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Introduction

Jeffrey D. Sachs

1. Aims of the NBER Project on Developing Country Debt

Latin America and Africa have suffered a collapse of living standards during the 1980s that in many countries rivals, and in some countries exceeds, the declines that were suffered during the Great Depression.[1] The 1980s is widely regarded as "the Lost Decade" of economic development for large parts of the world, and even this appellation is too optimistic for many countries whose living standards have fallen back to the levels of the 1950s and 1960s.[2] The collapse of living standards is intimately related to the external debt crisis that hit most of the countries of Latin America and Africa at the beginning of the 1980s.[3] As shown in table 1, economic performance—in terms of per capita growth, inflation, and the rate of capital formation in total output—has been particularly disastrous in those developing countries that experienced debt-servicing difficulties at the beginning of the decade.

Few countries that fell into debt-servicing difficulties in the early 1980s have yet been able to extricate themselves from the financial crisis. Remarkably, at the end of 1988, after more than six years of the global debt crisis, not a single country in Latin America had regained normal access to loans from the private international financial markets,[4] and countries such as Argentina, Brazil, and Peru were still caught in a dramatic process of collapsing incomes and exploding inflation.

The NBER Project on Developing Country Debt was initiated in 1986 to improve our understanding of four fundamental issues concerning the debt crisis. First, what were the forces, both within the debtor countries and in the international financial system, that contributed to the onset of the debt crisis in so many developing countries? Second, what were the mechanisms by which the debt crisis contributed to the decline of living standards in the

Table 1 **Economic Performance of Developing Countries with and without Debt-Servicing Difficulties**

	With Debt-Service Problems	Without Debt-Service Problems
Per capita GDP growth		
1970–79	2.8	3.8
1980–87	−.6	3.8
Average inflation rate		
1970–79	24.4	11.9
1980–87	64.6	12.1
Gross capital formation		
1980–81	25.4	27.7
1982–87	19.5	26.7

Source: IMF, *World Economic Outlook*, April 1988. GDP per capita, table A6; inflation, table A11; gross capital formation, table A7.

Notes: Growth data are compound annual rates between the dates shown; inflation is measured as the nominal GDP-weighted average of the compound inflation rates of the countries in the category; gross capital formation is measured as the arithmetic average of the country ratios of gross capital formation of GDP.

debtor countries in the 1980s? Third, what are the reasons why recovery from the crisis has proved to be so difficult in many countries? And fourth, what are the lessons of the debt crisis more generally for the proper role of external borrowing in the long-term growth strategy of a developing country?

To address these questions, the NBER project was divided into two parts: (1) a series of detailed country monographs, and (2) a series of analytical studies on several aspects of the international financial system. This volume (vol. 2) and a companion volume (vol. 3) present the monographs on the country studies. The analytical studies are contained in volume 1. A summary of the entire project may be found in *Developing Country Debt and the World Economy.*

The eight countries examined in the NBER project (Argentina, Bolivia, Brazil, Indonesia, Korea, Mexico, the Philippines, and Turkey) were selected in order to shed maximal light on the *comparative* question of why some countries succumbed to financial crisis in the 1980s while others escaped the crisis. To provide a reasonable basis for comparison, all of the countries chosen are middle-income, capital-importing countries that enjoyed access to international commercial bank loans in the 1970s.[5] Some of these countries escaped the worst of the crisis of the 1980s, while others have virtually collapsed in response to the financial crisis. An overview of the very different economic performances of the eight countries can be found in table 2.

While a debt crisis is a multifaceted phenomenon, we will say that a country experienced a debt crisis if: (1) the government was forced to reschedule the public or publicly guaranteed debts on an extraordinary basis; or (2) if the government went into substantial arrears on existing debt

Table 2 **Economic Performance of the Eight NBER Countries**

Economic Variables by Country	1960–80	1980–85
Real per capita GDP growth:		
Latin America		
Argentina	2.2	−3.7
Bolivia	2.1	−4.8
Brazil	5.1	−1.1
Mexico	2.6	−.9
Rest of world		
Indonesia	3.4	2.3
Philippines	2.8	−3.4
South Korea	7.0	6.0
Turkey	3.6	2.5
	1965–80	1980–85
Inflation rate:		
Latin America		
Argentina	78.5	342.8
Bolivia	15.7	569.1
Brazil	31.6	147.7
Mexico	13.2	62.2
Rest of world		
Indonesia	34.3	10.7
Philippines	5.8	7.8
South Korea	18.7	6.0
Turkey	20.8	37.1

Sources: GNP growth rates, 1960–80, from the World Bank's *World Development Report*, 1982; for 1980–85, from IMF, *International Financial Statistics*. Inflation rate is average annual rate of inflation from the World Bank's *World Development Report*, 1987.

payments for more than ninety days. In all cases in which (1) or (2) occurred, the government also lost access to normal lending from the international capital markets. New lending, to the extent that it could be achieved at all, came only in the context of so-called concerted lending programs, in which existing creditors agree as a group to make new loans in proportion to their existing exposure. Table 3 shows the timing of debt-servicing difficulties and the dates of the first formal debt-rescheduling agreements. As shown in the table, Indonesia and Korea escaped the debt crisis entirely according to these criteria; Turkey fell into crisis in the late 1970s, but overcame it by 1983, when the country no longer needed additional debt reschedulings and gained renewed access to international borrowing; and Argentina, Bolivia, Brazil, Mexico, and the Philippines fell into crisis in the early 1980s and had not recovered by the end of 1988.

A useful measure of the *depth* of the debt crisis in each of the countries is shown in the last column of table 3, which records the secondary market value of the commercial bank debt of the eight countries, as of June 1988. The secondary market price is a simple index of a country's creditworthiness, since it reflects the market's expectation of the proportion of the

Table 3 **Debtor Government Relations with Commercial Bank Creditors for the Eight NBER Countries, 1977–88**

	Date of First Debt-Service Difficulties	Date of First Rescheduling Agreement	Date of Renewed Market Access	Price of Debt, June 1988
Argentina	1982	1985	No[b]	27
Bolivia	1979	1980	No	13
Brazil	1983	1983	No	53
Indonesia	none[a]	none	na	na
Mexico	1982	1983	No	53
Philippines	1984	1986	No	55
South Korea	none	none	na	na
Turkey	1978	1979	1983	99

Sources: The dates of the first debt-service difficulties are taken from the individual country monographs (the dates refer to the interruption of debt servicing on commercial bank debt). The timing of the debt rescheduling agreements may be found in the World Bank, *World Debt Tables,* 1987–88 edition, table IV-3, pp. xxxvi–xlii. Only Turkey has regained access to the private capital markets, as of 1983. See the Turkey monograph by Celâsun and Rodrik (vol. 3) for details. The price of debt refers to the asking price per $100 of par value of commercial bank debt, from Salomon Brothers, "Indicative Prices for Less Developed Country Bank Loans," 9 June 1988. Note that there are no price quotations for Indonesia and South Korea.

[a]Indonesia experienced a limited external debt crisis in 1975, with foreign borrowing by the state petroleum company, Pertamina. This was not a generalized external debt crisis, and it was quickly resolved by 1977. See Woo and Nasution's monograph on Indonesia (vol. 3).

[b]Not yet renewed access.

na = not applicable.

outstanding debt that a country will service in the long run. The most creditworthy nation, Korea, has bank debt that trades at par, reflecting very little fear in the international capital markets of a future default by these two countries. For this reason, Korea's debt is not generally listed in quotations of secondary market prices for sovereign debt. Turkey's secondary market price is also nearly at par, reflecting Turkey's recovery of creditworthiness since the mid-1980s. The Latin American debt, by contrast, traded in June 1988 at about 50 percent of face value, and Bolivia traded at only 13 percent of par value, reflecting the fact that Bolivia experienced the deepest crisis in Latin America during the first half of the 1980s.[6]

Table 4 records the structure of the medium- and long-term external debt of the eight countries as of the end of 1986, both according to kind of creditor (i.e., whether the debt is owed to official creditors or to private markets, mainly the banks) and to the kind of debtor (i.e., whether the debt is a liability of the private or of the public sector). The creditor class of public and publicly guaranteed debt is available from the World Bank's *Debt Tables,* but the creditor class of the private sector, nonguaranteed debt is not published. To construct the first two columns of table 4, therefore, it was necessary to assume that all debt of the private sector is owed to foreign private creditors.

Note that in all of the countries, the bulk of the debt is owed by the public sector or is publicly guaranteed debt of the private sector.[7] This is a very

Table 4 **Structure of Medium- and Long-Term Debt by Category of Creditor and Debtor (billions of U.S. $, end of 1986)**

	Creditor		Debtor	
Country	Private	Official	Private	Official
Argentina	38.3	4.7	4.6	38.4
	(89)	(11)	(11)	(89)
Bolivia	1.7	2.3	0.6	3.5
	(43)	(57)	(15)	(85)
Brazil	78.4	18.7	14.6	82.5
	(81)	(19)	(15)	(85)
Indonesia	18.1	17.7	3.8	31.9
	(51)	(49)	(11)	(89)
Mexico	80.3	10.7	16.1	75.0
	(88)	(12)	(18)	(82)
Philippines	13.8	7.8	1.8	19.8
	(64)	(36)	(8)	(92)
South Korea	23.8	10.5	5.2	29.1
	(69)	(31)	(15)	(85)
Turkey	9.7	14.1	.5	23.3
	(41)	(59)	(2)	(98)

Source: World Bank, *World Debt Tables*, 1987–88 edition. To construct the table, it was assumed that *all* private nonguaranteed debt is owed to private creditors. The designation "official" in the debtor classification refers to debt of the public sector plus private sector debt with a guarantee by the public sector of the debtor country.

Note: Proportion of total debt is in parentheses.

significant fact, with two profound implications. First, the debt signifies not only a burden on the country's exports but also a burden on the fiscal resources, since government revenues must be used to service the public debt. Second, whereas an overhang of debt owed by private sector firms can be settled through bankruptcy and debt-to-equity conversions, writedowns, and buybacks arranged on an ad hoc basis, the public sector debt is not so easily discharged in the same manner. The available evidence suggests that, as a result, the private sector debt has been gradually extinguished through a number of ad hoc arrangements, while the public sector debt has been growing over time in most countries.[8]

The proportion of the total debt owed to official versus private foreign creditors differs significantly across countries. In Argentina, Brazil, Korea, Mexico, and the Philippines, most of the debt is owed to private financial markets (mostly banks), while in Bolivia, Indonesia, and Turkey, a higher proportion of the debt is owed to official creditors. The high proportion of official debt in these countries mainly reflects their lower per capita income, which made them less attractive to the banks for lending in the 1970s and made them more eligible and attractive for various forms of concessional official credits.[9]

Table 5 records the dramatic reversal of the net resource transfer from the private international capital markets (mainly banks) to the public sector of

Table 5 **Net Flows of Public and Publicly Guaranteed Debt, 1980–86 (as percentage of GDP, average per year)**

Country	1980–81	1982–84	1985–86
Argentina			
Net flows	.8	2.7	2.4
Net resource transfers	.3	.7	−1.8
Bolivia			
Net flows	4.7	−.3	−.1
Net resource transfers	1.0	−3.4	−.5
Brazil			
Net flows	1.9	2.3	−.3
Net resource transfers	.2	.2	−2.2
Indonesia			
Net flows	1.0	1.5	.7
Net resource transfers	.4	.7	−.2
Mexico			
Net flows	3.0	2.1	−.1
Net resource transfers	1.1	−1.8	−4.3
Philippines			
Net flows	1.7	1.9	1.5
Net resource transfers	1.0	.8	−.4
Turkey			
Net flows	.6	.4	.7
Net resource transfers	−.2	−.7	−.4

Source: World Bank, *World Debt Tables*, 1987–88 edition.

most countries after the onset of the debt crisis. The financial flows of public and publicly guaranteed debt from the private markets are measured in two ways in the table (in both cases as a percentage of the debtor country's GDP). "Net flows" are loan disbursements minus loan amortizations during the year. The "net resource transfers" are new loan disbursements minus total debt servicing (interest plus amortizations). Thus, the net resource transfer is equal to net loans minus interest payments.

After 1982, the Latin American countries were able to obtain new bank loans only as part of so-called involuntary or concerted lending packages (Bolivia received no funds in that form). In general, these concerted lending packages were more extensive during 1982–84 than later, so that the net resource transfers became more negative during 1985–86 than earlier.

Explanations of the Debt Crisis

In examining why some of the countries succumbed to a debt crisis while others did not, an explanation can be attempted on several different levels. At the most superficial level, it is clear that the ratio of a country's debt relative to its export earnings as of 1981 is a good, though by no means perfect, predictor of whether it fell into debt crisis during the 1980s. As shown in table 6, the countries with the highest ratios tended to be those which fell into debt crisis, while the two countries with the lowest ratios (Indonesia and South Korea) were those that escaped the crisis without any debt restructuring.

Table 6 **Debt Ratios on the Eve of the Debt Crisis, 1981**

Country	Debt-GDP Ratio	Debt-Export Ratio
Argentina	65.6	301.6
Bolivia	104.1	305.5
Brazil	30.3	296.3
Indonesia	25.4	91.2
Mexico	34.0	257.5
Philippines	54.2	242.8
South Korea	50.4	122.1
Turkey	33.4	326.8

Source: All data are from the World Bank, *World Debt Tables,* 1987–88 edition.

Note: The data refer to total external debt (public plus private medium- and long-term debt, plus short-term debt).

Unfortunately, this finding (which has been reported in many econometric studies) doesn't really take us very far. Why did the debt-export ratio grow so rapidly in Brazil, but not in Korea? Interestingly, as shown in the table, Korea had as much debt as Brazil *relative to GNP* and yet maintained much lower debt *relative to exports* because of the high and rising share of exports in GNP. At the very least, we would like to know how the economic policies of the different governments affected the evolution of export promotion and debt accumulation. Even more deeply, we would like to understand how various underlying social and political factors (e.g., the distribution of political influence among competing social groups, the structure of government, the nature of electoral competition, etc.) have been important determinants of the economic policy choices of each of the governments.

The NBER project seeks to shed light on the causes of the debt crisis at each of these levels of explanation, both the economic and the political. The attention to political factors might seem out of place to some readers. In the course of our research, however, it became very clear that the debt crisis is in large part a crisis of failed *policy choices* in the debtor countries, and that the policy choices themselves are best explained by appeal to important political as well as economic characteristics of the countries under study.

In addition to focussing on the origins of the debt crisis, the country monographs examine the mechanics of a debt crisis once it is underway. They also reveal in considerable detail the profound economic and political difficulties that are encountered by countries attempting to recover from a large debt and a sudden cutoff of foreign lending. In the rest of this essay, I summarize the findings of the country monographs on these issues. Section 2 is a discussion of the origins of the debt crisis in a comparative perspective. In section 3 I describe the macrodynamics of the debt crisis in the countries worst hit by the external shocks in the late 1980s. In section 4 I use the country experiences to examine the pressing policy problem of how to *recover* from a debt crisis and to explore why recovery has proved so elusive in most of the Latin American countries. Section 5 provides a summary of the findings.

2. Comparative Evidence on the Origins of the Debt Crisis

The country studies volumes and the analytical studies in volume 1 shed considerable light on the origins of the debt crisis. As described in the International Financial System volume in chapters by Barry Eichengreen, and Peter H. Lindert and Peter J. Morton, debt crises have been episodic features of the world economy for the past 175 years. The wave of new lending to the LDCs that began in the early 1970s looks very much like the burst of new lending to the LDCs in the 1820s, 1870s, 1890s, and 1920s. In each episode, a wave of new lending was soon followed by a sharp retrenchment of lending and a widespread debt crisis, requiring substantial renegotiations of debt contracts and often involving widespread defaults.

There is little doubt that major unforeseen external shocks at the end of the 1970s and early 1980s, especially the rise in world interest rates and the decline in the relative price of primary commodity exports of the debtor countries, played a major role in sparking the developing country debt crisis, as did similar macroeconomic shocks in the earlier historical episodes. At the same time, the NBER country monographs clearly reveal two additional facts about the crisis: (1) the effects of the external shocks on economic performance in a particular debtor country depended importantly on the quality of economic management in that country during the years when the borrowing was underway; and (2) even after the external shocks hit, in 1979 and 1980, there was time for policymakers to make adjustments in national policy to meliorate the shocks. Important adjustments were indeed made in some countries (e.g., Korea and Indonesia, and Turkey after 1979), but not in the Latin American countries or the Philippines.

The external shocks were particularly important for the following reason. During the heady days of the 1970s when commodity export prices rose at annual rates that were greater than the interest rate on new loans, countries and their banks had the illusion of an unending Ponzi game (see my introduction to the summary volume for a further discussion of this point). Countries that borrowed all that they needed to repay interest and principal on past loans had a debt that grew at the rate of interest. As long as nominal export earnings were growing even faster than this (which was the case because of the steady rise of export prices), it was possible to borrow *all of the funds* needed to service past debt and at the same time enjoy a *falling debt-to-export ratio*. It seemed too good to be true: loans could be paid back out of new loans without provoking a rising debt-export ratio. And indeed, as shown in table 7, despite the heavy borrowing of the 1970s, the developing countries as a whole had a debt-export ratio at the end of 1980 that was about the same or even lower than in 1973! To the countries and to the banks, a money machine seemed to be at hand.[10]

Once interest rates rose and export prices started to fall, the debt-export ratios shot up dramatically. As shown in table 7, the increase between 1979

Table 7 **Debt-Export Ratios of Developing Countries, 1973–87**

Country Grouping	1973	1980	1982	1987
All nonoil developing countries	115.4	112.9	148.3	155.1
Western Hemisphere	176.2	178.4	271.8	346.3
Asia	92.9	68.2	87.1	89.1

Source: For 1973 and 1980: IMF, *World Economic Outlook, 1983*, table 33. For 1982 and 1987: *World Economic Outlook, 1989*, table A48. Note that for the category "nonoil developing countries" for 1982 and 1987, I referred to the category "nonfuel exporters" in table A48.

and 1982 was dramatic, particularly in Africa and Latin America. Suddenly, the old Ponzi scheme was no longer working. Unless countries actually began to service the debts out of their own resources, i.e., by running trade surpluses, the debt-export ratios were bound to explode, and indeed they started to. In a sense, it was not until the rise of interest rates and fall of export prices at the end of the 1970s that the most basic question on the debt was posed for each country: Could and would the country repay its debts out of national income, rather than out of new borrowing?

It is easy to show that size of the external shocks on a country-by-country basis was not decisive in answering this question.[11] Consider in table 8, for example, the size of the terms-of-trade shocks in each of the eight NBER countries. The terms-of-trade shock is measured as the change in each country's terms of trade (comparing the *average* for 1980–82 with the average for 1977–79) multiplied by the 1980 share of total imports in GNP. This measure roughly indicates the income loss as a percentage of GNP that resulted directly from the fall in each country's export prices relative to import prices.

Five of the eight countries experienced a terms-of-trade deterioration if 1980–82 is compared with 1977–79, but there is no relation between the size of the shock and the depth of the subsequent crisis. Bolivia and Mexico, for example, fell into a deep debt crisis despite an improvement in the terms

Table 8 **Terms-of-Trade Shocks, 1979–83**

	Terms of Trade				
Country	1979 (1)	1983 (2)	(2) ÷ (1) (3)	Share of Exports in GNP, 1981 (4)	Size of Shock (5) = [(3) − (1)] × (4)
Argentina	102	96	.94	13	−.8
Bolivia	77	99	1.29	17	4.9
Brazil	114	87	.76	9	−2.2
Indonesia	73	97	1.32	31	9.9
Mexico	77	98	1.27	14	3.8
Philippines	112	99	.88	20	−2.4
South Korea	127	101	.80	37	−7.4
Turkey	125	94	.75	7	−1.8

Sources: Terms-of-trade data from the World Bank's *Work Development Report*, 1984 edition for 1979 data and 1987 edition for 1983 data. Share of exports in GDP from table 9 in this chapter.

of trade. It is true that by 1982, export prices were beginning to fall in these two countries, but judged over a ten-year perspective, export prices were high, not low. On the other hand, Korea suffered a sharp terms-of-trade decline after 1979, but it largely escaped the debt crisis.

It is apparent that other country-specific factors must have played a large role in determining the effects of the external shocks on the individual economies. The NBER country monographs suggest that the following country-specific factors were most important:

1. The shocks were less harmful in countries which had previously adopted a successful long-term growth strategy, based on an *outward-oriented trade regime*, a *competitive exchange rate*, and *prudent fiscal policies*.
2. The shocks were less harmful when foreign borrowing had contributed to a higher rate of capital accumulation in the 1970s, as opposed to a higher level of consumption spending or greater capital flight.
3. The shocks were less harmful when the government had adjusted rapidly to the external shocks in the early 1980s, rather than postponing adjustment measures.

I now examine each of these points in detail.

The Long-Term Growth Strategy

Trade and Exchange Rates

The benefits of outward-oriented trade policies have now been firmly established by the economics literature, and the monographs in the NBER project lend further support to the existence of long-term benefits from an outward-oriented trade strategy.[12] Outward orientation refers to the balance of incentives given by the trade regime to export sectors versus import-competing sectors. Outward-oriented regimes are typically defined as regimes that are neutral between the sectors or on balance more favorable to exports. Importantly, the authors of the monographs for Korea and Turkey stress that in practice, outward-orientation can be very different from laissez-faire. Korea, for example, had a very interventionist trade policy with heavy import protection, but it has balanced the anti-export biases of the import restrictions with highly favorable fiscal incentives for exports.

Table 9 provides some indicators of the trade regime of the various countries in the NBER project.[13] The table reports a World Bank index of trade orientation for 1973–77 and 1978–85, as well as the export-GNP ratios for the economies for 1960, 1980, and 1985. Korea has the highest index of outward orientation of the economies and, consistent with that, has had the most marked increase in the export-GNP ratio of all eight economies. Turkey moved from a posture of moderate inward orientation in the 1970s to one of moderate outward orientation in the 1980s, according to the World Bank index, and the export-intensity of the economy increased

Table 9 **Indicators of Trade Structure and Policy**

Country	Index of Trade Regime		Share of Primary Exports in Total	Export Share of GNP		
	1963–73	1973–85	1981	1960	1980	1985
Argentina	1	1	80	10	13[a]	15
Bolivia	2	1	97[a]	13	17	18
Brazil	3	3	59	5	9	14
Indonesia	3	2	96	13	31	23
Mexico	2	2	73[b]	10	14	16
Philippines	2	2	55	11	20	22
South Korea	4	4	10	3	37	36
Turkey	1	3	63	3	7	19

Sources: The trade orientation index varies from 1 to 4, with 1 being the most inward oriented and 4 being the most outward oriented. The index is taken from the *World Development Report* (1987, 83) of the World Bank. The share of primary exports in total exports is from the *World Development Report,* table 10, various years. The export-GDP ratios measure the exports of goods and nonfactor services as a percentage of domestic GNP. They are from various editions of the *World Development Report:* 1960 data from 1981 edition; 1980 data from 1982 edition; 1985 data from 1987 edition.

[a]1979.

[b]1983.

sharply after 1980, apparently in line with the shift in trade regime. Interestingly, Turkey is also the clearest case of recovery from a debt crisis, a recovery that Merih Celâsun and Dani Rodrik (vol. 3) attribute importantly to the boom in export earnings after 1980.

All of the Latin American countries are judged to be moderately or extremely inward oriented, except for Brazil during the 1970s, which was designated by the World Bank as moderately outward oriented. No Latin American country showed an important rise in the share of manufacturing exports in GNP during the 1970s; the rise in Mexico's export-GNP ratio between 1970 and 1980 is more than accounted for by the increase in oil exports as a percentage of GNP.

The benefits of an outward-oriented trade strategy, especially for a country engaged in extensive foreign borrowing, come through very clearly in the country monographs. With an inward-oriented trade strategy, foreign borrowing is directed to privately profitable but socially unprofitable sectors, leading to a buildup of inefficient import-competing industries that eventually prove to be unable to generate the foreign exchange necessary to service the accumulated foreign debt. This point, which was spelled out in simple theoretical terms by Brecher and Díaz Alejandro (1977), is amply demonstrated by the NBER monographs.[14] Once debt repayments became necessary in Latin America, the foreign exchange earnings could be generated only with tremendous political and economic difficulty since the manufacturing sector could only begin exporting with a large cut in real wages.[15]

The protected manufacturing sectors in Latin America rely heavily on imported inputs in the production process. When the terms of trade

deteriorated in the early 1980s, and when new lending stopped from international capital markets, the imported inputs also dried up (or rose sharply in price relative to nontraded goods), forcing much of the manufacturing sector into a sharp contraction.[16] These firms could stay in operation only with very substantial cuts in real wages.

The outward-oriented regime in Korea, by contrast, avoided many of the static inefficiencies of inward orientation, reduced Korea's vulnerability to external shocks, and also offered Korea various dynamic benefits, including the opportunity for export firms to exploit economies of scale and opportunities for learning-by-doing by producing for a large world market. The outward-oriented trade strategy, with its focus on spurring export growth, seems to offer the additional benefit of forcing policymakers to pay careful attention to exchange rate management. In Korea, as well as in Indonesia, and in Turkey after 1980, policymakers have devalued the currency in a timely fashion in order to avoid a costly loss of international competitiveness for the export firms.

In Latin America, by contrast, devaluations are typically avoided until the last possible moment. As long as the central bank has a minimal level of reserves or access to international loans, nominal exchange rates are held fixed despite internal cost inflation.[17] The result is that exporters are squeezed by an overvalued real exchange rate. This kind of chronic overvaluation adds a further barrier (in addition to the trade regime) to the development of a dynamic nontraditional export base. The Latin American tendency toward overvaluation on the official exchange rate at the end of the 1970s and the early 1980s (after the global shocks) is illustrated in table 10, where I show a measure of the real exchange rate vis-à-vis the United States for the eight NBER countries, comparing 1979–82 with a base of 1978. We can see that in Argentina, Bolivia, Mexico, and the Philippines, the real exchange rate appreciated in real terms, while it was stable or depreciating in Brazil, Indonesia, South Korea, and Turkey.[18]

Table 10 **The Real Exchange Rate, 1978–82 (local currency vis-à-vis the U.S., 1978 = 100)**

Country	1978	1979	1980	1981	1982	Average (1980–81)
Argentina	100	141	179	138	59	159
Bolivia	100	103	111	134	107	123
Brazil	100	92	76	80	77	78
Indonesia	100	78	81	81	80	81
Mexico	100	106	117	127	85	122
Philippines	100	105	108	105	101	107
South Korea	100	106	96	94	89	95
Turkey	100	111	84	71	60	78

Source: IMF, *International Financial Statistics*.

Note: The real exchange rate vis-à-vis the U.S. is calculated as P/EP^*, where P is the CPI of the country, E is the exchange rate in units of domestic currency per U.S.$, and P^* is the U.S. CPI. A rise in the index signifies a currency appreciation.

The inward-oriented trade structure in Latin America bolsters, in a political sense, the tendency toward an overvalued exchange rate. Since exporters who favor devaluations are limited mainly to the primary commodity sectors, devaluations in Latin America are typically opposed by most of the influential economic actors. There is no countervailing pressure for timely devaluations from a large manufacturing export sector, as there is in Korea and, increasingly, in Indonesia and Turkey.[19] Urban workers and firms operating in the sheltered manufacturing sector view devaluations as serving mainly to raise domestic costs and reduce real wages and to increase the rents earned by primary commodity exporters, whose supplies are deemed (incorrectly) to be inelastic in any event.

The policy of maintaining fixed nominal exchange rates in Latin American countries, despite an overvaluation of the currency, was an important reason for foreign borrowing by the public sector. In Argentina, Bolivia, and Mexico, in particular, the central banks borrowed heavily in the late 1970s and early 1980s to gain foreign reserves in order to support the exchange rate in the face of massive private capital flight, which in turn was prompted by fears of an impending devaluation (as well as more generalized fears of political and economic instability).[20] In the period of heaviest foreign borrowing, 1976–85, it has been estimated that about two-thirds of the increase in gross external debt in Argentina and Mexico went to finance private capital flight, as is shown in table 11.[21] The bulk of this capital flight was concentrated before 1983, during this period in which the monetary authorities were holding fixed an overvalued exchange rate. In Brazil, where capital control restrictions were in place and where the exchange rate did not become so overvalued, private capital outflows were significantly smaller than in Argentina and Mexico. In Indonesia and Korea, capital flight was a much smaller fraction of total borrowing, largely because real exchange rates did not become highly overvalued in the critical period, 1979–82.[22] In Indonesia,

Table 11 **Estimates of Capital Flight, 1976–84**

Country	Change in Gross Debt (1)	Estimated Capital Flight (2)	Ratio (2)/(1)
Argentina	36.3	25.0	.69
Bolivia[a]	3.0	1.0	.33
Brazil	79.3	17.3	.22
Indonesia[a]	27.0	5.0	.19
Mexico	79.4	53.4	.67
Philippines	19.4	3.7	.19
South Korea	33.2	3.5	.11

Sources: For Argentina, Brazil, Mexico, the Philippines, and South Korea, from R. Cumby and R. M. Levich, *On the Definition and Magnitude of Recent Capital Flight*, NBER Working Paper no. 2275 (June 1987), tables 1–5. The "Morgan" definition of capital flight is the one repeated here. For Bolivia and Indonesia, from Morgan Guaranty, *World Financial Markets* (March 1986), table 10, p. 13. Note that these sources did not contain estimates for Turkey.

[a]For Bolivia and Indonesia, data are for 1976–85.

for example, there was little capital flight between 1976 and 1985, despite the fact that the country has completely free international capital mobility, a point noted by Wing Thye Woo and Anwar Nasution (vol. 3).[23]

Another, and more subtle link between the exchange rate and foreign borrowing results from the fact that in several Latin American economies, the public sector is a large net exporter, while the private sector is a large net importer. In Bolivia and Mexico, for example, the major export earnings are garnered by state enterprises that produce primary commodity exports. In this circumstance, an overvaluation of the exchange rate can lead directly to a worsening of the budget deficit and thereby to increased foreign borrowing by the public sector.[24]

The Fiscal Balance

More generally, the management of fiscal policy, along with trade policy, was the second main determinant of which countries succumbed to a debt crisis. The importance of fiscal policy results from the fact that *most* of the foreign borrowing in the 1970s was undertaken by the public sector or by the private sector with public guarantees. We saw in table 4 that more than 80 percent of the external debt at the end of 1986 was held by the public sector.[25] The heavy indebtedness of the public sector poses special problems for debt servicing since the public sector has to generate resources in order to service the debt.

The foreign debt servicing in this case therefore requires two resource transfers: first, from the private sector to the public sector, and then from the public sector to the rest of the world. The first kind of transfer requires a coherent set of fiscal policies; the second, an outward-oriented trade strategy and realistic exchange rates.

The centrality of fiscal policy in the debt crisis is emphasized in all of the country monographs. In Latin America, Turkey, and the Philippines, governments ran chronically large budget deficits in the years leading up to the debt crisis, and often relied on foreign borrowing to finance *current* spending as well as capital expenditures. Moreover, the deterioration of the terms of trade in the 1980s caused a large loss of revenues, while higher interest rates raised the cost of debt servicing, so that the external shocks pushed the economies toward large deficits.

Budget deficits were large at the end of the 1970s in all of the Latin American countries and rose very sharply in the early 1980s, after the rise in world interest rates and the fall in export prices. As I will discuss later, the failure of the Latin American countries to close the gaping budget deficits after 1982, combined with the inability to finance the deficits with foreign borrowing, is the explosive mix that has fueled the high inflations throughout the region in recent years.

The Uses of Foreign Borrowing

The trade regime and fiscal policy management played a large role in determining the ways that foreign borrowing was utilized. In Korea, for

example, foreign borrowing largely financed investments in heavy industry that provided the basis for the export surge in the mid-1980s. It is safe to conclude that the foreign borrowing financed investment spending rather than consumption, since domestic saving rates rose throughout the whole period of heavy foreign borrowing in the 1970s.

In the inward-oriented regimes in Latin America, foreign borrowing was much more likely to support consumption, capital flight, and investment in nontradables, than it was to augment the manufacturing export base. As we saw in table 11, foreign borrowing was associated with heavy capital flight in three of the Latin American countries: Argentina, Bolivia, and Mexico. In Argentina, it is hard to identify any broad sector of the economy in which investment expenditure was spurred as a result of foreign borrowing, except for a binge of consumer durables purchases on the eve of the exchange rate crisis of 1981.

In Mexico it appears that the small share of foreign borrowing that did not finance capital flight was used to increase government transfers and government investment in the oil sector, much of which proved to be unprofitable when oil prices started to fall after 1981. In Bolivia, the foreign borrowing financed extensive capital flight, some worthwhile development of the natural gas sector, and several major "white elephant" projects which have since been abandoned.

In Brazil, domestic savings fell so sharply in the 1970s that despite the heavy foreign borrowing in that decade, national investment rates were *lower* in the late seventies (during the borrowing boom) than in the early seventies. Most of this decline was due to a fall in public sector savings as a percentage of GNP (i.e., a larger public deficit on the current account of the budget), suggesting that the borrowing really served to finance current government expenditures, such as subsidies on energy consumption.

In Turkey, much of the surge in foreign borrowing was associated with the convertible Turkish lira deposit accounts (CTLDs) discussed by Celâsun and Rodrik. This financial mechanism effectively gave large subsidies to investment projects financed with foreign loans. Thus, Turkey sustained a large investment boom as the counterpart of the foreign borrowing. It is evident that much of the investment was rather inefficient, but at the same time, Celâsun and Rodrik suggest that the increased investment played an important role in generating manufacturing capacity for Turkey's export boom in the 1980s.

In the Philippines, heavy foreign borrowing was used to finance a significant increase in public sector investment, but much of this expenditure proved to be highly inefficient. As Robert S. Dohner and Ponciano Intal, Jr. stress:

> The expansion of investment had a particularly large construction component, much of it in public or quasi-public facilities: luxury hotels, cultural centers, and some of the notorious projects of Imelda Marcos such as the villa built entirely of coconut produc or the University of Life.

> Other investments were hurt by changes in world demand and prices. These include major investments in copper refining, sugar mills, and arguably, the nuclear power plant that the Philippines built. (1989, 176)

Favoritism in allocating loans, kickbacks on government procurement, and the general use of public investment funds to enrich the Marcos "cronies" all contributed to giving the Philippines the highest ICOR (incremental capital output ratio) in Southeast Asia.

Finally, with respect to Indonesia, Woo and Nasution stress that foreign borrowing was kept at a moderate pace (indeed the 1981 debt-GNP ratio for Indonesia was the lowest for the eight NBER countries), was tightly screened, and was used in a balanced manner to support export-oriented agriculture as well as industry for the domestic market. Capital flight was moderate despite the complete absence of capital controls. Woo and Nasution stress that political considerations under Soeharto have led to a consistent emphasis on support for the rural agricultural sector,[26] which in turn has led the government to avoid an overvalued exchange rate which would tend to squeeze the agricultural sector.

Policy Adjustments to External Shocks, 1979–82

The rise in world interest rates and the fall in commodities prices in 1979 and after caught most policymakers throughout the world off guard. Real interest rates had been negative between 1973 and 1978, and they were widely forecasted in 1979 to remain low or negative for many years into the future. Similarly, commodities prices boomed again in 1979 as they had in 1974, and there was little basis for believing that they would soon collapse to levels in real terms that had not prevailed since the Great Depression.

Nonetheless, already in late 1978 there were enough clouds on the economic horizon to cause prudent policymakers in developing countries to pause from an aggressive strategy of foreign borrowing. Upon Paul Volcker's accession to power as chairman of the Federal Reserve Board at the end of 1978, short-term dollar-denominated interest rates (e.g., LIBOR) began to rise sharply—part of a strategy to stabilize the dollar—reaching what was then a postwar high of fifteen percentage points on six-month loans in June 1979. Real interest rates (the interest rate minus the inflation rate of the past twelve months) also reached the highest levels of the past several years by mid-1979. Moreover, several important borrowing countries had already begun to experience debt difficulties: Peru, as of 1976; Turkey, as of 1977; and Jamaica, as of 1978.[27]

It is fascinating to compare the policy reactions of the various countries to the shifting economic environment in 1979–80. These reactions were very important in affecting the later development of the crisis, since in Latin America in particular, a remarkably large proportion of the total debt as of 1982 had been incurred in just two years, 1980 and 1981. We also saw earlier that it was in these few years that the debt-export ratios jumped to their dangerous levels. As pointed out in Sachs (1987), the net debt of

Argentina, Brazil, and Mexico to BIS-area banks nearly doubled in the two years between December 1979 and December 1981.[28] On the whole, Korea, Indonesia, and Turkey responded appropriately to the deteriorating international situation, while the Latin American countries and the Philippines either ignored the ominous signs from abroad or even accelerated their foreign borrowing in a misguided attempt to counteract the recessionary effects of the external shocks.

It is instructive to give a schematic description of the policy choices undertaken in various countries during this crucial period. Characteristically, Korea proved to be the most prudent of the countries in the study. As early as spring 1979, Korea embarked on a Comprehensive Stabilization Program (CSP) and a retrenchment from the high rates of borrowing of the mid-to-late 1970s. The CSP included a turn to tighter monetary and fiscal policy, as well as a reallocation of investment from heavy industry to other less capital-intensive sectors. Nineteen eighty proved to be a deep crisis year for the economy (as a result of internal political unrest, a failed harvest, external shocks, and the internal adjustment effort). Nonetheless, the stabilization program was maintained and strengthened, in part through a significant depreciation of the exchange rate and a further tightening of fiscal policies.

Indonesia was also relatively well positioned in the crucial period of 1979–82. In 1978, Indonesia devalued the rupiah significantly in order to spur nontraditional exports. Moreover, Indonesia enjoyed a terms-of-trade boom in 1979–80, in line with the second OPEC oil shock. Because of moderate fiscal policies during 1979–82, Indonesia actually decreased its external debt net of foreign exchange reserves in that period.

Turkey was "lucky" in having experienced its debt crisis as early as 1977–78. By January 1980, the government had decided to launch a major policy initiative to open the Turkish economy and expand manufacturing exports. The real exchange rate was significantly devalued, which greatly enhanced the export profitability for Turkish manufacturing firms. A military government seized office at the end of 1980 and continued the policy adjustments. Labor unrest was repressed, thereby preventing wage increases from undoing the real exchange rate depreciation. At the same time, Turkey was fortunate to receive substantial financial support from the official creditor community.

In the Philippines, the needed adjustments were not put in place. As Dohner and Intal indicate, the Marcos government attempted to counter the recessionary effects of the second oil price increase by increasing public expenditures. The government actually embarked on a new strategy of Major Industrial Projects in 1980, causing a significant rise in the public sector deficit and a significant *acceleration* of foreign borrowing. As in Latin America, the foreign debt nearly doubled between 1979 and 1982.

In the four Latin American countries, there is not a single case of significant retrenchment during 1979–82. Bolivia was in no condition politically to embark on a stabilization effort. In the tortuous path from

military government in 1978 to democratic government in 1982, there were no less than thirteen heads of state! No government lasted long enough to implement a stabilization program, and only one really tried (for a short period in 1980). Bolivia fell into arrears with the commercial banks as early as 1980. In Argentina, the political situation was also difficult. The fixed exchange rate policy of Martinez de Hoz, in place since late 1978, was still being defended in 1979–80 as the best hope for fighting inflation. By 1980, the sharply overvalued exchange rate was provoking enormous capital flight, but the exchange rate was not devalued until February 1981. The period between March 1981 and the advent of democratic rule at the end of 1983 (with the accession to power of President Raúl Alfonsín) was primarily one of political and economic disarray, capped by Argentina's defeat in the Malvinas War in the spring of 1982.

The policies in Brazil stand in interesting contrast to those in Korea. In spring 1979, at about the same time that Korea embarked on its stabilization program, Brazil was undergoing a presidential succession, from Ernesto Geisel to João Baptista Figueiredo. The new planning minister, Mário Simonsen, embarked on a strategy of slower growth, reduced budget deficits, and less reliance on foreign borrowing. But instead of persevering as in Korea, these austerity measures were quickly abandoned, in part paradoxically as a response to the rise of oil prices in mid-1979. Rather than viewing the oil prices as yet another reason for retrenchment (as Brazil was a heavy oil exporter), the oil price increases were taken by many as a sign that new "stimulative" measures were necessary. In the event, Simonsen was replaced by Antônio Delfim Neto, who quickly ushered in a policy of accelerated foreign borrowing.

Mexico provides a particularly remarkable case of failure to adjust. Between 1979 and 1981, the Mexican public sector increased expenditures so dramatically that Mexico ended up in a foreign debt crisis in 1982 despite the historically unprecedented boom in oil export earnings during 1980 and 1981. Government spending rose from 32.2 percent of GDP in 1979 to 46.4 percent in 1981! This increase of 14 percent of GDP was accompanied by a rise in revenues of only 4 percent of GDP (from 26.2 to 30.1 percent).

It is interesting to speculate on the deeper factors that might explain the Latin American (and Philippine) failure to pursue more realistic fiscal policies. In another study, Andrew Berg and I (1988) surmised that the deep inequalities of income in Latin America and the Philippines have probably been an important systematic factor in undermining a sound fiscal policy. We hypothesized that higher income inequality would have the following effects, all making budgetary control more difficult:

- raise the pressure for redistributive policies toward the poor and working class;
- enhance the power of economic elites to resist taxation;

- decrease the political legitimacy of governments that defend the existing distribution of income;
- contribute to direct labor militancy;
- more generally, impede the development of a social consensus around policies that promote development in the long term, but which might impose costs on some social groups in the short term.

Berg and I offered some circumstantial evidence in support of our hypothesis by showing that the extent of income inequality in a sample of thirty-four middle-income developing countries was a good predictor of which countries in the sample had succumbed to a debt crisis and which ones had not.

3. Macroeconomic Adjustments After the Onset of the Debt Crisis

The previous section addressed the question of why some countries fell into crisis and others did not. We saw that the differences among the countries related to several factors, including the trade regime of each country, the exchange rate policies, the fiscal management, and the reaction of the various countries to the external shocks of 1979–82. In this section, I review some of the lessons in the country monographs concerning the macrodynamics of a debt crisis, starting from the moment that foreign lending is cut off to the overly indebted country. My focus here is on the experience of the Latin American countries, which suffered the deepest debt crises, though I also mention the cases of Turkey and the Philippines. I also explore the reasons that recovery from the crisis has proved to be so difficult.

In order to understand the economics of a debt crisis, it is important to review the basic theory of macroeconomic adjustment to external shocks. Consider, for purposes of discussion, a simple economy with three productive sectors: a primary resource sector (e.g., oil, grains, primary metals), a tradables manufacturing sector, and a nontradables sector (which includes services, construction, and manufacturing that operates behind a high tariff barrier). The sectors will be denoted R, T, and N, respectively. The economy imports final consumption goods, final investment goods, and imported intermediate goods used in domestic production of R, T, and N.

The relative importance of the three sectors in a particular economy will depend not only on the resource endowments of the economy, but also on the trade policies that have been pursued in the country over the preceding ten or twenty years. Outward-oriented trade policies will be more likely to result in a large tradables manufacturing sector, with significant levels of manufacturing exports, as in Korea. Inward-looking policies will tend to generate a manufacturing sector that is almost completely protected from world markets and is therefore really part of the nontradables sector, as in Argentina. Of course, the size of the manufacturing export sector will also depend on factor endowments. Resource rich economies will tend, ceteris paribus, to have a

smaller manufacturing export sector since the export of primary commodities will maintain a strong exchange rate, which will crowd out the manufacturing export sector.[29]

I will suppose that in the short run of the production of the primary commodity R is inelastically supplied, while production in the other two sectors is determined by production functions that use sector-specific capital, imported intermediate inputs, and labor. Labor can move between the sectors in the short run (though perhaps with some adjustment lag).

An appreciation of the real exchange rate (defined as a rise in the price of nontradables N relative to tradables T) causes N firms to bid up wages and attract labor from the T sector. A rise in domestic aggregate demand (e.g., a fiscal expansion that is financed by foreign borrowing) pushes up demand for nontradables and tradables. Since the supply and demand for nontradables must be equal, the relative price of nontradables to tradables must rise (i.e., there must be a real appreciation), and labor is drawn from the T sector to the N sector.

The urban real wage will tend to rise with an exchange rate appreciation (i.e., a rise in the relative price on N) and to fall with a depreciation. This will be true, for example, when the nontradables sector is relatively labor-intensive compared with the resource sector and the T sector is small (the typical pattern in the Latin American countries). If there is a large labor-intensive tradables sector (as in Korea, for example), the negative effect of a real depreciation on the real wage will tend to be smaller than in the case of Latin America, where the effect can be quite extreme.[30]

Also, the responsiveness of exports to a given percentage fall in real wages will tend to be lower in Latin America than in Asia because in Latin America the main export sector is the resource sector, which has a very low short-run supply inelasticity, while the more responsive T sector is much smaller in Latin America than in Asia as a percentage of total output. For this reason, the extent to which real wages must decline in order to increase exports by a given percentage of GDP will tend to be much larger in Latin America than in Asia.

Exogenous shocks which reduce current aggregate expenditures on nontradables will tend to cause a depreciation of the real exchange rate and consequently a decline in real wages. For example, a fall in the world price of the R sector or a rise in interest costs for a net debtor both lead to a negative income effect and a decline in demand for nontradables. Similarly, in a case where foreign borrowing from international capital markets is supporting domestic spending above domestic production, a cutoff of the foreign lending will cause a drop of absorption, with a consequent fall in the price of nontradables relative to tradables and a decline in the real wage. Analogously, a country that is financing a trade deficit by running down foreign exchange reserves will experience a collapse of absorption and a real exchange rate depreciation at the moment that the reserves are depleted

(assuming that there is no recourse to other forms of international capital inflow).

This discussion highlights one central theme. The external shocks that hit the NBER countries (a fall in the terms of trade, a rise in world interest rates, and for five of the countries, a collapse of international lending) were of the sort that: (1) reduced domestic absorption; (2) provoked a real exchange rate depreciation; and (3) thereby provoked a decline in real wages.[31] In economies with a very small T sector (such as Argentina, Bolivia, Mexico, and Turkey), the reduction of the real exchange rate and of the real wage had to be very large in order to induce a significant increase in the supply of new nontraditional exports to compensate for the terms-of-trade decline in the R sector and for the higher interest rates and the cutoff of new funds from abroad.

This discussion of adjustments to external shocks, while conventional, does not do justice to the real-world drama that lies behind the adjustment to external shocks. In practice, the adjustment to adverse external shocks is likely to be politically destabilizing, both because the shocks tend to require reductions in real wages that can provoke social unrest and because the shocks tend to require governments to adopt fiscal austerity measures that are politically unpopular and sometimes even threatening to the survival of the government. In practice, governments may have very grave difficulties in convincing the general public that the austerity is the result of external forces rather than domestic mismanagement.

In some countries, particularly Argentina and Bolivia, the real wage declines that followed the external shocks were vigorously resisted by powerful labor groups and by political groups acting on the behalf of urban labor interests. In these countries, the external shocks have provoked enormous labor unrest, including several general strikes since the early 1980s, as well as the periodic application of wage regulations (such as indexation agreements) that attempt to reduce or eliminate the downward movement of the real wage. The floor on real wage adjustments can of course contribute to open unemployment or more likely to the growth of an informal labor market, where the regulations are not honored and where real wages fall sharply.

In other countries, especially in Brazil, Turkey, and Korea, which were all under military rule in the period 1980–83, real wage resistance was more readily countered by government repression of labor unions and pro-labor political parties.[32] In Indonesia, the Philippines, and Mexico, union activity is traditionally weak because of a long history of government repression or co-optation.

The second kind of real-world adjustment difficulty arises from the fact that the external shocks directly and adversely affect government finances, thereby requiring politically painful fiscal adjustments by the governments. This is true of all three kinds of shocks that I have been discussing: terms of

trade declines, higher world interest rates, and a cutoff in new lending. Governments of most countries in the NBER project rely on primary commodity exports as a major source of government revenues,[33] so that a sharp drop in export earnings will cause a significant drop in government revenues.[34] Even where taxes are levied on imports rather than exports, the decline of export earnings following a terms-of-trade deterioration can provoke a sharp drop in imports and thereby a sharp drop in government revenues.[35]

Similarly, higher world interest rates directly affected the government budget since much of the foreign debt was an obligation of the public sector: higher world interest rates coupled with the heavy stock of foreign debt therefore contributed directly to an increase of the budget deficit. For the same reason, a cutoff in new loans also affected the government directly, since the lending cutoff generally affected loans to the public sector and therefore required that the government reduce a deficit that it had been financing with foreign loans or instead shift to other forms of finance (often with dire consequences).

The practical implications of the link between government revenues and the external shocks are enormous. When the terms of trade deteriorates, or interest rates rise, or lending is cut off, there is not an *automatic* decline in domestic spending to the extent that these shocks hit the public sector. Rather, the government faces an explicit policy choice of absorbing the shock through a combination of reduced expenditures, higher taxes, or a larger budget deficit. The effects on the economy, and on the political fortunes of the government, are closely linked to the choices that it makes.

The "textbook" approach to a permanent adverse shock, such as a lower terms of trade or higher interest costs, is to cut spending and raise taxes sufficiently to absorb the shortfall in government revenues. The "optimal" response to a cutoff in the availability of foreign credits is in general more complicated, though it will typically involve a *reduction* in overall borrowing, as well as a partial shift in financing from foreign sources to domestic sources. Typically, the necessary austerity measures are very difficult to carry out politically. When the government imposes austerity measures after a terms-of-trade shock or an interest rate increase, political opponents of the government will try to blame the economic hardships on government mismanagement rather than on the exogenous shocks themselves, and they will often enjoy significant political success with this gambit. This possibility alone will lead governments to try to postpone and disguise the necessary adjustments as long as possible.

Moreover, many governments simply do not have the power to implement an austerity program, even if they want to. Large parts of the public sector (e.g., state enterprises, local and regional governments) may be outside of the effective control of the finance minister. And even if the executive branch formulates a realistic adjustment effort, it may be frustrated by a

recalcitrant legislature (especially if controlled by an opposing political party) which refuses to support the executive's measures.[36] The government may therefore choose, or be forced, to absorb much of the shock through increased borrowing.[37] Eventually, the creditworthiness for borrowing will erode, finally forcing the government into inflationary finance if it still cannot engineer a cut in spending or a rise in taxes.

If we examine the actual path of adjustments taken in response to external shocks, certain salient trends are evident. In Latin America, where the foreign credit squeeze was most severe, governments responded to the external shocks with a combination of spending cuts and increased domestic borrowing. In cutting spending, public investment projects were the first to go, public sector real wages the second, and public sector employment a distant third.

The decline in foreign loans and the large budget deficits after 1981 led to a shift toward domestic financing. That financing was in turn divided between financing from the central bank (i.e., seignorage financing) and financing from the domestic capital markets. Of course, increased domestic borrowing contributed to a crowding out of private investment.[38] Since private investment was also crowded out by the increased public sector deficits, the combination of a lower public sector investment rate and a lower private sector investment rate led to a *sharp drop in total investment rate* in the economy, as a percentage of GDP, as shown in table 12.

Between 1982 and 1986, the governments in Argentina, Brazil, and Mexico borrowed heavily in the domestic capital markets, thereby raising sharply the stock of domestic public debt as a share of GNP. By 1988, the interest burden on the internal debt rivalled the interest burden on the external debt in Brazil and Mexico. In Bolivia, the government lacked even the creditworthiness to borrow from the internal capital markets, so that the decline in foreign lending was matched, *almost one-for-one*, by an increase

Table 12 **Rate of Gross Capital Formation as Percentage of GDP, 1978–86**

Country	1978–81	1982–86
Latin America		
Argentina	.23	.18[a]
Bolivia	.17	.12[b]
Brazil	.22	.19
Mexico	.25	.21
Rest of world		
Indonesia	.24	.28
Philippines	.25	.20
South Korea	.31	.31
Turkey	na	na

Source: IMF, *International Financial Statistics.*

[a]1982–83.

[b]1982–85.

na = not available.

in central bank credits to the government. As pointed out by Juan Antonio Morales and myself (in this vol.), this shift from foreign financing of the government deficit before 1980 to central bank financing after 1982 was the proximate cause of the Bolivian hyperinflation during 1984–85.

The large internal borrowing in Argentina, Brazil, and Mexico, with the attendant upward pressure on domestic real interest rates, led to increasing reliance over time on central bank financing of the budget deficits. Eventually, the central bank financing resulted in a sharp increase in domestic inflation. To summarize, large budget deficits during the pre-1982 period had modest effects on inflation since they were financed heavily by foreign borrowing, with a pegged exchange rate that kept domestic inflation low. After the foreign credits dried up and the budget deficits worsened after 1982, inflation began to increase. The increasing recourse to central bank financing in Argentina, Bolivia, Brazil, and Mexico between 1982 and 1985 then contributed to the outbreak of very high inflation, reaching a true hyperinflation in Bolivia during 1984–85 and more than 1,000 percent annual inflation in Brazil in 1988.

4. The Difficulty of Economic Stabilization

Six of the countries in the NBER project experienced a serious debt crisis: Argentina, Bolivia, Brazil, Mexico, the Philippines, and Turkey. Some evidence on the successes and failures of stabilization after the debt crisis are given in table 13. For each country, I summarize the growth and inflation performance of the economy in the years following the onset of the debt crisis. It is clear that only Turkey has been able to resume sustained growth after the crisis, though as of 1988, the Philippines was also showing signs of a possible return to sustained growth with low inflation.

All of the countries except the Philippines have had great difficulties in controlling inflation. Turkey's inflation has been in the high double-digit rates, while inflation in Latin America has been at triple-digit rates and higher. As of the end of 1988, it appeared that Bolivia and Mexico had been able to end their high inflations through programs of fiscal austerity, while Argentina and Brazil appeared to be on the verge of hyperinflation.

One of the deepest puzzles in the debt crisis has been the difficulty of sustaining economic stabilization and growth, with the partial exception of Turkey. The Turkish recovery in growth in the 1980s is explained by Celâsun and Rodrik by several factors: (1) the generous foreign support received by Turkey during 1979–82 from official creditors; (2) the shift toward export promotion in 1980, backed up by trade reforms and a significant real depreciation with a real wage cut; (3) special factors, like the boom in exports to the Middle East following the outbreak of the Iran-Iraq war; and (4) the fact that Turkey's external debt burden was never as great, as a percentage of GNP, as in the Latin American countries.

Table 13 **Recent Economic Performance: GDP Growth and Inflation**

Country	1983	1984	1985	1986	1987	1983–87
	GDP Growth					
Latin America						
Argentina	3.0	2.6	−4.5	5.5	2.0	1.6
Bolivia	−6.6	−.3	−.2	−2.9	2.1	−1.6
Brazil	−3.5	5.1	8.3	7.6	3.6	4.5
Mexico	−5.3	3.7	2.7	−3.7	na	−.7[a]
Rest of world						
Indonesia	4.2	6.0	2.5	4.0	3.6	4.1
Philippines	1.1	−7.1	−4.1	1.9	5.9	−.6
South Korea	10.9	8.6	5.4	11.7	11.1	9.5
Turkey	3.4	5.9	5.1	7.8	na	5.5[a]
	Inflation					
Latin America						
Argentina	350.0	622.2	669.2	90.1	131.3	305.7
Bolivia	275.6	1,282.4	12,783.0	276.3	14.6	680.0
Brazil	150.0	210.0	222.6	145.0	229.8	189.1
Mexico	101.6	65.5	57.7	86.2	131.8	86.8
Rest of world						
Indonesia	11.8	10.4	4.7	5.8	9.3	8.4
Philippines	10.0	50.4	23.2	.8	3.8	16.3
South Korea	3.4	2.3	2.5	2.8	3.0	2.8
Turkey	31.4	48.4	45.0	34.6	38.8	39.5

Source: IMF, *International Financial Statistics.*

Note: Inflation is calculated using the consumer price index. The average for the period is a geometric average.

[a]1983–86.

I have already indicated some of the reasons for the great difficulties in recovery in the Latin American countries, but they bear reiterating:

1. The external shocks required a sharp reduction in real wage levels, which proved to be politically destabilizing in several countries;
2. The external shocks provoked a significant worsening of the budget deficit, as well as a reduced ability to finance the deficit from abroad. The fiscal crisis in turn prompted sharp cuts in public investment and increased domestic borrowing by the central government. The domestic financing of the deficit has led to a partial crowding out of private investment and a sharp increase in inflationary finance by the central bank;
3. The sharp reduction in aggregate investment rates has led to a significant reduction in the potential growth rates of the economy;
4. The sharp rise in inflation has undermined political and economic stability and has undermined private sector confidence to invest in new export sectors.

The experiences of Argentina and Brazil in attempting to use wage-price controls as part of an anti-inflation effort are illuminating. The so-called heterodox shock programs, known as the Austral Plan in Argentina and the Cruzado Plan in Brazil, are discussed, respectively, in detail in the monographs by Rudiger Dornbusch and Juan Carlos de Pablo and by Eliana Cardoso and Albert Fishlow (in this vol.). The theory of the heterodox shock was the same in both countries: since inflation has an important inertial component, it is important to complement the orthodox measures of tight monetary and fiscal policy with an incomes policy designed to break the wage-price inertia.[39] In the event, both countries carried out the heterodox elements but fell short on the more orthodox elements, i.e., the budget deficits remained excessively large. After a short period of price stabilization, high inflation resumed in both countries.

It is important to underline three additional features of the economic environment that have hindered a strong recovery in Latin America. I put these factors under the heading of the "political economy of the Latin American debt overhang." The first factor is the political weakness of the Latin American governments. In Argentina, Bolivia, and Brazil, the debt crisis coincided with the transition of democratic rule after almost two decades of military government. The new democracies were fragile, untested, and inexperienced, and subject to the pent-up social demands of a population that had been politically repressed for years. Populist sentiments to increase wages and social spending took hold just at the moment that budget austerity and real wage cuts were needed. Even in Mexico, where the PRI (Institutional Revolutionary Party) has dominated the political scene for decades, the political control of the government has been waning for years, thus limiting the possibilities for strong austerity measures.[40]

The second factor is the particular problem of implementing austerity and reform programs in response to an external debt crisis. I have noted that interest servicing of the foreign debt now constitutes a large fraction of public expenditure in all of the Latin American countries (as well as in Indonesia and the Philippines). Budget austerity measures and other kinds of reform measures (e.g., trade liberalization measures) are viewed by the citizens of these countries as a squeeze on living standards that is undertaken *for the sake of foreign creditors*. Since the foreign debt has little public legitimacy in the first place (particularly in South America where it was accumulated during the 1970s, mostly under repressive military regimes), there is little popularity in belt-tightening for the sake of repaying the foreign debt. Increasingly during 1982–88, the issue of whether to suspend debt payments has become a central topic of political debate. Governments that urge austerity programs are increasingly subject to rejection by a frustrated electorate that is attracted to the option of suspending foreign debt payments.[41]

The third factor is the set of economic inefficiencies that arise from a large overhang of debt.[42] Countries with a large overhang of debt face the

following kinds of difficulties: sanctions from disgruntled creditors for incomplete payments on old debts (e.g., withdrawals of trade credits); high bargaining costs in renegotiating the old debt, including repeated breakdowns in financial relations between the government and its creditors; an inability to borrow for new investment projects, even when those projects have a high rate of return; and, as already mentioned, adverse incentives for carrying out austerity and reform programs since the costs of reform are borne by the debtor country while the benefits of reform will be appropriated by the foreign creditors.

Debt Renegotiations After the Onset of the Debt Crisis

In each of the six countries that succumbed to the debt crisis (Argentina, Bolivia, Brazil, Mexico, the Philippines, and Turkey), the country abruptly lost access to international lending after the international banks deemed the country to be uncreditworthy. In all cases, the contractual schedule of debt-servicing obligations faced by the country after the onset of the crisis could no longer be met, in part because the country had been relying on new lending to help finance the debt-service payments that were coming due. This was especially true for amortization payments, for which the normal expectation was that they would be refinanced through new loans. Once the debt crisis hit, even the refinancing of amortization payments became highly problematic.

As a result, there has been a sustained period of renegotiation of the debt since the onset of the crisis. Only Turkey has "graduated" from the process of renegotiation to renewed access to market borrowing. For the other five countries, the renegotiation process has been nearly continuous for five years, with little prospect in sight for a resumption of normal market conditions for these countries. As I noted in table 3, the secondary market value of the commercial bank debt of the five countries remains far below par, indicating a lack of faith that the old loans will be fully repaid. Thus, the banks have little desire to resume normal market lending to these countries.

The nature of the debt renegotiations has been widely discussed and analyzed, and a summary of the process may be found in my introduction to volume 1.[43] The basic structure of negotiations was designed by the creditor governments, mainly the U.S., working in conjunction with the commercial banks and the international financial institutions. The Mexican renegotiations of 1982–83 set the basic pattern for almost all of the negotiations that followed.

In a nutshell, the negotiating process has contained the following elements: (1) a long-term rescheduling of all principal due on medium- and long-term debt owed to commercial banks; (2) a commitment by debtor countries to remain current on interest payments due on the debt; (3) in some years, a partial refinancing of interest payments through the mechanism of a "concerted loan," in which the bank creditors agree jointly to re-lend a

portion of the interest that is due; (4) a long-term rescheduling of bilateral debt-service payments, both principal and interest, in the Paris Club forum; (5) an IMF standby program, with conditionality focussing on budget austerity and export promotion via exchange rate depreciation; and (6) new lending from official sources, including the IMF, the World Bank, the multilateral development banks, and the export credit agencies of the industrial countries.

Because of the creditor governments' concerns with the financial situation of the commercial banks that were heavily exposed in the debtor countries, the official policy has been to press for continued interest servicing of the debt and to oppose any significant element of debt reduction in the course of the negotiations between the debtors and the banks. Thus, even as evidence has grown after 1982 that much of the debt may not be repayable, at least if economic and political stability is to be maintained in the debtor countries, the negotiations have not led to any significant long-term reduction in the debt burden, with the notable exception of Bolivia.

Unlike Turkey, which received substantial credits after 1979 (enough to eliminate the net resource transfer from the Turkish government to its creditors), none of the Latin governments has been afforded a comparable financial "time-out" on debt servicing. Every year, the Latin governments have made large net resource transfers to the foreign creditors (equal to several percent of GNP each year). Only Bolivia has been able to reverse the negative resource transfers after 1985, through its policy of suspending debt payments to the commercial banks while at the same time receiving new credits from the official creditor community.

The NBER monographs make clear the high costs of a strategy that has continued to insist on full interest servicing of the bank debt. Relations between the creditor banks and the debtor governments have become increasingly turbulent and unstable since 1982. Negotiations between the governments and the banks are drawn-out cliffhangers, and the hardline positions of the creditors and the debtors have often pushed financial relations to the verge of rupture or beyond (as with the moratorium of debt-service payments by Brazil during 1987, the suspension of payments by Bolivia after 1984, and the deep arrears of Argentina in 1988).

Since the IMF has designed standby programs based on the presumption that the interest on the debt can and will be fully serviced, the conditions of these programs have repeatedly failed to be met by the Latin American countries. As Cardoso and Fishlow recall, "successive letters of intent under IMF programs had no sooner been dispatched than they were made obsolete by accelerating inflation that did violence to the monetary targets." Brazil signed and then subsequently failed to meet the conditions of no less than eight standby arrangements during 1983–85. Similarly, Argentina entered and then failed to comply with several IMF programs from 1986 to 1988.

The failure to the economies in the debtor countries to recover has led more and more market participants to expect that the debts of the Latin

American countries will eventually be reduced, either through a negotiated settlement or unilateral action. (As Lindert and Morton, Sachs, and Eichengreen stress in volume 1, debt reductions have been the *normal* mode of resolving debt crisis in past historical episodes.)

The unusual case of Bolivia provides some support for the argument that debt reduction may bring benefits both to the creditor and debtor.[44] For a variety of economic and foreign policy reasons, the U.S. government and the rest of the official creditor community began after 1985 to support the concept of debt reduction for Bolivia. Morales and Sachs argue that this more lenient attitude on the debt was crucial in allowing Bolivia (alone of the high-inflation countries in the region) to end the hyperinflation of 1984–85 and to restore stability and renewed economic growth.

During 1986–88, the official community supported Bolivia with new credits despite Bolivia's policy of nonpayment of interest to the banks.[45] At the same time, the official community supported Bolivia's negotiations with the banks aimed at allowing Bolivia to use donated funds from friendly governments to repurchase part of its debt at the deeply discounted secondary market price (of 11 cents per dollar of face value). In 1988, Bolivia repurchased approximately one-half its debt from the banks. Subsequently, Bolivia and the banks have entered into a new round of negotiations to reduce the burden of the remaining debt.

It would appear that the creditor banks have benefitted from the buyback along with Bolivia. Before the buyback, Bolivia was in complete suspension of debt payments and the secondary market price of Bolivia's debt had fallen to 5 cents on the dollar. The buyback raised the secondary market value to 11 percent and allowed the banks to sell half of the debt for cash at this price. Bolivia surely benefitted from the lenient treatment on the debt, not only in the trivial sense of saving money on future debt servicing, but also in the sense of bolstering the political case for a strong domestic austerity program, which could no longer be attacked as a measure undertaken for the sake of the foreign creditors.

5. Summary and Conclusions

The NBER monographs were prepared to shed light on several important questions regarding foreign borrowing and the developing country debt crisis. Why did the crisis occur? Why did it hit some countries deeply and not others? What are the economic mechanisms involved in an external debt crisis, and why is recovery so difficult? How might the process of debt negotiations be altered to enhance the recovery of the debtor countries?

The monographs are very rich in insights on these points, and this essay could do no more than touch the surface of the individual country experiences. Nonetheless, the country experiences do lend themselves to certain general conclusions, and it is worthwhile to restate these at this point.

First, while the debt crisis was provoked by important shocks in the international economy (mainly the rise in interest rates and the fall in primary commodities prices), the effects of these shocks on the individual debtor economies depended importantly on the quality of economic policies that were in place in the debtor economies. Countries with a sound *long-term* growth strategy, based on an outward-oriented trade regime, realistic exchange rates, and prudent fiscal policies, were well equipped to cope with the external shocks.

Moreover, even after the shocks hit at the end of the 1970s, there was still time for a reorientation of policies by the debtor countries. Most countries (and especially those in Latin America) lost this opportunity to get policies under control; many other countries, such as Indonesia, Korea, and Turkey, underwent significant adjustment efforts, which helped them to avoid the worst of the crisis.

The debt crisis, when it hit, showed a similar mechanism in the countries that fell into crisis. In the cases of Argentina, Bolivia, Brazil, Mexico, the Philippines, and Turkey, the onset of the debt crisis is marked by an abrupt withdrawal of new credits form the world capital markets and an inability to roll over existing debts on a normal basis. This shock is typically combined with (and indeed precipitated by) a terms-of-trade deterioration or a rise in interest rates that puts additional burdens on the debtor country.

Proper adjustments to these shocks typically require a real exchange rate depreciation (i.e., a rise in the price of tradables to nontradables, a reduction of the urban real wage, a shrinkage of the nontradables sector and an expansion of the tradables sector, and a program of fiscal austerity. These adjustments can well be traumatic, both economically and politically, especially in economies that are particularly inflexible because of a past history of inward-oriented trade policies. If the nontraditional export sector is especially small, then a very large real exchange rate depreciation and a large fall in the real wage might be needed in order to restore external equilibrium. The process of reducing the real wage can provoke social unrest. It is notable that this process led to more open conflict in countries with militant trade unions (e.g., Argentina and Bolivia), than in countries that relied on repression of trade unions to restrict labor demands (e.g., Korea and Turkey in the early 1980s).

The reduction of the budget deficit after the onset of the debt crisis also proved to be difficult and politically destabilizing in many countries. In part this is because governments simply wanted to avoid the opprobrium from pursuing an unpopular austerity program. In other cases, the government faced opposition in the legislature to austerity measures (such as tax increases or layoffs in the public sector) and thus was blocked from implementing an austerity plan. Also, the executive branch typically lacks the power to make a comprehensive fiscal adjustment since many of the fiscal problems are centered in powerful and independent state enterprises,

and in regional and local governments, which are beyond the reach of the finance minister. These units often have independent access to central bank financing that is outside of the budget. Moreover, these entities often have a powerful political voice, which allows them to resist calls for austerity.

Fiscal adjustments in the response to a debt crisis are particularly tricky from a political point of view, since the public comes to view the austerity measures as being put in place for the sake of *foreign creditors,* rather than domestic residents. In the Latin American countries and in the Philippines, there is a growing political current which therefore rejects the austerity measures in favor of a unilateral suspension of payments to the foreign creditors.

The country monographs reveal only spotty success in restoring stability and growth after the onset of a debt crisis. Turkey has been the most successful case, for it has not only restored economic growth but has also restored its access to the international capital markets. But even in this most successful case, the inflation rate has remained extremely high (nearly 100 percent per year in 1988), so that macroeconomic stability remains in question. In the Latin American countries, there has been no successful revival of growth, and as of 1988, Argentina and Brazil continued to face the possibility of hyperinflation. Mexico reached triple-digit inflation in 1987, but apparently reduced it in 1988 at the cost of another year of output decline. Bolivia was able to end a hyperinflation in 1986 and to resume slight positive growth in 1987, but only in the context of a program that included a complete suspension of payments on commercial bank debt.

The longer term prospects remain grim for many of the countries. Following the crisis, aggregate investment rates are down sharply in the four Latin American countries, as well as in the Philippines, so that the long-term growth potential has been diminished in recent years. Moreover, these countries seem to have little prospect of a quick return to the international capital markets in view of the market assessments that much of the *existing* debt will not be serviced in the long run.[46] I noted several possible inefficiencies that may result from the large overhang of bad debt. These inefficiencies include the costs of repeated breakdowns in debtor-creditor relations; the withdrawal of trade credits and new lending to the countries, even when highly profitable new investment opportunities exist; and the disincentive for the debtor to undertake costly reform efforts, if the benefits of those reforms are likely to flow to the creditors in the form of increased debt-service payments.

For these reasons, many of the authors speculated about the possible need to reduce the debt burden in the future and to abandon the presumption that all of the debt should eventually be repaid. The studies provide only one illustration of actual debt reduction, the case of Bolivia, but the evidence suggests that in that case, debt reduction has in fact worked to the mutual benefit of the creditors and the debtor country.

Notes

1. For several studies of Latin America in the 1930s, see Thorp (1984). A particularly good survey of the period is provided by Carlos F. Díaz Alejandro in the same volume. These essays show that despite the enormous collapse of commodities prices in the Great Depression, many primary commodities producers experienced a vigorous recovery, particularly in agriculture and import-competing manufacturing.

2. In Bolivia, for example, real per capita GDP in 1988 was at the same level as in 1955. In Peru, the real per capita GDP in 1987 was as the same level as in 1960.

3. The debt crisis is generally dated to August 1982, when Mexico announced that it would be unable to meet its debt-servicing obligations. Soon thereafter, there was a cascade of similar announcements. It is true, however, that several countries fell into external crisis before Mexico. Of the countries in the NBER study, Turkey's crisis arrived at the end of the 1970s, Bolivia fell into debt crisis in 1981, and Argentina fell into crisis in the spring of 1982.

4. Even Colombia, which did not reschedule its debts after 1982, found it to be impossible to get normal market loans to roll over principal falling due in 1988. Chile, which is widely considered by the financial markets to have been the best-managed of the South American countries, is still without access to spontaneous new lending from the banking world.

5. There are differences in the nature of the debt crisis in the poor versus middle-income countries because of the much less important role of bank debt in the case of the low-income countries. Thus, while this study inevitably sheds some light on the poorer countries in Sub-Saharan Africa, the relative importance of commercial bank debt in Latin America leads to special characteristics of the adjustment process and debt-renegotiation patterns in Latin America as compared with Africa. One major difference is that official creditors did not withdraw net lending as abruptly as did the commercial banks, so that there was not a decisive shift from net resource inflows to net resource outflows in the low-income countries of Sub-Saharan Africa as there was in the middle-income countries of Latin America. The second difference has been the greater effective debt relief offered by the official creditors than by the commercial banks. The Paris Club of government creditors, for example, routinely reschedules nearly 100 percent of interest payments due, while the commercial banks have never rescheduled interest payments.

6. Bolivia experienced the sharpest measured decline in per capita income during 1980–85 (−28 percent), as well as the worst hyperinflation in Latin American history (24,000 percent from August 1984 to August 1985). Peru, with hyperinflation beginning in 1988, appears to be the leading candidate for the worst crisis during the second half of the 1980s.

7. In practice, most of the debt is in fact the liability of a public sector entity.

8. Between 1980 and 1986, the proportion of total external debt owed by the public sector tended to rise significantly in the heavily indebted countries. According to the World Bank's *Debt Tables* (1988–89 edition), the overall 1980 long-term debt of the heavily indebted countries was $205 billion, of which $148 billion was public or publicly guaranteed debt. Thus, in 1980, about 72 percent of the debt was owed by the public sector. By 1986, the total debt had risen to $421 billion, of which $360 billion, or *86 percent*, was now owed by the public sector. One reason for the rise in

this ratio has already been mentioned in the text: private sector firms made individual arrangements with their creditors to reduce the debt through various kinds of workouts. This is generally easier than with public debt, for several reasons: (1) the private debtors usually have only a small number of foreign creditors; (2) the private debt can be negotiated outside of the glare of publicity; deals can be made without fear that they will act as precedents for other debtors; (3) concerted lending packages have been available mainly to public sector debtors; and (4) some parts of the private sector debt have been absorbed by the public sector, through various kinds of bailout programs for private sector firms.

9. Also, the availability of official credits will depend on various noneconomic factors, such as the military/strategic importance of the country. As Merih Celâsun and Dani Rodrik point out in volume 3, the strategic importance of Turkey as a frontline member of NATO contributed to the large inflows of official credits to Turkey after the onset of Turkey's financial crisis toward the end of the 1970s.

10. It may also seem to impute too much irrationality to market participants to suggest that they believed in a Ponzi scheme during the 1970s. Didn't they know that such a good thing was bound to end once real interest rates rose back to more normal levels? The answer seems to be that many market participants and observers simply extrapolated the heady successes of the 1970s well into the future. And for many market participants, the incentives were such that there were few concerns about the far distant future. Within many debtor countries, the expected tenure in office of a particular government was too short to worry about the long-run constraints on borrowing. Even more surprising, the same was true within many large banks. As described in a recent history of Bank of America (Hector 1988), the lending at the bank in the mid- and late 1970s was judged according to the growth of earnings, rather than on the quality of the loan portfolio. Of course, the earnings on a loan in a particular year depended only on whether the loan was being serviced that year (even if out of borrowed money) and not on an assessment of the true long-term value of the loan. Hector describes the frenetic atmosphere at the bank and at competitor banks as follows:

> By 1977, as Clausen [the bank president] strove to keep quarterly profits climbing, the 10 percent a year growth limit fell to demands from the head office. Tom Clausen wanted to restore Bank of America to its rightful place as the nation's most profitable bank. He pushed lenders to increase loans rapidly, even though Bank of America was running at the limits of its ability to control its growth. . . . (88)
>
> Managers learned quickly that headquarters always wanted more growth than they could supply . . . [L]oan officers realized that they were better off adding a pile of new loans of dubious quality than adding too few loans. The head office didn't differentiate between the good and bad loans of its budget reviews, and a loan officer's salary increases and promotions depended on only two variables: the size of his loan portfolio and the number of people working for his unit. (89)

11. For the conclusion that the size of external shocks (both on commodities prices and interest rates) cannot account for cross-country differences in performance in the 1980s, see also my papers, Sachs 1985, and Berg and Sachs (1988).

12. For an authoritative statement in support of outward-oriented trade regimes, see Krueger (1978). See also various studies by Bela Balassa, such as Balassa and Associates (1982).

13. Detailed descriptions of the trade strategies may be found in each of the country monographs.

14. Brecher and Díaz Alejandro proved that foreign borrowing at market interest rates must be welfare-worsening for a competitive economy operating with a tariff barrier for the import-competing sector. The tariff results in an excessive allocation of resources to the protected sector. The shadow value of capital in this sector is necessarily less than the world cost of capital, meaning that national income is reduced overall by the foreign borrowing once repayment on the foreign capital is taken into account. This misallocation caused by a high tariff barrier can in fact be so severe that national income is reduced by an inflow of foreign capital even if the foreign capital is a gift rather than a loan, a point first made by Harry Johnson (1967). The inflow of foreign capital reduces income by further encouraging the buildup of the high-cost protected sector and reducing the production of the more efficient export sector.

15. Among the Latin American countries, Brazil has shown the greatest capacity to spur new nontraditional exports. This is in line with Brazil's export-promotion policies during much of the 1970s. According to many observers, including Eliana Cardoso and Albert Fishlow (in this vol.), the Brazilian trading system became increasingly inward-oriented in the mid-1970s and afterward. Following substantial trade liberalization after 1985, Mexico has also enjoyed a mini-boom in manufacturing exports. The export growth has been very rapid, but starting from a very small base.

16. In some cases, where foreign exchange was rationed after the terms-of-trade decline and the onset of the debt crisis, the manufacturing firms simply could not obtain the necessary inputs, or only on the black market with a very depreciated exchange rate. In other cases, the exchange rate was devalued sharply so that the cost of the inputs rose sharply relative to wages and relative to nontradables in general.

17. In Argentina, Bolivia, and Brazil, the exchange rate has sometimes been maintained, even after reserves dry up, through the use of foreign exchange rationing and exchange controls. A black market exchange rate inevitably develops, which is sharply depreciated relative to the official rate. As is well known, the spread between the official rate, at which exporters must surrender foreign exchange, and the black market rate, which determines the marginal cost of imports, acts like an implicit tax on the export sector. The spread between the black market exchange rate and the official rate reached several hundred percent in Bolivia during 1984 and 1985, and has frequently been on the order of 30–50 percent in Argentina and Brazil. For further evidence on the existence of higher black market premia in Latin America than in East Asia, see Sachs (1985, 541, table 6).

18. Note that as with trade policy, Brazil comes across as somewhat more outward-oriented than do the other Latin American countries.

19. Interestingly, observers in Mexico have recently noted a growing constituency for devaluation among the new manufacturing exporters who have arisen with the liberalization-with-real-exchange-rate-depreciation since 1985.

20. Argentina and Mexico were particularly susceptible to capital flight because of the absence of capital controls (Argentina, unwisely, had eliminated most capital controls during 1977–78).

21. The definition and measurement of capital flight are fraught with conceptual and data problems. What should be counted as capital flight? All private capital flows abroad? Only those that are unreported? Only those that are prompted by a

specific motivation, such as tax evasion or to avoid political unrest? The definition used in table 11 is one that was proposed by Morgan Guaranty. It defines capital flight as all private sector capital outflows except those that are intermediated by the domestic banking system and except those that are recorded as foreign direct investment. Other definitions, equally plausible, also show the same pattern as in the table.

22. Apparently, Turkey also avoided extensive capital flight, though the studies reported in table 11 did not include Turkey in the countries examined.

23. Despite perfectly open capital markets, Indonesia has apparently been able to avoid rampant capital flight through the maintenance of a realistic exchange rate and prudent fiscal policy.

24. In some cases, however, the government is a net importer of goods and services (e.g., in Brazil, where the government services foreign debt and imports oil). Then, as Cardoso and Fishlow stress, a real appreciation can actually reduce a budget deficit and a real depreciation can worsen a deficit. In Brazil, for example, a real depreciation raises the domestic resource cost of servicing the foreign debt, which is not offset by higher earnings of public sector export firms.

25. Actually, the share of debt in the public sector increased after the onset of the debt crisis since much of the private sector debt was taken over by the government in the course of various bailout operations for private sector firms. Even before the debt crisis hit, however, the share of public sector debt in the total debt has always been more than half in all of the countries in the NBER project.

26. Among other factors, the regime is interested in reducing discontent in the heavily agricultural Outer Islands.

27. Of course, Mexico had already experienced one near-disaster with foreign borrowing in 1976, and Indonesia had been shaken by the Pertamina crisis of 1975, but those cases were viewed as special, isolated problems. The Mexican crisis was viewed more as a problem of exchange rate mismanagement (pegging to an unrealistic value of the peso), rather than as a foreign debt crisis.

28. The net debt here is defined as the total liabilities owed by residents of the country (public plus private sector) to commercial banks in the BIS reporting area, minus claims of residents on BIS-area banks. In Argentina, the net debt went from $5.3 billion at the end of 1979 to $16.3 billion at the end of 1981; in Brazil, the debt rose from $28.8 billion to 44.8 billion; and in Mexico, the debt increased from $22.5 billion to $43.4 billion. For the three countries, the net debt increased by 85 percent in just two years.

29. This is the phenomenon known as the "Dutch disease": a strong resource sector crowds out other tradables sectors and promotes the expansion of the nontradables sector.

30. The real wage could actually rise with an exchange rate depreciation in the unlikely case of a very large T sector that is labor intensive relative to the N sector.

31. Actually, in Korea, where the upward trend growth of real wages was quite strong, the shocks only slowed the growth of real wages relative to the earlier trend, but did not reduce real wages absolutely, except in 1980.

32. In Brazil, the labor movement has historically been rather weak and much less organized and militant than in neighboring Argentina and Bolivia.

33. Either directly, through sales of a state trading company, as in Bolivia and Mexico, or indirectly, through trade taxes and royalty payments on commodity production.

34. The revenues may be generated directly by state enterprises that own and produce the primary commodities (as in Mexico, where the state enterprise PEMEX is responsible for all oil exports, or in Bolivia, where the state tin company, COMIBOL, and the state oil company, YPFB, generate a very large share of total exports), or through export taxes (as in Argentina, which relies heavily on taxes on grain and meat exports).

35. Also, in Brazil and Turkey, where oil imports are undertaken by a state petroleum company, the rise in world oil prices can cause a significant budget deficit if the state firm, under domestic political pressures, is prevented from fully passing along to consumers the higher oil costs. Subsidies on oil imports was a large source of Brazilian budget deficits after 1973 and again after 1979.

36. In Bolivia, for example, during the 1982–85 administration of President Hernán Siles Suazo, the Bolivian Congress refused to support various tax measures proposed by the government to bring the deficit under control, thereby increasing the reliance on central bank financing and contributing to the eventual hyperinflation during 1984–85.

37. Of course, the recourse to borrowing in the face of a permanent external shock is feasible only in the short run; eventually the budget will have to adjust not only to the terms-of-trade decline, but also to the debt-service burden on the accumulated debt that results from the borrowing strategy. Even so, postponement of adjustment by the current government may make a lot of political sense, especially in a country with a rapid turnover of governments, where it can be expected that the political costs of adjustment will be borne by a future government of a different political party. In any event, a government may have no other option than borrowing, if it is unable to win legislative support for an austerity program.

38. Remember that this crowding out can be avoided if consumption (public and private) is reduced via higher taxes and lower government spending.

39. The highly successful Israeli stabilization program was based on the same principle. But in contrast to the Latin American cases, the Israeli program actually implemented a large measure of budgetary restraint.

40. Nonetheless, the Mexican government was still able during 1982–88 to impose harsh fiscal austerity measures and a sharp reduction of the real wage. These efforts were culminated at the end of 1987 in a new stabilization program christened the "Emergency Social Pact." The program was successful during 1988 in reducing the inflation rate, but contributed to significant electoral setbacks for the PRI in the elections of 1988. The long-term success of the pact was still in question as of the end of 1988.

41. As I note below, the case of Bolivia is illuminating in this regard. Morales and Sachs stress that it was the Bolivian government's suspension of interest payments to the commercial banks that gave the government the "political space" to undertake the sharp austerity measures at home.

42. See Sachs (1988) for a concise statement of the theory of adverse effects from a debt overhang, as well as references to further discussion in the economics literature.

43. See also the discussion and critique of the debt negotiation process in Sachs (1986, 1987, 1988).

44. The Bolivian debt arrangements are described at length in the monograph of Morales and Sachs, and in a separate article by Sachs (1988).

45. In the other cases of nonpayment to the banks, e.g., Brazil's debt suspension during 1987, the official community has refused to extend new official loans.

46. That is, the market believes that the expected discounted value of future net transfers from the debtor to the creditors is significantly less than the face value of the debt.

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