Volume Title: Developing Country Debt and Economic Performance, Volume 3: Country Studies - Indonesia, Korea, Philippines, Turkey

Volume Author/Editor: Jeffrey D. Sachs and Susan M. Collins, editors

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-30455-8

Volume URL: http://www.nber.org/books/sach89-2

Conference Date: September 21-23, 1987

Publication Date: 1989

Chapter Title: Economic Boom and Debt Crisis, 1973-77

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Chapter URL: http://www.nber.org/chapters/c9058

Chapter pages in book: (p. 629 - 655)

forces. Turkey received sizable volumes of new lending and debt relief in 1980–84. The new policy stance produced an export-led recovery and acceptable degree of creditworthiness by 1982–83, just as most of the LDC debtors were entering a deep crisis phase in their development process. After the termination of debt relief in 1984, Turkey began to face an increase in its external debt service. This strained the fiscal position and required a large rise in domestic borrowing at high real rates of interest.

1.4 Plan of the Monograph

Our monograph is organized in two parts. Following the broad retrospective provided on Turkish economic development in this chapter, in part I (chapters 2 to 5) we examine the aggregate performance and adjustment patterns from 1973 to 1986. These chapters constitute an analytical chronology of the policy phases outlined above. In part 2 (chapters 6 to 10) we focus on selected aspects of internal adjustment and external debt. Chapter 6 presents the principal findings of a multisector general equilibrium analysis and evaluates the interactions among external borrowing, trade liberalization, and exchange rate policy. Chapter 7 explores in greater detail the sources of Turkey's export boom in the post-1980 period. In chapters 8 and 9 we assess public finance and external debt management, respectively. In chapter 10, we recapitulate our conclusions and discuss the prospects for the future of debt management in Turkey. An appendix contains a political chronology, as well as supplementary tables on subjects covered in the main text of the monograph.

2 Economic Boom and Debt Crisis, 1973–77

For the Turkish economy, the 1970s were the best of times and the worst of times. The decade witnessed an unprecedented spurt of investment and growth until about 1977, accompanied by what looked like a steady improvement in income distribution. That was followed by a crash which was equally unprecedented. From mid-1977 on, Turkey found itself in a monumental debt crisis which took several years of intricate negotiations with creditors and a long series of rescheduling agreements to resolve. Growth suffered heavily, with two years of real contraction at the end of the decade, and income distribution turned sharply against urban workers and the peasantry.

This chapter and the next are devoted to providing an analytical overview of this boom-and-bust experience. The present chapter is concerned with the period immediately preceding the debt crisis of 1977, providing an interpretation of the economic boom as well as an explanation for the ultimate crisis. The period of forced adjustment between the onset of the crisis in mid-1977 and the reform package of January 1980—a period of vast importance despite its short duration—is the subject of chapter 3.

With hindsight, it is not too difficult to provide a broad interpretation of the Turkish experience prior to 1977. The early years of the decade were a time of great optimism as the perennial foreign exchange constraint appeared to have been permanently relaxed, thanks largely to a rapid rise in workers' remittances. As table 2.1 shows, the current account was actually in surplus for two years in a row in 1972 and 1973. Partly as a consequence, the public sector went on an investment binge shortly thereafter and encouraged the private sector to follow suit. As the share of investment rose from 18.1 percent of GNP (in 1973) to 25.0 percent (in 1977), the real growth rate of the economy reached its zenith at 8.9 percent (in 1975 and 1976).

There were two problems, however. First, all of this was taking place in the context of the fourfold rise in world oil prices. Second, the government succumbed to all of the usual policy pitfalls: price distortions, including overvalued exchange rates, and large public sector deficits. These helped swing the current account sharply into deficit, moving it from a surplus of $534 million in 1973 to a deficit of $3,431 million in 1977. The current account deficits were financed by external borrowing, much of it of short-term maturity.

As foreign lenders started getting jittery at the beginning of 1977, the stage was set for a debt crisis. Capital flows slowed down to a trickle, and

Table 2.1 **Macroeconomic Performance of Turkey During the 1970s**

Year	Real GDP Growth (%)	Inflation Rate (WPI) (%)	Current Account Balance (million $)	Investment (% of GDP)
1972	6.0	18.0	47	20.1
1973	4.1	20.5	534	18.1
1974	8.8	29.9	−662	20.7
1975	8.9	10.1	−1,889	22.5
1976	8.9	15.6	−2,286	24.7
1977	4.9	24.1	−3,431	25.0
1974–77 average	7.3	19.9	−2,067	23.2
1978	4.3	52.6	−1,595	18.5
1979	−0.6	63.9	−1,203	18.3
1980	−1.0	107.2	−3,304	21.4
1978–80 average	0.9	74.6	−2,034	19.4

Sources: State Institute of Statistics (SIS), SPO, and the central bank of Turkey.

the central bank's depleted reserves forced it into arrears on payments to foreign banks, governments, and export suppliers. The consequent foreign exchange shortages led to a forced reduction of the current account deficit via administrative means, the collapse of investment and growth, and an upsurge of inflation (see table 2.1). The next few years witnessed a series of debt renegotiations with creditors.

What were the sources of this debt debacle? Conventional wisdom stresses the adverse external environment and the short-term nature of the liabilities incurred during 1973–77. But more must have been at work. Until *the* debt crisis of 1982 came along, Turkey's debt problems were among the most severe experienced by the postwar international system, and its debt reschedulings were the largest undertaken to date. As table 2.2 reveals, Turkey alone accounted for 69.0 percent of the total volume of debt renegotiated by developing countries in the 1978–80 period. These facts point to a peculiar aspect of the Turkish experience. Unlike practically all other newly industrializing countries experiencing debt difficulties, Turkey got into trouble after the first oil shock, rather than the second one. This suggests prima facie that the usual explanations of the crisis in terms of a combination of external shocks with a number of key inappropriate domestic policies—such as overvalued exchange rates and a lax monetary and fiscal stance—will go at best only part of the way in explaining its origins.[1] Unless it can be demonstrated that the shocks were particularly severe and/or the policies particularly excessive, the analyst has to look for additional reasons for Turkey's precocious debt crisis.

We argue in this chapter that the key to the puzzle is Turkey's dependence between 1975 and 1977 on a form of foreign borrowing with intrinsically destabilizing features. To attract capital inflows, the authorities relied disproportionately on the "convertible Turkish lira deposit" scheme, whose

Table 2.2 **Debt Renegotiations, 1975–84: Turkey's Share in the Total**

Year	Number of Countries Renegotiating	Amount of Renegotiated Debt		Turkey's Share in Total (%)
		All LDCs	Turkey	
1975	2	373	—	—
1976	3	1,350	—	—
1977	3	373	—	—
1978	3	2,195	1.612	73.4
1979	7	6,564	3.898	59.4
1980	6	5.323	4.200	78.9
1981	13	2.757	100	3.6
1982	9	2.382	—	—
1983	21	51.089	—	—
1984	23	116.220	—	—

Sources: World Bank, *World Development Report 1985*, p. 28. except for Turkey. for which the same sources as those in table 2.1 have been used. The LDC totals given by the *WDR* have been adjusted to account for discrepancies between the Turkish series used here and those given in the *WDR*.

key feature was that it protected domestic borrowers from all exchange risk. As will be explained below, this scheme had the fatal flaw of engendering an ever-expanding spiral of overborrowing by the private sector. Even though the counterpart to the current account deficits was, in an accounting sense, an investment boom by the public sector, the boom was sustainable only to the extent that foreign banks were willing to increase their exposure to Turkey at an ever-increasing pace. Once foreign banks slowed their net lending, the edifice collapsed.

Hence it was primarily the dynamics of the debt accumulation process itself that was responsible for the early onset of the crisis. Fiscal, monetary, and exchange rate policies of the authorities would likely have gotten the country into trouble eventually. But the borrowing "strategy" in place ensured that this would come sooner rather than later.

2.1 External Shocks and Policies: International Comparisons

To put Turkey's experience in the mid-1970s in its proper perspective, it is useful to start with a brief comparative look. Was Turkey subjected to larger external shocks than other developing countries? There is some evidence that the oil shock of 1973–74 had somewhat more severe consequences on the balance-of-payments position of Turkey than in most other similarly placed countries. In table 2.3 we summarize Bela Balassa's (1984) findings with respect to the magnitude of the shocks experienced during 1974–76 by twenty-four oil-importing countries, among which Turkey is included. Balassa's calculations cover the terms-of-trade effect, as well as the reduction in export demand due to the recession in industrial countries.[2] It appears that Turkey fared relatively badly on the first score, largely because Turkey's exports scarcely benefited from the offsetting price rises common to many commodities besides oil.

Moreover, Balassa's calculations understate the magnitude of the shocks experienced by Turkey. These do not take into account the fall in workers' remittances consequent upon the reduction of economic activity in Germany and other countries in which the Turkish *Gastarbeiter* were concentrated. To

Table 2.3 **Balance-of-Payments Effects of External Shocks, 1974–76 (as a percentage of GNP)**

	Terms-of-Trade Effect	Export Volume Effect	Remittance Effect	Total
24 Developing Countries[a]	−4.2	−0.7	—	−4.9
Turkey	−7.1	−0.4	−1.7	−9.2

Sources: Balassa (1984) and own calculations (see text).

[a]Includes Turkey.

correct for the omission, we have followed Balassa's procedure to estimate the balance-of-payments effect of the derived reduction in workers' remittances. The estimate reported in table 2.3 is based on a conservative procedure which assumes the following: (a) in the absence of the reduction in foreign activity, remittances would have continued to grow at the trend rate observed during 1972–74; and (b) *with* the reduction in foreign activity but no significant additional policy distortions, the level of remittances would have remained at the 1974 level throughout 1974–76.[3] This procedure adds another −1.7 percent (of GNP) to the external shocks faced by Turkey, bringing the total to −9.2 percent for the 1974–76 period. By contrast, the average shock for Balassa's sample of oil importers amounted to −4.9 percent. The effect of this difference should not be exaggerated, however. Even with the remittance effect added for Turkey, Balassa's figures show nine countries (out of twenty-four) with more severe shocks, including Yugoslavia, Philippines, Portugal, Israel, and Korea.

Turning to economic policies, the next question is whether policies in Turkey in the immediate aftermath of the first oil shock were considerably more distortionary than in other countries. We will analyze these policies in more detail below, but for the moment the tentative answer has to be: not really. This can be seen by concentrating on three aspects of policy which have borne the brunt of criticism: exchange rate policy, budget deficits, and pricing of domestic energy. In table 2.4 we summarize evidence on these policies for Turkey and a sample of other developing countries. While Turkey appears to have been hardly a paragon of virtue in these respects, it

Table 2.4 **Policy Comparisons, 1973–77**

	Appreciation of Real Exchange Rate, 1973–76	Government Budget Deficit, 1975–76 (% of GNP)	Domestic Energy Price as a % of World Price, 1977	
			Regular Gasoline	Residual Fuel Oil
Argentina	5.5	7.8	213	61
Brazil	−6.0	0.3	385	112
Chile	3.0	2.3	233	213
Mexico	0.5	4.8	125	n.a.
Korea	19.4	1.7	n.a.	n.a.
Philippines	15.6	1.5	200	137
Indonesia	54.6	4.3	173[a]	n.a.
Peru[b]	4.4	3.5	238	42
Turkey	9.9	1.7	141	97

Sources: Exchange rates from Morgan Guaranty, *World Financial Markets;* budget deficits from World Bank, *World Tables*; energy prices, unless otherwise noted, from Fallen-Bailey and Byer (1979).

[a]Calculated using data for premium gasoline from U.S. Department of Energy, *International Energy Annual.*

[b]Peru experienced debt-servicing problems in this period, and renegotiated in 1978–79.

nonetheless was not a particularly promiscuous offender of economic rationality either.

The proximate cause for Turkey's debt crisis can be observed in the rapid deterioration of its current account during the period. In table 2.5 we compare Turkey with other developing countries in that respect. Here we see the relatively quick turnaround of the Turkish current account from a surplus of 2.4 percent of GNP in 1973 to a deficit of 5.1 percent in 1975, slightly higher than for all developing countries. This more rapid deterioration is consistent with the possibility that external shocks were indeed more severe in the Turkish case than on average. However, the distinguishing aspect of the Turkish performance comes after 1975: whereas other oil-importing countries managed to reduce their deficits to 2.1 percent of GNP by 1977, Turkey's deficit continued to grow and reached 7.1 percent. The initial deterioration can be accounted for by the oil shock, but the trend after 1975 requires additional explanations.

What lay behind these deficits, and were they large enough to have brought about the crisis? A preview of the arguments contained in the next two sections would go as follows. First, the counterpart to these deficits was an increased investment effort, mainly by the public sector. Hence, external borrowing was used primarily for investment purposes and not for consumption. Secondly, while consumption and investment decisions in the economy were considerably distorted by inappropriate pricing policies, mainly an overvalued exchange rate, these alone would not have brought about the crisis. What probably tipped the balance was the dynamics of the debt process itself. To prevent private sector crowding-out and to ensure foreign exchange availability for its own needs, the government subsidized private sector foreign borrowing by providing blanket protection against foreign exchange risk. As we shall show below, this type of external financing contained the germs of its own destruction. The implicit subsidy on foreign borrowing was larger the greater the likelihood of a crisis; in turn, the crisis became more likely as borrowing skyrocketed. Hence, while the underlying cause of the deteriorating external balance has to be located in the public sector investment drive, what precipitated the debt crisis per se was private sector borrowing behavior, itself in turn conditioned by government policy.

Table 2.5 **Current Account Balances, 1972–77 (as a percentage of GNP)**

	1972	1973	1974	1975	1976	1977
All LDCs	−1.7	−1.3	−2.3	−4.2	−2.8	−2.6
Oil-importing LDCs	−1.5	−1.1	−3.9	−4.3	−2.6	−2.1
Turkey	0.3	2.4	−2.2	−5.1	−5.4	−7.1

Sources: World Bank, *World Development Report 1985*, p. 17; and central bank of Turkey.

2.2 Public Investment, Current Account Deficits, and Debt

The political scenery of the 1970s was replete with instability and volatility, and no economic account of the period is complete without at least lip service to this fact. After 1973 Turkey was governed by a series of coalition governments of varying political outlooks. Following the defeat of the right-wing Justice Party in the 1973 elections, Demirel was replaced as premier by Bulent Ecevit who led an awkward coalition between his left-of-center Republican People's Party and the Islamist National Salvation Party. In March 1975, a new coalition of right-wing parties brought Demirel to power once again. This coalition lasted until the general elections of June 1977 which proved indecisive. After an unsuccessful try by Ecevit, Demirel was then able to resuscitate his previous coalition, which lasted however only until January 1978. Ecevit's minority government which replaced it collapsed in turn in October 1979, enabling Demirel to return to power once again.

The lack of decisive central authority during those years is frequently alleged to have been the main source of inadequate economic policymaking. While this is no doubt true, it should not cloud the fact that a series of weak governments of varying political ilk still managed to undertake an impressive and sustained investment boom. Table 2.6 documents the steady increase in the investment ratio after 1973, rising from 18.1 percent of GNP to 25.0 percent in 1977. That the investment effort was spearheaded by the public sector is equally clear. Public investment almost doubled from 7.0 to 13.1 percent of GNP, while the private sector investment rate remained roughly constant in the 10–12 percent range.

Table 2.6 **Investment-Savings Balance and Growth of Real Expenditures, 1973–77**

	1973	1974	1975	1976	1977
Investment	18.1	20.7	22.5	24.7	25.0
Private	11.1	10.0	10.3	13.1	11.9
Public	7.0	10.8	12.2	11.6	13.1
Domestic savings	20.3	18.4	17.4	19.3	18.0
Private	11.6	11.0	8.5	11.2	11.7
Public	8.8	7.4	9.0	8.1	6.4
Foreign savings	−2.2	2.3	5.0	5.4	6.9
Sectoral savings-investment balances					
Private	0.5	1.0	−1.8	−1.9	−0.2
Public	1.8	−3.4	−3.2	−3.5	−6.7
Total	2.3	−2.4	−5.0	−5.4	−6.9
Growth of real expenditures					
Private	3.7	7.3	7.4	9.6	2.7
Public	7.4	10.3	20.2	12.5	9.0
Total	4.5	7.9	10.0	10.2	4.2

Source: SPO.

Note: Investment-savings balance data reported as a percentage of GNP. Growth of real expenditures excludes expenditures on inventories and is reported in percentages.

The structure of investment reflected the underlying economic philosophy of the various governments in power, with industry and infrastructure receiving emphasis. In table 2.7 we show the distribution of investment by major sectors during 1973–77 and compare the breakdown with the earlier 1968–72 period. The only important difference is the greater emphasis on transportation projects after 1973. In the later period, investment in transportation accounted for no less than a quarter of total public sector investment. It is tempting to speculate about whether the ultimate outcome would have been much different had a greater share of investment been allocated to tradables sectors. In all likelihood, the microeconomics of project selection played only a secondary role in precipitating the debt crisis. First, it is difficult to argue that the social rates of return to infrastructure projects in a country like Turkey are systematically lower than in, say, agriculture. Second, as the Turkish experience of the 1980s shows, it would not have been too difficult to generate an export boom with an unchanged economic structure, once the appropriate macroeconomic environment was established.

The deliberate expansion of investment in this period was not accompanied by policies that would ensure a commensurate level of domestic resource mobilization; this is perhaps where the fragility of the governments of the time most clearly exhibits itself. As shown in table 2.6, the aggregate saving rate actually fell between 1973 and 1977, reflecting the consumption-stimulating influence of the growing overvaluation of the exchange rate (on which more later). The private sector's contribution to the public sector's savings-investment gap was nil, as the former became incapable after 1974 of generating enough resources even for its own investments. The private sector balance was in deficit at the level of 2 percent of GNP during 1975–76 until the foreign exchange crisis of 1977 brought private expenditures crashing down.

Table 2.7 **Structure of Fixed Investment, 1968–72 and 1973-77 (in percentages)**

	1968–72			1973–77		
	Public	Private	Total	Public	Private	Total
Agriculture	13.0	9.1	11.1	10.0	13.4	11.6
Industry	42.4	34.7	38.9	44.5	36.1	36.7
Manufacturing	21.8	31.9	26.7	24.0	35.1	26.3
Mining	4.9	1.4	3.3	6.6	0.6	3.6
Energy	15.7	1.4	8.9	13.9	0.4	6.8
Transportation & communication	21.0	10.3	16.0	25.0	15.5	21.6
Health and education	9.6	0.3	6.3	6.4	0.2	4.6
Housing	3.6	38.5	20.1	2.3	32.6	17.9
Others	10.4	7.1	7.6	11.8	2.2	7.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: World Bank (1980), tables 8 and 9.

As the boom in investment would suggest, the remarkable aspect of the foreign borrowing experience in this period was the use of these foreign funds for investment, rather than consumption. The figures in table 2.6 amply attest to this. Net use of foreign savings rose in this period from −2.2 percent of GNP in 1973 to 6.9 percent in 1977.[4] This amounts to a rise in the external borrowing ratio of 9.1 percentage points. Of this increase, 6.9 percentage points (or 76 percent) are accounted for by the rise in investment, and only 2.3 percentage points by the rise in consumption.[5] The role of the public sector is also clear: 92 percent of the increase in the net foreign savings ratio is accounted for by the deterioration of the public sector balance, and only 8 percent by the decrease in net private savings. This is clearly a case of foreign borrowing to finance public investment. Whether it amounted to *over*borrowing or not is an important question which will be addressed below.

The deterioration of the public sector finances can be observed more clearly in the trends of the public sector borrowing requirement (PSBR). In table 2.8 we adjust the public sector savings-investment gap calculated from the national accounts (and displayed in table 2.6) with additional financial items to arrive at an aggregate PSBR.[6] The results show the rise in the PSBR over the 1973–77 period to be equally dramatic: from 2.0 percent of GNP to 10.6 percent.[7]

In table 2.8 we also present the available evidence on the modes of financing of these deficits. Despite a somewhat large "other" category for certain years, the inescapable conclusion is that foreign borrowing did not

Table 2.8 The PSBR and its Financing, 1973–77 (as a percentage of GNP)

	1973	1974	1975	1976	1977
Public disposable income	20.7	18.4	20.9	20.6	19.7
Consumption	11.9	11.0	11.9	12.5	13.3
Savings	8.8	7.4	9.0	8.1	6.4
Public investment	7.0	10.8	12.2	11.6	13.1
Public savings-investment gap	1.8	−3.4	−3.2	−3.5	−6.7
Public-private capital transfers	−2.5	−0.8	−1.3	−1.4	−2.5
Inventory revaluation fund (SEEs)	−1.3	−1.0	−0.6	−1.5	−2.5
Increase in accounts payable, net	n.a.	n.a.	−1.0	−0.2	1.1
PSBR	2.0	5.1	6.1	6.6	10.6
Financing:					
Extemal borrowing, net	0.6	−0.2	0.3	0.8	0.5
Domestic borrowing	0.6	1.1	1.4	1.5	2.1
Long term	0.9	0.8	1.4	1.5	1.4
Short term (Treasury bills)	−0.3	0.3	−0.0	0.0	0.7
Central bank, net	0.2	3.6	1.9	4.5	6.6
Other[a]	0.6	0.6	2.6	−0.2	1.3

Source: SPO, IMF, and the central bank of Turkey.

[a]Includes changes in holdings of deposits and currency, SEE arrears, and errors and omissions.

play an important role in financing the public sector directly.[8] Foreign borrowing by the public sector remained well below 1 percent of GNP throughout the period. The single largest source of financing was instead the central bank, which provided more than half of the funds needed over the period 1974–77. Now this might seem surprising in view of the close links drawn above between the public sector imbalance and foreign borrowing. The apparent contradiction is resolved by looking at the financing of the public sector in general-equilibrium rather than partial-equilibrium terms. Foreign borrowing did indeed finance the public sector, but it did so indirectly via the intermediation of the banking sector, and of the central bank in particular. To see how the system worked, we have to turn to an analysis of the nature of the external liabilities incurred during this period.

Since the current account deficit is the mirror image of the domestic savings-investment imbalance, we first take a look at the financing of the former. Table 2.9 shows that the cumulative current account deficit from 1974 to 1977 amounted to $7.5 billion. Around 17 percent of this deficit was financed by running down the reserves of the central bank, and 81 percent by borrowing, with foreign direct investment playing an insignificant role. By far the most important item among the financing entries, however, is short-term borrowing, which accounted for more than half of the cumulative deficit. As will be discussed below, short-term borrowing was typically channeled through the central bank, and did not constitute a liability of the consolidated government or of the SEEs. Long-term borrowing, most of which did constitute a liability of the public sector, made up only 22 percent of the cumulative deficit.

Table 2.9 **Financing the Current Account, 1973–77 (million $)**

	1973	1974	1975	1976	1977	1974–77
Current account balance	534	−662	−1,648	−2,029	−3,140	−7,479
Nondebt financing	−625	457	503	94	375	1,429 (19.1%)
Foreign direct investment	79	33	114	10	27	184 (2.5%)
Change in reserves[a]	−704	424	429	54	349	1,256 (16.8%)
Counterpart to valuation changes	n.a.	n.a.	−40	30	−1	−11 (−0.1%)
Net foreign borrowing	91	205	1,145	1,935	2,765	6,050 (80.9%)
Long term	349	197	148	509	782	1,636 (21.9%)
IMF	0	0	248	143	18	409 (5.5%)
Implied short term	−258	−8	749	1,283	1,965	3,989 (53.3%)

Sources: Current-account and nondebt financing figures are from the central bank of Turkey; long-term debt flows are from the World Bank, *World Debt Tables*, various issues; net borrowing from the IMF is from the central bank of Turkey and the IMF, *International Financial Statistics*; short-term borrowing has been calculated as the residual, and includes errors and omissions and arrears besides the usual forms of short-term lending.

Note: Numbers in parentheses are the percentage distribution of the current account financing.

[a]A positive (negative) number denotes decrease (increase) in reserves.

A better idea of the predominant role of short-term debt can be obtained from table 2.10 in which Turkey's outstanding external debt is disaggregated by maturity and type of liability. Notice that while these stock statistics tell broadly the same story as the flow statistics of table 2.9, the two sets of figures are not perfectly consistent with each other as flows do not exactly match the difference between stocks. Beside the usual statistical problems with recording and omissions, the discrepancies are also due to changes in valuation as cross-rates fluctuate. Hence, since a considerable share of Turkey's short-term debt is denominated in deutsche marks, the dollar value of Turkey's external debt rises when the deutsche mark appreciates (as it did after 1975, for example). From the perspective of debt management, such fluctuations create special problems, some of which we will discuss below.

Leaving these valuation problems aside, table 2.10 documents the phenomenal rise in short-term liabilities after 1974. Within the span of three years, short-term liabilities rose from a meager 6.4 to 54.0 percent of total external debt. To put this rise in perspective, note that the comparable figure for all oil-importing developing countries barely budged from 14.1 to 15.3

Table 2.10 **External Debt and its Composition, 1973–77 (million $)**

	1973	1974	1975	1976	1977
Total external debt	3,263	3,494	4,723	7,280	11,280
Long-term debt	2,984	3,271	3,325	3,838	4,779
Public and publicly guaranteed	2,867	3,126	3,165	3,590	4,300
Private nonguaranteed	115	146	160	248	479
IMF	0	0	243	391	408
Short-term debt	279	223	1,155	3,051	6,093
Convertible TL deposits	225	145	999	1,781	2,267
(of which: overdue)	(0)	(0)	(0)	(0)	(241)
Banker's credits	[a]	0	12	413	384
Overdrafts	9	7	32	124	240
Dresdner Bank scheme	0	0	0	48	173
Acceptance credits	0	0	0	0	560
Petroleum credits	0	0	0	0	359
Commercial arrears	0	0	0	234	1,712
Third-party reimbursement claims					(204)
Suppliers' credits ("cash against goods" scheme)				(234)	(1508)
Other	45	71	112	451	398
Memo: Share of short-term debt in total (%)					
Turkey[b]	8.9	6.4	24.5	41.9	54.0
Nonoil LDCs	14.1	14.1	14.3	14.6	15.3

Sources: World Bank, IMF, and the central bank of Turkey. Data for short-term debt of nonoil LDCs are from IMF, *Recent Multilateral Debt Restructurings with Official and Bank Creditors*, December 1983, table 1.

[a]Figure for banker's credits for 1973 is included under convertible TL deposits for that year.

[b]Liabilities to the IMF have not been included under short-term debt.

percent. The overwhelming majority of this short-term debt (around 85 percent) was, directly or indirectly, a liability of the central bank.

The hallmark of the foreign debt experience in this period was an innovative form of borrowing called the "convertible Turkish lira deposits" (CTLDs) scheme. As the figures in table 2.10 show, this type of short-term debt dominates in volume all the rest. At the end of 1977, CTLDs amounted to 37.2 percent of all short-term liabilities. This share rises to 48.9 percent if we exclude payments arrears and overdue CTLDs. At the end of 1976, before the impending crisis slowed the flow, they accounted for 58.3 percent of all short-term debt. Hence, the CTLD scheme played a determining role at the margin in financing the current account deficits of the period.

What were the CTLDs? In May 1975 the pressure from the balance of payments led the government to resuscitate an old scheme whereby nonresidents could open deposit accounts with Turkish commercial banks.[9] Principal and interest payments on these deposits were guaranteed by the government (effectively by the central bank) against all foreign exchange risk arising from devaluations of the Turkish lira. The interest rate ceiling on such deposits was initially set at 1.75 percentage points above the Euromarket rate for the corresponding currency. Upon the opening of the CTLD account, the recipient bank would turn over the foreign currency to the central bank and have its account with the central bank credited with the Turkish lira equivalent of the deposit. The local bank could then extend loans denominated in liras to domestic firms. As interest and principal payments on CTLDs became due, the foreign lender would recover the original deposit plus interest, both in foreign currency. The central bank would in turn cover any loss experienced by the local bank due to the depreciation of the Turkish lira since the opening of the CTLD account.

The CTLD scheme was a wonderful system whereby the public sector could finance its deficits, while the private sector, far from being crowded out, ended up itself as the beneficiary of a credit explosion. To see this in greater detail, it pays to follow how CTLD funds were cycled (table 2.11). For the sake of concreteness, consider the consequences for the banking sector of an increase in foreign liabilities of DM100 in the form of a CTLD.

Table 2.11 **The CTLD Scheme**

	Assets	Liabilities
Step 1		
Commercial bank	Foreign exchange reserve of DM100	Deposit of DM100
Step 2		
Commercial bank	Loan of TL528	Deposit of DM100
Central bank	Reserves of DM100	Increase in base money of TL528
Step 3		
Central bank	TL528 domestic credit to government	Increase in base money of TL528

In step 1 of the process, the domestic bank holds a deposit liability of DM100, balanced by its holdings of DM100 in foreign exchange. Next, the commercial bank turns the DM100 over to the central bank, in return for which it is credited the Turkish lira equivalent of DM100, say TL528 (at the rate prevailing at the end of 1975). Abstracting from reserve requirements, the commercial bank can in turn use this to make loans to its customers. In step 2, there has been an increase in base money arising from the credit extended to the commercial bank by the central bank. In the final step, consider what happens as the public sector borrows from the central bank to finance its investment drive. The increased public sector expenditure eventually turns up in the form of imports, requiring foreign currency to be supplied by the central bank. When the process is complete, the money supply has increased (by 528 times the money multiplier minus one), the private sector enjoys new credits, and the government has found the foreign exchange with which to finance its investment.[10]

There are two noteworthy aspects of this type of borrowing. First, the government's ambitious investment program was being funded by accumulating liabilities of short-term maturity. Indeed, most of the CTLDs were of one-year maturity, and the rollover rate appears to have been less than 40 percent (Brennan 1976). These funds were being used to finance investment projects with considerably longer gestation lags.[11] Hence such foreign borrowing was inherently risky given the maturity transformation involved. Second, the level of such borrowing was determined not by the central bank or the public sector at large, but by the private sector, even though the major part of the resources thus mobilized ended up being used by the public sector. Essentially, the public sector investment drive acted as a powerful vacuum into which all foreign exchange brought in by the private sector would be quickly sucked. This played a crucial role in precipitating the debt crisis. The reason is that the incentives provided to the private sector by the CTLD scheme were fundamentally destabilizing. The argument here requires a closer look at the operation of the CTLDs during the 1975–77 period, to which we now turn.

2.3 The CTLD Scheme in Practice

The CTLD scheme is typically portrayed as having provided exchange guarantees to foreign lenders. While this is true, it is only part of the story. The return to foreign commercial banks taking part in the scheme consisted of the relevant Euromarket interest rate, i^*, plus the spread, σ, of about 1.75 percent plus whatever front-end fee, ϕ, they could extract. The nominal return to the foreign lender in foreign currency terms, q^*, can be written as:

$$q^* = i^* + \sigma + \phi. \tag{2.1}$$

The lenders had no reason to concern themselves with devaluations of the lira, save for possible effects on the liquidity of the country.

What has been less recognized is that the primary role of the exchange guarantee was to provide the eventual domestic users of the CTLD credits with an interest rate subsidy. Remember that the local commercial banks used the domestic currency counterpart of the CTLDs to make loans to the private sector. From the perspective of the domestic firms (i.e., in domestic currency terms), the nominal cost of funds, q, borrowed in this fashion consisted of the nominal return to the foreign lender, q^*, plus a margin, ρ,—of perhaps 0.5 percent—acquired by the intermediating local bank:

$$q = q^* + \rho. \tag{2.2}$$

Notice how the domestic borrower has been insulated from exchange risk, as the expected rate of depreciation of the lira appears nowhere in this formula.

The interest rate effect of this scheme from the perspective of domestic borrowers can be conceptually separated into two components. First, there is the effect of allowing the private sector to borrow abroad, where no such possibility existed before. Given the prior restrictions, this is just like removing a tax on foreign borrowing, with the initial rate of the tax set at the price-equivalent level of the restriction. It is reasonable to assume that the "effective" domestic interst rate—i.e., taking into account domestic credit rationing and curb markets—exceeded foreign interest rates (adjusted by the expected rate of currency depreciation) in the presence of borrowing restrictions; in other words, the implicit tax rate can be assumed to have been positive. This effect would naturally boost foreign borrowing.

However, the CTLD scheme had an additional element of subsidy deriving from the exchange guarantee. The subsidy consisted of the difference between the cost faced by the domestic borrowers, q, and the true opportunity cost of foreign funds, the latter of which was made up of the sum of three elements: the rate of return to the foreign lenders in foreign currency, q^*, the intermediating margin of the local banks, ρ, and the expected rate of depreciation of the domestic currency, $\dot{e}^e$. From equation (2.2), the implied subsidy, s, can be seen to equal simply the expected rate of depreciation of the home currency:

$$s \equiv (q^* + \rho + \dot{e}^e) - q = \dot{e}^e. \tag{2.3}$$

This makes obvious sense since the system insulated borrowers from exchange rate movements. Some estimates of the magnitude of these implicit subsidies are presented in table 2.12.

To recapitulate, there are two important lessons in all this. First, the distinguishing characteristic of the scheme was that it acted as an implicit subsidy on foreign borrowing by domestic firms. As the evidence in table 2.12 indicates, the magnitude of the subsidies involved was hardly negligible, amounting to 1.1 percent of GNP by the end of 1976. Secondly,

Table 2.12 **Estimates of the Subsidy Component of the CTLD Scheme**

	Year-end		
	1975	1976	1977
Expected depreciation of TL against[a]:			
DM	22.1%	30.5%	49.8%
SFr	17.6	42.9	60.4
US$	10.0	16.6	29.9
Estimated interest rate subsidy for borrowing denominated in:			
DM	22.1%	30.5%	49.8
SFr	17.6	42.9	60.4
US$	10.0	16.6	29.9
Weighted average[b]	20.4	32.6	51.1
Implicit subsidy payments[c]			
Total (million $)	203.8	580.6	1,158.4
Share of GNP[d] (%)	0.5	1.1	1.7

Sources: Tables 2.10 and 2.13; and IMF, *International Financial Statistics.*

[a]Actual rate of depreciation during the following year.

[b]Weights are the shares of different currencies in table 2.13.

[c]Calculated as the average subsidy rate multiplied by the outstanding stock of CTLD liabilities at year end.

[d]The denominator used here is the following year's GNP since the subsidy amounts are calculated for year-end figures.

the level of such subsidization was not fixed and depended on the state of expectations. Anything which fueled, say, domestic inflationary expectations, in turn giving rise to expectations of greater depreciation, would also raise the subsidy element, reducing the ex ante cost of foreign borrowing. We will analyze the implications of this for the debt accumulation process below. But first some details on the operation of the CTLDs.

It will not come as a surprise after the account above that it was private sector firms which took the lead in attracting CTLDs to the domestic banking sector. Typically, a Turkish firm would locate a foreign bank willing to make the deposit, and would be the beneficiary of the credit extended by the domestic bank using the counterpart funds. With a spread of 1.75 percent and front-end fees running around 4 percent, there was in fact little difficulty at first in attracting foreign lenders.[12] In addition, some of the inflows were engineered through capital flight: many entrepreneurs bought foreign exchange in the black market and channeled these funds back in via selected foreign banks. By the time of the collapse, more than two hundred foreign banks had been lured. Detailed information about these transactions is scarce. There is, however, one survey which covers the operations of six of the largest intermediary local banks. Information from this survey is summarized in table 2.13. The table covers a total of 547 separate deposits made by foreign banks, amounting to $517.7 million (at year-end 1977 exchange rates), which is 23 percent of all CTLD liabilities at the end of 1977.

Table 2.13 Summary Information on a Sample of CTLDs

	Deposits				
	DM	SFr	US$	NLG	Total
Amount (thousand $)[a]	373,525	116,950	26,597	581	517,653
Share in sample (%)	72.2	22.6	5.1	0.1	100.0
Number of deposits	422	100	24	1	547
Size of average deposit (thousand $)	885	1,170	1,108	—	946

Source: From the appendix to Yalçin Dogan. *IMF Kiskacinda Turkiye, 1946–1980,* 2d ed. (Istanbul: Tekin Yayinevi, 1986). The information in the appendix is attributed to a study by Ömer Gören.

[a]At year-end 1977 exchange rates.

Key: Dm = Deutsche mark; SFr = Swiss franc; US$ = U.S. dollar; NLG = Dutch guilder.

Two aspects of the evidence in table 2.13 are particularly noteworthy. First, the sheer number of separate transactions involved is itself mind-boggling. Judging from the sample, the CTLD scheme must have involved no less than 2,000 different loans of around $1 million each. While the number of foreign banks involved was substantially lower, the diffuseness of the process provides an important clue to the forthcoming crisis: foreign lenders had little idea, until it was too late, of the total amounts involved. One of the bankers involved would later express his bafflement as follows: "We began toting things up and I was quite surprised at the exposure. For instance, we would find out that a London bank was in for $100 million. It was just too astounding. Some nights I would wake up in a cold sweat" (Bleakley 1978, 50).

Secondly, the currency composition of the CTLD liabilities also deserves comment. As table 2.13 shows, only about 5 percent of the deposits were denominated in dollars, with the rest split between the deutsche mark (72 percent) and the Swiss franc (23 percent). This is surprising at first sight given the fact that American banks played a predominant role in the CTLD scheme; according to one account, some sixty U.S. banks were involved (Bleakley 1978). Yet this was the natural consequence of the incentives provided by the borrowing subsidies. From the Turkish borrower's perspective, borrowing costs were minimized in those markets where the nominal interest rates were lowest, irrespective of potential changes in cross rates (recall equation [2.2]). Since in 1975–77 these were the Euromarkets for the deutsche mark and the Swiss franc, Turkish borrowers overwhelmingly chose these currencies. The lower rates on loans denominated in these currencies of course reflected their expected appreciation against the dollar. This in turn meant that the implicit subsidy was larger for borrowing in DM and SFr. This is in fact borne out by the estimates of the subsidies presented in table 2.12. Throughout the 1975–77 period, the subsidy for borrowing denominated in these currencies was about twice that for borrowing denominated in dollars.

The fluctuations in cross rates suggests an additional problem with the CTLD scheme which was probably unanticipated when the program was first launched in May 1975. Even in the best of all possible worlds, had Turkey managed to maintain its peg against the dollar, the ex post subsidy on foreign borrowing would still have been positive (and sizable) as a consequence of the depreciation of the dollar against third currencies. The central bank would suffer losses due to the exchange guarantee even though no formal devaluation of the lira had taken place. As it happened, there were devaluations, and their impact was magnified by these cross-rate changes. For the Turkish authorities, this was a rude introduction to the world of floating rates.

Besides the public finance aspect of the CTLDs, i.e., the fact that the implicit subsidy payments by the central bank had to be financed somehow, the scheme had devastating behavioral consequences. For the scheme not only subsidized foreign borrowing, it also made the level of subsidization directly proportional to the expected rate of depreciation of the lira and, hence, to the magnitude of the current exchange rate disequilibrium. The combination gave rise to a potentially explosive scenario: the CTLD scheme would engender overborrowing as long as the lira was expected to depreciate against *some* major currency; the overborrowing would then cause the present exchange rate to become (more) overvalued; this in turn would fuel expectations of further depreciation, further overborrowing, and so on until foreign bankers would discover the transversality condition and refuse to play along.

This story highlights the critical role of exchange rate policy in the process of debt accumulation. Once the CTLD system got under way, the authorities were caught in a bind. Validating devaluationary expectations in order to set the current account straight would give rise to large exchange losses under the guarantee; refusing to do so would render the current account less sustainable by fostering further private sector borrowing. Exchange rate policy of the period strived to maintain, unsuccessfully, a middle road between the Scylla of large transfers to domestic firms and the Charybdis of growing current account deficits. Figure 2.1 shows the trends in the real effective exchange rate during the 1970s. Between 1975 and 1977, the real value of the lira was maintained at a roughly constant level, even though this constituted a real appreciation of about 10 percent relative to the 1973 level. The oil shock of 1973–74 had rendered a step increase in competitiveness—i.e., a real depreciation—imperative, a fact to which exchange rate policy remained impervious.

How overvalued was the Turkish lira? Table 2.14 provides two sets of estimates of the extent of overvaluation against the dollar during the 1974–77 period. The first of these is simply the black-market premium on the dollar. The second set of estimates is derived from a computable general equilibrium model used by Kemal Derviş and Sherman Robinson (1978). In

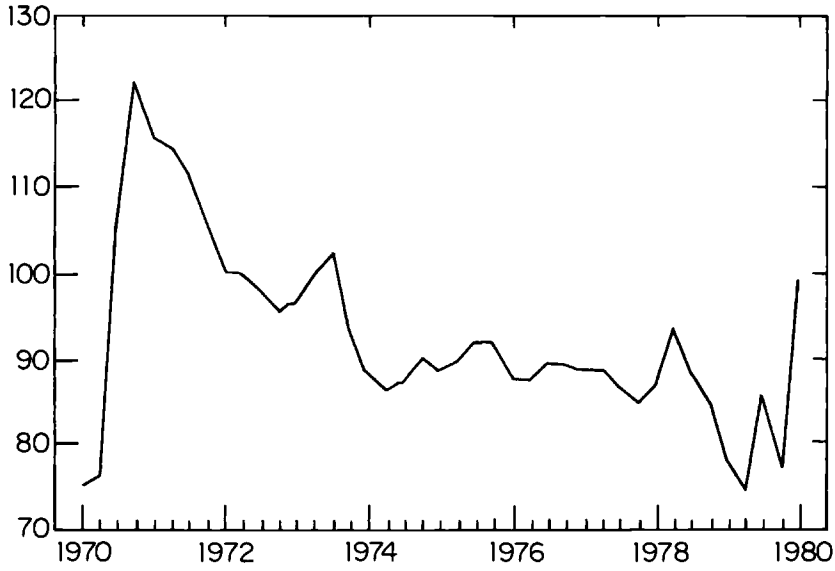

Fig. 2.1 Real effective exchange rate, 1970:I–1980:I (1972:I = 100)

Table 2.14 Measures of Overvaluation of the Turkish Lira

	1974	1975	1976	1977
Official exchange rate (TL/$)[a]	13.93	14.44	16.05	18.00
Black-market rate (A)[b]	14.35	15.76	17.64	21.02
"Equilibrium rate" (B)[c]	14.70	17.80	20.30	28.20
Overvaluation (%):				
(A)	3.0	9.1	9.9	16.8
(B)	5.5	23.3	26.5	56.7

Sources: Derviş and Robinson (1978), table 3.2; Pick's *World Currency Yearbook*, 1984; and IMF, *International Financial Statistics*.

[a]Period average.

[b]Calculated as the geometric average of twelve end-of-month rates.

[c]From Derviş and Robinson (1978). See discussion in text.

this model, the equilibrium exchange rate is defined as the rate that would achieve the current account path consistent with a "normal" level of reserves and foreign borrowing. While neither measure needs to be taken literally, they both tell the same story of increasing overvaluation after 1974. By 1977 a conservative estimate would be that the Turkish lira was overvalued by at least 20 percent.

The growing overvaluation had the consequence of raising the subsidy on foreign borrowing beyond any reasonable level. As table 2.12 shows, the

average subsidy rose from around 20 percentage points at the end of 1975 to more than 50 points at the end of 1977. The latter figure need not be taken too seriously—except for an indication of the ex post transfers made to the borrowers—since few foreign banks were foolhardy enough to continue establishing CTLD accounts past mid-1977.[13] Still, an interest rate subsidy of 33 percentage points (at year-end 1976) must have presented an inordinate inducement to borrow as much as possible, as quickly as possible. It is no wonder that many borrowers were soon willing to put up stupendously high front-end fees: these fees are reported to have risen eventually to more than 20 percent (Kafaoğlu 1986).[14] The fact that the process could continue until mid-1977 is testimony to how oblivious foreign bankers were to the Stiglitz and Weiss (1981) notion of equilibrium credit rationing.

2.4 Exchange Rate Policy and Debt Dynamics with CTLDs: A Model

To get a better grip on how exchange rate policy and foreign borrowing interacted under the CTLD scheme, it is instructive to look at a bare-bones model of the current account. The current account deficit, B, can be expressed as the difference between national expenditures and income, the latter of which equals national product minus interest payments on foreign debt. Abstracting from changes in reserves and direct foreign investment, B is also identically equal to the rate of accumulation of foreign debt, $\dot{F}$. We can then express $\dot{F}$ as the sum of interest payments and a component which depends negatively on the domestic real interest rate and the real exchange rate:

$$\dot{F} = B = q^*F - \alpha r - \beta(e - p) + g, \tag{2.4}$$

where q^* = effective foreign rate of interest, assumed to be fixed;
r = domestic real interest rate;
e = logarithm of the nominal exchange rate and the price of traded goods;
p = logarithm of the price of nontraded goods;
g = a shift factor.

The current account deficit depends negatively on the real interest rate since an increase in the latter reduces domestic expenditures (consumption and investment). The negative sign on the real exchange rate can be motivated either by the existence of excess capacity in the traded sector or by the negative real-balances effect of depreciations on expenditures. The real interest rate, in turn, is the difference between the relevant nominal rate—which we shall denote generally as i for now—and the expected rate of domestic inflation, $\dot{\pi}^e$.

$$r = i - \dot{\pi}^e, \tag{2.5}$$

where, by appeal to rational expectations, $\dot{\pi}^e$ is assumed to equal the actual rate of inflation, itself a weighted average of the increases in the prices of traded and nontraded goods:

$$\dot{\pi} = \mu\dot{e} + (1 - \mu)\dot{p}. \tag{2.6}$$

The Turkish authorities controlled the nominal exchange rate, e, and manipulated it with the current account deficit in mind. Their policy can be summarized in the following manner:

$$\dot{e} = \lambda B. \tag{2.7}$$

The greater the current deficit, the larger the rate of depreciation of the exchange rate, with the rate stabilized only when the target for the current account—here zero—is reached. This formalization does not do too much injustice to the actual exchange rate policy of the time, which consisted of a series of small adjustments.

For simplicity, we will abstract from the developments in the market for home goods and set p equal to zero. By doing this we are neglecting some important issues involved in the so-called capital-inflows problem: an autonomous capital inflow will tend to appreciate the real exchange rate as long as some of its proceeds are spent on nontraded goods. This adds a further layer of complications to the dynamics of debt accumulation being considered here. But since these complications are readily understood, we leave an explicit treatment of the home goods sector to the appendix to this chapter.

As a benchmark case, consider first the adjustment process of the economy with a fixed real interest rate, i.e., in the absence of the CTLD scheme. The model can be visualized with the help of figures 2.2 and 2.3. Figure 2.2 displays the FF schedule, which is defined as the combination of e and F that leaves the current account in balance (i.e., $\dot{F} = 0$). The FF locus is upward-sloping since a higher stock of debt implies larger interest payments and hence requires a more depreciated currency to equilibrate the current account. In the medium to long term, the economy has to locate itself somewhere on the FF schedule. The adjustment process of the economy out of this equilibrium is shown in figure 2.3. Making use of the policy rule expressed in (2.7), differentiation of (2.4) yields:

$$d\dot{F}/dF = q^* - \beta\lambda. \tag{2.8}$$

Stability of the process requires that (2.8) be negative, i.e., that $\lambda > q^*/\beta$. Unless exchange rate policy is sufficiently responsive to the deficits, foreign debt may keep on growing, fueled by the servicing of the existing liabilities. The stable case is demonstrated in figure 2.3.

A shock to the economy in the form of an increase in g—no harm in thinking of this as government spending—shifts the FF schedule up to $F'F'$, since at any level of debt a higher e is now required for long-run

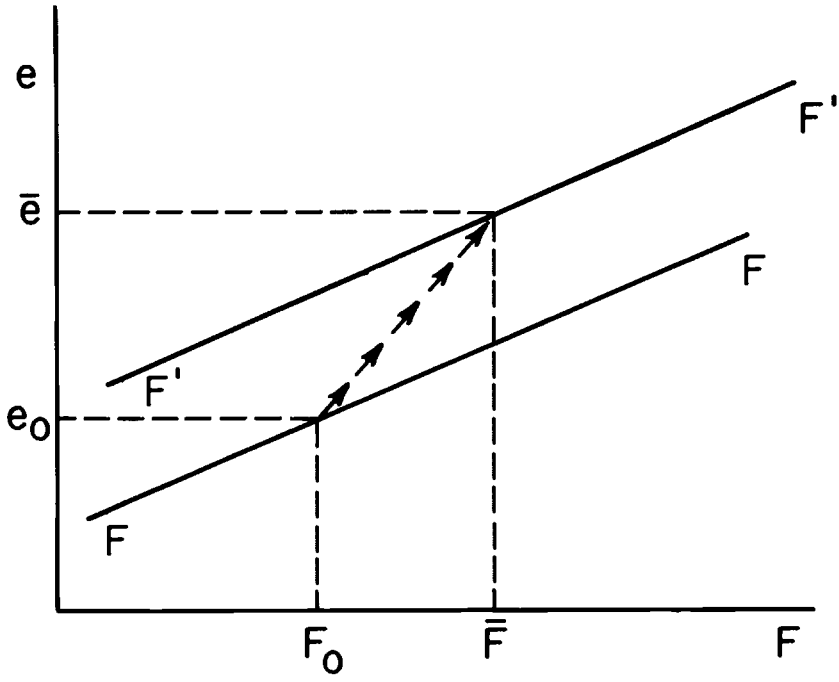

Fig. 2.2 The FF schedule

equilibrium. The point on $F'F'$ at which the economy eventually settles depends on the adjustment process. The higher the speed of adjustment of the exchange rate (and the lower q^*), the steeper the slope of $d\dot{F}/dF$ and the lower the eventual levels of the exchange rate $\bar{e}$ and of the debt stock $\bar{F}$. Unless λ is infinite, i.e., the exchange rate is adjusted instantaneously, $\bar{F} > F_0$ and $\bar{e} > e_0$.

Now consider the effects of the CTLD scheme. As explained above, the scheme served to fix domestic nominal rates at the level of foreign rates (plus the intermediary banks' margin, which we ignore). This rendered the effective real interest rate solely a (negative) function of the (expected) rate of inflation, and through (2.6), of the rate of depreciation of the currency:

$$r = q^* - \dot{\pi}^e = q^* - \mu\dot{e}. \tag{2.9}$$

One consequence of the policy is the magnification of the effect of any shock on the current account. Hence, upon the increase in g, the current account deficit on impact, $B(0)$, was previously simply Δg. The same calculation now yields

$$B(0) = [1/(1 - \alpha\mu\lambda)]\Delta g. \tag{2.10}$$

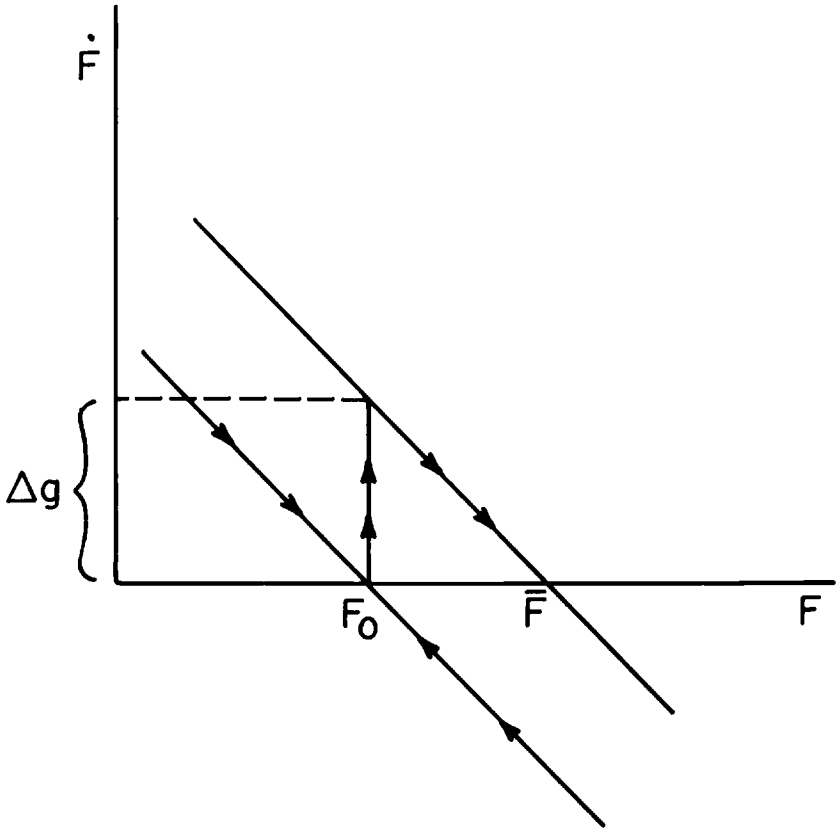

Fig. 2.3 External debt accumulation

Stability requires that $(1 - \alpha\mu\lambda) > 0$ (see eq. [2.11] below). Further, since all three parameters involved in this expression are positive, we must also have $(1 - \alpha\mu\lambda) < 1$. Therefore, $[1/(1 - \alpha\mu\lambda)]$ is greater than unity, which is the magnification effect mentioned above. The larger initial current account deficit in the presence of CTLDs is due to the greater spending encouraged by inflationary expectations *and* fixed nominal interest rates whenever the current account is adversely affected. Hence, in addition to the direct effect of the autonomous increase in g, we have an increase in private sector expenditures that is brought about by the instantaneous fall in real interest rates.

The adjustment process is also faster with the CTLD scheme in place. This can be seen once again by differentiating (2.4), and using the definition of r from (2.9):

$$d\dot{F}/dF = [1/(1 - \alpha\mu\lambda)]\,(q^* - \beta\lambda). \tag{2.11}$$

Stability will require the term in square brackets to be positive. With this requirement met, the same reasoning as in the previous paragraph can be used to show that this expression is larger than that in (2.8). In other words, the deficits are now reduced faster, since, with the stability of the process assured, any cut in current deficits has the added beneficial effect of further reducing expenditures via the dampened inflationary expectations.

Figure 2.4 compares the dynamics of debt accumulation with and without CTLDs. Note that the eventual stock of foreign debt $\bar{F}$ (as well as $\bar{e}$) are identical in the two cases. During the adjustment process, however, the current account deficits are always larger with CTLDs than without. The apparent contradiction is resolved by noting that the long-run level of debt is reached faster in the first case. In other words, debt is accumulated more rapidly with the CTLD scheme in place. How much more rapidly depends on the expenditure elasticity with respect to interest rates, α, and the strength of the linkage between the exchange rate and the price level, μ.

The argument so far is predicated on an exchange rate policy—here represented by λ—devised so that the process of debt accumulation eventually settles at some stable long-run level F. With the CTLD scheme in place, the stability requirement in fact becomes more stringent. In addition to the previous condition that $\lambda > q^*/\beta$, we now have $(1 - \alpha\mu\lambda) > 0$, which requires $\lambda < 1/\alpha\mu$.[15] This new upper limit on the responsiveness of exchange rate policy corresponds to the fact that a "too high" λ will cause too much of a borrowing binge via inflationary expectations. In the limit, as

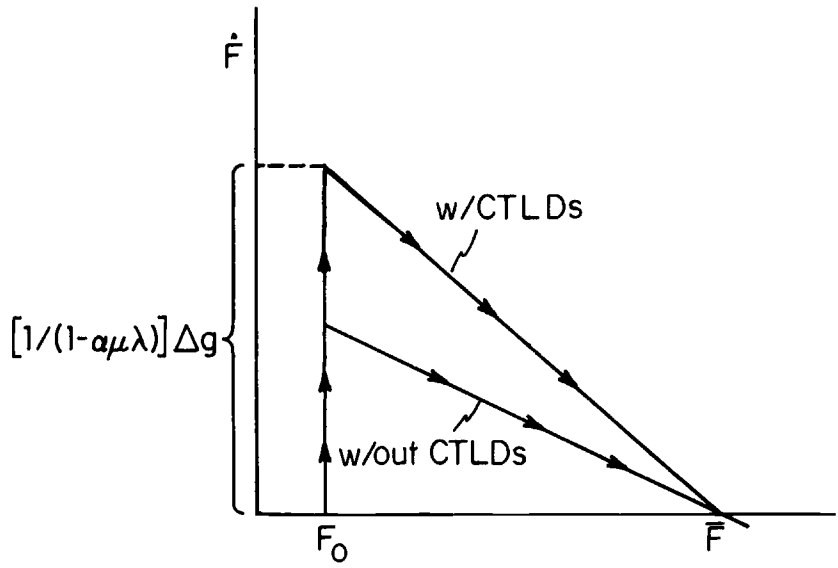

Fig. 2.4 Debt dynamics with CTLDs

λ goes to infinity, foreign borrowing creates the possibility of infinite capital gains. Hence, the difficult task for the authorities would have been to adjust the exchange rate so as to satisfy both requirements, i.e., to settle on a pace of depreciation which was neither too slow nor too rapid. Notice that the band of stability represented by $1/\alpha\mu > \lambda > q^*/\beta$ might have been quite a narrow one. In fact, no such λ would have existed in the case where q^*/β is larger than $1/\alpha\mu$.[16]

The more rapid accumulation of debt under the CTLD scheme and the narrower range of stable policies in turn create further problems. Turkish borrowers might have anticipated that the CTLD scheme, like all things too good to be true, would have to come to an end. The end could be precipitated either by the government or, as it eventually happened, by foreign lenders who finally got their sums right. Cut off from new inflows, the government would then have no choice but to undertake larger depreciations to bring the current account under control. Indeed, such expectations on the part of Turkish borrowers could prove self-fulfilling in the sense of bringing a collapse of lending where none need have occurred.

To see this, suppose that at some time τ during the debt-accumulation process, borrowers come to believe that there is a subjective probability, δ, that foreign lenders will autonomously reduce their rate of lending. If the possibility materializes, the authorities will have to increase the rate of depreciation from λ to $\bar{\lambda}$. This possibility raises the expected inflation rate from $\mu\lambda$ to $\mu[(1 - \delta)\lambda + \delta\bar{\lambda}]$ and correspondingly lowers the real interest rate. For sufficiently high δ and/or $\bar{\lambda}$, such expectations can be self-fulfilling by rendering the adjustment process unstable. From τ onwards, we now have:

$$\dot{dF}/dF = \{1/(1 - \alpha\mu[(1 - \delta)\lambda + \delta\bar{\lambda}])\}(q^* - \beta\lambda). \tag{2.12}$$

For large δ or $\bar{\lambda}$, the expression in the curly brackets could turn negative, making $\dot{dF}/dF$ positive. This possibility is illustrated in figure 2.5. The crisis is now made inevitable since the borrowing process no longer has a natural brake, and debt will keep on accumulating until something gives. The self-fulfilling nature of expectations here is the consequence of the nature of the CTLDs: the higher the probability of an eventual debt crisis, the cheaper it was to borrow.

2.5 Recapitulation

Did the experience of the 1974–77 period amount to overborrowing? The discussion above should leave no doubt that it did. With spread and front-end fees included, the marginal cost of funds (denominated in DM), was *at least* 20–25 percent toward the end of 1976. This amounts to a real interest rate burden of around 16–21 percent. It would be hard to believe that the ongoing investment drive in Turkey justified borrowing on such terms. The

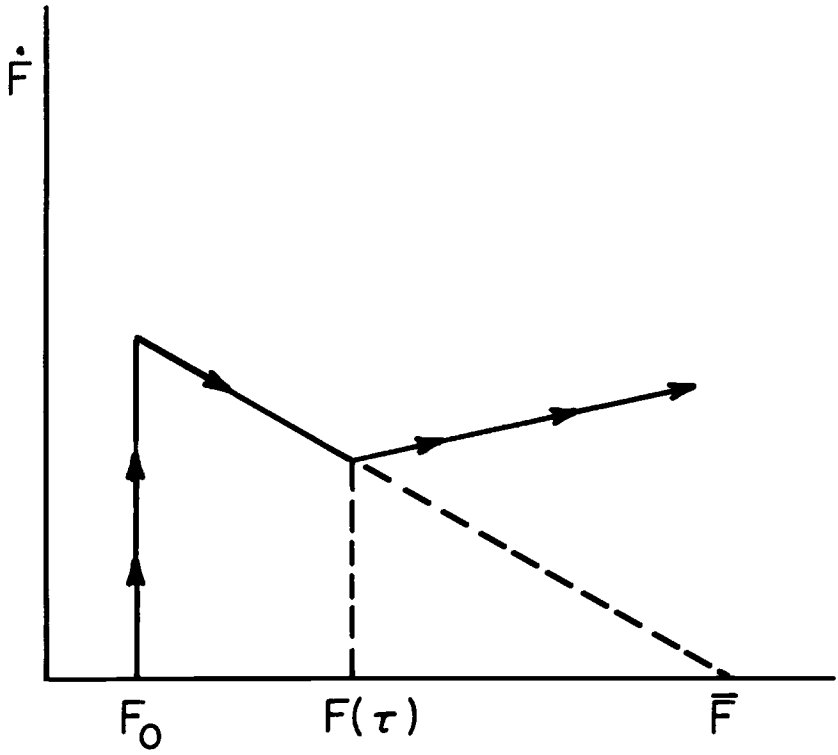

Fig. 2.5 Self-fulfilling crisis

authorities not only greatly subsidized foreign borrowing, but they also did so in a way that seriously hampered the dynamic stability of the process. To be sure, the CTLD scheme allowed a domestic credit explosion to finance a rapid increase in private sector expenditures alongside the public sector investment drive, and helped engineer unprecedented rates of economic growth. But the edifice was constructed on inherently shaky foundations.

The CTLD episode lasted for roughly two years, between May 1975 and July 1977. Given the problems already discussed, even this might be considered as too long a time frame. Why did the foreign banks not pull out earlier? Some clues to the answer have been given above. Banks seem to have had little knowledge of the rapid rise of Turkey's aggregate foreign liabilities, and do not appear to have analyzed the behavioral consequences of the scheme in any great detail. One account suggests that banks would "test" the CTLDs by frequently withdrawing their money, to redeposit it again promptly (Brennan 1976, 84). With a sufficiently large number of banks all doing the same, the information content of this strategy must have been close to nil. Individual banks simply imitated their competitors'

behavior with the assurance that, were a crisis to come, they would be caught in good company.

How about the government authorities? Here a number of factors must have been responsible for the implementation of the scheme. Perhaps foremost was the desire to maintain, for political as well as sound economic reasons, the investment effort. As has been aptly stressed by Boratav (1986):

> [t]his was a period when the rivalry and confrontation between the two major parties for the allegiance of the main social groups took acute and, at times, violent forms. The alternating governments—the Republican People's Party (RPP) in 1974 and the Justice Party (JP) during 1975–77—could, therefore, not afford to suspend the well-rooted distributional and allocational mechanisms of populism. And . . . these mechanisms could produce the intended results only in an expanding economy. (2)

The ready availability of foreign exchange through the CTLD scheme must have served to create the illusion of a soft budget constraint on public investment. Hence, after 1973 the realized levels of public sector investment (as a share of public sector income) consistently exceeded the planned levels under the annual programs.[17] Second, lack of experience with floating rates must have obscured the ill-effects of cross-rate changes discussed earlier. Third, a lack of recognition of the overvaluation of the current exchange rate also would have played a role in minimizing the risks involved. Besides, the margin of indeterminacy noted above with respect to outcomes might have provided some ground for optimism. Finally, we might add the most cynical explanation of all: it was likely that the eventual mess would have to be cleared up by the next government, which is precisely what happened.

The CTLDs were eventually consolidated and rescheduled in an agreement signed in August 1979.[18] Principal repayments on these liabilities began again in 1984, for the first time since July 1977. The burden of servicing the CTLD overhang would prove to be a substantial one in a period of vast real depreciations of the Turkish lira. Who paid the subsidies implicit in the CTLD scheme? Technically, the burden was the Treasury's, but the central bank was the effective source of payments as the Treasury never compensated the bank. Lacking resources of its own, the central bank had to generate funds somehow. As will be discussed in the following chapters, it did so partly through the inflation tax and partly by shifting the burden onto future generations via renewed external borrowing.

Appendix

Consider the effect of foreign borrowing on home-goods prices. Since borrowing allows a higher level of domestic expenditures, it puts upward pressure on the prices of such goods. This is the familiar problem of real

appreciation of the exchange rate in the presence of capital inflows. To represent this process, let the rate of increase of home-good prices, p, be proportional to the excess of expenditures over income, as captured by the current account deficit B:

(A2.1) $$\dot{p} = \theta B.$$

Now the expected rate of inflation has an additional component coming from the dynamics of p:

(A2.2) $$\dot{\pi} = \mu\dot{e} + (1 - \mu)\theta\dot{F}.$$

Using this, we can calculate the impact effect of Δg on the current account as follows:

(A2.3) $$\dot{F}(0) = -\{1/(1 - \alpha[\mu\lambda + (1 - \mu)\theta])\}\Delta g,$$

which is greater due to expectations of higher inflation. The dynamics of debt are in turn determined by:

(A2.4) $$d\dot{F}/dF = \{1/(1 - \alpha[\mu\lambda + (1 - \mu)\theta])\}(q^* - \beta(\lambda - \theta)).$$

Once again, the stable region for λ is smaller. In other words, incorporating the dynamics of the nontraded sector makes instability more likely and exchange rate management more problematic.

3 Crisis Without Adjustment, 1978–79

The debt crisis developing in mid-1977 threw Turkey into a period of forced adjustment. As foreign exchange sources dried up, external balance became for the first time in many years a genuinely binding constraint, requiring an adjustment in the relation between income and absorption in the economy.

Until the reform package of January 1980, the policies employed by the authorities were unsuccessful in extricating the Turkish economy from the crisis. In view of the foreign exchange constraint, some belt-tightening had become inescapable. However, the governments in power during this period—and there were many—compounded the problems by their refusal to implement vigorous adjustment measures. The investment boom collapsed, economic growth came crashing down, inflation rose to unprecedented heights, and income distribution worsened disastrously. The only positive development was the beginning of a series of debt reschedulings with official