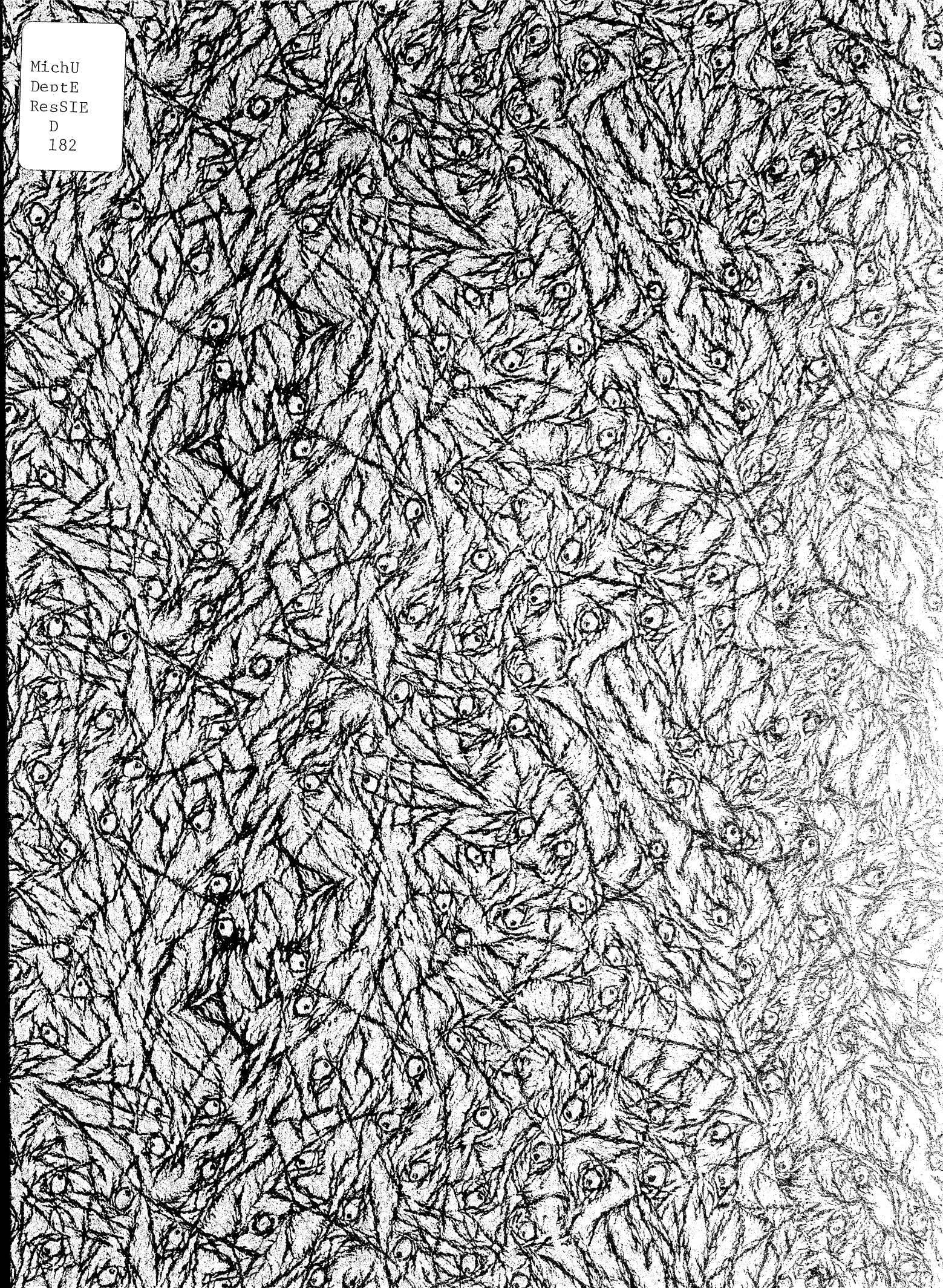
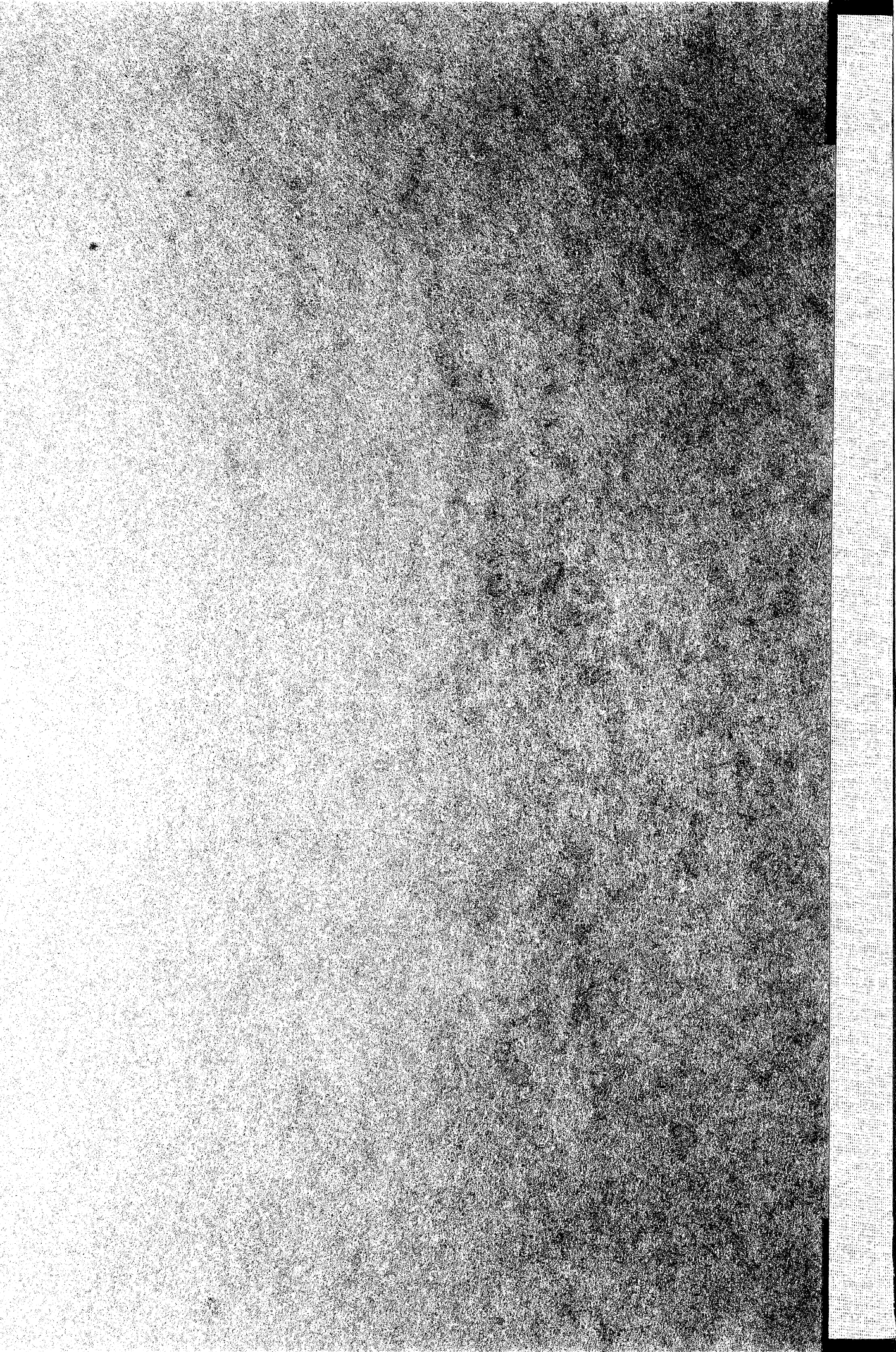


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THE DEBT CRISIS IN LATIN AMERICA

by

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Chapter 6

The Debt Crisis in Latin America

*Larry A. Sjaastad,
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Carlos Hurtado*

THIS CHAPTER discusses the various aspects of the current external debt problem in five Latin American countries: Argentina, Brazil, Chile, Mexico, and Venezuela. These countries were chosen because they account for a very large portion of total Latin American external debt and because they have all experienced severe payments difficulties since 1982. Other countries could have been included. Costa Rica, for example, was the first Latin American country to experience an external debt crisis in recent times, but Costa Rica has a very small external debt (at least in a comparative sense), and its problems do not conform to the global debt syndrome. Similarly, Panama could have been included on the ground that its debt is one of the largest in the world relative to its GDP. The cases that we have considered, however, permit us to cover a great deal of the problem and involve countries with highly different characteristics and histories.

What Triggered the Crisis?

The debt crisis was sprung on the world in August 1982, when the Mexican government became unable to continue debt service, and quickly spread to a number of other Latin American countries. We shall argue, however, that the crisis formed much earlier, with the coincidence of a number of quite independent phenomena: the rapid and enormous growth of external debt (again, particularly in Latin America), the shortening of maturities as more and more of that debt was owed to the world capital market rather than to international financial institutions, the sudden and spectacular rise in dollar interest rates, worldwide dollar deflation, and the political crisis in Latin America. All of these events were primary ingredients.

From 1971 to 1982, the total external debt of the developing countries grew, in nominal terms, by 600 percent, and debt service by 1,100

percent. (Estimates based on the 1983 *World Debt Tables* of the World Bank.) Even if we exclude dollar inflation during that period, growth was at an unsustainable rate, as it far exceeded the rate of growth of real output in the creditor nations. Nevertheless, by historical standards, the level of debt in 1982 was not extraordinarily high when measured against variables such as gross domestic product and exports. Debt service relative to debt, however, had doubled, with no commensurate increase in the ability of the countries to generate the requisite fiscal and trade surpluses to pay that service.

Moreover the countries borrowing most heavily were also those most heavily in debt; their debt service was enormous but still less than their annual borrowings. Once the ability to borrow began to wane, the heavy borrowers had to convert fiscal and trade deficits into surpluses virtually overnight, a trick that none of them could turn. The result was that country after country had to go hat in hand to the International Monetary Fund (IMF), seeking the blessing that would prevent the lines of credit from drying up entirely.

The great buildup of private international lending occurred during the 1970s and early 1980s and was closely related to, if not a consequence of, the oil price increase(s), which produced a virtual explosion of liquidity in the international commercial banks. Perhaps because of unanticipated inflation, and perhaps in part due to the surpluses of the Organization of Petroleum Exporting Countries (OPEC) following the oil price increase of 1973-74, real interest rates on dollar-denominated external debt were very low and indeed frequently negative, giving the developing countries a rather strong incentive to incur that debt. When real interest rates are negative (and are expected to remain so), it is clearly impossible to have "too much" external debt.

To be sure, there was concern by economists and government officials, but it focused on the more narrowly defined recycling problem rather than on the ability of the developing countries to meet the interest service on their external debts. The recycling issue arose from the fact that the commercial banks were absorbing short-term liabilities (from a relatively concentrated group of depositors) while acquiring assets that were, by their very nature, long term (despite the particular contractual terms of any given loan), as the bulk of the loans were going to a limited number of the developing countries.

By the late 1970s and early 1980s, less and less was heard about the recycling problem. There were basically two reasons. First, the insatiable appetite of at least certain developing countries for foreign capital was clearly matched by the willingness of the larger commercial banks to add to their international exposure, and second, growing fiscal deficits in

several of the industrialized countries were absorbing an ever larger portion of the OPEC surplus. So strong were these forces that the second oil shock, one much larger than the first in terms of the transfers involved, failed to reestablish any significant degree of concern with the recycling problem.

Three nearly simultaneous events in the early 1980s served to trigger the current international debt "crisis," which is, of course, precisely the doomsday scenario envisaged by the more pessimistic participants in the recycling debate. The first was the sharp recovery of the dollar beginning in late 1980, followed by the extraordinary strength of the dollar during much of 1982. Associated with the recovery were two important (and related) developments: dollar interest rates rose sharply, and dollar prices of many traded goods (particularly commodities that figured heavily in the exports of the debtor countries) fell abruptly, especially during the spectacular rise of the dollar from October 1980 through February 1981. As most of the debt of the developing countries was denominated in dollars, and much of it at the floating London interbank offered rate (LIBOR), the appreciation of the dollar and the rise in dollar interest rates implied an equivalent rise in debt service. Not only did the nominal interest service increase because of the rise in interest rates, but real interest service rose even more because of the decline in the dollar prices of many tradables. The latter effect comes about because countries obviously service their foreign debt by importing less or exporting more (in the final analysis); a decline in the dollar price of tradables implies an increase in the real burden of servicing foreign debt. In addition, there is some evidence that the appreciation of the dollar, coupled with the subsequent world recession, resulted in an adverse turn in the terms of trade facing the debtor countries. This latter effect came about because the appreciation of the dollar had, initially at least, a stronger downward effect on the prices of homogeneous commodities than on those of manufactures, and the former are very important exportables of most debtor countries.

Whereas appropriately defined real rates of interest on external debt had been negative during much of the 1970s for a number of developing countries, short-term real rates of interest on that debt rose abruptly to the 15-20 percent range at the end of 1980 and have remained very high ever since. Although it is difficult to have too much debt (in the short run, at least) when real rates of interest are negative, a debt service problem quickly emerges when real rates increase as they did.

Chilean data readily illustrate the point. The second column of table 6-1 indicates the annual rate of change of unit (dollar) values of Chilean imports and exports, and the third column indicates the behavior of

Table 6-1. *External Prices of Chilean Tradables and Interest Rates*
(percent)

Period	Annual rate of change— prices ^a	Interest rate ^b	Real interest rate ^c
1977	5.1	7.0	1.8
1978	6.1	6.4	0.3
1979	26.8	11.2	-12.3
1980	16.6	13.9	-2.3
1981	-5.5	15.7	22.4
1982	-8.6	13.3	24.0

a. Rate of change in a simple average of unit values of Chilean imports and exports as calculated by the United Nations Economic Commission for Latin America.

b. Annual averages of six-month LIBOR rates, based on U.S. dollars.

c. Defined against the prices of Chilean tradables.

Source: Gil-Diaz 1983.

dollar nominal interest rates. The fourth column combines the two into a real rate of interest on Chilean foreign debt. Note that that rate was very low or negative from 1977 through 1980 and then rose into the 20–25 percent range. Although nominal dollar interest rates rose somewhat, the main source of the increase in the real rate is the dollar deflation—the prices of Chilean tradables actually fell during 1981 and 1982. The same phenomenon occurred in most other debtor countries in 1981, and it was probably the most important single element in the making of the crisis. The dollar deflation was a direct consequence of the recovery of the U.S. dollar vis à vis other major currencies.

The second development was an intensification of the tendency toward greater fiscal deficits in the industrialized countries, a development that was exacerbated by the rapid decline in the OPEC current account surpluses that began in early 1981. Clearly the excess supply of funds available to the developing countries was shrinking; nevertheless, they were still able to finance their debt service (and then some) by rollovers of the principal and further borrowing that more than covered interest payments. The change in real interest rates that began in late 1980 did not immediately provoke the crisis, but competition for international funds was plainly making it more difficult for the developing countries to maintain their level of foreign borrowing. Even without further developments, it was but a matter of time until the debt crisis.

The third development exposed the underlying rot for all to see and precipitated the crisis. That development was the South Atlantic conflict of May–June 1982. As is well known, several major U.S. banks had an

exposure in Latin America well beyond their capital and reserves; such an exposure could be considered prudent only if the United States could reasonably be expected to come to the aid of any Latin American country with large debts to U.S. banks when that country encountered a payments difficulty. The decision by the United States to support Britain against Argentina in the South Atlantic conflict, however, exploded the credibility of that assumption. The bankers, unnerved by the event, began immediately to restrict the flow of loans to Latin America. Mexico, whose reserve position was very fragile after the February 1982 devaluation, was the first country forced to suspend payment, but Argentina, Chile, Brazil, and even Venezuela suffered the same fate.

Thus the debt crisis resulted from a number of factors no single one of which would have been sufficient alone. The crisis has been particularly intense owing to the fact that much of the borrowing helped, directly or indirectly, to sustain fiscal deficits; as that borrowing declined, the fiscal deficits had to be turned into surpluses to generate the local currency required to buy the dollars to service the debt. Countries such as Argentina and Brazil have found it extremely difficult to undertake the fiscal reforms that are required of them and have turned more and more to inflation as a source of finance. In the process, control of international capital flows has been tightened (as the country tries to avoid runs on its own currency), with the effect that governments have no access whatsoever to the very substantial foreign currency earnings accruing to their citizens on their foreign investments. Governments increasingly find themselves being abruptly cut off from such funds, and this aspect makes the current debt crisis particularly dangerous.

Latin American Public Finance during the 1970s

In this section we look at the revenues, expenditures, and deficits of Latin American governments during the 1970s and, when data are available from our source, the *Government Finance Statistics* of the IMF, during the early 1980s.¹ We also look at the main expenditure items in order to detect the sources of growth in the aggregate.

Because we are primarily interested in the connection between public expenditure and foreign indebtedness, we have taken the rather unusual step of presenting these figures in current U.S. dollars. To do so we used the market exchange rates as they are recorded in the *International Financial Statistics (IFS)* of the IMF. Since we are dealing with flow data, we use the average market exchange rate in each period. The presentation of data in current U.S. dollars has two implications: the U.S. infla-

tion imparts a positive trend to all series, and the figures reflect the volatility of Latin American exchange rates.

The reason for looking at the data in current U.S. dollars rather than in units of constant domestic purchasing power, as is customary, is that, with free access to the world capital market, it is the current dollar value of expenditures, and not its size in terms of units of constant domestic purchasing power, that affects the extent of foreign borrowing. The interested reader could easily relate these series to foreign debt data in other sections of this book.

Finally, we should note that the four main expenditure items that we have considered here—general public services, defense, capital expenditure, and our aggregate “social, economic, others”—do not add up, in general, to the figure we present under the heading “total expenditure and net lending.” In consequence, the reader should not expect to see the average rate of growth of the latter equal to a weighted average of the average rates of growth of our four expenditure items.

General Patterns

Revenues have been growing faster, on average, than expenditures in four out of five countries surveyed, Venezuela being the exception, with both items growing at the same pace.

The ranking of different expenditure items in terms of growth rates varies widely across countries. Some patterns emerge clearly, however, from table 6-2. First, the aggregate “social, economic, others” is a very fast-growing item. It ranks first in Argentina and Brazil and second in Chile and Mexico. Capital expenditure, on the other hand, is a slow-growing item in the southern cone countries. It ranks fourth of four items in Argentina and Brazil and third in Chile. Third, defense has been a fast-growing item in Chile and Argentina only. Two striking features of these rankings are their similarity in the cases of Argentina and Brazil and their perfect disparity between Chile and Venezuela.

Argentina

Time series in Argentina reflect the highly unstable nature of its economic behavior during the 1970s and early 1980s. Except in 1975, when a series of “maxi” devaluations by former economic ministers Gomez Morales and Rodrigo reduced the dollar value of revenues about 49 percent, they have been growing all along the period (see table 6-3). Expenditures, on the other hand, suffered two contractions, the first in 1975, for the reason explained above, and the second in 1977, when the

Table 6-2. *Growth of Revenues and Expenditures in Selected Latin American Countries, 1973-80*

Item	Argentina	Brazil	Chile	Mexico	Venezuela
Total revenue and grants (percent)	36.7	21.4	23.3	27.5	32
Total expenditure and net lending (percent)	34.7	20.9	15.1	26.4	32
General public services (percent)	36.2	19.5	2.5	0.4	30.4
Rank ^a	3	2	4	4	1
Defense (percent)	37.9	11.3	15	17.5	13.5
Rank ^a	2	3	1	3	4
Social, economic, other (percent) ^b	43.4	23.7	11.4	24.4	22
Rank ^a	1	1	2	2	3
Capital expenditure (percent)	33.5	10.4	5.5	29.2	23.3
Rank ^a	4	4	3	1	2

a. According to growth rate.

b. Education, health, social security and welfare, housing and community amenities, other community and social services, economic services, other purposes.

Source: Tables 6-3 through 6-13.

Table 6-3. *Total Revenues and Grants, Total Expenditures and Net Lending, and Deficit in Argentina, 1973-80*

Year	Total revenue and grants		Total expenditure and net lending		Deficit (US\$ billions)
	US\$ billions	Percentage change	US\$ billions	Percentage change	
1973	4.68	42.16	6.50	56.51	1.81
1974	8.54	82.43	11.46	76.61	2.92
1975	4.37	48.81	8.44	-26.33	4.07
1976	6.63	51.63	10.51	24.54	3.89
1977	7.26	9.56	8.77	-16.63	1.42
1978	10.55	45.23	12.66	44.38	2.11
1979	17.88	69.50	20.70	63.49	2.82
1980	26.64	49.00	32.14	55.34	5.51
Average	—	36.70	—	34.70	—

Sources: International Monetary Fund, *Government Financial Statistics* and *International Financial Statistics*, various issues.

Table 6-4. Expenditure in Argentina, by Function, 1973-80

Year	General public services		Defense		Social, economic, other		Capital expenditure	
	US\$ billions	Percentage change	US\$ billions	Percentage change	US\$ billions	Percentage change	US\$ billions	Percentage change
1973	0.64	74.47	0.64	74.47	4.89	103.8	1.06	24.6
1974	0.90	40.82	0.79	23.22	8.65	76.9	1.69	58.4
1975	0.55	-39.21	0.60	-23.58	5.09	-41.2	1.04	-38.4
1976	0.74	35.94	1.02	69.93	8.50	67.0	2.68	158.0
1977	0.75	0.4	0.93	-8.73	6.91	-18.7	2.23	-16.7
1978	1.06	42.54	1.59	70.77	10.71	55.0	2.64	18.5
1979	1.80	69.63	2.64	66.01	15.96	49.0	3.60	36.1
1980	2.98	65.10	3.48	31.49	24.81	55.5	4.59	27.7
Average	—	36.20	—	37.90	—	43.4	—	33.5

a. Education, health, social security and welfare, housing and community amenities, other community and social services, economic services, other purposes.

Sources: International Monetary Fund, *Government Finance Statistics and International Financial Statistics*, various issues.

recently installed military government tried, with some initial success, to reduce the size of public bureaucracy.

The fastest-growing item during the period was the aggregate "social, economic, other." Within this aggregate, the leading item was what the IMF *Government Finance Statistics* presents as "other purposes," with a growth rate of 107.3 percent.

The defense average growth rate ranks second among the four aggregates displayed in table 6-4. It is also the more volatile item, reflecting both the timing of the limits conflict with Chile and the changing political influence of the Argentine military.

Finally, Argentina shares with Brazil and Chile, the other southern cone countries in the group, a pattern of slow-growing capital expenditures.

Brazil

Brazil shows the smoother set of time series within the group of countries surveyed in this study. Figures for the central government are displayed in tables 6-5 and 6-6 and figures for state and local governments in table 6-7. The central government's revenues presented a slightly larger average rate of growth than expenditures. The opposite was true of state governments.

An interesting feature of the central government's aggregate figures is the negative trend in growth rates for both revenues and expenditures. No definite trend was observed in the rates of growth of both items at the state government level. With respect to the components of central government expenditure, there are two fast-growing items, general public services and "social, economic, other," and two slow-growing ones, defense and capital expenditure. "Social, economic, other" ranks first, in accordance with the leading role this aggregate plays in explaining expenditure growth in our group of countries. Capital expenditure shows the same slow growth pattern of the other two southern cone countries, Argentina and Brazil, and within this group, Brazil is the only exception with respect to high defense spending growth.

It is interesting to note that the only item that clearly follows the trend of decrease observed in aggregate expenditure growth is "social, economic, other." The other three items show more volatile behavior. State governments' expenditures also show a decreasing growth rate.

Chile

In Chile, much as in the other countries, central government revenues have grown at faster rates than expenditures over the 1973-80 period.

Table 6-5. Total Revenues and Grants, Total Expenditures and Net Lending, and Deficit of Brazil's Central Government, 1973-79

Year	Total revenue and grants		Total expenditure and net lending		Deficit (US\$ billions)
	US\$ billions	Percentage change	US\$ billions	Percentage change	
1972	11.12	23.3	11.36	20.4	0.24
1973	15.44	38.8	15.18	33.6	-0.26
1974	20.41	32.2	19.3	26.0	-1.28
1975	24.20	18.6	24.76	29.4	0.55
1976	30.14	24.5	30.45	23.0	0.31
1977	33.86	12.3	35.18	15.5	1.32
1978	39.05	15.3	41.08	16.8	2.04
1979	41.39	6.0	41.92	2.0	0.53
Average	—	21.4	—	20.9	—

Sources: International Monetary Fund, *Government Financial Statistics* and *International Financial Statistics*, various issues.

Data relating to the Chilean government revenues and expenditures appear in table 6-8. This tendency results in surpluses for 1979 and 1980 of about \$1 billion and \$1.5 billion.² It must be considered throughout that central government data give a narrow definition of the public sector. Although these data include several official agencies, they leave out important public enterprises such as Corporación Nacional del Cobre (copper) and Línea Aérea Nacional (airlines). Therefore these figures are significant more in relation to the evolution of the government finances over time than in relation to the absolute level of the aggregates.

In the 1975-78 period the central government registered only minor surpluses and deficits. Nevertheless, in 1979-80 it achieved significant surpluses, probably with the intention of paying off part of its domestic outstanding debt. The composition of Chilean government expenditure over the 1973-80 period was rather peculiar (see table 6-9). The relative average growth of expenditures for social and economic purposes and capital was the lowest among the countries under consideration (aggregate expenditure was also relatively low). General public services spending was specially reduced during 1974-75 as a consequence of the government's efforts to reduce the size of the public sector. Important decreases in other expenditure items in 1975 are also explained (at least in part) by the huge devaluation experienced in that year. In the 1976-77 period, all expenditure grew significantly, especially social and economic spending in 1977. By 1978 public spending in general had slowed down. Social and economic spending, however, kept rising rapidly.

Table 6-6. Expenditure in Brazil's Central Government, by Function, 1973-79

Year	General public services		Defense		Social, economic, other ^a		Capital expenditure	
	US\$ billions	Percentage change	US\$ billions	Percentage change	US\$ billions	Percentage change	US\$ billions	Percentage change
1972	1.37	4.6	0.84	11.4	8.22	33.0	1.38	12.4
1973	1.40	2.8	1.09	29.8	10.92	32.8	1.52	9.9
1974	2.14	52.1	1.28	17.2	14.32	31.1	2.15	41.7
1975	2.62	22.7	1.38	7.6	19.22	34.2	3.06	42.5
1976	4.04	54.1	1.78	29.2	21.63	12.5	4.13	34.9
1977	4.49	11.2	1.83	2.9	25.6	18.4	4.01	-3.0
1978	5.63	25.4	2.04	11.5	31.2	21.9	3.90	-2.8
1979	4.68	-16.9	1.65	-19.3	32.92	5.5	1.87	-52.1
Average	—	19.5	—	11.3	—	23.7	—	10.4

a. Education, health, social security and welfare, housing and community amenities, other community and social services, economic services, other purposes.

Sources: International Monetary Fund, *Government Financial Statistics* and *International Financial Statistics*, various issues.

Table 6-7. Revenues, Expenditures, and Deficits of Brazil's State and Local Governments, 1973-79

Year	State governments' total revenue and grants		State governments' total expenditure and net lending		Deficit (US\$ billions)	Local governments' deficit (US\$ billions)
	US\$ billions	Percentage change	US\$ billions	Percentage change		
1972	5.61	17.8	5.80	22.1	0.19	0.05
1973	7.62	35.8	7.87	35.7	0.24	0.08
1974	9.87	29.4	10.28	30.7	0.41	0.15
1975	11.04	11.9	12.30	19.6	1.26	0.22
1976	11.37	3.0	13.13	6.8	1.76	0.25
1977	13.28	16.9	13.97	6.4	0.69	0.23
1978	12.11	-8.8	17.31	23.9	1.72	0.29
1979	17.05	40.8	18.38	6.2	1.33	0.07
Average	—	18.3	—	18.9	—	—

Sources: International Monetary Fund, *Government Financial Statistics* and *International Financial Statistics*, various issues.

Table 6-8. Revenues and Expenditures of Chile's Central Government, 1973-80

Year	Total revenue and grants		Total expenditure and net lending		Deficit (US\$ billions)
	US\$ billions	Percentage	US\$ billions	Percentage	
1973	2.94	—	3.70	—	0.76
1974	3.13	6.5	3.73	0.8	0.6
1975	2.54	-19.0	2.53	-32.2	-0.01
1976	3.14	23.9	3.01	19.0	-0.13
1977	4.25	35.2	4.40	46.2	0.15
1978	5.97	16.9	4.99	13.4	0.02
1979	7.07	66.4	6.07	21.8	-1.0
1980	9.41	33.1	7.87	29.5	-1.55
Average	—	23.3	—	15.1	—

Sources: International Monetary Fund, *Government Financial Statistics* and *International Financial Statistics*, various issues.

Table 6-9. Expenditure in Chile's Central Government, by Function, 1973-80

Year	General public services		Defense		Social, economic, other		Capital	
	US\$ billions	Percentage	US\$ billions	Percentage	US\$ billions	Percentage	US\$ billions	Percentage
1973	0.6	—	0.4	—	2.65	—	0.78	—
1974	0.4	-36.8	0.5	39.8	2.82	6.4	1.13	44.9
1975	0.3	-19.0	0.3	-37.3	1.92	-31.9	0.49	-56.6
1976	0.4	28.1	0.4	16.8	2.01	4.69	0.43	-11.7
1977	0.5	35.7	0.5	35.5	3.34	66.2	0.50	16.1
1978	0.6	4.3	0.6	20.0	3.73	66.7	0.61	22.7
1979	—	—	—	—	—	—	0.71	16.7
1980	—	—	—	15.0	—	—	0.76	6.6
Average	—	2.5	—	—	—	11.42	—	5.53

Note: Dashes indicate that data are unavailable.

a. Education, health, social security and welfare, housing, other community and social services, economic services, and other purposes. Sources: International Monetary Fund, *Government Financial Statistics* and *International Financial Statistics*, various issues.

It is noteworthy that, in growth, official capital expenditures are always below aggregate spending except in 1978. This tendency may well be misleading, however, because, as noted above, several public enterprises are excluded from these figures. Finally it is also noteworthy that both expenditures and revenues show the lowest average growth in the group of countries considered.

Mexico

Although it is also observed in the Mexican case that the relative increase in revenues is slightly higher, on average, than that of expenditures, the deficit of the central government shows substantial increases in the 1972–80 period. Data relating to the central government finances appear in table 6-10. This behavior is explained by the changes in economic policies in the 1970s. A very expansionist policy was clearly pursued until 1975, which concluded with a significant devaluation at the end of 1976. The low deficits registered in 1977 and 1978, then, reflect the implementation of the adjustment program undertaken after the devaluation. In 1978 another fiscal expansion began, probably one of a higher magnitude, and continued until 1981. The reduction of all figures

Table 6-10. *Revenues and Expenditures of Mexico's Central Government, 1972–80*

Year	Total revenue and grants		Total expenditure and net lending		Deficit (US\$ billions)
	US\$ billions	Percentage	US\$ billions	Percentage	
1972	4.68	—	6.04	—	1.4
1973	5.59	19.5	7.8	29.0	2.2
1974	7.64	36.8	10.4	33.3	2.7
1975	10.70	40.0	15.0	44.0	4.3
1976	10.96	2.4	15.1	0.8	4.2
1977	10.68	-0.2	13.4	-11.4	2.7
1978	14.19	32.9	16.9	26.6	2.8
1979	19.23	35.7	23.7	40.0	4.5
1980	29.42	52.8	35.2	48.6	5.8
Average	—	27.5	—	26.4	—

Note: Data for 1972 percentages are not available.

Sources: International Monetary Fund, *Government Financial Statistics* and *International Financial Statistics*, various issues.

in table 6-7 during 1977 had the monetary causes implied by the devaluation, and a similar effect was probably observed in 1981.

Until 1975 the most important expenditure item of the government, in levels and rates of growth, was social and economic spending (see table 6-11). General public services and capital expenditure also showed significant increases, increases in the latter being of a higher level. Although defense spending shows a high growth rate on average, its share in total spending is not significant by comparison with the figures for the other countries.

The effects of the devaluation and the adjustment program implemented in 1976 were felt most in government public service and capital expenditures. Social and economic spending fell insignificantly in 1977. Nevertheless, the spending level in general public services kept falling until 1979, and that of capital rose after 1977 at the highest level. Even though this definition of government excludes many huge public enterprises—for example, PEMEX (petroleum), CFE (electricity), twenty-one steel enterprises, and seventeen chemical companies—the government's capital expenditures have, on average during 1973–79, the highest growth rate, whereas spending for general services has the lowest.

Venezuela

The central government in Venezuela registered important deficits, especially in 1977–78. Data relating to Venezuelan government finances appear in table 6-12. The same qualification expressed about the definition of government used for the other countries applies here: the Venezuelan data exclude many important publicly owned enterprises—such as *Petróleos de Venezuela* (petroleum) and *Petroquímica de Venezuela* (petrochemical plants). Government expenditure consistently increased over the 1972–81 period although at very different rates. The highest sustained increase seemed to take place starting in 1980. Notice that monetary factors could not affect these figures as much as in the other cases, because the exchange rate remained fixed during practically the whole period. It is noteworthy that the benefits from the world oil shock to Venezuela were immediately reflected in the 1974 increase in spending (and revenue) figures.

Regarding the composition of government expenditure (table 6-13), the highest growth was registered by general public services, whereas defense had the lowest. Furthermore, the latter's level was relatively unimportant. Expenditure on social and economic activities showed rather significant increases until 1977 and slowed down later in 1978–79. The general slowdown in government spending, however, was most

Table 6-11. Expenditure in Mexico's Central Government, by Function, 1972-80

Year	General public services		Defense		Social, economic, other ^a		Capital	
	US\$ billions	Per-centage	US\$ billions	Per-centage	US\$ billions	Per-centage	US\$ billions	Per-centage
1972	0.5	—	0.2	—	0.9	—	1.61	—
1973	0.6	15.8	0.3	24.1	5.9	37.2	2.06	28.0
1974	0.7	20.0	0.4	35.4	8.3	40.7	2.52	22.3
1975	1.1	50.3	0.5	23.8	11.1	33.7	3.0	19.0
1976	1.2	11.7	0.5	5.3	11.2	1.0	3.43	14.4
1977	0.5	-55.0	0.4	-17.7	10.1	-9.8	2.82	-17.8
1978	0.4	-32.1	0.5	18.5	11.2	10.9	4.03	42.7
1979	0.3	-7.3	0.6	31.5	14.7	31.3	6.83	69.6
1980	—	—	0.8	19.2	22.1	50.3	10.61	55.4
Average	—	0.36	—	17.5	—	24.4	—	29.2

Note: Dashes indicate that data are unavailable.

a. Education, health, social security and welfare, housing, other community services, and economic services.

Sources: International Monetary Fund, *Government Financial Statistics* and *International Financial Statistics*, various issues.

Table 6-12. Revenues and Expenditures of Venezuela's Central Government, 1972-81

Year	Total revenue and grants		Total expenditure and net lending		Deficit (US\$ billions)
	US\$ billions	Per-centage	US\$ billions	Per-centage	
1972	3.0	—	3.1	—	0.13
1973	3.95	31.4	3.7	17.8	-0.3
1974	10.4	162.0	9.8	164.0	-0.6
1975	9.9	-4.3	9.8	0.5	-0.1
1976	9.3	-6.0	10.6	8.5	1.3
1977	10.0	7.5	12.3	15.9	2.3
1978	10.0	-0.2	12.7	3.3	2.7
1979	12.0	19.8	11.8	-7.8	-0.2
1980	15.7	31.1	16.1	37.1	0.4
1981	22.8	46.6	24.3	48.2	1.5
Average	—	32.0	—	32.0	—

Note: Data for 1972 percentages are not available.

Sources: International Monetary Fund, *Government Financial Statistics* and *International Financial Statistics*, various issues.

important in capital expenditure: negative rates of growth were registered in 1979 and 1980, whereas a positive but low growth took place in 1978. Until that time capital expenditure had shown the most rapid increases.

There are thus two major characteristics of government spending in Venezuela during the 1972-80 period. Until 1977, total expenditure increases were sustained (though at varying rates), and capital accumulation appeared to be the major concern of government fiscal expansion. In addition, social and economic activities seemed to be important targets during the period. After 1977 there was a generalized slowdown in total expenditure—which seems to have ended in 1981—and a change in the major concerns of government policy, away from capital spending and toward current expenditure, mainly in general public services.

Money Creation and Government Finance

The manner in which money creation is linked to public sector deficits, and the degree to which it is, are complex questions. Not all central bank expansion takes the form of credit to the government, nor does all credit

Table 6-13. Expenditures in Venezuela's Central Government, by Function, 1972-81

Year	General public services		Defense		Social, economic, other ^a		Capital	
	US\$ billions	Per-centage	US\$ billions	Per-centage	US\$ billions	Per-centage	US\$ billions	Per-centage
1972	0.2	—	0.3	—	2.4	—	0.74	—
1973	0.2	16.5	0.3	6.7	2.73	13.8	0.90	21.7
1974	0.4	54.1	0.5	43.2	4.57	67.4	1.70	89.3
1975	0.6	50.3	0.5	18.1	5.54	21.2	1.90	12.0
1976	0.6	12.8	0.4	-16.6	6.1	10.1	2.95	55.1
1977	0.8	33.2	0.6	26.2	8.4	37.7	4.17	41.3
1978	1.0	17.1	0.6	10.4	8.9	6.0	4.49	7.8
1979	1.0	1.1	0.7	12.0	8.2	-7.9	2.75	-38.7
1980	1.6	58.3	0.8	8.3	10.5	28.0	2.69	-2.2
Average	—	30.4	—	13.5	—	22.0	—	23.3

Note: Data for 1972 percentages are not available.

a. Education, health, social security and welfare, housing, other community services, economic services, and other purposes.
Sources: International Monetary Fund, *Government Financial Statistics* and *International Financial Statistics*, various issues.

to the government come from the central bank. Much money is created, in some countries, to finance off-budget expenditures such as interest subsidies (for example, in Brazil) or to aid ailing private banks (for example, in Chile and Argentina). Finally, the relation between deficits and money creation is subject to great and frequent change, making it difficult to formulate any generalizations.

To estimate the amount of resources provided to the public sectors of Argentina, Brazil, Chile, Mexico, and Venezuela by their monetary authorities, we combined direct and indirect financing. Direct financing consists of the change in central bank claims on government (line 12a of the *IFS*). Indirect financing comes about because central banks lend to commercial banks, which in turn lend to public sectors. To obtain an estimate of this indirect finance, we constructed the net claims of the commercial banks on the public sector (commercial bank claims on government, line 22a, plus commercial bank claims on the rest of general government, line 22b, minus government deposits in commercial banks, line 26d), and compared it with central bank credit to commercial banks (line 26g). When changes in commercial bank claims on the public sector exceeded the change in central bank claims on commercial banks, we used the latter as the amount of indirect finance, and vice versa. It is unlikely, then, that either private saving or central bank lending to the private sector is included in our measure of indirect finance. The sum of the direct and indirect provision of resources appears in tables 6-14 and 6-15 under the heading ΔCG . Tables 6-14 and 6-15 also show the change in reserve money (labeled ΔRM , line 14 in the *IFS*) and the ratio of ΔCG to ΔRM . As can be seen, the ratios fluctuate enormously, indicating that contemporaneous monetary expansion is not highly correlated with central bank lending to the public sector. In Argentina, claims on the public sector have increased every year during the 1972-82 period except for 1977, the average ratio being about two-thirds. In Brazil, the pattern has been highly erratic, and the average ratio is slightly negative; only in 1982 did direct plus indirect central bank claims on government expand by a greater amount than reserve money. The Brazilian case is obviously a special one in that central bank lending is largely to the Banco do Brazil, which then extends subsidized credit to both the public and the private sector.

In Chile there was a sharp contraction of lending to the public sector in 1980 and 1981 but also a sharp decline in the stock of reserve money in 1981 and 1982. During an earlier period (1973-75), lending to the government far exceeded money creation, indicating that credit to the private sector was severely squeezed. During the 1977-80 period, central bank claims on government grew by only one-third as much as reserve money;

Table 6-14. Changes in Central Bank Credit to Government and Flows of Reserve Money: Argentina, Brazil, and Chile

Year	Argentina ^a			Brazil ^b			Chile		
	ΔCG	ΔRM	ΔCG/ΔRM	ΔCG	ΔRM	ΔCG/ΔRM	ΔCG	ΔRM	ΔCG/ΔRM
1972	7	6	1.17	0.4	5.2	0.08	53	39	1.36
1973	24	108	0.22	3.5	15.0	0.23	605	251	2.41
1974	30	75	0.40	-13.0	14.8	-0.88	2,917	692	4.22
1975	160	349	0.46	-9.9	17.4	-0.57	14,394	2,565	5.61
1976	468	1,960	0.24	5.5	40.0	0.14	23,788	10,254	2.32
1977	-57	1,103	-0.05	33.3	56.1	0.59	41,252	15,391	2.68
1978	1,669	3,504	0.48	25.2	73.2	0.34	12,860	16,637	0.77
1979	1,705	6,095	0.28	74.6	206.4	0.36	22,296	19,471	1.15
1980	15,060	10,386	1.45	64.6	261.0	0.25	-48,640	25,359	-1.92
1981	54,478	27,794	1.96	-163.8	502.0	-0.33	-62,647	-8,381	7.47
1982	112,297	381,847	-0.29	1,504.2	1,004.3	1.50	16,466	-21,006	-0.78

Note: ΔCG = sum of the direct and indirect provision of resources (see text). ΔRM = change in reserve money.

a. In billions of current pesos.

b. In billions of current cruzeiros.

c. In millions of current pesos.

Sources: International Monetary Fund, *Government Financial Statistics*, various issues.

Table 6-15. Changes in Central Bank Credit to Government and Flows of Reserve Money: Mexico and Venezuela, 1972-82

Year	Mexico ^a			Venezuela ^b		
	ΔCG	ΔRM	ΔCG/ΔRM	ΔCG	ΔRM	ΔCG/ΔRM
1972	23.1	24.2	0.95	30	619	0.05
1973	22.7	17.6	1.29	65	1,363	0.05
1974	34.8	30.1	1.15	-1,279	2,722	-0.47
1975	32.5	35.5	0.92	-872	4,009	-0.22
1976	24.3	-9.9	-2.45	-1,743	2,558	-0.68
1977	148.4	165.0	0.90	-201	3,517	-0.06
1978	58.2	84.9	0.69	-3,529	2,078	-1.70
1979	109.0	132.7	0.82	1,148	2,791	0.41
1980	159.0	208.2	0.76	-1,538	1,613	-0.95
1981	284.8	323.3	0.88	372	4,630	0.08
1982	1,459.5	1,023.6	1.43	3,165	5,203	0.61

Note: ΔCG = sum of the direct and indirect provision of resources (see text). ΔRM = change in reserve money.

a. In billions of current pesos.

b. In billions of bolivars.

Sources: International Monetary Fund, *Government Financial Statistics*, various issues.

this was the period of accumulation of international reserves in that country, with 1982 being a year of major decumulation.

The Mexican case is much more stable (until 1982). In most years, the growth in claims on government was very close to the growth in reserve money, the major exception being 1976, when the devaluation caused a flight from the peso and hence an actual decline in reserve money. With the onset of the debt crisis in 1982, however, the government began to rely more heavily on the central bank for financing.

Venezuela presents a picture similar to that of Brazil (but for different reasons). Reserve money has grown steadily and systematically, but very little of that growth has been captured by the government. This situation sharply contrasts with that of Mexico, where in most years the bulk of the money created in the central bank was passed directly to the fiscal authorities.

The generalizations that the data permit are quite limited. All five countries except Venezuela have made heavy use of the central bank for fiscal purposes. This practice seems to have accelerated in 1982 with the onset of the debt crisis; central bank direct and indirect lending to governments increased very sharply in all five countries, including Venezuela. Second, new central bank credits to governments exceeded reserve money creation in 1982 in all five countries except Argentina and Vene-

Table 6-16. Ratios of Money Creation to GDP and of Inflation Tax to GDP and Total Revenue: Argentina, Brazil, and Chile (percent)

Year	Argentina				Brazil				Chile				
	ΔRM GDP	TAX GDP	TAX TAX + REV	ΔRM GDP	TAX GDP	TAX TAX + GDP	ΔRM GDP	TAX GDP	TAX GDP	TAX TAX + GDP	ΔRM GDP	TAX GDP	TAX TAX + GDP
1972	2.6	3.5	23.7	1.2	0.8	8.5	9.8	9.1	9.1	32.1	9.8	9.1	32.1
1973	29.2	7.0	38.6	2.6	0.8	8.1	12.2	14.2	14.2	41.2	12.2	14.2	41.2
1974	13.0	9.4	39.5	2.0	2.0	16.7	6.6	9.3	9.3	26.7	6.6	9.3	26.7
1975	19.8	31.2	74.0	1.6	1.7	16.1	6.2	7.4	7.4	21.5	6.2	7.4	21.5
1976	25.8	25.5	67.8	2.5	2.2	17.8	7.8	5.7	5.7	16.6	7.8	5.7	16.6
1977	4.7	13.3	50.0	2.3	2.1	17.7	5.5	3.6	3.6	10.5	5.5	3.6	10.5
1978	5.8	8.8	38.2	2.1	1.9	16.3	3.9	2.3	2.3	6.2	3.9	2.3	6.2
1979	3.7	5.3	27.7	3.4	3.1	26.6	3.1	2.9	2.9	6.7	3.1	2.9	6.7
1980	3.0	3.3	19.0	2.2	3.0	22.2	2.8	2.3	2.3	5.7	2.8	2.3	5.7
1981	4.0	4.3	—	2.1	2.8	23.8	-0.7	0.7	0.7	—	-0.7	0.7	—
1982	24.9	13.1	—	2.1	2.5	—	-1.8	1.2	1.2	—	-1.8	1.2	—

Note: ΔRM = change in reserve money. GDP = gross domestic product. TAX = inflation tax. REV = revenue. Some data were unavailable, as indicated by the dashes.

Sources: International Monetary Fund, *Government Financial Statistics*, various issues.

zuela (in Argentina much of the enormous acceleration in money creation stemmed from the ruinous Carvallo plan for bailing out bankrupt financial institutions; much the same sequence of events was to unfold in Chile in 1983). Prior to the debt crisis, however, reliance on central bank financing was erratic in all countries except Mexico.

The above data indicate only qualitative behavior, not the magnitude of the financing, nor do they indicate the consequences for inflation. Indeed, reliance on central bank financing need not be inflationary if the resources transferred to the government do not exceed the normal growth in the demand for reserve money. Indeed, if the central bank does not allocate that growth to the government, the result will be a buildup for international reserves, which is essentially lending abroad, a phenomenon that occurred in all five countries during the second half of the 1970s and in 1980.

Tables 6-16 and 6-17 give a better idea of the magnitude of central bank finance, and the consequences for inflation, by presenting the growth of reserve money as a fraction of GDP, distinguishing between growth in that money and the "inflation tax." Reserve money is always a very small fraction of GDP, so that, in the absence of inflation, the growth in that stock relative to the level of GDP will be correspondingly small. Tables 6-16 and 6-17 indicate, however, that some countries have made very heavy use of reserve money growth. During the 1973-76 period in Argentina, growth in reserve money averaged about 20 percent of GDP—a level that cannot be sustained without igniting a very high rate of inflation—and returned to that level in 1982. The growth of reserve money in Brazil and Venezuela has been stable in the neighborhood of somewhat more than 2 percent of GDP. In Chile it has fluctuated widely, as it has in Mexico, in the latter country reaching more than 10 percent of GDP in 1982.

The growth in reserve money indicates the *potential* (or sometimes the consequences) for central bank finance of fiscal deficits (or the acquisition of international reserves). This growth includes both the increased demand for reserve money because of normal economic growth and the replacement demand that comes about because of inflation. Inflation depreciates the real value of the stock of reserve money, so money holders must demand more of it simply to sustain their holdings in real terms. The latter source of demand is identified as TAX in tables 6-16 and 6-17; the ratio of TAX to GDP is simply the inflation rate (as measured by the various $CPIS$) multiplied by the beginning-of-year stock of reserve money, the product being expressed as a fraction of GDP . The third column in each country panel of table 6-10 presents TAX as a fraction of normal revenues (REV) plus the inflation tax. The excess of the column labeled $\Delta RM/GDP$ and that labeled TAX/GDP is the change in reserve money in *real* terms expressed as a fraction of GDP .

Table 6-17. Ratios of Money Creation to GDP and of Inflation Tax to GDP and Total Revenue: Mexico and Venezuela

Year	Mexico			Venezuela		
	$\frac{\Delta RM}{GDP}$	$\frac{TAX}{GDP}$	$\frac{TAX + REV}{TAX + REV}$	$\frac{\Delta RM}{GDP}$	$\frac{TAX}{GDP}$	$\frac{TAX}{TAX + REV}$
1972	4.0	0.4	4.0	0.9	0.2	0.8
1973	2.5	1.8	15.3	1.6	0.4	1.6
1974	3.4	1.9	15.1	2.7	0.9	1.6
1975	3.3	1.2	9.0	3.2	0.7	1.6
1976	-0.7	2.4	16.1	1.8	0.7	1.9
1977	9.4	2.2	14.1	2.2	0.9	2.4
1978	3.9	2.3	13.6	1.2	0.8	2.4
1979	4.6	2.8	15.8	1.3	2.1	6.1
1980	5.4	4.1	19.4	0.7	1.9	4.9
1981	5.6	3.8	—	1.6	1.0	—
1982	10.4	10.5	—	1.5	0.7	—

Note: ΔRM = change in reserve money. TAX = inflation tax. REV = revenue. Revenue data are unavailable for 1981 and 1982. Sources: International Monetary Fund, *Government Financial Statistics*, various issues.

Tables 6-16 and 6-17 indicate that all countries except Venezuela have relied heavily on the inflation tax, particularly Argentina (and also Chile during the first half of the 1970s). During 1975 and 1976, Argentine collections of the inflation tax accounted for more than 25 percent of its GDP (and half or more of total resources available to the government)! The tax has been important in both Brazil and Mexico since the early 1970s; again, Venezuela is the exception. In Argentina and Mexico, the inflation tax increased sharply in 1982 (unfortunately, revenue data are not available for 1981 and 1982 for those countries); in the other three countries, the change is modest.

The data give some support to the idea that the debt crisis has forced governments to rely more heavily on the inflation tax as a source of finance, but we must be careful in evaluating this finding. Clearly the governments of Argentina, Brazil, and Chile were using the inflation tax as an important source of revenue long before the debt crisis. Indeed, it appears that in some countries (with the exception of Chile and possibly Venezuela), the low level of reliance on the inflation tax was a direct consequence of the ready availability of funds on the international capital market. That a drying up of those funds would cause the governments to revert to their old ways should surprise no one.

Gross versus Net Debt and Implicit versus Actual Amortization

In evaluating the implications of the enormous increase in Latin American external debt—particularly in the countries under consideration—over the past decade, we must take into account the world inflation and the special circumstances of each of the countries involved. Debt service is always at the expense of domestic consumption (and investment) of tradables, even if the debt service is covered entirely or in part by new borrowing. Consequently, it is the price of tradables that is relevant for converting nominal external debt into real debt. Moreover, as most of that debt is denominated in dollars, it is the dollar price of tradables that is relevant for this purpose.

The dollar prices of tradables have risen a great deal over the past decade for all countries but particularly for Mexico and Brazil. Part of the reason is the general world inflation, but the prominence of oil in the tradables of Mexico and Brazil has magnified the price increase for these countries. The two countries are in quite different circumstances, of course—Brazil is an oil importer, whereas Mexico is a major oil exporter. Mexico can take double advantage by exporting more, whereas Brazil can benefit only by contracting its imports. Nevertheless, by this means and others Brazil will, in the final analysis, service its external debt.

When the nominal magnitudes of external debt are deflated by country-specific price indexes for tradables, the reduction is very great indeed. The results of the exercise are contained in table 6-18. The growth rate of foreign debt is greatly reduced, and service of it begins to appear much more feasible. Another factor, however, offsets the first. The world inflation, among other things, has resulted in much higher than normal interest rates; indeed, much of the interest payments are actually amortization. Worse still, the debt is more and more owed to the private capital market (as opposed to international financial institutions), where interest rates are normally higher and maturities shorter. The consequence, reported in table 6-19 below, is that debt service rates—interest plus amortization—have increased by an amount that more than offsets the inflation-induced decline in real external debt. The two effects are, of course, opposite sides of the same coin.

The outcome is that external debt service is so enormous that none of the five countries can be expected to meet that service from trade surpluses alone (with the possible exception of Venezuela and the even more remotely possible exception of Mexico). This issue is taken up in further detail in a later section, but it seems most unlikely that any of the countries in question can trade their way out of the debt problem.

In the remainder of this section, we shall analyze each country's situation individually. For the most part, the results speak for themselves. In table 6-19, adjustments for interest and amortization rates are made; the column labeled "difference" is the increase in debt service owing to the rise in interest rates and shortening of maturities. The column labeled "current account adjustment" is the part of interest payments that is really amortization and that should be shifted from the current to the capital account of the balance of payments. In table 6-18, the debt and amortization figures are adjusted for inflation. The results of table 6-18 are self-explanatory.

Brazil

One of the key elements of Brazil's external debt problem is the evolution of its interest payments. The average interest rate on new commitments has risen from 7.2 percent in 1972 to 14.6 percent in 1981 (according to the World Bank's *World Debt Tables*). If we consider a real interest rate of 3 percent and assume that this is a reasonable estimate of the perceived real rate at the time when the major increase in indebtedness began (in the second half of the 1970s), we can calculate the interest payments that would have been made if this rate had been realized. The actual nominal interest rate increased as a result of world inflation,

Table 6-18. Adjustments of Debt and Amortization for Inflation
(millions of current dollars)

Year	Total government nominal debt ^a	De-flator ^b	Government real debt	Total nominal amortization	Total real amortization	Nominal borrowing ^c		Real borrowing ^d	
						Gross	Net	Gross	Net
<i>Argentina</i>									
1976	3,150	212	1,486	774	351	1,883	1,279	887	536
1977	4,429	219	2,022	907	415	1,236	604	948	533
1978	5,033	197	2,555	1,976	999	3,330	1,715	664	-335
1979	6,748	304	2,220	1,261	415	2,704	1,809	788	373
1980	8,557	330	2,593	1,730	524	2,776	1,630	785	261
1981	10,128	357	2,854	1,844	517	1,411	319	1,986	1,419
<i>Brazil</i>									
1976	23,080	228	10,101	3,547	1,522	8,217	5,696	1,156	-396
1977	28,776	296	9,705	4,833	1,630	10,007	6,343	4,081	2,451
1978	35,119	289	12,156	7,265	2,515	16,539	11,347	4,478	1,963
1979	46,466	329	14,119	9,902	3,009	11,524	5,016	2,343	-667
1980	51,482	383	13,452	11,580	3,026	11,067	4,274	3,787	761
1981	55,756	392	14,213	13,196	3,364	14,948	7,857	6,110	2,746
<i>Chile</i>									
1976	4,498	175	2,570	753	430	509	-134	53	-377
1977	4,364	199	2,193	942	473	1,120	291	704	231
1978	4,655	192	2,424	1,331	693	2,357	1,270	707	14
1979	5,925	243	2,438	1,722	709	2,940	1,623	770	61
1980	7,548	302	2,499	2,154	713	3,326	1,865	1,405	692
1981	9,413	295	3,191	2,939	996	4,945	3,148	2,770	1,774

(Table continues on the following page.)

Table 6-18 (continued)

Year	Total government nominal debt ^a	Deflator ^b	Government real debt	Total nominal amortization	Total real amortization	Nominal borrowing		Real borrowing ^c	
						Gross	Net	Gross	Net
<i>Mexico</i>									
1976	11,580	199	5,819	1,892	951	5,503	4,350	1,581	630
1977	15,930	247	6,449	3,073	1,244	7,066	4,828	3,939	2,695
1978	20,758	227	9,144	5,603	2,468	9,265	4,857	439	-2,029
1979	25,615	360	7,115	9,199	2,555	10,739	3,672	134	-2,421
1980	29,242	623	4,694	6,991	1,122	8,375	4,349	389	-733
1981	33,591	848	3,961	7,474	881	12,907	9,125	-569	-1,450
<i>Venezuela</i>									
1976	2,192	416	527	341	82	1,054	769	192	110
1977	2,961	465	637	739	159	2,071	1,466	474	315
1978	4,427	465	952	616	132	2,822	2,466	274	142
1979	6,893	630	1,094	1,342	213	3,802	2,912	68	-145
1980	9,805	1,033	949	2,670	259	2,803	1,068	218	-41
1981	10,873	1,198	908	2,722	227	1,831	479	267	40

a. Figures for Argentina and Venezuela refer to public sector debt, whereas for the other countries they refer to total outstanding debt. Figures correspond to the beginning-of-year stock.

b. The deflators correspond to the simple average of export and import unit values as they appear in the "world tables," World Bank (1980), until 1978. Afterward the deflators were updated with the available information about export and import unit values as they appear in the *International Financial Statistics*, IMF.

c. From the first column and total (true) amortization.

d. From the third and fifth columns.

Sources: World Bank (1980); International Monetary Fund, *International Financial Statistics*, various issues.

however, and possibly also because of rises in the real rate. Therefore the explicit interest payments that result from the increase in the nominal interest alone, above the 3 percent level, should be regarded as implicit principal repayments that, had real interest rates stayed constant, would have been avoided. This implicit amortization amounted to more than \$6 billion in 1981, six times the level of 1976 (see table 6-19).

The above-mentioned component of interest payments actually represents a capital account item rather than a current account item. If the capital and current accounts are corrected by this factor, we find that Brazil's capital surplus and current account deficit is significantly reduced. This correction is, of course, most significant in the later years. Both accounts, for example, are cut in half, when corrected, in 1981 (see table 6-19).

In assessing the external position of borrower countries, we must recognize that the stock of foreign debt in real terms has grown much less rapidly than in nominal terms. If the stock in nominal terms is deflated by an average of import and export unit values, the corresponding real debt service is an approximation of the sacrifice that the country has to make in terms of traded goods in order to enjoy the benefits of the borrowed capital. By using an index of this kind, we can see that, although nominal indebtedness in Brazil as of 1981 was more than ten times that of 1972, the real indebtedness has only slightly more than doubled over the same period (see table 6-18). On the other hand, during most of the years between 1976 and 1981, there was positive net new borrowing, and in all years the gross real new borrowing was positive (see table 6-18). The Brazilian foreign borrowing, in other words, not only covered interest payments on previous debt but also more than offset the negative effect that international inflation had on the real value of Brazil's outstanding debt.

In addition to the amortization implicit in the increase in the nominal interest rates, principal repayments were also increased by a reduction of the loan maturities. It is reasonable to assume that long-term borrowing implies annual amortization of about 10 percent of the outstanding debt per year. The difference between the actual debt service and a hypothetical debt service, if we assume both a (real) interest rate of 3 percent and amortization of 10 percent of the stock of debt, indicates about how much extra was paid in contrast to the amount that would have been paid if the interest rate had not increased and the maturities had not shortened. In the Brazilian case, this calculation indicates that by 1981 the debt service actually paid was about twice the hypothetical figure (see table 6-19). The implication is that the combined effect of increasing nominal interest rates and shortening maturities was responsible for a doubling of Brazil's

Table 6-19. *Adjustments for Interest Rates and Amortization Periods*
(millions of current dollars)

Year	Foreign debt ^a	Debt service			Hypothetical debt service			Difference	Current account adjustment
		Interest	Amortization	Total	Interest ^b	Amortization ^c	Total		
<i>Argentina</i>									
1976	3,150	264	604	869	95	315	410	459	170
1977	4,429	318	722	1,040	133	423	556	484	185
1978	5,033	503	1,615	2,117	151	503	654	1,463	352
1979	6,748	568	895	1,463	202	675	877	586	366
1980	8,557	841	1,146	1,987	257	856	1,113	874	584
1981	10,187	1,058	1,092	2,150	306	1,019	1,325	825	752
1982	10,506	—	—	—	315	1,051	1,366	—	—
<i>Brazil</i>									
1976	23,080	1,718	2,521	4,239	692	2,308	3,000	1,239	1,026
1977	28,776	2,032	3,664	5,696	863	2,878	3,741	1,955	1,169
1978	35,119	3,127	5,192	8,319	1,054	3,512	4,566	3,753	2,073
1979	46,466	4,750	6,508	11,258	1,394	4,647	6,041	5,217	3,394
1980	51,482	6,331	6,793	13,124	1,544	5,148	6,692	6,432	4,787
1981	55,756	7,778	7,091	14,869	1,673	5,576	7,249	7,620	6,105
1982	63,613	—	—	—	1,908	6,361	8,269	—	—
<i>Chile</i>									
1976	4,498	245	643	888	135	450	585	303	110
1977	4,364	244	829	1,074	131	436	567	507	113
<i>Mexico</i>									
1978	4,655	384	1,087	1,471	140	466	606	865	244
1979	5,925	583	1,317	1,899	178	593	771	1,128	405
1980	7,548	919	1,461	2,380	226	755	981	1,399	693
1981	9,413	1,424	1,797	3,221	282	941	1,223	1,998	1,142
1982	12,561	—	—	—	377	1,256	1,633	—	—
<i>Mexico</i>									
1976	11,580	1,086	1,153	2,239	342	1,158	1,505	734	739
1977	15,930	1,313	2,238	3,552	478	1,593	2,071	1,481	835
1978	20,758	1,818	4,408	6,226	623	2,076	2,699	3,527	1,195
1979	25,615	2,855	7,112	9,966	768	2,562	3,336	6,630	2,087
1980	29,242	3,842	4,026	7,868	877	2,924	3,801	4,607	2,965
1981	33,591	4,670	3,782	8,482	1,008	3,359	4,367	4,115	3,692
1982	42,716	—	—	—	1,281	4,272	5,553	—	—
<i>Venezuela</i>									
1976	2,192	122	285	407	66	219	285	122	56
1977	2,961	223	605	827	89	296	385	442	134
1978	4,427	393	356	750	133	443	576	174	260
1979	6,893	659	890	1,548	207	689	896	652	452
1980	9,805	1,229	1,735	2,964	294	981	1,275	1,689	935
1981	10,873	1,696	1,352	3,049	326	1,087	1,413	1,636	1,370
1982	11,352	—	—	—	341	1,135	1,476	—	—

Note: Dashes indicate that data are unavailable.

a. Beginning-of-year stock of public sector debt for Argentina and Venezuela and beginning-of-year total debt for other countries.

b. Assumes an interest rate of 3 percent (see text).

c. Assumes an amortization rate of 10 percent of outstanding debt (see text).

Sources: World Bank (1980); International Monetary Fund, *International Financial Statistics*, various issues.

debt service. Therefore the trade surplus that must be generated in order to avoid default was doubled by factors that may be regarded as external to Brazil.

Mexico

High interest payments on external debt also played a dramatic role in the evolution of the Mexican foreign debt problem. Between 1972 and 1981, the average interest rate on new commitments increased from 6.9 percent to 15.1 percent, and the interest charged by private creditors went from 7 percent to 16.1 percent. The debt service due to higher nominal interest rates was increased further by the fact that the participation of private creditors on total loans to Mexico grew from 64 percent in 1972 to 88 percent in 1981. (A similar change also occurred in Brazil.) Assuming once again that 3 percent is a reasonable figure for the long-run real interest rate, the result is that, by 1980-81, the implicit amortization due to nominal interest increases accounted for about 10 percent of the total stock of debt outstanding, and in 1981 it was nearly ten times as large as it had been in 1974. If the capital account surplus and the current account deficit are adjusted by this implicit amortization, they decrease from \$19.3 and \$12.8 billion to \$15.6 and \$9.1 billion, respectively, in 1981 (see table 6-19).

In Mexico the stock of foreign debt grew most rapidly between 1977 and 1981. This growth was matched, however, by the oil boom, which consisted of both a tremendous increase in the proven reserves and a doubling of the international price. When we assess the international debt position, we must consider two points: first, some of the debt was contracted only in order to anticipate higher consumption that would be made possible by the newly found wealth. Second, the stock of real debt was significantly reduced (with respect to the nominal stock) because of the oil price rise and oil's growing participation in the Mexican exports. Indeed, net real new borrowing may actually have been negative after 1978, although gross real borrowing was positive for most of the period (see table 6-18). As in the Brazilian case, borrowing was sufficient to cover at least all real total amortization.

The change in the average maturity of the loans to Mexico also plays an important role in the debt problem. The average maturity from all creditors on new public debt commitments went from 13.7 years in 1972 to 7.8 years in 1981. Actual amortization was about twice what it would have been if the interest rate had been 3 percent and amortization 10 percent (see table 6-19).

As in the Brazilian case, the increase in debt service implies that a

much larger trade surplus must be generated to achieve equilibrium in the balance of payments, if no further lending is forthcoming. The two cases show an important difference, however: the increase in the prices of Mexican traded goods comes from an increase in the price of its *exportables*, whereas the main increase in the prices of Brazilian traded goods comes from its *imports*—oil being probably the most significant price change. Therefore, with no more foreign borrowing available, the adjustment will probably imply an increase in exports in the first case and a reduction of imports in the latter.

Argentina

Although the average interest rate on new public debt commitments has not risen as much as for the other countries, the rate of interest on Argentine borrowing was already higher than for the other countries in 1972. In addition, interest on loans from private creditors (and the share of these in total indebtedness) has increased from 8.6 percent in 1972 to 13 percent in 1981 (and that share increased from 69 percent in 1972 to 82 percent in 1981). Therefore, when the implicit amortization is calculated using an assumed 3 percent long-run interest rate, the amount proves to be significant, reaching nearly 10 percent of total debt in 1980-81. For the same period, when the current account is corrected by the implicit principal repayments, the deficit is substantially reduced (see table 6-19).

The price index of traded goods in Argentina, in contrast with Brazil, Mexico, and Venezuela, has increased little. It grew significantly from 1978 to 1981 (about 80 percent) but declined sharply in 1981. Therefore, the stock of Argentina's debt in real terms has not been affected by inflation as much as the stock of debt in Brazil, Mexico, and Venezuela. In the second half of the 1970s, net real borrowing was negative only in 1978, whereas the gross equivalent was always positive, so that, in general, foreign indebtedness was enough to cover the real (implicit and actual) amortization (see table 6-18).

The maturities on new public debt commitments have lengthened somewhat during the period 1972-81 in Argentina, in contrast to the rest of the countries, but they have been quite variable. Amortization (actual and implicit) has increased mainly because of the effect of higher interest rates. Actual amortization has been below the hypothetical figure implied by the assumed 10 percent annual rate. The result is that the service of Argentine debt, relative to the hypothetical figure (assuming 3 percent interest and 10 percent amortization), amounted to about 10 percent in 1980-81, a lower percentage than in the countries discussed above (see table 6-19).

The implication is that, although Argentina has also been hurt by high rates of interest on its debt, the corresponding maturity terms have been relatively favorable. The price of its exports, however, has not grown to match the growth in the debt service; should this situation continue, the required adjustment (in case no further indebtedness is made possible) would imply an enormous reduction in imports.

Venezuela

The total foreign indebtedness of Venezuela has not reached the absolute levels that we saw in the cases of Brazil and Mexico but is important in relation to its GNP—about 17 percent as of 1981. In addition, the participation of private creditors in the total debt is extremely high: 97 percent in 1981 (versus 71 percent in 1972). The effect of higher interest rates on the debt service payments is therefore especially important; indeed, the average interest rate on new commitments from private creditors nearly tripled between 1972 and 1981. The above-mentioned factors result in an implicit amortization (again, if we assume a 3 percent long-term interest rate) of about 13 percent of the outstanding stock of foreign debt in 1981. The Venezuelan capital and current accounts, unlike those of Brazil and Mexico, are not regularly in surplus and deficit, respectively; in fact, the (unadjusted) capital account shows net outflows in some years, and when it is adjusted by the implicit amortization, it is mainly negative.

As in the Mexican case, the important foreign debt contracting was matched by an oil boom that began in 1974. Because of that boom, *real* debt has grown far less than its nominal counterpart; indeed, it may even be argued that real debt has stayed at a more or less constant level since 1972 (see table 6-18). The greatest increase in real foreign debt occurred in 1975-77, but it is mainly a result of the reduction in real terms during 1973-74. In the 1978-81 period, the gross real borrowing was about equal to (actual plus implicit) amortization (see tables 6-18 and 6-19).

In addition to the implicit amortization coming from the increase in interest rates, the average maturity of the loans to Venezuela also declined, as in the other countries. These two developments have made the service of the debt double with respect to the hypothetical service, which assumes a 3 percent interest rate and an amortization rate of 10 percent (see table 6-19). If Venezuela can borrow no additional funds, its prospect of running a trade surplus that offsets the debt service may be brighter than in the cases of Brazil and Mexico. The reason is Venezuela's tremendous oil export potential and stock of debt, which in absolute terms is not as high as that of the other two countries.

Chile

The implicit amortization due to high interest rates on Chile's external debt also provoked an important increase in its debt service. This increase was fueled not only by a general interest rate rise but also by a dramatic change in the participation of private debt in the total stock, which went from 13 percent in 1972 to about 65 percent in 1981. Private debt comes from private sources, whose share in public debt also increased significantly in the 1977-81 period. These factors help explain why in 1977 the implicit amortization was only about 5 percent of the total outstanding debt in 1978, whereas it reached 12 percent in 1981. This situation is also reflected in a reduction of the capital account surplus and the current account deficit of about 25 percent each in 1981 once both amounts have been adjusted for the implicit amortization in interest payments (see table 6-19).

As with Argentina, the real stock of debt is far less affected by inflation of Chilean tradables than it is in the case of the other countries. The only negative real borrowing takes place in 1976 and is due to a reduction in nominal debt; most of the increase in external indebtedness took place in 1980-81 (see table 6-18). As with Brazil and Mexico, gross borrowing was more than enough to offset debt service.

The average maturity from all creditors on loans to Chile declined from 13.5 years in 1972 to 10.7 in 1981. When the change of maturities is taken into account, the actual debt service was nearly twice as great as the hypothetical service, in contrast with the situation in Mexico, Brazil, and Venezuela (see table 6-19). Debt service in the case of Chile is a more serious problem than in the other four countries because Chile's foreign debt is nearly 85 percent of GDP—roughly double the relative debt of Mexico and Argentina. In addition, since January 1983 nearly all of the debt has become a liability of the government. The fiscal problem in Chile is therefore clearly a very intense one. Chile's ability to service its foreign debt plainly does not lie exclusively in trade; obviously more lending will be required.

Post-Debt Crisis Adjustment

The debt crisis burst on the world in August 1982 with the Mexican announcement that a suspension of payments was unavoidable. It quickly spread to other nations, particularly Latin American countries. The crisis was brought on by a number of factors, but the immediate cause was a

growing reluctance on the part of the banking community to extend new credits, credits with which the debtor countries had been paying both interest and amortization. No immediate adjustment could be made to the sudden unavailability of funds in the international capital market. Rescheduling was the only possibility in the short run. Rescue packages were forthcoming from the Bank of International Settlements (BIS), the U.S. Treasury, and the International Monetary Fund. The World Bank has since instituted its structural adjustment loan program. None of these short-run measures, however, can substitute for adjustment at the country level.

In this section, we examine the adjustments that have been made by Argentina, Brazil, Chile, Mexico, and Venezuela. In all cases, we find that a very considerable amount of progress has been made, but it has taken the form of accelerating the inflation rate (to collect more inflation tax), curtailing imports (at the expense of domestic industrial activity and employment), and appealing to the IMF for assistance. We conclude that these adjustments are insufficient *if* major lending does not continue; indeed, in most cases, no conceivable amount of domestic adjustment will replace the need for more borrowing. Unless some miracle reduces the ratio of debt service to debt, major defaults will be avoided only by writing down existing loans or by lending more funds.

Argentina, 1981-83

During the last three years, Argentina has gone through a very complex process of political change, including the inauguration of a new constitutional government last December. These developments have had an impact on its ability and willingness to impose the fiscal and monetary discipline required to adjust the economy to the current world capital market situation.

The Argentine case is noteworthy in that most of the difficulty seems domestic in nature. As the country is nearly self-sufficient in oil, it was not seriously affected by the two oil shocks of the last decade. The need for capital inflows to foster economic development is far less acute than in other countries of the region (for example, Brazil); mere avoidance of recurrent politically motivated capital outflows would ensure sufficient development.

At the end of 1980, the approaching change of command in the military government led to a major crisis from which the country has yet to emerge. Between 1978 and 1980, the country attracted foreign resources, channeled through the international banking system, in order to finance an ever-growing public sector. This capital inflow led to the sharp appre-

ciation of the peso and growing trade deficits, as shown in table 6-20. The appreciation of the peso generated not only a change in domestic relative prices but also an increase in real interest rates for both the exporting and import-competing sectors of the economy, which resulted in widespread bankruptcy. The economic policy changes introduced since 1981 have been more closely related to these domestic developments than to the state of the world capital market.

During the second and third quarters of 1981, the trade balance began to recover, and since the first quarter of 1982, it has consistently been in surplus. Such adjustment, however, has not been made on the basis of fiscal austerity. As table 6-21 shows, public expenditure has been rising since 1980. Although the new civilian government has announced its intention to reduce spending, significant measures are yet to be taken.

The adjustment that has been realized to date essentially consists of a massive transfer of resources to the public sector, implemented by means of private credit rationing and a huge increase in inflation tax collections. The proportion of domestic credit directed to the government gives a clear picture of the increasing pressure of the public sector on the domes-

Table 6-20. *Trade Balance for Argentina, 1980-83*
(millions of U.S. dollars)

<i>Year and quarter</i>	<i>Exports (f.o.b.)</i>	<i>Imports (c.i.f.)</i>	<i>Balance</i>
1980			
1	2059.6	2282.2	-226.6
2	1927.3	2290.7	-363.4
3	2035.5	2782.1	-746.6
4	2002.2	3190.4	-1188.2
1981			
1	1989.9	2614.0	-624.1
2	2848.2	2622.0	226.2
3	2719.2	2196.0	523.2
4	1585.7	1999.0	-413.3
1982			
1	2170.2	1484.0	686.2
2	2346.1	1333.0	1013.1
3	1622.6	1217.0	405.6
4	1483.7	1306.0	177.7
1983			
1	1933.7	977.0	956.7
2	2106.9	1184.6	922.3

Note: f.o.b. = free on board. c.i.f. = cost, insurance, freight.

Sources: International Monetary Fund, *International Financial Statistics*, various issues.

Table 6-21. *Basic Data for Argentina, 1980-83*

Year and quarter	Public expenditure (1982 US\$ billions)	Government credit/total credit (percent)		Real GDP (1980Q1 = 100)	Consumer prices (twelve-month percentage change)
		Stock	Flow		
1980					
1	1.114	14.0	—	100.0	—
2	1.224	11.8	0.9	100.83	—
3	1.326	13.0	19.4	104.78	—
4	1.288	15.3	26.3	106.43	—
1981					
1	1.196	14.8	12.9	100.28	—
2	1.363	16.7	21.3	100.83	89.3
3	1.652	21.1	36.1	93.67	112.8
4	1.812	26.9	42.3	92.19	122.7
1982					
1	1.090	29.0	38.6	92.38	147.2
2	1.171	28.4	25.9	90.54	129.7
3	1.343	24.3	17.5	91.00	156.4
4	1.808	25.4	28.9	92.29	202.9
1983					
1	1.598	32.4	48.2	92.93	244.7
2	—	34.3	39.4	93.21	313.5
3	—	—	—	—	338.7

Note: Dashes indicate that data were not available at the time of writing.

Sources: International Monetary Fund, *International Financial Statistics* and *Government Financial Statistics*, various issues.

tic capital market. This development is clearly revealed in table 6-21, which shows the ratio of the stock credit to the government to total domestic credit, the ratio between the respective flows, and the time pattern of the inflation rate, measured by the CPI.

As should be expected, this type of adjustment has had devastating effects on economic activity. Table 6-21 also shows the declining trend of the GDP since 1981. A direct consequence of this process has been the sharp fall of imports, which accounts for most of the observed adjustment in the trade balance. This adjustment is still well below the level necessitated by the present debt service schedule. Owing to the military government's political inability to carry out the IMF-sponsored austerity program after the South Atlantic conflict, and the unwillingness of the new civilian government to accept that program, the Argentine case is one of the most troublesome spots in the map of the debt crisis. Moreover, the sort of

adjustment realized so far (particularly the lack of fiscal austerity) will not be politically viable for much longer.

Brazil, 1981-83

An understanding of the difficulties currently faced by Brazil in its current adjustment to the international capital market developments since mid-1982 requires a brief account of the initial conditions. Before the 1973 oil shock, Brazil constituted one of the major success stories in the developing world. The average rate of growth of real GDP was about 10 percent per annum and that of exports was 20 percent. The maximum figures for both variables since 1970 occurred in 1973: 14 percent for GDP and 55 percent for exports. At that time, the bright economic performance, the small size of the foreign debt (\$12.5 billion), and a high level of international liquidity made it possible temporarily to avoid the unavoidable: adjustment to a higher oil price. Despite stagnation in the world economy, Brazil was able to sustain an average GDP growth rate of 8.6 percent and an export growth rate of 24.9 percent during the 1973-77 period. In 1979 a new oil shock coupled with rising international real interest rates put an end to this process.

After a \$5 billion loss of international reserves between 1978 and 1980, a rather drastic revision of monetary policy was introduced in 1981 (see table 6-22). Interest rates were freed, and under the assumption of unrestricted (although expensive) access to the international capital market, additional measures were taken with the explicit objective of increasing domestic real interest rates in order "to stimulate demand for foreign resources (in the short run), and in the medium and long run to increase domestic savings" (Langoni 1981). At the expense of a nearly 10 percent

Table 6-22. *Basic Data for Brazil, 1980-83*

Item	1980	1981	1982	1983
Exports (US\$ billions)	20,132	23,293	20,175	21,899
Imports (US\$ billions)	22,955	22,091	19,395	15,408
Oil imports (US\$ billions)	9,405	10,600	9,566	7,800
Trade balance (US\$ billions)	-2,823	1,202	780	6,491
Inflation (percent)	86.4	100.0	97.9	172.9
Devaluation (percent)	—	—	95.8	286.2
Monetary growth (percent)	—	—	86.8	89.1

Note: Dashes indicate that data were not available.

Sources: International Monetary Fund, *International Financial Statistics* and *Government Financial Statistics*, various issues.

decline in industrial output, the \$2.8 billion trade deficit was turned into \$1.2 billion and \$0.8 billion surpluses in 1981 and 1982, respectively. With this strategy of medium- and long-term reduction of the growth in foreign indebtedness Brazil confronted the disruption of the world capital market in 1982.

Since the debt-restructuring agreement signed with the IMF on February 25, 1983, a substantial deepening of the adjustment process has taken place. The cruzeiro was devalued by 30 percent at the end of that month and the accumulated devaluation for 1983 was 286 percent, compared with a 211 percent increase in the general price level. The implied "real" devaluation is nearly 30 percent. A \$6.5 billion trade surplus was achieved in 1983, although the monthly trade balance data indicate a decay in that balance since midyear. Given the present conditions in the international capital market, the adjustment still seems to be below the required level in magnitude; consequently a \$9 billion trade surplus has been targeted for 1984.

During the first eleven months of 1983, public expenditure fell by 5.5 percent, and revenues increased by 1.9 percent. Accordingly, the monetary base grew by only 98 percent (implying a decline, in real terms, of the monetary base by 40 percent), as far less revenue was collected by money creation. According to *Conjuntura econômica* (Fundação Getúlio Vargas 1984), the nominal deficit target on which Brazil and the IMF had agreed for 1983 had been met.

An important aspect of the adjustment in Brazil was the decline in imports, which accounted for 61 percent of the trade balance improvement. Much of the decline was in crude petroleum, the imports of which fell by 18.5 percent. Associated with this improvement on the trade front was a decline in industrial employment of 3.7 percent from January to August of 1983. As that sector had been seriously depressed since early 1981, this development cast some doubts on the political viability of the current adjustment process in Brazil.

Chile, 1981-83

The Chilean economic adjustment was quite different from that in the other Latin American economies considered here. The reason lies in the roots of the problem, which are peculiar to Chile. One key difference is that the crisis in Chile was not associated with a huge government deficit; indeed, the government ran a surplus in 1980-81 and only a small deficit in 1982. Nevertheless, the current account deficit as a proportion of GDP reached 14 percent in 1981 and 10 percent in 1982.

The current account and trade deficits of 1980 and 1981 (table 6-23) can be explained (aside from the rise in interest rates and the fall in the price of copper) by an excess of domestic private absorption over income. Indeed, if we look at the financial flows, we see that only about half of the growth in credit to the private sector in these two years came from an increase in quasi-money, whereas the remainder matched the rise in the net foreign liabilities of the financial system. During 1982 the current account deficit was cut in half and the trade balance became positive, and the tendency continued in 1983. At least two factors help explain the 1982 turning point in the trade balance. First, the devaluation in June 1982, when the peg to the U.S. dollar was abandoned and the basket peg began. Second, the severe recession of 1981-83, which can be linked to several factors, including the incredibly high levels of the real interest rates since early 1981. In a related development, the unemployment rate—one of the major concerns of the adjustment program—reached a peak of 25 percent (in Santiago) by mid-1982.

Although it may be thought that the government deficit of 1982 (the first since 1978) responded to the recession, this deficit clearly reflected the reduction in tax collections and in copper revenues. In fact, total government expenditure (measured in U.S. dollars) was the same as in 1981. On the other hand, in 1982 there was an important increase of credit to the private sector from both the central and the commercial banks. It is not clear how this increase in credit was financed, as the flow of quasi-money was about equal to that of the previous year. "Net foreign" and "other net" liabilities show the largest increases of the financial system liabilities.

An obvious conclusion from the discussion thus far is that the Chilean financial problems arose more from excessive expenditure in the private sector than from fiscal imbalances. The low rate of internal saving made necessary the use of external saving, which is reflected in the current and trade accounts of 1980-82. As external debt service also rose because of general shortening of maturities and higher interest rates, larger domestic savings will be needed to generate a trade balance high enough to cover future debt service and imports. From this point of view, the Chilean adjustment problem is no different from that of other Latin American countries.

During 1983, the adjustment of the economy in Chile seems to be well under way, even though it is occurring at a high cost in terms of domestic welfare. Until October 1983, a trade surplus of nearly \$1 billion had been achieved, mainly at the expense of imports (which fell 26 percent on top of the 44 percent decline in 1982). The flow of credit from the domestic

Table 6-23. *Selected Economic Indicators, Chile, 1980-83*

<i>Item</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>Range^a</i>
Trade balance (US\$ billion)	- 764	- 2.677	63	986	(to Oct.)
Percent change					
In exports	22.7	- 18.5	- 3.4	0.8	(to Oct.)
In imports	30.5	19.1	- 44.1	- 26.1	(to Oct.)
Current account (US\$ billion)	- 1.971	- 4.733	- 2.304	—	
Capital account (US\$ billion)	3.165	4.698	1.215	—	
Change, intl. reserves (US\$ billion)	1.244	0.067	- 1.165	—	
Percentage change					
In monetary base	37.9	- 8.7	- 25.5	- 5.5	(to Sept.)
In money, M_1	77.1	- 8.6	- 7.9	9.6	(to Sept.)
Fiscal def./GDP (percent)	- 5.5	- 1.1	2.7	—	
Currency account def./GDP (percent)	7.1	14.1	7.9	—	
Copper price (cents /pound)	99.2	79.0	67.1	73.9	(to Nov.)
Inflation (CPI)					
Average	35.1	19.7	9.9	27.3	
December-December	31.2	9.5	20.7	23.1	
Exchange rate (pesos/dollar)	39.0	39.0	50.9	78.8	
Percentage change in GDP	7.8	5.7	- 14.3	- 7.0	(to June)
Unemployment rate (Santiago, Oct.-Dec.)	10.1	11.0	21.9	17.7	(to Aug.-Oct.)
Real interest rate ^b	5.4	29.1	23.9	3.7	(to Nov.)
Flow of financial system credit					
To public sector (billion pesos)	5.1	- 36.0	84.8	- 18.1	(to Sept.)
To private sector (billion pesos)	207.2	204.3	354.2	- 45.9	(to Sept.)
Change in net foreign liabilities,					
excluding intl. reserves (US\$ billion)	79.7	89.8	158.4	- 105.5	(to Sept.)
Central bank intl. reserves (US\$ billion) ^c	4.074	3.775	2.578	1.998	(to Nov.)
Financial system flow of					
quasi-money (billion pesos)	120.8	98.8	94.0	- 16.9	(to Sept.)
Other net liabilities (billion pesos)	- 34.9	- 29.1	163.7	97.2	(to Sept.)

Note: Dashes appear in the column for 1983 where the range extended from December to December. Blank cells in the last column indicate that data were not available.

a. 1983 only.

b. Short-term deposit rates (monthly) corrected by CPI inflation and annualized.

c. Excludes the use of credit from the IMF.

Source: Banco Central de Chile, *Boletín mensual*, November and December 1983.

financial system to both private and public sectors was negative in 1983. As of November 1983, international reserves (excluding IMF credit, which was reactivated in August) stood at \$1.998 billion, or nearly \$600 million below the level of December 1982; however, they had been increasing since April 1983.

An external debt renegotiation agreement reached in July 1983 included a new loan for \$1.3 billion, a medium- and short-term debt rescheduling of \$3.4 billion, and a short-term rollover (to December 1984) of \$1.8 billion (Brau, Williams, and others 1983). If we assume that the current account deficit was in fact cut by one-half in 1983, relative to 1982, this agreement provides Chile—at least in the short run—with sufficient external liquidity. As in other cases in Latin America, however, the question remains as to how long the low level of consumption can be sustained. The need to generate large trade surpluses in the next three years is evident from the terms of the renegotiation agreement. Finally, important external obligations must be met during 1987–88 (owing to the new loan and the medium- and short-term debt reschedulement).

Mexico, 1982–83

The financial crisis that had been building up since 1980 culminated in 1982 (see table 6-24). The balance-of-payments situation in 1981 gives a clear picture of the Mexican financial crisis at that time. The current account deficit reached a record of \$14 billion, with the “errors and omissions” deficit at a record \$10 billion. These two outflows were nearly totally offset by an extraordinary inflow of capital, so that there was but a minor decline of international reserves. The enormous deficit in the current account has been attributed to a variety of causes, including the high government deficit, the fall of the international oil price, and the increase in debt service payments. On the other hand, the deficit in the “errors and omissions” account reflects private capital outflows due to the perceived increase in exchange and political risk. The exchange risk is also evident from the increase in savings channeled through dollar-denominated assets in Mexican banks. Although the nominal exchange rate was “sliding” down (slowly depreciating) in a controlled fashion, the perspectives concerning the balance-of-payments situation, and the “confidence crisis,” made the devaluation rate appear insufficient, so that capital flight went on.

In 1982, the major devaluation of February (from twenty-seven to forty-five pesos per dollar) marked the beginning of a series of confusing and contradictory policy developments, which resulted in an acceleration of the capital flight, despite the devaluation. There was, however, an

Table 6-24. Mexico: Selected Economic Indicators

Item	1980	1981	1982	1983	Range
Imports, f.o.b. (US\$ billion)	18.896	24.037	14.489	6.485	(to Oct.)
Trade balance (US\$ billion)	-2.830	-4.099	6.885	10.766	(to Oct.)
Service account (US\$ billion)	-5.607	-10.089	-10.110	-7.645	(to Oct.) ^a
Errors and omissions (US\$ billion)	-3.933	-8.840	-6.157	0.289	(to Sept.)
Change, intl. reserves (US\$ billion)	-0.749	-1.106	3.011	2.556	(to Sept.)
Exchange rate (pesos/dollar)					
Preferential	22.95	24.52	54.99	119.80	(to Dec.)
Free	22.95	24.52	61.52	150.79	(to Dec.)
Percentage change ^b					
In monetary base	40.5	44.8	98.0	45.5	(to Nov.)
In central bank claims on govt.	33.1	47.2	137.5	77.3	(to June)
In claims on govt./mon. base	85	86	103	101	(to June)
In money, M_1	32.2	33.1	64.9	29.0	(to Nov.)
In quasi-money	39.2	59.0	73.5	67.6	(to June)
In industrial production	9.8	8.8	-1.9	-7.0	(to June)
In real GDP	8.3	8.0	-0.2	—	—
Inflation (CPI)	26.4	27.9	59.0	101.9	(to Dec.)
Fiscal def./GDP (percent) ^c	7.7	14.8	18.6	—	—
Current account def./GDP ^c	4.0	5.9	1.7	—	—
Short-term interest rate ^d	27.25	32.75	59.50	54.70	(to Dec.)

Note: Dashes in the column for 1983 indicate that data were not available. Dashes in the last column indicate full range (January to December).

a. Financial service only.

b. Annual relative change at the end of the period indicated.

c. From a speech by IMF Western Hemisphere director, reproduced in Banco Central de Chile, *Boletín mensual*, November 1983.

d. End of period rate on three-month certificates of deposit.

Source: International Monetary Fund, *International Financial Statistics*, and Banco de Mexico, *Indicadores económicos*, various issues.

important effect on the trade balance, which turned positive in the second quarter of 1982—mainly at the expense of reduced imports, which in turn derived from the imminent recession. Many private firms had difficulty in servicing their foreign debt, and the scarcity of foreign exchange constrained the purchase of imported intermediate goods. This situation resulted in a decline of industrial production beginning in the third quarter of 1982.

In August 1982, a two-tier exchange system was imposed with the intention that the capital account (or the speculative movements) would take place at a freely determined rate and the service account and part of the trade account (imports) at the lower rate of about 48 pesos per dollar. As it was recognized that this measure might accelerate capital flight, it was also decided to make dollar-denominated assets in Mexican banks

payable only in pesos (at a rate of 69.5 pesos while the free market was fluctuating between 100 and 120 pesos per dollar).

In August 1982, Mexico also declared itself temporarily unable to service its foreign debt and obtained a postponement of principal repayments. At the same time, negotiations for a restructuring of foreign debt maturities began, and Mexico engaged in talks with the IMF. On September 1, 1982, the nationalization of commercial banks was decreed and controls on the foreign exchange market were imposed, with adverse effects on the already low level of private production and investment; property rights had become unclear. In addition, the private banks owned a large portion of the Mexican industrial sector shares, and what was going to be done with them has never been explained.

In 1982, the public sector deficit rose to 18.6 percent of GDP, and deficits in the service and "errors and omissions" accounts amounted to more than \$10 billion and \$6 billion, respectively. The trade account surplus reached nearly \$7 billion, but growth of real GDP was negative (-0.2 percent), and the inflation rate (average CPI) was 60 percent. In December, just after the new administration took office, foreign exchange operations were liberalized, with a controlled rate of 150 pesos per dollar and a preferential rate of about 96 pesos (which would eventually catch up to the higher rate) for debt service payments and some imports.

The main objectives of the adjustment program undertaken by the new administration, in agreement with the IMF, were a reduction of the public sector deficit in 1983 to 8.5 percent of GDP and the reduction of inflation and of the current account deficit. The latter target implies lower imports, higher oil exports, and a debt rescheduling. The assumption was that GDP growth, in real terms, would be zero.

Available data suggest that the main objectives of the program are being met (see Buira 1983; International Monetary Fund 1984). There was a trade balance surplus of \$10.8 billion until October of 1983 (mainly a result of lower imports, whose value declined by 40 percent with respect to 1982). An agreement concerning public sector debt amortization was reached in order to postpone \$20 billion of repayments due from August 1982 to December 1984. There was also new financing from U.S. syndicated sources in the amount of \$5 billion and from official sources of \$2 billion to \$2.5 billion (Brau, Williams, and others 1983).

The growth rate of the nominal monetary base and of the money stock have been declining (to about 46 percent and 29 percent, respectively, by November 1983), suggesting in view of the close relationship between monetary and fiscal policy that exists in Mexico, that the growth in the public sector deficit has been slowing down. Inflation has also declined, although it was still about 100 percent on average in 1983. There is also

some evidence of a very important decline in production, indicating that real GDP probably fell significantly in 1983. Indeed, industrial production was about 10 percent lower in the first semester of 1983 than it had been a year earlier. Increasing unemployment is also reflected in the coverage of workers by the Social Security Institute.

The adjustment policy has a number of drawbacks, including the serious recession and the postponement of debt repayments. The restructuring of debt mentioned above implies that obligations for the \$20 billion will have to be met starting in 1987 and for the \$5 billion starting in 1986. Very high debt service payments will be due in those years unless other arrangements are made. Other dangers are present, such as private sector distrust of economic policy and the possibility that the government will be unable to reach agreements with the labor unions. In short, the adjustment program requires an important reduction in consumption that may or may not be feasible, in view of the rates of growth experienced in recent decades.

Venezuela since 1982

The adjustment facing the Venezuelan economy is rather different from that in other debtor countries. Venezuela did not experience significant external imbalances until 1982, and inflation and monetary expansion have not been as high as in other cases in Latin America. In fact, the trade account registered a surplus (albeit declining) until 1982 (see table 6-25), and it does not seem likely to have turned into a deficit in 1983. In the first quarter of 1983, foreign assets of the central bank stood at \$8.6 billion, whereas total external debt was on the order of \$34-35 billion. Nevertheless, in February of that year, it was decided to abandon the convertibility of the bolivar (which had been fixed at the rate of 4.3 Bs/dollar for years) in order to impose a three-tier exchange rate system. This system consisted of a low rate of 4.3 Bs/dollar for public and some private debt service payments and some "essential" imports, another rate of 6 Bs/dollar for "necessary" imports, and a free rate for all other foreign exchange transactions. Shortly thereafter, the finance minister began negotiations to convert short-term debt into medium-term debt.

At the same time, the government announced its economic adjustment plan, which was at variance with many of the recommendations made by the IMF. The plan's main features were:

- Indefinite maintenance of the three-tiered exchange rate system and stabilization of foreign exchange outflows to sustain central bank reserves at \$8-9 billion

Table 6-25. *Venezuela: Selected Economic Indicators, 1980-83*

Item	1980	1981	1982	1983	Range
Trade account (US\$ billion)	8.714	7.840	3.199	—	
Imports, f.o.b. (Bs billion)	45.375	50.682	50.056	8.887	(to Mar.)
Exports (Bs billion)	82.507	86.388	70.583	51.941	(to Sept.)
Percentage change					
In imports	8.7	11.5	8.6	—	
In exports	34.6	4.8	-18.0	—	
Current account (US\$ billion)	4.728	4.000	-3.455	—	
Capital account (US\$ billion)	0.164	-1.882	-2.182	—	
Short-term capital (US\$ billion)	-1.896	-2.692	-4.567	—	
Errors and omissions (US\$ billion)	-1.129	-2.139	-2.526	—	
Change, intl. reserves (US\$ billion)	3.823	-0.012	-8.215	—	
Percentage change ^a					
In monetary base	6.6	17.1	17.5	66.3	(to Sept.)
In money, M_1	18.3	9.5	5.6	26.5	(to Sept.)
In central bank claims on govt.	-21.3	83.4	79.6	15.2	(to Sept.)
In claims on govt./mon. base	8.0	12.4	19.0	22.0	(to Sept.)
In GDP	-1.7	0.4	0.6	—	
Unit value of oil exports	100	116.1	116.1	98.1	
Inflation (CPI)	21.5	16.0	9.6	5.7	(to Sept.)
Exchange rate	4.3	4.3	4.3	4.3	
Preferential	—	—	—	6.0	
Free	—	—	—	8.0-9.0	(to Sept.)
Flow of credit to govt. from central bank (Bs billion)	-0.65	1.736	3.039	—	
Jan.-Sept.	—	—	3.558	1.641	

Note: Dashes for 1983 indicate that data were not available. Blank cells in the last column indicate full ranges (January to December).

a. Annual relative change at the end of the period indicated.

Source: International Monetary Fund, *International Financial Statistics*, various issues.

- Ultimate unification of the exchange rates at a level of less than 7 Bs/dollar
- Budget reductions (not specified) not including reductions in wages in state enterprises or in the public sector payrolls
- Price controls to remain after the (decreed) general price freeze of sixty days, which began with the devaluation
- Reduction of 1983 imports by \$4 billion (25 percent), mainly by prohibiting the entry of many luxury products
- Inflation at about 15 percent in 1983
- Negotiations to refinance about \$10 billion in foreign debt due in 1983 in order to convert it into five- to seven-year loans.

In March 1983 Venezuela declared a deferral on amortization of public external debt (which was subsequently extended to October 1983); the short-term debt involved was about \$11 billion. Nevertheless, interest payments were not going to be suspended. Total public sector debt at that time stood at \$27 billion, whereas private sector debt was on the order of \$7-8 billion. Private sector debt payments would be eligible for the preferential exchange rate (4.3 Bs/dollar) only if principal payments were to take place over a three-year period starting in January 1984.

A key difference between the Venezuelan crisis and others is that the central bank was holding a significant amount of reserves at the time the adjustment program started and negotiations for debt rescheduling began. Indeed, in March 1983, reserves at the central bank were more than 25 percent of total external debt and more than 30 percent of public sector foreign debt. Although Venezuela had to meet obligations of about \$10 billion during 1983, private capital flight may well have been the factor that finally pushed the government to impose exchange restrictions and to announce the adjustment plan. In 1982, the short-term capital and errors and omissions accounts showed outflows of \$4.6 and \$2.5 billion, respectively, whereas the overall balance of payments resulted in a fall of \$8.2 billion of international reserves. In addition, there is evidence of a further fall of more than \$1 billion in January and February of 1983. The Venezuelan authorities thus seem to have acted in February 1983 in anticipation of a liquidity crisis such as had occurred in Brazil and Mexico by implementing an economic policy package before they were forced to do so under IMF conditions.

As of April 1983, capital flight had ceased and international reserves were above their February levels. There is evidence of an increase in the trade surplus, mainly at the expense of lower imports, which was used to finance public sector debt service. In the foreign exchange market, the preferential rates remain at 4.3 and 6 Bs/dollar, and the free rate fluctuated at about 8-9 Bs/dollar.

In July 1983, some government officials were reportedly projecting GDP reductions of about 2.2 percent and 2 percent during 1983 and 1984, respectively, together with significant declines in domestic gross investment. The balance-of-payments deficit is believed to have reached \$4 billion in 1983, despite the contraction of imports. In addition, inflation was being projected at 20 percent and 30 percent for 1983 and 1984 and international reserves fell to \$7.5 billion at the end of 1983.

By September 1983, it was evident that Venezuela would not reschedule its foreign debt until the new administration took office the following January. In the same month, creditor banks reportedly stated that they would not consider rescheduling Venezuela's debt until all public sector

interest payments had become current.³ Despite the intentions embodied in the plan, the private sector had not, as of September 1983, been able to obtain dollars at preferential rates to meet its debt service obligations. If this situation continues, the total amount of Venezuelan debt in need of rescheduling in 1983–84 could be on the order of \$23 billion.

Trading the Way Out

Under the world's normal capital market conditions, the capacity of the countries discussed above to service their foreign debts is seldom questioned. Except for Chile, where the foreign debt–GDP ratio is about 85 percent, all of them present rather “normal” levels of foreign indebtedness by historical standards. If real interest rates and maturity terms were also in accordance with historical precedents, we would certainly not speak of a “debt problem” today. The problem, of course, is that, under the present capital market conditions, these countries are being asked to pay nominal interest rates in excess of 10 percent (real rates being even higher), and amortization rates in excess of 20 percent. For the worst case—that of Chile—this requirement implies debt service payments close to 25 percent of GDP, and for the group in general it is a burden very difficult or impossible to sustain without serious domestic political distress.

In the recent past, all of the countries in question have demonstrated a rather impressive ability to generate substantial trade surpluses, but these surpluses are still below the levels required by the present world capital market. The adjustment realized so far has been facilitated by the huge U.S. trade deficit but has also been harmed to some extent by protectionist policies, particularly those of the European Economic Community.

Unfortunately, many domestic policies implemented by these countries do not contribute to facilitating the always difficult process of adjustment. There is no doubt that adjustment in this context means increased savings. A very popular economic policy instrument used to generate trade surpluses, however, has been to restrict imports. This measure has had the adverse effect of precipitating a reduction in industrial activity and has also increased unemployment rates; on the other hand, exports have not increased and have even fallen below previous levels in some cases. In sum, the adjustment has mainly consisted of sharp reductions in imports. Perhaps the most important policy mistake has been the closing of domestic capital markets, thereby insulating residents from the strong incentives to save that were afforded by the world capital market's efforts to finance the U.S. budget deficit. Clearly there is a way

out of the debt problem: the banks can roll over the present debt in order to bring the maturity profile into a feasible configuration.

On the trade side of the problem, developed countries, in particular those of the European Economic Community, will have to ease their protectionist policies. Finally, the countries that are in trouble will have to avoid insulating their residents from the incentives to save. The normalization of the world capital market is also imperative, not only to make feasible the service of present debts, but also to make available in the future the resources that will be needed to finance the development of the region.

Notes

1. Information about these governments does not, however, give an adequate picture of the financial status of the whole public sector, which includes various parastatals not covered by the available statistics.

2. “Billion” means “thousand million.”

3. By mid-September the government was expected to request that the standstill on interest payments be extended for 120–180 days; it was due to expire at the end of the month. Arrears of the public sector stood at about \$85 million, but private sector arrears exceeded \$400 million.

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