Chapter 7
Money and Capital Markets

1. MAIN DEVELOPMENTS

The three-year downtrend of interest rates was checked in 1991. Nominal and real interest rates on unindexed local-currency transactions—on which current monetary policy has its strongest and most immediate effect—remained at their average 1990 level. At the same time the average yield to maturity of government bonds rose to above the 1989 level (Tables 7.3, 7.4), a rise induced by the government borrowing which accompanied the rise in private investment demand.

One would expect money demand to be correlated with economic activity and in fact the average money supply (M1) expanded at a rate similar to nominal GDP in 1991 (28 and 29 percent, respectively). However, there were sharp fluctuations in the public's desired portfolio, which were reflected in the behavior of M1 during the year: it grew rapidly in the first quarter, returned to the GDP trend line in the second and third, and declined substantially in the fourth; this decline coincided with increased foreign-exchange purchases and a marked rise in interest rates. Average M2 and M2* and short-term bank credit also rose along with GDP (Table 7.1), a pattern reinforced by the stability (on annual average) of local-currency interest rates. Current monetary policy was to stimulate economic activity so long as there was no danger of a run on the reserves, and the development of the monetary aggregates is a reflection of this policy.

The movement of local-currency interest rates was uneven during 1991. In the first three quarters, the Bank of Israel maintained the fairly low nominal level of 1990:IV in order to moderate the rise in long and medium-term interest rates and to support the rise in investment. In October 1991, the Bank allowed interest rates to rise appreciably, in response to the rise in foreign-exchange purchases of September–October, which was induced by the expectation that redemption of the Arrangement bank shares at the end of October would be followed by devaluation. Once the bank shares were bought in, and there was no devaluation, foreign-exchange purchases diminished to well below what was needed to finance the deficit on current account. Interest rates were kept fairly high in November and most of December, in order to stimulate foreign-exchange conversion and because it was felt that devaluation expectations had not died down completely. In mid-December the exchange-rate mechanism was revised—periodic realignment of the midpoint rate was replaced by daily realignment at a constant, predetermined rate; at the same time the midpoint rate was raised by 3 percent. As a result, and reinforced by the

Table 7.1
The Principal Monetary Aggregates, 1988–91[a]

(percent change, annual rate)

					Credit			
	M1	M2*	M2	M3	Unindexed local-currency	Short-term foreign	Total	Foreign reserves[b]
Average								
1988	33	29	28	20	34	–2	19	0
1989	26	15	17	19	34	32	33	19
1990	27	25	25	23	34	4	24	–1
1991	28	32	35	28	26	29	27	53
1990								
I	9	25	22	19	22	–4	14	–25
II	31	43	45	39	11	52	22	101
III	46	24	24	27	52	–15	28	–17
IV	17	38	42	26	37	39	37	42
1991								
I	59	81	84	60	9	58	21	146
II	11	4	6	9	19	77	35	181
III	29	15	11	7	41	–13	22	–32
IV	–14	2	21	24	33	–19	16	–40
During period								
1988	14	4	4	8	48	3	31	–35
1989	37	31	35	29	27	25	26	51
1990	30	37	38	31	29	22	27	31
1991	15	20	27	24	24	9	20	21
1990								
I	20	32	29	27	11	24	15	49
II	22	39	42	38	25	26	25	40
III	61	21	19	22	59	–12	34	11
IV	20	58	64	36	25	63	34	29
1991								
I	61	62	65	52	–1	98	22	351
II	2	–7	–8	–2	37	11	28	3
III	40	23	22	12	50	–3	32	–7
IV	–23	12	41	41	18	–35	1	–50

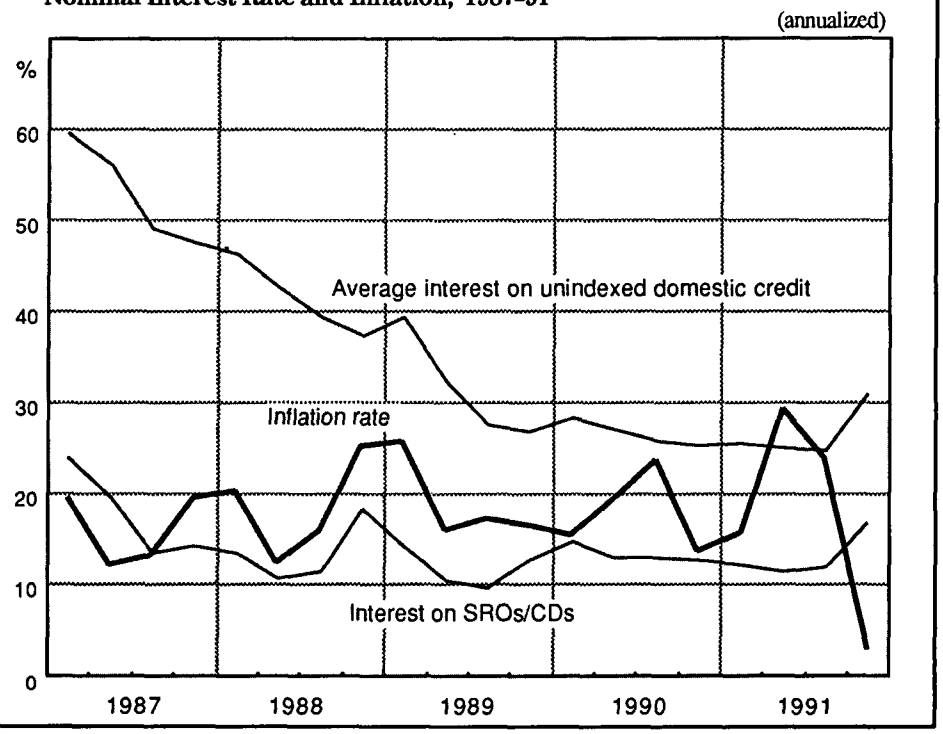
[a] M1 = currency in circulation and demand deposits; M2* = M1 + interest-bearing local-currency deposits; M2 = M2* + Treasury bills; M3 = M2 + foreign-currency denominated deposits. Averages show the change over preceding period average; change during period is the change from last month of period over last month of preceding period.

[b] Foreign aid, usually received in October and November, has been spread evenly over the year.

high interest rates, capital imports accelerated. In view of this and in the context of the slack economy and the marked reduction in the rate of price increase in the last four months of 1991, the Bank of Israel acted in early 1992 to reduce nominal local-currency interest rates to a level substantially below that of 1990–91.

The exchange rate and prices also moved unevenly during the year. Most of the exchange-rate adjustment occurred in March–May 1991; at a time when there was a shift from unindexed local currency to other financial assets, this induced an exceptionally steep rise in prices in the second and third quarters.[1] As a result, devaluation expectations built up at the end of October—after redemption of the bank shares (which had in effect become dollar-linked government bonds by virtue of the Arrangement). Any attempt to check foreign-exchange purchases by adjusting the exchange rate to the out-of-line price movements could well have pushed the price level out of control; that is, inflation would

Figure 7.1
Nominal Interest Rate and Inflation, 1987–91[a]



[a] For definition of interest rates, see Table 7.3. Inflation rate calculated from 2-month moving average of CPI.

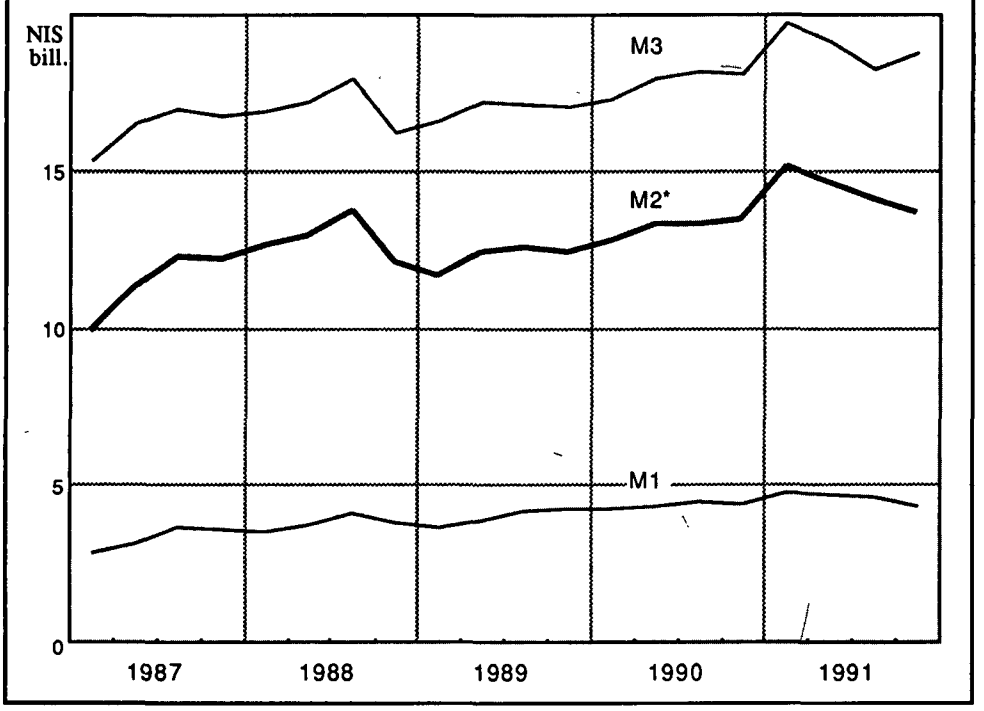
have moved to a higher plateau. The Bank of Israel therefore moderated the foreign-exchange purchases by refraining from meeting the entire incremental demand for credit. Thus during 1991 as a whole, the exchange rate and the price level rose by 11 and 18 percent respectively, or at about the average rate of previous years (see Table 7.3).

The money and capital markets were affected by a number of factors in 1991: (a) the influx of immigrants from the former Soviet Union, which tended to increase the expect-

[1] According to the CPI. The exceptional price rise actually occurred in the second quarter (on the statistical problem affecting the CPI, see Chapter 3).

ed return on capital and the demand for housing and other investment (chiefly in the first three quarters); (b) the government's domestic deficit and domestic borrowing, which rose, as did its involvement in financial intermediation; among other things, this increased the reliance of private firms on financial institutions (and, evidently, also on foreign sources), at the expense of the primary bond market; (c) the Gulf War and the events preceding it, which caused cyclical changes in expected yields and portfolio composition; (d) the redemption of the Arrangement bank shares; this was due in October 1991 and the government anticipated it by borrowing in excess of current deficit needs in

Figure 7.2
Monetary Aggregates, 1987-91[a]



[a] Average quarterly balances at December 1988 prices. For definition of aggregates, see Table 7.1.

the preceding six months, while the public stepped up its foreign-exchange purchases in September and October; (e) interest-rate and exchange-rate policy (see below).

Immigration increased the expected return on capital and hence the demand for capital goods. This was reflected in a substantial rise in nonbank share prices (which in turn reflects, at least in part, a rise in the market price of the stock of producer durables) and in apartment prices (Table 7.3). This trend started in 1989, when it was due to the substantial decline in interest rates and—to some extent—to the reduction in the compulsory investment requirement for social insurance funds. It was arrested in the second

Table 7.2
Monetary Assets, 1988–91

(annual rate of change, percent)

	Currency in circulation	Deposits			Treasury bills	Tradable bonds
		Demand	Time[a]	Resident[b]		
Monthly average						
1988	35	32	27	–3	23	9
1989	23	28	10	18	72	42
1990	25	29	25	9	15	25
1991	28	28	34	–16	72	32
1990						
I	2	14	34	7	–17	–1
II	32	30	49	19	83	19
III	37	53	14	23	22	36
IV	22	14	49	–31	105	19
1991						
I	61	58	93	–31	116	–24
II	13	10	1	–9	42	100
III	15	40	9	–27	–29	50
IV	1	–24	10	13	572	202
During period						
1988	24	6	0	19	7	18
1989	33	41	28	4	133	37
1990	24	34	40	–2	48	17
1991	17	13	22	–14	115	65
1990						
I	4	36	38	24	–6	3
II	31	16	47	19	103	34
III	37	82	5	14	–3	25
IV	29	14	81	–45	157	9
1991						
I	56	64	63	–19	101	–16
II	5	–1	–11	–10	–15	115
III	20	58	15	–31	13	60
IV	–3	–36	33	7	1,000	160

[a] Including SROs. See note to Table 7.1.
[b] Foreign-currency denominated.

half of 1990 because of the Gulf crisis, but revived and intensified when the Gulf War ended in February 1991. The increase in the expected return on capital was expressed in a substantial expansion of private investment (dwelling and nondwelling), which began in 1990 and gathered momentum in the first three quarters of 1991.

The domestic budget deficit (cash basis) rose to 6.4 percent of GDP in 1991 (Table 7.6), reflecting among other things the fact that immigration entails increased govern-

ment outlays. At the same time, credit to the private sector rose substantially, to 2.1 percent of GDP.[2] Most of the credit went to housing and agriculture. Including lending, the domestic budget deficit came to 8.5 percent of GDP in 1991, and gross borrowing (excluding resident deposits and Treasury bills) came to 5.5 percent of GDP. Except in 1989, such ratios have not occurred since the 1985 Economic Stabilization Program (ESP), and they reflect a considerable increase in the government's market involvement. The increase in government borrowing and lending reduces the cost of capital to sectors benefiting from credit subsidies, but increases it for others. Thus it reduces the efficiency of resource allocation and the composition of investment, and constitutes retreat from the goals of capital-market reform.

The increase in the domestic budget deficit was accompanied by increased pressure on private investment funding. One indicator of this pressure is net borrowing (excluding resident deposits and Treasury bills), which rose from 1.6 percent of GDP in 1990 to 3.3 percent in 1991. The volume of net borrowing was not exceptionally high, but in view of the marked increase in private investment demand, it tended to raise the yield to maturity of government bonds, thereby contributing to the increase in the cost of capital to the private sector.

The public's increased demand for shares induced a substantial increase in the volume of share issues, along with a substantial decline in private bond issues, so that the total volume of private capital raised in the primary markets remained at the 1990 level.

The increase in government lending contributed to the substantial growth of long- and medium-term domestic credit via financial institutions. The real balance outstanding of this type of credit, which was stable in 1989–90, rose by 6.7 percent in 1991, reflecting the expansion of both mortgage loans and commercial bank credit. The former also helped to reduce the real interest rate on mortgage loans from 5.4 percent in 1990 to 4.6 percent in 1991, in spite of the rise in the yield to maturity of government bonds.

Firms presumably also increased their investment funding out of internal sources (since business profitability improved[3]) and by raising more capital abroad (in view of increased government borrowing and the decline in world interest rates).

The increase in expected returns on capital and government borrowing was reflected in accelerated real expansion of domestic financial asset holdings, from 2.3 percent during 1990 to 7.7 percent during 1991. The bulk of the increase was in tradable bonds and in stocks (both their volume and their price relative to the CPI). Portfolio composition also changed: the share of indexed bonds, which declined in 1989, rose, as did that of nonbank stocks. At the same time the share of unindexed local-currency assets other than Treasury bills declined somewhat. The share of indexed deposits (including saving schemes) and exchange-rate indexed assets again declined (Table 7.A9).

[2] This ratio, which had declined since the 1985 stabilization program, came to 0.3 percent of GDP in 1989–90.

[3] The increase in profitability emerges from financial reports for the first half of 1991 of companies traded on the stock exchange. For other indications that profitability rose, see Table 2.2.

Table 7.3

Selected Nominal Interest Rates, 1988–91[a]

(percent p.a.)

	Short-term credit to the public						Financial assets of the public			
	Local currency									
	Overdraft facilities	Term credit	Total[b]	Foreign credit[c]	Total[d]	Marginal cost of discount-window loan	CDs and SROs[e]	1-month TBs	Resident deposits[c]	Interest-rate spread[f]
1988	46.2	33.4	41.2	12.4	31.7	20.8	13.4	16.2	6.2	32.9
1989	34.3	26.6	31.2	13.8	33.5	14.5	11.6	13.2	7.3	22.8
1990	29.6	22.5	26.4	10.5	22.7	15.3	13.2	15.2	4.0	16.4
1991	29.9	22.3	26.4	6.9	25.5	15.1	12.9	14.9	0.4	17.0
1990										
I	31.3	23.8	28.1	11.4	26.7	17.4	14.7	18.0	6.2	16.6
II	30.0	22.9	27.0	11.3	24.9	14.7	12.7	14.9	5.2	17.3
III	28.6	22.1	25.6	10.1	20.1	14.7	12.8	15.4	3.2	15.7
IV	28.4	21.4	25.1	9.2	19.3	14.3	12.6	14.5	1.5	15.7
1991										
I	28.7	21.2	25.3	7.8	29.9	13.7	12.0	14.2	0.8	16.6
II	28.2	21.1	24.9	7.0	35.0	12.7	11.3	13.5	0.5	16.8
III	28.2	21.0	24.7	6.7	15.4	14.0	11.8	13.3	0.2	16.3
IV	34.7	26.1	30.8	6.0	22.8	20.3	16.6	18.8	0.0	18.1

[a] For details see Table 7.A5.

[b] Weighted by the volume of credit of the two components.

[c] Nominal interest is weighted period average in dollar terms. Real interest calculated by revaluing nominal interest in accordance with changes in the exchange rate vis-à-vis the dollar and deflated by the CPI during the reporting period. The rates on nondirected foreign-currency credit are posted rates and are generally above the rates actually charged.

[d] Includes directed credit and exchange-rate indexed credit n.e.s.

[e] 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.

[f] The difference between interest rate on overdraft credit and on CDs & SROs.

Table 7.4
Selected Real Interest Rates, 1988–91[a]

(percent p.a.)

	Short-term credit to the public					Marginal cost of discount-window loan	Financial assets of the public			Yield to maturity of government bonds[f]	
	Local currency										
	Overdraft facilities	Term credit	Total[b]	Foreign credit[c]	Total[d]		CDs and SROs[e]	1-month TBs	Resident deposits[c]	5 years	10 years
1988	25.6	14.5	21.3	0.2	13.1	3.7	–2.6	–0.2	5.3	4.1	4.5
1989	11.3	4.9	8.7	14.5	10.6	–5.2	–7.6	–6.2	–8.0	1.7	2.5
1990	10.2	4.2	7.5	–2.6	4.4	–2.0	–3.7	–1.6	–8.3	1.2	1.9
1991	10.0	3.7	7.1	2.9	6.4	–2.5	–4.3	–2.6	1.8	2.1	2.9
1990											
I	17.3	10.6	14.4	10.9	13.1	4.9	2.4	5.3	5.7	1.6	2.1
II	7.3	1.4	4.7	0.8	3.1	–5.4	–7.0	–5.2	–4.7	1.3	1.8
III	4.3	–1.0	1.9	–12.4	–2.6	–7.0	–8.5	–6.4	–17.9	0.7	1.5
IV	12.3	6.2	9.5	–8.0	4.4	0.0	–1.5	0.2	–14.5	1.2	2.3
1991											
I	13.5	7.0	10.6	22.5	14.6	0.3	–1.1	0.8	14.5	2.6	3.3
II	0.9	–4.6	–1.7	27.2	6.3	–11.3	–12.3	–10.6	19.5	2.1	3.2
III	–1.4	–7.0	–4.1	–26.8	–11.3	–12.3	–14.0	–12.8	–31.3	1.4	2.5
IV	29.8	21.6	26.1	–1.7	18.4	16.0	12.4	14.5	14.0	2.2	2.8

[a] Nominal interest deflated by the CPI. For details see Table 7.A5.
[b], [c], [d], [e] See Table 7.3.
[f] Gross yield to maturity in secondary market (for net yield see Table 7.A17).

2. MONETARY DEVELOPMENTS

Monetary developments were dominated by two prominent cycles, reflecting the Gulf crisis and the fact that the Arrangement bank shares were due to be bought in during October 1991. The period covering the last quarter of 1990 to the end of 1991 can be subdivided as follows: September 1990–end of February 1991 (when the Gulf War ended); from then until August 1991; and September–December 1991.

In the first subperiod, as the Gulf crisis escalated, there were mounting fears of Israeli involvement in war. If this had happened, the budget deficit and government domestic borrowing would probably have increased substantially, and it would probably have deterred immigration and hence damped down housing construction and economic activity. In this period a variety of estimates of capital imports required for funding investments and immigrant absorption were mooted, giving rise to a public debate on Israel's capacity to obtain the necessary funds. In addition, it was announced in September 1990 that in 1991 social insurance funds and cooperative societies would have to pay tax of 20 percent on real interest income (this was not approved by the Knesset).

These factors tended to depress expected bond yields and returns on capital. This led to a change in desired portfolio composition, and the secondary-market demand for bonds declined, as did the demand for producer durables, while the demand for money and unindexed deposits ($M2^*$) rose. Bond prices therefore declined (the real yield to maturity rose), as did the price of shares and apartments (relative to the CPI) (Tables 7.3 and 7.4). It is not clear *a priori* whether this will raise or lower unindexed local-currency interest rates.[4] The decline in the banks' demand for borrowed reserves suggests that there were forces at work depressing interest rates. The Bank of Israel acted to stabilize nominal local-currency interest rates by reducing the supply of borrowed reserves.

These developments were accompanied by, and perhaps contributed to, an appreciable decline in the rate of price increase, which almost certainly led economic agents to expect the exchange rate to rise more slowly. At the same time, world interest rates declined, as they did throughout 1991. This evidently reduced the expected yield from foreign assets and—in view of the fact that nominal local-currency interest rates levelled off and real long- and medium-term rates rose—led to capital imports in excess of the current-account deficit which were reflected in foreign-exchange conversion and withdrawals from resident deposits. The conversions tended to bring the actual exchange rate to the lower boundary of the band from September 1990 until the devaluation of March 1991. (Even with a constant yield gap, a decline in inflationary expectations increases the demand for money, and hence induces capital imports.)

[4] Expectations of the decline in the price of bonds and tangible capital depress the demand for them, and push up the demand for unindexed local-currency assets while reducing the demand for unindexed local-currency credit. The effect of this process on the price of bonds and capital is in the same direction (decline in prices, increase in yield to maturity). An increase in demand for cash tends to raise local-currency interest. On the other hand, an increase in the demand for local-currency deposits and a decline in demand for local-currency credit tend to depress it. The net effect on nominal interest rates cannot therefore be determined *a priori* but depends on the elasticity of the various demands.

The government reduced its borrowing and increased its injection following the rise in the yield to maturity of government bonds. The Bank of Israel acted to offset the government injection by reducing the supply of borrowed reserves, so that the additional demand for monetary base was met mainly by private foreign-currency conversions and resident deposits during this period (Table 7.5).

Table 7.5
Sources of Changes in the Monetary Base, September 1990–December 1991[a]

(NIS million, monthly rate))

	Sept. 1990–Feb. 1991	Mar.–Sept. 1991	Oct.–Dec. 1991
Injection	309	-113	1,806
Central bank	-390	469	-883
Government	27	-377	-1,030
Withdrawals from resident deposits[a]	140	64	83
Total change in monetary base	86	43	-24

[a] Including restitutions deposits.

Thus the developments of the first subperiod can be summarized as follows: demand for tangible capital and bonds declined and demand for M2 rose, share prices and housing prices fell, real long- and medium-term interest rates rose, local-currency interest rates were steady, and there was a substantial increase in M2 whose source was foreign-exchange conversions; at the same time the actual exchange rate remained close to the lower boundary of the band.

During February, as the consequences of the Gulf War became clear, expectations changed and a countertrend set in, persisting until the end of August. Expectations became optimistic, while fears of a substantial rise in the budget deficit and the public debt receded. This increased the demand for tangible capital and government bonds and brought the desired quantity of M2* back to the level consistent with economic activity. Thus, share and apartment prices rose steadily and the real yield to maturity of government bonds declined (though not back to the 1990 level). Economic activity and investment also stepped up.

In September 1990–March 1991, the exchange rate remained close to the lower boundary of the band (as a result of capital imports). At the time it was not clear why this happened, and it was felt that the stability of the nominal exchange rate had contributed to the poor export performance. Accordingly the midpoint rate was raised by 6 percent at the beginning of March 1991, and since the actual rate was close to the lower edge of the band, it too rose by 6 percent. This devaluation was unexpected and was perceived as a switch in exchange-rate policy (midpoint adjustments had not entailed an immediate change in the actual exchange rate since the band was introduced in 1989). Following the devaluation, capital imports increased and foreign-currency conversion continued into

Table 7.6
Domestic Budget Deficit (Consolidated Balance Sheet of Central Government and Central Bank), 1987–91[a]

(percent of GNP)

	1987	1988	1989	1990	1991				
					Total	I	II	III	IV
Deficit									
Estimated expenditure[b]	39.7	41.6	40.7	40.2	41.6	45.7	38.1	39.1	43.6
less Tax revenue	45.6	44.0	40.1	40.4	39.9	41.8	38.5	39.3	40.2
subtotal: Deficit excl. interest	–6.0	–2.4	0.6	–0.2	1.7	3.9	–0.4	–0.2	3.4
Interest receipts[c]	5.5	4.9	5.1	5.0	4.8	3.8	4.8	3.7	6.8
Total domestic deficit	–0.5	2.4	5.7	4.9	6.4	7.7	4.4	3.5	10.2
Financing									
Money creation[d]	0.6	–5.1	0.6	2.5	–0.8	5.8	–5.9	–7.6	4.4
Net increase in internal public debt[e]	–0.8	1.8	6.6	1.3	3.7	6.5	5.6	5.4	–2.7
of which Net domestic borrowing[f]	0.2	3.7	7.3	1.6	3.3	6.5	7.0	4.4	–4.5
Purchases of foreign currency	–0.2	5.7	–1.5	1.0	3.5	–4.6	4.6	5.6	8.5

[a] The deficit shown here differs from that of Chapter 5 in two respects: (a) Cash basis (this table) versus accrual basis ; (b) coverage: this table is confined to central government (general government in Chapter 5); however, the deficit of the Jewish Agency is included both here and in Chapter 5.

[b] Expenditures are calculated as the sum of tax receipts and the deficit figure obtained from the financing side.

[c] 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).

[d] Interest on the monetary base *plus* the implicit budgetary outlay of discount-window lending *less* liquidity fines. See also Table 7.11.

[e] Increase in the government asset base *less* net credit from the government. This is the balancing item.

[f] Tradable bonds and nontradable deposits and bonds (excluding Treasury bills and resident deposits).

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

April, accelerating portfolio adjustment and contributing to the rise in share and apartment prices, as well as to the exceptional (though temporary) rise in the CPI.

During April–September 1991, government borrowing exceeded deficit financing needs. This moderated the decline in the yield to maturity of government bonds and it remained above the 1990 level. The excess borrowing was due to the government's desire to anticipate the redemption of the Arrangement bank shares at the end of October 1991 (NIS 3.4 billion). In order to moderate the contractionary effect of the government's excess borrowing, the Bank of Israel increased the supply of borrowed reserves in April and made it possible for local-currency interest rates to decline somewhat, the object being to reinforce the decline in long- and medium-term interest rates and to stimulate economic activity (Tables 7.3 and 7.4).[5]

In September, foreign-exchange purchases exceeded what was needed to finance the current-account deficit. Behind this process, which intensified in October, was the redemption of Arrangement bank shares expected at the end of the month. These shares were in effect tradable bonds linked to the dollar, and it was therefore reasonable to assume that investors would want to replace them by a similar asset, i.e. a tradable exchange-rate indexed asset. Although in September the price of dollar-linked bonds rose in response to demand, the volume of new issues was comparatively low; it could therefore have been expected that the redemption of the Arrangement shares would be accompanied by foreign-exchange purchases reflecting portfolio adjustment, even in the absence of devaluation expectations.

This anticipatory portfolio adjustment stemmed from the expectation that there would be devaluation at the end of October. These expectations were due to a combination of factors: the rapid increase in prices of April–September which eroded the real exchange rate, the March devaluation which, as stated, was perceived as a change in policy, and the interval since the previous adjustment of the midpoint rate (in the preceding two years the midpoint rate was adjusted every 6–8 months). It was believed that the devaluation would be deferred until just after redemption in October of the (dollar-linked) Arrangement bank shares.

Any attempt to check the foreign-exchange purchases by means of a large devaluation would have exacerbated the already high rate of price increase of the preceding months, and might have raised inflation to a higher plateau. The Bank of Israel therefore decided not to meet the entire incremental demand for credit and in October it permitted a substantial rise in interest rates. Once the bank shares were bought in at the end of October, foreign-exchange purchases declined appreciably and indeed turned to capital imports, although there was no devaluation. The Bank of Israel nevertheless kept interest rates high during November and most of December because it was believed that devaluation expectations had not died down completely, so that lowering the rates would have led to a new cycle of foreign-exchange purchases. In mid-December a new exchange-

[5] Because short-term credit (and assets) and long-term credit (and assets) are not fully substitutable, an increase in borrowed reserves cannot fully compensate for the contractionary effect of government borrowing.

Table 7.7
Selected Exchange Rates and Prices, 1988–91

	Percentage change over preceding period (annual rate)						
	Exchange rate vis-à-vis			Prices			Premium on black-market dollar
	CPI	Currency basket	Dollar	Apartments[a]	Nonbank shares	Bonds	
Average							
1988	16.3	2.4	0.3	18.5	–26.4	24.5	9.2
1989	20.2	16.1	19.9	34.7	58.9	35.1	3.8
1990	17.2	10.6	5.2	34.5	43.1	18.7	5.3
1991	19.0	12.3	13.0	29.8	58.3	14.7	4.1
1990							
I	12.6	6.1	–3.0	35.5	4.0	–8.1	8.1
II	21.1	13.7	13.0	46.9	99.2	25.5	2.4
III	19.0	17.2	3.9	34.5	28.7	33.7	5.3
IV	20.0	6.1	–5.0	11.7	–14.9	1.2	5.3
1991							
I	11.8	5.3	9.3	25.3	122.4	–7.4	3.9
II	22.6	34.4	64.6	82.9	87.8	27.7	2.1
III	31.0	0.4	1.6	12.6	124.6	55.6	4.8
IV	9.9	13.7	1.5	–6.2	–15.0	2.6	5.5
During period							
1988	16.4	1.3	3.1		–18.6	23.2	
1989	20.7	19.7	22.2		96.1	38.9	
1990	17.6	11.1	3.7		16.9	10.7	
1991	18.0	11.6	13.7		65.0	17.3	
1990							
I	12.0	14.0	11.5		–13.4	1.8	
II	21.2	13.6	9.8		199.0	35.1	
III	23.3	13.5	–1.9		–44.1	24.4	
IV	14.3	3.7	–3.7		28.8	–12.1	
1991							
I	13.3	15.5	28.8		237.1	16.3	
II	27.0	27.1	51.0		88.5	23.5	
III	30.0	–3.9	–10.8		67.3	56.4	
IV	3.7	9.9	–3.8		–30.2	–15.6	

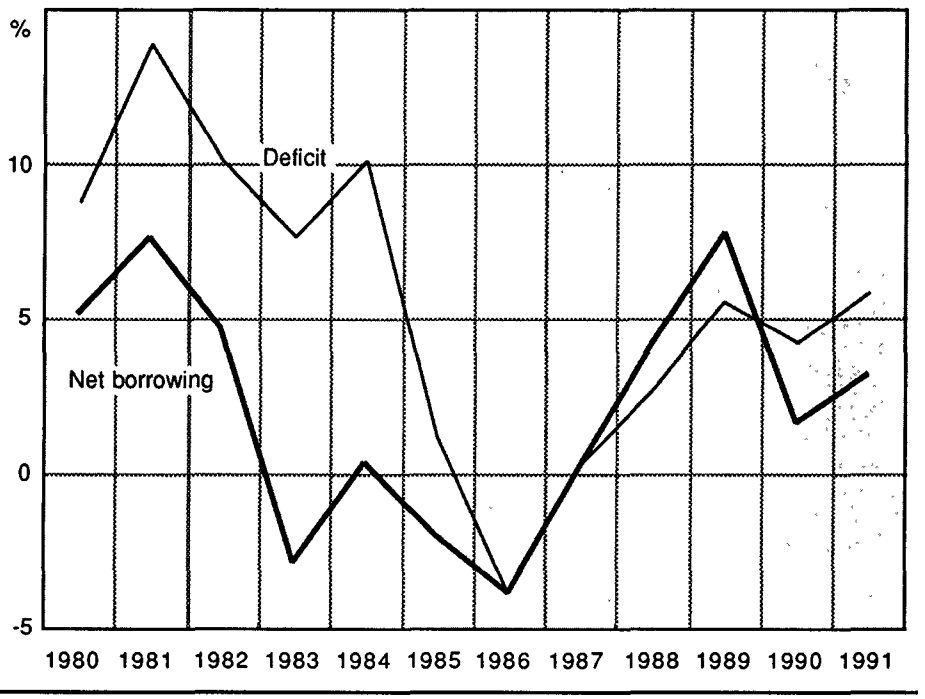
[a] Owner-occupied dwellings.

rate mechanism was announced (see below) and the midpoint rate was raised by 3 percent. As a result, capital imports stepped up. Since the economy was slack and the rate of price increase moderated in the preceding two or three months, the Bank of Israel took steps in December 1991–February 1992 to substantially reduce local-currency interest rates, and in fact they dropped to below the level of 1990–91.

Theoretical considerations and experience alike suggest that the exchange rate has a direct and crucial effect on the development of prices. The exchange rate has served as an anchor for prices since the 1985 ESP—and in 1991 it once again proved effective (exchange-rate developments cannot of course be divorced from fiscal and interest-rate policy, at least not in the long run).

Figure 7.3
Government Deficit and Net Borrowing, 1980-91

(percent of GNP)



Between 1987 and 1990 the exchange rate rose at an average annual rate of 11 percent. It can be assumed that prices of Israel's trading partners are rising at an annual average rate of about 4–5 percent; this implies a basic annual average rate of inflation of 15–16 percent.[6] The actual rate of inflation was a little higher, about 18 percent, reflecting other factors besides the exchange rate (see Chapter 3). Excluding housing prices, the rate of inflation was slightly below 16 percent during this period.

The details of exchange-rate management have been altered several times since the ESP: until 1989 there was a fixed exchange rate with periodic devaluations intended to

[6] In 1990 and 1991 the rate of inflation of Israel's trading partners was below 4 percent.

Table 7.8
Sources of Change in Unindexed Local-Currency Assets, 1987–91

(NIS million)

	1987	1988	1989	1990	1991	1990 III	1990 IV	1991 I	1991 II	1991 III	1991 IV
Change in narrowly defined monetary base											
General government (injection *plus* net sale of Treasury bills)	100	–478	–1,290	3,575	4,553	1,273	1,621	362	–875	–351	5,418
Bank of Israel	537	3,635	–122	–1,941	850	944	–2,350	–1,600	2,261	2,836	–2,648
Discount–window loan	*672*	*2,641*	*686*	*–1,671*	*2,575*	*1,049*	*–2,067*	*–1,230*	*2,158*	*3,100*	*–1,454*
Open–market operations	*–829*	*441*	*–779*	*277*	*–917*	*6*	*–128*	*–302*	*133*	*79*	*–826*
Other[a]	*694*	*553*	*–29*	*–547*	*–808*	*–111*	*–155*	*–68*	*–30*	*–343*	*–368*
Resident deposits	321	–273	879	45	648	–268	753	297	315	–211	247
Private purchases (–) of foreign exchange	305	–3,840	1,098	–1,137	–5,307	–1,165	–287	1,342	–1,567	–1,993	–3,091
Total	**1,262**	**–956**	**565**	**541**	**744**	**785**	**–263**	**401**	**135**	**282**	**–74**
Domestic banking operations[b]	**2,277**	**995**	**3,730**	**5,781**	**3,469**	**308**	**3,620**	**389**	**–174**	**417**	**2,838**
Change in unindexed local–currency assets											
Money supply	1,110	368	1,650	1,646	957	680	631	420	144	–27	420
Time deposits and SROs (CDs)	2,429	–329	2,645	4,676	3,256	412	2,725	371	–184	725	2,344
Total	**3,540**	**39**	**4,294**	**6,322**	**4,214**	**1,093**	**3,356**	**790**	**–40**	**699**	**2,764**

[a] Directed credit and 'other' (items from the Bank of Israel's profit & loss statement and miscellaneous net transactions between the government and the Bank of Israel).

[b] This is the residual item and represents the effect of the deposit multiplier.

correct the erosion of the real exchange rate. Initially, the tendency was to devalue infrequently and by as little as possible so as to gradually reduce the rate of inflation. The problem with this system was that it induced speculative cycles, which were expressed

Table 7.9
Source of the Domestic Asset Base, 1987–91

(percent of GDP)

	External injections			Foreign-currency conversions	Total
	Government[a]	Bank of Israel[b]	Total		
1987	0.9	2.3	3.2	0.9	4.0
1988	3.9	4.2	8.1	-5.1	3.0
1989	6.2	0.3	6.5	1.7	8.2
1990	5.1	-2.0	3.2	-1.0	2.1
1991	8.5	1.2	9.7	-3.5	6.2
1990					
I	4.6	1.2	5.7	-0.8	4.9
II	3.5	-4.7	-1.2	2.0	0.8
III	6.9	3.5	10.4	-4.3	6.1
IV	5.6	-7.9	-2.3	-1.0	-3.4
1991					
I	10.3	-4.4	5.9	4.6	10.5
II	6.2	6.4	12.7	-4.6	8.1
III	5.3	7.7	13.0	-5.6	7.4
IV	12.3	-4.9	7.4	-8.5	-1.1

[a] Central government deficit, foreign-currency conversion by Jewish Agency, and net lending to private sector.

[b] Borrowed reserves, direct credit, and 'other' (see note a to Table 7.8).

as sharp fluctuations in the foreign reserves and the interest rate. In 1989 the band was introduced in order to moderate these fluctuations; under this regime the exchange rate can move in accordance with market forces within a specified range on either side of a midpoint rate. The midpoint rate was adjusted from time to time, by an amount set so as to avoid a rise in the actual rate. Speculative fluctuations were in fact reduced, since the probability of a large devaluation—and the prospect of immediate profits—declined and interest-rate fluctuations also diminished. This mechanism operated with a large measure of success until March 1991. The damping down of capital movements reinforced the central bank's measures to reduce interest rates, which were particularly prominent in 1989. During 1990 and in the first three quarters of 1991, monetary policy was concerned to maintain nominal unindexed local-currency interest rates at the level to which they had fallen in the second half of 1989.

At the beginning of March the midpoint rate was raised by 6 percent against the currency basket. This unexpected devaluation was perceived as a change in exchange-rate policy, because since 1989 adjustments of the midpoint rate had not been

accompanied by changes in the actual exchange rate. This presumably generated expectations for a further devaluation in October. In April and May the exchange rate continued to rise gradually (by 11 percent from March to May) and desired portfolio composition changed, implying some upward pressure on prices; the combination of the two factors led to an exceptionally high price increase in the second quarter. Nevertheless for the year as a whole the exchange rate rose at a level similar to that of previous years, as did the rate of inflation (Table 7.7).

Table 7.10
Composition of Change in the Domestic Asset Base, 1987–91

(percent of GDP)

	Monetary base	Treasury bills	Reserves backing resident deposits[a]	Tradable government bonds	Long and medium term asset base
1987	2.3	1.4	–0.7	4.8	–3.9
1988	–1.3	–0.4	0.3	6.3	–1.9
1989	0.8	1.1	–1.1	4.1	3.4
1990	0.5	–0.2	0.0	0.4	1.3
1991	0.6	0.7	–0.5	6.2	–0.8
1990					
I	2.3	–0.3	0.2	0.0	2.7
II	–2.1	–1.2	1.6	0.3	2.2
III	2.9	0.1	1.0	1.6	0.4
IV	–1.0	0.5	–2.7	–0.2	–0.0
1991					
I	1.4	1.0	–1.0	6.6	2.4
II	0.5	–0.3	–0.9	8.4	0.4
III	0.8	–0.2	0.6	5.1	1.1
IV	–0.2	2.4	–0.7	4.5	–7.2

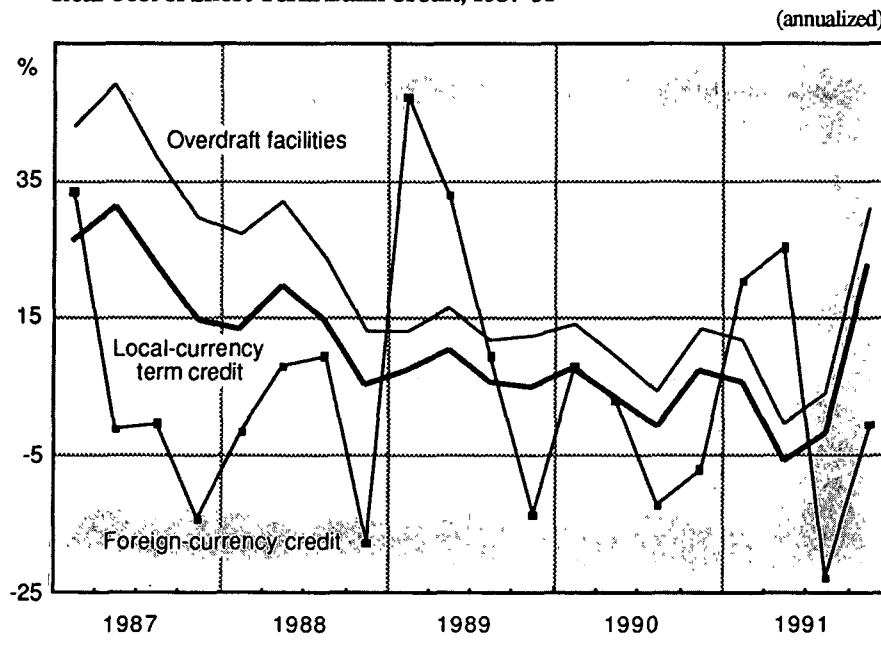
[a] Including restitutions deposits.

The heavy foreign-exchange purchases of September and October led the policy makers to conclude that the exchange-rate mechanism had lost its credibility, and in mid-December it was revised. Under the new arrangement the midpoint rate rises daily at a constant and predetermined rate; the actual exchange rate continues to vary within a band of 5 percent on either side of the midpoint rate. The new mechanism does away with the need for periodical adjustments of the midpoint rate and thereby reduces the probability of speculative cycles and lessens uncertainty. But the new mechanism must do more than just damp down speculative cycles. It must also prevent any recurrence of the inflationary process of the past and it must not be an obstacle to reducing the rate of inflation once conditions are right (see also Chapter 3).

Looking at the year as a whole it can be seen that nominal and real unindexed local-currency interest rates remained at roughly the 1990 level (Tables 7.3 and 7.4). This is

the category of interest rates most strongly affected by current monetary policy. The fact that they remained stable (while the real yield to maturity of government bonds rose) can be ascribed to a monetary policy which supported increased economic activity and investment. However more monetary expansion might have been in order, considering the fact that the foreign reserves rose by more than average M1 and M2 balances and in view of the high unemployment rate prevailing in 1991. In retrospect it seems that at the end of 1990 and early 1991 it would have been possible to allow unindexed local-currency interest rates to drop further. It might also have been possible to reduce interest rates faster at the beginning of 1992.

Figure 7.4
Real Cost of Short-Term Bank Credit, 1987–91



Nevertheless there are limits to the ability of current monetary policy to affect long- and medium-term interest rates and hence investment. Current monetary policy operates on the supply of monetary base and hence on nominal unindexed local-currency interest rates and credit. The effectiveness of this policy as regards long- and medium-term interest rates depends on, among other things, the substitutability of short-term and other credit; although it has increased in recent years, substitutability is not perfect; if therefore it is sought to lower long-term rates directly (and immediately), this has to be done by reducing government borrowing.

4. THE TOOLS OF MONETARY POLICY

Current monetary policy operates on the level and structure of unindexed local-currency interest rates, principally by affecting the banking system's liquidity both directly and through the monetary base. The Bank of Israel's chief instrument for affecting bank liquidity is through its lending to them. Other instruments which affect the monetary base are open-market operations and foreign-exchange options. Reserve requirements and the interest paid on liquid assets are not used very frequently.

Table 7.11
Potential and Actual Revenue from Money Creation, 1986–91[a]

(percent of GNP)

	Inflation tax[b] (1)	Money creation (2)	Change in discount-window loan (3)	Interest on monetary base[c] (4)	Interest on discount-window loan[d] (5)	Net revenue from money creation [e] (6)
1986	1.2	1.8	0.5	0.8	0.0	0.5
1987	1.0	2.3	1.1	0.7	0.0	0.6
1988	0.9	-1.3	3.4	0.3	0.0	-5.1
1989	0.8	0.8	0.3	0.1	0.3	0.6
1990	0.6	0.5	-1.5	0.1	0.6	2.5
1991	0.6	0.6	1.8	0.0	0.4	-0.8
I	0.6	1.4	-4.1	0.0	0.3	5.8
II	0.9	0.5	6.5	0.0	0.2	-5.9
III	0.7	0.8	8.7	0.0	0.4	-7.6
IV	0.1	-0.2	-3.9	0.1	0.8	4.4

[a] See note a to Table 7.A3.

[b] 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.

[c] Interest paid on deposits with central bank.

[d] Includes liquidity-deficit fines.

[e] Columns (2) – (3) – 4) + (5).

SOURCE: Bank of Israel.

The Bank offers two types of loan facility—the discount-window loan and the auction loan. The first is in effect a step function, with both interest-rate and quantity brackets being a policy variable. The auction loan can be interpreted as a factor which shifts the discount-window supply curve: if the volume auctioned is increased, the supply shifts to the right and the volume of the loan tends to increase and its marginal costs to decrease, and vice versa.

Until January 1991 auctions were held weekly, and since then they have also been held daily. In addition to the auctions for banks, an auction to the public via the banks was introduced in June 1990. This instrument tends to reduce the demand for credit from the banks' own sources and thereby strengthens the link between the cost of credit and the cost of its sources.

Table 7.12
Monetary Policy: Supply and Demand of Banks for Liquid Assets, 1989–91

(NIS million)

				1990				1991			
	1989	1990	1991	I	II	III	IV	I	II	III	IV
Demand											
Reserve requirement (estimated)	2,046	1,709	1,993	2,045	1,698	1,483	1,609	1,860	1,873	1,905	2,332
Liquidity surpluses (balance)	263	239	112	231	244	268	215	208	180	256	–199
Total demand	**2,309**	**1,948**	**2,104**	**2,276**	**1,942**	**1,751**	**1,824**	**2,069**	**2,053**	**2,161**	**2,133**
Supply											
Nonborrowed reserves[a]	451	–2,193	–1,754	–2,612	–1,633	–2,223	–2,304	–353	–97	–2,174	–4,393
of which Treasury bills held by banks	*402*	*342*	*399*	*409*	*340*	*297*	*322*	*372*	*375*	*381*	*466*
Discount–window loans utilization	1,858	4,141	3,858	4,889	3,575	3,974	4,128	2,421	2,150	4,335	6,526
Ordinary loan	805	2,245	1,211	3,389	2,071	2,006	1,514	477	500	1,087	2,799
Auction	1,052	1,896	2,647	1,500	1,504	1,968	2,613	1,945	1,650	3,249	3,747
Total supply	**2,309**	**1,948**	**2,104**	**2,276**	**1,942**	**1,751**	**1,824**	**2,069**	**2,053**	**2,161**	**2,133**
Free reserve (nonborrowed reserve *less* reserve requirement)	–1,595	–3,902	–3,747	–4,657	–3,331	–3,706	–3,912	–2,213	–1,970	–4,079	–6,725
Discount window, addendum											
Marginal bracket utilization	283	484	195	479	538	589	329	167	223	171	219
Total offered at auction	1,121	1,901	2,647	1,500	1,506	1,986	2,613	1,945	1,650	3,249	3,747

[a] i.e., other than discount-window loans.

In January–April 1991, following conversion of foreign exchange and withdrawals from resident deposits, the banks' nonborrowed and free reserves grew and demand for borrowed reserves declined (see Table 7.12). In order to moderate the decline in interest rates, the Bank of Israel reduced the volume auctioned, and the marginal cost (average for the month) declined from 14 percent in December 1990 to 12 percent in April 1991. Starting in June, in view of foreign-exchange purchases and the negative government injection, the banks' nonborrowed and free reserves declined and demand for borrowed reserves rose. In order to moderate the increase in interest rates the Bank of Israel increased the volume auctioned. The marginal cost of the discount-window loan rose from 12 percent in April to 14 percent in August.

In September the Bank of Israel refrained from accommodating the volume auctioned to the rising demand, which was met by increasing the discount-window loan, whose marginal cost rose to 15 percent. In October, following a further increase in the demand for foreign exchange, the demand for borrowed reserves rose substantially; in order to prevent too drastic a rise in interest rates the Bank increased the volume auctioned; the increase in demand led to a rise in marginal cost to 21 percent. In November, after the Arrangement bank shares were bought in, the demand for borrowed reserves declined and the Bank of Israel reduced the volume auctioned while keeping interest rates at their high October level. In December the volume auctioned stayed at the November level and the decline in demand was reflected in a contraction of the discount-window loan and a decline in the marginal cost to 19 percent. At the same time the Bank of Israel acted to deepen the Treasury bill market, and the volume of Treasury bills rose substantially, from NIS 1,900 million at the end of September to NIS 3,600 million at the end of December.[7]

5. CREDIT

In this section, we distinguish between long- and medium-term credit on the one hand, and short-term credit on the other. The latter is granted by the commercial banks (and their overseas offices). The two types of credit are not perfect substitutes, because they differ in destination and because a variety of constraints stemming from, among other things, considerations of bank stability result in the segmentation of credit transactions according to the two types of credit, with sources and applications matching within each category. In the past most long- and-medium term credit was granted by specialized banks (mortgage and investment finance banks and financial institutions). In recent years, following the capital-market, reforms so far carried out, the proportion of long- and medium-term credit has risen, the commercial banks have played an increasing role in extending it and the two types of credit have become more substitutable. Moreover

[7] Part of the absorption stemming from the increase in Treasury bills was neutralized by lowering reserve ratios in November (equivalent to an injection of NIS 300 million).

Table 7.13
Commercial Bank Credit to the Public, 1989–91

(nominal percent change over preceding year)

	End-year, NIS million		Average balances			End-year balances		
	1990	1991	1989	1990	1991	1989	1990	1991
Unindexed local-currency credit[a]	24,086	29,985	34.0	34.0	26.3	26.6	28.6	24.5
Credit lines and overdrafts	*13,023*	*16,545*	31.2	23.6	22.3	15.9	21.7	27.0
Other	*11,062*	*13,440*	38.6	50.1	31.4	44.3	37.7	21.5
Foreign-credit	9,114	10,081	50.2	36.5	78.5	44.7	113.2	10.6
Directed export credit	417	300	16.6	–33.3	–86.1	7.2	–88.2	–28.2
Subtotal	**33,617**	**40,366**	33.5	23.8	27.2	26.1	26.7	20.1
Indexed local currency	13,916	19,272	46.8	49.5	36.4	50.7	39.0	38.5
Credit out of earmarked deposits	18,648	21.857	7.1	2.6	10.1	3.2	2.6	17.2
Total bank credit	**66,181**	**81,496**	24.3	20.3	23.8	20.8	20.9	23.1
Consumer Price Index			20.2	17.2	19.0	20.7	17.6	18.0

[a] Commercial banks and their overseas offices.

some of the activities of investment finance banks were transferred to the commercial banks in 1991 and therefore now appear in the statistics relating to them.

In 1991 the balance outstanding of total credit rose more than it did in 1990, both nominally and when deflated by the CPI. The increase in medium- and long-term credit is in part due to the expansion of government credit.

Table 7.14
Real Cost of Short-Term Credit, 1988–91

(percent p.a.)

	1988	1989	1990	1991
Before tax				
Local currency	21.3	8.7	7.5	7.1
Overdraft facilities	25.6	11.3	10.2	10.0
Fixed-term credit	14.5	4.9	4.2	3.7
Foreign currency	0.2	14.5	–2.6	2.9
Average cost[a]	13.1	10.6	4.4	6.4
Standard deviation	10.7	15.2	8.4	17.0
After tax[b]				
Local currency	11.7	4.8	4.2	4.2
Overdraft facilities	14.1	6.2	5.7	5.9
Fixed-term credit	8.0	2.7	2.4	2.2
Foreign currency	0.1	8.0	–1.5	1.7
Average cost[a]	7.2	5.8	2.5	3.7
Standard deviation	5.9	8.3	4.7	10.1

[a] Weighted by the composition of credit (average balances).

[b] Assuming that real interest is tax deductible and that the tax rate was 43.5 percent in 1990 and 41 percent in 1991 (for development loans, 25 percent).

SOURCE: Bank of Israel.

The average balance of short-term bank credit rose by 27 percent in 1991, which compares with the 29 percent increase in GDP (see Tables 7.2 and 7.3). In real terms (deflated by CPI), short-term credit rose by 7 percent compared with 6 percent in 1990—unindexed local-currency credit grew more slowly and exchange-rate indexed credit grew faster. The latter is, at least in part, a delayed response to the increased accessibility of foreign sources (in 1990 credit ceilings were abolished, the minimum term was substantially reduced, and access to foreign markets facilitated).

The balance of long- and medium-term credit from financial institutions to the non-financial private sector, which remained stable in 1989–90, rose by 6.7 percent during 1991 (Table 7.15). Part of the increase stemmed from the increase in government earmarked deposits in both commercial and mortgage banks.

The balance of mortgage-bank credit rose by 19 percent during 1991, compared with an annual average of 11 percent during the preceding two years. This reflects a substant-

Table 7.15
Medium- and Long-Term Credit by Financial Institutions to the Nonfinancial Private Sector, 1989–91[a]

(real percent change over preceding year)

	End-year, NIS million		Average balances			End-year balances		
	1990	1991	1989	1990	1991	1989	1990	1991
Mortgage banks	17,500	24,538	10.3	11.9	16.5	9.6	12.1	18.8
Other specialized banks	2,340	805	–3.8	–25.2	–50.7	–10.7	–40.0	–70.9
Commercial banks	24,912	31,003	–4.9	–0.4	3.1	–5.9	0.6	5.4
Indexed credit	*12,497*	*17,517*	20.8	22.6	12.8	23.7	13.3	18.8
Out of earmarked deposits	*12,415*	*13,486*	–16.5	–15.5	–6.1	–21.1	–9.6	–8.0
Subtotal: Domestic credit	**44,752**	**56,346**	–0.1	1.4	4.4	–1.5	1.1	6.7
Foreign credit	6,003	5,208	–3.1	–4.4	–5.7	–4.7	4.2	–26.5
Total	**50,755**	**61,554**	–0.4	0.7	3.2	–1.9	1.4	2.7

[a] Based on consolidated balance sheet of commercial banks and specialized banking corporations.
SOURCE: Bank of Israel, Research Department.

ial increase of NIS 2,850 million in the net flow of new loans (NIS 962 million in 1990, see Table 7.16).[8] The rise is to a large extent due to the increase in the gross flow of government earmarked deposits, which went up from NIS 1,388 million in 1990 to NIS 2,741 million in 1991.

Table 7.16
Medium- and Long-Term Credit Flows, Mortgage Banks, 1988–91

	1988	1989	1990	1991
NIS million				
Assisted mortgages	1,163	1,186	1,668	3,517
of which Out of government deposits	*936*	*1,085*	*1,388*	*2,741*
Other mortgages	891	1,186	1,582	2,357
Total mortgages	**2,054**	**2,372**	**3,270**	**5,875**
Total net of repayments	**870**	**710**	**962**	**2,850**
Other loans	79	145	314	414
Total mortgage-bank loans	**2,133**	**2,517**	**3,584**	**6,289**
Real annual change, percent				
Assisted mortgages		–15.2	21.4	75.1
of which Out of government deposits		–3.6	9.1	66.0
Other mortgages		10.7	13.8	25.2
Total mortgages		–3.9	17.7	51.0
Total net of repayments		–32.1	15.5	149.2
Other loans				
Total mortgage-bank loans		–1.8	21.5	47.5

Liberalization and reform

The next stage in the liberalization of the capital and money markets was begun in November 1991. Among the steps taken were further reduction in reserve ratios on deposits, some deregulation of indexed transactions, simplification of tax procedures and unification of tax rates on financial assets, and removal of more restrictions on investment abroad by Israelis and in Israel by foreigners. These measures continue the policy of the last few years, with the aim of opening up Israel's financial markets faster and increasing the funds available for investment and economic growth.

During 1991 the government offered its shares and convertible securities in Bezeq and in a subsidiary of Israel Chemicals to the public (to the amount of NIS 240 million). In

[8] The change in credit balances also includes capital gains and losses connected with exchange-rate movements and other factors. The flow of credit is a better indicator of the sources devoted to new investments. Unfortunately we have no information on the flow of long-term credit given by commercial banks (the difference between the flow and the change in balances is less important for short-term credit).

February 1992 the government offered 19 percent of the shares of Israel Chemicals. This was the largest initial public offering in the history of the Tel-Aviv Stock Exchange (NIS 550 million), about half of it being subscribed beforehand by institutional investors. The firm was valued at a high $1.25 billion and the reserve price of the shares was set in accordance with this. Nevertheless, and although the sale took place in a week which began with a steep decline in the share prices, 99 percent of the offering was taken up. As in the case of Bezeq, the Israeli capital market demonstrated that it was capable of absorbing a considerable volume of new stocks.

On the other hand, during 1991 and in early 1992 two bills—one dealing with mortgages and the other providing for the restructuring of the farm debt—passed into law, marking a retreat from the goals of money and capital market reform. The Land Mortgages Law implies that directed credit, which has been considerably reduced in the last few years, will again expand, thereby reducing the efficiency of resource allocation. Furthermore, it provides for partial indexation of mortgages, which means that there is no way of predicting the fiscal burden implied by mortgage credit.

The Moshav Debt Settlement Law is a piece of retroactive legislation which intervenes in commercial contracts between borrowers and the banks. Such a law has adverse effects on the banking system, the availability of credit, the budget, and business ethics.

6. THE INTERNAL PUBLIC DEBT[9]

Since most of the financial intermediation system is directly or indirectly owned by the government—at any rate since October 1991, when the Arrangement bank shares were bought in—the domestic component of national wealth is roughly as large as the internal public debt and it is growing at a similar rate.[10]

The estimated real internal public debt, which declined by 7.6 percent during 1990, rose by 2.8 percent during 1991; on annual average, there was a 4 percent decline.[11] Since real GNP (deflated by the CPI) rose by 8 percent,[12] this is reflected in a decline of the internal public debt/GNP ratio from 91.4 to 81.2 percent (see Table 7.17).

[9] The wealth and internal public debt series have been revised this year, in order to cope with the statistical problems caused by capital market reform, such as, among other things, changes in the portfolio composition of financial intermediaries. The internal debt is here defined to exclude the net monetary base and to include the market value of the Arrangement bank shares. It is estimated as follows: financial wealth (excluding net foreign assets); *less* private sector claims on financial intermediaries *plus* estimated claims of financial intermediaries on the government.

[10] If all financial intermediation were government-owned the net internal debt would be identical with domestic wealth.

[11] The 1990 decline occurred entirely in the last quarter and was due primarily to the erosion of bond prices and to the fact that no new bonds were issued to replace the Arrangement bank shares.

[12] This increase consists of a 5.5 percent real increase and a 2.1 percent increase in the GDP price deflator relative to the CPI.

Table 7.17
Estimated Net Internal Debt/GDP Ratio, 1980–1991[a]

(percent)

1980	110.4	1986	126.3
1981	108.0	1987	113.7
1982	111.9	1988	98.8
1983	107.5	1989	93.4
1984	120.6	1990	91.4
1985	135.7	1991	81.2

[a] See note 9 in the text. The debt/GDP ratio is calculated at current prices.

7. THE CAPITAL MARKET

In October 1991 the remaining Arrangement bank shares, to a value of NIS 3.4 billion, were redeemed and these shares thus ceased to be traded on the stock exchange. The government rolled over this amount by issuing bonds, mostly indexed, throughout the year, and made little use of futures, forward transactions, and options. Some of the public's proceeds appear to have been put into Treasury bills, whose balance rose from NIS 1.9 billion at the end of September to NIS 3.6 billion at the end of December.

Figure 7.5
Index of Total Real Yield on Financial Assets, 1988–91

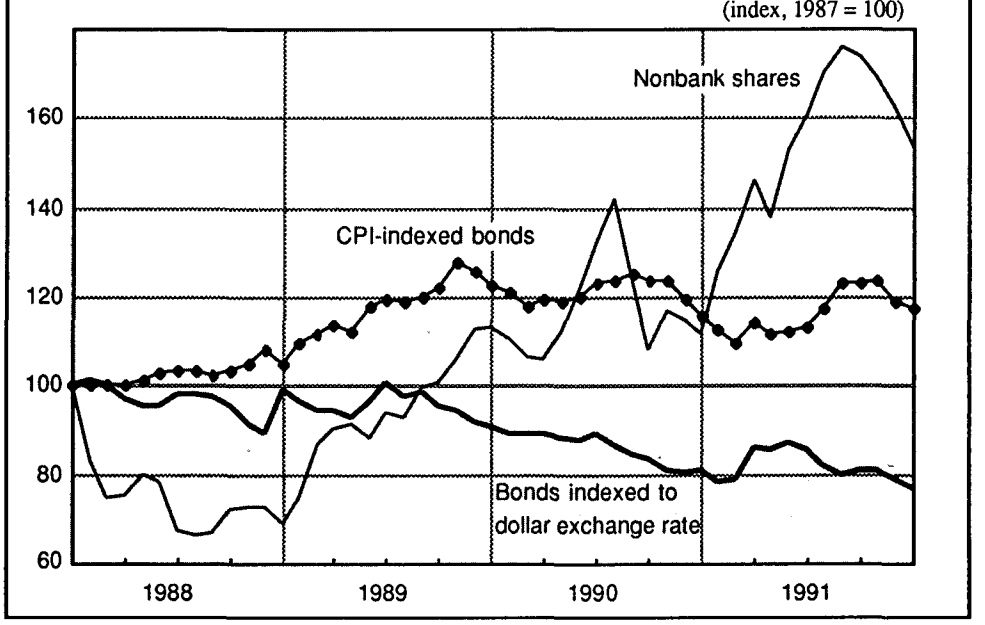


Table 7.18
Principal Stock Market Indicators, 1989–91

	1989	1990	1991		
			Total	1st half	2nd half
New issues[b] (NIS million[a])	998	921	1,443	701	742
of which Shares					
Public sector corporations	28	194	240	240	0
Private firms	866	532	748	309	439
Market value (NIS million[a])	22,425	25,533	32,594	36,749	32,594
Arrangement bank shares	*15*	*12*	*0*	*9*	*0*
Other shares	*85*	*88*	*100*	*91*	*100*
Volume of stock-exchange trade (NIS million[a])	10,722	14,274	22,251	10,199	12,051
Arrangement bank shares	*20*	*11*	*10*	*12*	*7*
Other shares	*80*	*89*	*90*	*88*	*93*
Annual turnover[c]					
Arrangement bank shares	0.49	0.50	0.73	0.76	0.70
Other shares	0.56	0.60	0.65	0.63	0.68
All shares	0.55	0.58	0.67	0.64	0.69
Real overall rate of return[d] (percent)					
Arrangement bank shares	5.9	–5.9	1.5	7.4	–5.5
Other shares	64.7	–1.4	37.3	44.2	–4.8
All shares	48.5	–2.3	31.8	39.0	–5.2

[a] At December 1991 prices (monthly deflation). Market value—end-of-year figures; volume of trade—on and off the floor. Figures in italics are percentages.

[b] Shares, convertible securities, and exercised options.

[c] Ratio of monthly volume of trade (on and off the floor) to average monthly market value of the stock of shares.

[d] Deflated by end-of-month CPI.

SOURCE: Bank of Israel and Central Bureau of Statistics.

The cost of the entire Arrangement came to NIS 16 billion at December 1991 prices; the eventual cost (once the banks are sold) will be lower. M.I. Holdings (the company charged with selling the bank shares) has so far sold only one bank. However, a quarter of the IDB Holdings shares have been sold to other interested parties in the group and the government's share holding is now less than 50 percent. The Discount Bank shares held by IDB Holdings were transferred to the government.

The volume of private bond issues was remarkably small this year. There appeared to be three reasons for this. First, starting at the end of 1990, approved enterprises have been eligible for government guarantees on their credit of up to two-thirds of their investment. In the past, the premium charged for these guarantees was less than the difference between the yield on government and private bonds. Second, the cost of raising equity capital declined because share prices rose in the secondary market, on the

Table 7.19
Principal Bond Market Indicators, 1989–91

	1989	1990	1991		
			Total	1st half	2nd half
Market value of listed bonds (NIS million[a])					
Government	48,876	48,627	58,479	53,498	58,479
Private[b]	8,688	9,312	9,489	9,208	9,489
Total	**57,564**	**57,939**	**67,968**	**62,706**	**67,968**
of which: Held by (percent)					
The public	*22*	*22*	*26*	*22*	*26*
Commercial banks	*21*	*20*	*20*	*21*	*20*
Social insurance funds	*54*	*55*	*52*	*54*	*52*
Bank of Israel	*3*	*3*	*2*	*3*	*2*
Volume of stock-exchange trade (NIS million[a])					
Government	6,840	6,863	8,089	3,517	4,572
Private[b]	1,411	1,675	1,680	766	914
Total	**8,251**	**8,538**	**9,769**	**4,283**	**5,486**
Bank of Israel intervention[c]	*0.00*	*0.54*	*0.02*	*0.02*	*0.03*
Issues of tradable bonds (NIS million[a])					
Government	3,768	1,196	8,951	5,338	3,613
Private[b]	1,333	1,423	337	169	169
Total	**5,101**	**2,619**	**9,289**	**5,507**	**3,782**
Annual turnover[d]					
Government	0.16	0.14	0.15	0.07	0.08
Private[b]	0.18	0.18	0.18	0.08	0.09
Total	0.16	0.15	0.15	0.15	0.16
Real overall rate of return (percent)					
CPI-indexed bonds					
Government	14.1	–6.0	–1.2	–2.4	1.2
Private[b]	29.7	–2.7	6.6	–0.5	7.2
Total	17.4	–5.6	1.5	–2.5	4.1
Exchange-rate indexed bonds					
Government	9.6	–12.8	–1.4	10.6	–10.9
Private[b]	15.1	–6.9	0.6	6.6	–5.6
Total	12.7	–10.8	–1.7	9.0	–9.8

[a] At December 1991 prices. Figures in italics are percentages.

[b] Including public sector corporations.

[c] Ratio of the central bank's sales and purchases in the secondary market to total volume of stock-exchange trade in bonds.

[d] 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.

one hand, while on the other, long-term interest rates rose because of increased government borrowing; this almost certainly reduced the profitability of private bond issues. Third, NIS 600 million worth of nontradable bonds were issued to social insurance funds this year, apparently only by public sector corporations. Since the issue of special bonds to social insurance funds was stopped, fund yields have become much more volatile: investors had for many years been accustomed to a very low variance, so that fund managers came under pressure to look for alternatives; one such alternative was private nontradable bonds. We have no information about what led companies to issue bonds in this way; the interest or issuing costs may have been a trifle lower, and there may have been less risk.

The index of holding-period yields of private CPI-indexed bonds rose by a real 6.6 percent during the year, compared with 1.2 percent for government bond prices; exchange-rate indexed bonds show a similar picture.[13] It may be inferred that investors consider the private/government risk difference to have narrowed. Presumably, the improvement in profitability and perhaps also the increased accessibility of foreign credit helped to reduce the riskiness of private firms, in a year when world interest rates declined.

This year the value of shares held by the social insurance funds' portfolio rose to NIS 3 billion in December 1991, or to 4.7 percent of their total portfolio. As a result, the proportion of stocks held by the social insurance funds rose from 0.7 percent in 1987 and 6.5 percent in 1990 to 9.7 percent at the end of 1991. According to various estimates, the social insurance funds hold 30 percent of traded stocks (about 30 percent of all listed stocks); if we deduct stocks of small firms in which the funds are probably not interested in trading, the market share of the funds is considerable.

[13] The number of new issues was too small to permit any conclusions to be drawn about the yield-to-maturity gap between private and government bonds in the primary market.