

CHAPTER VIII

MONEY AND CAPITAL MARKETS

1. MAIN DEVELOPMENTS

Monetary developments in 1987 should be evaluated against the background of the fixed exchange rate regime and the economic developments that took place since the adoption of the 1985 stabilization program, with its reduction of inflation and the government deficit. In the last two years, the slashing of the government deficit and the reform of the capital market made it possible for real long-term lending and borrowing rates to fall steadily. The stable exchange rate regime maintained by the Bank of Israel in the last few years was an important instrument for keeping the price level under control, but since the domestic inflation rate is higher than in Israel's trading partner countries, this regime also caused cyclical expectations of devaluation. During the year this reflected itself in the directions of change in the monetary aggregates and short-term interest rates.

Following a steady erosion of the exchange rate against the main foreign currencies, the sheqel was devalued at the beginning of the year. The devaluation was supported by a restrictive monetary policy, which had the objective of moderating the devaluation's inflationary effects, and of offsetting part of a large capital inflow caused by expectations of a real appreciation in the near future. This monetary restraint expressed itself in a steep rise of short-term interest rates and a contraction of net domestic credit, which is the domestic source of the money supply (M3). In the first half of the year, expectations of a real appreciation of the currency also led to an increase in the demand for local-currency assets; this caused the rise in interest rates in this period to be accompanied by an expansion of the monetary aggregates. In the second half of the year, as inflation declined when the expectations of a real appreciation weakened, the Bank of Israel eased its monetary restraint; interest rates fell, net domestic credit went up, and the rate of expansion of the monetary aggregates slowed down due to a contraction of the demand for sheqel assets. This policy was maintained in the early months of 1988.

In 1987, the public continued to adjust its financial assets portfolio to the lower rate of inflation; this reflected itself in a steep rise in the unindexed aggregates. The effect of the fall in the inflation rate on the increase of these aggregates is difficult to isolate,

so that they do not provide a yardstick for assessing the magnitude of monetary expansion in 1987. This chapter will therefore concentrate on the M3 aggregate and its sources of growth—the foreign currency reserves and net domestic credit.¹ In the analysis of this aggregate, too, reliance on quantities alone may be misleading, and in order to arrive at proper conclusions, one must have a complete picture of the supply and demand factors and the changes in interest rates. For this purpose, it is necessary to identify the changes in expectations of devaluation—the main cause of the fluctuations in the demand for M3 during the year. These expectations are closely related to the regime of a stable exchange rate at a time when domestic inflation is higher than abroad. Since the adoption of the stabilization program in July 1985 this regime has served the Bank of Israel as the principal instrument for keeping control over the price level: a stable exchange rate provides the price level with a nominal anchor and acts to stabilize it—directly, by its effect on prices of tradeable goods, and indirectly, by containing inflationary expectations. Past experience in Israel shows that in such an exchange rate regime, expectations of devaluation were low for long periods, rising shortly before devaluations and declining after them.

Table VIII-1a
THE MONETARY AGGREGATES, THE SOURCES OF CHANGE IN M3,
AND THE CONSUMER PRICE INDEX, 1986-87
 (Annual percent change)

	1986	1987	
	Total	Total	1st half 2nd half
M1 – currency in circulation and demand deposits	120	50	44 57
M2 – M1 plus interest-bearing sheqel deposits	75	47	68 29
M3 – M2 plus residents' foreign-currency deposits (Patam)	27	29	39 21
<i>Sources of M3 growth</i>			
Net domestic credit	20	21	-10 63
Foreign currency reserves ^a	36	39	111 -4
<i>Consumer price index</i>	20	16	18 15

^a All the U.S. aid is received in October-November, but in order to correct for the fluctuations in the data this causes, the grants-in-aid were distributed evenly over the year.

¹ The analysis here is in the framework of a model of the composition of the public's asset portfolio (including assets and liabilities with the rest of the world). According to this model, the demand for each type of asset increases when the return on this asset rises, and falls when the return on alternative assets increases. In this chapter, money is represented by M3. This aggregate is less sensitive to the adaptation to a lower rate of inflation than the nonindexed aggregates, because a large part of this process—the shift from residents' foreign-currency deposits (Patam) to unindexed assets—is carried out within the aggregate.

In January 1987 the sheqel was devalued by 11 percent against the currency basket in order to make exports and import substitution more competitive. The devaluation was carried out within the framework of a package deal that included a partial sterilization of the cost-of-living allowance and a reduction of employers' national insurance contributions in order to reduce the impact of the devaluation on domestic prices.

The public's expectations of a near devaluation abated considerably after the January devaluation and led to a fall in the expected return on foreign-currency assets. This caused a rise in the demand for local-currency assets (indexed and unindexed), as well as for M3—in which unindexed assets were the major component—at the expense of foreign-currency assets (see Section 2 below). The change in expectations of devaluation also led to a rise in the money supply, due to capital inflows from abroad; these forces could have been sufficient to cause a fall in the real interest rates.² Since the devaluation was carried out at a time of soaring demand, expectations strengthened that prices would rise shortly (these expectations reflected themselves, for example, in the yields of indexed bonds and in the forecasts of expected inflation by various organizations). A fall in real domestic interest rates would have reinforced pressures for price rises; a rapid price rise would have aborted the success of the devaluation, and brought the next devaluation closer. The Bank of Israel acted in various ways to prevent such an outcome, by absorbing part of the incremental money supply. Overall, the large expansion of demand and the moderate growth of supply brought about a rise in short-term lending and borrowing rates, together with a rapid increase in the quantity of money, M3 (see Tables VIII-1a and VIII-1b).

These developments in the money supply in the first half of the year also reflected themselves in the composition of the sources of M3 expansion: capital inflows from abroad resulted in a large growth of the quantity of money due to the increase in the foreign reserves, while the restrictive monetary policy of the Bank expressed itself in a nominal contraction of net domestic credit (see Table VIII-1a).

In the second half of the year, the expectations of a continuing real appreciation of the sheqel receded, the demand for local-currency assets and M3 decreased, and capital inflows slackened. In the second half of the year, the Bank, desiring to prevent an excessive monetary squeeze due to foreign-currency purchases, and to bring down short-term interest rates, took steps to contain the contractionary factors by increasing its discount-window lending (by gradually reducing interest rates on these loans). Since demand for M3 fell in this period, the growth rate of this aggregate slowed very substantially (see Table VIII-1a).

²It is plausible that the growth of the money supply exceeded the rate of increase of demand, since the supply of money is also influenced by the expansion of credit due to the banking multiplier.

Nominal interest rates in fact began to fall already since April, but the inflation rate declined faster (among other things, due to the restrictive monetary policy in the first half of the year), so that real interest rates remained high for a few more months. The reduction of the nominal interest rates became a fall in the real interest rate from August, and especially in the last quarter of the year (see Table VIII-1b).

The developments in the second half of the year also show up in the composition of the sources of M3 expansion: the weakening of expectations of devaluation contributed to a contraction in the quantity of money through a decline in the foreign reserves, while the Bank's policy, which intended to prevent the monetary squeeze coming from this decline in the quantity of money, took the form of a large increase in net domestic credit (see Table VIII-1a).

In the year as a whole, it therefore appears that the first half was dominant: the money supply increased, mainly due to the rise in the demand for money as expectations of devaluation abated, with an accompanying rise of short-term interest rates.

The first few months of 1988 are largely a continuation of the second half of 1987. Interest on overdraft facilities and real borrowing rates fell slightly in the first quarter of 1988, to a level several percentage points lower than the 1986 average (which was already substantially lower than the level of the two preceding years), while the balance of M3 stabilized in real terms. Preliminary indicators point to a further decline in interest rates in April and May.

The directions in which long-term interest rates changed also generally support the conclusion that monetary policy was restrictive in the early part of the year and eased

Table VIII-1b
REAL ACTUAL INTEREST RATES ON VARIOUS
TYPES OF CREDIT AND THE PUBLIC'S ASSETS, 1986-87

	1986	1987	1987				1988
			I	II	III	IV	I
<i>Short-term credit to the public</i>							
Total	7.0	19.7	34.0	21.2	18.9	8.1	12.4
<i>of which: Overdraft facilities</i>	31.1	38.9	40.3	48.1	39.5	29.8	26.3
Private capital issues ^a (indexed)	9.6 ^b	8.3	7.9	9.3	8.3	7.9	8.3
<i>Financial assets of the public</i>							
Time deposits for one month	0.0	3.7	6.2	4.9	4.9	-1.7	-1.2
Indexed 6-year government bonds	6.0	4.9	4.5	5.6	4.6	4.3	4.3

^aIncludes an imputed 1.6 percent cost of floating an issue.

^bAverage for July-December 1986.

subsequently,³ but early in the year long-term rate rose less steeply than short-term interest rates. On average for the year, long-term interest rates declined relative to the preceding year. This seems to have been related to the decline in the government's demand for sources of long-term funds.⁴ The decrease in government demand for long-term funds was supported by the capital market reform, which stimulated competition in the long-term money and capital markets. The reform lowered the proportion of obligatory investment in government bonds by the various saving institutions, and also significantly reduced the issues of non-negotiable government bonds carrying a fixed interest rate. At the same time, a general permit was given to firms to float private bond issues. As a result, the saving institutions switched to buying negotiable government bonds at market prices⁵ and to acquiring private bonds. Sales of negotiable bonds, which in 1985 accounted for 25 percent of total bond sales, thus rose to 54 percent of the total in 1987. Private bonds issues also rose steeply. This reduced the role of sales of non-negotiable bonds in stabilizing-term borrowing rates, and increased competition between the banks and the nonbanking sector in the money market. These factors, together with the fall in government demand for long-term funds, combined to lead to a drop in long-term interest rates. The small size of the government deficit in the last two years, and the capital market reform, thus enabled the private sector to raise more long-term funds at an progressively lower cost.

The differences between the directions of change in long-term and short-term interest rates require that the analysis of this year's developments distinguish between the effects of these two types of interest on the economy.⁶

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³ The dating of monetary restraint according to data on long-term interest rates differs slightly from that based on short-term rates of interest.

⁴ Government borrowing this year appears to have been greater than in the previous year (see Table VIII-6), but it should be kept in mind that the data on actual borrowing also include part of the absorption of capital inflows (i.e., a greater supply of capital from abroad); therefore they do not properly reflect the release of resources for the private sector.

⁵ In the last two years the gross yield on the non-negotiable bonds held by the pension and provident funds was 5.5 and 5.2 percent, respectively; for comparison, the average gross return in the secondary market was 5.3 percent in 1986 and 4.5 percent in 1987.

⁶ The theory of expectations provides an alternative explanation for the change in the yield schedules. According to this theory, long-term interest rates are determined in accordance with the average short-term interest rates expected for these long periods. Such an approach points to a certain change in the public's expectations in 1987, towards a decline in future short-term interest rates. This may have its explanation in a slow process of digesting the significance of the economic changes that occurred in the last three years. The cut of the government deficit, the fall of the inflation rate, and the stability of the balance of payments—although having occurred mainly in 1985 and 1986—led the public to believe that in the future short-term interest rates will come down more than was expected in 1986. This expressed itself in a fall of long-term interest rates.

Table VIII-2
GROWTH OF M3 (EXCL. TREASURY BILLS) HELD BY THE PUBLIC, 1985-87

	Percentage of GNP ^a										
	1987				1985				1987		
	1986	Total	1st half	2nd half	Average 1980-84	Total	2nd half	1986	Total	1st half	2nd half
	<i>NIS current million</i>					<i>Percent</i>					
A. Contribution of balance of payments and net domestic credit											
1. Transfers of foreign currency ^b	1,007	1,269	1,759	-490	-2.2	2.1	5.0	2.5	2.7	7.3	-1.8
2. Change in net domestic credit	1,386	1,847	-74	1,921	10.7	6.1	1.7	3.5	3.5	-0.3	7.2
<i>of which:</i> To the government	-1,306	-1,002	-772	-230	1.8	-1.8	-3.6	-3.3	-2.1	-3.3	-0.9
To the public	2,692	2,848	698	2,151	8.9	7.8	5.3	6.8	5.5	3.0	8.1
3. Total purchases of M3 (1+2)	2,392	3,116	1,685	1,431	8.4	8.2	6.7	6.0	6.2	7.0	5.4
B. Contribution of revaluations											
1. Revaluation of foreign currency reserves	334	734	543	191	16.2	7.1	3.9	0.9	1.6	2.4	0.7
2. Revaluation of net domestic credit	-372	-588	-245	-343	6.5	8.4	2.3	-1.0	-1.2	-1.1	-1.3
<i>of which:</i> Credit to the government	-307	75	-135	210	9.3	11.9	6.1	-0.8	0.1	-0.6	0.8
Credit to the public	-65	-663	-113	-550	-2.8	-3.5	-3.8	-0.2	-1.3	-0.5	-2.0
3. Revaluation of M3 (1+2)	-39	146	298	-152	19.1	15.5	6.2	-0.1	0.4	1.3	-0.6
C. Total change in M3 balances (A+B)											
1. Change in foreign currency reserves	1,340	2,003	2,302	-299	13.5	9.2	8.8	3.4	4.3	9.8	-1.1
2. Change in net domestic credit	1,014	1,259	-320	1,578	14.1	14.5	4.0	2.5	2.3	-1.4	6.0
<i>of which:</i> To the government	-1,612	-927	-906	-20	7.6	10.1	2.6	-4.1	-2.0	-3.8	-0.1
To the public	2,626	2,186	585	1,601	6.5	4.4	1.4	6.6	4.3	2.4	6.1
3. Total change in M3 balances	2,354	3,262	1,983	1,279	27.6	23.6	12.8	5.9	6.6	8.4	4.8

^a See note b to Table VIII-2a.

^b Excluding revaluations.

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Total financial assets held by the public posted a real 8.9 percent increase in 1987, and credit also expanded rapidly. The real average balance of short-term credit rose 25 percent, and the balance of long-term credit (including indexed medium-term credit)—by 13 percent. The expansion of credit, both in 1986 and in 1987, is among other things related to the government's borrowing policy. Although public borrowing has been reduced in the last two years, the cut was less than that of the government deficit; government borrowing was therefore considerably higher than the financing requirements of the deficit (see Table VIII-6).⁷ Since this had a potential excessive contractionary effect, the Bank of Israel offset it by expanding its discount-window lending and by formal and effective changes in the liquidity ratios, thus increasing the short-term resources at the disposal of the banks.⁸ Viewed from a somewhat different perspective, it may be said that since government borrowing exceeded its financing requirements, net domestic credit to the government decreased, and this made it possible to expand net domestic credit to the private sector (see Table VIII-3) by increasing the proportion of short-term credit at the expense of long-term credit. These trends contradict one of the objectives of the capital market reform—the promotion of fixed investment by releasing long-term funds for the business sector. The long-term credit flows indeed rose substantially in 1987, but a smaller absorption by the government would have permitted an even greater expansion of these credits.

Interest rates on unindexed nondirected credit are higher than on short-term deposits. These great disparities between borrowing and lending rates which have prevailed, with fluctuations, since the mid-1970s, translate into wide financial margins in this segment of banking operations, which is the main source of the banks' profits. This seems to be due to institutional restrictions on the other areas of banking activity, such as narrow margins on directed credit and the control of rates of commissions. The disparities are also made possible by the high market concentration in the banking sector and the restrictions imposed on short-term capital movements for reasons of monetary policy.

⁷ At the end of 1987 the actual investment in government bonds was still higher than required by the proportion of obligatory investment in government bonds of the saving institutions. In part, this was due to the still not uncompleted adjustment of their stock of bonds, and in part, apparently, because managers of provident funds and saving schemes preferred these non-negotiable bonds, and even urged the Ministry of Finance to continue issuing them to the funds. To some extent this explains the government's over-borrowing.

⁸ The switch of the public from residents' foreign-currency deposits (Patam) to local-currency assets, on which the reserve requirements are lower, resulted in an effective reduction of the overall reserve requirements. The change in reserve requirements was highly important in 1986 (see Table VIII-4).

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A stable exchange rate is one of the principal instruments for maintaining price stability in the short and medium term; it depends on stability in the balance of payments and the availability of adequate foreign currency reserves. An examination of the sources of M3 growth shows that in 1987 the average balance of net domestic credit⁹ rose by 14 percent (a real contraction of some 5 percent) while the other source of expansion, foreign currency reserves, swelled by 55 percent (a real increase of some 30 percent). The monetary aggregates therefore do not seem to have expanded in excess of the increase facilitated by the rise in the foreign exchange reserves. Since the overall state of the balance of payments was also favorable, [with a low deficit in the adjusted current account, a decline in the ratio of foreign debt to GNP, against the background of accelerated growth and fiscal balance (see Chapter VII, The Balance of Payments)], it may be said that monetary policy supported the maintenance of the stable exchange rate regime, and thereby contributed to a slight further reduction of inflation, accompanied by a slowing of the real appreciation of the sheqel. The price paid for this achievement was high short-term interest rates.

The rise in short-term interest rates, especially in the first half of the year, acted to curb domestic demand—particularly inventory investment, fixed investment and the acquisition of durables. However, demand was also affected by opposite factors, such as the decline in long-term interest rates, the continued growth of the business sector product and the rise in income, so that in the final account aggregate demand expanded.

The steep rise in average lending rates cut into the profitability of the nonbanking business sector (although this had a lesser effect on profits than the rise in wages). It may further be pointed out that high marginal short-term interest rates tend to contract the supply of product by raising marginal production costs. There is, however, a wide variation in the interest rates paid by different users and industries; generally, the interest rates faced by industries producing tradeable goods are lower than those confronting other sectors.

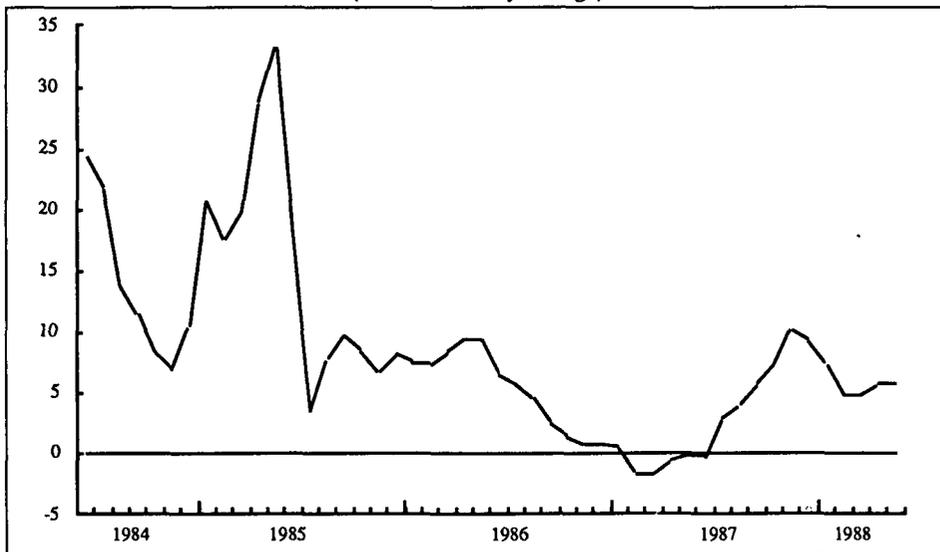
Strong expansionary forces also operated this year on the supply side, and the growth recorded by the business sector was impressive.

⁹Net domestic credit is the sum of the contributions of the commercial banks and the Bank of Israel to money creation, through net domestic credit to the government and the public. Net domestic credit to the government increases the quantity of currency in circulation or the deposits held by the public, which are part of the money supply. Net domestic credit to the public is increased by the operation of the banking multiplier (since liquidity ratios are less than unity) when credit to the public is increased, and by an expansion of the Bank of Israel's discount-window lending, which lowers the effective liquidity ratios. Total gross credit to the public includes bank credit in foreign currency, and is a source for the increase of all assets. Since an increase in long-term assets, such as saving schemes or bonds, is an absorption and not monetary expansion, the increment to these assets is deducted from total gross credit to the public to arrive at net domestic credit.

2. THE EXCHANGE RATE REGIME, EXPECTATIONS OF DEVALUATION, AND THE PUBLIC'S DEMAND FOR SHORT-TERM FINANCIAL ASSETS

Since 1985 economic policy has been to maintain a stable exchange rate regime. The switch to this regime, which was accompanied by a steep drop in the inflation rate, brought about far-reaching changes in the public's expectations of devaluation. The weakening of inflationary expectations dampened the expectations of devaluation, and in consequence of the gap between the domestic inflation rate and that prevailing abroad, led to cyclical swings in expectations. The transition to the new exchange rate regime may, by itself, have brought down expectations of devaluation. Since domestic inflation is higher than in Israel's trading partner countries, and due to the relatively infrequent changes in the nominal exchange rate, there are intervals in which the real exchange rate is eroded. Among the public, this arouses expectations of devaluation, which wane immediately after a devaluation is carried out. Experience in Israel has been that when the economy was under a stable exchange rate regime, there were long periods of low expectations of devaluation. These used to rise a relatively short time before devaluations, and abated after them. Moreover, according to some evidence, when there were more fluctuations in the exchange rate, expectations of devaluation were on average higher.¹⁰

Figure VIII-1
PREMIUM ON BLACK MARKET DOLLAR, 1984-88
(Percent, monthly average)



¹⁰See, for example, Bruno, M. and Sussman, Z., *Exchange Rate Flexibility, Inflation and Structural Change*, Economic Quarterly (Hebrew), No. 99, 1978.

The premium on the black market dollar may serve as an indicator of devaluation expectations, although it is also affected by other factors, among them the yields on alternative assets (such as short-term interest rates). For the period since mid-1985, the movements in black market dollar premium indicate a slow decline in the public's expectations of devaluation (see Appendix Table VIII-20). In the first half of 1986 this premium was not different from its average in the second half of 1985, despite the decline of inflation between these two periods, and despite the passage of time since the last devaluation in July 1985. It would therefore seem that the public's recognition that the exchange rate regime had indeed been changed took hold only gradually.

A slow learning process, which continued throughout 1986, can also be discerned in the public's behavior in the bond market.¹¹ In 1987 the black market dollar premium was lower than in 1986, and on average, expectations of devaluation were apparently also lower.¹² The black dollar premium clearly indicates a decline in expectations of devaluation in the first half of 1987, and their subsequent rise in the second half of the year.

The further analysis in this chapter gives special emphasis to the developments in M3 and in net domestic credit, which is defined on the basis of this aggregate (see note 9). The experience of 1985 shows that changes in expectations of devaluation cause this aggregate to fluctuate widely, and change in directions similar to those of unindexed financial assets. The proportion of residents' foreign-currency deposits (Patam) in M3 (excluding Treasury bills) shrank from 75 percent in mid-1985 to some 24 percent by the end of 1987—a proportion similar to that of the percentage of foreign-currency linked assets in the total asset portfolio. This primarily endogenous development largely also reflects an irreversible process caused by the banning of new Patam deposits for less than one year. In recent years this increased the interchangeability between the unindexed components of M3 and foreign currency originating in short-term capital movements with the rest of the world (capital movements may to a large extent be regarded as adjustments in the public's overall assets and liabilities portfolio, part of which is kept abroad).

¹¹ See, for example, Yariv, D., *The Publication of the Consumer Price Index and the Efficiency of the Stock Market*. This study compares the price performance of indexed bonds with dollar-linked bonds before and after 1985. Its finding is that whereas prior to 1985 the monthly publication of the CPI evoked a similar response of both kinds of bonds, there were, after 1985, no significant changes in prices of bonds linked to foreign currency. The analysis of sub-periods after 1985 shows that early in this period, in July 1985–March 1987, foreign-currency linked bonds still responded to the publication of the CPI, albeit more weakly than CPI-linked bonds.

¹² It should also be kept in mind that 1987 covers only part of the cycle between two adjacent devaluations.

Table VIII-3
SOURCES OF GROWTH IN PURCHASES OF M3 (EXCL. TREASURY BILLS)

	Percentage of GNP ^a										
	1986	1987			Average 1980-84	1985		1986	1987		
		Total	1st half	2nd half		Total	2nd half		Total	1st half	2nd half
A. Change in foreign currency reserves	<i>NIS current million</i>					<i>Percent</i>					
1. Private sector sales of foreign currency	-984	-137	1,344	-1,481	-5.8	-4.8	-2.2	-2.5	0.1	5.7	-5.6
2. Foreign currency transfers by the government ^b	1,990	1,406	415	991	5.0	6.9	7.2	5.0	2.7	1.6	3.7
3. Total (1+2)	1,007	1,269	1,759	-490	-2.2	2.1	5.0	2.5	2.7	7.3	-1.8
B. Change in net domestic credit to the public sector											
1. Total, public sector (a+b+c+d+e-f)	-1,399	-1,631	-1,183	-448	4.7	-1.9	-4.9	-3.6	-3.3	-4.9	-1.7
a. Public sector deficit ^c	-1,070	-1,507	-1,116	-391	6.0	3.0	-0.2	-2.7	-3.1	-4.7	-1.5
b. Interest payments on the domestic debt	2,411	2,989	1,451	1,538	5.1	5.8	5.7	6.1	5.9	6.1	5.8
c. Net government credit to the private sector	527	62	131	-69	3.6	0.5	0.2	1.3	0.2	0.6	-0.3
d. Net government borrowing ^d	1,275	1,768	1,239	529	5.7	4.4	3.5	3.3	3.6	5.3	1.9
e. Change in bank credit to the government	-1	-1	5	-5	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
f. Foreign currency transfers by the government	1,990	1,406	415	991	5.0	6.9	7.2	5.0	2.7	1.6	3.7
2. Total, Bank of Israel (g+h+i)	93	629	411	218	-2.9	0.1	1.4	0.3	1.2	1.7	0.8
g. Open-market operations	0	59	145	-86	-0.2	0.0	0.0	0.0	0.1	0.6	-0.3
h. Conversion of restitution residents' foreign currency deposits (Patam)	-112	-122	-11	-111	-0.6	-0.8	-0.7	-0.3	-0.2	-0.1	-0.4
i. Other ^e	205	692	277	415	-2.3	0.9	2.1	0.6	1.4	1.2	1.6
3. Total, (B.1+B.2)	-1,306	-1,002	-772	-230	1.8	-1.8	-3.6	-3.3	-2.1	-3.3	-0.9
C. Change in net domestic credit to the private sector											
1. Total (D-A.3-B.3)	2,692	2,848	698	2,151	8.9	7.8	5.3	6.8	5.5	3.0	8.1
of which: Discount-window lending	166	672	-48	719	1.1	0.0	-1.0	0.5	1.2	-0.2	2.7
Directed credit	-50	20	-20	39	3.7	0.6	-0.8	-0.1	0.0	-0.1	0.2
D. Total purchases of M3 (excl. Treasury bills) (A3+B2+C1)	2,392	3,116	1,685	1,431	8.4	8.2	6.7	6.0	6.2	7.0	5.4

See notes on following page.

Notes to Table VIII-3:

^a See note b to Appendix Table VIII-2a.

^b Foreign currency transfers by the government include interest receipts on the foreign currency reserves. The U.S. civilian aid grants, all of which are received in October-November, are distributed evenly over the year in order to eliminate the fluctuations in the data on the foreign reserves and net domestic credit that would otherwise appear.

^c Net domestic deficit of the public sector (government and National Institutions), excluding net interest payments.

^d Includes Treasury bills.

^e This item includes the increment to net domestic credit resulting from the final accounts of the Bank of Israel.

3. MONETARY POLICY AND THE SOURCES OF CHANGE IN M3

The main task of monetary policy is to maintain the stability of the price level—directly, through its effects on demand for goods and services, but mainly, more indirectly—through protecting the exchange rate, which plays a major role in ‘anchoring’ the price level and inflationary expectations. Since mid-1985 a stable exchange rate regime has been maintained: by comparison with the period before the 1985 stabilization program, the exchange rate was kept fixed for long intervals.

Stability of the exchange rate depends on balance of payments stability and on keeping the foreign currency reserves at an adequate level. Monetary policy can influence this level. One route for influencing the balance of payments is to affect the demand for goods and services, which determines the size of the import surplus; another route is control of capital movements, particularly short-term flows. Past experience teaches that capital exports can dictate raising the exchange rate even when the state of the current account does not call for doing so, and that capital inflows due to high domestic interest rates may to some extent delay devaluations.

Maintaining the stability of the exchange rate, as a major intermediate objective of monetary policy, makes it highly important to analyze policy with reference to the state of the foreign reserves. It is therefore convenient to break down the sources of growth of the money supply (in our case, as explained above, the M3 balances), by two components: changes in the foreign exchange reserves, and in net domestic credit.

In 1987 the M3 balances increased by 6.6 percent of GNP, composed of an expansion of 2.3 percent of GNP in net domestic credit and a rise of 4.3 percent of GNP in the foreign currency reserves (see Table VIII-2).

A striking development this year was the drastic contraction in private sector purchases of foreign currency. After purchases in amounts of 5.8 percent of GNP in 1982-85 and 2.5 percent in 1986, in 1987 the private sector sold foreign currency to the Bank of Israel in an amount of 0.1 percent of GNP (see Table VIII-3). Until 1986, the decline in the private sector's foreign currency purchases was due to the improve-

ment in its external current account, while in 1987 the fall in purchases reflects a rise in (derived) capital imports, with a nearly unchanged current account (see Appendix Table VIII-4a).¹³

The year's changes in capital imports were related to the changes in expected relative yields on local-currency versus foreign-currency assets, due to changes in expectations of devaluation. Since these expectations differed greatly in the two halves of the year, each half-year will be dealt with separately.

On January 13 the sheqel was devalued by about 11 percent; after the devaluation, the public's expectations of another devaluation in the near future weakened considerably. In mid-February, the Bank of Israel, anxious that the devaluation might lead to rapid price increases, raised the nominal interest rates on the discount-window loans in the top bracket and on the commercial banks' deposits, by one percent a month. These increases were announced as temporary. It turned out later that in this period prices rose less than had been anticipated, so that real interest rates climbed steeply.

The rise in the expected relative yields on local-currency assets led to an increase in demand for them on the one hand, and to large capital inflows from abroad on the other. The public's sales of foreign currency in this period amounted to 5.7 percent of GNP (see Table VIII-3). The Bank of Israel absorbed part of the increase in the money supply stemming from these foreign currency purchases, through sales of Treasury bills and long-term bonds. The government's absorption through bond sales in this half-year rose by 5.3 percentage points of GNP, as against 3.6 percentage points in the preceding year, despite the contraction of the government deficit (see Table VIII-3). Discount-window lending also declined slightly in this period, due to repayments by the commercial banks which had other sources of liquidity at their disposal.

These events reflected themselves in a decline of 3.3 percentage points of GNP in domestic credit to the government and a 3 percent of GNP expansion of credit to the public. The capital inflows were, as already stated, only partially offset by the contraction of domestic credit, and M3 purchases rose in this period by 7 percentage points of GNP, with new residents' foreign-currency deposits declining, and higher purchases of the unindexed components of M3. As explained in Section 1, demand for M3 in this period exceeded supply, causing the increase in M3 to be accompanied by a rise in borrowing and lending rates. Thus, for example, the average real interest rate on overdrafts climbed from 27 percent per annum in 1986 to 44 percent in the first half of 1987 and the real interest on 30-day time deposits went up from zero to 6 percent.

¹³This description rests mainly on Table VIII-3. The changes in the balances of M3 and its components may be due to changes in the acquisition of assets included in the aggregate, as well as to changes in the value of residents' foreign currency deposits (Patam) as a result of changes in the exchange rates. In 1982-85, when the exchange rate changed frequently, the revaluations accounted for two-thirds of the change in M3 balances, whereas in the last two years they were negligible (see Table VIII-2). For most purposes it is therefore sufficient to analyze the changes in purchases of M3 as shown in Table VIII-3.

When it became apparent that the devaluation had not driven up inflation, and that actual real interest rates were quite high, the Bank of Israel, beginning in August 1987, gradually cut the nominal interest rates on the top bracket of the discount-window loans by 1.2 percent per month, and reduced the interest on the required reserves steadily until the end of the year. The combination of the fall in yields on local-currency assets and the rise in expectations of devaluation, as the January devaluation receded into the past, and the cumulative appreciation of the currency, caused capital inflows to dry up in the middle of the year. Later, mainly in the last quarter, the private sector began buying foreign currency. These purchases grew larger as a result of devaluation expectations caused by the world-wide stock market crash in October 1987. Following the crash, the international value of the dollar slumped and it was feared that Israel would not be able to acquiesce in a large appreciation of the sheqel against the dollar, and would prevent it by devaluing against the currency basket. It seems that as these fears disappeared in early 1988, the private sector reverted to selling foreign currency to the Bank of Israel. In the second half of the year the private sector bought foreign currency from the Bank of Israel in an amount equal to 5.6 percent of GNP—an increase partly explained by the rise in the private sector's current account deficit. In the second half of the year the Bank of Israel, in order to prevent a monetary squeeze coming from these foreign-currency purchases, supplied the banking system with liquidity by permitting it to draw on discount-window loans at lower interest rates, and to expand credit to the private sector. At the end of the year the Bank provided liquidity by offering discount-window loans by tender. Discount-window lending in this period increased by 2.7 percentage points of GNP, following a 0.2 percent decrease in the first half of the year. The government's borrowing, too, declined, totalling 1.9 percent of GNP, despite the rise in the government's total deficit, including net interest payments, to 4.3 percent of GNP, as against 1.4 percent in the first half of the year.

These changes showed up in an 8.1 percent of GNP expansion of net domestic credit to the private sector (7.2 percent for total net domestic credit, private sector and government). The combination of the fall in foreign reserves and the rise in domestic credit led to a slowing of the increase of M3 (see Table VIII-2). An additional erosion of several percent of the M3 balance resulted from the depreciation of the dollar (a development opposite to that of the first half of the year), so that the increment to the balance decreased from 8.4 percent of GNP in the first half of the year to 4.8 percent in the second half.

Real interest rates on overdrafts and 30-day time deposits fell in the second half of the year to 34 and 1.5 percent per annum, respectively (in the last quarter—29 and -1.7 percent respectively).

Table VIII-4
MONETARY POLICY INDICATORS, 1984-87
(Percent of GNP^a)

	1984	1985		1986	1987		
		Total	2nd half		Total	1st half	2nd half
Addition to unlinked short-term asset base^b							
1. Discount-window loan	0.6	0.0	-1.0	0.5	1.2	-0.2	2.7
2. Increase in banks' liquidity deficiencies	0.6	0.8	1.1	0.1	-0.8	-1.3	-0.3
3. Open-market operations	0.0	0.0	0.0	0.0	-0.1	-0.6	0.3
4. Bank of Israel injection due to other factors	-3.2	0.9	2.0	0.6	1.1	0.6	1.5
5. Injection generated by directed credit ^c	4.1	1.1	0.3	-0.1	0.0	-0.1	0.2
6. Total addition to unlinked short-term asset base (1 through 5)	2.2	2.8	2.4	1.1	1.4	-1.5	4.4
Other increments to unlinked short-term assets							
7. Due to changes in foreign currency credit ceilings	-0.3	-0.1	-0.7	0.4	0.0	0.0	0.0
8. Due to changes in liquidity ratios ^d	-0.6	-4.8	-9.6	4.3	1.3	0.6	2.0
9. Total increase in assets, excl. composition effect of monetary policy (7+8)	-1.0	-4.9	-10.3	4.6	1.3	0.6	2.0
10. Composition effect ^e	-0.1	6.3	11.0	2.5	2.2	3.3	1.1

^a Calculated as the arithmetic mean of monthly ratios. The numerators are current prices, the denominator (GNP) is derived from quarterly data and corrected for the change in prices during the quarter.

^b The change in the asset base is smaller than that of assets because of the operation of the multiplier.

^c Adjusted for the transfer of export credit funds from the Bank of Israel to the commercial banks in 1985.

^d The changes in the sources of commercial bank sheqel credit due to changes in the liquidity ratios on sheqel assets during the period.

^e A change in the composition of assets due to a change in yields alters the volume of credit as a result of differential liquidity ratios.

Table VIII-5
DOMESTIC DEFICIT OF THE PUBLIC SECTOR (GOVERNMENT
AND BANK OF ISRAEL) AND ITS FINANCING, 1982-87
 (Percent of GNP^a)

	1982	1983	1984	1985		1986	1987		
				Total	2nd half		Total	1st half	2nd half
Deficit									
Deficit excl. interest paid ^b	6.3	3.3	8.4	3.0	-0.2	-2.7	-3.1	-4.7	-1.5
Interest (adjusted) ^b	3.6	2.8	3.9	6.2	6.2	6.5	5.8	5.8	5.8
Total	10.0	6.0	12.3	9.3	6.0	3.9	2.7	1.1	4.3
Financing the deficit									
Change in M3 base	2.6	7.6	3.9	0.9	-0.4	-0.5	1.7	2.6	0.8
<i>of which:</i> M1 base	1.7	2.3	3.0	6.5	10.6	1.9	2.7	4.7	0.7
Net increase in domestic debt ^c	5.3	-6.3	0.0	4.6	5.3	3.2	3.1	4.9	1.3
Sale of foreign currency	2.6	6.3	8.6	4.8	2.2	2.5	-0.1	-5.7	5.6
Net effect of monetary policy on sheqel segment ^d	-0.6	-1.6	-0.2	-1.1	-1.0	-1.4	-2.0	-0.7	-3.4

^a Calculated as the arithmetic mean of monthly ratios. The numerators are current prices, the denominator (GNP) is derived from quarterly data.

^b Interest payments in this table are an estimate of the real interest on the domestic debt, in addition to adjustments required by the national accounts. These estimates differ from the interest payments and the deficit including them in other tables of this chapter, where they are nominal interest payments.

^c Increment to the government asset base (excluding Patam and net credit granted by the government).

^d Interest on the money base, plus the fiscal burden of discount-window lending, less fines for liquidity deficiencies (see Table VIII-A2).

SOURCE: Appendix Table VIII-A5.

Table VIII-6
POTENTIAL AND ACTUAL REVENUE FROM MONEY CREATION, 1983-87
 (Percent of GNP^a)

	1983	1984	1985		1986	1987		
			Total	2nd half		Total	1st half	2nd half
1. Inflationary erosion	2.4	3.1	2.7	2.2	1.3	1.1	1.0	1.2
2. Money creation	2.3	3.0	6.5	10.6	1.9	2.7	4.7	0.7
3. Change in discount-window loan	1.8	0.6	-0.0	-1.0	0.5	1.2	-0.2	2.7
4. Interest on money base	0.5	0.8	1.8	2.5	0.9	0.8	0.9	0.7
5. Interest on discount-window loan and liquidity deficiency fines	0.8	1.2	0.7	0.5	0.0	0.0	0.0	0.0
6. Revenue from money creation (2-3+4-5)	0.8	2.8	5.4	9.6	0.5	0.6	4.0	-2.7

a See note a to Table VIII-5.

4. THE CAPITAL MARKET REFORM

The government has in the last few years started to implement a reform of the capital market, with the objective of reducing government involvement in this market, increase competition in it, and thus improve the mechanism of choice of investments. The reform had the further purpose of initiating a change in the institutional structure of financial intermediation, with a reduction of the high market concentration of the banking system. This high concentration not only maintains noncompetitive markets, but also creates conflicts of interest within the banking system, due to its many and diversified fields of activity in the capital market.¹⁴

In the framework of this reform several steps were taken during 1987: in April, the Ministry of Finance issued a general permit for the floating of private bond issues (with a limit on the size of issues for corporations affiliated to the commercial banks), leaving a supervisory function to the Securities Authority alone.¹⁵ Measures were also taken to equalize conditions of bond issues for the government and the private sector, with an elimination of the relative tax advantages of government issues, by equalizing the tax benefits on interest income. More channels were opened for investment in private bonds by institutional investors were already opened last year. This year, still more possibilities were provided for floating issues. In addition, the coverage requirements on dollar-linked saving schemes were lowered, expanding and diversifying the freely disposable resources of the banking system. It was permitted to purchase private or negotiable government bonds in an amount of up to 10 percent of the current accumulation of savings as cover for dollar-linked saving schemes.

The reduction of the obligatory investment in government bonds by institutional investors and the easing of conditions for bond issues brought about an increase of more than 30 percent in the private sector's bond issues, which in 1987 totalled over NIS1 billion. As in the previous year, 55 percent of the issues were by companies affiliated with the banking system. These issues are destined for extending long-term credit to firms of modest size; from the latter's perspective this is preferable to floating bonds of their own which have a fairly high fixed cost of issue, and pose problems of tradeability due to the small size of the issue. It is worth noting that the increase in bond flotations was not at the expense of share issues, which also expanded substantially.

¹⁴For a more detailed description of the principles underlying the capital market reform, see Bank of Israel *Annual Report 1986*, and the report of the Bejski Commission on the Regulation of the Bank Shares (Hebrew), April 1986.

¹⁵It should be noted that administrative intervention is still possible, through regulations with regard to the final tax rate on income from interest on approved securities. Almost no use was made of these regulations in 1987, and they should not be used as a discriminatory instrument in the process of approving private bond issues.

The lowering of the coverage requirements led to an excess supply of long-term funds, which caused interest rates on private issues (by the banks and others) to fall, in step with the decline in the long-term interest rate. The average rate of interest on private dollar-linked bond issues was 6.6 percent, as against 7.6 percent in 1986. After April 1987, the interest rate on private issues fell slightly more than on government issues, apparently as a result of the reduction of the tax advantages formerly enjoyed by government bonds, and the extension of similar benefits to private issues.

The share of negotiable debentures in total bond issues increased in 1987, as the government in effect ceased issuing special non-negotiable bonds to institutional investors (except for pension funds, life-insurance, and dollar-linked saving schemes). In the last two years the proportion of negotiable bonds in total gross issues was 54 percent, as contrasted with a mere 4 percent in 1984, and some 25 percent in 1985. The expansion of the negotiable part, and the practice of placing bonds by tender, improve the capital market's functioning: they cause prices to reflect market conditions, instead of being set by administrative decisions.¹⁶

The main thrust of the steps taken in the capital market reform was to reduce government involvement and to equalize the conditions of raising funds for the government and the private sector. Against the background of the slash in the government deficit, these measures led to a fall in long-term interest rates, and contributed to improving the functioning of the capital market, but developments in a single year do not yet permit definite conclusions. In addition to reducing the government's role in the capital market, it is important to make it more competitive by promoting the market for negotiable bonds. This requires changes in the institutional structure, together with a lowering of the banking system's high market concentration, and the entry of new independent firms into the capital market.

In early 1988, the Expert Committee on Personal Income Tax Reform (the 'Sheshinski Committee') submitted its report; the gist of its recommendations as regards the capital market is to make the tax rates on interest income equal for all the various savings channels, and for all categories of investors and forms of investment. Taxation of income from the capital market is regarded as reducing the tax burden on wage income, and to remove existing distortions in the taxation of the capital market. These changes may establish a better basis for investment and economic growth.

¹⁶It is of interest to note that the public sector took the lead in the floating of bonds by tender, and most private issues also adopted this form. In some of the tenders for private bonds it is prices that are set, and in others—the interest rates.