

## Chapter 3

# Prices

*The Consumer Price Index (CPI) rose by 11.2 percent during 1993, following an increase of 9.4 percent in 1992. Nevertheless, continuing the trend which began in 1990, there were indications in 1993, too, that many price indices had moderated. The average rise of the CPI was 10.9 percent, compared with 11.9 percent in 1992. The wholesale price index rose by 7.2 percent during the year, compared with 9.1 percent in 1992, and the implicit price index of GDP by 9.6 percent (11.4 percent in 1992). Developments in prices in 1993 took place in the context of the more moderate rise in unit labor costs and import prices in recent years. Other factors which played an important role in determining the path of price movements were public expectations—which were affected by the exchange-rate regime and the fact that a target rate of inflation was set at the beginning of the year—the reduction of the budget deficit, lower tax rates, and the liberalization of foreign trade. A particularly pronounced effect was exerted by excess demand in the housing market, which pushed housing prices up by an exceptional 23.7 percent during the year, accounting for about half the rise in the CPI. Monetary expansion at the end of the year also contributed to price increases, particularly in the assets markets.*

### 1. MAIN DEVELOPMENTS

The CPI rose by 11.2 percent during 1993, and by an average of 10.9 percent, similar to the rate of increase in 1992, and below the 18 percent level which prevailed from 1986 to 1991.

Despite the relative stability in the rate of increase of the CPI in 1992–93, that of most major price indices moderated in 1993, continuing the trend evident since the beginning of 1990. The average rise of the CPI was one percentage point lower than in 1992. Although the CPI rose during the year<sup>1</sup> by 1.8 percentage points more than in 1992, it is greatly influenced by the timing of the survey, and hence is not inconsistent with the trend apparent in the other indices.<sup>2</sup> The index of wholesale prices rose by 7.2 percent during the year, compared with 9.1 percent in 1992. Other indices, such as the CPI excluding housing, and the index of controlled prices, also rose relatively slowly, by 7.5 and 9.9 percent respectively. There was a more moderate rise, 9.6 percent, in the implicit price index of GDP, too, following increases of 20.2 and 11.4 percent in 1991

<sup>1</sup> The rate of change *during* the year is calculated as the rate of change between the last index of the year (December) and that of the previous December. The *average* rate of change is the rate of change between the average of the twelve monthly indices and the average of the twelve indices of the previous year.

<sup>2</sup> When adjustment is made for the technical problem of the timing of the data in the housing component of the CPI, the moderation of the rate of inflation during the year is also reflected by the CPI.

**Table 3.1**  
**Selected Price Indices, 1970-94:I**

(percent change, annual rate)				
	CPI	Implicit price index of		Wholesale prices
		Domestic use of resources <sup>a</sup>	GDP	
<i>Change during period<sup>b</sup></i>				
1970-78 <sup>c</sup>	29.1	30.7	30.5	
1979-85 <sup>c</sup>	169.7	167.0	166.7	169.6
1986-89 <sup>c</sup>	18.2	20.3	20.1	17.8
1989	20.7	19.7	17.7	19.5
1990	17.6	16.2	14.8	12.6
1991	18.0	15.0	20.2	14.6
1992	9.4	10.9	11.4	9.1
1993	11.2	9.2	9.6	7.2
1992				
I	10.4	2.0	4.2	9.6
II	6.3	29.2	25.3	11.9
III	11.7	13.4	15.4	5.4
IV	9.1	1.2	2.1	9.7
1993				
I	16.2	14.7	14.1	10.2
II	8.0	11.4	15.3	6.2
III	8.6	7.6	9.7	4.4
IV	12.4	3.4	0.0	8.1
1994				
I	9.6			9.3
<i>Average change</i>				
1986	48.1	47.8	50.5	45.1
1987	19.9	20.7	20.5	18.5
1988	16.3	17.7	20.0	17.5
1989	20.2	20.3	20.3	21.0
1990	17.2	15.7	15.6	11.6
1991	19.0	17.6	20.7	16.0
1992	11.9	10.9	11.5	10.2
1993	10.9	10.5	11.3	8.2

<sup>a</sup> Net of direct defense imports.

<sup>b</sup> CPI and wholesale price figures based on monthly data; GDP and resource use, on quarterly data.

<sup>c</sup> Geometric mean of period.

**Table 3.2**  
**Prices of Tradables and Nontradables, 1988–93**

(annual change, percent)

	CPI <sup>a</sup>					Implicit price indices <sup>b</sup>					
	Nontradables			Tradables		Domestic resource use <sup>c</sup>	Narrow domestic business resource use <sup>d</sup>	GDP	Business product	Imports <sup>e</sup>	Exports <sup>f</sup>
	Total	Excluding housing	Excluding controlled goods and housing	Total	Excluding controlled goods						
<i>Change during period<sup>g</sup></i>											
1988	21.6	21.2	24.4	10.8	10.5	17.0	13.6	21.6	19.3	2.5	11.3
1989	24.7	20.3	16.8	13.7	14.2	19.7	18.9	17.7	15.9	21.7	19.0
1990	21.2	16.0	13.2	13.0	12.4	16.2	13.2	14.8	11.1	15.0	11.1
1991	21.3	17.3	14.4	13.4	14.1	15.0	13.2	20.2	20.1	3.4	15.1
1992	8.7	11.5	9.7	8.7	8.8	10.9	10.0	11.4	10.4	9.6	10.0
1993	13.7	8.7	8.0	7.0	6.5	9.2	8.2	9.6	8.4	6.7	6.7
<i>Average change</i>											
1988	19.7	20.7	22.4	11.6	11.9	17.7	15.7	20.0	18.6	7.6	11.6
1989	24.9	22.1	20.9	13.3	13.5	20.3	18.9	20.3	18.7	16.1	18.6
1990	20.6	14.9	11.4	11.6	11.7	15.7	12.8	15.5	12.7	11.8	9.3
1991	22.2	17.6	15.0	13.3	13.4	17.6	15.0	20.8	19.1	8.6	14.8
1992	12.6	13.3	11.7	10.9	10.9	10.9	10.6	11.5	11.4	6.7	7.5
1993	12.8	9.4	7.8	7.3	7.3	10.5	9.0	11.3	9.9	9.8	9.7

<sup>a</sup> Nontradables comprise services other than foreign travel, fruit and vegetables, butter and cheese, eggs, bread and bakery products, gas and electricity. Tradables are all other CPI items. The weights in the CPI are 58 and 42 for nontradables and tradables respectively.

<sup>b</sup> National accounts data.

<sup>c</sup> Excluding direct defense imports.

<sup>d</sup> Domestic resource use excluding public services wages, housing services, and nonprofit institutions.

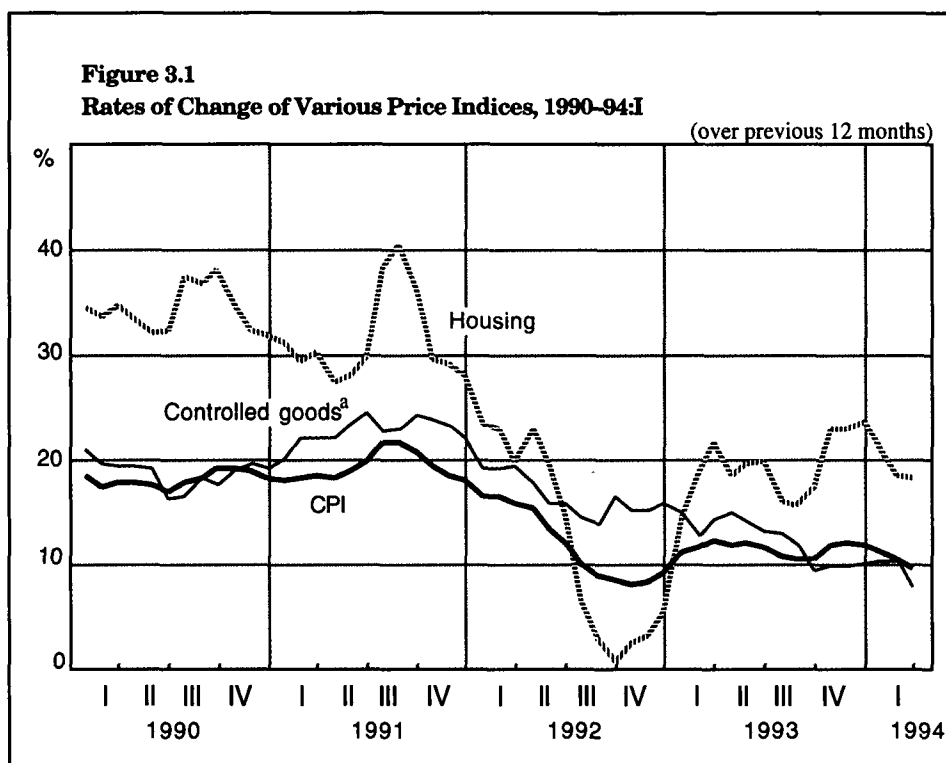
<sup>e</sup> Excluding defense imports and diamonds.

<sup>f</sup> Excluding diamonds.

<sup>g</sup> Quarterly averages

SOURCE: Based on Central Bureau of Statistics data.

and 1992 respectively. The moderation is less pronounced in the annual average increases in the implicit price indices of GDP, which rose by 11.3 percent, and of domestic use of resources—10.5 percent (Tables 3.1 and 3.2).



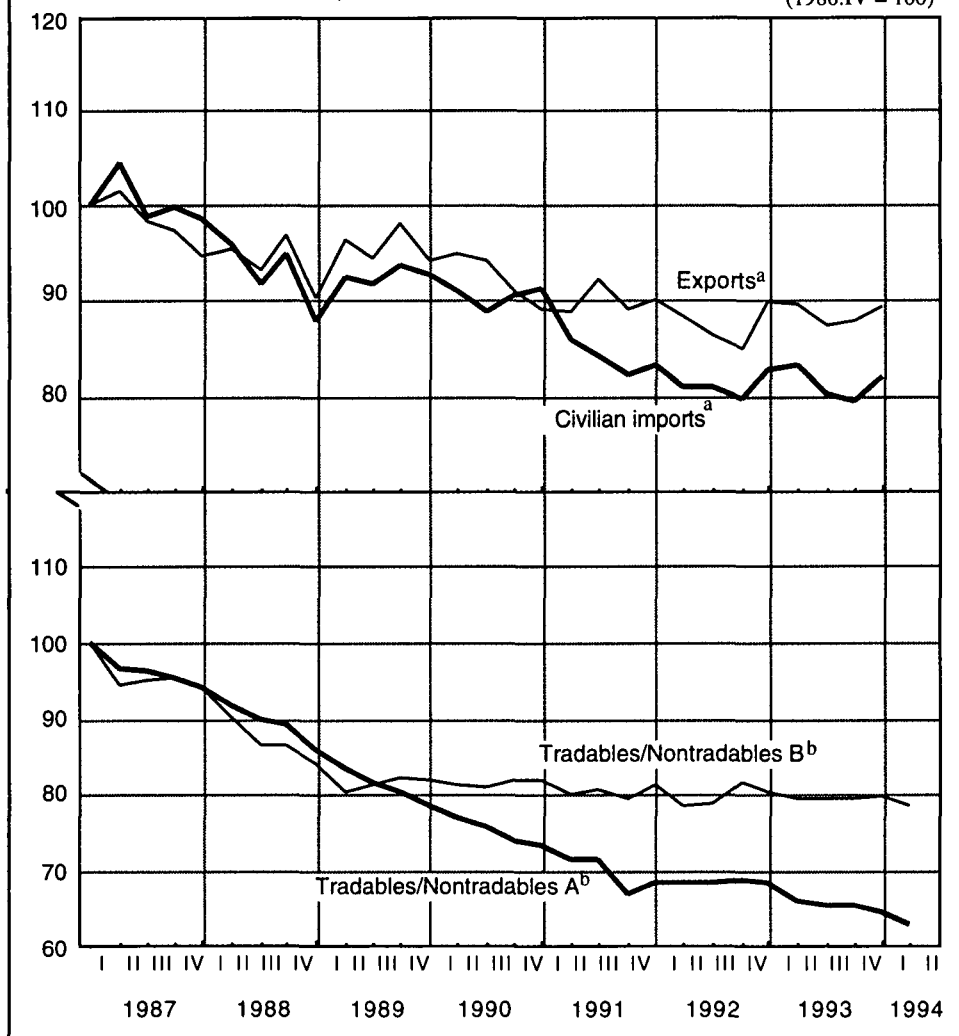
<sup>a</sup> The definition of controlled goods was changed in 1991.

The explanation of price trends in 1993 and the slowing of inflation in recent years, lies in exchange-rate policy and the trend of import prices, which mainly affect prices of tradables (i.e., goods also traded internationally). Demand and supply in the different markets determine the relative prices of goods, as well as their prices relative to the exchange rate (i.e., the real exchange rate). These factors determine prices of nontradables. Hence, exchange-rate policy plays a major role in the development of all prices. The exchange-rate against the currency basket rose by an average of 12.1 percent in 1993, similar to its rise in 1990-92, corresponding with the drop in foreign prices, which was expressed as a 3.7 percent fall in the dollar prices of imports (Table 6.6). As a result, prices of tradables rose slowly, by an average of 7.3 percent (Table 3.2).

The increase in the demand for and supply of goods and services was approximately in balance in most segments in 1993, except for the housing market where there was

**Figure 3.2**  
**Relative Price Indices, 1987-94**

(1986:IV = 100)



<sup>a</sup> Prices of exports (imports) excluding diamonds, relative to implicit prices of domestic resource use, excluding direct defense imports.

<sup>b</sup> Variant A, all CPI items; Variant B, excluding controlled goods and housing (quarterly averages).

excess demand. This balance was reflected by the slight increase in the import surplus/GDP ratio. The contraction of government involvement in the housing market in 1992-93, and the fall in total construction activity, together with increased private demand for housing from immigrants who were becoming more settled and from young couples, created excess demand which led to an 11 percent rise in the relative price of

**Table 3.3**  
**Main Components of the Consumer Price Index, 1983–93**

	Weighting in CPI	Average		1989	1990	1991	1992	1993
		1983 –85	1886 –89					
Total	1,000	261.1	25.5	20.2	17.2	19.0	11.9	10.9
Housing	165	266.0	24.6	32.3	34.2	31.6	11.2	19.3
Controlled goods <sup>a</sup>	131	278.4	28.6	29.1	18.7	22.7	16.4	12.2
Fruit and vegetables	64	264.3	28.2	5.2	0.9	12.2	16.9	0.6
Clothing and footwear	72	237.7	18.6	4.1	3.1	8.2	9.2	6.3
Total excl. housing	835	260.9	26.0	17.8	13.4	15.7	12.2	8.5
Total excl. controlled goods	869	259.4	24.7	18.1	16.8	18.4	11.3	10.7
Total excl. housing and controlled goods	704	256.8	25.1	14.4	11.6	14.1	11.3	7.6
Total excl. housing, fruit and vegetables	771	259.9	25.4	18.9	14.3	15.9	12.0	9.0
Total excl. fruit and vegetables	936	260.9	25.3	21.3	18.2	19.4	11.7	11.5
Total excl. fruit and vegetables, etc. <sup>b</sup>	568	258.5	25.4	17.0	13.8	14.9	11.0	8.3

<sup>a</sup> Controlled goods include subsidized essentials and goods and services supplied by public authorities, government enterprises, or supported corporations (e.g. Bezeq—Israel Telecommunication Corp. Ltd.). New definitions were introduced at the beginning of 1991.

<sup>b</sup> Total excluding fruit and vegetables, controlled goods, housing, clothing and footwear.

SOURCE: Based on Central Bureau of Statistics data.

housing during the year. The exceptional rise in housing prices seems, however, to reflect more than difficulties of structural adjustment. Exceptional developments in 1993, such as the closure of the administered areas in March, and political events, especially the peace process, affected both expectations and actual price increases—of housing in particular. This process was supported by monetary expansion and the stock-market boom (mainly towards the end of the year), which created a general sense of prosperity, pushing housing prices up even further. These developments caused the relative price of housing to rise, which in turn seems to have been an important factor in raising the CPI by 1.2 percentage points more than the declared target.

There was moderate real appreciation in 1993: prices of imports excluding defense imports and diamonds, which reflect economic developments more accurately than do total import prices, rose by an average of 9.8 percent, while export prices excluding diamonds rose by 9.7 percent—both slightly below the 11.3 percent increase in the implicit price index of GDP (Table 3.2 and Figure 3.2). Prices of tradables rose 7.3 percent, less than the 12.8 percent increase in prices of nontradables, mainly due to the rise in prices of apartments. Prices of nontradables excluding housing rose by only 9.4 percent (Table 3.2). The long-term trend of real appreciation is evident in many other countries too, and arises from two main factors: a rise in demand with a bias to non-

**Table 3.4**  
**Selected Price Indices and Exchange Rates, 1990–93**

	(rates of change of quarterly averages)								
	CPI		NIS against			Nontradables		Housing	
	A <sup>a</sup>	B <sup>b</sup>	Currency basket	Dollar	Tradables	A	B <sup>c</sup>	A <sup>d</sup>	B <sup>e</sup>
1991									
I	2.8	3.5	1.3	2.2	1.3	3.5	4.5	5.8	1.0
II	5.2	6.9	7.7	13.3	5.2	5.4	4.6	16.3	5.6
III	7.0	3.6	0.1	0.4	2.2	9.5	4.4	3.0	21.3
IV	2.4	2.5	3.3	0.4	4.0	1.5	2.8	-1.6	-1.3
1992									
I	1.4	2.6	-0.4	-0.6	1.6	1.4	4.4	-0.1	-4.8
II	2.9	2.9	4.0	3.7	2.7	3.0	2.3	4.7	4.5
III	1.6	1.1	4.4	0.6	1.8	1.5	0.3	1.3	4.0
IV	2.4	3.9	3.1	7.0	2.2	2.5	4.1	6.9	-1.1
1993									
I	3.5	3.0	4.5	6.7	1.0	4.7	2.3	8.1	9.8
II	3.0	1.9	-0.3	-1.5	2.2	3.3	2.1	1.3	6.5
III	1.4	2.1	2.4	3.5	1.3	1.4	1.6	5.0	0.6
IV	3.2	3.1	2.8	3.1	2.4	3.6	2.4	6.0	5.9
1990	17.2	16.7	10.6	5.2	11.6	20.6	14.9	34.7	36.2
1991	19.0	18.6	12.3	13.0	13.3	22.2	17.6	30.2	31.0
1992	11.9	12.1	10.2	7.9	10.9	12.6	13.3	9.9	10.0
1993	10.9	10.0	12.1	15.1	7.3	12.8	9.4	15.6	19.8

<sup>a</sup> CPI

<sup>b</sup> Adjusted CPI—reflecting the development of consumer prices, with housing prices based on final quarterly survey results.

<sup>c</sup> Nontradables excluding housing.

<sup>d</sup> Actual prices of owner-occupied homes.

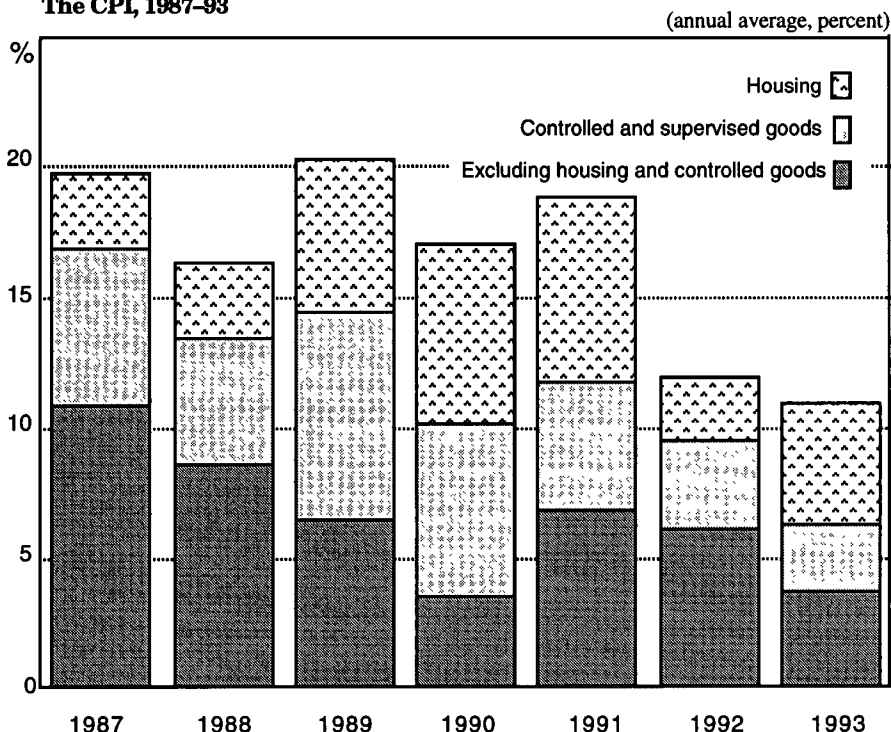
<sup>e</sup> CPI prices of owner-occupied homes.

SOURCE: Central Bureau of Statistics and Bank of Israel.

tradables—a trend which accompanies improved living standards—and rapid technological progress specifically in the industrial, tradables sector. Beyond this long-term real appreciation, there was excess demand during 1993, which was concentrated, as stated, in the construction industry. Although this added to the pressure for real appreciation, the effect was evident only in the year-on-year comparison, whereas the annual average shows no significant appreciation.

The process of decline from the 18 percent inflation level began in 1990, but was reflected in the CPI only from 1992. This is explained by two macroeconomic developments which mainly affected production costs. One is the easing of the rate at which import prices rose from 1989 to 1992 (though there was some variance in their trends) against

**Figure 3.3**  
**The CPI, 1987-93**



1. The share of each category is calculated according to its weighting each year.
2. The share of controlled and supervised goods in total goods changed in 1991.

the background of the recession in world markets (Table 3.5). At the same time, taxation on trade was reduced in recent years, and this helped to reduce upward pressure on prices in Israel. The second factor was the rise in unemployment, from about 6 percent in 1988 to more than 11 percent in 1992, which eased the rate of increase of nominal wages and unit labor costs (Table 3.5). Wage moderation has a significant effect, mainly on prices of nontradables. These factors, together with budgetary restraint, created the right conditions for reducing inflation, and indeed, since 1990 there has been a marked slowing down in the rate of increase of most prices. This did not result in a slower rise in the CPI, due to demand pressure in the housing market; when this pressure eased in 1992, there was a marked fall in the inflation rate (Table 3.3).

The moderation in the rate of increase of nominal unit labor costs and of local-currency prices of imports did not continue in 1993, although the trend over a number of years may still have had a cumulative effect. These, in conjunction with such other influ-



**Table 3.5**  
**Price Developments: Related Indicators, 1987-93**

(annual change, percent)

	Average					During period <sup>a</sup>			
	1987-89	1990	1991	1992	1993	1990	1991	1992	1993
<b>Price changes</b>									
<b>Imports</b>									
Intermediates <sup>b,c</sup>	15.6	7.9	7.9	4.3	7.0				
Consumer goods <sup>c</sup>	11.5	12.3	9.7	12.3	10.2				
Producer durables <sup>d</sup>	13.5	13.5	15.0	10.6	9.4	4.95	15.3	12.8	5.8
Exports (excl. diamonds) <sup>d</sup>	16.3	8.4	11.1	8.2	8.8	8.9	12.1	10.6	5.3
<b>Real change in GDP and use of resources</b>									
GDP <sup>d</sup>	3.5	6.0	6.2	6.7	3.4	9.1	9.8	-0.0	10.1
Domestic use of resources <sup>d,e</sup>	3.3	8.4	12.2	6.9	5.2	12.6	15.2	0.4	10.0
Exports (excl. diamonds) <sup>d</sup>	4.0	5.9	1.3	14.4	12.5	3.1	13.5	4.4	14.6
Unit labor costs	0.6	-0.9	-6.0	1.0	2.5				
<b>Nominal change in labor costs</b>									
<b>Public-sector wages</b>									
per employee post	22.5	17.3	20.8	11.5	12.2	20.5	16.2	11.1	14.3
<b>Business-sector wages</b>									
Wage per employee post	22.5	15.5	12.8	14.0	11.4	16.4	13.1	12.9	4.3
Wage per employee post excl. COLA <sup>f</sup>	17.1	9.7	6.9	11.5	6.3				
Wage per man-hour	22.1	15.2	15.4	11.2	10.8				
Wage per man-hour excl. COLA <sup>f</sup>	16.7	6.2	4.9	5.4	6.1				
Unit labor costs	21.6	8.6	12.2	10.7	12.8				
<b>General government deficit (percent of GNP)</b>									
Total	-2.7	-3.7	-4.0	-2.4	-1.9				
Domestic	-4.3	-6.5	-7.0	-5.7	-3.5				
<b>Monetary indicators</b>									
Change in M1	40.6	26.8	28.2	19.2	27.4	29.8	15.0	35.6	30.9
Change in M2	39.5	24.6	35.1	24.1	40.0	37.7	26.9	21.2	39.5
<b>Interest rate</b>									
Bank credit	41.8	26.4	26.4	19.9	16.4				
Overdraft facilities	47.5	29.6	29.9	22.0	18.1				
Long term <sup>g</sup>	3.4	1.2	2.1	2.3	2.8				
<b>Unemployment rate</b>	7.1	9.6	10.6	11.2	10.0				
<b>Change in exchange rates</b>									
Currency basket	10.3	10.6	12.3	10.2	12.1	11.1	11.6	14.9	8
Dollar	9.1	5.2	13.0	7.9	15.1	3.7	13.7	16.9	10.1

<sup>a</sup> Change from fourth quarter of preceding year to fourth quarter of current year.

<sup>b</sup> Excluding fuel and diamonds.

<sup>c</sup> Foreign trade data at effective exchange rate, including tariffs.

<sup>d</sup> National accounts data.

<sup>e</sup> Excluding direct defense imports.

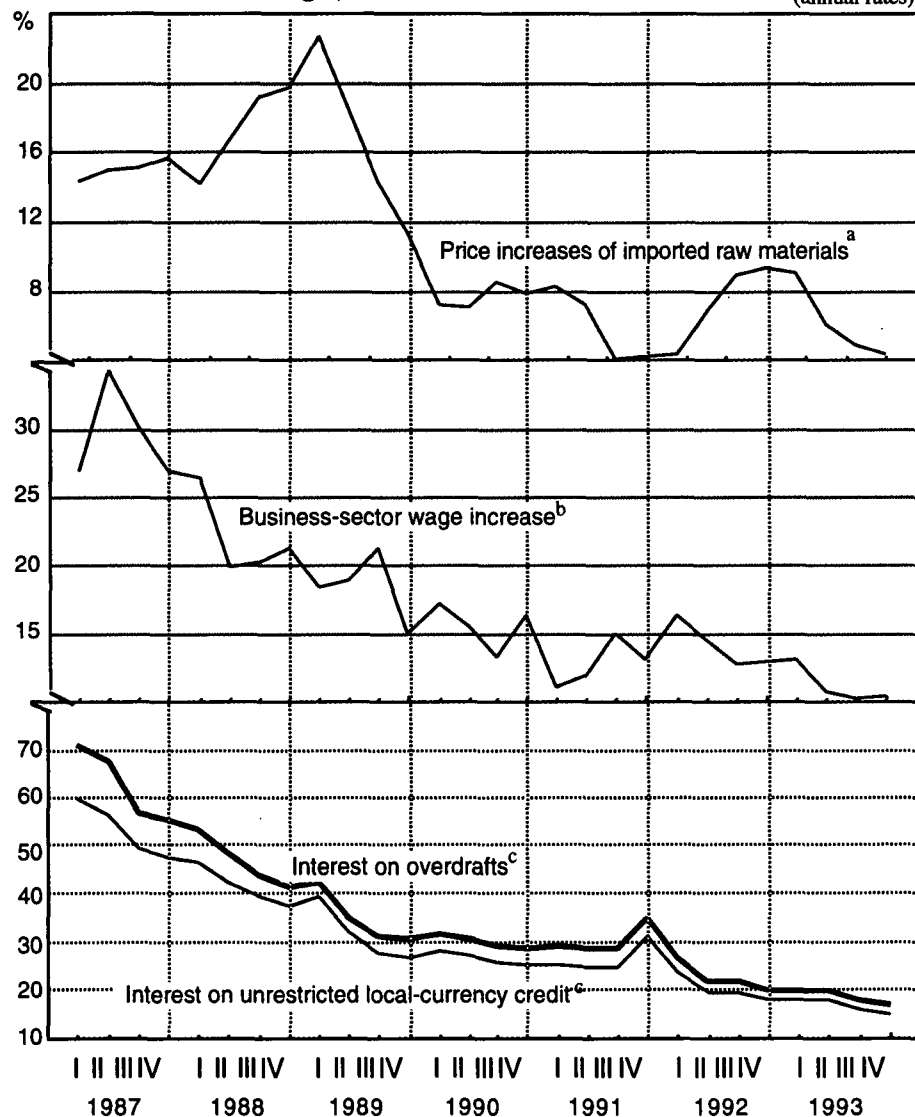
<sup>f</sup> Nominal wage increase not due to increase in prices. COLA = Cost of Living Allowance.

<sup>g</sup> Real gross yield to maturity on 5-year government bonds.

SOURCE: Based on Central Bureau of Statistics data.

**Figure 3.4**  
**Production Cost Changes, 1987-93**

(annual rates)



<sup>a</sup> Excluding fuel and diamonds. Rate of change of four-month moving average.

<sup>b</sup> Rate of change of quarterly averages in annual terms.

<sup>c</sup> Quarterly averages in annual terms.

ences as a change in inflationary expectations, budgetary restraint, and liberalization—all of which reduced rigidities—made the relatively low rate of inflation possible.

Public expectations regarding inflation play an important role in determining it. They greatly affect the path followed by the supply of and demand for goods, as well as the process of wage negotiations, so that in the past they helped to account for the persistent level of inflation. In recent years there has been a real change in the way these expectations are formed, as a result of developments in the labor market, the implementation of the sloping-band exchange-rate regime (from December 1991), and the official announcement of an annual target inflation rate, all of which helped to reduce uncertainty and to lower inflationary expectations. Government policy, through the Budget Deficit Reduction Law, also helped to change the expectations of the public, as strict budgetary discipline was maintained, while prices of controlled goods were raised at moderate rates consistent with the declared target figure (prices of controlled and supervised goods rose by only 9.9 percent during the year, less than the rise in the CPI). Against the backdrop of the lower level of inflation in 1992 and the attainment of the objectives set in that year, all these factors indicated the importance of adhering to the inflationary target, served to lower inflationary expectations, and reduced the rate of increase of many price indices. In addition, in September 1991 the process of exposing the economy to competing imports began. Despite the difficulties involved in estimating the effect of this process on prices, it warrants serious attention. The increased competition arising from trade liberalization seems to have made it easier for excess demand to be expressed by an increase in the import surplus, without boosting inflation.

The monetary aggregates continued to grow in 1993, while the interest rate fell (Table 3.5). As most of the increase in the aggregates took place towards the end of the year, its effect on prices, mainly of housing, was evident only then (and possibly also in the first months of 1994).

The development of the CPI during 1993 can be divided into three sub-periods. From January to April its annual rate of increase rose to 16.8 percent, led by housing prices. The falling value of the sheqel and monetary expansion at the end of 1992 also created upward pressure on prices of goods in general, and of apartments—which are quoted in dollars—in particular. From May to July the rate of change of the CPI moderated greatly, falling to an annual 2.4 percent. Most of this moderation was due to seasonal factors, and was consistent with the slow rise in the value of the sheqel, monetary restraint, and the lower level of economic activity. From August to December, when there was monetary expansion and greater economic activity, the CPI rose at an annual rate of 12.7 percent. In this period stock-market transactions and share prices peaked, partly the result of progress in the peace process. All these created a general sense of prosperity, and may have contributed to the increase in prices, mainly of housing. These developments at the end of the year aroused fears of renewed inflation, prompting the Bank of Israel to raise the interest rate. It appears at present that price increases in the first quarter of 1994 continue to be concentrated in the housing market; the CPI rose by an annual 9.6 percent in the first quarter, whereas excluding housing it rose by only 5.8 percent.

## 2. DETERMINANTS OF PRICES

### **The background: 1990–92**

In 1990 the economy emerged from the recession which had prevailed in 1988–89. This was made possible by the economic recovery program, supported by the large influx of immigrants and very favorable trading conditions. At the beginning of the 1990s the rise in the average nominal wage per employee post was affected by the sluggishness of the labor market during the recession, and by the expected and actual increase in the supply of labor resulting from immigration (factors which raised unemployment significantly). The rate at which nominal wages rose eased, in consequence, by some 2 percent a year from 1989, and this, together with a steady rate of price increases in 1989–91, resulted in a real cumulative 5.3 percent reduction in wages in those years (Table 3.5). Moreover, in view of the world-wide recession, the rate of price increases of imports (especially intermediates) and exports fell to an annual average of about 7 percent in 1990–92<sup>3</sup>, after high rates in the 1980s. All these, in conjunction with accumulated excess capacity, mainly in tradables in the years of the slump, enabled GDP to grow by about 6 percent per annum from 1990, and this high rate prevailed until 1992. Simultaneously, the same factors acted to reduce inflation. From 1992 they were also supported by the trade liberalization process, greater competition, expansion of imports and exports, and the government's policy of reducing, and even abolishing, certain indirect taxes, and removing some of the many quotas. Furthermore, in December 1991 a new exchange-rate policy was introduced, with the exchange rate moving within a band, the slope and position of which are determined in advance, and in 1992, for the first time, a target inflation figure was declared for the following year.

The effect of the forces which were operating in 1989–91 may be seen from the moderation of the rate of increase of wholesale prices from 1990, and of prices of many components of the CPI. Food prices rose by an average of 12.6 percent in 1990 and 1991, while those of furniture and household goods rose by an average of 13.1 percent. The slower rise of prices of clothing and footwear, most of which is tradable and greatly affected by the moderation of import prices, was particularly marked, and their average increase fell to 5.7 percent. Nevertheless, the rate of increase of the CPI did not fall, and the index continued rising at an average annual rate of about 18 percent. The reason for this seems to lie in the development of prices of housing and related categories, which rose on average at an exceptional rate of over 30 percent, compared with 17 percent in 1987 and 1988, and in the fact that the prices of controlled goods rose faster than those of the other components of the CPI, excluding housing. In effect, the CPI excluding housing and controlled goods rose by an average of 12.8 percent in 1990 and 1991 (Figure 3.4). In 1992 international economic developments and changed expectations

<sup>3</sup> The result of an average change of 11 percent in the NIS/currency-basket exchange rate, and an annual average 4 percent reduction in import prices in 1990–92, in terms of the currency basket.

led to a further decline in the rate of increase of the CPI excluding housing, when housing prices rose at an average annual rate of 11.2 percent, and the CPI by 11.9 percent.

### **Exchange-rate policy and inflationary expectations**

Israel's foreign-exchange policy plays a major role in setting the path for its nominal system. Its direct effect on prices of tradables, and through them on those of nontradables, is influenced by economic rigidities—which include the system of wage agreements and linkage, and expectations—preventing the complete accord of monetary and real variables.<sup>4</sup>

The value of the sheqel against the currency basket fell by 8 percent during the year, and by an average of 12.1 percent. These rates are consistent with those of recent years, but their significantly smaller variance in 1993 may be taken as indicating that the uncertainty associated with them has also declined. In the last quarter of 1992—following the 3 percent increase of the midpoint rate in November, together with the reduction of the slope of the band to 8 percent, and against the background of strong demand for foreign currency—the value of the sheqel against the currency basket fell by 5.3 percent, and against the dollar by 10.3 percent. This fall had a considerable effect on prices: during the first quarter of 1993 prices rose at an annual rate of over 16 percent, compared with 9.1 percent in the previous quarter. This was led by an immediate rise in prices of apartments, which started at the end of 1992 and persisted in the first few months of 1993. Increases in prices of the other components of the CPI followed, some of which may be attributed to the effect of the change in the exchange rate on the other prices. Another adjustment was made in July, when the slope of the band was reduced to 6 percent, and the midpoint rate was raised by 2 percent, bringing the exchange rate down by about 2 percent.

Viewed in retrospect, the inflation targets and the slope of the exchange-rate band can be compared with actual developments. At the end of 1991 the slope was set at 9 percent, and the midpoint raised by 3 percent. Based on the assumption that prices abroad would rise by about 3 percent (the world average rate of inflation), and that there were forces acting to weaken the trend of real appreciation that had prevailed for years, the inflation target for 1992 was set at a maximum of 14–15 percent.<sup>5</sup>

Towards the end of 1992, it became clear that the rate of inflation was below the target (9.4 percent during the year, and 11.9 percent on average). This reflected the forces

<sup>4</sup> The exchange rate has a direct short-term effect on prices of apartments, which are quoted in dollars. Their long-term price, however, is determined by supply and demand, so that the effect of changes in the dollar exchange rate is only temporary.

<sup>5</sup> When analyzing economic developments, it is easier to use average rates of change, which prevent extreme effects from distorting the general picture. On the other hand, the inflation target and the slope of the band are set in annual terms (rates of change during the year). As long as these target figures are falling, the expected *average* rate of change will be higher than the expected rate of change *during* the year.

acting to reduce inflation, including the expansion of the labor force, a further rise in the high unemployment rate, a slowdown in the rate of increase of the nominal wage, on the one hand, and the adjustment of the public's expectations on the other. Other factors, such as structural change in GDP (a reduction in the nontradable sector resulting from the contraction of construction), the reduction of the budget deficit, the lower tax rate, and trade liberalization, helped to curb inflation. They also enabled the slope of the exchange-rate band for 1993 to be set at 8 percent in November 1992, and the target inflation rate at 10 percent (based on the assumption that import prices would continue to rise slowly). Although the 1993 target was not actually achieved—the CPI rising by 11.2 percent during 1993—most major price indices went up by less than this (Table 3.3). Prices of tradables rose by a moderate 7 percent during the year (Table 3.2), but because of the problems of the housing market, prices of nontradables rose faster, by 13.7 percent, whereas those of nontradables excluding housing rose by only 8.7 percent.

In the second half of 1993 it became evident that there were forces acting to reduce inflation (from May to July 1993 the CPI increased at an annual rate of 2.4 percent). The slope of the exchange-rate band was reduced by 2 percent, the midpoint was raised by 2 percent, and the import surcharge and exchange-rate insurance premium for exporters, both standing at approximately 2 percent, were abolished. In addition, the inflation target for 1994 was set at 8 percent. At present it seems that developments in the housing market are continuing to exert upward pressure on the relative price of housing in 1994, and in the first quarter the CPI rose by 9.6 percent (annual rate), above the 1994 target.

## Housing

The housing component of the CPI rose by 23.7 percent during 1993. This represents an 11.3 percent increase in the relative price of housing, compared with a 3.7 percent reduction in 1992. Between 1988 and the end of 1993 the relative price of housing rose by about 50 percent.

The number of real-estate transactions reached a record in 1993 (according to land betterment tax data), as did mortgages—the increase deriving mainly from new immigrants. Urban land sales also rose considerably. Two factors seem to be responsible for the steep price rise in 1993: the rising exchange rate at the end of 1992 and from June to August 1993 pushed up the prices of apartments, which are quoted in dollars. This could have been temporary, with housing prices adjusting to the public's portfolio, had it not been for excess demand which also exerted upward pressure on prices. The excess arose essentially from stronger demand for housing services, mainly from new immigrants who were becoming settled, and from young couples (those born between 1969 and 1975 forming a particularly large cohort). In addition, demand increased as the result of the public's review of its assets, in the expectation that apartment prices would continue rising (due partly to the implications of progress in the peace negotiations). This firm demand was accompanied by rapid expansion of the money supply, lower interest rates, and a soaring share-price index—itsself influenced by

the peace process—creating a general feeling of prosperity which may also have contributed to the increase in demand. The housing component had a great effect on the variance of the CPI both during the year and in a year-on-year comparison. In 1992 the increase in the housing index was lower than that of the CPI, while in 1993 the reverse was the case, with housing pushing the CPI upwards. The path followed by housing prices during 1993, particularly the steep rise in January–April, moderation in the next four months, and the surge in September–December, exerted a considerable influence on the CPI, because of housing's large weight in the index, and its indirect effect on expectations regarding other components.

In January 1994 the method of calculating the housing index was revised, making it more up-to-date and accurate.<sup>6</sup> Alternative indices of housing prices, such as rent and the 'adjusted CPI' (Table 3.4), give a partial estimate of the bias in the CPI. These indicate that there was a downward bias of some 2 percent in 1992, and an upward bias of about 1.5 percent in 1993. Hence, the best measure of the rate of consumer price changes is some 12 percent for 1992, and about 10 percent for 1993. These figures are consistent with the rates and trends indicated by other indices, and are in line with the inflation targets for those years.<sup>7</sup>

## Cost variables

Nominal wages per employee post rose by 11.6 percent in 1993, compared with 13.5 percent in 1992. This is similar to the rise in prices, and is based on the more rapid 12.2 percent increase in public-sector wages (11.6 percent in 1992), while in the business sector wages rose by 11.4 percent (down from a 14 percent increase in 1992—Table 3.5). In the business sector, the increase in construction wages, an exceptional 16.3 percent, was prominent. The hourly wage in the business sector rose by 10.8 percent. It is reasonable to assume that with greater certainty regarding the path of inflation, the rate of change of wages reflects real developments in the labor market more accurately than in the past. From 1989 to 1993 the real hourly wage fell by a cumulative 11 percent because of the high unemployment rate, and the higher proportion of new, low-paid

<sup>6</sup> The problem in calculating the housing component of the CPI arises from serious difficulties in basing estimates on market data, as the number of comparable transactions (regarding area of apartment, age of building, location, etc.) is small, and registration of sales in the Land Registry takes place after a 45-day delay. These factors prevented the CBS from publishing changes in apartment prices on a current basis, obliging it to provide an index based on a three-month average, published with a month's delay. Moreover, as this figure is meant to reflect the price of housing services, certain long-term assumptions must be made, involving the duration of use of an apartment, the interest rate relevant to such investments, the building's rate of depreciation, the share of land value in the price of the apartment, etc. Any deviation from these assumptions would cause additional bias in the housing component.

<sup>7</sup> With the change in the system of weighting the CPI, the housing component was reduced from 25 percent at the end of 1993 to about 20 percent at the beginning of 1994. Due to updating of other elements of the calculation (the rate of depreciation and interest on apartments), it is not possible to assess whether there was an upward bias in the weight of this component in relation to others.

workers. Following these trends, there was no significant change in the total real wage in 1993, while in the private sector excluding construction it fell by 0.4 percent (Table 4.9).

There was no significant change in labor productivity in 1993, whereas nominal wage cost per unit rose by 12.8 percent, compared with a 10.7 percent increase in 1992. The steep rise in 1993 is due in part to the changes in industry resulting from the contraction of construction, where wage costs are low, and the expansion of other industries where wage costs are higher. The changes in the composition of employment—the substitution of Israelis for workers from the administered areas—also caused a short-term reduction in productivity, because of training and transition problems. The rise in labor costs is nevertheless biased upwards, as the calculation does not take the government subsidy of labor—which reduces the cost to the manufacturer—into account (the subsidy also raises labor costs, due to the employment of less-skilled workers).

There were two important developments with regard to wages, although neither of them affected wages significantly in the course of the year. One was the reduction of the unemployment rate from 11.2 percent at the end of 1992 to about 9 percent at the end of 1993, concomitant with an increase in the labor force, mainly in the public but also in the private sector. The other was the wage agreements in the public sector guaranteeing significant wage increases over the next few years. Although there were signs of a significant reduction in hard-core unemployment, it is still at a high level, exerting downward pressure on wages, reflected by the moderate wage increases and the fall in the hourly wage in the business sector. The effect of the public-sector wage agreements is expected to be felt in the years ahead.

An analysis of wage developments by industry shows a rise in the nontradables industries: 11.5 percent in personal services, 12.7 percent in agriculture, and 16.3 percent in construction. This was due to excess demand for labor in these industries, caused partly by the closure of the administered areas in March. The substantial wage increase in construction highlights the serious labor shortage in the industry, and also reflects the considerable rise in the number of completions in 1993, a labor-intensive stage of building which requires skilled, relatively highly-paid, labor.

The government introduced several measures in 1993 to improve profitability, including reducing VAT by one percentage point at the beginning of the year, cutting corporation tax by one percentage point, and raising the accelerated depreciation allowance by 50 percent in many industries. In addition, several taxes on trade were reduced in 1993: a trade agreement was signed with EFTA, under which quotas on imports from member countries were brought into line with those on imports from EU countries, tariffs such as that on imported services, the travel tax, and the general import tariff, were abolished, and the process of liberalizing trade with third countries (i.e., countries with which Israel has no trade agreements) continued. Regarding financing costs, the year can be divided into two periods: in the first, the rate of interest at the



discount window was kept steady at the high level of 12 percent, in order to stabilize the financial markets. In the second, when the CPI was seen to be rising more slowly, the Bank of Israel gradually reduced the interest rate to 9 percent (Table 3.5). Towards the end of July 1993, the Bank of Israel reduced the slope of the exchange-rate band from 8 to 6 percent, and raised the midpoint rate by 2 percent. At the same time, the import tariff and the exchange-rate insurance premium for exporters (both of which were about 2 percent) were abolished. These steps were taken against the background of the annual 4.4 percent decline in the dollar price of imported intermediates, due to the world-wide recession and greater competition. Fuel prices also eased, and towards the end of 1993 they reverted to their real level in the mid-1970s.

### 3. THE DEVELOPMENT OF PRICES

During 1993 the rate of change in all components of the CPI, except housing, moderated. Fruit and vegetable prices were prominent in this regard, falling by 1.2 percent in 1993 compared with a rise of 14.2 percent in 1992. Health services rose by 7.4 percent in 1993 (20.6 percent in 1992), due to price reductions by the sick funds arising from increased competition between them. On the other hand, housing rose by 23.7 percent during the year, accounting for about 5 percentage points of the rise in the CPI. Clothing and footwear prices have risen more slowly year-on-year than the other components, because most of these items are tradable, and falling import prices in recent years resulting from fiercer competition in international trade have restrained their price increases. Fruit and vegetable prices, which are highly sensitive to the weather, fluctuate widely, both during the year and in year-on-year comparisons. In 1993, too, the exceptional moderation in their prices can be attributed to the weather.

The 1992 average monthly rate of change prevailed in 1993, but inter-month variance fell, both in the total CPI, and in most of its components. The reduced variance between months is also evident in the wholesale price index, and in the exchange rate against the currency basket and the dollar. This stability reflects the more stable economic climate created by, *inter alia*, the policy of the sloping band and inflation targets, which help to reduce risk and promote growth.