I$ is investment, $X$ represents exports of goods and nonfactor services, and $M$ represents imports of goods and nonfactor services. Adding net factor income from abroad ($Y_f$)—net interest payments, profit remittances, and the like—to both sides of the equation converts GDP into GDI, gross domestic income:

$$\text{GDI} = C + I + (X - M) + Y_f$$

Finally, adding net transfers from abroad ($Tr_f$)—both private (such as worker remittances and private gifts) and public (official grants)—to both sides of the equation converts GDI into GNDI, gross national disposable income:

$$\text{GNDI} = C + I + (X - M) + Y_f + Tr_f$$

From equation (1) we can subtract consumption and investment, which together represent an economy’s spending or absorption ($A$) of resources:

$$\text{GNDI} - A = (X - M) + Y_f + Tr_f = \text{CAB}$$

(2)
Notice, however, that the right-hand side of equation (2) is simply the current account of the balance of payments (CAB): the balance on goods and nonfactor services \((X - M)\), plus net factor income \((Y_f)\) and net transfers from abroad \((Tr_f)\). Thus, an imbalance between GNDI, which represents a country’s resources available for spending, and \(A\), its expenditures, is automatically reflected in the current account balance of its balance of payments. Where absorption \((A)\) exceeds GNDI, a current account deficit will emerge. Indeed, equation (2) shows that an external current account deficit always reflects an excess of absorption \((A)\) over available resources \((GNDI)\).\(^1\) One can therefore address an external imbalance (such as an unsustainable current account deficit) by domestic policy measures such as monetary, fiscal, or exchange rate policy to bring absorption into balance with GNDI, even if an external shock (such as a terms of trade decline) is the immediate cause of the external imbalance. Moreover, because \(A\) includes both consumption and investment, an excess of either can lead to problems. Thus, an excessive external current account deficit can arise not only in the classic cases of overconsumption, but also in cases of investment-led overspending, as in some Asian countries during 1990–96.

The above income identities can also be manipulated to show the relationship between national savings and investment, on the one hand, and the external current account balance. Returning to equation (1), let us now subtract only consumption \((C)\) from both sides of the equation. In this case, we obtain national saving on the left hand side, because resources (GNDI) minus consumption \((C)\) is, by definition, saving \((S)\):

\[
GNDI - C = I + (X - M) + Y_f + Tr_f, \text{ or} \]

\[
S = I + (X - M) + Y_f + Tr_f
\]

Subtracting investment \((I)\) from both sides of the equation yields

\[
S - I = (X - M) + Y_f + Tr_f
\]  \((3)\)

But the right hand side of equation (3) is, once again, the external current account balance. Thus, we observe that the difference between an economy’s national saving and investment equals its external current account balance:

\[
S - I = (X - M) + Y_f + Tr_f = CAB \quad (3')
\]

In other words, an external current account deficit emerges whenever an economy’s investment spending exceeds its savings, requiring it to draw external funds to finance the shortfall. This happened in Thailand and several other Asian countries, where substantial

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\(^1\) Equation (2)—an identity—holds at all levels of income. However, internal balance can only be achieved when GDP equals potential output. If both conditions hold, internal and external balance can be achieved simultaneously.
investment spending exceeded even the large sums saved domestically. In Thailand, for example, national saving averaged 35 percent of GDP in 1995–96, but gross investment exceeded 42 percent of GDP, much of it used for unproductive private projects.

C. Financing Versus Adjustment

Because adjustment often involves making painful choices to reduce absorption, the question arises whether adjustment can sometimes be deferred or postponed. Adjustment can be deferred when imbalances appear to be temporary and a country has sufficient financial resources, typically foreign reserves, or the ability to borrow abroad, to cover any shortfall in its external current or capital and financial accounts. Such a shortfall might result from a one-year drop in the world price of a country’s chief commodity that is expected to be reversed in the near future. In this case the country could presumably cover the resulting shortfall in export receipts by drawing down its official international reserves. This option is called financing the imbalance. For financing to be feasible, however, the earnings shortfall must be considered temporary, and the authorities must have enough resources to cover it. If it is doubtful that the world commodity price will recover quickly, or if the required financing would leave reserves at a dangerously low level, then adjustment is unavoidable.

Adjustment is necessary, for example, when a country has difficulty meeting its debt service obligations. In this situation official reserves and foreign exchange flowing through the monetary authorities are insufficient to meet external obligations. Remedy this situation will require external and, most likely, internal adjustment, to strengthen the external current account balance. In addition, the country will need a full-scale adjustment program to receive debt relief from official creditors. Adjustment can also be critical when internal imbalances arise. Inflation, for example, often accelerates if not combatted, while governments face severe political pressures to respond to a recession.

More generally, it can be risky to assume that economic imbalances, in particular external imbalances, are temporary. “Temporary” drops in world commodity prices often continue for several years, as the experience of the late 1970s and early 1980s demonstrates. Similarly, a temporary surge in investment reflected in a significant current account deficit may not be self-reversing in the short run. Thus, adjustment is often desirable even when a country has large international reserves to finance an external imbalance for a considerable time.

D. Key Elements of Macroeconomic Adjustment: Stabilization and Structural Reform

Macroeconomic adjustment has three key elements. One, mentioned earlier, involves adjusting aggregate demand to the supply of resources. This is critical for adjustment in the short run, because it is typically easier to adjust aggregate demand to the available supply of resources in a short time than it is to expand the resource base. The second element is ensuring that relative prices in the economy give appropriate signals to market participants, through changes in the exchange rate, interest rates, and other administered prices. This element is often important in countries with large state sectors or considerable government control over the economy and was an essential part of the reform and adjustment programs in the transition countries. The third element involves adjusting aggregate supply through structural reform measures. This element is especially important for enabling an economy to
achieve growth, both during and after an adjustment program. This chapter explores these three elements.

II. STABILIZATION POLICIES

A. The Rationale

Stabilization policies are measures designed to bring aggregate demand into better balance with aggregate supply in an economy, thereby addressing both internal and external balance. In terms of the equations presented earlier, which focus on external balance, stabilization aims at bringing an economy's absorption (AD)—its combined spending for consumption and investment—in line with its total resources, as measured by gross national disposable income (GNDI). Stabilization can also help bring aggregate demand in line with potential output, which will promote internal balance. Where inflation is evident or an external current account deficit is unsustainably large, stabilization policies aim at reducing aggregate demand. Multiple policy measures (e.g., exchange rate changes and adjustments in fiscal policy) make it possible to achieve internal and external balance simultaneously. When an economy is experiencing a significant recession and the external current account balance is in surplus or has a deficit considered sustainable over the medium term, adjustments in macroeconomic policies may aim at stimulating demand to increase absorption.

The rationale for stabilization policies reflects both economic theory and the experience of many economies that have endured serious macroeconomic imbalances and implemented adjustment programs in response. A growing number of economists now believe that sustainable economic growth requires establishing reasonable price stability and a viable external position. Without these two factors growth is difficult to sustain, even if a country's real GDP rises for a few years. Among countries in transition, for example, economic growth returned most quickly to countries that moved first to stabilize prices following the initial round of price liberalization (Fischer, Sahay, and Végh, 1996, 1997). Similarly, a number of researchers (e.g., Sarel, 1996; Ghosh and Phillips, 1998; and Khan and Senhadji, 2000) have found that developing and even industrial countries experience a decline in growth once inflation exceeds some modest "threshold" level. In the case of external imbalances an unsustainable position often forces an adjustment in policies (Milesi-Ferretti and Razin, 1996), often following a plunge in the exchange rate, as experienced in Mexico during 1994–95 and by a number of Asian countries during 1997.

Why do price stabilization and a viable external position appear necessary for sustainable growth? Consider first the effects of significant inflation. Basically, inflation acts as a hidden tax, discouraging saving and investment, distorting relative prices, and encouraging speculative activity. It may also promote capital flight to countries with greater price stability. In addition, inflation often leads to a wasteful shift of resources from classic production to the creation of financial sector activities whose main goal is to minimize the cost of inflation—activities that would not be profitable in a stable price environment (Leijonhufvud, 1977). Recent research suggests that inflation rates above 7–11 percent for developing countries and 1–3 percent for industrial countries reduce growth (Khan and Senhadji, 2000).
External imbalances hamper growth by constraining the supply of imported goods and services and discouraging capital inflows that can finance domestic investment. Traditionally, many developing countries with heavy debt service obligations or unsustainable current account deficits have had substantial difficulties in financing the imports needed to undertake investment projects, particularly in the private sector. In many cases, excess demand for imports, often fueled by overvalued exchange rates, has led to restrictions on trade and payments, worsening the supply situation. For some countries with significant arrears on external payments, such as Zambia during the 1980s, external imbalances periodically eliminated the availability of trade credit and disrupted imports. The 1990s have shown how a country’s over-reliance on net capital inflows can disrupt growth when changes in market sentiment lead to a large outflow of funds following years of large net capital inflows. In Mexico, for example, large capital outflows in 1994–95 led to a sharp decline in output in 1995, requiring two years before real GDP exceeded the level of 1994. Unsustainable external positions attributable to large capital outflows likewise triggered output declines in Indonesia, Korea, and Thailand, countries that enjoyed many years of rapid economic growth before 1997, and the same appears to have occurred in Russia (1998) following large capital reversals that destabilized its balance of payments.

B. Principal Stabilization Measures

Stabilization policies fall under two headings: expenditure-reducing (or augmenting), and expenditure-switching. Expenditure reducing policies are designed to adjust the level of economic activity by lowering (or, in the case of augmenting policies, increasing) aggregate demand. Fiscal policy (which involves taxes and government expenditures) and monetary policy (which affects interest rates and the rate of monetary growth) are the main measures to achieve expenditure reduction. Expenditure switching policies are measures that shift expenditure between the domestic and external sectors, typically by increasing exports and decreasing imports of goods and services. Exchange rate changes are the main instruments to achieve expenditure switching. These two groups of policies are discussed next.

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2 Because high inflation and external sector deficits are the main economic imbalances facing most countries, this chapter emphasizes measures to reduce expenditure, rather than policies for expanding it. Nevertheless, for countries with low growth or serious recessions and sustainable external positions, one could also discuss expenditure augmenting policies, which would have the opposite effects from the measures discussed here.

3 Changes in administered prices can also affect aggregate demand. Because they are typically viewed more as affecting resource allocation, these and other pricing issues are discussed under structural policies, later in the chapter.
1. Expenditure reducing policies

   a. Fiscal policy

   Fiscal policy entails the use of taxation and government spending to achieve a particular outcome in the fiscal balance. As various studies have shown (see, for example, Blejer and Cheasty, 1993), both the definition of the fiscal sector (general government, general government plus nonfinancial public state enterprises, and the like) and the measure of the fiscal balance (cash versus accrual) can vary, depending on the purpose for which the fiscal balance is used. However, the conventional fiscal balance (total revenue less total expenditure) on a cash basis, for the broadest definition of government appropriate for policy purposes, is reflected directly in the position of the external current account. We can see this by returning to equation (3') and subdividing the overall savings minus investment balance for the economy into separate balances for the government and private sectors:

   \[ S - I = (S - I)_g + (S - I)_{ng} = (X - M) + Y_f + Tr_f = CAB \]  

   (4)

   In the government sector, savings equal the difference between government GNDI and government consumption:

   \[ S_g = GNDI_g - C_g \]  

   (5)

   Government sector GNDI, however, is defined as revenue less expenditures for all transfers to other sectors of the economy (interest payments, subsidies, and transfers, including net lending), because these represent payments that the government must exclude in determining the resources it has available for absorption (purchases of investment and consumption goods, the latter including wage payments to employees). Thus, we can rewrite government sector GNDI as follows:

   \[ GNDI_g = REV_g - Int_g - Subs_g - Net Transf_g \]

   Equation (5) then becomes

   \[ S_g = REV_g - Int_g - Subs_g - Net Transf_g - C_g \]  

   (6)

   If we then subtract government sector investment from both sides of equation (6) to show the savings minus investment balance for the government sector, we obtain

   \[ S_g - I_g = REV_g - Int_g - Subs_g - Net Transf_g - C_g - I_g \]

   However, the sum of government outlays for interest payments, subsidies, net transfers, consumption, and investment is simply equal to total government expenditure, since under net transfers we include current and capital transfers and net lending. Thus, we have

   \[ S_g - I_g = REV_g - EXP_g \]  

   (7)
showing that the savings minus investment balance in the government sector is exactly equal to the conventional fiscal balance. Strengthening the government’s fiscal balance thus leads directly to an improvement in the external current account balance (assuming no change in the balance of the private sector), while a weakening in the balance—a decline in the surplus or rise in the fiscal deficit—has a corresponding negative effect on the current account position. This helps explain why shrinking the fiscal deficit or, for fiscal surplus countries, increasing the surplus, usually contributes directly to improving the external current account balance. It also explains why, in so many countries, tightening the fiscal position is a key component of an adjustment strategy aimed at reducing an external current account deficit.

Fiscal policy also affects the balance of payments in ways beyond those already described. For example, tightening fiscal policy, by reducing aggregate demand, also reduces the demand for imports of goods and services, thereby strengthening the external current account balance. In an open economy with capital flows and a flexible exchange rate, a decline in interest rates triggered by tighter fiscal policy may also boost exports and reduce imports of goods and services, if lower interest rates induce a capital outflow that depreciates the exchange rate, increasing the competitiveness of exports and making imports more expensive domestically. To promote internal balance, fiscal policy can adjust aggregate demand through measures affecting taxes or government spending. Tightening fiscal policy, for example, can reduce demand by lowering private disposable income, if taxes are raised or transfer payments reduced. In this case private consumption, investment, or both, will likely fall. Reducing government spending on wages or goods and services, by comparison, will lower demand by cutting government consumption or investment.

Because the fiscal balance equals the difference between government revenues and expenditures, strengthening the fiscal position involves, by necessity, some combination of increasing revenues and reducing expenditures. To describe the many possibilities for achieving fiscal savings is beyond the scope of this chapter. But some revenue and expenditure measures (for example, raising consumption rather than trade taxes and cutting unproductive military outlays while preserving spending for primary health and education) may be more compatible with promoting economic growth than are other measures (see Mackenzie and others, 1997). Moreover, although improving tax or budget administration can help strengthen the fiscal position, the effects of such measures are usually hard to quantify and thus should not be relied on as significant sources of fiscal savings. Finally, in some countries, such as the United States, altering fiscal policy may be time-consuming, because of the need for legislation that requires approval by several independent branches of government. Thus, in those countries other measures, in particular monetary policy, may be necessary to achieve expenditure reduction within a short period.

b. Monetary policy

Monetary policy involves the use of various policy instruments to affect the growth of monetary aggregates and interest rates in the economy. Because sustained inflation is ultimately a monetary phenomenon, whatever its initial triggering mechanism, slowing monetary growth must be part of any anti-inflation program. For reasons to be explained below, slowing the growth of net domestic assets—the domestic component of the monetary aggregates—can also contribute to improving a country’s external position, by allowing a higher level of net foreign assets for any given level of the broad money stock. The higher
interest rates that usually accompany a slowing of monetary growth also help reduce inflation and an unsustainable current account deficit by causing aggregate demand to fall. Lower demand, in turn, reduces investment and imports, the latter strengthening the current account balance. Higher real interest rates may also attract net capital inflows, as the return on domestic financial assets rises relative to that in other countries. Thus, higher interest rates may strengthen both the current and the capital and financial accounts of the balance of payments.

As with fiscal policy, it is beyond the scope of this chapter to discuss the precise mechanisms and options for conducting monetary policy. Nevertheless, it is worth mentioning that countries differ in their approach to monetary policy. Whereas some have traditionally targeted interest rates, others have targeted various monetary aggregates, and some, like the United States, have shifted between these two approaches over time. More recently a number of industrial countries, including Canada, New Zealand, Spain, and the United Kingdom, have adopted inflation targeting as their approach to monetary policy. This approach uses a variety of specific techniques to achieve announced targets for the inflation rate. Although most industrial and many developing and transition countries use indirect instruments, such as open market operations, to control the level and growth of monetary aggregates, a number of developing and some transition countries still rely on direct instruments, such as bank-by-bank ceilings on credit, to achieve their targets. It is well accepted that indirect instruments offer many advantages over direct instruments (see, for example, Alexander and others, 1995). Nevertheless, many countries still find it necessary to use direct instruments, often because the government securities needed for open market operations are not yet widely used, or because a durable secondary market in these securities has not yet been developed.

When assessing monetary policy it is important to recognize the monetary implications of fiscal deficits. A country with an expansionary fiscal policy, meaning a sizable government sector deficit, even under conditions of potential output or full employment, will need budgetary financing, requiring either higher interest rates or faster monetary growth, depending on how the budget deficit is financed. In this circumstance monetary authorities aiming to reduce inflation and to shrink the current account deficit will need to pursue even tighter monetary policy than would otherwise be necessary to cool aggregate demand and slow the growth of the monetary aggregates.

c. Relative effectiveness of monetary and fiscal policy

In responding to macroeconomic imbalances, the relative effectiveness of monetary and fiscal policy can be assessed both in relation to institutional factors and with reference to the Mundell-Fleming model, a standard model used for macroeconomic analysis. This model allows for the possibility of capital inflows and outflows and the linkage of interest rates across economies, thereby providing a useful basis for analyzing the effects of monetary and fiscal policy in open economies (Mankiw, 1997, provides a simple description of the model).

With regard to institutional factors, in some countries it may be easier to use monetary policy rather than fiscal policy to respond to macroeconomic imbalances. This is because the central bank has the authority to change policy quickly, adjusting interest rates of open market operations in a matter of days, if not hours. The same is not always true of fiscal policy, which depends on the passage of legislation to enact a government budget or its
components. However, faster policy response does not guarantee a more rapid impact on economic activity, because research suggests that in some countries monetary policy changes may take one to two years to fully affect the economy.

A further consideration follows from applying the Mundell-Fleming model, which shows that in small, open economies, the relative effectiveness of monetary versus fiscal policy in addressing internal imbalances also depends on the type of exchange rate regime. Fiscal policy is likely to be more effective under fixed-rate regimes, and monetary policy is more powerful in a floating-rate environment.

In a fixed-rate regime, monetary policy typically focuses on maintaining the exchange rate, so that it cannot target domestic demand. Moreover, any attempt to adjust demand by changing the money supply can generate an offsetting movement in international reserves that undercuts the effect of monetary policy on national income. For example, slowing monetary growth will raise interest rates and attract capital inflows, thereby offsetting, at least in part, the initial monetary contraction and its effect on GDP. A fiscal expansion, by comparison, will raise interest rates, encourage capital inflows, and tend to appreciate the exchange rate. The central bank, obliged to maintain a fixed exchange rate, will offset the appreciation by purchasing foreign exchange, thereby expanding the money supply, lowering interest rates, and reinforcing the positive effect of the fiscal expansion on GDP.

Where exchange rates are flexible, a monetary expansion that lowers domestic interest rates will encourage capital outflows that depreciate the exchange rate and further stimulate income as the lower exchange rate raises net exports. A fiscal expansion, by contrast, will raise interest rates, promoting capital inflows that appreciate the exchange rate and reduce net exports, offsetting the rise in national income from the fiscal expansion. Thus, fiscal policy will have much less impact on national income under flexible exchange rates.

This analysis indicates that capital inflows can affect the potency of monetary or fiscal policy for stabilization. For example, the rise in interest rates that is likely to accompany monetary tightening may induce net capital inflows, particularly if the tightening occurs in the context of an adjustment program that increases a country’s attractiveness to foreign investors. The additional inflows will offset, at least partially, the effect of monetary restraint, requiring sterilization or other measures to discourage further inflows to achieve the desired slowing of monetary expansion. In this case fiscal tightening can be of assistance, offsetting the effect of capital flows on monetary growth. Fiscal tightening can also mitigate the effects of exchange rate appreciation that capital inflows can induce following monetary tightening. By reducing aggregate demand, fiscal tightening will curb import demand and limit the weakening in the current account balance after an appreciation of the exchange rate triggered by higher domestic interest rates.

d. How expenditure-reducing policies work: a monetary perspective

The above analysis (often referred to as the “absorption approach”) provides a general sense of how expenditure-reducing policies operate. We can also see the application of these policies using a monetary perspective that draws on the use of the basic monetary identity embedded in a country’s monetary survey. This monetary perspective can easily be linked to the absorption approach, as will be shown later in this section.
The monetary survey reflects the basic idea that total monetary liabilities in an economy's banking system, summarized by $M$ in the following equation,\(^4\) equals total monetary assets, as represented by the sum of net foreign assets (NFA) and net domestic assets (NDA):

$$M = \text{NFA} + \text{NDA}$$  \hspace{1cm} (8)

Net domestic assets, in turn, can be subdivided into domestic credit (DC) and other items net (OIN), the latter being a variable that includes the net capital in the domestic banking system and the value of the banking system's revaluation account, which takes account of changes in the domestic value of foreign currency assets and liabilities as the exchange rate changes:

$$\text{NDA} = \text{DC} + \text{OIN}$$  \hspace{1cm} (8a)

Domestic credit, in turn, can be subdivided into two components: net credit to the government sector (NCG) and credit to the rest of the economy (CRE), which in countries with large parastatal sectors includes both credit to the private sector and credit to state enterprises:

$$\text{DC} = \text{NCG} + \text{CRE}$$  \hspace{1cm} (8c)

Thus, we can rewrite equation (8) to show these different elements:

$$M = \text{NFA} + \text{NDA}$$  \hspace{1cm} (9)

$$M = \text{NFA} + \text{NCG} + \text{CRE} + \text{OIN}$$  \hspace{1cm} (9a)

As noted in the discussion of inflation and its causes, reducing inflation will require some slowdown in the growth rate of $M$. This implies setting a target for the supply of money, $M^S$ (and its growth rate), equal to the predicted demand for money.\(^5\) Expenditure-reducing

\(^4\) Note that $M$ represents a broad monetary aggregate, such as M2 or M3. It may include foreign currency deposits where these represent an important component of broad money.

\(^5\) The traditional approach to setting $M^S$ involves estimating the demand for money, which depends on real income (real GDP) and real interest rates, and using the estimated demand to determine money supply. However, if a stable money demand function can be specified, one can apply the famous Fischer equation, whereby the product of the monetary aggregate ($M$) and its velocity ($V$) equals the product of the price level ($P$) and the volume of transactions or real GDP ($Y$), to determine the level of $M$ consistent with a particular price target. From the Fischer equation, we have:

$$M - V = P - Y.$$  

Within this framework, once $V$ and $Y$ are determined, setting $M$ will determine $P$. However, the success of any policy using monetary targets depends on $V$ being constant or predictable.
policies will thus help contain inflation to the extent that they achieve a target for the monetary aggregate, $M$. Second, because the value of net foreign assets of the banking system (NFA) corresponds to the sum of net international reserves (the net foreign assets of the monetary authorities) and the net foreign assets of the economy’s deposit money banks, achieving a balance of payments target requires some target for NFA. Notice from equation (9a), however, that setting $M$ and NFA requires imposing a target on net domestic assets of the banking system (NDA). Exceeding that target means some combination of lower NFA, corresponding to a weaker balance of payments, and a larger $M$ that exceeds money demand, implying higher inflation. This explains why Fund-supported adjustment programs usually include ceilings on either NDA or the NDA of the monetary authorities to reduce both internal (inflation) and external (current account) imbalances. Moreover, many such programs also include a target for net international reserves of the monetary authorities, thereby fixing two of the three variables in the equation.

Equation (8c) shows that controlling net domestic assets of the banking system essentially requires limiting domestic credit, since OIN comprises two items—the revaluation account and the value of bank system capital—that are basically fixed once the exchange rate is determined. But since domestic credit itself equals net credit to the government sector plus credit to the rest of the economy, one way to limit it is to restrain the growth of net credit to the government sector. This, in turn, requires limiting the fiscal deficit, since for any given amount of net foreign financing and net nonbank domestic financing, a limit on the net credit to the government sector—the other component of government sector financing—requires a ceiling on total budgetary financing and thus the government deficit. Exceeding this deficit, assuming that nonbank and foreign financing are predetermined, will require more credit to the government sector.

Unless credit to the nongovernment sector falls by an equivalent amount, the excess in the deficit will cause domestic credit—and thus net domestic assets—to exceed its target, requiring some combination of more money creation (thus, more inflation) and lower net foreign assets (and a weaker external position). But reducing credit to the nongovernment sector is also undesirable, because in many developing countries domestic credit is a key source of financing for private sector activity, and reducing it would likely lower investment and the growth rate. Thus, from the monetary perspective fiscal policy is critical for

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6 The level of NFA contained in the deposit money banks is essentially market determined. Thus, setting a target for total NFA will reflect the goal for net international reserves (NIR) plus the ex ante projection for the NFA of the deposit money banks.

7 For any given projection of the capital and financial account in the balance of payments, a higher level of NFA corresponds to a less negative (more positive) current account balance.

8 This statement assumes, as is true in many developing countries, limited opportunities for private firms to borrow externally. In economies with large parastatal sectors, a country could have a larger fiscal deficit and more credit to the private sector if credit to state enterprises were constrained. However, such countries typically lack comprehensive data on credit to parastatals, so it is often infeasible to develop separate targets for credit to state enterprises.
achieving an economy’s macroeconomic objectives, since too large a budget deficit is inconsistent with attaining inflation, growth, and external sector targets. At the same time, establishing targets for inflation, the external balance, and economic growth implies setting targets for money aggregates \((M)\), net foreign assets \((NFA)\), and credit to the rest of the economy \((CRE)\). This, in turn, limits the net credit to government, because the other element in equation \((9b)\), \(OIN\), is basically determined by real growth, inflation, and the exchange rate. But limiting the net credit to government restricts the fiscal balance, because it restrains the total credit available to finance the deficit.

The above analysis can be related to the “absorption approach” described in the previous section by recognizing the relationship between the current account of the balance of payments \((CA)\) and the change in net foreign assets of the banking system \((\Delta NFA)\). By definition, the change in the net foreign assets of the banking system equals the sum of the change in net international reserves \((NIR)\) and the change in net foreign assets of the commercial banks \((NFA^{CMB})\):

\[
\Delta NFA = \Delta NIR + \Delta NFA^{CMB}
\]  

(10)

In the external accounts, if there are no extraordinary reserve movements or debt relief, the change in net international reserves equals the overall balance of payments and thus the sum of the current account \((CA)\) and the capital and financial accounts \((C + FA)\):

\[
\Delta NIR = CA + C + FA
\]

(11)

If we add the change in net foreign assets of the commercial banks to both sides of equation \((11)\), we obtain an expression that relates the net foreign assets of the banking system to the external current account of the balance of payments and the change in the net foreign indebtedness of all nonbank residents \((\Delta FI)\):\footnote{For a more extensive discussion, see International Monetary Fund (1987), chapter III.}

\[
\Delta NFA = CA + \Delta FI
\]

By rearranging these terms, we can show that the current account equals the difference between the change in the net foreign assets of the banking system and the change in net foreign indebtedness of all nonbank residents:

\[
CA = \Delta NFA - \Delta FI
\]

(12)

\footnote{The financial account of the balance of payments includes, by definition, the negative value of the change in the net foreign assets of the commercial banks, since an increase in these net assets appears as debit (negative entry) in the balance of payments. By adding the value of the change in net foreign assets to the financial account, the change in commercial bank net foreign assets drops out of the account: \(-\Delta NFA^{CMB} + \Delta NFA^{CMB} = 0\). Thus, only the change in the net foreign indebtedness of nonbank residents appears in \(\Delta FI\).}
Recall from above, however, that the change in net foreign assets of the banking system equals the difference between the change in broad money ($\Delta M$) and the change in net domestic assets ($\Delta NDA$):

$$\Delta NFA = \Delta M - \Delta NDA$$

Substituting the above relationship for $\Delta NFA$ and adding $\Delta FI$ to both sides of the equation yields the following expression:

$$CA + \Delta FI = \Delta M - \Delta NDA$$  \hspace{1cm} (13)

Moreover, recalling from the discussion following equation (2) that the current account balance equals the difference between gross national disposable income ($GNDI$) and absorption ($A$), (i.e., consumption and investment), we obtain the following relationship:

$$GNDI - A + \Delta FI = \Delta M - \Delta NDA$$  \hspace{1cm} (14)

The implication is that an excess of absorption over gross national disposable income and net foreign savings (the change in net foreign indebtedness of nonbank residents) will be reflected in an excess in the change in net domestic assets over the growth in broad money. Viewed from the opposite perspective, excessive growth in the net domestic assets of the banking system reflects an excess of absorption over available income plus the change in net indebtedness of nonbank residents. If one rules out an acceleration in money growth to avoid higher inflation, and assumes no further changes in net foreign indebtedness, shrinking the excess absorption requires a slowdown in the growth of net domestic assets. Thus, the absorption approach also helps explain why many adjustment programs focus on slowing the rise in net domestic assets, and in particular of the growth in domestic credit (through, for example, fiscal tightening, which reduces the government’s need for additional bank financing), as a way of shrinking an excessively large current account deficit.

2. Expenditure-switching policies: exchange rate adjustment

The second set of stabilization measures comprises expenditure-switching policies, policies that help shift demand between domestically produced and foreign goods or that help switch production between domestic and foreign markets. Exchange rate adjustment is the main policy measure in this area, the other being trade policy, which is covered under “Structural Policies and Their Rationale” in this chapter. Exchange rate regimes come in many forms, ranging from regionally linked currency systems such as the euro zone and fixed rates tied to a currency board to freely floating–market determined rates, with various options, such as currency bands around a central fixed rate, adjustable or sliding pegs, and managed (“dirty”) floats in between these extremes (Box 1). In the wake of the Mexican (1994–95) and Asian (1997–98) crises, economists increasingly view the extremes of floating and currency boards or monetary unions, such as the EMU, as the most viable exchange rate arrangements over the long run (see, for example, Obstfeld and Rogoff, 1995, and Eichengreen, 1999). Nevertheless, many countries still prefer intermediate positions that give the government at least some control over the exchange rate, and some economists (such as
Frankel, 1999) have argued that intermediate positions may be appropriate for some countries under certain circumstances.

a. Goals of exchange rate policy

Exchange rate policy has three main goals: promoting competitiveness and a sustainable current account position, achieving equilibrium in the foreign exchange market, and switching expenditure (and sales or production) between foreign and domestic markets.\(^{11}\) The first and third of these objectives are particularly important from the standpoint of stabilization. However, achieving equilibrium in the foreign exchange market is important to give producers and consumers correct signals regarding relative prices in world markets and to avoid creating parallel markets that can lead to inefficiency and resource misallocation.

Exchange rate policy plays a key role in promoting competitiveness and a sustainable current account position by helping establish a real exchange rate (RER) consistent with external equilibrium. The real exchange rate is defined as follows:

\[
RER = \frac{eP}{P^f}
\]

(15)

where \(P\) represents the domestic price level, \(e\) is the nominal exchange rate (measured in units of foreign currency per unit of domestic currency), and \(P^f\) represents the level of foreign prices.\(^{12}\)

\(^{11}\)Strictly speaking, expenditure-switching policies shift demand between traded and nontraded goods. The terms “domestically produced” and “foreign” are used as more convenient approximations to “nontraded” and “traded,” respectively.

\(^{12}\)Depending on the type of exchange rate used, \(P^f\) can represent either a single country’s price level (in the case of a bilateral real exchange rate) or a weighted average of prices for a set of countries (as with real effective exchange rates, which track changes in a country’s exchange rate against its trading partners, typically using as weights each country’s share in total trade).
Box 1. Types of Exchange Rate Regimes

Membership in a currency union
Examples: European Union countries participating in the EMU; countries in the CFA Franc zone in West Africa

Basically fixed regimes

- **Fixed rate:** Economies that peg to a major international currency, with no or rare parity adjustments, with or without a currency board. Examples: Argentina (pegged to U.S. dollar with currency board); Barbados (pegged to U.S. dollar without currency board)

- **Currency basket peg:** economies that peg to a basket of currencies of their main trading partners or to standardized currency composites such as the SDR. Examples: Zambia during part of the 1980s.

- **Crawling peg:** Economies that announce a prearranged schedule of exchange rate adjustments against the currency of the peg (the exchange rate changes at a fixed pace). Example: Poland, 1993–95.

- **Currency bands:** Economies that peg to a single currency or currency basket with defined (typically narrow) bands. Examples: Brazil, pre-January 1999; countries in the former European Monetary System.

- **Fixed but adjustable peg:** the arrangement prevailing under the Bretton Woods par value system (pre-1973).

Basically flexible regimes: adjustable and flexible exchange rates

- **Adjustable based on indicators:** economies that adjust their currencies automatically to changes in selected indicators, such as developments in the real effective exchange rate.

- **Managed float:** Economies that adjust their exchange rates frequently on the basis of judgments made following developments in variables such as reserves and the balance of payments position.

- **Independent float:** Economies that allow markets and market forces determine the exchange rates for their currencies. ¹

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Note: This box is based on Guitián (1994).

¹ In this case the authorities may intervene, but only for smoothing purposes.
At an appropriate real exchange rate a country can finance its payments for goods and services through earnings from exports of goods and services, anticipated capital flows, and, if needed, temporary drawdowns of international reserves in a way that can be maintained without a drastic shift in monetary and fiscal policies. In this situation the current account balance can be considered sustainable (Milesi-Ferretti and Razin, 1996), and the country’s exports of goods and services can be viewed as competitive. However, setting the nominal exchange rate is only one part of determining the real exchange rate. As equation (15) indicates, the domestic and foreign price levels also matter. If the nominal exchange rate depreciates, for example, the domestic price level must not rise so much as to offset the effect of the exchange rate adjustment. The real exchange rate can also change if domestic prices move, without any change in the nominal rate. Achieving a real depreciation without a nominal depreciation is difficult, however, because domestic prices rarely decrease without major economic disruptions, such as a large rise in unemployment.

By altering the real exchange rate exchange rate policy can switch expenditure between domestic and imported goods and promote external balance. For example, a real devaluation, meaning a policy-induced lowering of the real exchange rate, will raise the relative price of imports, presumably lowering their consumption. For a broad array of services and manufactured goods, a real devaluation will also reduce the cost to foreigners of domestically produced items. This will raise exports of goods and services, although the increase may take time to materialize. The real devaluation should also make it more attractive to export, by raising the domestic currency value of export receipts. Thus, a real devaluation should improve the current account balance directly, reducing imports and raising exports. A real devaluation should also have a secondary effect on the current account balance, because the rise in domestic prices following the devaluation will lower the real value of domestic financial balances, reducing expenditure generally, including imports.

Adjusting the nominal exchange rate will change the real exchange rate, so long as domestic prices do not move sufficiently to offset the effect of the change in the nominal exchange rate. Thus, a nominal devaluation will ordinarily induce a decline in the real exchange rate, albeit a smaller decrease because of the inevitable upward effect of a nominal devaluation on domestic prices. The real devaluation will be greater to the extent that other policies reduce the likelihood of compensating domestic price adjustments. For example, combining a nominal devaluation with tight monetary and fiscal policies will restrain domestic demand, limiting the subsequent rise in domestic prices. For this reason exchange rate adjustment is often combined with monetary and fiscal tightening as part of a comprehensive adjustment program featuring both expenditure-reducing and expenditure-switching measures.

b. When is an exchange rate change needed?

Because the key variable for competitiveness and external balance considerations is the real rather than the nominal exchange rate, determining the appropriateness of the

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13This assumes that the higher costs of production arising from the devaluation, such as increased domestic prices for imported inputs, do not offset the rise in export revenues.
nominal exchange rate inevitably involves some judgment. No indicator of exchange rate overvaluation is perfect, because the equilibrium (real) exchange rate is an endogenous variable that responds to many factors, including changes in net capital flows. For example, a rise in a country’s real effective exchange rate may reflect higher capital inflows or increased productivity relative to the country’s trading partners. Nevertheless, the following events may signal that the exchange rate is overvalued:

- development or persistence of a noticeable parallel market in foreign exchange;
- a large and persistent external current account deficit; and
- a noticeable and sustained appreciation in the real effective exchange rate.

Overvaluation becomes increasingly likely in the presence of multiple signals. For example, the first two conditions characterized the exchange rate in Ghana and Uganda during the early 1980s, before the start of sustained adjustment and reform programs, when massive smuggling and currency substitution came to characterize those economies.

3. Coordinating stabilization measures

The appropriate set of stabilization measures for any adjustment program will depend on the nature, size, and likely duration of the country’s macroeconomic imbalances. Inflation and recession typically require adjustments to fiscal and monetary policy to affect domestic demand, although the precise measures will depend on the nature of the economic problems. For example, in early 1999 low nominal interest rates led many economists to recommend expansionary fiscal policy as a way of reviving economic demand in Japan. In addition, economists such as Paul Krugman advocated a modest expansion in the money supply to counteract deflation. By comparison, during 1998 and early 1999, when the Maastricht treaty limited the ability of many European Union countries participating in the EMU to relax fiscal policy, monetary policy was relaxed to address the deflationary pressures arising from the Asian and other crises and reduce high rates of unemployment.

External imbalances often require exchange rate adjustment, particularly when real exchange rate appreciation or the emergence of parallel markets signal a decline in competitiveness. Exchange rate adjustments played an important part in restoring stability and growth in a number of African countries, including Ghana and Uganda, where extreme overvaluation had led to massive disruptions in economic activity.

The choice of exchange rate regime also matters. Fixing the exchange rate at a highly competitive level was a critical component of the first stage of Poland’s adjustment and transformation program in 1989–90, for example. By contrast, adopting a flexible rate regime enabled Korea and Thailand to adjust to the dramatic changes in world capital markets following the Asian crisis, improving the current account position and contributing to the restoration of foreign exchange reserves in both nations.

To be effective, policy measures must be coordinated. Lax fiscal policy, for example, will undermine the effectiveness of tight monetary policy, raising aggregate demand and encouraging faster monetary growth at the same time that the monetary authorities are working to counteract these trends. In much the same way, expansionary fiscal and monetary policies will offset the real effects of a devaluation by encouraging inflation, requiring a larger nominal exchange rate change to achieve the same real depreciation. Thus, when establishing an adjustment program, it is important to adopt complementary policies. This will generally require a combination of expenditure-reducing and expenditure-switching
policies, together with policies to adjust key prices and indexation systems, so that both internal and external balance can be achieved.

4. Effect of stabilization policies on capital flows

In a world of increasing globalization and large capital movements, stabilization policies also affect net capital inflows. Authorities must consider these effects when developing an adjustment program. As noted earlier monetary tightening can exacerbate a capital inflow problem by raising domestic interest rates, thereby encouraging more inflows. The additional inflows will expand the money supply and put upward pressure on the exchange rate, weakening the external current account balance. Although sterilization may provide a short-term response, it is generally agreed that the costs of sterilization make it unsuitable as a long-term policy response (see, for example, López-Mejía’s chapter in this volume). By comparison, devaluing the exchange rate may in some situations undermine confidence among foreign investors and encourage net capital outflows, weakening the external position and requiring further adjustment to stem a decline in net international reserves. It is partly for this reason that many countries delayed depreciating their currencies under the Bretton Woods System, aggravating the final adjustment needed when a depreciation became unavoidable.

In an environment of substantial capital flows, fiscal policy can be especially useful. By reducing interest rates, fiscal tightening can offset the interest rate effects of monetary contraction, thereby reducing the incentives for additional capital inflows. Where the banking system provides a substantial share of budgetary financing, fiscal tightening will also slow the growth in the money supply. Tighter fiscal policy will also restrain an overheated economy, slowing the inflow of short-term capital that might otherwise finance speculative investments in construction and local stock markets. By comparison, when large capital outflows are the problem and maintaining the exchange rate is not the primary concern, stimulating fiscal policy under a floating exchange rate regime can help restore aggregate demand and preserve domestic incomes, particularly where outlays for unemployment benefits and other safety net programs are increased. Korea, Thailand, and Indonesia have all followed this approach in responding to their crises in 1997–98.

A more flexible exchange rate system can also help countries adjust more effectively to shifts in net capital flows. Allowing the exchange rate to appreciate, for example, following a rise in net capital inflows, may reduce further inflows, because market participants will anticipate that the resulting decline in competitiveness may weaken the current account balance and reduce the attractiveness of the currency. By the same logic, allowing the exchange rate to depreciate following net capital outflows can help restore equilibrium by boosting competitiveness and promoting an eventual improvement in the current account balance.
III. STRUCTURAL POLICIES AND THEIR RATIONALE

Stabilization policies can lower inflation, achieve a sustainable external position, and move an economy toward potential output. By themselves, however, they may be unable to achieve rapid economic growth and significantly higher real incomes. Attaining these latter objectives typically requires structural reforms as well as stabilization.

Structural reforms are designed to affect an economy’s productive capacity and productivity, although they can also have long-term macroeconomic effects. By addressing institutional rigidities and improving both the efficiency of factor use and resource allocation, structural reforms can raise the level of potential output in an economy, allowing internal and external balance to be reached at a higher level of real income. Structural reforms can also facilitate the adoption of stabilization measures, overcoming obstacles to the implementation of these measures and allowing policies to be sustained. This may come about, for example, by changing legal and administrative institutions, or by strengthening social safety nets to reduce the cost of adjustment to more vulnerable groups in the population.

A. Main Structural Reform Policies

A wide array of structural reform policies is available for raising growth and income. The following discussion provides a brief overview of the main measures.

1. Price adjustment and liberalization

Although pricing issues also have stabilization consequences, their structural repercussions are particularly important. Administrative control over prices remains an important obstacle to efficiency in many developing and transition countries. Many governments set prices for key production inputs, such as electricity, petroleum products, and telephone service, often because they are produced by government-owned or regulated monopolies. In this situation, imbalances arise because governments are reluctant to adjust controlled prices for higher costs of production, including those due to exchange rate movements. Such price controls, besides creating enterprise losses that burden the government budget (a stabilization issue), distort the allocation of resources, because consumers do not face the true relative cost of using the items subject to price controls. In many transition countries, the legacy of a large state enterprise sector means that government price controls cover many products. The reluctance to adjust prices can thus lead to widespread economic distortions, requiring many rounds of inflation-generating price adjustments before relative prices reflect world market levels. Only then can domestic financial policies effectively reduce inflation.

When price controls lead to distortions and resource misallocation, authorities will need to implement structural reforms. Besides raising administered prices to cover costs, if not to bring prices to world market levels, authorities may need to reconsider whether controlling these prices is desirable. Although there is a strong case for government regulation of prices set by monopoly producers, market forces, possibly supported by government policies to promote competition, should be sufficient to set prices for other goods and services, including those produced by state enterprises in a competitive environment. Thus, governments should liberalize prices where considerations of monopoly do not apply. This explains why price liberalization has played a major role in the
transformation of the former centrally planned economies. It remains relevant for economies that still have widespread price controls.

2. Tax, expenditure, and budgetary reforms

In many countries complex tax laws and inadequate systems of tax administration make it hard to raise sufficient revenue to finance important government services without large budget deficits and their attendant macroeconomic consequences. This has been a particular problem in the transition countries, where a major overhaul in the tax structure has been necessary to adjust the tax system to the needs of a market economy. Weak revenue monitoring and expenditure control systems add to the difficulties, making it hard to check the status of budget performance and keep spending plans on track. Many countries also use inefficient procedures for developing government budgets, making it difficult to incorporate revised macroeconomic forecasts in budget projections or apply program evaluations when setting spending priorities. Together, these problems contribute to fiscal imbalances and keep the government sector from providing the education, health, and other services needed to support private sector activity and facilitate growth.

Governments faced with the kinds of problems outlined here can choose from a wide variety of measures to address them. Tax reform, for example, can raise revenue by removing exemptions, requiring advance payments of estimated tax liabilities, imposing license fees or presumptive taxes on hard-to-tax groups such as farmers and small businesses, simplifying rate structures and payment procedures, and eliminating nuisance taxes. All of these options should facilitate taxpayer compliance and reduce the burden of tax administration.

Tax administration can be further strengthened by raising salaries for tax inspectors, which may reduce corruption and encourage the retention of competent staff, and by providing training and better equipment. On the expenditure side, budgeting expenditures at realistic levels, rather than imposing sequestration and across-the-board spending caps, will facilitate more productive uses of public funds, while careful monitoring and centralization of the release of funds in the finance ministry will reduce the risk of unauthorized expenditure.

3. State enterprise reform, privatization, and restructuring

In many countries large state enterprise sectors contribute to low productivity and slow economic growth. Because they are more subject to political influence and often face little competition, state-owned enterprises are frequently less efficient than private firms, and they experience higher costs and lower profits or sizable losses that contribute to higher fiscal deficits. The lower efficiency of state enterprises can also lead to poorer quality goods and higher prices for consumers. A large state enterprise sector can mean government control over prices for a wide array of goods and services, causing major distortions and resource misallocation in the economy. An extensive state enterprise sector can also mean less innovation, because the incentives facing managers encourage the pursuit of the “quiet life” rather than changes in products and production processes that can bring political difficulties or labor unrest.
To address these problems, adjustment programs in countries with large state enterprise sectors often include measures for state enterprise reform. Many countries have adopted privatization programs, returning factories and other facilities to private ownership while yielding one-time increases in revenue to the government budget. Restructuring programs have also been adopted for enterprises not privatized, including such measures as closing inefficient or money-losing production units, streamlining management, and establishing performance contracts for top executives. A key objective has been to "harden the budget constraint" for state-owned enterprises, so that they are forced to operate efficiently. Thus, in some countries the automatic recourse of state enterprises to budgetary subventions or loans from state-owned commercial banks has been terminated. In many countries, reform has also included selling company-owned housing and transferring responsibility for child care and medical facilities to the government. At the same time, restructured enterprises have sometimes been granted autonomy in setting prices.

4. Rationalizing social safety nets

The need for economic adjustment often reveals the inefficiency and ineffectiveness of existing social safety nets—government programs to ensure a minimum standard of living to the most vulnerable members of society. Different types of countries typically have different kinds of safety net programs, with different problems. For example, in many transition countries, social security programs (which provide pension and health benefits) have high costs and are typically funded through heavy payroll taxes on employers, sometimes discouraging foreign investment. In addition, unemployment benefits are often low and poorly administered, making it hard to develop the political support for implementing privatization and restructuring programs at state enterprises. In many developing countries subsidy programs are poorly targeted, providing small benefits at high fiscal cost to persons at all income levels and doing little to relieve poverty among the lowest income groups. By contrast, the main problems in many industrial countries involve public pension programs designed as pay-as-you-go schemes. Many of these programs have large unfunded liabilities that could exceed several times the level of GDP during the next few decades, as aging populations reduce the number of working persons per beneficiary. Further, high unemployment benefits and stringent employment regulations are thought to contribute to high unemployment rates in many Western European countries.

To ensure support for adjustment efforts and assist low-income households while containing fiscal expenditure, policymakers must give careful attention to social safety nets in any adjustment program. Where large social security systems threaten to impose heavy expenditure burdens, governments must develop programs that will bring benefits in line with projected revenues. Because the tax burden of most pay-as-you-go public pension systems is already substantial, averaging 15–30 percent of payrolls in most industrial and transition countries, and will be hard to increase further, program reforms will likely include changes on the expenditure side. Measures may include raising the general retirement age, refocusing disability programs, eliminating early retirement programs for women and workers in hardship industries, and transforming pay-as-you-go systems into prefunded or multipillar systems to allow savings-based resources to cover a much larger share of total
retirement benefits.\textsuperscript{14} Similar concerns involve public health care programs, where costs have risen with the aging of populations and the development of new and expensive treatments. Subsidy programs can be made more effective through better targeting. Many countries can achieve substantial fiscal savings while increasing benefits to the most needy by implementing measures to permit access only to low-income groups. One approach, used in Sri Lanka, gives low-income families coupons for limited amounts of basic commodities at subsidized prices. Another, used in Brazil, focuses benefits on areas where the poor live, rather than across the nation. In still other countries, authorities subsidize only those items that the poor consume disproportionately, such as particular types of bread. Another approach replaces subsidies altogether with cash benefits or, as Romania did in 1994, with a one-time adjustment in wages. Ukraine used a similar approach in adjusting charges for communal (housing) services to help households cover the cost of certain utilities. There households received cash payments to cover utility costs that exceeded 15 percent of their income.

5. Financial sector reforms

During the past two decades weak financial systems have been a source of serious macroeconomic problems in a growing number of countries. In some developing countries, such as Bangladesh and Tanzania, high interest rate spreads and the limited development of financial systems have seriously harmed economic growth and development. In other countries, notably Chile in the early 1980s and Japan from 1991 through 2000, heavy loan losses have constrained the ability of the banks to fund new loans, slowing growth and leading to calls for massive bank restructuring. In some Eastern European countries the absence of secondary markets for government securities for years constrained the ability of authorities to conduct monetary policy through open market operations, requiring instead that they rely on less efficient direct instruments for monetary control. In some transition countries government-owned banks offer inadequate intermediation services, thereby contributing to an excessively cash-based payments system. Moreover, many countries have had to bear heavy fiscal costs in recapitalizing banks as part of financial sector restructuring. In Indonesia, Korea, and Thailand, inadequate financial supervision contributed to the heavy use of short-term foreign borrowing to fund domestic investment. This led to unsustainable investment booms and an eventual economic collapse when net capital flows turned negative and the resulting depreciations in exchange rates triggered widespread bankruptcies, declines in output, and unemployment.

The many adverse consequences of weak financial systems and banking crises have led economists to make financial sector reform a prime element in many recent adjustment programs. During the past five years many countries have adopted measures to strengthen prudential regulation, improve bank supervision, and implement codes for securities and corporate regulation. In addition, the international community has moved to promote sound financial practices through the adoption of such measures as the Basle Committee’s Core Principles for Effective Banking Supervision and the IOSCO Principles and

\textsuperscript{14} For more analysis and policy options on this subject, see World Bank (1994), Chand and Jaeger (1996), and U.S. Congressional Budget Office (1999).
Recommendations for the Regulation and Supervision of Securities Markets (see IMF, 1998a). In Indonesia, Korea, and Thailand, the recognition that financial sector weaknesses were arguably the fundamental cause of their macroeconomic disturbances led authorities to place financial sector reform at the center of each country’s adjustment program. Moreover, the experience of these countries has led adjustment programs generally to focus much more on financial sector issues.

6. External sector reforms, trade liberalization, and convertibility

The IMF’s Articles of Agreement have long encouraged countries to adopt current account convertibility. Determining the conditions under which convertibility could be established was among the many issues explored in providing advice and support to countries in transition (see Greene and Isard, 1991). In recent years trade liberalization has assumed greater importance (IMF, 1998b). In part this reflects the success of the Uruguay and other rounds of trade negotiations in reducing trade barriers and tariff levels among industrial countries. It also reflects a long history of research showing that more openness and lower trade barriers are associated with higher rates of economic growth. Over the last decade most IMF member countries have established current account convertibility, as evidenced by adherence to the provisions of Article VIII, sections 2 through 4, of the Fund’s Articles of Agreement. In addition, many developing countries have reduced both tariff rates and nontariff trade barriers. Although trade restrictions remain an issue in many countries, the current frontier for policy reform is capital account convertibility.

Considerable research supports the view that countries benefit from liberalizing capital markets and that the effectiveness of capital account restrictions declines quickly over time (see, for example, Dooley, 1996). The events of the Asian and Russian crises of 1997–98, however, have shown the importance of an orderly approach to liberalizing capital markets, with the strengthening of domestic financial markets as a prerequisite to successful liberalization. Thus, in many countries, reforming domestic financial markets is under way not only for its own sake, but also to permit eventual capital account liberalization.

7. Improved governance and transparency of government operations

Questions of governance and transparency are among the structural issues that have received growing attention in formulating economic adjustment programs. Until recently, little systematic research had been done on the effects of government inefficiency, corruption, and lack of transparency on economic performance, although many anecdotal reports document how these factors have harmed economic activity and discouraged investment.

Recently, economists have examined the effects of fiscal transparency and identified several cases, such as New Zealand, where increased transparency appears to have contributed to lower inflation and general improvement in macroeconomic performance (Kopits and Craig, 1998). In addition, since 1995 a number of studies have shown the adverse effects, particularly of corruption, on economic performance. Mauro (1996), for example, has found that a one standard deviation improvement (equal to a 2.38 point increase on the Transparency International index of corruption, which ranges from a worst case of zero to a best case of 10) in corruption corresponds to a 4 percent rise in a country’s
investment to GDP ratio and a 0.5 percent rise in its real growth rate. Corruption also reduces foreign direct investment, because foreign investors view corruption as equivalent to a large and arbitrary tax on their operations (Wei, 1997). In addition, corruption reduces tax revenue and alters the mix of public spending, raising outlays for and lowering the productivity of investment projects while reducing spending for health, education, operations, and maintenance (Tanzi and Davoodi, 1997; Tanzi, 1998).

An important aspect of improving governance involves strengthening public institutions. In many developing and transition countries public health services remain underfunded and inadequately staffed, with low salaries causing health professionals to divert time to private sector activities or to charge side fees when delivering care. Tax administration agencies experience similar problems: low salaries encourage corruption, while poor funding and lack of experience constrain the ability of agency workers to give taxpayers information that could promote compliance and ease administrative burdens. Finally, legal systems in many countries pose serious obstacles to economic growth. Complex and outmoded legal codes, shortages of courts and judges, and in many cases rampant corruption make it hard for private parties to resolve disputes through the court system. This complicates business transactions, increases costs, and deters investment, particularly from foreign investors who can choose where to establish new projects.

Because institutions have a dramatic impact on a country’s economic climate, institutional reform can play an important role in increasing productivity and raising a country’s growth rate (Rodrik, 2000). Such institutional elements as administrative structures, court systems, and commercial laws need careful review in any comprehensive adjustment program. Institutional reform usually requires considerable time to implement, however, particularly if laws and regulations need rewriting and staff must be retrained. Hence, although it is important to introduce reform measures early in an adjustment program, full implementation of these measures and the regulatory benefits are likely to come over a period of years.

### B. The Interdependence of Stabilization and Structural Reform

Macroeconomic stabilization seeks to establish an environment of low inflation and sustainable balance of payments in support of long-lasting economic growth. Considerable research has accumulated showing that growth and structural reform are hard to sustain in the absence of stabilization. Thus, stabilization provides an essential foundation for economic growth. In addition, low inflation and a sustainable external position increase the likelihood that difficult but important structural reforms will succeed.

Structural reforms improve not only the economy’s productivity, but also the effectiveness of many stabilization measures. Trade liberalization, for example, may dampen the inflationary effects of a devaluation while allowing the economy to grow through access to foreign technology and experience. Strengthening financial sector regulation will help restrain an overheated economy by reducing the willingness of banks to finance speculative investment projects. Fiscal reforms, by allowing additional spending for health, education, and social safety net programs, may increase the acceptability of stabilization measures and contribute to higher economic growth. Policies to promote domestic competition may reduce prices while stimulating innovation, thereby lowering inflation while encouraging growth. Price liberalization and the adjustment of administered prices to cost-recovering or world
market levels are often essential to eliminate distortions that can also contribute to macroeconomic imbalances. Together, these and other structural reforms facilitate stabilization while enabling the economy to reach internal and external balance at a higher level of real income.

Successful reform often requires implementing several measures at once, or in close proximity. For example, the sustainability of price liberalization turns on the level of the exchange rate, among other factors. Liberalizing at too high a real exchange rate will undermine the competitiveness of domestic production. Thus, many countries that have liberalized their price systems have done so in the context of a major depreciation of their nominal exchange rate, Poland (1989–90) being among the most notable examples. Similarly, the restructuring of state enterprises requires at least the adjustment of enterprise prices, if not price liberalization, so that the restructured enterprises can earn profits, or at least cover their costs. More generally, policy measures need to be carefully coordinated. This includes both the coordination of structural and stabilization measures and the coordination of stabilization policies themselves.

IV. ADJUSTMENT AND GROWTH

Just as economic adjustment may be necessary for countries to achieve internal and external balance, stabilization and an appropriate structural framework are important to achieve sustainable economic growth over time. Although stabilization programs often reduce a country’s rate of growth in the short run, over the medium term countries with a stable macroeconomic environment—in particular, low inflation and a sustainable external position—can better sustain economic growth, thereby achieving better economic performance.

A. Stabilization and Growth

During the past decade a number of economists have found evidence that inflation tends to reduce a country’s growth rate. Much of this research has been cross-sectional, comparing countries with different growth and inflation rates to see whether growth is higher or lower for countries with different inflation rates. Since Fischer’s (1993) study, which highlighted the nonlinear relationship between inflation and growth, a number of papers have found evidence suggesting that the relationship appears to be complex, with growth decreasing once inflation exceeds some minimum level. The critical level has varied across studies. Sarel (1996), reviewing 87 countries over the period 1970–90, found the critical inflation rate to be 8 percent. Ghosh (1997), focusing on transition countries, found that countries with a real growth rate of at least 2 percent had, on average, inflation rates of 10 percent or less. Ghosh and Phillips (1998), analyzing a large sample of developing and advanced economies, suggest that economic growth may begin to decline at inflation rates as low as 2.5 percent. More recently, Khan and Senhadji (2000), examining inflation and growth across a large number of industrial and developing countries, have found that growth tends to decrease once inflation exceeds 1–3 percent in industrial countries and 7–11 percent in developing countries.
There is also evidence that growth declines, or turns negative, when inflation rises above a certain level and then turns positive again once the inflation rate recedes sufficiently. Bruno and Easterly (1995), studying a number of inflationary episodes in developing countries between 1961 and 1992, observed that the real economic growth rate fell, on average, from 1.6 percent a year to -1.2 percent a year once inflation exceeded 40 percent for two consecutive years. Growth then recovered after the inflation rate fell below 40 percent, with the growth rate averaging 2.6 percent during the period after the inflationary crisis. Easterly (1996) found similar results for 28 episodes during 1960–94 in which countries reduced inflation below 40 percent for at least two years, after having had inflation above 40 percent for two years or more. Real economic growth, which had averaged -1 percent a year when inflation exceeded 40 percent, rose to an average of 2 percent during the first year of stabilization and 4 percent during the second year. The experience of transition countries since 1990 also supports the connection between reducing inflation and achieving sustainable growth.

Papers by Fischer, Sahay, and Végh (1996 and 1997) on Eastern Europe, the Baltics, Russia, and other countries of the former Soviet Union have found that, on average, countries that stabilized first were the first to resume economic growth. In these countries, where the cumulative decline in recorded GDP exceeded 30 percent, GDP typically stabilized after the inflation rate fell below 50 percent, with growth resuming on average during the second year following the implementation of a stabilization program. The resumption of growth was most noticeable in Eastern Europe, in such countries as Poland and the Czech Republic, where stabilization programs were introduced first. However, a similar pattern emerged in the Baltics, Russia, and other countries of the former Soviet Union during 1994, and by 1997 positive growth had returned to most countries in the region.

**B. Structural Reforms and Growth**

Although stabilization appears to be a prerequisite for sustainable growth, satisfactory economic institutions—and reform of those institutions when major structural problems emerge—also seem necessary to maintain growth over the medium term. The experience of Asian countries provides ample support for this point. Studies of the East Asian “economic miracle,” such as World Bank (1993), have identified the important role of structural reforms in boosting growth in Hong Kong SAR, Indonesia, Korea, Singapore, and Thailand. In these economies price liberalization, trade reforms designed to open economies, heavy investment in schooling for persons at all economic levels, and the establishment of a regulatory climate conducive to investment all played an important role in fostering rapid economic growth. By comparison analysts such as Goldstein (1998) point to weaknesses in financial markets as a prime cause of the 1997–99 Asian financial crisis. Weak prudential standards and inadequate banking supervision played an important role in the sizable accumulation of bad loans in countries such as Indonesia, Korea, and Thailand, including massive amounts of lending for equity purchases and construction that, in retrospect, proved unproductive. In addition, lax regulation of corporate financial activities, which allowed cross-lending by companies in large combines (chaebols), contributed to the severity of economic decline in Korea.

Non-Asian developing countries also provide evidence for the importance of structural reform in creating sustainable economic growth. For example, much of Chile’s remarkable economic performance since the mid-1980s can be attributed to structural
reforms that dramatically changed major institutions in the economy (Goldsbrough and others, 1996; Mackenzie, Ormond, and Gerson, 1997). The replacement of Chile’s traditional state pension system with a defined contribution program, in which individuals invest their contributions in an approved investment fund, restored solvency to the state pension system and created a valuable supply of investment funds for Chilean firms, augmenting the capital market by as much as 50 percent and contributing to Chile’s high growth rate. Reforms in tax policy and administration improved revenue mobilization, allowing the budget to achieve many years of consecutive surpluses that have contributed to price stability and higher national savings. In addition, trade liberalization reduced the country’s previously high import barriers, fostering competition from foreign products that in turn boosted performance at local companies. Elsewhere in Latin America, Argentina’s adoption of a currency board, along with changes in labor law and other “second generation” reforms, was a major reason for the achievement of price stability and significant economic growth after 1990, following years of high inflation and stagnant real incomes. Structural reforms also played an important role in reviving the economies of such countries as Bolivia and Peru.

Structural reform has also played a key role in fostering and sustaining economic growth in the transition countries. In Poland, for example, price liberalization, the development of financial markets, and privatization contributed not only to stabilization and faster resumption of economic growth, but also to the reemployment of workers made jobless by the shrinking of the state enterprise sector. By comparison, the slow pace of privatization and enterprise reform help explain the much weaker economic performance of Romania since 1989, where economic crisis and the resumption of inflation have disrupted adjustment programs and halted economic growth several times. Weaknesses in structural reform, in particular delays in improving tax policy and administration, have also contributed to the difficulty of sustaining growth in the Russian Federation. There, and in many other countries of the former Soviet Union, the failure to reform taxes and curb government programs has forced government officials to tighten fiscal policy through massive expenditure arrears (Cheasty and Davis, 1996) that have encouraged tax evasion and that could rekindle inflation if the arrears are cleared through monetary expansion.

Finally, economic growth has also increased noticeably in industrial countries that have undertaken important economic reforms. In New Zealand, for example, the adoption of various laws to increase the transparency of macroeconomic policymaking and to establish clear incentives for the implementation of prudent monetary policy have contributed to the decline in inflation and rise in economic growth since the mid-1980s. Measures to reduce the size of government appear to have increased growth in Denmark (Tanzi and Schuknecht, 1995).

C. Adjustment, Growth, and Poverty

Recently, increased attention has focused on the effects of adjustment and growth on poverty and on the need for specific measures to foster poverty reduction. The recognition that adjustment programs can adversely affect the most vulnerable groups in a country has led economists to ask how these programs can be designed to minimize their adverse effects on the poor. In addition, widening income disparities in a period of worldwide growth have raised questions about the relationship between growth and poverty.
Although adjustment programs often require fiscal consolidation, programs can be developed that aim at promoting growth over the medium term while protecting or promoting the situation of poor households. Expenditure cuts, for example, can focus on such categories as the military and less productive capital outlays, sparing or redirecting expenditure toward such programs as primary health and education, which are of particular importance to low-income households. Similarly, for adjustment programs to succeed, it is often necessary to strengthen the country’s social safety net to ensure adequate support of the most vulnerable. In this regard, targeted income maintenance programs, including short-term government work projects and food subsidy programs for low-income families, can help address poverty and provide assistance for workers temporarily displaced by adjustment efforts.

Adjustment programs can also mitigate poverty over time, to the extent that they encompass structural reforms that lead to faster growth over the medium and long term. Research is now accumulating that economic growth, on average, reduces poverty. Dollar and Kraay (2000) have shown that the incomes of the poorest 20 percent of the population rise, on average, one-to-one with an economy’s overall growth rate, based on observations for 80 countries over 40 years. GDP increases (and decreases) tend to affect the poor about the same as the entire population. Various policy measures, such as trade liberalization, improved governance, and fiscal discipline, to the extent they raise per capita income, also stand to benefit poor households. In addition, reducing high inflation tends to have special benefits for the poor, given their much greater use of cash (and general absence of financial assets) that can be shielded from the effects of inflation. Thus, countries aiming at poverty reduction should focus their efforts on higher growth, drawing on the experience of many countries that have seen poverty decline in line with general growth.

V. CONCLUSION

Macroeconomic adjustment and structural reform are the ways in which countries respond to economic imbalances and promote economic growth. Macroeconomic adjustment is especially important for stabilization, whose aim is to achieve low inflation and a sustainable external position—the foundation for economic growth over the medium term. Structural reform is important to raise a country’s growth rate and, in some cases, facilitate the implementation of adjustment programs. Because countries want both stabilization and growth, adjustment and reform measures are often implemented simultaneously. Indeed, in recent years a whole line of research has developed illustrating the importance of stabilization—in particular a low inflation rate—to achieve satisfactory economic growth over the medium term.

A variety of policy measures is available to promote stabilization and structural reform. Fiscal and monetary policies can be tightened to reduce excess demand. In addition, the nominal exchange rate can be depreciated to adjust the real exchange rate, strengthening

\[\text{Dollar and Kraay (2000). Except for reducing inflation, where these authors find a supplemental effect, their results do not show much additional effect of policies on the incomes of the poor once the impact of the policies on average per capita income is taken into account.}\]
the balance of payments by reducing import demand and making exports more competitive. An even broader set of structural measures can be undertaken to address economic problems attributable to inappropriate government pricing policies, institutional rigidity, inefficient state enterprises, domestic monopoly, trade barriers, weak financial institutions and legal systems, and government inefficiency, including ineffective expenditure programs and poor tax administration.

In addition, governments can reform their social safety programs to cushion the effects of adjustment on vulnerable groups in the population while keeping the total cost of such programs consistent with a prudent fiscal policy. An adequate social safety net may be important not only in itself, but also to secure political support for adjustment measures. Well-designed safety net programs, along with well-targeted programs in health and education, increase the likelihood that faster economic growth will improve living standards at all income levels, thereby combating poverty and promoting equity. Finally, it is important to take poverty reduction into account when designing adjustment programs. This requires, for example, sparing or redirecting expenditure toward programs such as primary health and education, which have special importance for the poor, and seeing how existing government programs can be made more effective at reaching lower income households.
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