

## Chapter 7

# Money and Capital Markets

### 1. MAIN DEVELOPMENTS

The interest rate on unindexed credit declined slightly during 1990, while the rate on unindexed deposits remained more or less unchanged; both these rates fell substantially in the preceding two years, when the spread between them also narrowed. Average nominal balances of the principal monetary and credit aggregates rose by more than nominal output;<sup>1</sup> However, this does not appear to indicate increased inflationary pressure because this year there were forces at work which tended to increase the demand for money and credit beyond what was called for by the growth of output. The development of interest rates and nominal balances was the outcome of monetary policy, which was geared to keeping interest rates at the level of the second half of 1989 or a little below, with the aim of reinforcing the revival of real economic activity so long as there was no danger of a rise in inflation. Moreover, the steps taken this year as part of the ongoing reform of the money market helped to narrow the interest-rate spread.

Nominal interest on unindexed credit, which averaged 40 percent in 1988, 30 percent in 1989, and 27 percent in the last quarter of that year, dropped a little further, to 25 percent, in 1990 (Table 7.1 and Figure 7.1). Nominal interest on unindexed deposits stood at the 12–13 percent maintained since the end of 1987. By and large, inflationary expectations are based on the Consumer Price Index (CPI), whose rate of increase has been steady for several years, so that most of the decline in the nominal interest rate presumably reflects a decline in the *ex ante* real rate. However, the rise in business-sector output prices moderated this year, implying a rise in the *ex post* real cost of credit. Average money supply (M1) rose by 30 percent this year or by 8 percentage points more

<sup>1</sup> All interest rates and percentage changes are in annual terms, unless otherwise stated.

M1 = currency in circulation and demand deposits (for simplicity, the minimal interest paid on credit balances in demand deposits is ignored throughout this chapter); M2 = M1 plus interest-bearing local-currency deposits and Treasury bills held by the public; M3 = M2 plus resident deposits (foreign-currency denominated); M2\*, M3\* = M2 and M3, respectively, less Treasury bills held by the public; unindexed credit consists of overdraft facilities and unindexed time credit; local-currency credit consists of unindexed local-currency credit and credit indexed to domestic price indexes; total short-term credit consists of credit in local currency and credit denominated in foreign currency; total bank credit consists of total short-term credit and credit out of earmarked deposits.

**Table 7.1**  
**Selected Interest Rates, 1988-90<sup>a</sup>**

(percent p.a.)

	Short-term credit to the public				Private issues (indexed)	Financial assets of the public			
	Local currency			Total <sup>c</sup>		CDs and SROs <sup>d</sup>	1-month deposits	Resident deposits <sup>e</sup>	Government indexed bonds <sup>f</sup>
	Overdraft facilities	Term credit	Total <sup>b</sup>						
<b>Nominal interest</b>									
1988	46.2	33.4	41.2	31.7		13.4	13.7	6.2	
1989	34.3	26.6	31.2	33.5		11.6	12.6	7.3	
1990	29.6	22.5	26.4	22.7		13.2	12.5	4.0	
I	31.3	23.8	28.1	26.7		14.7	10.9	6.2	
II	30.0	22.9	27.0	24.9		12.7	14.1	5.2	
III	28.6	22.1	25.6	20.1		12.8	13.0	3.2	
IV	28.4	21.4	25.1	19.3		12.6	12.0	1.5	
<b>Real interest (ex post)<sup>g</sup></b>									
1988	25.6	14.5	21.3	13.1	6.4	-2.6	-2.4	7.1	4.1
1989	11.3	4.9	8.7	10.6	3.2	-7.6	-6.7	-3.4	1.7
1990	10.2	4.2	7.5	4.4	3.6	-3.7	-4.3	-7.7	1.2
I	17.3	10.6	14.4	13.1	3.6	2.4	-0.9	1.0	1.6
II	7.3	1.4	4.7	3.1	4.0	-7.0	-5.8	2.3	1.3
III	4.3	-1.0	1.9	-2.6	2.7	-8.5	-8.4	-19.6	0.7
IV	12.3	6.2	9.5	4.4	3.2	-1.5	-2.0	-12.8	1.2

<sup>a</sup> For details see Table 7.A5.<sup>b</sup> Weighted by the volume of credit of the two components.<sup>c</sup> Includes directed credit and exchange-rate indexed credit n.e.s.; weighted average; the rates on nondirected foreign-currency credit are posted rates and are generally above the rates actually charged.<sup>d</sup> Median of banking system; over NIS 10,000; assumed to be renewed every three days; does not include large negotiable SROs. From September 1988, the figures are the average of all brackets.<sup>e</sup> Nominal interest is period average for dollar-denominated resident deposits, in dollar terms. Real interest calculated by revaluing nominal interest in accordance with changes in the exchange rate vis-à-vis the dollar during the reporting period.<sup>f</sup> Five-year bonds. Gross yield to maturity in secondary market (for net yield see Table 7.A19).

**Table 7.2**  
**The Principal Monetary Aggregates, 1988-90<sup>a</sup>**

(annual rate of change, percent)

	M1	M2*	M2	M3	Unindexed local- currency credit	Bank credit		CPI
						Excluding earmarked	Total	
<i>Monthly average</i>								
1988	33	29	29	21	34	40	25	16
1989	26	16	18	20	34	37	24	20
1990	30	28	27	24	34	30	20	17
I	14	25	22	19	22	27	17	13
II	29	45	47	41	11	24	18	21
III	38	26	25	28	52	32	21	19
IV	34	40	44	29	37	36	27	20
<i>During period</i>								
1988	15	5	5	8	48	38	25	16
1989	39	35	39	32	27	32	21	21
1990	31	38	39	32	29	30	21	18
I	20	29	26	25	11	22	15	12
II	34	46	50	43	25	28	22	21
III	51	21	19	22	59	31	20	23
IV	21	60	65	38	25	39	28	14

<sup>a</sup> M1 = currency in circulation and demand deposits; M2\* = M1 + interest-bearing local-currency deposits; M2 = M2\* + Treasury bills; M3 = M2 + resident deposits (foreign-currency denominated). Monthly averages show the change over preceding period average; change during period is the change from last month of period over last month of preceding period.

than GDP (Table 7.2 and Figure 7.2).<sup>2</sup> The broader unindexed aggregates, M2 and M2\* (respectively including and excluding Treasury bills), rose on average by 27 and 26 percent respectively, rather less than average M1. During the year, however, both rose by almost 40 percent, mainly because of a large government injection at the end of the year, and a steady flow of capital imports by the private sector in the third quarter. The figures for January–April 1991 show that the rate of increase of nominal M1, M2, and M3 (excluding Treasury bills) moderated appreciably, indicating that a good part of the expansion of late 1990 was temporary and stemmed from the fact that the ceiling on the interest rate on auctioned government bonds was not adjusted, at a time when it was expected to rise (see below). Furthermore, the fact that private capital imports continued

<sup>2</sup> Unless otherwise stated, the rates of change of M1, M2, and M3 are calculated from period averages of weekly data, as are other financial aggregates whenever weekly data are available. In the past, the calculation used end-of-month data, which are often biased by technicalities such as the redemption date of securities rolled over within a short time or book transactions by the Treasury or the central bank. In the course of this year these technical factors became increasingly important, to the point of obscuring important economic changes.

fact that private capital imports continued throughout late 1990 and early 1991 indicates that there is no excess supply of local-currency assets. The broadest credit aggregate (which includes credit out of earmarked deposits) rose by 20 percent on average or by 2 percentage points less than nominal GDP (Table 7.2 and Figure 7.3). The composition of bank credit was considerably affected by institutional changes connected with money market reform and does not necessarily reflect the macro-economic situation.

**Table 7.3**  
**Monetary Assets, 1988-90**

(annual rate of change, percent)

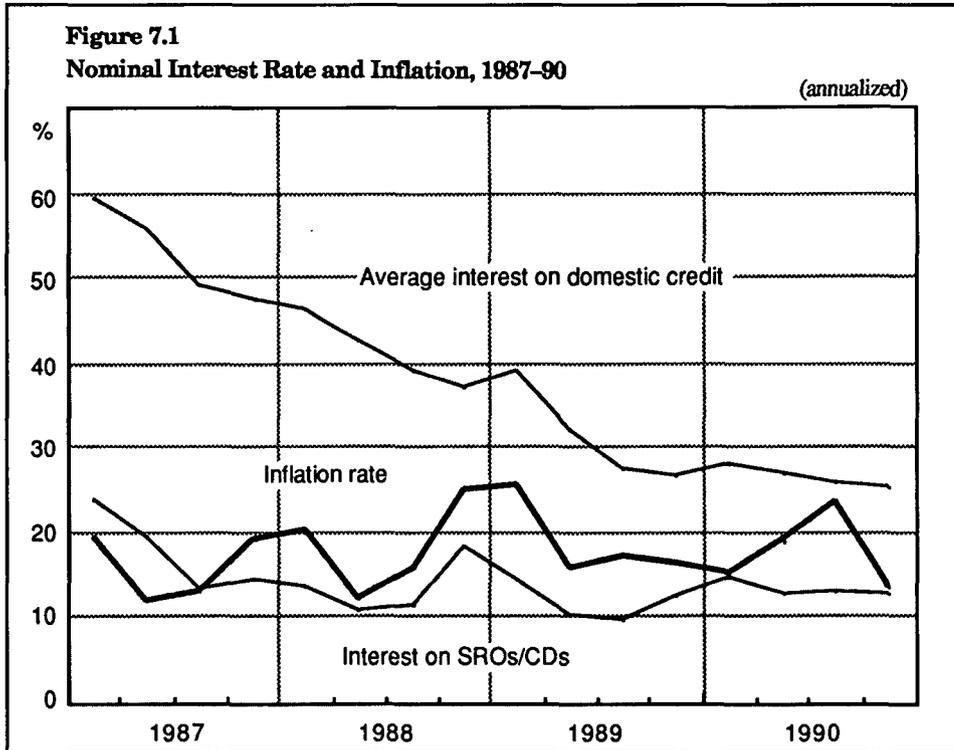
	Currency in circulation	Deposits			Treasury bills	Tradable bonds
		Demand	Time <sup>a</sup>	Resident <sup>b</sup>		
<i>Monthly average</i>						
1988	36	31	28	-3	23	9
1989	22	30	11	18	72	42
1990	25	35	27	9	15	24
1990						
I	3	23	31	7	-17	-1
II	32	27	54	19	83	19
III	37	39	20	23	22	35
IV	21	44	44	-31	102	14
<i>During period</i>						
1988	24	7	1	19	7	18
1989	32	44	33	4	133	37
1990	24	36	42	-2	48	15
1990						
I	5	34	33	24	-6	3
II	31	36	53	19	103	34
III	35	65	9	14	-3	22
IV	30	14	82	-45	157	5

<sup>a</sup> Including SROs. See note to Table 7.2.

<sup>b</sup> Foreign-currency denominated.

The year's monetary policy was passive in contrast with the active expansionary policy of the preceding two years—a change dictated by real developments. In 1988 and 1989 there were no forces at work to bring the depression to an end; accordingly, controlled monetary expansion was called for, namely measures designed to lower interest rates on credit and to increase the money supply and credit faster than output. Signs of recovery emerged at the end of 1989 and the beginning of 1990, most prominently the revival of activity triggered by expectations of increased immigration; in addition, the demand of the established population picked up and, on the supply side, structural reforms undertaken in the last few years began to show results. In such a

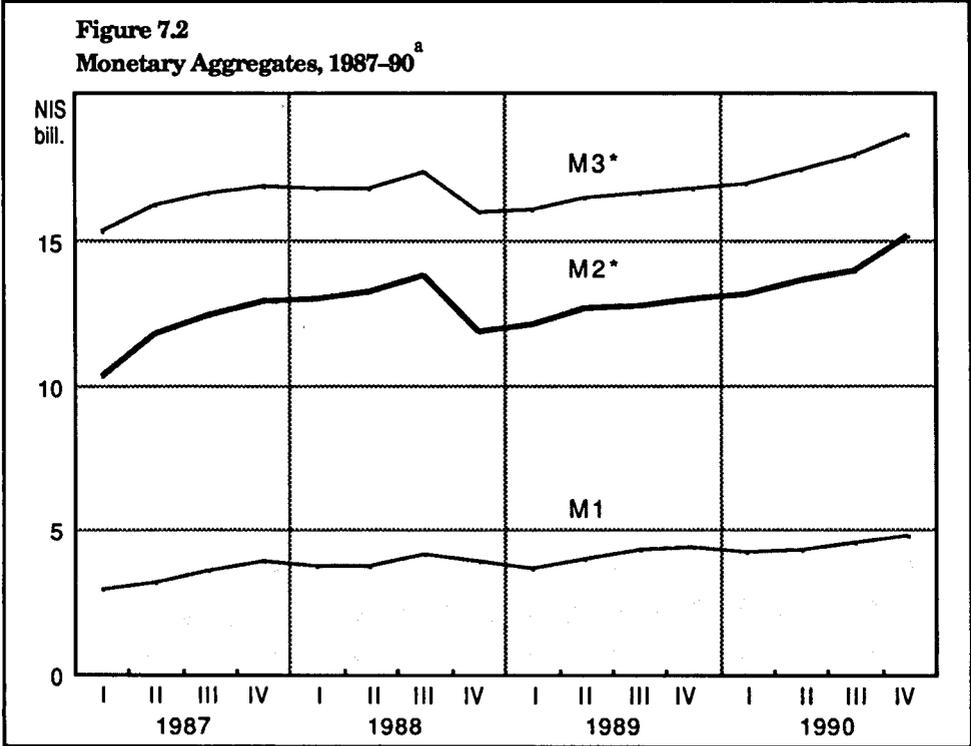
situation, monetary policy is conceived to be in a supporting role, namely to aid real forces to materialize. This on three levels: (a) current policy sought to allow credit and monetary aggregates to meet demand at the prevailing rates of interest and inflation; (b) exchange-rate management took into account both the need to maintain the midpoint rate as a nominal anchor and the short-term effects of the nominal exchange rate on relative prices and real economic activity; (c) the Bank of Israel continued to push money-market reform, particularly in the field of foreign or exchange-rate indexed credit.



When monetary policy is aimed at determining interest rates, the quantity of money and credit is determined by demand. The central factor pushing up demand for these aggregates is the development of real output and prices. Together, these rose by 22 percent this year and thereby contributed more than 20 percentage points of the increase in the financial aggregates.<sup>3</sup> The fact that demand for unindexed assets rose by more than was called for by the rise in nominal output is connected with several (permanent and transitory) factors. The main long-run factor is the ongoing reform of the money market which is altering the composition of the public's portfolio: there is a shift out of exchange-rate indexed and government-mediated assets such as resident deposits and

<sup>3</sup> Since there are no precise estimates of the separate effects of real output and prices on the demand for financial assets, we have to make do with a general evaluation.

directed credit to unindexed or CPI-indexed assets and credit mediated by banks or other financial intermediaries. In this context, note that the expansion of opportunities for borrowing abroad and the contraction of directed credit (to the point of its abolition this year) did not result in real expansion of foreign-currency denominated credit this year; instead, it helped to reduce the cost and expand the volume of unindexed and CPI-indexed credit. The chief transitory factors were the weakening of devaluation expectations compared with 1989 and expectations of an imminent rise in long and medium term interest rates; these operated to raise demand for unindexed assets at the end of the year.



<sup>a</sup> At December 1988 prices. For definition of aggregates, see Table 7.1.

Real long and medium term yields remained at their end-1989 level in the first three quarters of 1990, in a context of continuing fiscal restraint, contraction of the current-account surplus without exerting upward pressure on interest rates, and greater exposure of the capital market to competition from abroad. Share prices also rose substantially in the first six months of 1990, the real yield reaching 17 percent in response to the signs of economic recovery. On the other hand, yields to maturity began to rise in the fourth quarter, as expectations built up for a steep rise in the budget deficit stemming from the acceleration of immigration. In the second half of 1990, capital market yields were also

**Table 7.4**  
**Sources of Change in Unindexed Local-Currency Assets, 1987-90**

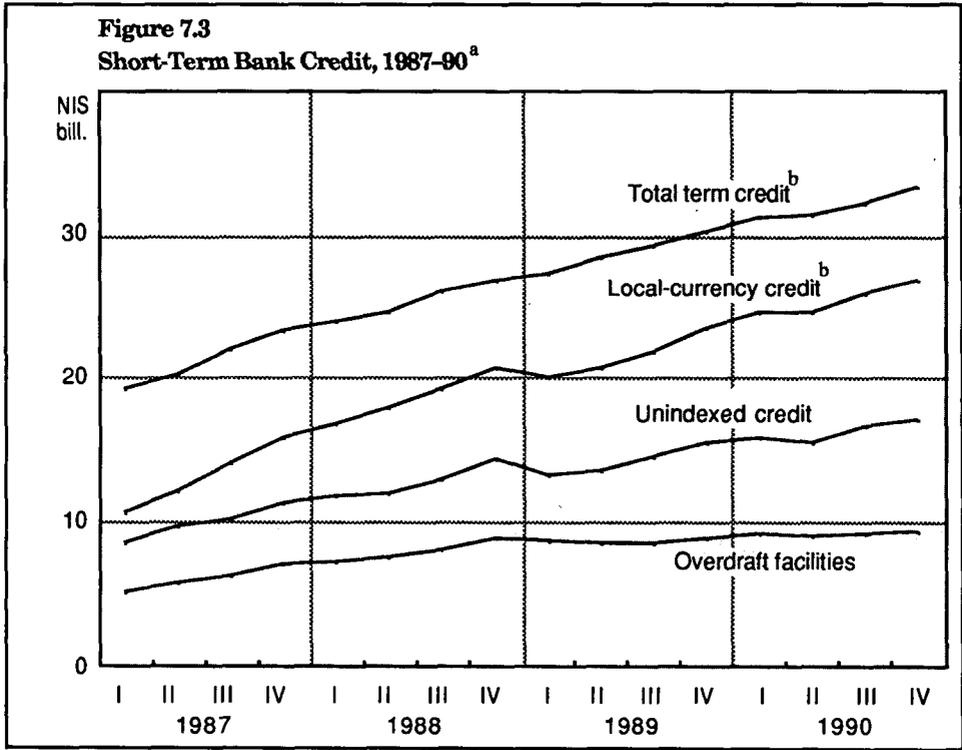
	NIS million				Percent of GNP			
	1987	1988	1989	1990	1987	1988	1989	1990
<b>Change in narrowly defined monetary base</b>								
General government (injection <i>plus net sale of Treasury bills</i> )	100	-478	-1,290	3,575	0.0	-0.7	-1.5	3.3
Bank of Israel	550	3,599	-105	-1,769	0.8	4.9	-0.7	-1.6
Discount-window loan	672	2,641	686	-1,671	1.1	3.5	0.4	-1.5
Directed credit	20	-43	135	8	0.0	0.0	0.2	0.0
Open-market operations	-829	441	-779	277	-1.6	0.6	-1.1	0.3
Other <sup>a</sup>	688	560	-147	-382	1.2	0.8	-0.2	-0.4
Resident deposits	321	-273	879	-128	0.7	-0.3	1.2	-0.2
Private purchases (-) of foreign exchange	305	-3,841	1,098	-1,137	0.9	-5.3	1.8	-1.1
Total	1,276	-994	582	541	2.4	-1.4	0.8	0.5
<b>Domestic banking operations<sup>b</sup></b>	<b>2,259</b>	<b>1,182</b>	<b>4,048</b>	<b>6,235</b>	<b>4.1</b>	<b>2.0</b>	<b>5.0</b>	<b>5.8</b>
<b>Change in unindexed local-currency assets</b>								
Money supply	1,106	368	1,649	1,647	2.0	0.5	2.0	1.5
Time deposits and SROs (CDs)	2,429	-179	2,980	5,129	4.5	0.0	3.8	4.8
Total	3,536	189	4,629	6,776	6.5	0.5	5.8	6.4

<sup>a</sup> The source of 'other' is the Bank of Israel's profit & loss statement and miscellaneous net transactions between the government and the Bank of Israel.

<sup>b</sup> This is the residual item and represents the effect of the deposit multiplier.

affected by two transient factors—the Gulf crisis, which reduced share prices, and announcements by the government (not subsequently acted upon) that a far-reaching change in capital taxation was imminent.

Two flows which play a central role in the determination of the monetary base and which are not under the central bank's control are government injections and foreign-exchange conversions by the private sector. The government injection came to NIS 2.6 billion, while the monetary base rose by only NIS 540 million. Of the total injection, NIS 1.5 billion was in December and included NIS 0.7 billion repayments of internal public debt which was not rolled over. In the first quarter of 1991, the government absorbed NIS 15 million, although as a rule there is a substantial injection in this quarter—the last of the fiscal year. All in all, the relatively small injection in 1991 only partly offset the very large one of late 1990.

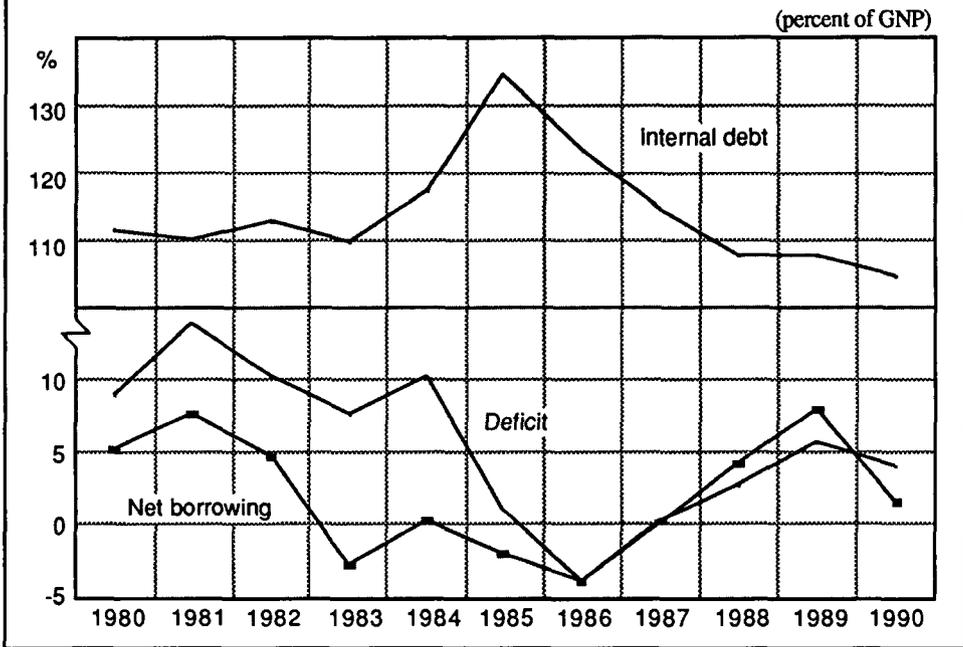


<sup>a</sup> For a detailed definition, see note 1 in text.

<sup>b</sup> Including indexed local-currency credit.

This large government injection came at a time when recovery from the slump was already under way; however, since private sector capital imports financed a good part of the current-account deficit, such a large monetary injection was not needed. Furthermore, 1990 was preceded by two years of absorption greater than the 1990

**Figure 7.4**  
**Internal Debt, Government Deficit, and Net Borrowing, 1980-90**



injection and occurring during a depression, when monetary expansion would have been in order. The combination of excess absorption during the depression and injection as recovery began moderated the fluctuations in the interest rate on government bonds. In the absence of excess absorption the rate would have fallen more than it did in 1989, and this would have enabled private investors—who pay a substantial risk premium on their issues—to raise capital more cheaply and to invest more. It can be argued that borrowing in excess of deficit-financing needs at a time when the interest rate is expected to rise minimizes the cost of financing the public debt. But the adverse effect on economic activity and the consequent loss of tax revenue must be set against this putative saving. At the end of 1990, upward pressure on government bond yields developed; the government prevented it from materializing in full by means of a large injection, and in fact refrained from raising the maximum interest rate which may be offered at auctions of government bonds. The public understood that the expected increase in the public debt would sooner or later force the interest rate up, and continued to hold unindexed assets while waiting for this to happen. The result was that the timing of government borrowing was upset, thereby hampering current monetary management and the timing of private issues.

Private transactions in foreign currency and in resident deposits absorbed some NIS 1.3 billion from the monetary base during 1990. In recent years these transactions

have exhibited considerable fluctuations due to the devaluation-expectation cycles. These fluctuations were weakened by a series of measures, chief among them the introduction of the exchange rate band and, at the end of 1989, foreign-exchange options.

To sum up the year (Table 7.4)—private purchases of foreign exchange (including foreign-currency-denominated deposits which also constitute a drain from the monetary base), the government injection, and the Jewish Agency's foreign-exchange conversions (about NIS 1 billion) together added NIS 2.3 billion to the monetary base; this is well in excess of what was called for by the change in the quantity of M1, in other deposits subject to reserve requirements, and in the demand of banks for excess liquidity—about NIS 0.5 billion altogether. The Bank of Israel therefore had to absorb NIS 1.8 billion from the monetary base, and it did so chiefly by reducing discount-window lending.

Progress with the various reforms under way this year was confined almost exclusively to the money market; the little that was done in the capital market consisted of following up programs introduced earlier, without any real innovation: the rate of compulsory investment in government paper imposed on social insurance funds was once again lowered, there was a—highly successful—issue of convertible bonds by the Bezeq Company, and there was increased activity in mortgages not connected with government subsidized mortgages.

While these are important developments, 1990, like 1989, is notable chiefly for the failure to execute reforms already planned. Privatization (including of the Arrangement banks) has hardly got off the ground; nothing has been done to alter the structure of financial intermediation so as to eliminate potential conflicts of interest in the capital market; and little has been done to change the structure of capital-market regulation.

The pension funds of the Histadrut (General Federation of Labour) are one area ripe for reform in which the authorities' impotence is marked. Coverage for these saving channels continues to consist of special bonds with higher yields than their counterparts in the free market. For life assurance, which has hitherto also enjoyed special deposit conditions, the Ministry of Finance reduced the coverage ratio of special bonds (to 40 percent) and their yield (to 4 percent) at the beginning of 1991, and will abolish the special coverage at the end of the year. In contrast, the Ministry of Finance's repeated efforts to bring the pension funds into line with other institutional saving channels have come to nothing through 1990 and have had only a limited effect since (see below). The need to compete with saving channels whose yields are kept artificially high raises the cost of borrowing to firms seeking to finance investment projects, thus undermining the effort to revive economic growth and relieve unemployment.

## 2. MONETARY DEVELOPMENTS

In 1990, monetary developments were affected by: (a) the rise in output, which increased the demand for money and money substitutes; (b) exchange-rate management and the control of interest rates and the monetary and credit aggregates; (c) money and

**Table 7.5**  
**Monetary Policy: Supply and Demand of Banks for Liquid Assets, 1989–90**

(NIS million)

	1989					1990				
	Total	I	II	III	IV	Total	I	II	III	IV
<b>Demand</b>										
Reserve requirement (estimated)	1,938	2,046	1,997	1,963	1,746	1,668	1,978	1,653	1,455	1,588
Liquidity surpluses (balance)	418	578	504	344	246	270	288	280	292	220
<b>Total demand</b>	<b>2,356</b>	<b>2,623</b>	<b>2,501</b>	<b>2,307</b>	<b>1,992</b>	<b>1,938</b>	<b>2,266</b>	<b>1,932</b>	<b>1,747</b>	<b>1,807</b>
<b>Supply</b>										
Nonborrowed reserves <sup>a</sup>	498	629	1,991	799	-1,425	-2,203	-2,622	-1,642	-2,227	-2,320
<i>of which</i> Treasury bills held by banks	445	576	461	393	349	334	396	331	291	318
Discount-window loans utilization <sup>b</sup>	1,858	1,995	510	1,509	3,417	4,141	4,889	3,575	3,974	4,128
Ordinary loan	805	682	80	242	2,217	2,245	3,389	2,071	2,006	1,514
Auction	1,052	1,313	430	1,267	1,200	1,896	1,500	1,504	1,968	2,613
<b>Total supply</b>	<b>2,356</b>	<b>2,623</b>	<b>2,501</b>	<b>2,307</b>	<b>1,992</b>	<b>1,938</b>	<b>2,266</b>	<b>1,932</b>	<b>1,747</b>	<b>1,807</b>
Free reserve (nonborrowed reserve less reserve requirement)	-1,440	-1,417	-6	-1,164	-3,171	-3,871	-4,600	-3,295	-3,681	-3,908
<i>Discount window, addendum</i>										
Marginal bracket utilization	283	330	80	242	482	484	479	538	589	329
Total offered at auction	1,121	1,370	647	1,267	1,200	1,901	1,500	1,506	1,986	2,613

<sup>a</sup> I.e., other than discount-window loans.

<sup>b</sup> See Section 3 of the text.

capital market reforms which altered some of the conditions of borrowing and holding deposits, thus changing the public's portfolio preferences as well as altering relative yields. As a rule, injections to the monetary base which are not under Bank of Israel control<sup>4</sup> affect interest rates and the growth rate of money and credit; this year, however, the Bank of Israel countered part of the effect in accordance with its accommodating monetary policy. *The potential effects of immigration on the demand for money are also of importance, and are briefly dealt with below.*

## **Monetary policy**

The three-year old dilemma of whether to push on with disinflation or to resort temporarily to measures designed to stimulate economic activity confronted the economy in 1990 too. The primary task of monetary policy is to maintain price stability. In the country's present circumstances, this means eventually reducing the rate of inflation to the average rate prevailing in the countries with which Israel trades. In the long run, inflation harms the economy in a variety of ways; in particular, it diverts resources from productive activity to defensive action. In the long run, therefore, resumption of economic growth and disinflation are complementary goals. It is for this reason that the 1985 economic stabilization program (ESP) introduced a fixed-exchange-rate regime constituting the principal nominal anchor (although it is not an absolute one). Monetary policy aimed primarily at maintaining the foreign reserves, so as to support the exchange-rate regime; accordingly, in the two-and-a-half years following the launching of the ESP, monetary policy was severely contractionary, as reflected in very high interest rates. Together with the high level of wages, the policy of disinflation contributed to the depression that set in during 1987, but it was understood that maintaining the achievements of the ESP would entail some social cost, the more so as willingness to pay the price helped to build up public confidence in continuing stability. But the existence of recession also makes it necessary to take account of its social and economic cost, and requires some monetary expansion in an attempt to alleviate the problem in the medium run.

The recession deepened in 1988 and 1989 while the stability of the rate of inflation at the level reached after the ESP became even more entrenched, in spite of a considerable lag in exchange-rate adjustment. The monetary policy of these two years sought to resolve the dilemma: it was decided not to attempt to reduce inflation further by conventional monetary restraint alone, but it was understood that monetary policy would respond with restraint to any upward departure of inflation from the post-ESP plateau. In addition, it was decided that action would be taken to lower interest rates in order to stimulate real economic activity so long as there was no sign of inflation rising, and assuming that the recession would itself damp down the rate of price increase.

<sup>4</sup> These injections consist of the government injection and the private sector's foreign-exchange conversions, including conversion of foreign-currency denominated deposits to local-currency deposits.

**Table 7.6**  
**Domestic Budget Deficit (Consolidated Balance Sheet of Central Government and Central Bank), 1986-90<sup>a</sup>**

(percent of GNP)

	1986	1987	1988	1989	1990				
					Total	I	II	III	IV
<b>Deficit</b>									
Estimated expenditure <sup>b</sup>	38.8	41.2	42.7	42.4	41.6	43.8	38.5	44.1	39.8
less Tax revenue	48.0	47.4	45.2	41.8	41.7	44.1	39.8	41.8	41.2
<i>subtotal: Deficit excl. interest</i>	-9.2	-6.2	-2.5	0.6	-0.2	-0.2	-1.3	2.3	-1.4
Interest receipts <sup>c</sup>	5.6	5.7	5.0	5.3	5.2	4.0	5.5	5.1	6.2
Total domestic deficit	-3.6	-0.5	2.5	5.9	5.0	3.8	4.2	7.5	4.8
<b>Financing</b>									
Money creation <sup>d</sup>	0.5	0.6	-5.3	0.6	2.6	1.2	2.6	-1.6	8.2
Net increase in internal public debt <sup>e</sup>	-4.9	-0.8	1.9	6.8	1.4	1.7	3.6	4.6	-4.5
Purchases of foreign currency	0.9	-0.2	5.9	-1.5	1.1	0.9	-2.1	4.5	1.1

<sup>a</sup> The general government deficit shown here differs from that of Chapter 5 in two respects: (a) Cash basis (this table) versus accrual basis ; (b) the data here do not include that part of the deficit of local authorities, the National Insurance Institute, and the publicly-supported nonprofit institutions which is not financed by the government. The deficit of the Jewish Agency is included both here and in Chapter 5.

<sup>b</sup> Expenditures are calculated as the sum of tax receipts and the deficit figure obtained from the financing side.

<sup>c</sup> Mostly real interest (since most of the internal debt is indexed); also includes a nominal element (since some of the debt is not fully indexed or indexed to the exchange rate).

<sup>d</sup> Interest on the money base *plus* the implicit budgetary outlay of discount-window lending *less* liquidity fines. See also Table 7.8.

<sup>e</sup> Increase in the government asset base *less* net credit from the government. This is the balancing item.

SOURCE: Bank of Israel and Ministry of Finance (Accountant-General).

The first signs of recovery appeared in late 1989 and early 1990, and were the combined result of several factors, among them structural changes which improved the efficiency of production, a cyclical rise in demand, and a substantial rise in immigration. The extent of recovery and the scale of immigration became clear only in the course of 1990, primarily towards its end, while at the beginning of the year recovery still looked pretty shaky. As a result, it was then decided to keep to the fairly low level of interest rates of the second half of 1989.

In the second quarter of 1990 it became apparent that recovery was taking root; however, the behavior of some prices—the steep rise in housing and controlled prices—gave cause for concern. These price increases were of a once-for-all nature, but, given a monetary policy that seeks to determine the nominal interest rate, there is the danger that a once-for-all rise in the price level will raise inflationary expectations and exert upward pressure on the nominal interest rate, stemming from, among other things, a speculative outflow of capital. In such a situation, preventing the nominal interest rate from rising calls for monetary expansion, which is liable to validate the change in expectations. It is then important to make sure that the specific price rises do not spread to other prices and to be prepared to make a radical policy switch the moment there are signs of this happening. These concerns intensified in August, when the Gulf crisis erupted and oil prices rose rapidly. However, the rate of price increase declined in the last quarter, as the labor market continued slack (which moderated wage claims), the interest rate was comparatively low, oil prices settled and demand slackened as tension built up during the Gulf crisis. Thus the fears of higher inflation proved unfounded before long, and it was not necessary to revise monetary policy.

The exchange-rate regime introduced in early 1989 was in force in 1990 too: fairly infrequent devaluation of the midpoint rate (against the currency basket) and daily movement within a band, whether in response to market forces or to central bank intervention. The separation of realignment of the midpoint rate from rate management within the band makes it possible to deal separately with issues of long and medium run policy (at least six months) and short-term developments. Thus midpoint rate policy is determined on the basis of long and medium run considerations, namely those concerned with the dilemma between containing inflation and stimulating economic activity. The gradual easing of monetary policy decided on at the end of 1987, when inflation levelled off and the recession deepened, originally consisted of lowering the interest rate. Changes in exchange-rate management were introduced only at the end of 1988 (after the general election and the formation of a new government), about two years after the preceding realignment and in response to massive foreign-exchange purchases by the public. The band was introduced in early 1989 after devaluations amounting to 13.5 percent at the turn of the year. Since then, midpoint rate policy has been integrated with the overall monetary strategy described above. In other words, monetary policy is predicated on the role of the exchange rate both as a nominal anchor and in the short-run determination of relative prices.

## Money market reform

This year the Bank of Israel took a number of steps affecting the structure of the money market as part of an ongoing reform aimed at reducing government involvement in financial intermediation. This year's principal areas of reform were foreign-exchange control, directed credit, resident deposits, and control of bank charges.

**Table 7.7**  
**Potential and Actual Revenue from Money Creation, 1985-90<sup>a</sup>**

	(percent of GNP)								
						1990			
	1985	1986	1987	1988	1989	Total	First half	Second half	
Inflation tax <sup>b</sup>	2.6	1.2	1.0	0.9	0.8	0.7	0.7	0.6	
Money creation	6.1	1.8	2.4	-1.4	0.8	0.5	0.0	1.0	
<i>less</i> Interest on money base <sup>c</sup>	1.7	0.8	0.7	0.4	0.2	0.1	0.1	0.1	
Interest on discount-window loan <sup>d</sup>	0.7	0.0	0.0	0.0	0.3	0.6	0.7	0.6	
Subtotal	5.1	1.0	1.7	-1.8	1.0	1.1	0.6	1.5	
<i>less</i> Change in discount-window loan	0.0	0.5	1.1	3.5	0.4	-1.5	-1.3	-1.8	
Net revenue from money creation	5.1	0.5	0.6	-5.3	0.6	2.6	1.9	3.3	

<sup>a</sup> See note a to Table 7.A3.

<sup>b</sup> The decline in the real value of the M2\* base due to inflation; the figures are the product of the M2\* base and the rate of inflation, calculated monthly.

<sup>c</sup> Interest paid on deposits with central bank.

<sup>d</sup> Includes liquidity-deficit fines.

SOURCE: Bank of Israel.

In the realm of foreign-exchange control, liberalization of capital outflows continued in 1990 (and in 1991 as well). The principal measure here was to permit firms to invest up to 20 percent of their net worth abroad. In September the ceiling on foreign credit mediated by banks was abolished and in the last few years the arrangements under which firms are allowed to obtain direct credit from abroad have been considerably extended, with the minimum term being reduced from 18 to 6 months. These measures increase potential competition between local banks and banks abroad. Most of the directed credit funds were abolished in September 1990, thereby shifting credit transactions to the unrestricted segment.

Several measures intended to encourage movement out of resident deposits were taken as part of the long-run policy of reducing the exchange-rate indexed government obligations. These included reducing the interest rate and abolishing the penalties on premature withdrawals (which is conducive to movement out of resident deposits inasmuch as the opening of new accounts is prohibited). The balance of resident deposits rose during the year to reach \$2.3 billion at the end of August, presumably because of

expectations for midpoint rate devaluation, but by December it had fallen by \$400 million; in the first three months of 1991 it fell by another \$100 million. Time and demand deposits declined to about the same extent. It is difficult to identify the destination of the sums withdrawn from resident deposits, but a large proportion probably went into unindexed deposits and exchange-rate indexed deposits,<sup>5</sup> with expectations for a rise in the interest rate on indexed government bonds being a contributory factor.

These reform measures notably expanded unrestricted financial intermediation, but most of the expansion was in the local-currency or the exchange-rate indexed segment. The abolition of directed credit was almost completely offset by the increase in unrestricted foreign-currency credit. One reason for this is the exchange-rate band mechanism which allowed for increased variability of the exchange rate, in turn increasing the risk of foreign-exchange exposure both on the deposit and the borrowing side. In addition, the Bank of Israel increased the stock of foreign-exchange options which serve as a partial substitute for foreign-currency denominated deposits. The shift from foreign-currency denominated to local-currency transactions was reflected in the narrowing of the interest-rate spread on unindexed transactions as well as in the increased proportion of local-currency credit and assets in the public's portfolio; this was due to increased competition from banks abroad since the relaxation of foreign-exchange controls. The Bank of Israel tried to encourage movement from foreign-currency denominated to local-currency transactions throughout the 1980s, but it is only now that the former have been liberalized to some extent that its efforts are meeting with success.

In April 1990 a large proportion of bank charges were decontrolled. Controls were originally imposed in 1981; the relative price of bank charges dropped and by 1984-88 the banks' operating income covered rather less than 40 percent of their operating expenses. In 1989 bank charges were permitted to rise (by more than the CPI) and the proportion rose to 44 percent, at which it remained in 1990. At present only 8 percent of banks' commission income is still controlled. Both controlled and noncontrolled bank charges are for the most part lower than charges for similar services abroad.

The rise in bank charges coincided with the contraction of the banks' financial margin. The relationship between bank charges and interest rates is a complex one, for two reasons. First, a large proportion of bank services cannot be segregated from deposit-holding and receipt of credit. Banks can therefore set charges and interest rates in accordance with each customer's total volume of transactions, as regards both the holding of balances and the making of payments. Second, given the oligopolistic structure of Israeli banking, the price of banking products is affected by customers'

<sup>5</sup> These, like resident deposits, are indexed to the exchange rate but they are very different from the point of view of monetary policy. Resident deposits are subject to 90-100 percent reserve requirements, as a result of which they are in effect government obligations to the private sector; the reserve requirement on the new deposits is below 10 percent and is unindexed; the remaining 90 percent constitute a source of indexed credit; the new deposits thus constitute an indexation arrangement only within the private sector.

bargaining power. It is thus impossible to quantify the relationship between interest and bank charges, both because of its complexity and because of the lack of long and consistent series on the latter. However, the experience of other countries indicates that there is a connection, and there is no reason to believe that things are different in Israel. As regards 1990, it appears that the combination of a rise in bank charges from a fairly low level with the contraction of financial margins from a fairly high level brings both prices closer to the marginal cost of bank services, making for more efficient use of financial services.

### 3. THE TOOLS OF MONETARY POLICY

In 1990 the Bank of Israel continued the discount-window lending introduced in late 1987, with some innovations intended to enhance its ability to influence those components of the monetary base which are not under its direct control. In order to maintain interest rates on short-term credit and unindexed deposits, the volume of the discount-window loan offered at auction and the interest rate and volume of the loan given under the quota were adjusted by the Bank of Israel for short-term changes in bank liquidity. This is for purposes of day-to-day control of the interest rate set at auction, which is the operating target of monetary policy. The experience of the last few years suggests that the banks adjust the interest on unindexed deposits, particularly on large SROs, to changes in the rate set in the discount-window auctions. The response of the lending rate to the auction rate is both slower and weaker, mainly for two reasons. First, in the course of its dealings with a customer applying for credit, a bank examines his creditworthiness. The information obtained is a kind of fixed investment, and the cost of transmitting it from one bank to another is high, which enables every bank to defer adjustment of lending rates. This is of course true of banking everywhere. Second, the oligopolistic structure of the Israeli banking system reinforces the delay, but this factor will presumably weaken as money market reform increases competition.

The Bank of Israel's principal tools of current monetary policy—the ordinary discount-window loan and the weekly auction—have been supplemented by two innovations: a loan to the public auctioned weekly and a loan to banks auctioned daily. In spite of their accounting and legal similarities these loans differ materially in their objectives and their effects on different aggregates. The ordinary discount-window loan is given subject to a number of interest-rate brackets, the interest rising with the amount borrowed. A bank's share of each quota is determined by its share of the banking system's assets and credit; in this case, the Bank of Israel determines the commercial bank's share of the quota and the relevant interest rates and each bank determines the amount it borrows. The auctioned discount-window loans are different: here the Bank of Israel offers a given volume of credit to the system as a whole, and the interest rate is set by interbank competition. The auctioned loan is usually taken up in its entirety, so that in practice the volume is determined by the Bank of Israel and the price by the banking system's demand.

The auctioned loan to the public (via the banks)<sup>6</sup> was introduced in order to induce the banks to narrow the interest-rate spread. This is similar to the auctioned loan for banks: the Bank of Israel offers a specified volume and sets a minimum interest rate and the volume is determined by discriminatory auction. This innovation, introduced in June 1990, has been welcomed by the public and by the end of the year, NIS 1 billion had been lent under this arrangement. It is difficult to quantify its effect on lending rates. On the one hand, the public has access to credit whose nominal price has been set by the Bank of Israel rather than the intermediating bank; on the other hand, the banks set the commissions they charge on participation in the auction, and presumably they are also able to influence some of the participants.

#### 4. CREDIT

This year several measures were introduced with far-reaching effects on the structure, and perhaps the volume, of credit. In mid-September the ceilings on nondirected credit were abolished, as were most of the directed credit funds, and the arrangements for financing imports of fuel, feedingstuffs, and equipment; the latter were ripe for abolition since in the last two years net nominal credit out of them did not increase because their relative price had risen. The new situation brought about a substantial increase in the volume of foreign credit and, to a lesser extent, in indexed local-currency credit, the latter also at the expense of unindexed credit.

The rise in immigration will probably increase the demand for credit, particularly long and medium term, for financing housing and business investment. The Knesset has passed an amendment to the Encouragement of Capital Investments Law providing government guarantees for loans taken for purposes of nondwelling investment (both structures and equipment) and working capital. It is still too early to assess the effect of this amendment on demand for credit, particularly in view of the Gulf war, but there is no doubt that it will have a considerable impact on the structure of credit.

As mentioned, it was difficult to gauge inflation correctly this year because of the 5 percentage point divergence between the CPI and the implicit price index of business-sector product. For most purposes of monetary analysis the CPI would seem to be the more relevant, because the demand for money is more closely tied to the volume of transactions than to output; however, business-sector product prices are obviously relevant for an *ex post* analysis of producers' credit. As regards expansion of the real volume of credit, it is difficult to decide between the two, since the volume of credit is correlated with firms' expenditures—some of which rise along with the CPI while others rise with other price indexes.

<sup>6</sup> The public is allowed to bid for part of the discount-window loans, but the commercial banks handle the book-keeping and also assume default risk, for which they charge a premium.

**Table 7.8**  
**Real Cost of Short-Term Credit, 1987-90<sup>a</sup>**

(percent p.a.)

	Before tax						After tax <sup>b</sup>					
	1987	1988	1989	1990			1987	1988	1989	1990		
				Total	1st half	2nd half				Total	1st half	2nd half
<b>Nondirected short-term credit</b>	23.7	16.9	10.1	5.2	8.8	1.8	13.1	9.3	5.6	3.0	5.0	1.0
Local currency	31.6	21.3	8.7	7.5	9.4	5.6	17.4	11.7	4.8	4.2	5.3	3.2
Overdraft facilities	39.4	25.6	11.3	10.2	12.2	8.2	21.7	14.1	6.2	5.7	6.9	4.6
Fixed-term credit	23.0	14.5	4.9	4.2	5.9	2.5	12.6	8.0	2.7	2.4	3.3	1.4
Foreign currency <sup>c</sup>	2.5	0.2	14.5	-2.6	5.7	-10.2	1.4	0.1	8.0	-1.5	3.2	-5.8
Subject to ceiling	17.9	12.5	24.2	-1.3	13.2	-13.9	9.9	6.9	13.3	-0.7	7.5	-7.8
Exempt from ceiling	-2.3	-3.0	12.4	-3.4	4.4	-10.6	-1.2	-1.7	6.8	-1.9	2.5	-6.0
<b>Directed credit</b>	0.1	-2.8	11.1	-7.3	2.6	-16.2	0.0	-1.5	6.1	-4.1	1.5	-9.2
Local currency	2.4	-1.0	-4.5	-6.5	-1.1	-11.7	1.3	-0.6	-2.5	-3.7	-0.6	-6.6
Foreign currency <sup>c</sup>	0.1	-2.8	11.1	-7.3	2.6	-16.2	0.0	-1.5	6.1	-4.1	1.5	-9.2
<b>Total short-term credit<sup>d</sup></b>												
Average cost	18.4	13.1	10.6	4.4	8.0	0.9	10.1	7.2	5.8	2.5	4.5	0.5
Standard deviation	17.6	10.7	15.1	8.4	8.2	8.5	9.7	5.9	8.3	4.7	4.7	4.8

<sup>a</sup> Deflated by an index approximating the end-of-month price level, constructed as the geometric mean of adjacent monthly CPIs.

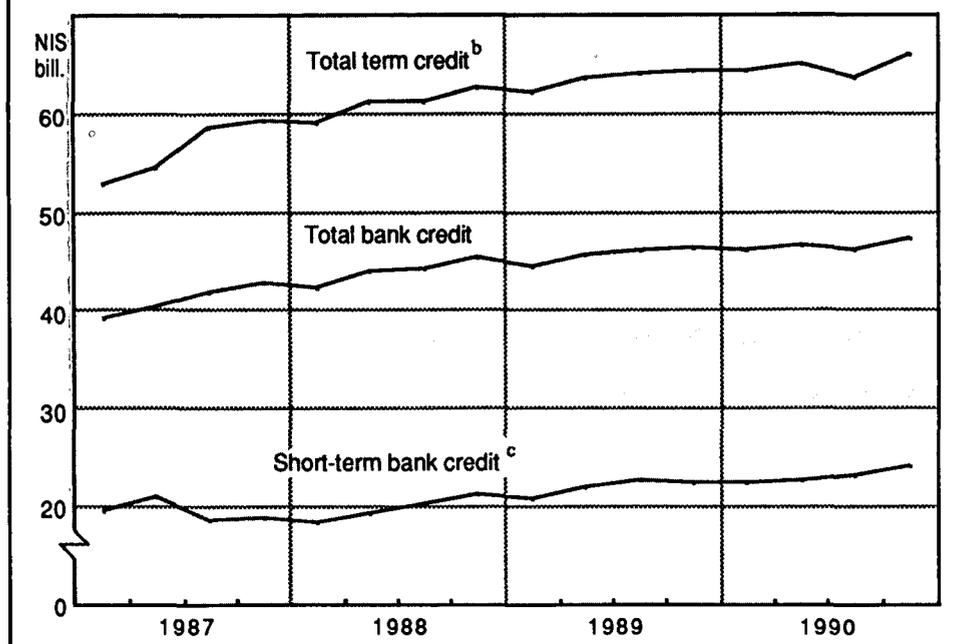
<sup>b</sup> Assuming that real interest is tax deductible and that the tax rate was 54 percent in 1986 and 45 percent in 1988-89 (for development loans, 30 percent in 1986 and 25 percent in 1988-89).

<sup>c</sup> Nominal interest on dollar-linked loans is calculated as  $[(1 + r)(1 + e) - 1]100$ , where  $r$  is the nominal interest rate in terms of dollars and  $1 + e$  is the index of the NIS/\$ exchange rate.

<sup>d</sup> Weighted by the composition of credit (average balances).

SOURCE: Bank of Israel.

**Figure 7.5**  
**Bank Credit and Credit from Specialized Institutions, 1987-90<sup>a</sup>**



<sup>a</sup> At December 1988 prices.

<sup>b</sup> Total bank credit *plus* credit from specialized institutions.

<sup>c</sup> Not including indexed local-currency credit.

Since the start of capital market reform, the volume of long and medium term credit has grown more slowly than output. This is due to the substantial contraction of investment subsidization by means of cheap credit and to firms' easier access to the primary market. As immigration stepped up in 1990, there was some retreat from the reform, the chief example being the giving of guarantees to building contractors and other producers.

## 5. THE CAPITAL MARKET

### The stock market

As far as the stock market is concerned, 1990 is divided into two periods by the outbreak of the Gulf crisis in early August; until then, share prices continued to rise, an upturn that started a year earlier: in the first six months of 1990 nonbank shares rose by 17 percent in real terms (Table 7.9 and Figure 7.6), compared with 65 percent in 1989. The fact that the rise persisted was due to continuing signs of recovery from the slump and to

upward revision of immigration forecasts, with their implications for improved long-run growth. In 1989 the rise was due partly to expectations for recovery and partly to the fact that the decline in long-term interest rates had run its course. In the first six months of 1990, the volume of stock-exchange trading exceeded the 1989 average and the turnover (0.56) was similar. In this context, the paucity of new issues is striking—NIS 148 million at December 1990 prices for the first six months of 1990, compared with NIS 800 million in 1989.

**Table 7.9**  
**Principal Stock Market Indicators, 1988–90**

	1988	1989	1990		
			Total	1st half	2nd half
<i>Millions of December 1990 NIS<sup>a</sup></i>					
New issues	264	846	630	148	482
Market value (end of year)	12,964	18,998	21,631	22,358	21,631
Commercial-bank shares	28	15	13	13	13
Other shares	72	85	87	87	87
Volume of stock-exchange trade (on and off the floor)	5,794	9,084	12,092	5,474	6,618
Commercial-bank shares	41	20	11	12	11
Other shares	59	80	89	88	89
<b>Annual turnover<sup>b</sup></b>					
Commercial-bank shares	0.17	0.49	0.50	0.46	0.53
Other shares	0.34	0.56	0.60	0.58	0.62
All shares	0.23	0.55	0.58	0.56	0.61
<b>Real overall rate of return<sup>c</sup> (percent)</b>					
Commercial-bank shares	-2.6	16.8	-7.6	1.0	-8.5
Other shares	-31.3	64.7	-0.6	16.5	-14.7
All shares	-14.2	48.5	-2.3	13.8	-14.1

<sup>a</sup> Monthly deflation. Figures in italics are percentages.

<sup>b</sup> Ratio of monthly volume of trade (on and off the floor) to average monthly market value of the stock of shares.

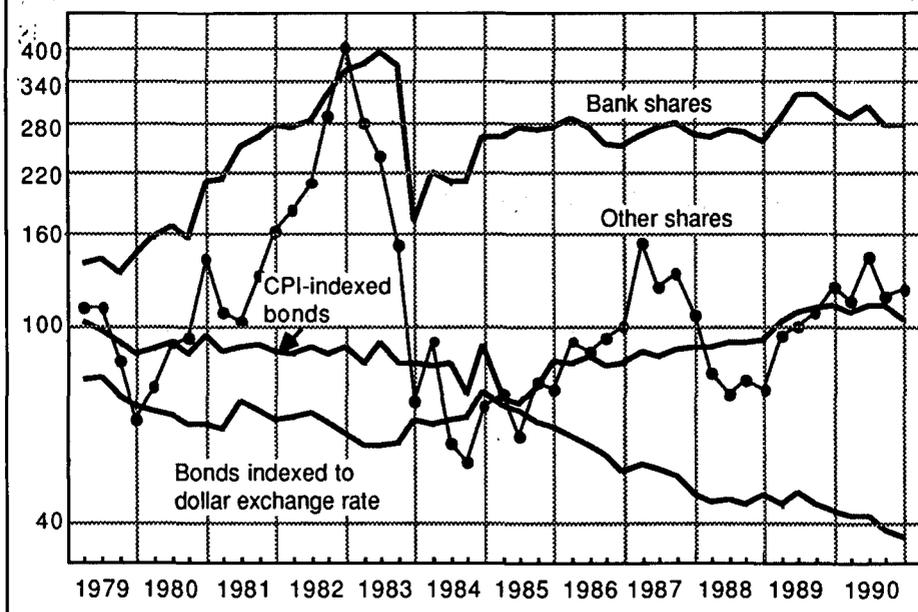
<sup>c</sup> Deflated by end-of month CPI.

SOURCE: Bank of Israel and Central Bureau of Statistics.

The situation changed when the crisis broke out, causing considerable uncertainty about future economic growth. At the same time, the jump in oil prices raised fears about the profitability of firms and the economic situation in Israel and the entire western world. Nonbank shares were down by a real 15 percent in the second half of the year, 13 percent in August alone (Table 7.A18). Turnover rose from 0.56 to 1.16, as the volume of trade rose and the value of the stocks declined. It is thus surprising on the face of it that the volume of new issues came to NIS 480 million (at December 1990 prices),

**Figure 7.6**  
**Index of Total Real Yield on Financial Assets, 1979-90**

(index, 1975 = 100)



<sup>a</sup> Semi-logarithmic scale; December 1975 = 100.

but a closer look at the figures reveals that most of the amount is accounted for by the Bezeq telephone company and by issues floated in July (Table 7.A10). The Israeli stock market suffered no more than any other, perhaps less, but it is difficult to segregate the effects of the Gulf crisis from other factors.

As mentioned, this year's new issues included shares and convertible securities of Bezeq. This was the year's largest issue and one of the largest in the history of the Tel Aviv Stock Exchange. It was welcomed by both institutional investors and the general public, in spite of its coinciding with the Gulf crisis. The success of this offering indicates that the prospects of privatization are good, and it highlights the importance of allowing institutional investors access to this market.

Since January 1991, when the fighting broke out in the Gulf, share prices have risen almost uninterruptedly, to above their eve-of-crisis level.

### Social insurance funds

The conservative investment policy that has been a feature of the social insurance funds since their directors have had the power to diversify their investments changed somewhat this year: as share prices dropped in the early days of the Gulf crisis, the funds stepped up their demand for shares, thereby moderating the downturn, and did well six months

**Table 7.10**  
**Principal Bond Market Indicators, 1988-90**

	1988	1989	1990		
			Total	1st half	2nd half
<b>Market value of listed bonds (NIS million<sup>a</sup>)</b>					
Government	32,969	41,408	41,196	42,413	41,196
Private <sup>b</sup>	5,129	7,360	7,889	7,832	7,889
<b>Total</b>	<b>38,098</b>	<b>48,768</b>	<b>49,085</b>	<b>50,245</b>	<b>49,085</b>
<i>of which</i> Held by the public	30	22	22	22	22
commercial banks	22	21	20	19	20
social insurance funds	46	54	55	56	55
the Bank of Israel	3	3	3	3	3
<b>Volume of stock-exchange trade (NIS million<sup>a</sup>)</b>					
Government	3,364	5,795	5,814	2,505	3,310
Private <sup>b</sup>	745	1,195	1,419	609	810
<b>Total</b>	<b>4,109</b>	<b>6,990</b>	<b>7,233</b>	<b>3,114</b>	<b>4,119</b>
<i>of which</i> Bank of Israel intervention <sup>c</sup>	5.78	0.00	0.54	0.26	0.83
<b>Issues of tradable bonds (NIS million<sup>a</sup>)</b>					
Government	6,852	3,192	1,013	123	890
Private <sup>b</sup>	1,530	1,129	1,205	879	326
<b>Total</b>	<b>8,381</b>	<b>4,321</b>	<b>2,218</b>	<b>1,002</b>	<b>1,217</b>
<b>Annual turnover<sup>d</sup></b>					
Government	0.12	0.16	0.14	0.06	0.08
Private <sup>b</sup>	0.15	0.18	0.18	0.08	0.10
<b>Total</b>	<b>0.13</b>	<b>0.16</b>	<b>0.15</b>	<b>0.13</b>	<b>0.16</b>
<b>Real overall rate of return (percent)</b>					
<b>CPI-indexed bonds</b>					
Government	6.9	14.1	-6.0	0.4	-6.4
Private <sup>b</sup>	1.7	29.7	-2.7	-1.1	-1.6
<b>Total</b>	<b>4.6</b>	<b>17.4</b>	<b>-5.6</b>	<b>0.3</b>	<b>-5.9</b>
<b>Exchange-rate indexed bonds</b>					
Government	7.9	9.6	-12.8	-3.1	-10.0
Private <sup>b</sup>	1.8	15.1	-6.9	-1.5	-5.5
<b>Total</b>	<b>3.5</b>	<b>12.7</b>	<b>-10.8</b>	<b>-2.4</b>	<b>-8.6</b>

<sup>a</sup> At December 1990 prices. Revised figures for 1988-89. Figures in italics are percentages.

<sup>b</sup> Including public sector corporations.

<sup>c</sup> Ratio of the central bank's sales and purchases in the secondary market to total volume of stock-exchange trade in bonds.

<sup>d</sup> Ratio of monthly volume of trade (on and off the floor) to market value of the stock of bonds. Calculated from monthly ratios.

SOURCE: Bank of Israel (Monetary Department and Research Department) and Central Bureau of Statistics.

later when prices recovered. At the end of the year a new investment channel became available, namely real estate. Only one fund went into this market, since there are some tax problems. However, this is a sphere which promises expansion of funding for housing starts, an important development at a time of large-scale immigration.

The Ministry of Finance's proposals to adjust the terms of the special bonds issued as coverage in accordance with market conditions are still firmly opposed by the Histadrut. The yield to maturity of other saving channels has been declining and is diverging steadily from the artificially-maintained yield on the special bonds, which remained at 6.2 percent in real terms throughout 1990. [NOTE: At the end of April 1991, the Histadrut agreed to a reduction of the special yield to 5.5 percent, but even so, the gap between this rate and market rates is far in excess of the gap prevailing before the start of capital-market reform in 1987.] The result is misallocation of saving and investment, in stark conflict with the aims of capital market reform.

**Table 7.A1**  
**The Money Base, 1987-90**

(NIS million)

	Cash in circulation (1)	Liquid assets of banks (2)	Narrow money base (1)+(2) (3)	Broad money base		Change over preceding period, % (6)
				Recognized liquidity deficit (4)	Total (3)+(4) (5)	
1987	1,350	3,015	4,364	3	4,367	39.7
1988	1,671	1,639	3,311	10	3,321	-24.0
1989	2,211	1,549	3,759	0	3,759	13.2
1990	2,751	1,602	4,354	0	4,354	15.8
January	2,173	1,698	3,871	0	3,872	3.0
February	2,172	1,902	4,074	0	4,074	5.2
March	2,236	1,964	4,200	0	4,200	3.1
April	2,340	1,929	4,270	0	4,270	1.7
May	2,328	1,494	3,822	0	3,822	-10.5
June	2,392	1,409	3,801	0	3,801	-0.6
July	2,502	1,321	3,822	0	3,822	0.6
August	2,554	1,643	4,197	0	4,197	9.8
September	2,579	1,400	3,978	0	3,978	-5.2
October	2,619	1,437	4,056	0	4,110	3.3
November	2,629	1,526	4,155	0	4,155	1.1
December	2,751	1,602	4,354	0	4,354	4.8

\* Monthly data are average of all Wednesdays in the month; annual figures are for December of the stated year.

SOURCE: Bank of Israel, Supervisor of Banks, *Current Banking Statistics*.

**Table 7.A2**  
**Unindexed Local Currency, 1987-90<sup>a</sup>**

	(NIS million)									
	Money supply (M1)				Other deposits				Total (3+5+6+7+8)	
	Currency in circulation (1)	Demand deposits (2)	Total (1+2) (3)	Total (3) seasonally adjusted (4)	CDs (5)	Time deposits (6)	Deposits against liabilities (7)	Treasury bills (8)	NIS million (9)	Change over preceding period, % (10)
1987	1,350	1,701	3,051	3,193	4,095	3,443	60	438	11,086	50.8
1988	1,671	1,824	3,496	3,563	2,639	4,982	47	467	11,631	4.9
1989	2,211	2,636	4,846	5,183	4,258	5,800	116	1,089	16,109	38.5
1990	2,751	3,586	6,337	7,041	5,623	8,642	164	1,609	22,375	38.9
January	2,173	3,054	5,227	5,420	4,255	5,818	68	1,020	16,389	1.7
February	2,172	2,916	5,088	5,413	4,333	6,075	64	997	16,558	1.0
March	2,236	2,835	5,071	4,948	4,569	6,295	65	1,073	17,073	3.1
April	2,340	3,078	5,418	5,323	4,597	6,598	137	1,132	17,881	4.7
May	2,328	3,208	5,536	5,566	4,662	6,903	73	1,183	18,357	2.7
June	2,392	3,062	5,454	5,625	4,692	7,173	283	1,281	18,883	2.9
July	2,502	3,023	5,525	5,741	4,531	7,498	93	1,363	19,010	0.7
August	2,554	3,664	6,217	5,939	4,748	7,388	83	1,146	19,582	3.0
September	2,579	3,468	6,047	5,858	4,848	7,431	138	1,272	19,736	0.8
October	2,619	3,694	6,312	6,237	4,816	7,696	93	1,362	20,279	2.8
November	2,629	3,844	6,473	6,389	4,682	8,456	93	1,538	21,241	4.7
December	2,751	3,586	6,337	7,041	5,623	8,642	164	1,609	22,375	5.3

<sup>a</sup> Monthly data are average of all Wednesdays in the month; annual figures are for December of the stated year.

SOURCE: Bank of Israel.

**Table 7.A3**  
**Growth of M3, 1988-90**

	NIS million				Percent of GNP <sup>a</sup>						
	1989	1990			1988	1989	1990				
		Total	1st half	2nd half			Total	I	II	III	IV
<b>Contribution of balance of payments and NDC</b>											
Foreign-currency transfers	1,556	1,023	857	167	-4.1	2.5	1.1	2.6	1.1	0.2	0.4
Change in NDC <sup>b</sup>	2,152	4,469	1,896	2,573	5.2	2.2	4.4	2.3	5.5	3.9	5.8
To the government	-930	191	-690	881	-1.4	-1.0	0.0	-3.0	-0.2	-1.7	4.9
To the public	3,082	4,277	2,585	1,692	6.6	3.2	4.4	5.2	5.7	5.6	0.9
Total purchases	3,708	5,492	2,752	2,740	1.1	4.6	5.4	4.9	6.5	4.1	6.2
<b>Contribution of revaluation</b>											
Foreign reserves	889	579	674	-95	1.2	1.0	0.5	-1.9	4.3	-3.5	3.1
NDC	-480	239	-373	612	-0.5	-0.5	0.3	2.3	-3.6	3.4	-1.0
To the government	-1,165	-1,027	-72	-955	1.6	-1.6	-0.9	-0.9	0.9	2.8	-6.2
To the public	685	1,267	-301	1,567	-2.1	1.1	1.1	3.3	-4.4	0.5	5.2
Total revaluation	655	535	295	240	0.9	0.8	0.5	0.3	0.9	0.6	0.3
<b>Total change in M3 balances</b>											
Foreign reserves	2,445	1,602	1,530	72	-2.9	3.4	1.6	0.7	5.4	-3.3	3.4
NDC	1,672	4,708	1,523	3,185	4.7	1.7	4.7	4.6	1.9	7.3	4.9
To the government	-2,095	-836	-762	-74	0.2	-2.6	-0.9	-3.9	0.6	1.1	-1.3
To the public	3,767	5,544	2,285	3,259	4.5	4.3	5.5	8.5	1.2	6.2	6.2
Total change	4,363	6,027	3,047	2,980	2.0	5.4	6.0	5.1	7.5	4.8	6.5

<sup>a</sup> Average of monthly ratios (monthly GNP estimated from quarterly data).

<sup>b</sup> Excluding revaluation.

**Table 7.A4**  
**Indexed Deposits of the Public and Its Securities Holdings, 1987-90<sup>a</sup>**

	(NIS million)								
	Approved saving deposits		Indexed long-term deposits <sup>b</sup>	Resident deposits <sup>c</sup>		Tradable securities <sup>d</sup>			Total (1)+(3) through (7) (9)
	Total (1)	Principal (2)		Restitutions (4)	Other (5)	Bonds <sup>e</sup> (6)	All shares (7)	Bank shares (8)	
1987	15,180	7,737	4,017	5,612	5,706	5,569	13,632	6,709	49,716
1988	19,412	12,622	5,046	5,659	7,012	6,552	8,962	2,824	52,643
1989	24,958	16,857	5,480	7,041	8,351	8,978	15,122	2,920	69,929
1990	28,257	19,450	5,288	8,497	9,303	10,357	21,115	3,178	82,817
January	25,073	17,018	5,421	7,133	8,486	8,947	15,747	2,860	70,807
February	25,284	17,196	5,386	7,227	8,660	8,910	15,113	2,801	70,581
March	25,517	17,377	5,423	7,426	8,938	9,037	15,000	2,846	71,341
April	25,685	17,523	5,371	7,483	8,910	9,249	16,032	2,922	72,730
May	26,016	17,722	5,314	7,636	8,978	9,109	17,360	3,000	74,412
June	26,568	18,024	5,411	7,788	9,297	9,724	18,770	2,476	77,559
July	26,897	18,293	5,362	7,933	9,507	10,054	20,519	3,175	80,272
August	27,164	18,601	5,233	8,039	9,711	9,967	18,819	3,032	78,932
September	27,671	18,924	5,181	8,155	9,929	10,222	18,715	3,024	79,873
October	27,857	19,187	5,233	8,287	9,697	10,448	18,576	3,134	80,097
November	28,021	19,330	5,306	8,395	9,337	10,448	20,685	3,154	82,193
December	28,267	19,450	5,288	8,497	9,303	10,357	21,115	3,178	82,817

<sup>a</sup> Monthly data are average of all Wednesdays in the month; annual figures are for December of the stated year.

<sup>b</sup> Includes indexation increments.

<sup>c</sup> Includes valuation adjustments for relative changes in foreign exchange rates. Includes nonresident deposits of Israeli residents entitled to hold nonresident deposits (e.g. new immigrants).

<sup>d</sup> At market prices. Includes shares held by banks; excludes shares held by the government.

<sup>e</sup> At market prices. Excludes bonds held by commercial banks, the Bank of Israel, social insurance funds, and other institutional investors.

SOURCE: Bank of Israel, Supervisor of Banks, *Current Banking Statistics*.

**Table 7.A5**  
**Bank Credit to the Public, 1987-90<sup>a</sup>**

(NIS million)

	Export financing			Financing of domestic output			Total
	Diamonds <sup>b</sup>	Other	Total	Local currency <sup>c</sup>	Foreign currency <sup>d</sup>	Total	
1987	477	2,573	3,051	13,201	3,103	16,303	19,354
1988	537	2,337	2,874	20,126	2,753	22,879	25,754
1989	700	2,404	3,104	27,395	4,300	31,696	34,799
1990	0	419	419	36,730	8,883	45,613	46,032
January	674	2,370	3,044	29,285	4,268	33,553	36,596
February	697	2,336	3,033	29,625	4,150	33,775	36,808
March	744	2,389	3,134	29,866	4,461	34,327	37,460
April	817	2,686	3,503	30,387	4,834	35,221	38,725
May	869	2,846	3,715	30,524	5,108	35,632	39,347
June	879	2,892	3,771	31,155	5,094	36,249	40,020
July	863	2,812	3,674	32,906	4,968	37,874	41,548
August	787	2,768	3,555	33,459	4,828	38,287	41,842
September	823	2,688	3,511	34,434	4,818	39,252	42,763
October	0	418	418	36,018	8,133	44,151	44,569
November	0	422	422	36,307	8,407	44,714	45,137
December	0	419	419	36,730	8,883	45,613	46,032

<sup>a</sup> Monthly data are average of all Wednesdays in the month; annual figures are for December of the stated year.

<sup>b</sup> Includes problem debts of diamond firms.

<sup>c</sup> Includes indexation differentials. The 1987 figure includes NIS 5 million directed local-currency credit.

<sup>d</sup> Includes credit from overseas offices of Israeli banks.

SOURCE: Bank of Israel, Supervisor of Banks, *Current Banking Statistics*.

**Table 7.A6**  
**Effective Monthly Interest Rates, 1986-March 1991**

(percent, annualized rates)

	$\pi$	E/\$	Lending rate						Borrowing rate				
			OV	OVE	FTC	DWt	C\$e	TBC	LA	CD	TB	RD\$	YTM
1986	19.6	0.1	61.5	70.0	38.0	32.8	13.6	28.1	18.4	17.2	18.5	4.5	20.0
1987	16.1	4.4	61.9	74.6	42.8	25.3	14.0	37.5	18.8	17.6	19.1	5.1	20.0
1988	16.4	3.1	46.2	56.2	33.4	19.0	13.1	31.7	11.2	13.4	14.6	6.1	16.2
1989	20.7	22.2	34.3	41.8	26.6	13.8	13.1	33.5	8.6	11.6	14.1	7.1	13.2
1990	17.6	3.7	29.6	35.4	22.5	15.1	10.5	22.7	6.1	13.2	14.4	3.9	15.7
1989													
January	73.5	345.7	45.6	57.5	36.7	21.8	13.8	122.2	11.0	17.6	21.2	8.8	19.6
February	21.9	-8.2	41.4	51.8	33.3	14.6	14.1	24.5	11.0	13.4	16.4	7.9	15.8
March	5.6	4.0	38.5	48.0	32.7	13.3	14.1	29.0	11.0	11.7	15.4	8.8	13.1
April	35.4	4.1	36.6	45.3	29.3	13.0	13.9	27.7	11.0	10.4	14.4	8.2	12.5
May	11.1	46.4	35.8	44.7	28.1	13.0	13.5	44.0	11.0	10.4	13.7	7.4	11.6
June	15.9	62.7	31.6	37.5	25.3	10.7	13.3	46.6	6.0	9.6	12.6	6.7	9.9
July	7.1	16.2	30.6	36.4	24.3	10.6	12.8	28.4	7.6	9.3	12.2	6.2	9.7
August	15.6	12.4	30.6	36.5	23.4	9.9	12.6	26.6	8.2	9.0	11.7	6.5	10.1
September	20.3	12.3	30.6	36.5	21.3	12.8	12.6	25.7	5.7	10.2	11.7	6.7	11.0
October	24.0	-8.1	30.4	36.3	20.7	15.9	12.3	18.1	6.9	12.3	13.1	6.0	14.4
November	16.7	-6.7	30.3	36.3	22.3	15.0	11.9	19.0	7.4	12.8	13.5	5.7	14.1
December	13.7	-16.6	30.9	36.8	22.4	15.0	12.0	15.8	6.7	12.2	13.3	5.8	17.4
1990													
January	13.6	-8.1	31.0	37.0	23.2	17.1	11.5	19.5	7.5	14.2	15.0	6.2	17.5
February	6.5	-0.5	31.5	37.7	24.0	17.8	11.3	22.6	8.0	15.1	15.5	6.3	18.3
March	16.0	51.6	31.4	37.7	24.2	17.0	11.3	38.8	8.7	14.7	15.5	5.5	18.1
April	34.9	-3.8	31.1	37.1	23.6	15.0	11.5	20.7	8.8	13.5	14.9	5.7	15.9

May	20.7	7.4	30.2	36.1	22.8	13.8	11.4	24.1	5.3	12.5	14.4	5.3	14.8
June	9.3	28.3	28.9	34.6	22.2	13.6	10.9	30.2	6.0	12.2	13.9	4.1	14.1
July	21.1	1.3	28.5	34.3	22.3	14.4	10.6	21.3	4.6	12.8	13.8	3.8	14.2
August	20.7	-17.4	28.7	33.4	21.7	14.4	10.4	14.8	5.1	12.8	13.8	2.9	16.1
September	28.3	12.7	28.5	34.3	22.2	15.8	9.3	24.6	4.8	12.9	14.1	2.8	16.0
October	22.4	-14.1	28.4	34.3	21.3	15.0	9.2	16.0	5.4	12.9	14.1	1.6	15.7
November	16.3	-9.2	28.2	34.1	21.5	13.9	9.1	17.4	4.2	12.8	13.9	1.5	14.4
December	4.9	14.4	28.5	34.4	21.2	13.0	9.4	24.8	4.2	12.1	13.8	1.4	13.4
1991													
January	16.8	-1.6	28.6	34.3	21.0	13.8	8.3	19.6	5.0	12.2	13.6	0.9	14.4
February	7.6	-11.7	28.9	34.9	21.6	13.5	7.5	16.1	3.9	12.3	13.8	0.7	14.4
March	15.7	145.6	28.9	34.5	21.6	12.6	7.6	58.7	3.9	12.3	13.8	0.7	14.2

## NOTATION:

- $\pi$  - Inflation rate.  
 E/\$ - Average change in the dollar exchange rate.  
 OV - Credit lines and overdrafts; includes regular interest, additional interest on borrowings in excess of approved credit lines, and credit-allocation and management fees and commissions.  
 OVE - Overdrafts in excess of approved overdraft facilities.  
 FTC - Other unindexed fixed-term credit.  
 DWt - Discount-window auction. In October 1987, when the Bank of Israel changed the liquidity regime, it introduced discount-window loans by auction. The interest shown in the table is the average rate weighted by the volume of discount-window loans.  
 C\$C - Nondirected dollar credit subject to ceilings. The interest shown is nominal, i.e.  $100(1 + rd)[1 + \delta(er)]$  where  $rd$  is the dollar interest rate, in percent, and  $\delta(er)$  is the average percentage change in the exchange rate against the dollar.  
 TBC - Total bank credit; average, weighted according to the composition of total credit; Bank of Israel estimate.  
 LA - 1987-June 1989, liquid assets held with the Bank of Israel, in the marginal bracket; from July 1989, actual interest (all brackets).  
 CD - CDs; median of the system—over NIS 10,000; on the assumption that CDs are renewed every 3 days, and there are no large deposits. From September 1988 the data are the average of all deposits.  
 TB - Treasury bills; over NIS 10,000 for 14 days. From September 1988, the data are the average of all Treasury bills with maturities of up to a year.  
 RD\$ - Resident deposits (in dollar equivalent) average for the total—over \$50,000 for 12 months. The dollar interest rate was multiplied by the average change in the exchange rate against the dollar in order to obtain the nominal NIS yield.  
 YTM - Yield to maturity of 1-month Treasury bills.
- SOURCE: Bank of Israel.

**Table 7.A7**  
**Commercial Bank Credit to the Nonfinancial Private Sector, 1989-90**

	End-year, NIS million		Average real balance, 1990 (1989 =100)			Nominal change during period			
						1990			
	1989	1990	Total	1st half	2nd half	1989	Total	1st half	2nd half
Nondirected credit <sup>a</sup>	33,020	47,033	118.3	112.0	124.7	35.3	42.4	12.5	26.7
Credit lines and overdrafts	10,701	13,023	105.4	104.2	106.7	15.9	21.7	7.8	12.9
Other unindexed local currency	8,032	11,062	128.6	120.6	136.6	44.3	37.7	9.2	26.2
Indexed local currency	10,012	13,830	127.6	123.5	131.7	50.7	38.1	18.5	16.6
Foreign currency	4,275	9,117	115.2	95.6	134.8	44.7	113.3	16.3	83.3
<i>of which</i> For fuel imports	879	0	80.5	119.1	41.8	66.6	-100.0	3.0	-100.0
Directed export credit	3,528	417	58.3	84.4	32.2	7.2	-88.2	6.2	-88.9
Diamond fund <sup>b</sup>	654	0	71.3	107.3	35.2	14.5	-100.0	34.4	-100.0
Other	2,873	417	55.6	79.7	31.5	5.7	-85.5	-0.2	-85.5
Subtotal	26,535	33,620	105.6	103.7	107.6	26.1	26.7	9.4	15.8
Indexed local currency	10,012	13,830	127.6	123.5	131.7	50.7	38.1	18.5	16.6
Credit out of earmarked deposits	18,171	18,734	87.7	91.0	84.3	3.2	3.1	2.6	0.5
Total bank credit	54,718	66,185	102.7	102.3	103.1	20.8	21.0	8.8	11.2
Consumer Price Index						20.7	17.6	7.9	9.0

<sup>a</sup> Includes indexation differentials on the indexed portion of nondirected local-currency credit and credit from overseas offices of Israeli banks. Includes credit to local authorities.

<sup>b</sup> Includes problem debts of diamond firms.

**Table 7.A8**  
**Local-Currency Credit to the Government, 1987–90**

	(NIS million)						
	From the Bank of Israel			From banking institutions			Total net credit in local currency (3) + (6)
	Credit <sup>a</sup> (1)	Deposits of central government and national institutions <sup>b</sup> (2)	Net credit (1) – (2) (3)	Credit (4)	Deposits of central government (5)	Net credit (4) – (5) (6)	
1987	7,695	3,489	4,206	2,007	18	1,989	6,195
1988	9,495	5,995	3,501	1,769	27	1,743	5,243
1989	9,260	7,535	1,725	2,363	21	2,342	4,067
1990	8,986	6,754	2,231	2,326	41	2,284	4,516
January	10,064	8,144	1,920	2,269	26	2,243	4,163
February	10,043	8,201	1,843	2,283	36	2,248	4,090
March	10,165	8,505	1,660	2,387	23	2,364	4,025
April	10,127	8,053	2,074	2,351	17	2,335	4,408
May	10,137	7,098	3,039	2,233	25	2,208	5,247
June	10,373	7,416	2,958	2,161	24	2,137	5,095
July	10,319	6,387	3,932	2,187	26	2,161	6,093
August	10,275	5,892	4,383	2,372	29	2,344	6,727
September	10,163	6,111	4,052	2,377	31	2,346	6,398
October	10,027	6,510	3,516	2,386	26	2,361	5,877
November	10,007	6,514	3,493	2,333	28	2,305	5,797
December	8,986	6,754	2,231	2,326	41	2,284	4,516

<sup>a</sup> Includes monthly accrual of Bank of Israel profits.

<sup>b</sup> Includes the Bank of Israel's equity and net balances in the 'other accounts' item in its balance sheet.

SOURCE: Financial statements of the Bank of Israel and monthly statements of the banking institutions.

**Table 7.A9**  
**Medium and Long Term Credit to the Public by Specialized**  
**Banking Institutions, 1987-90<sup>a</sup>**

	Gross flows			Net flows	Balance outstanding <sup>b</sup>	
	Total	To households	To firms		Average	End-of-period
<i>NIS million</i>						
1987	2,089	1,332	757	147	11,721	14,110
1988	2,740	2,084	656	613	15,573	17,375
1989	2,776	2,425	352	-29	19,550	21,489
1990	3,820	3,303	517	437	23,395	25,843
<i>Real annual change, percent<sup>c</sup></i>						
1988	12.6	34.3	-25.6	257.5	14.7	5.8
1989	-16.0	-3.6	-55.5		4.8	2.5
1990	16.5	15.4	24.5		1.9	2.3

<sup>a</sup> The data cover only supervised banking institutions.

<sup>b</sup> As recorded, i.e., the implicit subsidy has not been deducted.

<sup>c</sup> Deflated by six-month average (flows) or end-period (balances) CPI.

SOURCE: Bank of Israel, Research Department.

**Table 7.A10**  
**Estimated Wealth of Private Nonfinancial Sector, 1983–90<sup>a</sup>**

	NIS billion				Real annual change, <sup>b</sup> percent						
	1988	1989	1990		1983–87	1988–90	1988	1989	1989		
			1st half	2nd half					Total	1st half	2nd half
<b>Assets</b>	125.6	159.6	174.9	189.6	6.4	3.3	-2.0	5.3	1.0	1.5	-0.5
Short-term assets and tradable bonds	27.2	33.7	37.1	41.7	2.0	6.6	2.0	2.7	5.1	1.8	3.2
Shares of financial intermediaries	3.4	4.3	5.0	5.0	4.8	-20.3	-74.5	5.8	-2.7	6.6	-8.8
Medium and long term assets	95.0	121.5	132.8	142.9	8.0	4.4	7.8	6.0	-0.0	1.2	-1.2
<b>Liabilities</b>	61.0	75.8	83.5	94.2	14.6	10.2	8.2	2.9	5.7	2.1	3.6
Short term <sup>c</sup>	27.7	36.4	40.7	47.9	4.4	18.8	16.9	8.9	11.8	3.6	7.9
Long term	33.3	39.4	42.8	46.3	23.7	4.2	2.0	-2.1	0.1	0.7	-0.6
<b>subtotal: Net financial wealth</b>	<b>64.6</b>	<b>83.9</b>	<b>91.4</b>	<b>95.4</b>	<b>2.2</b>	<b>-0.7</b>	<b>-10.0</b>	<b>7.5</b>	<b>-3.3</b>	<b>1.0</b>	<b>-4.2</b>
<b>Tangible assets<sup>d</sup></b>											
Nominal	144.3	175.5	195.6	219.4	3.7	1.7	-3.4	0.8	6.3	3.3	2.9
Real					4.8	2.7	2.9	1.2	3.0	1.4	1.6
<b>Total net wealth</b>											
Nominal	208.9	259.4	287.0	314.8	3.1	1.1	-5.5	2.9	3.2	2.5	0.6
Real					3.9	1.6	-1.3	3.1	1.0	1.2	-0.2

<sup>a</sup> The private nonfinancial sector comprises households and nonfinancial firms. The sector's wealth is estimated as the difference between its claims against and obligations to the public sector, the Bank of Israel, the rest of the world, and financial intermediaries. The latter include commercial banks, cooperative saving and loan associations, mortgage banks, investment finance banks, financial institutions required to publish financial statements, and pension and provident funds; these institutions represent most of the financial intermediation system. Financial institutions not required to publish financial statements are not, owing to lack of data, classified as financial intermediaries and they are therefore part of the private nonfinancial sector in this table. As a result, the asset and liability figures in this table differ from those in other tables of this chapter. For further details see Table 7.A7.

<sup>b</sup> Deflated by the CPI.

<sup>c</sup> Includes CPI-indexed credit from commercial banks.

<sup>d</sup> Tangible assets comprise the stock of consumer durables and dwellings, as well as structures, equipment, and goods and raw materials inventories held by firms. Also includes compulsory loans.

SOURCE: Bank of Israel, Research Department.

**Table 7.A11**  
**Financial Asset Holdings of the Public, 1989-90<sup>a</sup>**

	End-of-period balances, NIS million				Percent of total			
	1989		1990		1989		1990	
	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half
Unindexed short-term assets	14,988	16,842	19,030	24,324	10.4	10.3	10.5	12.4
Money supply (M1)	4,466	5,304	5,639	6,951	3.1	3.3	3.1	3.5
<i>of which</i> Currency in circulation	1,934	2,224	2,429	2,817	1.3	1.4	1.3	1.4
Time deposits, SROs, CDs, Treasury bills	10,522	11,538	13,391	17,373	7.3	7.1	7.4	8.8
Resident deposits and tradable bonds	15,720	17,578	19,435	19,407	10.9	10.8	10.7	9.9
Deposits	7,850	8,647	9,528	9,359	5.4	5.3	5.2	4.8
<i>of which</i> Nonresident deposits of Israelis	3,733	4,560	4,974	5,366	2.6	2.8	2.7	2.7
Bonds <sup>b</sup>	7,870	8,931	9,906	10,049	5.5	5.5	5.5	5.1
<i>subtotal</i> : Short-term assets	<b>30,708</b>	<b>34,419</b>	<b>38,464</b>	<b>43,731</b>	<b>21.3</b>	<b>21.1</b>	<b>21.2</b>	<b>22.2</b>
Bank shares	3,627	2,874	3,160	3,166	2.5	1.8	1.7	1.6
<i>subtotal</i> : Short-term assets & bank shares	<b>34,334</b>	<b>37,294</b>	<b>41,624</b>	<b>46,898</b>	<b>23.8</b>	<b>22.9</b>	<b>22.9</b>	<b>23.8</b>
Nonbank shares	9,101	12,550	16,266	17,101	6.3	7.7	9.0	8.7
Restitutions deposits	6,632	7,152	7,894	8,572	4.6	4.4	4.3	4.4
Saving schemes and indexed deposits	28,455	30,825	32,645	33,684	19.7	18.9	18.0	17.1
Social insurance funds and life assurance	65,798	74,994	83,133	90,521	45.6	46.1	45.8	46.0
<b>Total financial assets</b>	<b>144,320</b>	<b>162,814</b>	<b>181,563</b>	<b>196,777</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<i>of which</i> Nonbank shares	9,101	12,550	16,266	17,101	6.3	7.7	9.0	8.7
Foreign-currency assets <sup>c</sup>	28,636	31,230	33,214	32,696	19.8	19.2	18.3	16.6
CPI-indexed assets	91,596	102,193	113,053	122,655	63.5	62.8	62.3	62.3

<sup>a</sup> In this table 'public' excludes the government, the central bank, and commercial banks. Owing to lack of data, no adjustment was made for the rest-of-the-world sector, i.e., financial assets of foreigners were not deducted and foreign financial assets of Israeli residents were not added.

There is some double-counting in this table since financial assets include liabilities issued by financial institutions and tradable assets held by them.

<sup>b</sup> Total tradable bonds *less* bonds held by commercial banks, the central bank, and social insurance funds.

<sup>c</sup> Arrangement bank shares redeemed in October 1988 are regarded as a foreign-currency asset. This applies also to Arrangement shares redeemed in October 1989 or converted to saving schemes, and to other saving schemes with CPI/exchange-rate linkage options.

SOURCE: Bank of Israel.

**Table 7.A12**  
**Change in Financial Asset Holdings of the Public, 1989–90<sup>a</sup>**

	Average real balances in 1990 (1989=100)			Percent change during period			
				1989	1990		
	Total	1st half	2nd half		1989	Total	1st half
Unindexed short-term assets	110	105	114	20.3	22.8	4.7	17.3
Money supply (M1)	110	105	115	20.2	11.4	-1.5	13.1
<i>of which</i> Currency in circulation	107	104	110	12.2	7.7	1.2	6.5
Time deposits, SROs, CDs, Treasury bills	110	105	114	20.4	28.0	7.5	19.1
Foreign-currency deposits and tradable bonds	105	105	105	-0.5	-6.1	2.4	-8.4
Deposits	103	104	102	-12.6	-8.0	2.1	-9.9
<i>of which</i> Nonresident deposits of Israelis	114	112	116	4.5	0.1	1.1	-1.0
Bonds <sup>b</sup>	106	105	107	14.9	-4.3	2.8	-6.9
<i>subtotal: Short-term assets</i>	107	105	110	8.7	8.0	3.5	4.3
Bank shares	76	76	77	-6.2	-6.3	1.9	-8.0
<i>subtotal: Short-term assets and bank shares</i>	104	102	106	7.4	6.9	3.4	3.4
Nonbank shares	136	129	143	66.3	15.9	20.1	-3.5
Restitutions deposits	103	102	103	-6.5	1.9	2.2	-0.3
Saving schemes and indexed deposits	97	99	95	-0.8	-7.1	-1.9	-5.3
Social insurance funds and life assurance	108	107	109	14.9	2.6	2.7	-0.1
Total financial assets	106	105	107	11.3	2.8	3.3	-0.5
<i>of which</i> Nonbank shares	136	129	143	66.3	15.9	20.1	-3.5
Foreign-currency assets <sup>c</sup>	97	99	95	-2.5	-11.0	-1.5	-9.7
CPI-indexed assets	106	105	107	10.2	2.1	2.5	-0.4

<sup>a</sup> For notes, see Table 7.A11.

SOURCE: Bank of Israel.

**Table 7.A13**  
**Estimated Wealth of the Private Nonfinancial Sector, 1987-90**

	(NIS millions, end of year)			
	1987	1988	1989	1990
<b>Assets</b>				
Short-term financial assets <sup>a</sup>	34,375	30,606	38,069	46,658
Money supply	3,287	3,655	5,304	6,951
Time deposits and SROs	8,167	7,860	11,468	17,267
Foreign-currency deposits	5,730	8,193	8,757	7,940
Tradable bonds	5,728	7,498	8,200	9,535
Financial shares	11,463	3,400	4,340	4,965
Medium-term financial assets <sup>b</sup>	29,506	37,475	45,217	51,206
Earmarked deposits of the public	1,230	1,451	1,605	1,498
Saving schemes & indexed long-term deposits	20,729	27,346	33,265	37,318
Restitutions deposits	5,664	6,340	7,153	8,572
Exporters' credit	1,884	2,338	3,193	3,817
Long-term financial assets	46,182	57,524	76,333	91,695
Deposits in social insurance funds	39,026	48,763	68,299	82,207
Life insurance deposits	4,092	5,321	6,694	8,314
Compulsory loans <sup>c</sup>	3,064	3,440	1,340	1,174
Tangible assets <sup>d</sup>	128,232	144,254	175,518	219,405
Consumer durables	18,356	22,002	25,483	31,349
Dwellings	48,625	52,356	64,965	90,446
Structures and equipment	54,494	62,072	75,716	87,074
Inventories	6,758	7,825	9,354	10,537
Total	238,296	269,859	335,137	408,963
<b>Liabilities</b>				
Short-term <sup>e</sup>	20,344	27,684	36,391	47,861
Nondirected credit				
Local currency	14,113	21,165	27,947	35,886
Foreign currency	1,186	1,432	2,687	8,155
Directed credit				
Foreign currency	3,002	3,290	3,528	417
Credit from abroad	2,039	1,796	2,230	3,402
Medium-term and long-term <sup>f</sup>	28,053	33,309	39,365	46,341
Local currency	18,312	23,404	29,616	36,977
Foreign currency	9,741	9,905	9,749	9,364
Total liabilities	48,397	60,993	75,756	94,201
Net wealth <sup>g</sup>	189,899	208,866	259,381	314,762

<sup>a</sup> These items differ from the corresponding items of Tables 7.A11 and 7.A12, which refer to the 'public', whereas this table refers to the 'private nonfinancial sector'. Time deposits and CDs are deposits in commercial banks and other financial institutions. Foreign-currency deposits are demand and time deposits held with the banking system (resident deposits and nonresident deposits of Israeli residents) and importers' deposits. Tradable bonds are total bonds issued to the public (excluding dollar-linked bonds

issued by firms) *less* bonds held by the Bank of Israel, commercial, investment, and mortgage banks, and other financial institutions subject to the supervision of the Supervisor of Banks, social insurance funds, and insurance companies. Shares of financial intermediaries are shares issued by commercial banks, specialized financial institutions, mortgage banks, and insurance companies.

<sup>b</sup> These items differ from the corresponding items of Tables 7.A11 and 7.A12 in that they include earmarked deposits of the public and saving schemes and indexed deposits with investment and mortgage banks (in addition to saving schemes and indexed deposits with commercial banks). The data on saving schemes include the imputed value of grants (where applicable) and not the amount recorded at the time the accounts were opened.

<sup>c</sup> Calculated by discounting the inflation-adjusted stream of repayments at 5 percent (the interest rate on social-insurance fund bonds). The present value of Peace for Galilee bonds is assumed to be 25 percent of the inflation-adjusted value.

<sup>d</sup> Revised data.

<sup>e</sup> Nondirected local-currency credit consists of credit from the commercial banking system, mortgage banks (to building contractors), and insurance companies *less* credit to local authorities. Nondirected foreign-currency credit includes credit from the banking system in Israel other than for fuel imports. Credit from abroad is granted by overseas offices of Israeli banks, suppliers, and others (excluding credit to local authorities).

<sup>f</sup> The subsidy element of long-term local-currency credit is estimated as the present value of the stream of repayments according to the actual inflation rate. In this calculation repayments are spread over six years (the estimated average term of the loans), with interest on outstanding loans weighted accordingly. The present value of the subsidy element of foreign-currency credit is calculated in a similar manner, with the stream of repayments discounted by the Eurodollar rate.

<sup>g</sup> Calculated as the difference between total assets and total liabilities of the private nonfinancial sector; includes the estimated subsidy element of long-term local and foreign currency credit.

SOURCE: Bank of Israel.

**Table 7.A14****Net Financial Wealth of the Public (Foreign Currency), 1982-90**

(\$ million)

	Assets <sup>a</sup> (1)	Liabilities <sup>b</sup> (2)	(1)-(2) (3)	(3) as percent of total net financial wealth (4)
31.12.82	8,991	6,584	2,407	8.0
30.9.83	10,022	7,076	2,946	9.8
31.12.83	12,584	7,063	5,521	23.5
31.12.84	14,832	7,301	7,531	31.7
30.6.85	16,570	7,591	8,979	39.0
31.12.85	16,418	8,301	8,117	28.3
31.12.86	17,658	9,435	8,223	24.5
31.12.87	18,118	10,378	7,740	19.3
31.12.88	15,983	9,091	6,892	19.3
31.12.89	17,592	9,268	8,324	19.5
31.3.90	17,533	9,454	8,079	18.9
30.6.90	17,625	9,287	8,338	19.0
30.9.90	18,093	9,245	8,848	18.9
31.12.90	17,136	10,419	6,717	14.4

<sup>a</sup> Resident deposits, nonresident deposits of Israeli residents, exchange-rate indexed bonds, restitutions deposits, dollar-linked saving schemes, and suppliers credit to foreigners. Bank shares covered by the Bank-Share Arrangement (including shares converted to saving schemes) are included from December 1983.

<sup>b</sup> Foreign-currency credit via the banking system (directed and nondirected); foreign-currency credit out of earmarked deposits with commercial, mortgage, and financial investment banks; credit from abroad; and private bonds. Excludes fuel credit.

SOURCE: Bank of Israel.

**Table 7.A15**  
**Securities Held by the Public, 1988–90**

	Market price			Percent of total			Annual change, percent		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
<b>Tradable bonds</b>									
Held by commercial banks	5,804	8,833	10,011	21.6	21.3	20.4	35.2	26.1	-3.6
Held by Bank of Israel	755	1,136	1,419	2.8	2.7	2.9	40.4	24.7	6.2
Held by social insurance funds	12,259	22,568	26,795	45.7	54.4	54.6	74.4	52.5	0.9
Held by the public (residual)	8,021	8,928	10,860	29.9	21.5	22.1	11.5	-7.8	3.4
<b>Total</b>	<b>26,839</b>	<b>41,465</b>	<b>49,083</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>40.9</b>	<b>28.0</b>	<b>0.7</b>
<b>Shares and convertible securities</b>									
Held by commercial banks <sup>a</sup>	1,196	1,626	1,964	13.1	10.1	9.1	7.0	12.6	2.7
Bank shares converted to savings schemes	404	419	0	4.4	2.6	0.0	-77.7	-14.1	-100.0
Held by social insurance funds	333	665	1,418	3.6	4.1	6.6	-64.1	65.3	81.3
Held by the public (residual)	7,200	13,443	18,249	78.8	83.2	84.4	-44.9	54.7	15.4
<b>Total</b>	<b>9,133</b>	<b>16,153</b>	<b>21,631</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>-57.9</b>	<b>46.5</b>	<b>13.9</b>

<sup>a</sup> This item may be overstated because of double counting due to classification problems.

SOURCE: Tel Aviv Stock Exchange and Bank of Israel.

**Table 7.A16**  
**Security Issues and Capital Formation Estimate, 1987-90**

(NIS million)

	Public sector								Private sector			
	Tradable bonds <sup>a</sup>				Nontradable bonds				Total net borrowing	Bond issues <sup>b</sup>	Shares and convertible securities	Total net borrowing
	Volume of issues	Redemptions	Open market operations	Treasury bills	Net borrowing	Saving schemes	Provident funds	Total				
1987	3,725.7	1,133.1	63.4	770.0	3,426.0	-2,652.5	-1,002.7	-3,655.2	-229.2	1,043.2	397.9	1,441.1
1988	7,141.8	2,551.6	-113.7	-316.7	4,159.8	-2,840.0	-731.3	-3,571.3	588.5	1,020.1	173.3	1,193.4
1989	5,949.5	3,377.6	1.7	798.9	3,372.5	632.3	-841.9	-209.6	3,162.9	874.3	693.3	1,567.6
1990	4744.3	3775.0	-36.2	-213.1	720.0	-3245.1	-1384.8	-4629.9	-3909.9	1093.1	723.5	1,816.1
January	222.0	79.1	0.0	-259.3	-116.4	-98.3	174.3	76.0	-40.4	77.4	72.4	149.8
February	55.4	102.4	0.0	-16.1	-63.1	-153.0	10.5	-142.5	-205.6	138.7	65.7	204.4
March	46.4	130.4	-4.3	202.4	114.1	-157.5	32.4	-121.1	-11.0	251.3	54.5	305.8
April	173.6	205.0	-2.0	-56.4	-89.8	-168.6	-110.5	-279.1	-368.9	41.4	38.0	79.4
May	408.4	486.6	-4.4	-181.5	-264.1	-265.9	-348.4	-614.3	-878.4	153.2	59.6	212.8
June	514.0	304.9	0.2	-66.6	142.6	-157.2	-7.4	-164.6	-22.0	116.4	17.9	134.3
July	500.5	352.0	0.4	79.2	228.1	-152.7	-118.6	-271.3	-43.2	55.8	55.7	111.5
August	506.1	280.4	-4.3	-90.1	131.3	-138.8	-219.3	-358.1	-226.8	101.5	51.2	152.7
September	267.2	209.9	-11.2	31.7	77.8	-587.7	43.7	-544.0	-466.2	0.0	227.6	227.6
October	790.7	501.5	-2.6	25.9	312.5	-787.7	-245.6	-1024.3	-711.8	100.0	32.2	132.2
November	893.6	340.1	-3.1	-18.4	531.9	-324.9	-187.9	-512.8	19.1	57.4	48.2	105.6
December	366.4	782.7	-4.9	136.4	-284.8	-261.8	-408.0	-669.8	-954.6	0.0	0.0	0.0

<sup>a</sup> Includes bonds issued to commercial banks and social insurance funds, does not include turnover in Bank of Israel trading portfolio.

<sup>b</sup> Includes receipts from realization of options.

SOURCE: Bank of Israel Monetary Department.

**Table 7.A17**  
**Real Overall Rate of Return on Listed Shares, 1987–90<sup>a</sup>**

(index, December 1988 = 100)

	CPI	Commercial banks	Insurance companies	Mortgage banks	Financial institutions	Investment companies	Industry	Trade and services	Land, construction, development
1987	56.0	62.7	52.3	41.4	59.9	67.9	70.1	73.7	54.7
1988	56.8	72.2	40.9	42.6	64.9	53.7	58.6	52.5	39.5
1989	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1990									
I	97.5	99.2	87.9	98.9	97.9	95.5	96.2	94.0	94.0
II	123.2	109.3	104.1	106.7	104.3	124.7	122.0	119.0	124.4
III	108.8	105.6	91.3	104.7	104.8	108.4	108.2	103.9	107.4
IV	115.1	108.8	98.6	107.5	102.6	124.8	120.0	100.7	110.0
1990 <sup>b</sup>	-2.3	-7.6	-16.3	-8.7	-12.8	6.0	1.9	-14.5	-6.6

<sup>a</sup> End-of-period, deflated by end-of-month CPI.

<sup>b</sup> Percent change during the year.

SOURCE: Tel Aviv Stock Exchange.

**Table 7.A18**  
**Real Overall Rate of Return of Listed Securities, 1987-90<sup>a</sup>**

(index, December 1988 = 100)

	Bonds		Shares and convertible securities	
	Foreign currency	CPI-indexed	Commercial banks	Nonbank shares
1987	85.7	81.4	87.9	88.4
1988	88.7	85.2	85.6	60.7
1989	100.0	100.0	100.0	100.0
1990	89.2	94.4	92.4	99.4
January	95.9	98.6	97.5	97.8
February	96.5	96.0	96.5	94.1
March	95.5	97.1	95.7	93.6
April	94.3	96.7	97.1	99.2
May	96.2	97.7	96.3	107.8
June	97.6	100.3	101.0	116.5
July	95.4	100.8	100.0	125.2
August	95.0	101.9	96.3	108.8
September	91.1	100.9	92.6	96.1
October	88.5	100.8	94.0	104.2
November	87.5	97.2	92.3	102.3
December	89.2	94.4	92.4	99.4
<i>Real overall rate of return, percent</i>				
1990	-10.8	-5.6	-7.6	-0.6
1st half	-2.4	0.3	1.0	16.5
2nd half	-8.6	-5.9	-8.5	-14.7

<sup>a</sup> Deflated by CPI (adjusted to end of month).

SOURCE: Based on stock exchange data.

**Table 7.A19****Real Net Yield to Maturity of CPI-Indexed Bonds, 1989-90<sup>a</sup>**

(percent)

Years to maturity	New issues <sup>b</sup>			Secondary market	
	5	10	Private bonds	3-5	9-10
1989					
I		1.86	3.08	0.93	1.80
II		1.47	1.71	0.38	1.53
III	0.97	1.44	2.12	0.14	0.81
IV	0.34	0.38	2.12	-0.45	-0.07
1990					
I	1.11	1.24	2.55	0.22	0.66
II	0.60	1.20	2.87	-0.05	0.36
III	1.49	0.69	1.84	-0.65	0.05
IV		1.24		-0.19	0.81
1990					
January	1.01	0.98	2.69	-0.06	0.44
February	1.21	1.34	2.41	0.41	0.88
March		1.39	2.84	0.31	0.66
April	0.80	1.13	3.12	0.00	0.53
May	0.61	1.25	2.91	0.15	0.46
June	0.40	1.21	2.74	-0.30	0.10
July	0.60	0.35	1.43	-0.56	-0.02
August	1.06	0.93	2.06	-0.59	0.20
September	2.80	0.78		-0.81	-0.03
October		0.89		-1.37	0.29
November		1.45		0.10	0.70
December		1.39		0.69	1.43

<sup>a</sup> Average of end-week yields of government bonds, calculated according to *ex post* CPI corrected for indexation loss at maturity.

<sup>b</sup> Five-year bond rates in 1988 are for fully indexed bonds; none of these were issued in the first half of 1989 and, starting in July, they were replaced by a bond that is not indexed during its first year. Ten-year bonds are fully indexed.

SOURCE: Bank of Israel.

Table 7.A20

## Market Value of Listed Shares and Convertible Securities, 1990

	Market value, end of year <sup>a</sup>			New issues		Issues as percent of of total value <sup>c</sup>
	NIS million	Percent of total	Percent change <sup>b</sup>	NIS million	Percent	
Commercial banks <sup>d</sup>	3,281	15.2	-6.9	1.2	7.3	0.2
Mortgage banks	928	4.3	19.5	0.0	0.0	0.0
Investment finance banks	387	1.8	0.6	0.0	0.0	0.0
Insurance companies	791	3.7	-11.7	2.3	13.8	1.7
<i>subtotal: Financial sector</i>	<b>5,387</b>	<b>24.9</b>	<b>-3.4</b>	<b>3.5</b>	<b>21.1</b>	<b>0.4</b>
Trade and services <sup>e</sup>	3,314	15.3	125.2	30.8	183.4	13.0
Real estate etc. <sup>f</sup>	2,593	12.0	-13.2	5.7	33.8	1.3
Industry	6,356	29.4	10.1	30.0	178.3	3.4
Investment and holding companies <sup>g</sup>	3,481	16.1	23.7	25.8	153.3	6.1
<b>Total</b>	<b>21,631</b>	<b>100.0</b>	<b>13.9</b>	<b>100.0</b>	<b>594.6</b>	<b>3.3</b>

<sup>a</sup> Excludes bonus shares, convertible bonds, noncash issues, and newly listed shares issued in previous years.

<sup>b</sup> During 1989.

<sup>c</sup> At beginning-of-year prices (monthly deflation).

<sup>d</sup> Including bank holding companies.

<sup>e</sup> End-of-year market value includes Bezeq-Israel Telecommunication Corp.

<sup>f</sup> Real estate, construction, development, citrus.

<sup>g</sup> Including oil exploration companies.

SOURCE: Tel Aviv Stock Exchange and Bank of Israel.

**Table 7.A21**

**Mean and Standard Deviation of Selected Rates of Return, 1988-90**

(percent)

	Average yield during period (monthly rate)					Standard deviation <sup>a</sup>			
	1988	1989	1990			1988	1989	1990	
			1st half	2nd half	Total			1st half	2nd half
Demand deposits <sup>b</sup>	-1.40	-1.43	-1.37	-1.33	-1.42	0.74	0.62	0.41	0.48
SROs (CDs) <sup>c</sup>	-0.34	-0.51	-0.33	-0.25	-0.40	0.66	0.50	0.42	0.47
Dollar-denominated resident deposits									
Demand	0.02	-0.70	-0.99	-0.36	-1.63	4.01	2.57	1.46	1.35
Time	0.30	-0.40	-0.82	-0.12	-1.52	4.03	2.58	1.45	1.37
Restitutions <sup>d</sup>	-0.52	-0.07	0.29	0.27	0.32	3.60	3.76	2.01	1.00
CPI-indexed bonds	0.39	1.37	-0.46	0.07	-0.99	1.46	2.61	2.20	1.90
All shares	-1.24	3.41	0.02	2.27	-2.23	2.36	3.89	3.84	6.75
Bank shares	-0.20	1.38	-0.63	0.20	-1.46	1.98	4.18	3.07	2.45
Nonbank shares	-2.80	4.36	0.22	2.70	-2.26	7.62	5.17	4.42	7.63

<sup>a</sup> Standard deviation for 12 months preceding end of stated period.

<sup>b</sup> Includes nominal interest from August 1984.

<sup>c</sup> High intercustomer variance.

<sup>d</sup> Time deposits denominated in DM.

SOURCE: Based on Central Bureau of Statistics data.

**Table 7.A22**  
**Mutual Fund Operations, 1988-90**

	(end of period)			
	1988	1989	1990	
			First half	Second half
Mutual fund assets (NIS million)	3,895.8	7,093.7	8,323.9	8,262.6
<i>Percent</i>				
Real annual overall rate of return	-4.2	14.7	8.8	-14.3
Standard deviation of real monthly rate of return <sup>a</sup>	2.0	1.8	2.1	2.4
Mutual fund assets/total tradable assets <sup>b</sup>	12.7	16.2	16.3	14.5
Local-currency denominated bonds	43.1	55.2	50.4	49.8
Foreign-currency denominated assets	7.3	10.3	9.8	9.3
<i>of which</i> Arrangement bank shares	22.1	31.4	36.8	27.9
Nonbank shares	9.2	11.4	12.4	11.4
Unindexed assets	5.7	7.2	8.0	6.2
Composition of portfolio				
CPI-indexed bonds	50.0	48.2	44.8	47.1
Foreign-currency denominated assets	23.7	20.8	17.9	16.4
<i>of which</i> Arrangement bank shares	16.0	12.9	11.0	10.7
Nonbank shares	14.4	19.6	24.3	24.7
Unindexed assets	11.8	11.4	12.9	11.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<sup>a</sup> Standard deviation for 18 months preceding end of stated period.

<sup>b</sup> Tradable assets comprise unindexed assets, tradable bonds held by the public, foreign-currency deposits, shares, convertible securities, as defined in Table 7.A11.

SOURCE: Bank of Israel Research and Monetary Departments.

**Table 7.A23**  
**Composition of Social Insurance Fund Portfolio, 1987-90**

	(percent, end of year)			
	1987	1988	1989	1990
Special bonds issued to social insurance funds	63.0	52.0	39.0	36.7
Tradable government bonds	20.0	32.0	42.0	41.5
Arrangement bank shares	2.0	0.3	0.3	0.3
Private bonds	4.0	6.0	8.0	8.6
Nonbank shares	0.6	0.7	1.1	2.9
Indexed deposits	5.0	5.0	4.0	5.4
Loans to members	0.3	0.3	0.1	0.1
Other loans	1.0	0.7	0.6	0.5
Other assets	4.1	3.0	4.9	4.0
Total	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Total (NIS billion)	23.1	30.5	44.8	53.5

SOURCE: Ministry of Finance.

**Table 7.A24**  
**Social Insurance Funds: Required and Actual Investment in Government Securities, 1983-90**

	(percent, end of year)		
	Pension	Providence and severance pay	Study
<b>Minimum requirement</b>			
1983 <sup>a</sup>	92	92	92
1987 <sup>a</sup>	92	78	78
1988	93	78	78
1989	93	72	72
1990	93	50	50
<b>Actual investment</b>			
1987	92	85	88
1988	94	84	86
1989	93	81	82
1990	93	78	79

<sup>a</sup> Recognized investment requirement, consisting of shares (up to 10 percent) and approved private securities (in 1987 this applies only to pension funds).

SOURCE: Bank of Israel.

## APPENDIX B: ACTIVITIES OF THE MONETARY DEPARTMENT

### Structural changes in the money market

The Bank of Israel continued to increase competition on the money market, the object being to reduce intervention in the operation of financial instruments and increase reliance on market forces. Steps were also taken to deregulate sources of unrestricted credit and increase its availability. The following measures were introduced:

1. Reserve ratios on unindexed local-currency deposits were reduced from an average of 12 percent at end-1989 to about 9 percent at end-1990, thus bringing them closer to the level required by prudent liquidity management.

2. The regulations concerning CPI and exchange-rate indexed deposits were changed: the indexation component was removed from the liquidity ratio, the ratio itself was reduced to a level similar to that of prudent liquidity management, and the term limitations were reduced; the following changes were also made regarding foreign-currency deposits:

- The compulsory investment (15 percent, in indexed government bonds) for long-term indexed deposits was cancelled, and an unindexed liquidity ratio was set at 5 percent of the balance of the principal in this deposit. The restriction on the use of loanable funds from this deposit for granting CPI-indexed credit only was lifted. The minimum term of a long-term indexed deposit was also reduced from an average of 30 months to 12.

- The 60 percent exchange-rate indexed component of the liquidity ratio on exchange-rate indexed time deposits was cancelled; a local-currency liquidity requirement of 7.5 percent was retained for 1-year deposits, and of 5 percent for those of more than a year. The minimum term was reduced from 1 year to 6 months.

- The reduction of interest on resident deposits continued; in addition, early-withdrawal penalties were abolished, in order to encourage depositors to move out of this category—on which the liquidity requirement is 100 percent and whose terms are in effect set by the central bank.

- A foreign-exchange resident deposit was introduced for exporters of goods and services; the reserve ratio on it bears no interest and is 8 percent on demand deposits and 4 percent on time deposits.

3. The following steps were taken to increase the availability of nondirected credit:

- The foreign-currency credit ceilings and directed credit arrangements were cancelled.
- The minimum term for credit obtained directly from abroad was reduced from 18 to 6 months. Israeli banks were permitted to guarantee credit granted to Israeli residents by banks abroad.

- Arrangements for issuing commercial papers were completed.

**Table 7.B1**  
**Reserve Requirements on Local-Currency Deposits**

	(percent)		
	Total	Bracket 1	Bracket 2
<i>28.12.1989</i>			
Unindexed deposits			
1 to 6 days	15	8	7
1 week to 3 months	10	4	6
3 months to 1 year	7.5	2	5.5
1 year or more	5	1	4
Exchange-rate indexed deposits			
1 year or more <sup>a</sup>	7.5	1	6.5
<i>26.4.1990</i>			
Unindexed deposits			
1 to 6 days	10	8	2
1 week to 3 months	7.5	4	3.5
3 months to 1 year	5	2	3
1 year or more	3.5	1	2.5
Exchange-rate indexed deposits			
1 year or more <sup>a</sup>	5	1	4
Long-term indexed deposit <sup>b</sup>	5	1	4
<i>27.9.1990</i>			
Unindexed deposits			
1 to 6 days	10	8	2
1 week to 3 months	7.5	4	3.5
3 months to 1 year	5	2	3
1 year or more	3.5	1	2.5
Exchange-rate indexed deposits			
6 months to 1 year	7.5	2	5.5
1 year or more <sup>a</sup>	5	1	4
Long-term indexed deposit <sup>b</sup>	5	1	4

<sup>a</sup> Until 25.4.90, the reserve ratio on deposits subject to income tax ceiling was 67.5; an indexed deposit with the Bank of Israel could be held in lieu of 60 percentage points of this amount.

<sup>b</sup> Until 26.9.90, average term of at least 30 months; from 27.9.90, average term of at least 12 months. Until 27.12.89, the requirement was 15 percent held in indexed government bonds; 28.12.89–31.1.90, 10 percent in indexed government bonds plus a 2 percent unindexed deposit with the Bank of Israel; 1.2.90–28.2.90, 5 percent in indexed government bonds plus a 4 percent unindexed deposit with the Bank of Israel; from 1.3.90, 5 percent unindexed deposit with the Bank of Israel.

### **New policy instruments**

Several changes were made in the structure and operation of the discount-window loans: 1-month discount-window loans, auctioned to the public, were introduced in June 1990, and daily loans were auctioned to banks (in December 1990).

**Table 7.B2**  
**Discount-Window Lending: Quotas, by Interest**  
**Bracket,<sup>a</sup> December 1989–April 1991**

(NIS million, monthly average)					
Interest bracket	12	13	14	15	16
1989					
December	669	615	615	669	0
1990					
January	669	669	669	669	0
February	334	334	1,338	669	0
March	*	*	1,253	1,253	0
April	*	911	911	911	911
May	*	911	911	911	911
June	*	955	955	955	955
July	*	955	956	478	478
August	*	958	958	479	479
September	*	934	934	467	467
October	*	937	937	702	468
November	*	940	940	473	473
December	*	725	725	363	363
1991					
January	*	544	544	544	363
February	*	363	363	363	363
March	*	387	387	387	387
April	387	387	387	387	387

<sup>a</sup> Interest brackets above 16 percent were not utilized in 1990. Interest rates are annualized (compounded quarterly). Asterisk indicates cancelled.

The addition of new instruments to those offered enabled the Bank of Israel to reduce the proportion of discount-window loans under quota, for which it determines interest rates and the distribution of the amount available. Each instrument fulfills a specific purpose, moreover: the auction to the public is meant to strengthen the link between monetary policy and interest on credit to the public, and to separate the interest component on credit from the risk component and other charges taken by commercial banks. This strengthens the customer's bargaining position in determining the additional interest. The object of the daily auction is to make monetary policy more flexible, and to influence interest on the money market on an ongoing basis.

The Bank of Israel issued 3-month foreign-exchange options. In mid-1990, 1-year foreign-exchange options which can be exercised every 3 months were also issued. One-year options are issued once a week, and 3-month options 4 times a week. Their purpose is to encourage futures markets and implement a policy of helping unindexed local-currency interest cope with speculative capital movements. The exchange-rate band was widened from  $\pm 3$  percent to  $\pm 5$  percent in 1990 for the same purpose.

Table 7.B3

## Discount-Window Lending: Utilization, December 1989–April 1991

(NIS million, monthly average)

	Quota	Auction			Total
		To the public	Weekly	Daily	
1989					
December	2,492		1,200		3,692
1990					
January	3,014		1,500		4,514
February	3,516		1,500		5,016
March	3,634		1,500		5,134
April	2,775		1,500		4,275
May	1,692		1,500		3,192
June	1,700	69	1,441		3,210
July	1,826	200	1,400		3,426
August	1,692	396	1,600		3,688
September	2,500	557	1,750		4,807
October	2,213	734	1,750		4,697
November	1,490	877	1,650		4,017
December	837	979	1,850		3,666
1991					
January	830	1,000	640	194	2,664
February	436	904	650	617	2,607
March	172	896	750	182	2,000
April	305	904	0	236	1,445

The following steps were taken to increase the flexibility of the Bank of Israel's open-market operations in both Treasury bills and other securities:

1. Treasury bills may be redeemed at their clearing-day value and not only at that of the following day, as was the case till now. The object of this is to equalize the terms of Treasury bills and of securities and deposits, which are cleared at their clearing-day value, and to increase competition between them.

2. Auctions were held for future purchases of Treasury bills. Through an auction held at the beginning of each month, the Bank of Israel undertakes to purchase specific series of Treasury bills at mid-month. The purpose of this instrument is to encourage firms to invest in Treasury bills and smooth out intra-monthly fluctuations in local-currency interest rates arising from regular intra-monthly shifts in the government injection.

3. In order to reduce interest-rate swings, the Bank of Israel renewed its intervention in the bond market, albeit on a small scale.

**Table 7.B4**  
**Discount-Window Lending: Cost,<sup>a</sup> December 1989–April 1991**

(monthly average)

	Quota	Auction				Total <sup>c</sup>
		To the public		Weekly	Daily	
		Cost to bank	Cost to customer <sup>b</sup>			
1989						
December	13.6			15.5		14.2
1990						
January	13.9			17.0		14.9
February	14.7			17.8		15.6
March	15.1			17.2		15.7
April	13.8			15.3		14.3
May	13.5			13.8		13.7
June	13.5	14.3	17.3	13.5		13.5
July	13.4	14.0	15.5	14.4		13.9
August	13.3	13.7	15.4	14.3		13.8
September	14.0	15.2	17.7	16.0		14.9
October	13.7	14.8	17.3	15.0		14.3
November	13.3	14.5	16.5	13.9		13.8
December	13.2	14.2	16.6	13.1		13.4
1991						
January	13.3	14.4	17.2	13.6	13.8	13.8
February	13.7	14.5	16.8	13.6	13.3	13.9
March	13.0	13.3	16.5	12.6	12.6	13.0
April	12.2	12.3	14.8		12.4	12.3

<sup>a</sup> Annualized (compounded quarterly).

<sup>b</sup> Including commissions etc.

<sup>c</sup> Average interest on auctioned loans. Does not include commission on loans to the public.

Interest rate on banks' local-currency deposits with the Bank of Israel—percent of required reserve (surplus reserve): until 14.2.1990, 10.0 (6.0); from 15.2.1990, 12.5 (6.0); from 28.3.1991, 11.5 (6.0).

**Table 7.B5**  
**Open-Market Operations (Treasury Bills), 1986-90**

(NIS million)

	Sale	Redemption	Net absorption	Holdings <sup>a</sup> of		Daily average turnover
				The public <sup>b</sup>	Banks	
1986	1,006.0	1,006.1	-0.1	158.7		10.3
1987	3,907.4	3,338.3	569.1	828.5	311.8	20.9
1988	2,270.9	2,654.7	-383.8	636.8	208.1	39.7
1989	3,273.8	2,445.1	828.7	1,703.6	672.8	20.0
1990	3,578.1	3,311.8	266.3	2,158.0	531.3	23.0
January	200.1	425.5	-225.4	1,499.0	566.1	18.3
February	234.1	217.8	16.3	1,527.0	537.3	12.8
March	358.9	132.6	226.3	1,788.0	672.5	29.1
April	208.2	234.7	-26.5	1,789.0	628.4	17.5
May	233.1	383.8	-150.7	1,659.0	494.8	18.7
June	321.1	352.0	-30.9	1,647.0	392.7	20.7
July	407.5	278.7	128.8	1,810.0	417.4	21.9
August	256.4	302.1	-45.7	1,764.0	605.6	30.4
September	280.3	196.6	83.7	1,870.0	577.5	24.0
October	313.0	230.0	83.0	1,991.0	572.4	25.8
November	254.4	233.3	21.1	2,045.0	500.3	22.8
December	511.0	324.7	186.3	2,158.0	531.3	33.6

<sup>a</sup> End of period.

<sup>b</sup> Including banks. The December 1990 figure does not include NIS 145 million repaid on 2.1.1991.

**Table 7.B6**  
**Yield to Maturity of Treasury Bills, by Months to Maturity, 1986-90<sup>a</sup>**

(percent)

	0-1	1-2	2-3	3-4	4-5	5-6	7-9	10-12
1986	21.5	21.6	22.0					
1987	15.4	15.9	16.6					
1988	16.3	16.7	17.0	17.2	17.4	17.7		
1989	13.3	13.1	13.1	13.1	13.3	13.6	14.0	14.1
1990	15.7	15.7	16.2	16.5	16.9	17.0	17.6	16.3
January	17.5	17.0	17.1	17.6	17.9	18.0	18.3	18.7
February	18.3	17.8	18.3	18.5	18.7	19.0	19.7	20.1
March	18.1	18.2	18.2	18.3	18.5	18.5	18.5	18.7
April	15.9	15.7	15.7	15.8	15.9	16.0	16.1	16.3
May	14.8	14.7	14.6	14.7	14.8	14.8	15.3	15.3
June	14.1	14.4	14.4	14.5	14.7	14.8	15.3	15.5
July	14.2	14.4	14.5	14.5	14.7	15.1	16.0	16.3
August	16.1	16.1	16.5	16.6	17.0	17.1	18.1	17.9
September	16.0	16.3	16.8	17.5	18.4	18.6	19.6	19.5
October	15.7	15.5	17.1	17.8	18.8	18.8	19.2	19.3
November	14.4	14.7	15.5	16.1	16.7	16.8	17.4	17.5
December	13.4	14.1	15.5	16.5	16.8	16.9	17.5	

<sup>a</sup> Thursday averages.

BANK OF ISRAEL

THE GOVERNOR AND MANAGEMENT

May 31, 1991

*Governor*

MICHAEL BRUNO

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DAVID KLEIN, Senior Director, Monetary Operations and Foreign Exchange Control

ITZHAK RAHAV, Director General

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and Head of Comptroller's Office

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