



## *Fiscal policy for stabilization and adjustment*

The fiscal crisis facing most developing countries—and the related problems of external debt, inflation, and recession—have called new attention to the importance of sound fiscal policy. Although country circumstances vary greatly, fundamental principles of fiscal management apply everywhere. This chapter describes these principles and then applies them to three different issues: the debt troubles of the middle-income countries, the problem of cycles in commodity-exporting economies, and the task of adjustment in the severely resource-constrained economies of Sub-Saharan Africa.

One of the most important aspects of fiscal policy is the management of the public sector's deficit—the excess of its spending over its revenue (see Box 3.1). Deficits in themselves do not automatically imply macroeconomic problems. If the use of public resources is sufficiently productive, future income can be generated to cover the servicing costs of any debts incurred. If expenditures rise owing to temporary factors, such as wars or natural disasters, then deficits may be justified as a way to spread the cost over several years. Deficits can be more easily absorbed by countries with high rates of domestic private saving and well-developed capital markets. Thus a relatively high deficit need not cause problems in an efficient, high-saving economy, whereas in a low-saving, highly distorted one, even a small deficit might be destabilizing. A prudent fiscal policy can therefore be defined as one that maintains the public deficit at a level that is consistent with other macroeconomic objectives: controlling inflation, promot-

ing private investment, and maintaining external creditworthiness.

### **Fiscal policy and macroeconomic performance**

The extent to which any given public sector deficit can be reconciled with broader macroeconomic goals depends largely on the way it is financed. A deficit must be funded by the private sector lending the government some of the excess of its saving over its own investment, by foreigners lending part of their savings, by printing money, or by some mixture of the three (see Box 3.2). Too great a strain on any of these sources of finance can create macroeconomic imbalances. Overreliance on domestic borrowing may mean high real interest rates and falling private investment. Overreliance on foreign borrowing can cause appreciating real exchange rates, widening current account deficits, unsustainable external indebtedness, and dwindling foreign exchange reserves. Overreliance on money creation may prompt higher inflation. Viewed from the alternative perspective of production and expenditure, an increased fiscal deficit is an additional claim on the supply of goods. The only ways to meet this extra claim are by importing additional goods from the rest of the world (that is, increasing the current account deficit), by driving up domestic inflation and interest rates to make the private sector buy fewer goods, or by increasing domestic production.

Figure 3.1 illustrates the link between fiscal deficits and current account deficits in four countries. Since the surplus of private saving over invest-

### Box 3.1 Measuring the public deficit

The correct way to measure the public sector deficit depends on the purpose. The most obvious objective is to measure the net claim on resources by the public sector; this in turn influences the external deficit, inflation, domestic interest rates, and employment.

A useful indicator would then be the public sector's net use of financial resources, the *public sector borrowing requirement* (PSBR). The PSBR represents the total excess of expenditure over revenue for all government entities, all of which must be financed by new borrowing net of repayment of previous debts. It is also called the "consolidated public sector deficit." Expenditure includes wages of public employees, spending on goods and fixed capital formation, interest on debt, transfers, and subsidies. Revenue includes taxes, user charges, interest on public assets, transfers, operating surpluses of public companies, and sales of public assets. Expenditure does not include amortization payments on government debt or accumulation of financial assets, while revenue does not include the drawdown of cash reserves.

The PSBR is the most comprehensive deficit measure, but it can be misleading in some circumstances. In countries with a high rate of inflation, part of the borrowing by the public sector is offset by the decline in the real value of their existing debts. A fraction of the interest payments by the public sector then compensates creditors only for the loss in the real value of the debts; it does not represent a real interest cost to the government. Sometimes the debt principal is explicitly indexed to inflation, in which case the indexation inflates the PSBR. Another measure of the public sector deficit for these cases is the change in real debt. The *operational deficit* is defined as the PSBR minus the inflation correction part of interest payments; it is sometimes called the "inflation-corrected" deficit. The difference can be significant. In 1985 in Brazil the inflation correction component of the indexed domestic debt was so large that the PSBR was 27.1 percent of GDP, while the operational deficit was only 3.5 percent of GDP.

The interest paid on debt is a result of past deficits

rather than current behavior. A measure of the current policy stance might therefore exclude all interest payments, yielding the *primary deficit*, also called the "non-interest deficit." The primary deficit measures how current actions improve or worsen the public sector's net indebtedness, and it is important for evaluating the sustainability of government deficits. Although fiscal deficits can be run indefinitely, the primary balance must eventually become positive to cover at least part of the interest on current debt. If public revenue and the economy as a whole grow faster than the real interest rate, then even the primary balance can remain in deficit. However, it is generally not possible in the long run to always grow faster than the interest rate. The relation between these deficit concepts is shown in Box figure 3.1.

The public sector should include the central government, provincial and municipal governments, decentralized agencies, and state-owned enterprises. Conventional deficit measures often include only the central government. This can give a very misleading picture when other public entities are running large deficits or surpluses. Even in comprehensive measures the public financial intermediaries are often excluded because of their special role as financing agents. On occasion these intermediaries, especially the central bank, have run large losses. These are sometimes called the "quasi-fiscal deficit." They usually arise because the central bank assumes the exchange rate or portfolio losses of private banks (see Box 3.3) or because the central bank directly engages in subsidized lending. The deficit of public financial intermediaries has macroeconomic effects similar to the deficits of other public entities; they should therefore be included in the overall PSBR. Measurement difficulties are formidable, however. Such losses are often omitted unless they are too large to ignore.

Another correction to the deficit is to remove the effect of temporary factors: the deviation of domestic income, commodity prices, and interest rates from their long-run values, and events such as tax amnesties. Sales of government assets could also be excluded,

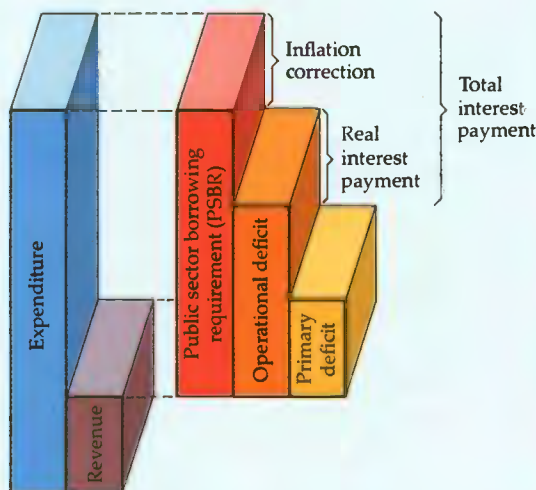
ment often cannot cover additional public deficits, these spill over in varying degrees as bigger current account deficits. Higher international interest rates and lower commodity prices also add directly to both types of deficit in many countries. So while foreign borrowing permits the fiscal deficit to expand without undue pressure on domestic inflation and interest rates, the buildup of external debt makes countries more vulnerable to external events such as global recession, falling commodity

prices, and sudden changes in the cost and availability of new foreign lending. If fiscal expansion is unsustainable, the continued accumulation of external debt only delays an adjustment that is all the more severe for being postponed.

#### *Fiscal deficits and inflation*

Governments can choose to finance their fiscal deficits by creating money, that is, by printing and

Box figure 3.1 The relation between different deficit concepts



since they are really financing deficits rather than contributing revenue. The result would be the *structural deficit*, that is, the deficit likely to persist unless corrective measures are taken.

All of these deficit measures provide their own insight into the economic impact of government finance. The PSBR measures the need for domestic or external financing (see Box 3.2). The operational deficit removes some of the distortions caused by high inflation. In debtor countries the primary deficit indicates the public sector's current contribution to debt difficulties. During times of abnormal commodity prices or domestic income, the structural deficit gives a picture of the long-run position.

spending currency. By issuing currency, governments are able to claim real resources; this claim is known as seignorage. The sum of currency holdings by the public and by banks is known as the money base, since it is the basis for monetary transactions performed with cash, checking accounts, savings accounts, and other types of monetary assets. Because the demand for monetary assets keeps increasing in a growing economy, the government can to a limited extent finance itself

through expanding the money base without causing inflation. When the rate of new money creation exceeds the growth in demand for money, however, inflation can result. (In countries where the currency is freely convertible, foreign exchange reserves might also be lost as people exchange the unwanted domestic money for foreign currency.) Individuals are, in effect, taxed by inflation because the real value of their money holdings falls: part of the government's seignorage then becomes an implicit "inflation tax." Banks holding reserves against deposits also face this tax, which they usually pass on to depositors in the form of lower interest rates on deposits. Inflation created by the printing of money may carry an extra fiscal benefit because it reduces the real value of domestic government debt. (When inflation is anticipated, however, nominal interest rates rise in advance to compensate bondholders for the inflation tax.)

Seignorage—the government's ability to claim resources in return for issuing currency—is usually limited by the demand for real money balances, which typically falls as inflation rises. Beyond a certain point an increase in money creation, and thus in the rate of inflation, may actually decrease seignorage if the demand for money falls sharply enough in response. Countries that have relied frequently on money creation as a form of public finance typically have a very low rate of money holdings. Brazil and Israel, for instance, have had modest levels of seignorage on currency—thanks to their low ratios of currency holdings to GDP—despite very high inflation (see Table 3.1). Only countries with extremely high rates of inflation—for example, Argentina and Bolivia—have temporarily generated seignorage on currency of more than 3 or 4 percent of GDP, but such seignorage rates are not sustainable.

Inflation, therefore, is often a fiscal phenomenon: it is caused by governments with no alternative source of deficit finance resorting to money creation at a higher rate than the growth in money demand. Any hope of controlling inflation without reducing government deficits is then in vain. Excessive reliance on money creation is particularly risky if the inflation itself worsens the deficits, because expenditures keep pace with rising prices while revenues do not. This means that still more money creation becomes necessary—further worsening the inflationary spiral.

To counteract the inflationary pressures of money creation, governments sometimes raise the reserve requirements on bank deposits. This in effect requires banks instead of the general public to

### Box 3.2 What is a “prudent” fiscal deficit?

One way to decide whether a public deficit is “prudent” is to determine whether financing it is consistent with the government’s other macroeconomic objectives—external creditworthiness, growth of private investment, and control of inflation, for example. To do this, financing must be broken down into its components. A good starting place is the identity stating that the sum of all investment in the economy must be equal to the saving available from both residents and foreigners (see Box figure 3.2, top). Foreign saving is the excess of foreigners’ income from the domestic economy over their spending in it. This is equal to the current account deficit in the balance of payments. Private saving is equal to GNP minus taxes and private consumption, which gives the private component of gross national saving. Public saving is the excess of public current revenues over current spending, and the public deficit can therefore be defined as public investment minus public saving. The first identity can thus be rewritten as shown in Box figure 3.2, bottom. *A public deficit must be balanced by a domestic private sector that saves more than it invests and/or by an external current account deficit.* The “prudence” of the public deficit depends on the level of private saving, the desired level

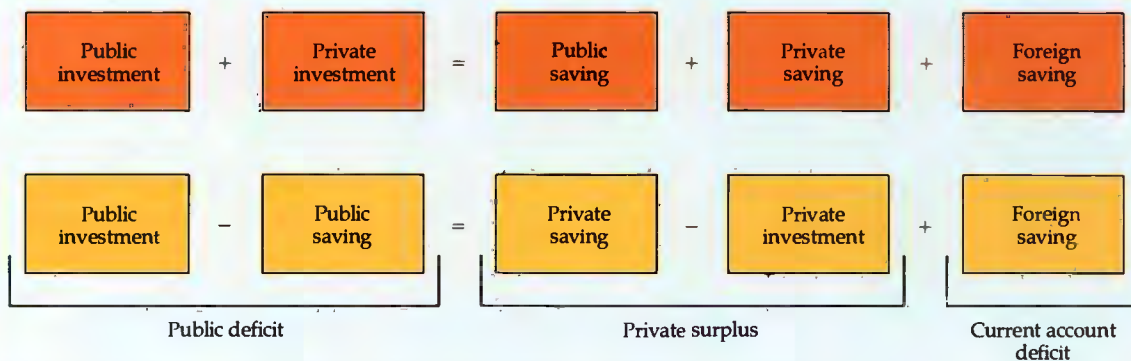
of private investment, and the desired current account deficit.

The financial flows corresponding to both the external current account deficit and the private surplus are also important. The amount and type of foreign and private lending will determine whether the public deficit is consistent with other macroeconomic goals, as described below.

External creditworthiness is sometimes defined as maintaining an acceptable ratio of gross external debt to exports. This is because exports determine the ability to service debt; a permanently increased debt-export ratio could impair creditworthiness. This suggests that public external debt should grow at the same rate as exports over the long run. Temporary increases in commodity exports should not lead to more public borrowing for the reasons discussed in the section on commodity export cycles in the text. If access to voluntary foreign lending has already been interrupted because of excessive borrowing in the past, then it makes sense to aim for a lower debt-export ratio, implying that the growth of debt should be held below the growth of exports.

The usual objective in managing foreign exchange

Box figure 3.2 The savings–investment identity and the financing of a public deficit



hold currency, so that the money base—but not the overall supply of money—expands. Alternatively, the financial system may be required to hold large amounts of government bonds in its portfolio at artificially low interest rates. While increased reserve or portfolio requirements avoid the inflationary effects of monetary expansion, the resulting

increase in the spread between deposit and loan rates hinders domestic financial intermediation. Savers react to the poor returns on deposits by storing their wealth in property or by taking it abroad. The squeeze on bank loans restricts domestic investment and forces investors to turn abroad for funds.

reserves is to maintain an adequate ratio of reserves to imports of goods and services. Deficits can be prudently financed by running down reserves only to the extent that reserves remain over this target. As imports grow, additional reserves have to be accumulated; the financing available from this source could therefore be negative.

Printing money to finance a deficit can result in inflation to the extent that it exceeds the growth in demand for money at the current level of prices. Higher reserve requirements are one way to avoid that result, but they widen the spread between deposit and loan rates, and can therefore be inconsistent with other objectives of efficiency in domestic financial markets and greater private investment.

Nonmonetary domestic borrowing from the banking system or from the nonbank private sector should be consistent with the macroeconomic objective of promoting private sector investment. One guideline is to avoid an increase in the share of public borrowing in domestic credit provided by the banking system. Another approach would be to target public domestic borrowing at a level consistent with the desired level of domestic real interest rates.

Delaying payments on debt service or on goods purchases—that is, increasing arrears—is an important source of finance in some countries. Arrears are implicit credits that have similar macroeconomic consequences to other forms of public borrowing, as well as jeopardizing future financing. A common objective is to reduce arrears either in absolute terms or as a proportion of GDP.

These criteria can be used to judge what level of fiscal deficit is prudent. Higher growth in exports, real demand for money, and overall financial savings means a higher deficit can be financed without violating the objectives of external creditworthiness, low inflation, or reasonable real interest rates. In general, faster economic growth brings bigger deficits within the bounds of prudence, because it usually implies faster growth of exports and demand for money. In a slowly growing economy with low financial savings and stagnant exports, the prudent fiscal deficit is likely to be low.

### *Sustainability of fiscal deficits*

Fiscal deficits have implications for the future as well as for the present. The debts created by borrowing have to be serviced. The public sector must generate the necessary resources through receipts from public investment, through additional taxes

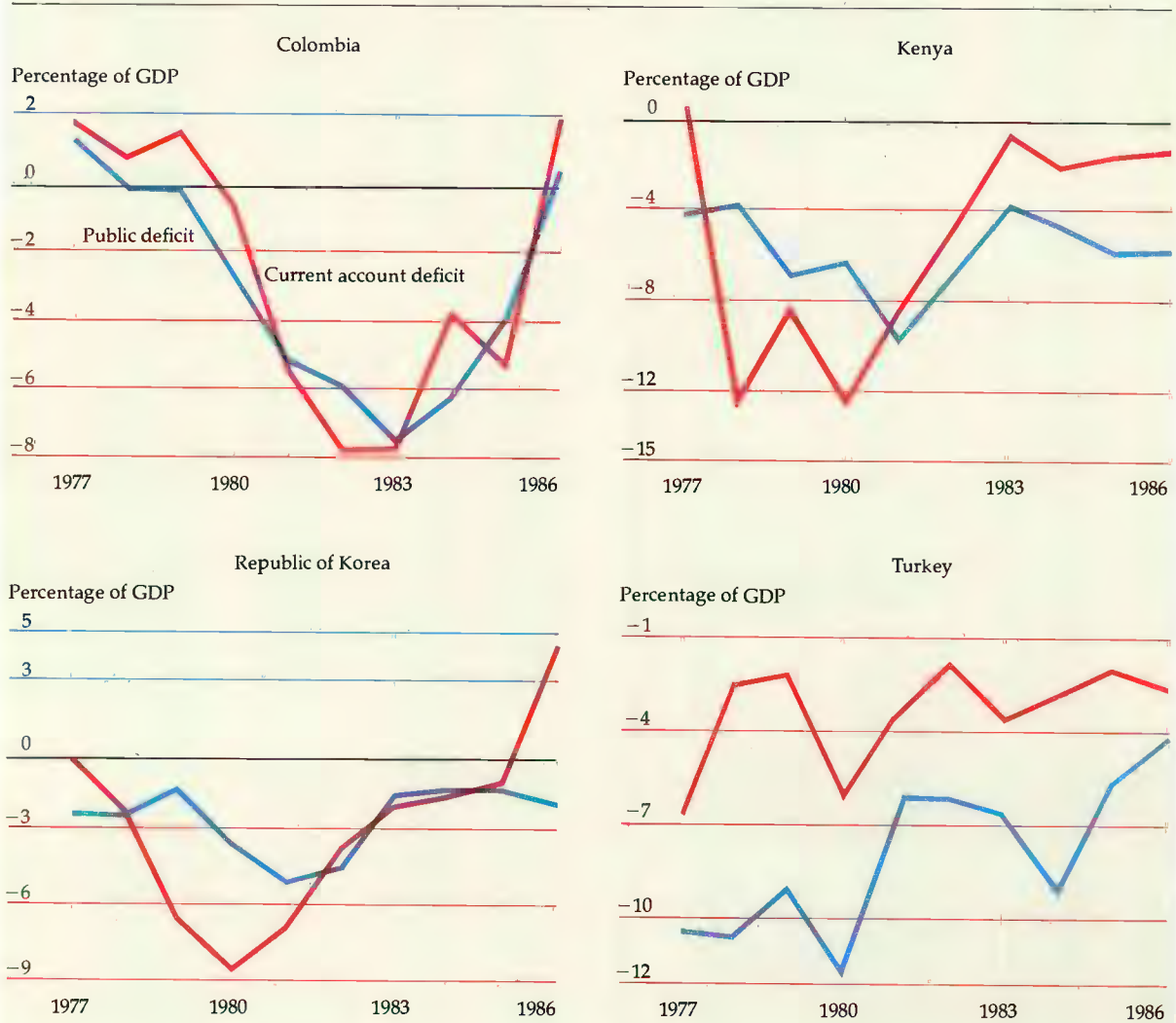
or spending cuts, or through money creation. Although governments can borrow indefinitely, in the long run they must claim enough resources to pay at least part of the interest; otherwise the level of debt will rise without limit as a proportion of GDP. This means that the so-called "primary deficit"—the consolidated public sector deficit excluding interest payments (see Box 3.1)—must eventually run into surplus to compensate for past deficits. The only exception to this requirement is if resources are used so effectively that the growth rate of the economy—and of public revenues—persistently exceeds the real interest rate on public debt.

The sustainability of fiscal policy is not an abstract concern. The private sector takes it into account, for example, when deciding whether to invest. If deficits are perceived to be unsustainable, then the private sector will expect future tax increases or money creation. If it predicts the latter, it will also expect higher inflation and currency devaluation. Savers can avoid this threat of implicit or explicit taxation by taking their capital abroad; this itself accelerates the breakdown of the unsustainable policies. The moment of truth for imprudent fiscal policy often comes with a financial or balance of payments crisis.

### *Stabilization versus structural adjustment*

In analyzing the fiscal crisis in developing countries, a distinction must be made between macroeconomic stabilization and structural adjustment. Stabilization addresses short-term problems that need to be dealt with urgently: inflation, loss of foreign exchange reserves, capital flight, and large current account deficits. Structural adjustment addresses obstacles to longer term growth: distortions in the incentives for production (for example, overvalued real exchange rates); controls on prices, interest rates, and credit; burdensome tariffs and import restrictions; and excessive taxes and subsidies. These tasks must be undertaken together. Careless structural adjustment can make the problem of stabilization more difficult, because the distortions are often a source of revenue to the government. For example, high tariffs provide public revenue as well as protection to domestic industry. Equally, structural reforms are unlikely to command credibility unless stabilization policies are in place. Investors will expect trade liberalization to be short lived if fiscal deficits imply an eventual balance of payments crisis. And fiscal stabilization can hamper structural adjustment. For

**Figure 3.1 Public deficits and current account deficits in four countries, 1977 to 1986**  
(percentage of GDP)



Notes: The public deficit for Turkey includes only central government and state-owned enterprises. The public deficit for Kenya includes only central and local governments. The 1986 public deficit figure for the Republic of Korea is a budget estimate. Other public deficit figures are for the consolidated public sector.

example, cuts in public infrastructure spending to reduce the deficit may cause private investment to fall. Raising tariffs to increase public revenues may distort relative prices.

Stabilization is often associated with a domestic recession characterized by rising unemployment, sharply contracting imports, and falling real wages and living standards. Lower living standards are unavoidable when the previous level has been artificially raised by unsustainable policies. But the re-

cession can be damaging to future growth if it is too deep or too prolonged. The blow to the confidence of domestic investors may inhibit necessary new investment. The decline in the economy can also strain the financial system and impair its ability to finance new growth. Excessive cuts in spending risk a downward spiral of continually falling output. These risks make it vital to team contraction of demand induced by fiscal retrenchment with structural adjustment to increase output.

Some waste of resources can be eliminated with little effect on growth; other forms of fiscal restraint can be damaging. Incentives to expand exports reduce the contraction of imports necessary to restore external balance, and steps to promote savings lessen the fall in investment required to finance the fiscal deficit. Additional external financing can buy time for new supply incentives to take effect.

Stabilization and structural adjustment face different institutional constraints. Stabilization is often postponed, but it can usually be implemented when a crisis forces events. In contrast, structural adjustment seldom carries the same sense of urgency; its results are less obvious and more gradual. It often requires the support of a broader circle of policymakers than stabilization, which is typically undertaken at the behest of the central bank and finance ministry. Structural reforms are difficult, too, because they inflict visible damage on a few and bring less obvious benefits to many. These difficulties reinforce the tendency to pursue short-run stabilization to the exclusion of structural adjustment during crises.

*The interdependence of fiscal, monetary, and exchange rate policies*

Fiscal policy needs to be judged alongside the other main tools of macroeconomic policy: monetary policy and exchange rate policy. Macroeconomic imbalances are often addressed by tightening monetary policy. However, the governments of developing countries find it more costly to control the money supply than do their counterparts in the industrial countries. To tighten monetary conditions, they are usually forced to impose higher reserve requirements on banks or to induce the banking system to hold more government bonds. In their shallow financial markets this often provokes a bigger rise in interest rates than would be the case in the industrial countries. Private borrowers must therefore reduce their demands for credit more drastically by decreasing capital investment or by going abroad for foreign loans. Higher interest rates on existing private debt are also more likely to cause financial distress for private enterprises and thus to weaken the banking system in developing countries. Interest rate controls are

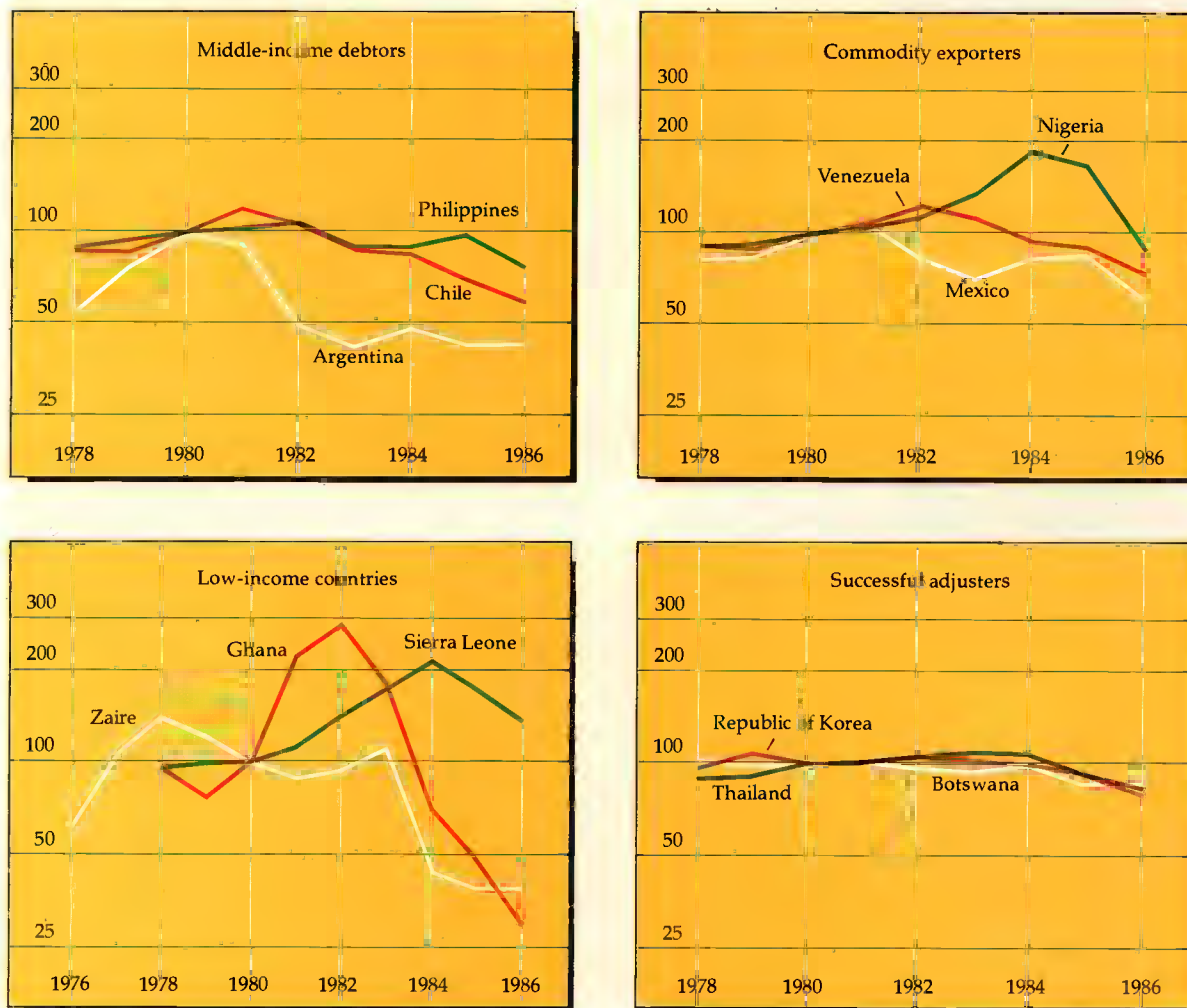
**Table 3.1 Revenues from seignorage on currency in selected countries, average for 1980 to 1985**

<i>Level of seignorage revenues and country</i>	<i>Seignorage revenues (increase in currency as a percentage of GDP)</i>	<i>Ratio of currency holdings to GDP (percent)</i>	<i>Currency growth (percent per year)</i>	<i>Inflation (percent per year)</i>
<i>High</i>				
Argentina	4.0	3.8	269	274
Bolivia	6.2	6.1	438	506
Ghana	2.2	6.1	45	54
Sierra Leone	2.4	7.7	35	43
<i>Moderate</i>				
Brazil	1.0	1.4	129	147
Israel	1.1	1.3	165	181
Mexico	1.5	3.7	50	58
Peru	1.9	3.1	92	97
Turkey	1.2	3.8	38	46
<i>Low</i>				
Bangladesh	0.6	4.0	16	12
Colombia	0.8	4.7	18	22
Côte d'Ivoire	0.7	9.2	8	7
Dominican Republic	0.7	4.6	16	15
Korea, Republic of	0.5	4.3	13	9
Nigeria	0.8	7.2	13	16
Venezuela	0.4	4.5	8	12

*Notes:* This table measures only the seignorage corresponding to currency held by the public, since seignorage on banks' holding of currency reserves is difficult to measure for some countries. The first column is calculated as the end-of-year currency outside banks (IFS line 14a) minus the end-of-year value of the previous year, divided by the current year GDP. The second column is the ratio of the average of beginning-of-year and end-of-year currency outside banks to current GDP. The third column is the percentage change in currency outside banks from end-of-year to end-of-year. The final column is the percentage change in the consumer price index (IFS line 64) from December to December. The geometric average of growth rates is used for columns three and four; the arithmetic average of ratios is used for columns 1 and 2.

*Source:* IMF, *International Financial Statistics*.

Figure 3.2 Real effective exchange rate indexes for selected countries



Notes: The vertical axis is in log scale. The real exchange rate is an index of relative domestic and international prices expressed in a common currency. (In technical terms it is defined as the domestic price index times the exchange rate—expressed as units of foreign currency per unit of domestic currency—divided by an international price index in foreign currency.) An increase in this index signifies that the foreign currency equivalent of the domestic price index is increasing faster than the international price index. This is referred to as a real appreciation of the domestic currency, which implies that the country exporters are less competitive in international markets, while foreign producers are more competitive in the domestic market. The real exchange rate index is often expressed in "effective" terms, which take into account the relative importance of inflation and exchange rate movements in each trading partner.

sometimes used to counteract these pressures, but this often leads to credit rationing and capital flight. So, more than in industrial countries, tight money is a poor substitute for fiscal discipline.

Exchange rate policy on its own is also unlikely to be successful at stabilization. Public deficits often result in real exchange rate overvaluation because the additional pressure on domestic demand

drives up wages and prices. Tight monetary policy reinforces this tendency by raising domestic interest rates and attracting capital inflows. Devaluations of the currency without an accompanying fiscal correction will eventually be offset by increases in domestic prices and affect the real exchange rate only temporarily. Equally, when wages and domestic prices do not fall readily in nominal terms, a



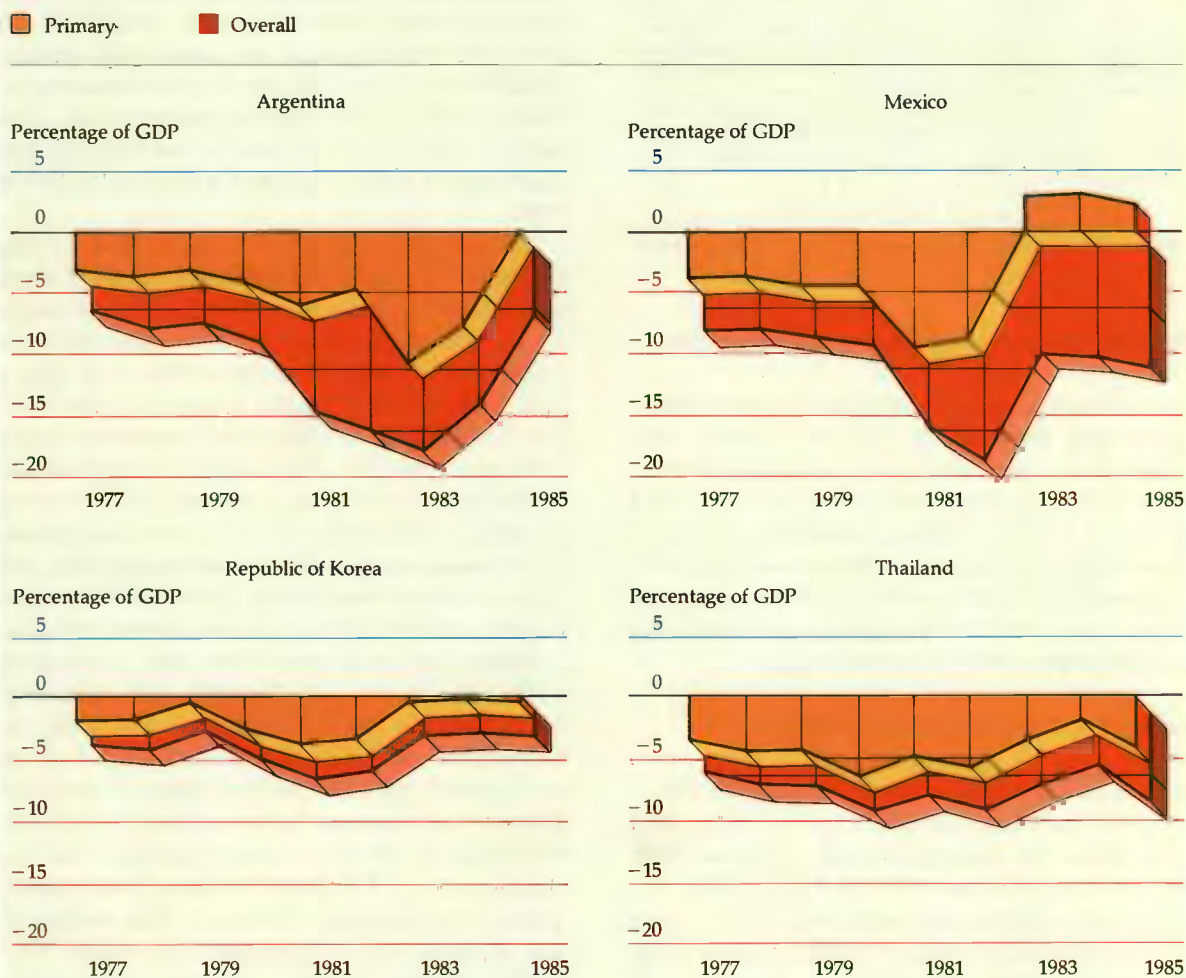
fiscal contraction without a nominal devaluation is also unlikely to change the real exchange rate.

Figure 3.2 shows the pattern of real exchange rate movements for a sample of twelve countries representing middle-income debtors, commodity exporters, low-income countries, and countries that avoided debt-servicing difficulties through successful adjustment. The countries that stayed out of trouble had remarkably stable real exchange rates, thanks partly to stable fiscal policies. The other three groups saw expanding fiscal deficits in the late 1970s and early 1980s, and their real exchange rates appreciated during this period. After 1982 fiscal austerity accompanied by nominal devaluation began in these countries. The result was a sharp depreciation of the real exchange rate.

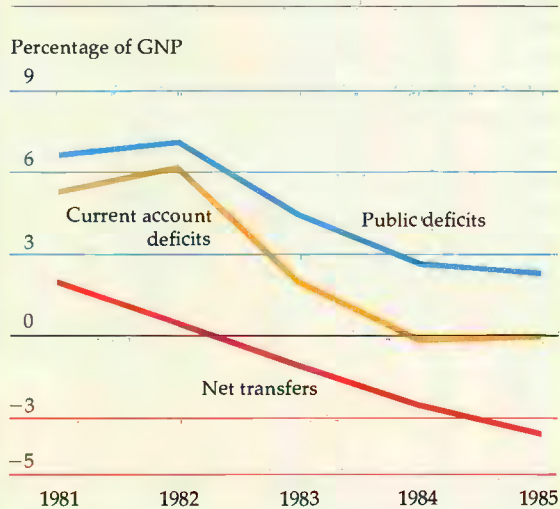
Nominal devaluations have an immediate effect

on public sector accounts because they revalue foreign currency income and expenditure in domestic currency. Whether the effect on the fiscal deficit is negative or positive depends on whether the public sector's spending on debt service and imports exceeds its income from exports and trade taxes and on how producer prices and public sector wages change. For example, an oil exporter would likely gain additional public revenue from a devaluation, while a debtor without significant public sector exports would more likely find that its extra expenditure was greater than its additional revenue. So the degree of fiscal squeeze needed to achieve a given reduction in the budget deficit following a devaluation varies according to whether the public sector is a net earner of foreign exchange.

**Figure 3.3 Overall and primary public balances for four middle-income debtors, 1977 to 1985**



**Figure 3.4 Net transfers, current account deficits, and public deficits for seventeen highly indebted countries, 1981 to 1985**



*Notes:* Net transfers are defined as disbursements of medium- and long-term external loans minus interest and amortization payments on medium- and long-term external debt. Public deficits refer to the consolidated public deficit, except for Costa Rica, Morocco, Uruguay, and Yugoslavia, where central government deficits are used. For Mexico and Brazil, two countries with high internal debt and high inflation, the "operational deficit" measure was used.

### The fiscal dimension of the external debt crisis

Fiscal deficits were a principal cause of the international debt crisis—both directly, because they meant greater public borrowing, and indirectly, because they encouraged the private sector to send its capital overseas. Most developing countries have recognized that fiscal discipline will help both to prevent future debt problems and to resolve the present ones. But the debts already incurred make fiscal adjustment all the more difficult.

#### *Fiscal management and external borrowing*

With a few exceptions the countries that developed debt-servicing problems in the early 1980s were those that had significantly increased their fiscal deficits in the late 1970s and early 1980s. Figure 3.3 shows the overall public sector balance and the primary balance for four middle-income countries. Two of these (Argentina and Mexico) developed debt problems, the other two (Republic of

Korea and Thailand) did not. The problem debtors allowed their primary deficits to rise before 1982. These inflows of debt were used partly to finance an increase in public consumption and transfers. The governments of many debtor countries also greatly expanded their capital spending. But the quality of these projects—and the corresponding rates of return—declined, so that many projects were unprofitable once international interest rates rose.

The aggregate current account deficit of the seventeen highly indebted countries widened in step with their aggregate fiscal deficit (see Figure 3.4). This growing external imbalance was supported by a huge flow of financial resources. Real exchange rates appreciated. Then in August 1982 the capital inflow came to an abrupt halt. Mexico announced that it could not service the principal on its debt, which precipitated a sudden loss of confidence in the creditworthiness of all the indebted developing countries. Voluntary commercial lending to most of them ceased, and they were forced to reschedule their debt service payments. Thanks to the fall in new lending and the increase in international interest rates, the net flow of resources to the seventeen highly indebted countries was actually reversed. The turnaround in net transfers was equivalent to almost 6 percent of GDP from 1981 to 1985.

Some countries managed to avoid debt-servicing difficulties altogether or recovered quickly from earlier debt troubles. Korea and Thailand maintained uninterrupted access to commercial bank loans, even though their borrowing was heavy both in absolute terms and relative to their GNP (see Table 3.2). Turkey recovered vigorously from a debt crisis after 1980 and managed to regain access to commercial borrowing. In these cases the key to avoiding or recovering from the crisis was sound fiscal management, stable real exchange rates, and export-oriented trade policy. Korea had two years of high deficits in 1981–82 but recovered quickly to a sustainable deficit ratio of less than 2 percent of GDP (see Figure 3.3). Thailand had somewhat higher deficits, but benefited from low initial indebtedness and high growth. Turkey lowered its fiscal deficit after 1980, then managed to absorb the deficits that remained by promoting private saving. Relative fiscal restraint stabilized real exchange rates in Korea and Thailand and enabled Turkey's to depreciate gradually. This helped to fuel vigorous export expansion. As a result Thailand's debt-exports ratio was held to a manageable rate of increase; in Korea and Turkey it fell.

**Table 3.2 External debt statistics for successfully adjusting debtor countries and highly indebted countries, 1980 and 1986**

Country or country group	Total external debt (billions of dollars)		Debt-GNP ratio (percent)		Debt-export ratio (percent)		GDP growth rate, 1980-86
	1980	1986	1980	1986	1980	1986	
<i>Successfully adjusting debtor countries</i>							
Korea, Republic of	29.7	45.1	49.3	47.4	131.8	107.5	8.2
Thailand	8.3	18.0	25.1	44.7	96.3	148.4	4.8
Turkey	19.0	31.8	34.1	56.5	517.9	293.6	4.9
Seventeen highly indebted countries	287.6	471.7	32.8	60.8	175.6	364.1	0.7

Most of the highly indebted countries responded to the cessation of lending by tightening their fiscal policies. This austerity helped them to avoid a general suspension of payments, but it was insufficient to solve their debt problem. By 1985, Argentina, Colombia, the Dominican Republic, Mexico, and the Philippines had all achieved primary fiscal surpluses. However, this improvement fully offset neither the earlier deterioration in fiscal deficits nor the decline in external financing. The interest on foreign debt accumulated in the earlier fiscal expansion significantly added to the fiscal burden. For example, in Argentina interest on the external debt was equivalent to 17.1 percent of current public revenues in 1985, while in Mexico it was 12.9 percent in the same year. As a result the consolidated public deficit improved by far less than the primary deficit. In Mexico, for example, large public deficits remained although the primary balance reverted to surplus.

Almost all the debtors supported their fiscal contractions by devaluing their currencies. Depreciated real exchange rates made debt service more burdensome, although for many governments this was more than offset by the rise in trade taxes and export revenues. The devaluations were generally associated with lower real wages. The real wage fell in Mexico by 38 percent between 1981 and 1986, in Brazil by 21 percent between 1982 and 1984, and in Turkey by 45 percent between 1981 and 1986. Lower incomes were necessary to compress demand and improve the external balance. But this decline placed a heavy burden on the poorest members of society at a time when social spending was already being sharply cut.

To reinforce the effect of devaluation and fiscal contraction on the external balance, many countries also tightened import restrictions after 1982. This interrupted attempts at import liberalization, which had been embarked upon earlier when foreign debt was freely available. In Mexico quantita-

tive restrictions were imposed on all imports, in contrast to an average of 60 percent of imports in the 1970s. (After 1984 the country moved back toward import liberalization.) Argentina subjected all imports to permits in 1984 and imposed a surcharge of 10 percent on imports in 1985. Chile raised import duties and imposed surcharges during 1982-84. Colombia increased tariffs and import restrictions in 1983-84 and imposed an import surcharge of 8 percent in 1984.

#### *Fiscal policy and private capital flows*

The fiscal imbalances of the late 1970s and early 1980s contributed to the external debt crisis in several ways—not merely through direct public borrowing. Unsustainable fiscal policies and the accompanying overvalued exchange rates helped to stimulate an exodus of private capital from the heavily indebted nations. The inconsistency of fiscal policy and exchange rate targets also led in some countries to large-scale external borrowing by the private sector.

Unsustainable fiscal deficits provoke capital flight because domestic savers anticipate a coming crisis that is likely to involve a major devaluation and new taxes on income and consumption. All estimates of capital flight are highly uncertain and controversial, but one recent study argued that it has been a significant factor in the debt accumulation of some countries. The estimate of cumulative capital flight from Argentina during 1974-82 was \$31.3 billion. Nearly half of Venezuela's external debt is estimated to be due to capital flight. The total for seven highly indebted countries was \$92 billion, compared with an aggregate debt of \$307 billion. Most of the countries that suffered from severe capital flight had free currency convertibility at the time it occurred; countries with strict capital controls, such as Brazil and Colombia, were less badly affected. Countries that maintained pru-

### Box 3.3 Fiscal deficits and financial crises

The public expenditures associated with subsidizing banking systems or resolving financial crises are often not included in the conventional measure of the public deficit. Such spending became important after the onset of the external debt problem in 1982, when several middle-income countries faced a banking system crisis. Highly leveraged enterprises in the debtor countries were unable to repay their debts. The banks that had been borrowing abroad on behalf of the enterprises were forced to absorb the losses. Some domestic banks had many of their liabilities denominated in foreign currencies, with the corresponding assets in domestic currency. Currency devaluations then meant sizable exchange rate losses. In Yugoslavia, for example, the foreign exchange losses of the commercial banking system averaged almost 2 percent of GDP between 1981 and 1983, and the banking system's equity dropped from 3 to -0.5 percent of total assets.

When a financial crisis occurs, policymakers face a dilemma: they need to stabilize the economy, which calls for a smaller fiscal deficit. But they also need to make substantial transfers to maintain the viability of the financial system, which implies a bigger deficit. In virtually all cases the central bank has borne the losses and financed them by printing money or by exchanging its bonds for the bad debts. Financial emergencies have not caused budget deficits, conventionally defined, to rise by much. A more meaningful measure of the public deficit, however, should include the losses of the central bank. Their economic consequences—including the impetus they give to inflation—are the same.

In Yugoslavia public sector entities, including the federal government, have been prohibited from borrowing from the banking system to finance their revenue shortfalls. Consequently public sector revenue has normally equaled or slightly exceeded expenditure. Some public expenditures, however, were financed by large contributions from enterprises, many of which were already incurring losses. These losses were financed, in turn, by credit from the banking system. Thus monetary growth was rapid despite fiscal restraint, mainly because the National Bank of Yugoslavia bore the banking system's portfolio and foreign exchange losses during the past few years. In 1986, for example, the government budget remained virtually balanced, but the losses of the National Bank of Yugoslavia were about 13 percent of national income. This

led to substantial money creation and inflation of around 70 percent in that year.

In Chile the government response to financial crisis was more transparent. The private sector was given a preferential exchange rate for the repayment of external debt, and the central bank bought the nonperforming assets of the commercial banks in exchange for bonds under a repurchasing agreement. Under this agreement the central bank made large transfers to the banks in 1983 to support their liquidity. If the measured public sector deficit had included these transfers, it would have been 9 percent of GDP, not 3 percent as conventionally measured.

Argentina's fiscal deficit was relatively low in 1986, at about 2 percent of GDP. But the central bank was also posting annual losses of about 2 percent of GDP. These resulted mainly from the difference between the interest rate the central bank paid on deposits from banks and the preferential rate it charged on loans given to the troubled commercial banks. Furthermore, since the recipients of these preferential rates are not servicing their debt with the central bank, the loans could be thought of as a fiscal transfer. If such transfers were included, the overall deficit would have exceeded 7 percent of GDP in 1986. This helps to explain Argentina's difficulties in servicing public debt. In Bolivia the government still has to address a grave problem: the banks suffered foreign exchange losses when the government converted the foreign currency debts of nonfinancial firms to local currency. The government has suspended foreign debt service, and it has not decided how those losses are to be allocated.

Financial crises led to similar problems in other middle-income countries. In Mexico the losses associated with exchange rate differences between dollar assets and liabilities of the nationalized banks added 4 percent to the consolidated public deficit in 1982. This contributed to the burst of inflation in that year. In Costa Rica, where the conventional fiscal deficit was only 1.8 percent of GDP in 1985, central bank losses were about 5.3 percent of GDP. This helps to explain that year's current account deficit of 5 percent of GDP.

Transferring the burden of financial losses to the central bank does not eliminate the effects of public spending arising from a financial crisis. Such transfers simply make the conventional definition of the fiscal deficit misleading.

dent fiscal policies, such as Thailand, were able to avoid severe capital flight even without capital controls.

Flight capital has largely failed to return since

1982. This indicates continued uncertainty about policy sustainability and thus about the investment climate. Fiscal contraction has been more painful as a result; a return inflow would have in-

creased the domestic savings available for productive investment. Capital flight also meant that the costs of stabilization were often inequitably distributed. The rich protected their income and wealth from devaluation and inflation by shifting assets abroad, while the poor suffered real wage declines.

Capital flight began in many cases because stabilization was postponed too long. Another contributing factor was lack of consistency in policy. Some countries tried to control inflation by fixing exchange rates or by depreciating them in real terms at a preannounced rate, but they could not sustain this policy alongside fiscal expansion. Argentina faced this problem during 1979–81; inconsistent policies led to massive capital flight and an exchange rate crisis in 1981, followed by a rapid real depreciation of the currency.

The interaction of fiscal policy with monetary and exchange rate policy also affected private borrowing. In Argentina private external debt grew from \$3.1 billion to \$11.2 billion between 1978 and 1982, while in Chile it rose from \$1.6 billion to \$8.7 billion. Tight money and insufficiently contractionary fiscal policy drove up domestic interest rates, while the comparatively low rate of currency depreciation made foreign loans seem cheap to private borrowers. Liberalized capital markets facilitated the inflow of foreign credits. The Chilean government ran a modest surplus until 1982, but even this was not contractionary enough to sustain a fixed exchange rate in the face of wage indexation, inflation inertia, and a deterioration in the terms of trade.

One oddity concerning the debt crisis, it might seem, is that large-scale capital flight and private foreign borrowing continued side by side. If the private sector expected a breakdown of policy and large devaluations, why did it keep borrowing? A partial answer is that many governments implicitly subsidized private borrowing. Argentina, Chile, Mexico, and Venezuela subsidized private debt repayment after the crisis broke, either through differential exchange rates or by explicitly taking on private foreign debt (see Box 3.3). To the extent that the private sector anticipated these subsidies, it was willing to keep borrowing. Distortions in financial markets also help to explain simultaneous capital flight and private borrowing. Where governments relied on large reserve requirements to finance deficits while maintaining strict monetary policy, the resulting interest rate spread between deposits and loans drove both savers and borrowers offshore. In effect the government's "tax" on

financial intermediation led the private sector to shift its financial intermediation abroad.

### *Inflation and internal debt management*

After 1982 the highly indebted countries had to rely much more on internal financing of their public deficits. The fall in net external finance (that is, in their current account deficits) was greater than the reduction in their public deficits. That in turn meant greater reliance on monetary finance and internal debt accumulation. In some countries reduced foreign finance combined with devaluation led to domestic financial crises (see Box 3.3). Some governments assumed private foreign debt to preserve the country's international credit standing—sometimes under pressure from commercial banks—or to bail out private borrowers. Others made substantial public transfers to keep their financial systems afloat. Such operations further increased the public sector deficit and the need for additional internal financing.

Large exchange rate depreciations and growing reliance on monetary finance caused inflation to accelerate in many of the debtor countries during their stabilization programs, despite falling fiscal deficits. Faster money creation led to increased revenues from the "inflation tax," which helped to finance the remaining public deficit. The behavior of this "tax" was quite unstable, however. Capital flight and more rapid turnover of the money stock had diminished the share of the money base in GDP; accelerating inflation was therefore needed to maintain the required financing. Governments resorted to conventional and unconventional ways of stopping inflation, with mixed results (see Box 3.4). Bolivia and Chile managed to stop runaway inflation through fiscal austerity, although both suffered recessions in the process. Argentina and Brazil tried an unconventional ("heterodox") mixture of price controls, wage policies, and monetary reform but failed to halt inflation for lack of supporting ("orthodox") fiscal measures.

The highly indebted countries were aware of the inflationary consequences of printing money. Some used higher reserve requirements on domestic bank deposits to raise seignorage revenues without loosening their monetary stance. This was important in Mexico in 1982, in Peru during 1984–85, in the Philippines in 1986, and in Venezuela in 1983. Government borrowing from the banking system also increased, either through forced bond purchases or through borrowing at market rates.

### Box 3.4 Stabilizing inflation: experiences in Latin America

Recent experience in Latin America gives some insight into the role of fiscal policy in fighting inflation.

#### “Orthodox” stabilization

*Bolivia.* Inflation accelerated in Bolivia when the government printed money to compensate for the abrupt decline in external financing in the early 1980s. This inflation itself worsened the fiscal deficit. As prices rose, people delayed paying taxes so that their tax liability would be lower in real terms. Revenues of the nonfinancial public sector dropped from more than 11 percent of GDP in 1981 to less than 5 percent by 1984. The consolidated public sector deficit exploded from 8 percent of GDP in 1981 to more than 27 percent in 1984. To cover this, the government printed money even faster. Even the suspension of debt service payments in 1984 could not arrest the spiraling inflation. In the twelve months preceding August 1985 prices rose by 24,000 percent.

A newly elected government unveiled a far-ranging stabilization program in August 1985. This ended controls on most prices, wages, and interest rates and tightened fiscal and monetary policies. Public sector revenues were increased by reforming the tax system and raising public sector prices (for oil, gas, electricity, and transport), while public sector wage costs were reduced through cuts in employment and wages. The program stopped inflation almost instantly. Because the inflation was so severe, peso prices were being set by converting dollar prices into pesos at the parallel market exchange rate. Once the exchange rate had been stabilized, which was possible because of fiscal and monetary austerity, the peso inflation rate rapidly converged to the dollar inflation rate prevailing in the world markets. However, the program has had limited success so far in restoring output and incomes.

*Chile.* Another successful anti-inflation program has been implemented in Chile. With some reversals, persistent fiscal and monetary austerity has gradually lowered inflation from triple-digit rates in the 1970s to around 20 percent at present (see Box table 3.4). A failed attempt at curbing inflation through a fixed exchange rate led to a large devaluation in 1982, followed by a recession and financial crisis. But fiscal restraint was broadly maintained, so inflation remained lower. The adoption of a flexible exchange rate policy and the abolition of formal wage indexation, along with a restrained monetary policy, allowed fiscal austerity to have the desired anti-inflationary effect. However, per capita income declined by 18 percent during 1982-83, partly because of the ill-fated exchange rate experiment and the decline in Chile's terms of trade. Growth has since resumed, with per capita income rising by 10 percent between 1983 and 1986.

#### “Heterodox” stabilization

The costs believed to be associated with conventional anti-inflation policies have led to a search for new methods. In 1985-86 Argentina and Brazil adopted an innovative policy mix of wage and price controls, monetary reform, fixed exchange rates, and fiscal adjustment. These programs—the Austral and Cruzado plans, respectively—were called “heterodox” in contrast to the “orthodox” mix of fiscal and monetary stringency.

*Argentina.* After the Austral Plan was introduced, inflation fell from monthly rates of 25 percent in May 1985 to 2 percent in the second half of the year. The fiscal deficit fell substantially because falling inflation and improved tax administration meant additional real revenues (equal to about 6 percent of GDP). The pro-

In some cases public bonds were also sold to non-bank institutions or individuals.

Greater reliance on domestic finance and higher reserve requirements drove up real domestic loan rates. As shown in Table 3.3, real loan interest rates reached extreme levels in many countries in 1985 or 1986. Often abrupt shifts in policy also led to great variability in real interest rates. In many cases domestic interest rates were higher than international rates—even when corrected for currency depreciation. So the substitution of internal for external debt—far from alleviating the debt crisis—has actually increased the public debt bur-

den. In Mexico public domestic interest payments reached 24 percent of current public revenues in 1985. In Brazil domestic public debt more than doubled in real terms from 1981 to 1987. Without further fiscal adjustment some countries risk being trapped in a spiral of rising real interest rates, growing domestic debt service and fiscal deficits, or faster money creation and inflation.

Even countries with lesser external debt problems—Thailand and Turkey, for instance—have faced a growing pressure on domestic interest rates from domestic financing of public deficits. Thailand chose to forgo the inflation tax by follow-

**Box table 3.4 Inflation in selected heavily indebted countries, 1971 to 1987**  
(CPI percent December-over-December)

Country	Average, 1971-80	1981	1982	1983	1984	1985	1986	1987
Argentina	121	131	210	434	688	385	82	175
Bolivia	20	25	297	328	2,176	8,170	66	11
Brazil	38	101	102	178	209	249	64	321
Chile	131	10	21	23	23	26	17	23

Source: 1971-86, IMF, *International Financial Statistics*; 1987, World Bank data.

gram was accompanied by new loans and debt rescheduling from both private and official external creditors. The economy began to grow again by the last quarter of 1985, when growth of 5.7 percent was achieved. In 1987, however, unfavorable movements in interest rates and export prices caused the external balance to deteriorate. Public spending had increased; when revenues again declined, the fiscal deficit grew. Inflation accelerated, although it remains below the pre-Austral rate. In retrospect the failure to reform taxes and cut public spending prevented the needed adjustment in public deficits.

*Brazil.* The Cruzado Plan was a failure. Inflation was even higher after the breakdown of the plan than before. Fiscal deficits significantly exceeded projections after price controls were put in place. The controls themselves contributed to the deficits of public enterprises, whose prices fell in real terms. The deficit was contained in the short run only because of a large fall in domestic debt service thanks to the "de-indexation" of government bonds. Real wages were increased by 8 percent at the beginning of the plan and continued to rise gradually thereafter. Fiscal stimulus and higher

wages led to a private consumption boom. This rapidly eroded the trade surplus required for external debt service and created shortages of domestic goods. In 1987 inflation accelerated, a new price freeze was imposed, and payments of interest on commercial external debt were suspended.

#### The necessity of fiscal correction

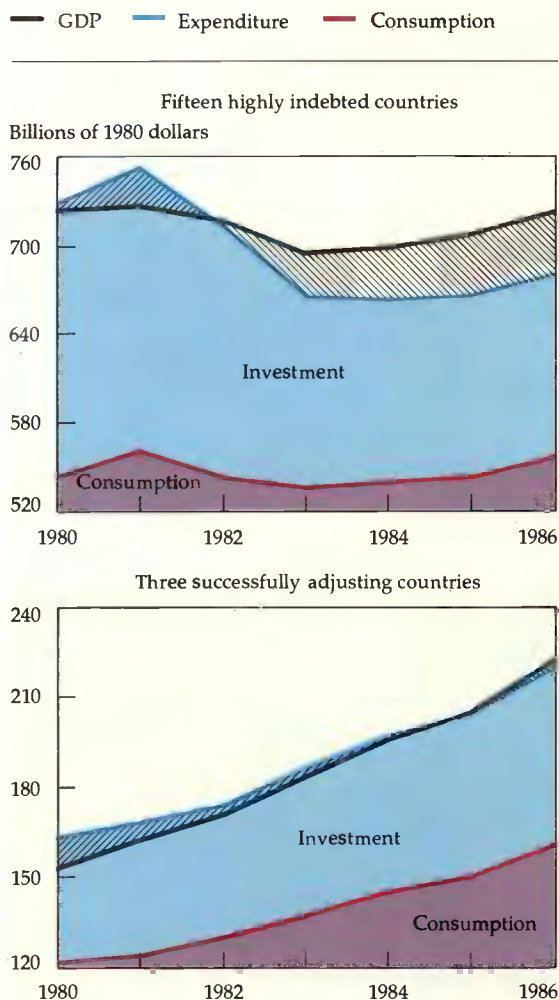
The attempts to stabilize prices through "heterodox" measures were based on a misreading of the causes of inflation. It was assumed that inflation was largely "inertial," meaning that it was caused by spiraling wage and price increases arising from indexed labor contracts. This undoubtedly explained some of the persistence of inflation in Argentina and Brazil (in contrast to Bolivia, which did not have indexed contracts). However, the financing requirements of the public sector were the more fundamental cause. The lack of sufficient external finance and continued high deficits meant that money creation had to continue in Argentina and Brazil. Although "heterodox" measures might speed the fall in inflation in the presence of fiscal correction and may help in building political consensus for reform, they are of little use by themselves.



**Table 3.3 Real loan interest rates for selected countries, 1980 to 1986**  
(percent)

Country	1980	1981	1982	1983	1984	1985	1986
Argentina	26.8	8.7	-43.2	-22.5	-27.1	-9.2	19.6
Brazil	-2.5	4.9	29.8	-3.7	23.7	26.1	-7.8
Indonesia	..	..	10.5	9.5	16.5	20.0	17.5
Malaysia	1.0	-1.1	2.8	7.1	7.2	11.2	9.3
Mexico	3.5	5.2	-23.5	-23.0	2.5	9.2	15.4
Philippines	..	4.5	7.0	6.0	-19.7	21.1	17.0
Thailand	-4.0	2.9	8.4	13.3	19.2	15.2	15.2
Turkey	-38.0	-3.0	5.0	15.0	0.0	6.0	17.0
Uruguay	-8.4	9.3	26.4	14.5	8.9	2.4	0.3

Note: Calculated as the average nominal lending rate for each year minus the consumer price inflation for that year. Countries were selected on the basis of availability of data.

**Figure 3.5 Aggregate production and expenditure in highly indebted and successfully adjusting countries, 1980 to 1986**



*Notes:* The aggregate for highly indebted countries excludes Brazil and Colombia because of the atypical adjustment pattern in those countries. The three successfully adjusting countries are Republic of Korea, Thailand, and Turkey. The aggregate is computed by converting the domestic currency value in 1980 prices into dollars using the 1980 exchange rate, and then summing all dollar values. The difference between domestic production (GDP) and expenditure (total consumption plus investment) represents the net resource balance, which is the same as the net resource flow from the domestic economy to foreigners. An excess of expenditure over GDP represents a resource deficit (net resource inflow) , while a surplus of GDP over expenditure is equivalent to a resource surplus (net resource outflow) .

the cautious external borrowing policies of the government led to greater reliance on internal financing. Turkey experienced both high domestic interest rates and inflation as a result of moderately high fiscal deficits. In both cases the effect of high interest rates was cushioned by continuing access to international borrowing and by steady economic growth. Their mix of policies averted financial crisis. Nonetheless, the combination of tight monetary policy and moderately high fiscal deficits cannot continue indefinitely without causing internal or external debt difficulties.

#### *The dynamics of growth and debt*

As discussed above, stabilization programs have set back structural adjustment and growth in many highly indebted countries, despite well-meaning efforts to the contrary. Tariffs and quotas have been used to cut imports. Some countries liberalized later, but revenue requirements left little room for widespread tariff reductions. Financial liberalization has been set back by increased government demands on the banking system, higher reserve requirements on deposits, and financial crises. The only significant change in supply incentives has been the real devaluation of domestic currencies. Output has declined sharply during these stabilization programs. Per capita incomes in the seventeen highly indebted countries fell 9 percent during 1980–87. Despite the need to generate current account surpluses, the aggregate exports of the seventeen countries actually contracted in value terms, from \$167 billion in 1981 to \$147 billion in 1987. Lack of success in expanding domestic supply meant that the response to the cutoff of lending was heavily focused on contracting aggregate demand. Real domestic expenditure (the sum of total investment and consumption, public and private) fell precipitously after 1981 in the heavily indebted countries in order to generate a surplus of output over expenditure to make the required resource transfer (see Figure 3.5).

Investment bore the brunt of this cutback; consumption stayed roughly constant in absolute terms. High and volatile domestic interest rates against an uncertain economic background discouraged private investment. Public investment was cut sharply as a fiscal austerity measure. To the extent that productive investments were cut or delayed, growth of output suffered. If resource outflows could have been avoided, it would have been possible to keep investment at its level of the early 1980s. Countries that did not need to gener-

ing tight monetary policies. Interest rates increased, and public domestic interest payments reached 13 percent of current revenues in 1985 as



ate a resource outflow were able to maintain investment, in some cases slowing consumption to do so. Partly through strong supply incentives, countries such as Republic of Korea, Thailand, and Turkey have maintained reasonable debt ratios through strong income growth, without cutting total spending. Figure 3.5 shows the contrast between the steadily rising output, expenditure, and consumption of these three countries and the unhappy experience of their highly indebted counterparts.

Why has the private sector in many highly indebted countries responded weakly to the export incentives implied by the depreciation in the real exchange rate? Although the fall in commodity prices partly explains the poor export performance, another factor is the great variability of fiscal policy, real exchange rates, and real interest rates during the past five years (see Figure 1.7 on the export volume performance of Latin American countries). That degree of uncertainty makes investors reluctant to commit themselves, even if incentives are (temporarily) favorable. The more successful economies generally pursued more stable macroeconomic policies.

To sum up, many middle-income countries developed debt problems because of excessive fiscal expansion and overvalued currencies, which made them vulnerable to the rise in global interest rates and the fall in export prices after 1981. Responding to the cutoff of commercial lending, they have achieved considerable fiscal adjustment by cutting spending and generating additional revenue. Growth has been severely curtailed, however, because of the reliance on investment cutbacks, import rationing, and distortionary revenue increases. Inflation has accelerated in many cases because of large nominal devaluations and increased reliance on monetary finance of the remaining budget deficits. Heavy burdens of internal debt have also developed where governments have relied on nonmonetary domestic finance. Real wages have fallen, and the incidence of poverty has risen.

There are no easy remedies. The experiences of the more successful countries illustrate that prudent fiscal policy and timely adjustment are essential before a crisis becomes too severe. This is an important lesson for countries that have not yet reached the crisis stage. However, the lesson comes too late for most highly indebted countries. The challenge for them is to continue shrinking fiscal deficits without further contracting domestic demand. Cuts in public spending should prefera-

bly be selective rather than across-the-board. New revenues might come from increased user fees and tax reforms to close loopholes and expand tax bases. Lower deficits would allow less reliance on domestic financing and thus lower inflation and interest rates, which would permit renewed growth of the private sector. Redirecting spending away from import-intensive uses and providing incentives to expand exports would reduce the need to restrict demand. Moderate capital controls will probably remain necessary in most countries to restrain short-term capital outflows, at least until full stabilization is achieved. The adjustment task would be far easier if the international environment improved. Lower international interest rates, improved flows of financing to highly indebted countries, or selective debt relief would enable public and private investment to recover and would allow the indebted countries to grow out of their debt problems if appropriate domestic policies are pursued.

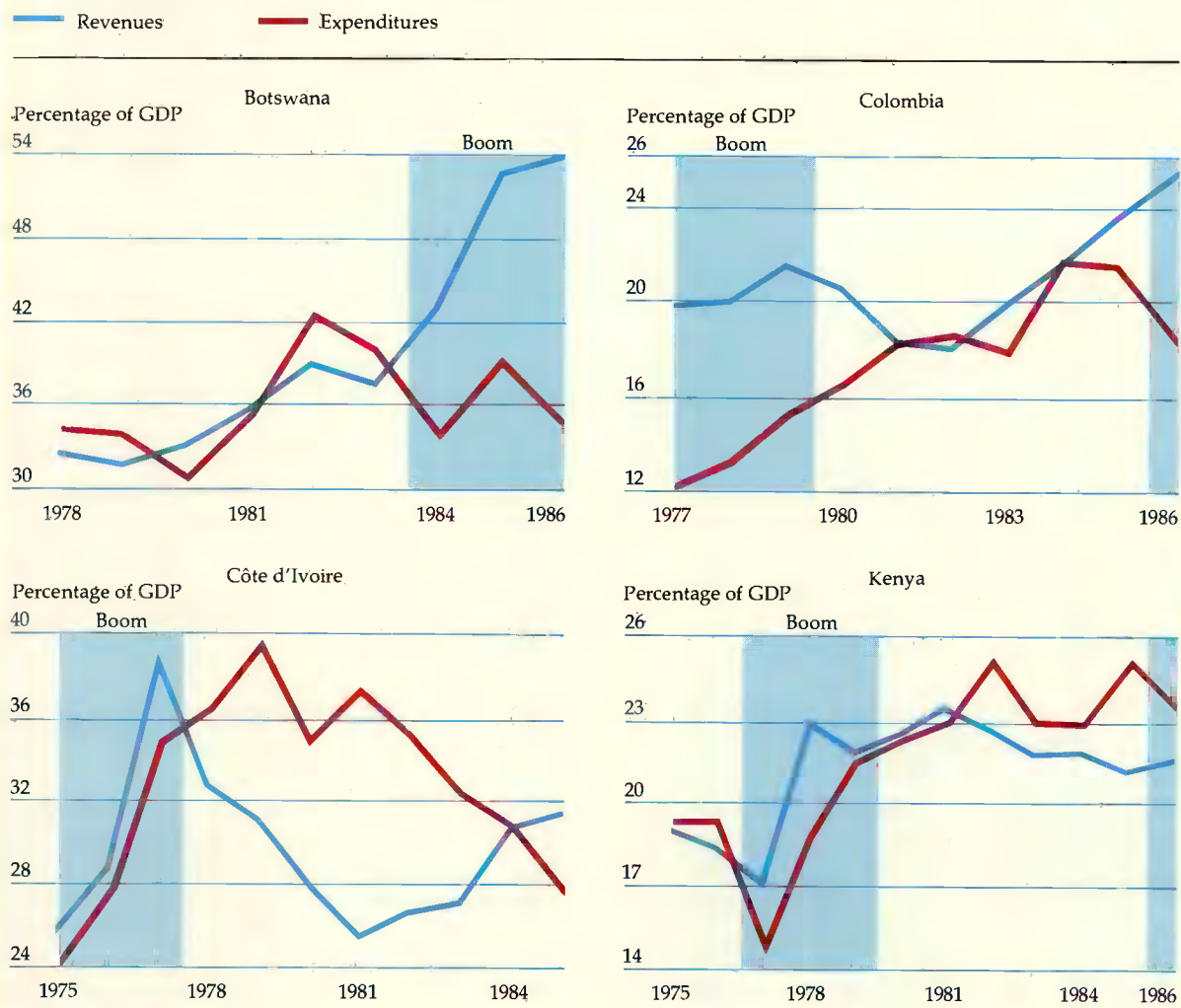
### **The fiscal management of commodity export cycles**

Many developing countries rely on one or two primary commodity exports as their major source of foreign exchange. Often these exports also contribute revenue to the government budget, either through direct state ownership or through export taxes. Cyclical swings in commodity prices have had a large effect on both external and fiscal accounts. The price increases of the 1970s and the later unexpected collapses created fiscal crises in many countries. With hindsight it is clear that resources generated by the "booms" (periods of high export prices and volumes) were managed in a way that left countries vulnerable to the coming collapse. As a result some countries may even be worse off for having experienced a boom.

#### *Country experience with commodity booms*

Figure 3.6 shows the behavior of public spending and revenue before and after commodity booms in selected countries. It shows a remarkable regularity. In most countries public revenue accelerated dramatically during the boom. This was sometimes due to direct state ownership of the enterprise producing the export commodity, as in oil exporting countries such as Indonesia, Mexico, and Nigeria. Elsewhere it resulted from the increased profits of publicly owned marketing boards or stabilization funds. When world prices

Figure 3.6 Public revenues and expenditures during commodity booms



Note: Both revenues and expenditures exclude transfers, so their difference is not equal to an overall public sector balance. Figures for Kenya are for central government only.

went up, the marketing boards did not raise the prices they paid to producers proportionately. Marketing board revenues in Côte d'Ivoire, for example, reached a remarkable 16.5 percent of GDP at the peak of the cocoa and coffee boom of 1977. Even in countries where the profits of the commodity boom remained mostly with the private sector, the boom indirectly increased government revenue. For example, in Kenya the coffee sector is in private hands, and producer price increases more or less matched world price increases. Yet government revenue increased from 17 to 23 percent of GDP during 1977-78 thanks to increased

trade flows and higher export and import tax revenue.

When the boom ended, government revenue declined sharply. Commodity-producing state enterprises suffered sharply lower earnings. In other countries the marketing boards absorbed some of the decline in prices, which led to substantial losses. For example, public revenue in Côte d'Ivoire fell from 37 percent of GDP in 1977 to only 25 percent in 1981. Revenue from trade taxes fell as trade flows slowed.

Public spending also went up in the boom—in many cases by more than revenue. In Kenya gov-

ernment expenditure rose from 15 percent of GDP in 1977 to more than 21 percent in 1979. Public spending in Côte d'Ivoire shot up from 28 percent of GDP to 35 percent in only one year, from 1976 to 1977. Increases in both current and capital spending were often of dubious economic merit. Government payrolls expanded, consumer subsidies increased, and ambitious new investment projects began. In the Dominican Republic, for example, profits from sugar in the 1970s were used to subsidize consumer purchases of petroleum products. In many of the oil-exporting countries profits from oil exports were used to keep oil prices artificially low at home. Later evaluation of many of the public investments begun during the boom shows that they had very low rates of return. They were plagued by cost overruns and delays. For example, an analysis of a sample of investment projects in seven oil-exporting countries showed that the largest third of the projects had cost overruns averaging 109 percent. A quarter of these suffered delays of three to four years. Some were abandoned before completion; others were rendered uneconomical by changed world market conditions. Mexico, Trinidad and Tobago, and Venezuela began major public investments in large steel plants in the 1970s, not long before the prolonged glut on world markets. Far from paying the interest on the debt that was raised to finance them, these projects became a heavy drain on public budgets.

Even as the boom was ending, spending was maintained or increased (see Figure 3.6). This led to a jump in public deficits. Mexico's, for example, rose from 7.9 percent of GDP in 1980 to 17.5 percent in 1982. The Nigerian public deficit rose from 1.1 percent of GDP in 1979 to 9.1 percent in 1981. After a delay of several years most countries did cut spending or raise revenue; in many cases they were forced to do so because voluntary foreign commercial lending stopped.

External debt had grown rapidly during the boom in many countries; net capital flows were reduced or even reversed during the bust. Foreign commercial banks were eager to lend to commodity-exporting countries during the boom because of the apparent security provided by commodity revenue, while public sector borrowers wanted to leverage their commodity revenues into even greater spending growth. After revenue fell sharply, nervous lenders were reluctant to make new loans. For example, net flows of long-term public external debt to Nigeria were \$1 billion a year as oil prices soared in 1979–80. During the disastrous oil price slump of 1986, however, the

corresponding flow was only \$20 million. Contrary to the principle that debt should be used to smooth such cycles, it exacerbated them.

The macroeconomic effects of the mismanaged booms were similar in most countries. Real exchange rates appreciated excessively (see Figure 3.2). Exports of other goods declined, while import growth accelerated under pressure from high aggregate demand, overvalued exchange rates, and the ready availability of foreign exchange. Nigeria's imports increased from \$9.7 billion in 1977 to \$19 billion in 1981; Mexico's more than quadrupled in value between 1977 and 1981. After the boom, imports contracted sharply in Nigeria, from \$19 billion in 1981 to \$4 billion in 1986, and in Mexico, from \$24 billion in 1981 to \$12 billion in 1986.

During the boom, export revenues and capital inflows led to a surge in central bank holdings of foreign exchange reserves. This in turn led to rapid monetary growth and higher inflation. In both Côte d'Ivoire and Kenya, for example, money growth accelerated to more than 43 percent in 1977, and inflation reached 21 percent in both countries. Inflation in Nigeria rose from 6 to 34 percent during the first oil boom, then from 14 to 44 percent during the second. Although most economies became overheated, higher export prices did not cause GDP growth to increase significantly above its long-run trend. For example, in Côte d'Ivoire growth was 7.0 percent during the boom years of 1975 to 1980 compared with 7.9 percent during 1965 to 1975.

Not all countries fell into the commodity cycle trap. Botswana, Cameroon, and Indonesia managed their boom revenues cautiously, by minimizing macroeconomic imbalances and easing adjustment in the downswing. Spending did increase in Cameroon and Indonesia in the boom, but the increases were comparatively modest. Indonesia avoided public deficits during the boom itself in 1979–81, and the downward adjustment in spending was rapid once the boom ended; in 1986–87 the government responded promptly to another fall in oil prices by cutting spending. In Cameroon up to 75 percent of the revenue generated during the 1979–81 oil boom was saved abroad, in part through the repayment of public external debt. In the aftermath of the boom, revenue continued to grow faster than expenditure—partly thanks to further growth in the volume of oil exports—so that deficits were avoided until recently. Botswana is an even more dramatic case. Its public spending fell as a share of GDP during the diamond boom after 1983. During the coffee boom of 1986 Colom-

bia also showed exceptional fiscal restraint by cutting expenditures while revenue was increasing sharply.

Careful fiscal management greatly reduced the macroeconomic side-effects of these countries' commodity booms. Inflation either stayed level or increased only slightly in Botswana, Cameroon, and Indonesia. During the boom the real exchange rate actually depreciated modestly in Cameroon and Botswana, while in Indonesia the appreciation was moderate compared with elsewhere. Exports of other goods were satisfactory in all three cases, and import growth remained within bounds.

### *Principles for managing commodity export cycles*

One commonly stated principle for managing commodity price movements is that the revenue from temporary price increases should be saved, whereas income from permanent increases can be spent. Usually this precept was disregarded, or else price increases were erroneously assumed to be permanent. In one sense, though, the principle misses the point, which is that all commodity prices have been extremely volatile during the past decade. Classifying a particular shift as "permanent" or "temporary" in such an environment is uncertain. Policymakers therefore have to ask which sort of mistake is more costly. The cost of assuming a temporary price increase to be permanent is probably higher than that of assuming a permanent increase to be temporary. As the examples of Mexico, Nigeria, and others illustrate, it is often difficult to rein back spending that increased during a supposedly permanent boom—especially if boom revenue was leveraged through borrowing into even higher spending. Delays in adjustment to the fall in export prices lead to further debt accumulation. When the adjustment finally comes, it is more difficult because countries have to cope not only with lower commodity revenue, but also with increased debt service and reduced flows of new lending. A prudent strategy, therefore, is for the public sector to save a large portion of its commodity revenue.

The use to which these additional savings are put determines how quickly the government can respond to changed circumstances. The main alternatives are increasing the country's net foreign asset position (either through repaying debt or accumulating foreign deposits), reducing public domestic debt, or raising public domestic investment. Besides the drawbacks of increased public spending described above, public investment suf-

fers from the defect that it is difficult to reverse: new investment spending is hard to stop for projects under way, and it is usually difficult and time-consuming to sell physical assets once they have been acquired. All this suggests that any additional public investment financed by commodity revenue should be limited to highly profitable projects.

Although not completely without risk, foreign assets are highly liquid and thus can be sold quickly during bad times. Botswana has protected itself against downturns in the diamond market by increasing its foreign exchange reserves to cover two years' worth of imports. Repayment of debt reduces the public sector's exposure to unstable revenues and avoids the monetary pressures caused by reserve accumulation at the central bank. Cameroon (after 1978) and Colombia (in 1986) used their commodity revenues to repay public external debt. Reducing the government's net debt to the central bank would also reduce monetary expansion by offsetting ("sterilizing") the increase in foreign exchange reserves; Colombia used this method in 1986.

In addition many countries could usefully reconsider the balance between public and private saving during commodity booms. If governments save a high proportion of boom revenues, this can help the country to save enough in good times to provide resources for consumption in bad times. As discussed above, however, governments have often spent too much in booms. It may be better in many cases to allow private producers to retain more of the boom revenue, so that they can themselves save during good times to prepare for bad times. If private saving is thought to be inadequate, it may be due more to controls on financial markets, such as low deposit interest rates, than to any inherent defect in private savings behavior. Wise policy would try to facilitate both public and private saving during booms.

### **Adjustment in low-income Sub-Saharan Africa**

In the 1980s low-income countries have faced economic problems similar to other developing countries. These problems include fiscal and external deficits, excess public indebtedness, overall economic contraction, and inflation. However, the problems in low-income countries have been particularly severe. The external debt problem has become even more serious than in the highly indebted middle-income countries, with little prospect for full debt servicing in the foreseeable

future. In 1986 the ratio of all external debt to GNP in low-income Africa was 88 percent, compared with 61 percent for the seventeen highly indebted middle-income countries.

The special difficulties of low-income economies arise from their limited flexibility, particularly in the financing of public expenditure. Yet the need to build up social and physical infrastructure makes heavy demands on budgets. External financing is mostly limited to official sources, domestic financing is restricted because of thin financial markets, and the tax base is usually narrow. These countries depend heavily on official development assistance: in low-income Sub-Saharan Africa official development assistance amounted to 12.2 percent of GNP in 1986. However, the way the aid flows were managed may have contributed to the severe adjustment problems that became apparent in the 1980s. The inflow of foreign exchange supported an appreciation of real exchange rates, excessive imports by urban consumers, and a resulting decline of export- and import-competing sectors in the late 1970s and early 1980s. The mismanagement of aid may also have contributed to low rates of domestic saving.

The scarcity of public financing has led these countries to rely on some highly distortionary means of financing, including heavy taxes on the main commodity export. These are usually implemented through low producer prices paid by the commodity marketing board or through differential exchange rates that penalize producers. Import tariffs are another important source of revenue. Low-income countries derive 38 percent of government revenues from international trade taxes, compared with 19 percent in middle-income countries. The revenue system of low-income countries is thus very fragile and subject to wide swings as external conditions change. Their high commodity taxes have also encouraged the growth of black markets and smuggling.

#### *Fiscal and external deficits in Africa*

Low-income African countries borrowed heavily in the late 1970s and early 1980s to finance consumption and domestic capital formation in the face of declining export prices and volumes. The fall in export revenues was the result both of their own bad policies, such as heavy taxation of export commodities, and of weak growth in export demand from the industrial countries. High fiscal deficits led rapidly to external borrowing because the level of domestic savings is low in most low-income

countries. In 1986 the average rate of gross domestic saving in all low-income countries besides China and India was only 8 percent of GDP, compared with 23 percent in middle-income countries. In Burkina Faso, Lesotho, Mozambique, and Somalia saving was negative in 1986. The corresponding levels of public and private consumption were unsustainable without external financing.

After 1980 official and private creditors and the countries themselves realized that the rate of public borrowing needed to be cut. The debt troubles of the highly indebted middle-income countries also contributed to a drop in lending to low-income countries. Total net lending to Sub-Saharan low-income countries fell from more than \$4 billion in 1980 to less than \$2 billion in 1985 (see Figure 3.7). Repayments of principal on past official credits, as well as a drop in new disbursements, were to blame.

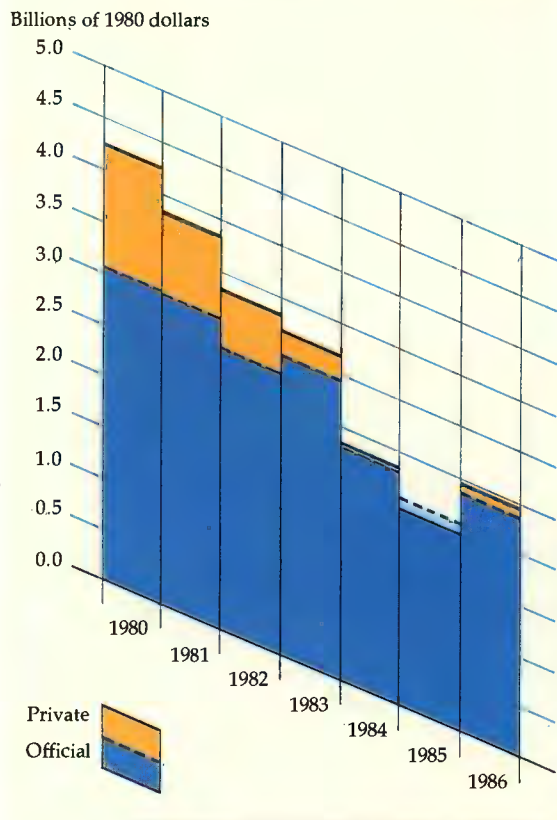
The countries were forced to cut deficits sharply. In Kenya the primary deficit (that is, excluding interest) fell from 7.4 percent of GDP in 1981 to near zero in 1985, while in Malawi it dropped from 11.8 percent of GDP in 1981 to 1.0 percent in 1985. Interest payments increased in Kenya from 2.4 to 4.4 percent of GDP during the same period, however, while in Malawi they rose from 4.6 to 6.3 percent of GDP. This meant that the overall deficit improved about 2 percent of GDP less than the primary balance. As with middle-income debtors, external debt service (including both interest and amortization) was a large burden on the budget and amounted to 34 percent of current public revenue in Kenya and 44 percent in Malawi in 1985. Debt service was also a heavy burden on the balance of payments, although severe import restriction allowed current account deficits to improve in line with improved fiscal balances.

Negative rates of economic growth and more realistic exchange rates have dramatically increased the ratio of outstanding and disbursed debt to GNP in many low-income countries, despite the drop in net flows of new debt. In Malawi the ratio of public debt to GNP increased from 56 percent in 1980 to 71 percent in 1985, while in Kenya it increased from 32 to 51 percent, in Zaire from 43 to 112 percent, and in Zambia from 61 to 133 percent. Unfortunately adjustment to date has been at best a matter of running harder to stay in place.

#### *Exchange rate management in Africa*

Overvalued real exchange rates have been particularly common in Sub-Saharan Africa. They are at

**Figure 3.7 Net flows of medium- and long-term debt financing to Sub-Saharan Africa, 1980 to 1986**



*Notes:* Net flows are disbursements minus amortization of concessional and nonconcessional lending; figures do not include grants or short-term lending. The deflator used to convert to 1980 dollars is the manufacturing unit value index, which measures the average price of manufacturing exports by the five largest industrial countries. The solid line indicates the level of total net flows, and the dotted line indicates total net official flows. For 1985, net private flows are negative.  
*Source:* World Bank 1987d.

the center of the macroeconomic management problems that many countries in the region have faced. The official exchange rate is used as a fiscal instrument in many low-income African countries, although not in the francophone countries, where the individual authorities do not control the exchange rate. Lacking an adequate tax base to finance desired spending, governments resort to taxing the mineral and agricultural export commodities, which account for a large share of the formal sector. Often this is done by maintaining an official exchange rate below parallel market rates

and requiring commodity exporters to sell foreign exchange at this rate to the central bank. Alternatively the government sets domestic producer prices with reference to the official rather than the parallel rate. The official exchange rate is also often used to subsidize certain sectors through the administrative allocation of foreign exchange to these sectors at the official rate. If the government's purchases of foreign exchange exceed its sales, then the tax implicit in the differential between the official and parallel exchange rates exceeds the subsidy to the private sector. The tax is distortionary because it discourages exports. Attempts to evade the tax lead to the growth of parallel markets in smuggled goods and foreign exchange.

Since 1982 many countries have sharply devalued their official exchange rate (see Figure 3.2). Official and parallel rates have converged, which has reduced the export tax and improved production incentives. However, the devaluations can be destabilizing: where other revenue sources are not found to replace the lost export tax, the result may be bigger fiscal deficits and an inflationary increase in money creation. Fiscal reform therefore needs to happen along with exchange rate reform (see Box 3.5).

#### *The need for fundamental reform*

As has happened elsewhere in the developing world, fiscal restraint in low-income countries has often damaged the prospects for long-term growth. Spending cuts have fallen disproportionately on public capital formation, as in the middle-income countries. Social services have been cut from already inadequate levels. A more selective way to reduce expenditure must be found, by eliminating subsidies to better-off consumers in favor of priority areas such as transport maintenance, primary education, and basic health. Chapters 5 and 6 discuss these issues in more detail.

The tension between stabilization and structural adjustment runs in both directions. Stabilization has sometimes made the task of structural reform all the harder—for example, when it has meant cutting productive investment. But structural reform can also set back efforts at stabilization. Low-income countries face this problem in a particularly acute form. They find it hard to reduce distortionary taxes, for instance, since the lost revenue is difficult to replace. Without a doubt these countries need to reduce the massive protection that they grant to inefficient industries, but the revenue role of tariffs cannot be lightly dismissed. No alter-

native revenue source could immediately compensate for the loss of revenue that would result from a sweeping liberalization effort. The implication is that trade liberalization must proceed in stages,

accompanied by matching fiscal reforms. Replacing quotas by tariffs and adopting more uniform tariff structures are two ways to reconcile liberalization and revenue goals in the short term.

### Box 3.5 Exchange rate unification and fiscal balance

The effect on the fiscal balance of closing the gap between the official and parallel exchange rates can be seen in the experience of Ghana and Sierra Leone. Before 1983 Ghana had large fiscal deficits financed by printing money, strict foreign exchange rationing, high inflation, and a strong demand for foreign currency as a hedge against inflation. The black market exchange rate was a more accurate measure of the true value of the local currency (the cedi) than the official rate. The purchase and allocation of foreign exchange at the official rate levied an implicit tax on exports and granted an implicit subsidy on imports. The black market premium was generally more than 500 percent and reached more than 2,000 percent in 1982. Production of the key exports, cocoa and gold, fell sharply during 1970–82 in response to the prohibitive rate of implicit export taxation; real per capita incomes fell 30 percent. Because of the fall in exports and the lack of external financing, imports were severely compressed.

In April 1983 the Ghanaian government initiated its Economic Recovery Program. In October 1983 the official exchange rate was increased from 2.75 cedis/dollar to 30 cedis/dollar, at a time when the black market rate was roughly 90 cedis/dollar. The black market received formal recognition: special import licenses were granted to those who wished to bring imports in through the black market, provided the appropriate taxes were paid. Noncocoa exporters were allowed to retain a fraction of their foreign exchange earnings for debt service and approved imports. The Cocoa Board also had a retention account from 1983 to early 1987. In January 1986 the currency was devalued again to 90 cedis/dollar. The market was split into two tiers in September 1986. Only cocoa exports, debt service, and petroleum imports were to go through the official market, while raw materials and inputs were to pass through an auction market for foreign exchange; consumer goods were excluded. In February 1987 the markets were unified at the auction rate. Consumer goods were subsequently integrated into the auction except for a few prohibited items.

The stepwise devaluation of the official exchange rate was accompanied by fiscal reform to reduce the deficit, thus lessening the need for the export tax implied by the previous difference between the official and black market exchange rates. The fiscal deficit was reduced from 2.7 percent of GDP in 1983 to 0.7 percent in 1986. This was accomplished mainly by dramatically increasing tax revenue, from only 5.5 percent of GDP

in 1983 to 13.6 percent in 1986. This allowed the government to decrease its use of the "inflation tax." Wholesale price inflation fell from 81 percent in 1984 to 30 percent in 1986, despite the huge changes in the official exchange rate. Overall the Ghanaian experience is one of successful devaluation accompanied by fiscal reform.

Sierra Leone encountered greater difficulties with exchange rate unification. The local currency (the leone) was floated in June 1986, at a time when the black market rate was five times the official exchange rate. Inflation immediately accelerated from 57 percent for the twelve months preceding the float to 259 percent for the following twelve months. The monetary base increased by 151 percent from June 1986 to June 1987. In reaction, the official exchange rate was artificially fixed one year after the initial float. Since then few transactions have been occurring at the official rate.

The disappointing outcome reflected an underlying fiscal imbalance. During the preceding five years revenue had been greatly eroded; it fell from 16.1 percent of GDP in 1978–79 to 6.0 percent in 1985–86. The sharpest decline was in international trade taxes, reflecting the shrinkage of reported trade flows as goods moved into the parallel market, but domestic tax collections also fell. This chronic inability to collect taxes caused the deficit to increase to 14 percent of GDP in 1985–86. The deficit was financed through a combination of money creation and the implicit tax on exports arising from the difference between the official and black market rates. The effective elimination of the difference led to a drop in the export tax, so the rate of money creation had to rise. Maintaining consumer subsidies on staple foods and petroleum in the face of increased inflation and depreciation increased the deficit further. Thus for fiscal year 1987 the fiscal deficit was about \$6.7 million a month. The average monetary base for the fiscal year was the equivalent of \$44 million, so that inflation of about 15 percent a month was necessary to generate the "inflation tax" to finance the deficit. This was close to the actual inflation rate of about 11 percent a month for this period.

The experience of Sierra Leone illustrates that floating the official exchange rate by itself does not solve a macroeconomic imbalance—indeed, without accompanying fiscal reform it may actually make it worse. The Sierra Leonean float was implemented when the fiscal balance was out of control. Fiscal reform is often a prerequisite to unify dual exchange rates.

In summary, the fiscal problems of the low-income African economies are even more severe than those of the middle-income debtors and commodity exporters. Past fiscal deficits have left a legacy of debt that complicates their present adjustment efforts. Impressive reductions in fiscal deficits have been achieved, but they have by necessity focused on unsustainable short-term measures. The scarcity of public revenue sources is cramping attempts to correct structural distortions, such as large gaps between official and parallel exchange rates, high tariffs, and low producer prices for commodities. Fiscal reform is a way to resolve the dilemma. Broader revenue bases would make it possible for the low-income countries to reduce or eliminate some of their most distortionary taxes. A greater flow of external finance, together with selective debt relief, would help support reform.

### **Fiscal policy and the growth imperative**

The developing countries face a fiscal dilemma. On the one hand, departures from prudent fiscal policy have helped to create economic crises involving excessive debt and high inflation. Fiscal austerity in these circumstances was unavoidable. On the other hand, it is essential to restore growth, incomes, and employment. Several of the worst affected countries are in depressions as severe as the Great Depression of the 1930s.

One of the most important lessons from this situation is that overspending and unsustainable growth carry a high cost. Countries that followed stable macroeconomic policies were hurt far less by

the turbulence of the 1980s. For example, Thailand surpassed the Philippines, and Colombia outpaced Peru in per capita income in the 1980s, although the pairs were closely matched in the 1970s. The poor also fared much better in the stable economies, although the excessive public spending that helped to destabilize the other economies was sometimes carried out in their name.

The only way to resolve the tension between austerity and growth is to combine fundamental fiscal reform with other measures in trade, industry, agriculture, and finance. The recent progress toward short-term stabilization can now be supplemented with structural adjustment to restart growth. The contribution that sound public finance can make to this task is described in the following chapters. The narrow public revenue base in many developing economies can be expanded through improved tax administration and collection, new broadly based taxes such as the value added tax, and increased reliance on user charges for public services. This would make it possible to rely less on the "inflation tax," excessive trade taxes, and parallel exchange rates, all of which can do great economic harm. Public expenditure can be shifted toward infrastructure and away from subsidies for consumption and ill-chosen capital spending. Reforms in local government and state enterprises can also help to make public spending more effective and revenue less costly to raise. In these ways sound public finance—more perhaps than any other area of policy—offers opportunities to reconcile lower public deficits with long-term economic growth.