

## CHAPTER VIII

# MONEY AND CAPITAL MARKETS

### 1. MAIN DEVELOPMENTS

The economic stabilization program introduced in July 1985 led to a remarkable slowing of inflation and a marked change in monetary trends. The latter development was reflected by a sharp drop in the government deficit, the principal factor in the real expansion of the public's financial asset holdings in recent years; a change in relative yields, which induced the public to reshuffle its financial portfolio; and a slower nominal growth of financial assets and credit. Real interest rates, which had been high since early 1984, rose sharply while nominal interest rates turned down.

The underlying causes of the monetary developments in the first half of the year were for the most part a continuation of those evident in 1983-84. Although smaller than in 1984, the government deficit was still large: the domestic deficit<sup>1</sup> was equivalent to 11 percent of GNP, after standing at 13 percent in 1984. At the same time the difficulties in financing the deficit persisted. They arose against the background of expected policy changes, including the impairment of linked liquid financial assets (especially Patam) and a devaluation (with a consequent jump in prices). The yield on assets linked to the exchange rate and especially those denominated in foreign currency therefore reached a comparatively high level. This made it hard for the government to go on increasing its borrowing from the public, and so it had to rely mainly on foreign grants and loans for financing the deficit (reflected in the sale of foreign currency to the public).<sup>2</sup> Consequently, only part of the government and Bank of Israel's external injection remained in the economy; it was channeled to the acquisition of medium- and long-term foreign currency-linked assets and to the money base in order to restore its inflation-induced erosion. The public continued to alter its financial portfolio, preferring, as in 1984, foreign currency-linked assets over assets linked to the consumer price index (the weight of the former rose in the first half of the year from 32 to 36 percent).

The stabilization plan changed most of the basic factors at work in the monetary sphere. A determined effort was made to reduce the government deficit, and in the second half of the year it was slashed to a mere 4.5 percent

<sup>1</sup> See Table VIII-6.

<sup>2</sup> The starting point in this chapter is the domestic deficit of the public sector, defined here as the government and Bank of Israel. The government's net income from foreign grants is treated as a source of financing the domestic deficit. A deficit so financed does not, of course, impose a burden on the economy.

of GNP<sup>3</sup> (excluding interest payments on the debt accumulated in the past, there was even a surplus). After a nominal devaluation at the outset of the plan, inflation was expected to fall steeply. This, together with the high nominal interest rates, led to a sharp change in relative yields: that on assets in or linked to foreign currency declined, and the expected yield on unlinked assets turned up. This spurred the reshuffling of the public's assets portfolio and the altering of the deficit financing mix. In the financial portfolio the weight of assets linked to foreign currency dropped precipitately (to 27 percent), and that of unlinked assets (M2) went up from 4 to 7 percent. The growth of real balances reflected the reduced cost of holding money following the containment of inflation. The even brisker demand for other unlinked assets is explained by their sharply higher relative yield under the Bank of Israel's nominal interest rate policy. Thus there was a net addition to the sheqel asset base (equivalent to 11 percent of GNP), at the expense of Patam (foreign currency-denominated accounts), which was drawn down to a similar extent. Because of the differential liquidity ratios in force, this shift in asset holdings would have enlarged the credit growth potential. To avert this, the Bank of Israel raised the liquidity ratios. These developments also found expression in the government deficit financing mix during this period: only a small fraction of the deficit was covered through the sale of foreign currency; for the most part it was financed by increasing the government's domestic liabilities, with money creation expanding and the linked domestic debt shrinking.

As in 1984, monetary policy concentrated on curbing the growth of short-term bank credit by setting high interest rates on the discount-window loan, the marginal source of credit expansion. This pushed the real marginal cost of domestic credit up to a high 40 percent annual rate since the beginning of 1984, with a precipitous jump during the first package deal period followed by a drop to the pre-deal level. After the launching of the stabilization program the real marginal cost of credit again reached a very high level, and the average interest rate also went up sharply (see Table VIII-A22). This was due to the lowering of nominal interest by less than the drop in the inflation rate and the expected rate of inflation. The high interest was intended to help stabilize prices by temporarily depressing domestic demand, thereby discouraging speculation in the foreign exchange market and strengthening the balance of payments on the one hand, and temporarily retarding the rise of prices on the other. But persistence in such a policy affects economic activity, especially in the case of firms that are oriented to the domestic market and have to resort to expensive sources of credit. Moreover, this policy led to large-scale transfers from the Bank of Israel to the commercial banking system.<sup>4</sup>

<sup>3</sup> The decrease was even greater than the sustainable decrease embodied in the stabilization plan.

<sup>4</sup> What motivated the Bank of Israel to pursue such a policy was its desire to narrow the commercial banking system's financial margin. This, however, involved a high price since it augmented the private sector's income, thereby blunting the short-term impact of the government deficit cut, and also because of its strong redistributive effect on business sector income, especially the increased income of the financial segment at the expense of that of the rest of the private sector (see the discussion in section 3).

Table VIII-1  
MONETARY INDICATORS, 1980-85

	Average balance as percent of GNP								Nominal monthly rate of change, percent					
	1980	1981	1982	1983	1984	1985			1982	1983	1984	1985		
						Jan.- Dec.	Jan.- June	July- Dec.				Jan.- Dec.	Jan.- June	Aug.- Dec.
Narrow money base	3.5	2.8	2.7	2.5	2.0	4.6	2.2	6.2	5.9	8.4	15.3	18.4	9.9	10.0
Unindexed liquid assets <sup>a</sup>	6.6	6.0	6.5	6.7	5.8	10.3	6.9	12.4	9.0	7.8	14.9	15.8	14.1	9.8
Liquid assets	39.1	37.3	39.1	37.4	38.3	43.2	40.7	44.8	7.1	10.1	15.4	9.2	12.7	3.7
Liquid assets and bank shares	51.9	56.0	62.8	62.9	50.7	59.0	55.8	60.9	8.3	7.3	15.7	9.2	13.2	3.7
Total financial assets	141.6	153.4	182.6	178.3	163.2	193.9	178.6	203.5	9.4	7.3	16.4	9.2	11.9	4.6
Bank credit to private nonfinancial sector <sup>b</sup>	26.6	22.7	20.7	18.4	17.4	21.0	19.3	22.1	7.5	7.3	16.4	9.4	12.8	4.0
Medium- and long-term credit	24.7	23.7	27.7	32.8	36.5	43.7	40.1	46.0	9.1	11.2	16.7	9.3	11.2	7.5 <sup>c</sup>
Net financial wealth of private nonfinancial sector	104.7	111.5	124.6	120.3	106.0	127.8	117.7	134.1	8.1	7.9	16.1	9.4	12.0	6.8 <sup>c</sup>
Consumer price index <sup>d</sup>									7.2	9.3	15.2	9.1	11.9	2.7
Exchange rate (NIS/\$)									6.6	10.2	16.0	7.4	12.0	0.3

<sup>a</sup> M1, time deposits, CDs, and treasury bills.

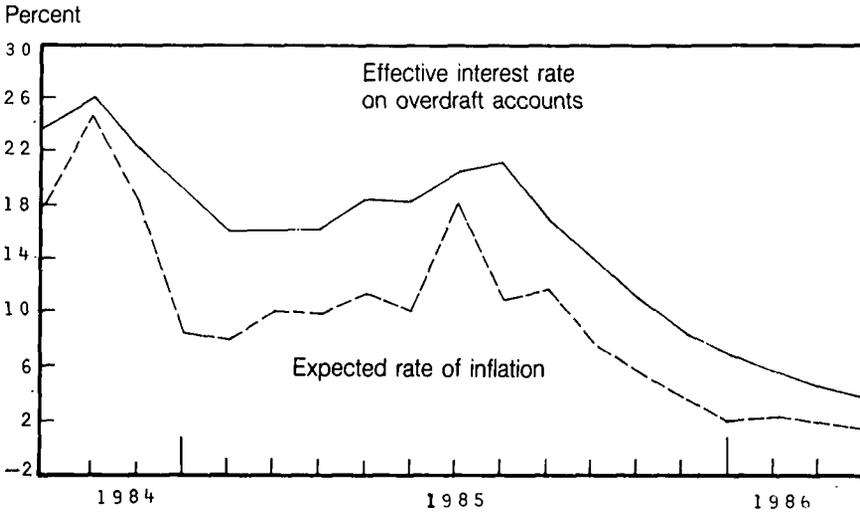
<sup>b</sup> Excluding fuel credit.

<sup>c</sup> July-December.

<sup>d</sup> The CPI reflects changes in the average monthly price level, i.e. it approximates the change from mid-month to mid-month. As a result, the series is biased when there is a change in the rate of inflation (as happened, for example, in July 1985).

SOURCE: Table VIII-A1.

**Figure VIII-1**  
**EFFECTIVE MONTHLY INTEREST ON OVERDRAFTS AND**  
**EXPECTED RATE OF INFLATION,<sup>a</sup> OCT. 1984 TO MARCH 1986**



<sup>a</sup> Estimate derived from the indexed bond market.

Despite the high price of credit, the real balance of short-term bank credit began to expand in late 1984 (with the steep rise in interest rates). The average balance was 12 percent higher this year in real terms than in 1984, but there was no increase in the course of the year. Under the stabilization plan the level even turned down a bit,<sup>5</sup> the net result of factors increasing demand for credit on the one hand and of factors curtailing its supply on the other. Demand was brisker because of an unplanned buildup of inventories (due to the slump in business activity), while the mounting cost of credit had a contrasting effect, depressing the quantity demanded but increasing the debt of a growing number of firms that had trouble paying their swelling interest bill.

The public's financial asset holdings edged up 1 percent in real terms during the year. This followed a resounding 14 percent real growth in 1984, and so the average value of the portfolio rose in the year reviewed. The size of the portfolio was influenced by developments in the various segments of the capital market. The share market slump affected the value of equities, while bond prices fell 7-20 percent (following the rise in real interest rates). The public's net financial wealth expanded by a modest 3 percent this year (mainly in the second half). This was the net outcome of a mild increase in both asset accumulation and outstanding credit: the real balance of short-term credit was about the same at the end of the year as at the beginning, while medium- and long-term credit went up a mere 2 percent (after a hefty real growth in previous years).

<sup>5</sup> Especially credit for fuel imports. Excluding fuel, the average short-term credit balance rose in the second half of the year as well; the balance of medium-term foreign credit, however, declined.

**Table VIII-2**  
**INCREMENTAL DOMESTIC LIQUIDITY GENERATED BY EXTERNAL INJECTIONS, 1979-85**

	Millions of current NIS				Percent of GNP <sup>a</sup>					
	1984	1985			1979-82	1983	1984	1985		
		Jan.- Dec.	Jan.- June	July- Dec.				Jan.- Dec.	Jan.- June	July- Dec.
<b>Source</b>										
Public sector injection <sup>b</sup>	746	356	545	-189	11.3	9.0	10.4	2.4	6.1	-1.3
Bank of Israel injection <sup>b</sup>	96	360	298	62	0.3 <sup>c</sup>	3.9	1.6	1.5 <sup>c</sup>	2.8	0.2 <sup>c</sup>
Total external injection	842	716	843	-127	11.6	12.8	12.0	4.0	8.9	-1.0
<i>less</i> Leakage through balance of payments	538	822	632	190	3.3	6.6	9.0	3.7	6.3	1.1
Total injection	<b>304</b>	<b>-106</b>	<b>211</b>	<b>-317</b>	<b>8.4</b>	<b>6.4</b>	<b>3.1</b>	<b>0.2</b>	<b>2.6</b>	<b>-2.1</b>
<b>Destination</b>										
Money creation (= change in money base)	231	1,872	215	1,656	2.1	2.4	3.1	6.8	2.5	11.1
Increment to liquid asset base	-96	-1,661	-109	-1,551	0.3	4.3	-1.7	-5.8	1.1	-10.4
Resident deposits (Patam)	41	-1,754	-41	-1,712	1.0	5.5	0.9	-5.8	-0.1	-11.5
Tradable bonds <sup>d</sup>	-137	93	-68	161	-0.8	-1.2	-2.6	0.0	-1.0	1.1
Medium- and long-term asset base	169	-317	105	-422	6.0	-0.3	1.6	-0.8	1.2	-2.8
Restitution deposits	14	194	80	114	0.6	0.4	0.4	0.8	0.9	0.8
Savings schemes and social insurance funds <sup>e</sup>	155	-511	25	-536	5.3	-0.7	1.2	-1.6	0.3	-3.6

<sup>a</sup> Calculated as the arithmetic mean of monthly ratios. The numerators are at current prices; the denominator (GNP) is derived from quarterly data and corrected for the change in prices during the quarter.

<sup>b</sup> For details see Table VIII-4.

<sup>c</sup> The figures are downward-biased because they are net of the export funds transferred from the Bank of Israel to the commercial banks. The amount that has to be added in order to make these figures comparable to the others is to be found in Table VIII-4.

<sup>d</sup> Excludes accrued interest.

<sup>e</sup> Net long-term government borrowing from the private sector (net of early redemption of State of Israel Bonds).

The high inflation in the first half of 1985 swelled the nominal monetary aggregates. A large part of the aggregates (assets and credit) is fully pegged to the consumer price index or the exchange rate, and so this segment expanded with the rate of inflation and depreciation of the sheqel. But in the unlinked segment inflation caused a heavy erosion and a consequent need for new nominal increments of financial assets, which were supplied during this period by external injections. After inflation began to slow under the stabilization program, the nominal growth of the monetary aggregates also slowed, and in the final part of the year financial assets and credit expanded by only 2 percent a month, as against 10 percent or more a month in the last two years.

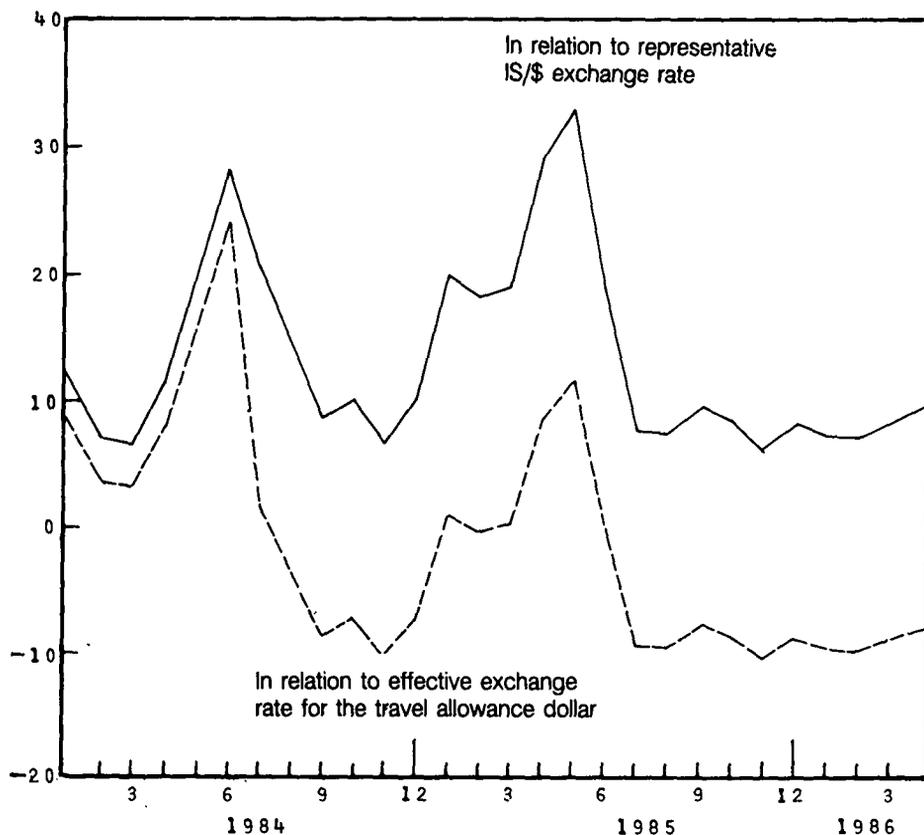
### **Effect of Monetary Developments on Inflation and Real Activity**

The relation between the government deficit and the movement of prices in an open economy like Israel is a complex one, and must be examined in the context of the overall deficit financing mix. The lion's share of the government's domestic deficit is connected with the import surplus. The surplus itself does not generate excess demand in the markets, and therefore it does not push up prices: it manifests itself in the sale of foreign currency to the public. But whenever the government deficit has expanded, it created excess demand in the markets, which was reflected by a real appreciation of the currency (the prices of products that are not traded internationally rose faster than the prices of tradables—both imports and exports). However, in years when the deficit was large but constant, it did not cause a further real appreciation of the currency. Funding the government deficit by the import surplus financing mix (foreign grants and loans) permitted domestic demand to exceed GNP, but it resulted in a steady growth of the government's external debt. This created difficulties until recently, when U.S. government aid was stepped up.

Another part of the government deficit is financed by borrowing from the public. This too does not generate excess domestic demand, as it reflects the public's readiness to forgo consumption in the present and to save in the form of government liabilities. In the past this was the principal source of financing the deficit, but in 1983-84 the public was less willing to continue lending to the government. This was because of the enormous domestic debt, which swelled in the wake of the arrangement worked out after the bank share crisis in late 1983 and shook public confidence in the government's ability to repay the debt. This in turn engendered expectations of stringent policy measures, including nominal devaluations (which temporarily erode part of the public's assets) and adverse changes in the properties of financial assets. As a result, part of the public's saving was diverted from government savings instruments to foreign currency, making it harder yet to finance the government deficit and the balance of payments.

The rest of the deficit—the part that is not funded by borrowing from the public or selling it foreign exchange—was covered by money creation (the growth of the money base). As long as the inflationary process persisted, the public needed this additional money to restore the inflation-eroded purchasing power of its nominal balances. This mode of financing is therefore connected

**Figure VIII-2**  
**PREMIUM ON THE BLACK MARKET DOLLAR, 1984-APRIL 1986**  
 (percent, monthly average)



with the inflation tax, and is dependent on its development. The volume of money creation is dictated by the public's desire to hold money for transactions purposes: the higher the price of holding money (i.e. its erosion), the smaller the quantity demanded. This source of financing has covered only a very small fraction of the deficit, in most years being equivalent to a mere 2 percent of GNP. The inflationary process in Israel has been determined without any connection with the inflation tax and money creation: it has been determined primarily by the interaction of the principal prices in the economy — the exchange rate, nominal wages, and controlled commodity prices.

It was against this backdrop that the economic stabilization program was introduced with the object of quickly reducing inflation and simultaneously mending the balance of payments. The main components of the plan were a government budget cut, the freezing of the sheqel/dollar exchange rate, the freezing of most domestic prices (including wages), and a tight monetary pol-

icy. The pruning of the government budget and the monetary restraint were intended to curb domestic demand, thereby improving the country's current account (not counting the improvement implicit in the increased American aid). The tight fiscal policy aimed to reduce the government's need to increase the domestic and external debt in view of the difficulties this has presented of late, and to enhance public confidence in the government's new strategy. The freezing of the exchange rate, controlled prices, and wages, along with the temporary controls put on other prices, was designed to directly influence the rate of inflation, on the assumption that these variables determine the movement of prices in the economy and the resulting money creation, and not the other way around. But it should be stressed that some of these components were interrelated: in particular, failure to reduce the deficit was liable to trigger a massive purchase of foreign currency by the public with a consequent strain on the country's foreign reserves, thereby diminishing confidence in the plan and creating pressure to abandon one of the principal components— stabilization of the exchange rate.<sup>6</sup>

Following the freezing of the principal nominal variables, inflation did in fact fall very rapidly, and the fear of the appearance of devaluation expectations and other forms of speculation proved to be unfounded. The balance of payments improvement, reflected by a big drop in the public's foreign currency purchases after the marked narrowing of the government deficit and the change in relative yields, was also rapid. On the other hand, money creation was greatly stepped up. This time too it stemmed from the public's inflation-related behavior—the desire to enlarge its money balances following the sharp fall in the rate of inflation (which, as stated, reflects the price of holding money). The government was therefore “forced” to print money (through the Bank of Israel), but for the most part this was accompanied not by the growth of the public's income, but by a reduction of the linked domestic debt (especially Patam).

The steep rise in the real marginal cost of domestic credit, which had already been high since the beginning of 1984, helped to dampen private demand, especially inventory investment (see Chapter II). It is hard to quantify this effect, for the fiscal variables (i.e. the reduction of the government deficit) also depressed demand.

At the same time, the real cost of credit had a contractionary effect on economic activity because of the use of short-term credit for working capital purposes. This effect is especially severe when credit remains expensive for a fairly long period, for it unsettles the financial position of many firms. Coming on top of the troubles they experienced in 1985 because of sagging demand, the high interest aggravated their situation. Hence it is no wonder that a larger number of firms went bankrupt this year.

<sup>6</sup> The original objective of monetary policy was to support the speedy slowing of inflation and prevent the creation of fertile soil for speculation, which was liable to cause the abandonment of exchange rate stability. But in practice the policy concentrated on setting very high interest rates, which were probably higher than necessary.

## 2. CAUSES OF MONETARY DEVELOPMENTS IN THE FIRST HALF OF 1985

Monetary developments in the first half of 1985 were dominated by the same basic trends evident in the two preceding years, namely soaring inflation and a concomitant swelling of both the public's financial asset holdings and credit. In 1985 too the large government deficit was responsible for most of the real asset growth: the government found it hard to fund the deficit from domestic sources and had to turn to foreign sources. But the intensity of these trends underwent a change during this period: after reaching a record high in 1984, they weakened in the first half of 1985 but were still stronger than in 1983. The attempt to mend the economy through the first package deal, in force from November 1984 to the beginning of February 1985, did not succeed. After decelerating for a short period, domestic prices resumed their upward climb in February at an average monthly rate similar to that in 1984. Nevertheless the temporary slowdown of prices resulted in the reduction of the government deficit—because of the smaller inflation-related erosion of tax receipts—and a growing public awareness that inflation could be mastered; it also underscored the importance of synchronizing the principal prices in the economy, especially the exchange rate.

A large government deficit has long been the dominant feature of the economy, and its impact has of course also been felt in the monetary sphere. In many countries experiencing similar problems the function of monetary policy is to determine the deficit financing mix, along with credit supply. The deficit is financed by printing new money (money creation), borrowing from the public, and selling it foreign currency (attended for the most part by an increase in the government's external debt, i.e. the drawing down of foreign exchange reserves). But in Israel the big deficit has been one of the factors in the development of a capital market characterized by a high degree of government intervention in determining and stabilizing interest rates and in exchange rate management. Consequently, the deficit financing mix in this country has been largely determined by the public's preferences, with the impact of monetary policy being felt only marginally: monetary policy has perforce focused on influencing credit supply.

In most years since 1974 the domestic deficit, including interest payments, has been equivalent to 12 percent or more of GNP. In 1983 it declined, but in 1984 it again rose to stand at 13 percent, mainly because of the crisis in tax collection. In the first half of 1985 the deficit exclusive of interest dropped from 9 percent of GNP to 5 percent, thanks to the recovery of tax collection; however, the total deficit was still large—11 percent of GNP (see Table VIII-6). In 1983-84 the public was less willing to go on increasing its lending to the government, and this, together with the prevailing devaluation expectations, induced it to divert the incremental income generated by the government deficit to acquiring foreign currency for financing imports and for saving abroad. In other words, in these two years the government deficit was funded primarily by the sale of foreign currency to the public. In the first half of 1985 such sales covered 55 percent of the deficit, compared with 70 percent in 1984.

Despite the growth of the domestic debt during this period compared with the two preceding years, the public still saved part of its additional income abroad. Foreign currency was also purchased for portfolio purposes. This phenomenon has been evident since the summer of 1983, but it apparently ebbed somewhat in the first half of 1985 (it was most conspicuous during the period of the Histadrut elections, when the public expected the adoption of tough policy measures). Money creation continued to be relatively small, despite the sharp fall in the total deficit.

Besides the decisive influence of the government deficit on the accumulation of financial assets, the provision of credit to the private sector by the public sector and financial intermediaries has also contributed to the expansion of the public's financial portfolio, while the composition of domestic assets and the distribution of the portfolio between domestic and foreign assets have been mainly determined by their expected yields. The linkage of most of these assets, together with the addition of new ones, accounts for the nominal growth of the portfolio.

All these factors operate jointly and simultaneously. We shall briefly describe them one by one: first, the contribution of the authorities to the financial asset base, i.e. the contribution of the government domestic deficit and the credit supplied by the public sector and the Bank of Israel (the external injection<sup>7</sup>); second, the contribution of the financial intermediaries (the difference between the acquisition of financial assets and the addition to the financial asset base); third, the relative yield effect on the composition and distribution of the external injection among the various assets and on the composition of the assets themselves; and fourth, the automatic contribution of the linkage mechanism through revaluations, which quantitatively is the most important factor of all.

(a) The contribution of the authorities to the financial asset base can be seen in Tables VIII-2 and VIII-4, which present the public sector and Bank of Israel's external injections. The total external injection was equivalent to 9 percent of GNP in the period reviewed, but two-thirds of it leaked out of the economy through large-scale purchases of foreign currency (6.3 percent of GNP).

(b) The contribution of the financial intermediaries to the public's asset acquisition was equal to 2 percent of GNP in the first half of 1985, after a modest contribution in the two preceding years as well (see Table VIII-3).<sup>8</sup>

The intermediaries' activity is largely influenced by the Bank of Israel's monetary policy. In the past few years the Bank has promoted the sheqel seg-

<sup>7</sup> The term "external injection" refers to the direct contribution of the public sector or the Bank of Israel to the creation of financial assets. It is connected with the widely used term "outside money", which is a liability of the monetary authorities, as distinguished from "inside money", which is a commercial banking system liability. It should be emphasized that "external" does not refer to sources outside the economy. The external injection is the gross injection, since part of it is diverted by the public to purchasing foreign currency, while only the net injection from the sale of foreign currency remains in the hands of the public in the form of Israeli currency.

<sup>8</sup> Part of the intermediaries' current interest outlay is not included in asset acquisition, but is included in asset revaluation in Table VIII-3.

ment. Besides encouraging the public to hold sheqel deposits by paying interest on the money base, it has fostered sheqel credits by imposing quantity restrictions on nonsheqel sources of credit, i.e. ceilings on foreign currency-linked credit, along with differential reserve requirements—low ratios on sheqel assets and a 100 percent ratio on linked assets. The expansion of short-term credit has thus been made possible by the accumulation of sheqel assets, and on the margin also by discount-window lending, which carries a variable nominal interest. Since this facility is a source of increasing credit on the margin, the interest thereon largely determines the marginal cost of expanding credit in the economy.

Until the end of 1983 the real cost of this facility was close to zero. But beginning in early 1984 the nominal interest was raised, bringing the real cost up to a very high level—an average annual rate of over 40 percent (see Table VIII-A22). During the first package deal the Bank of Israel lowered the nominal interest somewhat, but because of the sharp drop in inflation the real cost soared to an unprecedented 150 percent annual rate. After the expiration of the deal in February 1985, prices again began to climb and the real cost of the facility fell to its pre-deal level of about 45 percent.

Such a high marginal real interest, which dampens domestic investment, and in the immediate term inventory investment in particular, thus helps to ease the balance of payments strain in the short run; but it has negative repercussions on business sector activity, especially production for the domestic market (these repercussions become more severe the longer interest stays high—see section 3 below).

(c) The expected relative yields influence the composition of the assets portfolio on the one hand, and the deficit financing mix, which generates additional assets, on the other. In recent years the yield on foreign currency-linked assets has changed relative to other assets, inducing a reshuffling of the assets portfolio. During the period reviewed expectations arose (especially before the Histadrut elections) of a nominal devaluation and an ensuing round of price increases (see Figure VIII-2); as a result, the weight of foreign currency-linked assets rose at the expense of assets pegged to the consumer price index. These expectations were accompanied by fears of an unfavorable yield change in government liabilities—either the diminishing of their liquidity or the imposition of a capital gains tax. The public therefore favored foreign over domestic assets,<sup>9</sup> and this was reflected in both the composition of the portfolio and the deficit financing mix:

In the last month of 1984 and beginning of 1985 inflation slowed down. This led to a larger holding of unlinked assets (including money) and brought up the weight of money creation in the deficit financing mix. With the renewed acceleration of inflation, these components reverted to their previous level.

<sup>9</sup> The asset most affected was Patam, because of repeated statements about the need to alter its properties (yield). In February 1985 the possibility of investing in Patam deposits for less than one year was terminated.

**Table VIII-3**  
**CHANGE IN FINANCIAL ASSETS OF THE PUBLIC, 1983-85**

	Millions of current NIS				Percent of GNP <sup>a</sup>				
	1984	1985			1983	1984	1985		
		Jan.- Dec.	Jan.- June	July- Dec.			Jan.- Dec.	Jan.- June	July- Dec.
<b>Contribution of injection and financial intermediation</b>									
1. Total injection <sup>b</sup>	307	-106	211	-317	2.6	3.1	0.2	2.6	-2.1
To liquid asset base <sup>c</sup>	135	211	106	105	6.8	1.5	0.9	1.4	0.7
Bank shares purchased (-) by government	3	0	0	0	-3.9	0.0	0.0	0.0	0.0
To medium- and long-term asset base	169	-317	105	-422	-0.3	1.6	-0.8	1.2	-2.8
2. Domestic financial intermediation	-7	292	237	55	-0.2	1.4	0.6	2.1	0.4
3. Purchase of assets by the public (1+2)	<b>300</b>	<b>186</b>	<b>448</b>	<b>-262</b>	<b>2.4</b>	<b>4.5</b>	<b>0.8</b>	<b>4.7</b>	<b>-1.7</b>
Liquid assets	-101	1,277	439	838	3.4	-1.5	5.2	4.6	5.5
Shares of financial concerns	-1	-6	16	-23	-4.2	-0.0	-0.0	0.2	-0.1
Medium- and long-term assets	402	-1,085	-8	-1,077	3.2	6.0	-4.4	-0.1	-7.1
<b>Contribution of revaluation</b>									
4. Total revaluation	18,636	43,608	21,377	22,231	159.6	278.7	176.6	223.7	146.8
Liquid assets	4,140	8,105	4,782	3,323	40.0	61.9	32.8	50.0	21.9
Shares of financial concerns	1,576	3,556	2,307	1,249	7.1	23.6	14.4	24.1	8.2
Medium- and long-term assets	12,921	31,948	14,289	17,659	112.4	193.3	129.4	149.5	116.6
Percent change in balances, monthly rate <sup>d</sup>									
5. Total change in asset holdings (3+4)	<b>18,936</b>	<b>43,795</b>	<b>21,825</b>	<b>21,969</b>	8.5	16.4	9.4	11.9	6.9
Liquid assets	4,038	9,382	5,221	4,161	10.1	15.4	9.3	12.8	5.9
Shares of financial concerns	1,574	3,549	2,323	1,226	1.2	16.2	9.2	14.3	4.4
Medium- and long-term assets	13,323	30,863	14,281	16,582	9.5	16.8	9.5	11.4	7.6

<sup>a</sup> See note a in Table VIII-2.

<sup>b</sup> Total injection in Table VIII-2 *plus* purchase of bank shares by the government *less* leakage through balance of payments.

<sup>c</sup> Money base *plus* indexed liquid asset base.

<sup>d</sup> I.e. percent change in end-of-period balances.

(d) Besides the acquisition of assets and the change in their composition, the nominal growth of the portfolio is influenced by variations in the rate of inflation. This effect is connected with the value-linkage mechanism which evolved in the economy and enabled it to function despite the high inflation. A large part of the public's portfolio and credit is fully linked either to the consumer price index or the exchange rate. The high inflation automatically appreciated nominal asset balances (see Table VIII-3). Asset revaluation was also influenced by the divergence between the change in consumer prices and the exchange rate on the one hand and the change in the adjusted price of the assets on the other.

### 3. CAUSES OF MONETARY DEVELOPMENTS IN THE SECOND HALF OF THE YEAR

Monetary developments in the second half of the year reviewed were dominated by the economic stabilization program introduced in July with the object of curbing inflation and improving the balance of payments. After an initial steep upward adjustment, controlled product and service prices were frozen along with the exchange rate, and administrative controls were imposed on other prices in the economy. The cost-of-living allowance arrangement was temporarily suspended, causing a marked erosion of real wages in the first few months (part of this erosion was to be restored within half a year—see the discussion in Chapter III). Besides these measures, which directly influenced prices, the new overall plan provided for a deep cut in the government budget, especially with respect to taxes and subsidies but also involving some reduction of the government's real activity. This was intended to ease the government deficit financing problem, which had become more acute in the previous two years because of the difficulty of increasing the domestic and external debt. The budget cut was also intended to dampen demand, thereby further improving the balance of payments current account on top of the improvement recorded in 1984 and that expected with the receipt of special U.S. government aid.

These measures were accompanied by a very stringent monetary policy supportive of price stabilization. One of the instruments employed was the setting of high interest rates on both assets and credit in order to prevent the expansion of domestic credit, which was liable to stoke domestic demand and thus neutralize the contractionary fiscal policy (the narrowing of the government deficit). Moreover, when the growth of demand is accompanied by low interest rates and expectations of a devaluation and ensuing price increases, the availability of more credit will probably spur speculative purchases of foreign currency. While an imminent devaluation was not expected after the sizable one implemented at the beginning of July, there were fears that such expectations would arise later on, forcing the government to abandon exchange rate stability and thereby doom its new strategy to failure.

The success of the fiscal and monetary policy measures in quickly bringing

inflation down and consolidating the balance of payments improvement on both current and capital account enhanced confidence in the sustainability of the stabilization plan. The slowing of inflation from July onward (to about 2.5 percent a month until the end of the year and 1 percent a month in the first four months of 1986) damped down devaluation expectations, which invariably breed speculation with all its harmful effects.

The government deficit was slashed to an unparalleled degree, drying up what for many years had been the principal source of financial asset accumulation. This remarkable fiscal performance can be chiefly credited to the government's new policy, but to some extent it was also a by-product of inflation, namely the smaller inflation-induced erosion of tax receipts.

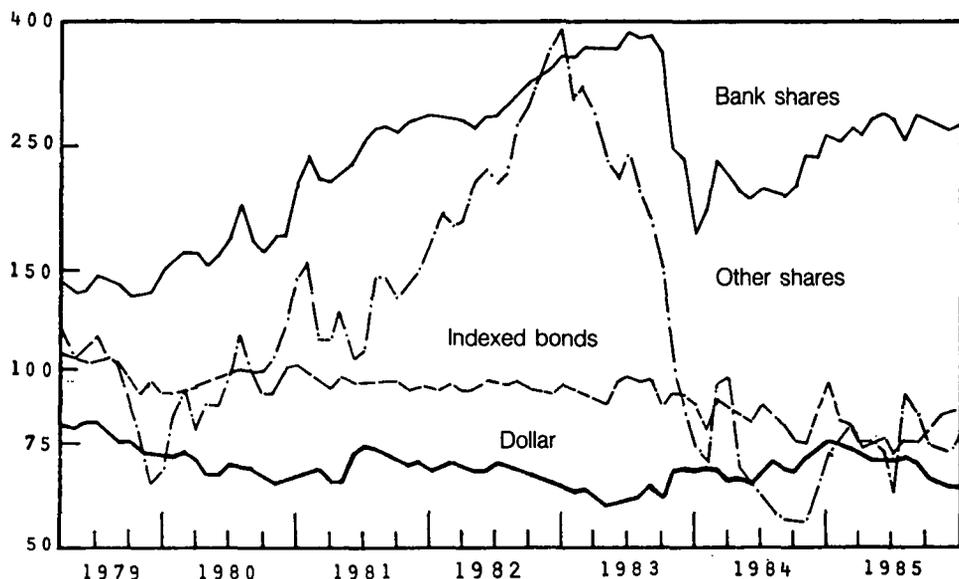
The stabilization plan produced a striking change in relative financial asset yields. Its credibility in the eyes of the public led to a sharp drop in the expected rate of inflation<sup>10</sup> and a consequent increase in the relative yield on unlinked assets. Monetary policy contributed to this by setting a high positive real interest on sheqel assets other than M1. The expected yield on foreign currency linked-assets declined with the waning of devaluation expectations under the exchange rate freeze (see Figure VIII-2). This relative yield change resulted in a change in the deficit financing mix and in the composition of the public's financial asset holdings. At the same time, private sector demand for foreign currency fell off sharply because of the trimming of the balance of payments deficit, and apparently also because of a diminished desire to hold foreign currency for portfolio purposes, a trend evident in the two preceding years. Thus foreign currency purchases by the public, which in 1983-84 had financed the bulk of the government deficit, ground to a virtual halt. The government deficit, which inclusive of interest payments was equivalent to only 4.5 percent of GNP during this period, was covered to only a minor extent by the sale of foreign currency to the public (1 percent of GNP); for the most part it was financed by the growth of the money base (money creation), which constitutes the unlinked domestic asset base.

The reshuffling of the public's financial portfolio reflected a switch from foreign currency-linked assets, especially Patam, to unlinked and CPI-linked assets. Under the stabilization program the liquidity of Patam demand accounts was greatly reduced following the termination of new deposits for less than one year; if it were not for this, the move from Patam to unlinked deposits would have been even more pronounced.

Excluding interest payments on the domestic debt built up in previous years, the government budget was in surplus to the tune of 1 percent or more of GNP in the second half of the year (asset accumulation exclusive of accrued interest was thus correspondingly negative). In addition, the public sector provided less credit during this period. These two developments were reflected by a negligible external injection. The Bank of Israel's external injection was

<sup>10</sup> See Figure VIII-1. A contributory factor in this development was the success of the first package deal in containing inflation, which relied on administrative price controls despite the absence of exchange rate stability.

**Figure VIII-3**  
**REAL OVERALL RATES OF RETURN INDEX FOR FINANCIAL ASSETS, 1979-85**



Semilogarithmic scale.

smaller than in the first half of 1985, the resultant of a decrease in its credit outflow to the private sector and an increase in net interest payments to it.

The total external injection, which was equivalent to -1 percent of GNP, together with foreign currency purchases by the public, resulted in a net absorption equal to 2 percent of GNP and a corresponding negative accumulation in the domestic asset base (see Table VIII-2). This was accompanied, as stated, by a shift from foreign currency-linked assets to sheqel assets, a development reflected by the shrinkage of Patam in an amount equivalent to 11 percent of GNP and a similar percentage growth in money creation (the unlinked asset base); thus the increased money creation did not augment the government deficit financing potential. At the same time, there was a negative accumulation in approved savings schemes and social insurance funds (excluding accrued interest) equivalent to 3 percent of GNP, as well as a large redemption of savings schemes, especially of "arrangement" bank shares held by senior citizens<sup>11</sup> (equal to 9 percent GNP), and the reinvestment of a substantial part of the proceeds in new savings schemes specially created for this purpose.

<sup>11</sup> Following the collapse of bank share prices in October 1983, an arrangement was worked out whereby the shares could be converted into locked savings schemes for a period of four to six years if the owners were below pension age and for two years if they had already reached pension age.

**Table VIII-4**  
**EXTERNAL INJECTION AND BALANCE OF PAYMENTS LEAKAGE, 1979-85**

	Millions of current NIS				Percent of GNP <sup>a</sup>					
	1984	1985			1979-82	1983	1984	1985		
		Jan.- Dec.	Jan.- June	July- Dec.				Jan.- Dec.	Jan.- June	July- Dec.
<b>Public sector<sup>b</sup></b>										
Expenditure <sup>c</sup>	3,455	12,421	4,968	7,453	54.7	54.1	51.8	50.7	52.1	49.2
<i>less</i> Tax revenue	2,792	12,169	4,493	7,676	47.1	50.7	42.9	48.8	46.9	50.7
<i>subtotal: Domestic deficit<sup>d</sup></i>	663	252	475	-223	7.6	3.4	9.0	1.9	5.2	-1.5
Credit to private sector <sup>e</sup>	83	104	70	34	3.8	5.7	1.4	0.5	0.9	0.2
Total public sector injection	<b>746</b>	<b>356</b>	<b>545</b>	<b>-189</b>	<b>11.3</b>	<b>9.0</b>	<b>10.4</b>	<b>2.4</b>	<b>6.1</b>	<b>-1.3</b>
<b>Bank of Israel</b>										
Directed credit <sup>f</sup>	64	-34	93	-127	-0.9	1.5	1.3	0.0	0.9	-0.8
Transfer of export funds to commercial banks	0	170	0	170	1.7	0.0	0.0	0.6	0.0	1.1
Discount-window loan	63	-26	129	-155	0.2	1.9	0.7	0.0	1.0	-1.1
Other factors	-32	420	76	344	1.1	0.5	-0.4	1.6	0.9	2.2
Bank of Israel injection A <sup>g</sup>	<b>95</b>	<b>360</b>	<b>298</b>	<b>62</b>	<b>0.3</b>	<b>3.9</b>	<b>1.6</b>	<b>1.6</b>	<b>2.8</b>	<b>0.3</b>
Bank of Israel injection B <sup>h</sup>	<b>95</b>	<b>530</b>	<b>298</b>	<b>232</b>	<b>2.0</b>	<b>3.9</b>	<b>1.6</b>	<b>2.1</b>	<b>2.8</b>	<b>1.4</b>
<b>Balance of payments, private sector</b>										
Deficit on current account	426	287	211	76	4.3	9.1	7.1	1.2	2.0	0.5
<i>less</i> Capital imports	-112	-535	-421	-114	1.0	2.6	-1.8	-2.5	-4.4	-0.6
Leakage via balance of payments <sup>i</sup>	<b>538</b>	<b>822</b>	<b>632</b>	<b>190</b>	<b>3.3</b>	<b>6.6</b>	<b>9.0</b>	<b>3.7</b>	<b>6.3</b>	<b>1.1</b>

<sup>a</sup> See note a to Table VIII-2.

<sup>b</sup> Central government and Jewish Agency (not as defined in Chapter V).

<sup>c</sup> Derived as residual; consists of domestic purchases, compensation of employees, transfer payments, subsidies (excl. interest on domestic public debt).

<sup>d</sup> These figures (cash basis) differ from those of Chapter V (accrual basis); in addition, different sources were used.

<sup>e</sup> Includes loan subsidy (see note b in Table II-A1).

<sup>f</sup> Variant A excludes and variant B includes transfer of export funds to the commercial banks.

<sup>g</sup> Purchase of foreign currency by the public.

Only part of the incremental money creation can be attributed to the slowing of inflation, which has made it more worthwhile to hold real money balances. This phenomenon is typical of economies undergoing rapid disinflation, but it is of a once-for-all nature. In this country it has been accompanied by an appreciable further growth of money creation, owing to the sharply higher real interest paid on sheqel deposits under the Bank of Israel's policy.

Because of the differential liquidity ratios in force, variations in the public's assets portfolio are accompanied by variations in credit supply. The switch from Patam to sheqel assets would, *ceteris paribus*, have swelled the credit supply (see Table VIII-5). To head off an excessive growth of credit, the Bank of Israel raised the liquidity ratios on sheqel assets. Thus the expansion of the sheqel asset base (11 percent of GNP in the second half of 1985) was accompanied by only a marginal increase in the financial intermediaries' credit outflow. The combined effect of the decrease in the government deficit and total injection and the small expansion generated by the financial intermediaries was a negative asset acquisition by the public, equivalent to -2 percent of GNP (excluding interest—see Table VIII-3). Besides the effect which disinflation had on relative yields and as an outgrowth of the public's asset portfolio mix, the drastic reduction of inflation affected nominal asset balances, most of which are indexed. The result was a much slower nominal growth of such assets and a much smaller asset revaluation.

A major role in the stabilization plan was assigned to the direct nominal price anchors, especially the exchange rate. The addition of a nominal monetary anchor would seem to have been superfluous, but to successfully check the rise of prices and stave off pressure to jettison exchange rate stability, both real and speculative demand had to be curtailed. When inflation has been arrested, it is hard to use the money supply (narrowly defined) as the nominal monetary target, for no one can foresee how much demand for money will expand following an abrupt drop in its price. Monetary policy therefore focused on the volume of credit, where such changes are not to be expected.

The instruments for achieving the monetary policy objectives were chosen with a view to fostering the unlinked segment of the economy. High nominal interest rates were set on the discount-window loan to the commercial banking system and on the banks' deposits with the Bank of Israel, Patam demand deposits were terminated, the ceilings on foreign currency-linked credit were lowered, and the capital import restrictions tightened. The interest on the discount-window facility largely determines the cost of expanding sheqel credit in the economy, and thus the marginal interest thereon. The supply of free (discretionary) foreign currency-linked credit shrank during this period, increasing the weight of sheqel credit and hence the effect of its price.

The drastic slowing of inflation pushed up the real cost of credit to a very high level (190 percent annual rate in the initial stage of the stabilization plan). The public's inflationary expectations, as reflected by the bond market, for example (see Figure VIII-1), also found expression in a high lending rate (albeit lower than the ex post real cost—approximately a 100 percent annual rate in the first months of the plan). The real interest paid by the Bank of Israel on

**Table VIII-5**  
**MONETARY POLICY INDICATORS, 1982-85**  
(percent of GNP)<sup>a</sup>

	1982	1983	1984	1985		
				Jan.- Dec.	Jan.- June	July- Dec.
<b>Asset base increment<sup>b</sup></b>						
Discount-window loan	0.8	1.9	0.7	0.0	1.0	-1.1
Open-market operations	0.6	0.0	0.0	0.1	-0.3	0.6
Injection generated by directed credit <sup>c</sup>	0.3	1.5	1.3	0.6	0.9	0.3
Injection due to other factors	1.0	0.5	-0.4	1.6	0.9	2.2
Total asset base increment	2.7	3.9	1.6	2.3	2.5	2.0
<b>Direct asset increment<sup>b</sup></b>						
Change in assets due to change in						
Ceilings on credit <sup>d</sup>	-2.2	-0.3	-0.2	-0.4	-0.3	-0.5
Reserve ratios (sheqel assets)	1.6	-1.2	0.1	-4.0	1.6	-9.6
Liquidity deficits	0.0	0.5	0.7	0.9	0.5	1.3
<i>subtotal: Asset increment not due to composition effect</i>	-0.6	-1.2	0.6	-3.5	1.8	-8.8
Composition effect <sup>c</sup>	1.6	0.0	3.1	5.9	0.2	11.1
Total asset increment	1.0	-1.2	3.7	2.4	2.0	2.3

<sup>a</sup> See note a to Table VIII-2.

<sup>b</sup> The increments to the asset base and assets are not comparable because of the operation of the multiplier.

<sup>c</sup> Corrected for the transfer of export credit funds from the Bank of Israel to the commercial banks in 1982 and 1985.

<sup>d</sup> Foreign currency linked credit.

<sup>e</sup> A change in the composition of assets due to a change in yields alters the volume of credit as a result of the policy of differential reserve ratios.

the banks' reserves and the real interest which the banks paid on nonindexed deposits were also very high (an annual rate of 34 and 18 percent respectively in the second half of the year). This disparate development of nominal interest rates and inflation apparently reflected the monetary authorities' fear that inflation would slow by less than it actually did.

The jump in the real cost of free sheqel credit in the second half of the year had a contrasting effect on the economy. On the one hand it dampened some real domestic demand components, especially inventory investment, and caused the deferment of purchases of durable consumer goods costing more than the buyers' current income, and to some extent also of investments that did not qualify for cheap credit; while in the financial sphere it discouraged speculation, especially in foreign currency. The weakening of demand immediately after the stabilization program went into effect resulted in an involuntary stock buildup and ensuing spate of sales, which helped lower prices generally. The latter development, even if it was short-lived (once stocks were run

Table VIII-6  
**FINANCING THE DOMESTIC DEFICIT — PUBLIC SECTOR  
 AND BANK OF ISRAEL, 1980-85<sup>a</sup>**  
 (percent of GNP)<sup>b</sup>

	1980	1981	1982	1983	1984	1985		
						Jan.- Dec.	Jan.- June	July- Dec.
<b>Deficit</b>								
Deficit excl. interest <sup>c</sup>	6.3	9.8	6.6	3.4	9.0	1.9	5.2	-1.5
Interest (adjusted) <sup>d</sup>	7.0	2.6	4.3	3.4	4.4	6.3	6.3	6.3
<b>Total</b>	<b>13.3</b>	<b>12.4</b>	<b>10.9</b>	<b>6.8</b>	<b>13.4</b>	<b>8.2</b>	<b>11.5</b>	<b>4.8</b>
<b>Financing the deficit</b>								
Money creation	2.1	2.1	1.8	2.4	3.1	6.8	2.5	11.1
Net increment to domestic debt <sup>e</sup>	6.5	8.7	7.0	-0.6	1.6	-1.2	3.9	-6.4
Sale of foreign currency	5.2	2.0	2.7	6.6	9.0	3.7	6.3	1.1
Net effect of monetary policy on sheqel segment <sup>f</sup>	-0.5	-0.4	-0.6	-1.6	-0.3	-1.1	-1.2	-1.0
<b>Total deficit finance</b>	<b>13.3</b>	<b>12.4</b>	<b>10.9</b>	<b>6.8</b>	<b>13.4</b>	<b>8.2</b>	<b>11.5</b>	<b>4.8</b>
Revenue from money creation <sup>g</sup> <i>of which</i> Net interest paid	1.6 0.0	1.7 -0.5	1.2 0.2	0.8 0.3	2.8 -0.3	5.7 1.2	1.3 0.3	10.1 2.1

<sup>a</sup> According to consolidated central government and Bank of Israel accounts.

<sup>b</sup> See note a to Table VIII-2.

<sup>c</sup> This is the definition used in Table VIII-4. See note d there.

<sup>d</sup> See Table VIII-A25.

<sup>e</sup> Increment to government debt base; includes resident deposits (Patam) and net of credit granted by the government.

<sup>f</sup> Interest on the money base *plus* the fiscal burden of discount-window lending *less* fines on liquidity deficits. See Table VIII-A2.

<sup>g</sup> Money creation *plus* net effect of monetary policy.

down prices reverted to their previous level),<sup>12</sup> bolstered confidence in the government's new strategy, thereby contributing to its success. But the economy paid a price for such a high interest in lost product and cost pressure. Short-term credit serves as a factor of production, since it is an alternative to working capital. An increase in its price normally reduces its use, but the data show that not every firm succeeded in this, and some were even unable to meet the real interest payments, with the result that their debt grew. The rising price of credit strained the financial position of firms that were heavy users of expensive credit, and together with the difficulties caused by declining demand, aggravated their situation. Among the users of such credit the share of non-profit institutions rose (their weight in free credit went up from 10 percent at the end of 1984 to 13 percent at the end of the year reviewed). The high interest will therefore have repercussions on the government's deficit in the future if it will bail out non-profit institutions in addition to businesses, as has happened of late.

<sup>12</sup> On the other hand rising interest pushed up costs, generating pressure on prices from this side, which was liable to neutralize the first effect described.

It should be stressed that not all the private sector has recourse to the expensive marginal credit. The heaviest users are branches oriented to the home market, such as construction and commerce. Israel has a highly differential credit price structure because of government intervention: a contractionary monetary policy generally focuses on a comparatively small segment of the market, and the burden it has to shoulder is more onerous than it would be if the restraint were more broadly applied. This also results in a widening differential between the various interest rates in the economy. Export production, for example, benefits from credit bearing a very low real interest which is not changed under a monetary squeeze policy (see Table VIII-A22). This segment will use marginal credit only if it has no other choice (e.g. when profits turn into a loss). The weight of marginal free credit in total short-term bank credit came to 12 percent (see Table VIII-A20), and during the second half of the year real interest payments thereon were equivalent to 7.5 percent of GNP. This estimate, however, does not reflect the business sector's total interest burden. First of all, the estimate is biased for it does not include the negative interest on subsidized credit nor the positive interest on free foreign currency credit. Moreover, the business sector also obtains expensive credit outside the banking system, but no data are available on the volume of such finance. Total interest payments on bank credit amounted to 7 percent of GNP in the second half of 1985, compared with 5 percent last year and 1 percent in 1983.

The interest rate policy encompassed, as stated, not only credit but also assets. The high rate set on deposits was intended to increase the public's financial saving on the one hand and to discourage speculative foreign currency purchases (which yield a relatively low return) on the other. In addition, a high deposit interest rate makes it possible to keep the commercial banking system's financial margin from rising excessively when the lending rate is high. The Bank of Israel sought to reduce the financial margin in order to make it less worthwhile to turn to the nonbank credit market. One of the means employed was the payment of a high nominal interest on a large portion of the banks' reserves held with it. It should be noted that a nonbank credit market, which thrives on the spread between the lending and deposit interest rates (i.e. the financial margin), is to be found in many countries (e.g. the U.S.), and in itself it makes for a more efficient financial system. But in Israel this margin is far bigger than in western economies (4-6 percent a month as against 4-6 percent a year). Despite the Bank of Israel's efforts, it widened substantially in the second half of 1985 (see Table VIII-A21), apparently because of the increased risk due to the difficulties faced by Israeli firms. The price of this policy has been high: in the second half of the year the Bank of Israel paid the commercial banks some \$270 million (Table VIII-A1).

On the strength of the available information on developments since the stabilization plan went into force, we shall now take up the question whether the real cost of marginal credit had to be so high. In other words, could price stability have been achieved at a lower real cost and with less detrimental effects than what actually occurred? We examine this question from two an-

gles. First, assuming that determination of the nominal interest rate is the only feasible policy, could interest have been reduced at a much earlier stage without a consequent expansion of credit? According to some it could have, for a number of reasons. Because of public confidence in the stabilization plan, inflationary expectations were low, no devaluation was anticipated, the black market dollar rate was stable, and the commodity and financial markets were slack. Furthermore, it turned out that the lowering of interest rates in the second half of the year did not spark an increase in credit. Apparently a big change in the expected real cost of credit requires a big adjustment of the quantity desired, but this cannot be done in the short run, especially when the market is weak. What is more, the high nominal interest created a situation where firms that could not repay their credits were saddled with a swelling interest bill (in the first three months of the stabilization plan this in itself increased borrowers' unrepayable indebtedness by 60 percent nominally).

The monetary authorities' attitude was that nominal interest had to be kept high because of its dampening effect on domestic demand, which in turn helped tone down inflation. When the stabilization plan was initiated it was not clear how inflexible credit demand would be in the short run. For this reason, and also because of the fear of speculation, which could frustrate the plan, the authorities preferred to lower interest at a modest pace (despite the expected cost in lost product).

The second angle from which monetary policy can be viewed is the possible alternative of basing it on indexed interest instead of nominal interest, even though this is not generally done and it has been officially rejected by the Bank of Israel. In the process of arresting inflation, when the rate of change cannot be foreseen, the use of nominal interest is liable to cause large errors in the real cost of credit. Indeed, the high real interest in the second half of 1985 was partly due to apprehension that inflation would not be reduced as quickly as it actually was.

Adherence to a nominal interest rate policy was connected with the Bank of Israel's employment of monetary instruments that negated the indexation of the economy. The Bank's approach was consistent with the widely held belief that were it not for the elaborate linkage mechanism which evolved over the years inflation would not have reached such a high level in this country. But this is not the only view on the subject. There are some who link inflation with nominal increases in the exchange rate and wages, and contend that the large government deficit could have generated all the required liquidity even if assets were not linked. They maintain that indexation did not cause inflation, but enabled the economy to function in the face of high inflation. According to this view, it would have been preferable to introduce a real interest rate regime, pegging interest either to the consumer price index or the exchange rate.<sup>13</sup> The discount-window facility, for instance, could have been pegged to

<sup>13</sup> To take one example, in fighting inflation in Germany at the beginning of the 1920s the central bank gave a 10 percent dollar-linked loan for financing real activity.

the exchange rate, or capital imports allowed subject to an appropriate surcharge. This would have obviated part of the price paid by the economy in lost product for focusing on nominal interest. Determining real interest rates instead of nominal rates would not have precluded price stability under the overall economic plan, for the exchange rate was stabilized and synchronized with wages and other prices in the economy.

It should be added that with the implementation of this plan, which was designed to dampen demand and thus cause an unplanned inventory buildup, a heavier demand for credit was to be expected. In view of the very high real lending rate on the eve of the plan (45 percent p.a.), it would seem that some real increase in credit could have been allowed, instead of trying to reduce it (at least in the course of implementing the plan). Since the credit target turned out to be too restrictive, this was a cogent reason for modifying it.