Chapter 2
Monetary Policy, Inflation and Prices

The Consumer Price Index (CPI) rose in 2004 at a modest rate of 1.2 percent—slightly above the bottom limit for price stability targets. This came following a year in which price changes were below the lower limit of the target range and actually went down by 1.9 percent. Among the factors that contributed to the return of inflation to its target limit were the economic recovery that gained momentum in 2004, consecutive reductions in interest rates by the Bank of Israel since 2003, and a rise in the price of production inputs imported from overseas. Despite the forces that increased the rate at which prices rose, price changes were moderate this year—apparently due to excess production capacity remaining in the market following the recession from 2001 to 2003, and the appreciation in exchange rates for the second consecutive year.

The economic climate was relatively stable this year, thanks to the macroeconomic policy, and both internal and external conditions. Thus, for example, inflation expectations were generally at the target limit, and foreign currency trading was stable, with low standard deviations. There was a gradual devaluation of about 6 percent in the shekel/dollar exchange rate until May, followed by a revaluation at a rate of around 7 percent for the remainder of the year. Stability in the foreign currency market is also evident in light of the continued decline in short-term interest rate differentials between Israel and abroad, which reached historically low levels: interest differentials between the shekel and the dollar came to only about 1 percent in February 2005, after having dropped to 1.65 percent at the end of 2004, while at the end of 2003 and 2002 they stood at 4.2 percent and 7.85 percent respectively.

Against the background of relatively low inflation expectations and market stability, Bank of Israel interest rates continued to fall in 2004 as well. Until April, the Bank continued to reduce nominal interest at a cumulative rate of 1.1 percentage points, to 4.1 percent—a level that was maintained until November. Towards the end of the year, as conditions were again suitable for further reductions, the Bank lowered interest rates

by 0.2 percentage points in December, and again in January and February 2005. The nominal interest rate in Israel was 3.9 percent at the end of 2004, and after two additional reductions in early 2005, interest rates in February stood at 3.5 percent.

1. PRINCIPAL DEVELOPMENTS

The macroeconomic policies of 2004, as well as internal and external conditions, created a relatively stable economic climate despite the sharp rise in oil prices and other commodities, and expectations regarding rising interest rates both around the world and locally.

Prices rose at a moderate rate of only 1.2 percent, slightly higher than the bottom limit of the price stability target. Price changes during the year were not uniform: they rose 1.4 percent during the first half of the year, but dropped by 0.2 percent during the second half of the year (see Table 2.1).

A continuous examination of whether the price stability target was met in 2004, as would appear from the actual inflation during the past 12 months, indicates that inflation was lower than the target's lowest limit up to November (and was even negative for part of that period), but was moving upward beginning with the year's second quarter, going slightly higher than the target's lowest limit in December (Figure 2.1). The principal factors that caused inflation to return to the target limits (following a 1.9 percent drop in prices in 2003) were the recovery in economic activity, continuous reductions in interest rates by Bank of Israel since 2003, and the rise in the price of production inputs imported from overseas. Despite the forces acting to increase the rate at which prices rose, price changes for the year were moderate—apparently due to excess production capacity remaining from the recession in 2001-2003, as well as the appreciation of the shekel this year, for the second consecutive year.

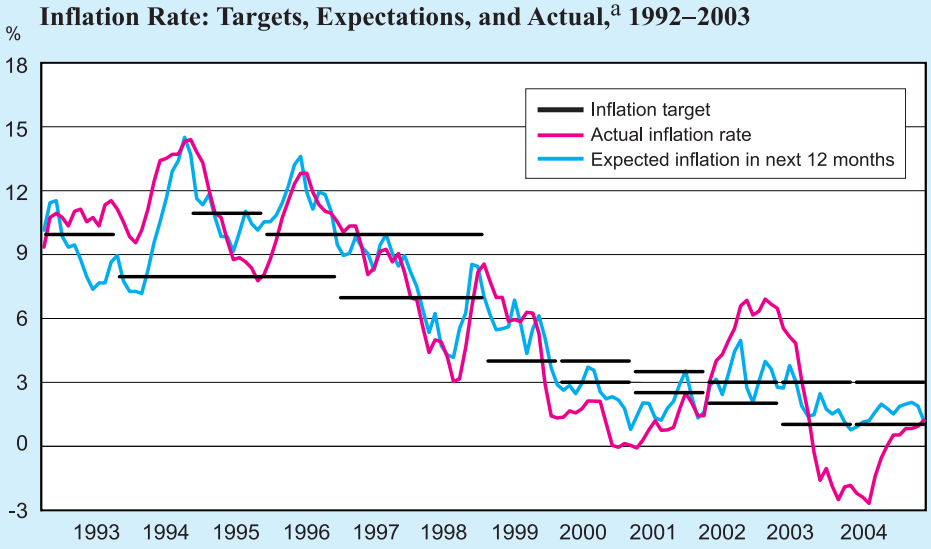
Economic stability, the consequence of renewed faith in the macroeconomic policy, was the positive background underlying the continued recovery in real activity, which was even accelerated thanks to a sharp rise in exports and a more moderate rise in private consumption. The main factors that supported this growth were the relative calm in the security situation, and the worldwide economic recovery—particularly in the American and East Asian markets, together with the expansion of international trade and increased demand for high-tech goods. This continued growth was also supported by the combined macroeconomic policy—a fiscal policy which maintained budgetary discipline while reducing the tax burden; and a monetary policy that continued to lower interest rates, especially at the beginning of the year, and allowed for a significant drop in real short-term interest. This combination of macroeconomic policy and the receipt of American loan guarantees as early as 2003, and the continued decline in interest rates for all types of loans created conditions that promoted further economic growth.

Table 2.1
Nominal and Real Interest Rates, Inflation Expectations, and Price Increases, 1997–2004

	Bank of Israel key interest rate	Nominal monetary interest rate[a]	Inflation expectations[b]	Expected real interest[c]	Real yield to maturity on CPI-indexed bonds[d]	Change in CPI	
	Period averages					During period[e]	Monthly[f]
1997	13.6	14.7	9.1	5.1	4.0	7.0	
1998	11.7	12.6	6.2	6.0	5.0	8.6	
1999	12.1	13.0	5.2	7.4	5.3	1.3	
2000	9.3	9.8	2.5	7.2	5.7	0	
2001	6.8	7.1	1.9	5.1	4.7	1.4	
2002	6.8	7.3	3.3	3.9	4.8	6.5	
2003	7.5	7.8	2.0	5.8	4.9	–1.9	
2004	4.2	4.4	1.6	2.8	3.9	1.2	
2003							
January	8.9	9.4	2.7	6.5	5.7	5.6	2.3
February	8.9	9.4	3.8	5.4	5.6	5.1	4.8
March	8.9	9.4	3.1	6.1	5.6	4.8	2.4
April	8.7	9.2	1.9	7.2	5.6	3.1	–2.3
May	8.4	8.9	1.4	7.5	5.2	1.6	–5.7
June	8.0	8.4	1.5	6.8	4.8	–0.3	–6.9
July	7.5	7.9	2.5	5.4	4.4	–1.6	–8.0
August	7.0	7.3	1.7	5.4	4.6	–1.1	2.4
September	6.5	6.7	1.5	5.2	4.6	–1.9	–5.8
October	6.1	6.4	1.7	4.7	4.3	–2.6	0
November	5.6	5.8	1.1	4.7	4.2	–2.0	–2.4
December	5.2	5.4	0.7	4.6	4.1	–1.9	–2.4
2004							
January	4.8	5.0	0.9	4.1	3.8	–2.3	–2.4
February	4.5	4.7	1.1	3.5	3.9	–2.5	2.4
March	4.3	4.5	1.2	3.3	4.0	–2.7	–1.2
April	4.1	4.3	1.6	2.7	4.0	–1.5	14.1
May	4.1	4.3	2.0	2.3	4.0	–0.6	4.9
June	4.1	4.3	1.7	2.5	4.0	0	0
July	4.1	4.3	1.5	2.7	4.0	0.5	–2.4
August	4.1	4.3	1.9	2.4	4.0	0.5	2.4
September	4.1	4.3	2.0	2.3	3.9	0.8	–2.4
October	4.1	4.3	2.0	2.2	3.8	0.8	0
November	4.1	4.2	1.9	2.3	3.8	0.9	–1.2
December	3.9	4.1	1.1	3.1	3.7	1.2	1.2

[a] Effective interest; in annual terms.
[b] For next 12 months, based on the capital market. Until 2002, expectations were calculated from gross relative yields; from 2003, from gross yields.
[c] Nominal interest rate on Bank of Israel auctions less inflation expectations.
[d] Averages in all maturities; up to and including 2002–relative gross, and from 2003–gross.
[e] Change in monthly data; change over the same month in the previous year.
[f] In annual terms.
SOURCE: Monetary Department, Bank of Israel and Central Bureau of Statistic data.

Figure 2.1
Inflation Rate: Targets, Expectations, and Actual,[a] 1992–2003

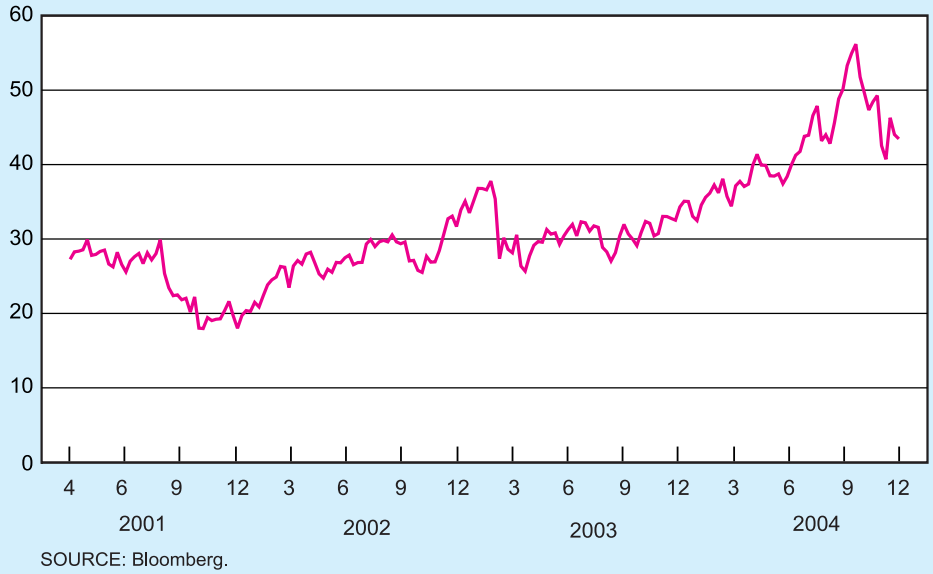


[a] Actual inflation, price rises in previous 12 months. Expected inflation, from capital market.
SOURCE: Based on Central Bureau of Statistics data.

Oil prices rose sharply this year due to increased demand, primarily from East Asian markets, and temporary interruptions in oil production (see Figure 2.2). Higher oil prices contributed to a moderation in the growth rate worldwide during the second half of the year, but its effect on the economies of the industrialized nations seemed to be weaker than in the past, thanks to technological improvements that led to more efficient energy usage and the transition to oil alternatives. In spite of the rise in energy prices, inflation expectations worldwide—and for the Israeli economy as well—remained low, apparently because of the awareness of central banks' obligation to sustain price stability, which enabled them to maintain relatively low interest rates.

In spite of the relatively low inflation expectations, this year was characterized by expectations of increases in interest rates around the world, and in local markets as well, due to the recovery in real economic activity. These expectations were partially realized and interest on federal funds was raised gradually beginning in July, at a cumulative rate of 1.25 percentage points, with expectations that it would continue to rise. However, a moderation in the worldwide growth rate during the second half of the year, and continued price stability helped to moderate expectations for higher interest rates, and long-term interest rates in the US even fell to levels that were lower than those at the beginning of the year. Given all this, central banks around the world were able to maintain a relatively expansionary monetary policy, in order to continue supporting the recovery of the global economy. These developments also allowed the Bank of Israel to continue its expansionary monetary policy, while avoiding the need to raise interest rates despite the reduction of long-term interest differentials between Israel and abroad and expectations of rising interest in the local market as well.

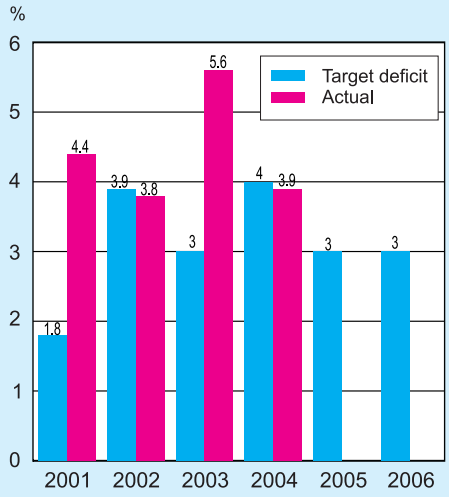
Figure 2.2
Price of a Barrel of Oil, April 2001-December 2004



SOURCE: Bloomberg.

Developments in the foreign currency market also supported the continued stability, and enabled the Bank of Israel to maintain its monetary expansion. Trading in the shekel/dollar market was relatively stable, with a decline in rate fluctuations and the implied volatility usually associated with options, thus expressing a relatively low rate of exchange rate risk. Until mid-May the NIS depreciated gradually, by a cumulative rate of some 6 percent—mainly as a result of the strengthening of the dollar worldwide due to rapid expansion of the American economy. This depreciation, accompanied by continued reductions in interest by the Bank of Israel until April, supported a gradual rise in inflation expectations from a level close to the bottom limit of the target at the beginning of the year, to the middle of the target range during the third quarter. Later on in the year, as growth rates in the US moderated and there was uncertainty regarding their continuation given the size of the budget deficit and the balance of payments in the American economy—the trend in dollar trading around the world shifted: the dollar weakened against most of the major currencies, including the shekel, which posted a cumulative appreciation of some 7 percent. During this period, one-year inflation expectations from the capital market stabilized at an average level of about 2 percent, and towards the end of the year they dropped once again to 1.1 percent. As a result of these developments the contribution of the exchange rate to the cumulative rise in prices throughout the year was relatively small, since the exchange rate at the end of the year was similar to what it had been at the beginning of the year, although it naturally had an impact on the development of prices throughout the year. It should be noted that the rates of shekel/dollar depreciation and appreciation were lower than those of other currencies, and exchange-rate volatility was lower too.

Figure 2.3
The Government Deficit, 2001-06 (percent of GDP)



SOURCE: Based on Ministry of Finance data.

This year's fiscal policy also contributed to a stable climate in the financial markets, and enabled the monetary policy to continue reducing interest rates. During the year, the government employed a policy of fiscal restraint with regard to expenses, which led to a reduction in the public sector share in the GDP, together with a tax reduction. Thanks to this policy, the government deficit this year stood at 3.9 percent of the GDP, significantly lower than last year's deficit (5.6 percent), and even slightly lower than the target set for 2004, which was 4 percent of the GDP (see Figure 2.3). Furthermore, the government promoted several important structural reforms, including the implementation of the pension reform it passed in 2003; and continuation of the tax reform, including moving up the date for equalizing tax rates on foreign securities investments, to the beginning of 2005. The government is also working to expedite the privatization process, and this includes facilitating the sale of the banks still owned by the government, and implementing other important reforms in the financial markets, in accordance with the recommendations of the Bachar Commission. All of these factors contributed to increased faith in the fiscal policy, and supported the stability of the financial markets despite low interest rate differentials between Israel and abroad.

This year's developments in yield to maturity for indexed and unindexed bonds was influenced by changes in yields overseas and other factors, such as the macroeconomic policy and the recovery in real activity. Up until May, yields rose gradually following a sharp decline in 2003. The rise in yields, given their rise overseas as well, reflected an expected increase in nominal and real long-term interest rates, in the wake of the economy's quick recovery. Beginning in June, concomitant with moderated expectations regarding the continuation of rapid growth rates and against a background of lower long-term yields abroad, yields in the local market steadied and bond trading stabilized, with a downward trend that intensified in the fourth quarter.

Towards the end of the year fiscal uncertainty grew somewhat, following the problems in approving the budget for 2005. This has still not been reflected in the financial markets, because the public apparently believes that the budget will ultimately be approved without deviating from the long-term policy of endeavoring to reduce the deficit and government debt. It should be recalled that one of the more important reasons for the sharp decline in yields in the local financial markets beginning in 2003 was the American loan guarantees, which were offered at a fixed sum and for

a limited time frame. The guarantees led to a drop in the economy's risk premium and allowed the government to ease the pressure to raise capital in the local market during the past two years, despite the relatively high deficit. In order to maintain low interest rates even after raising capital from the guarantee funds, the government will have to stay with its policy of continuing to reduce the government deficit and the debt to GDP ratio, particularly given the background of the relatively short period of fiscal reliability and the high debt to GDP ratio, which require that a large portion of budgetary sources be allocated to paying interest on the loan.

In light of all these factors, the Bank of Israel continued its monetary expansion in 2004 as well. Until April, the Bank continued to lower nominal interest at a cumulative rate of 1.1 percentage points to 4.1 percent—a level that was maintained until November. Towards the end of the year, when conditions for reducing interest were renewed, the Bank once again lowered interest rates by another 0.2 percentage points in December, and again in January and February 2005. (See Section 2 below for a detailed description.) The cumulative rate of these reductions in interest since the beginning of 2003 was 5.2 percentage points at the end of 2004, and nominal interest rates in Israel were 3.9 percent. Following two additional drops in interest in January and February 2005, interest rates in Israel came to 3.5 percent.

Continued reduction of interest rates by the Bank of Israel this year, and rising inflation expectations—from the low level for the bottom limit of the target in the last quarter of 2003 to the center of the target or slightly below center in the fourth quarter of 2004—were reflected in the expected drop in real short-term rates for the Bank of Israel's key interest rates, from an average of 4.7 percent during the last quarter of 2003 to about 2.5 percent at the end of 2004. Real short-term interest rates have never been so low during the past decade, and this was possible due to the ongoing recession in 2001-2003 whose impact is still being felt (as expressed, *inter alia*, by relatively high unemployment rates), and thanks to the reliability of the macroeconomic policy and relatively low interest rates in a considerable number of developed economies, particularly the American economy. Lower real short-term interest rates also promote a decline in longer term interest rates, and this is likely to help foster investment and encourage activity.

2. MONETARY POLICY IN 2004

The monetary policy works to achieve price stability in the economy, and the stability of financial markets. Since 1992, Israel has implemented a monetary policy of inflation targets, as is accepted in most developed nations. Up until 2002, Israel's inflation targets were short term and changed from time to time; however, since 2003, the inflation target is defined as the target of long-term price stability within a range of one to three percent. By adopting a multi-year policy of inflation targets in Israel, those who formulated the macroeconomic policy stressed a long-term commitment to price stability and contributed towards the public's faith in the policy, thereby improving

its effectiveness. Setting defined targets that can be declared and easily evaluated also helped reduce inflation rates, which are also rooted on inflation expectations, and this helps to keep inflation at the target level and create conditions for sustainable growth.

The principal instrument used by the Bank of Israel to achieve its inflation target is monetary interest. The bank uses this to control the cost of money in the short term, that is, the interest rate in the economy, and can have an effect on inflation via several channels—through aggregate demand, inflation expectations and the exchange rate. Control of interest is reflected through auctions of deposits and treasury bills, through which the Bank of Israel absorbs excess liquidity. (Using these instruments the Bank provides the amount of money demanded such that the desired interest rate is maintained.) Since the ceiling on treasury bills was revoked in 2002, treasury bills have gradually become a key policy instrument through which the Bank can control interest rates. Thus, the Bank will be able to expand the use of market instruments to manage the monetary policy and reduce the use of non-commercial instruments—bank deposits with the Bank of Israel.

In order to determine the desired interest rate, the Bank of Israel constantly checks a series of indicators from the capital, financial and foreign currency markets, along with macroeconomic data regarding inflation and real activity (see Section 3 for details on the development of these indicators). By using these indicators and exercising its judgment, the Bank of Israel decides each month the appropriate interest rate to achieve the inflation target for the coming year and two years. Furthermore, the Bank attempts to avoid, as much as possible, drastic changes in interest rates or frequent changes in their direction, because such changes could increase uncertainty, lead to sharp fluctuations in the financial markets and jeopardize financial stability. Therefore, interest rates are adjusted gradually, when economic conditions warrant, and accordingly—if inflation deviates from the target, its return to the target is also gradual.

In 2004 the Bank of Israel continued its policy of gradually lowering interest rates, in spite of rising interest rates in the local financial markets during the first half of the year. Interest rates had already begun to fall in early 2003 and continued to do so throughout the entire year, thanks to a drop in inflation expectations and the stabilization of the financial markets. During 2003 interest declined by a cumulative rate of 3.9 percentage points, and rates at the end of 2003 reached 5.2 percent.

In the first quarter of 2004 most of the indicators still showed that interest could continue to drop, although at a slower pace than previously: one-year inflation expectations from the capital market, and assessments by private forecasters gradually rose to the target limits, but they were still below the center of the target (Table 2.2); actual development of prices during the first quarter of the year also remained very moderate. In contrast with this, the downward trend of yield to maturity on government bonds that had begun during the first quarter of 2003 and continued throughout the year stopped in early 2004, and yields, particularly long-term yields, actually rose, reflecting expectations of a relative quick rise in nominal and real long-term interest.

Additionally, the depreciation trend in the exchange rate from the beginning of the year indicated a potential rise in prices later on although the foreign currency market remained calm and the implied volatility in options indicated a continued drop in exchange rate risk; the economy's risk premium, which is derived from the CDS market[1] on Israel government bonds traded abroad, continued its moderate decline, following a sharp drop in 2003, following receipt of the loan guarantees. Against the background of all these developments, and in order to promote the continued recovery of real activity, the Bank of Israel continued to reduce interest until April, but the monthly rate of these reductions was smaller each month and totaled 1.1 percentage points.

In April and May, both inflation expectations from the capital market and predictions by forecasters continued to go up, and in May they had reached the center of the target range—and even above the center. This was concomitant with the accelerated rate of increase in actual prices and the continued depreciation in the exchange rate. Yields in the bond and treasury bill markets also continued to rise, influenced by the growing recovery in the US due to expected interest rate hikes following the rapid economic recovery. As a result of this, the Bank of Israel stopped lowering interest rates in May and June, but did not raise interest, primarily given the year's inflation expectations which, despite their increase, remained close to the center of the target, and given the stability and low risk levels in the foreign currency market, in spite of the ongoing depreciation.

From July to November inflation expectations from the capital market and forecasters' predictions kept within a relatively narrow range of 1.5-2.5 percent, a range that coincides with the target. The depreciation trend in the exchange rate was replaced by a modest appreciation trend, in light of the weakness of the dollar in world markets due to the large deficits in America's budget and balance of payments. Yields in the local bond markets stopped increasing, and their levels remained stable and even dropped, concomitant with a drop in long-term yields overseas. Changes in real prices also moderated greatly, among other things, due to the appreciation of the NIS. However, in contrast with this, declining interest differentials between Israel and abroad, together with expectations of higher interest rates in the local economy, signaled to the Bank of Israel that now was not the time for further interest reductions: interest differentials between the shekel and the dollar were lower than they had been in the past, and were expected to drop even further due to the expectation of further increases in interest rates in the US, and a too-rapid reduction in interest differentials could have exerted pressure for a sharp depreciation and inflation. Moreover, accumulated data indicated a relatively rapid recovery for real activity during the first half of the year, and an increase in local demand. Expected real interest also remained very low, at a level that supports the continued recovery of real activity. Given all of these factors, the Bank of Israel decided not to adjust interest rates between June and November.

[1] For further details with regard to CDS, see Box 2.1 in the Annual Survey for 2003 of the Foreign Currency Department.

Table 2.2
Indicators of Inflation, 2003–2004

		Inflation expectations derived from capital market						
	CPI[a]	For coming year[b]	For second year	3–9 years	Forecasters' average	NIS/$ exchange rate	Real interest rate[c]	Money supply M1[a]
	(annual change)		*(percent)*			*(monthly averages)*	*(percent)*	*(annual change)*
2003								
January	5.6	2.7	4.4	5.7	2.5	4.84	6.5	1.1
February	5.2	3.8	4.8	5.9	2.8	4.87	5.4	–1.6
March	4.9	3.0	4.3	5.2	2.5	4.78	6.1	–4.8
April	3.1	1.9	3.5	4.2	1.7	4.62	7.2	–3.4
May	1.6	1.4	2.9	3.7	1.3	4.48	7.5	–3.6
June	-0.3	1.5	2.8	3.5	1.4	4.38	6.8	–6.8
July	-1.7	2.5	2.8	3.7	1.8	4.37	5.4	–2.2
August	-1.1	1.7	3.0	4.1	2.2	4.45	5.4	2.1
September	-1.9	1.5	2.5	4.0	2.5	4.46	5.2	3.4
October	-2.6	1.7	2.3	3.6	2.1	4.45	4.7	7.1
November	-2.0	1.1	2.0	3.4	1.9	4.49	4.7	8.7
December	-1.9	0.7	1.8	3.2	1.6	4.39	4.6	7.7
2004								
January	-2.3	0.9	2.1	3.3	1.5	4.42	4.1	10.4
February	-2.5	1.1	2.5	3.5	1.7	4.46	3.5	11.7
March	-2.7	1.2	2.8	3.4	1.7	4.50	3.3	14.1
April	-1.5	1.6	3.0	3.6	2.1	4.55	2.7	18.5
May	-0.6	2.0	3.1	3.7	2.6	4.60	2.3	16.9
June	0.0	1.7	2.6	3.7	2.3	4.52	2.5	21.0
July	0.5	1.5	2.2	3.8	2.0	4.49	2.7	22.2
August	0.5	1.9	2.6	3.9	2.4	4.53	2.4	20.5
September	0.8	2.0	2.3	3.7	2.5	4.50	2.3	22.8
October	0.8	2.0	2.5	3.6	2.4	4.46	2.2	21.3
November	0.9	1.9	2.0	3.4	2.2	4.41	2.3	18.5
December	1.2	1.1	1.9	3.5	2.0	4.34	3.1	18.7

[a] Annual rate of change, each month compared with same month in previous year.
[b] For next 12 months.
[c] Nominal interest rate on Bank of Israel auctions less inflation expectations.
SOURCE: Monetary Department, Bank of Israel and Central Bureau of Statistic data.

Only towards December, as the appreciation continued and against a background of persistently moderate price developments, and expectations for low—or even negative—cost of living indexes in the coming months, the Bank of Israel decided to lower interest by 0.2 percentage points. This decision was also made as a result of assessments being voiced at the time, that during the second half of the year the rate of growth would be slower,[2] so that there was no fear of pressure on prices alongside demand.

[2] In retrospect, it became apparent that the rate of growth in GDP during the second half of 2004 was faster than it was in the first half of the year.

Following two years of nearly continuous declines in interest, totaling 5.2 percentage points, nominal interest rates in Israel reached 3.9 percent at the end of 2004, and after further reductions in January and February 2005, interest came to only 3.5 percent. Despite the low interest and the significant reduction in interest differentials between Israel and abroad, actual inflation and one-year inflation expectations are quite low, and financial markets are calm. The stability that was achieved, with such low short-term interest rates and such low interest differentials, is the result of greater faith in the macroeconomic policy, which enabled the Bank of Israel to reduce interest, even if interest rates around the world were on the rise, and interest differentials between Israel and abroad were lower than ever before.

3. INDICATORS THAT GUIDE ECONOMIC POLICY

As stated, in order to decide about interest rates the Bank of Israel monitors a series of economic indicators from the capital, financial and foreign currency markets, along with other indicators for inflation and real activity. These indicators help the Bank decide whether interest rates need to be adjusted, and in what direction. For example: If the public's inflation expectations are lower than the inflation target, this indicates a need to lower interest rates. Obviously, the decision to adjust interest rates is not based solely on one, single indicator, but rather on an examination of a host of indicators, as well as on the Bank's judgment.

It should be noted that in recent years, the speed and efficiency by which new information is expressed in the financial markets has improved, and this reinforces the importance and quality of the information these markets can provide. Deregulation and liberalization of the Israeli economy in recent years has contributed towards this process, which has enhanced the liquidity and marketability of the local capital market and has enabled unlimited capital transactions both to and from the economy. Another result of this development is the fact that an irresponsible macroeconomic policy is reflected in the financial markets quite strongly, and this means that policy-makers must take into account the discipline imposed by local and international markets.

Below are specific developments regarding various indicators during the past year.

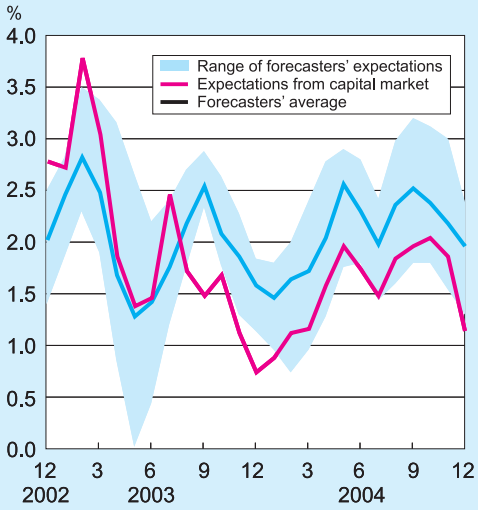
a. Indicators for inflation expectations

1. One-year inflation expectations from the capital market

These expectations, which are measured by yield-to-maturity differentials between unindexed securities ("treasury bills") and CPI-indexed bonds ("Galil") were stable in 2004 and ranged throughout the year (except in January and December) at the limits of the target (Figure 2.4). Until May, expectations rose from a level that was near the bottom limit of the target to the center of the target, in response to lower interest rates by the Bank of Israel and the depreciation of the NIS. Later on in the year, particularly

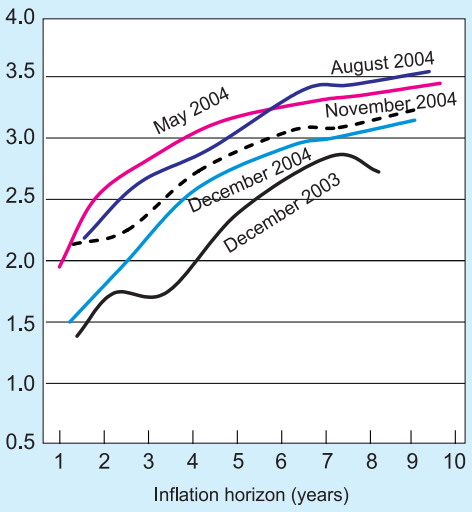
from August-November, expectations leveled off in the center of the target range, despite the appreciation of the shekel from mid-May and the moderate change in real prices. Only towards December, particularly following the Bank of Israel's announcement that it was reducing interest rates by 0.2 percentage points, did inflation expectations drop to an average of 1.1 percent. This reduction may have been the result of the public's assessment that the drop in interest rates—following a lengthy period when interest rates had not been lowered, and despite low interest differentials—shows that expected prices were lower than previously thought. Inflation expectations have a direct impact on price changes in the economy, and their stability, in spite of changing economic conditions, contributes to stable prices and indicates that the policy is reliable.

Figure 2.4
Inflation Expectations for 12 Months Ahead Derived from Capital Market and Forecasters' Expectations, 2002–2004



SOURCE: Based on forecasters' reports.

Figure 2.5
The Inflation Expectations Curve, December 2003-December 2004
(capital-market data, monthly averages)



SOURCE: The Monetary Department, Bank of Israel.

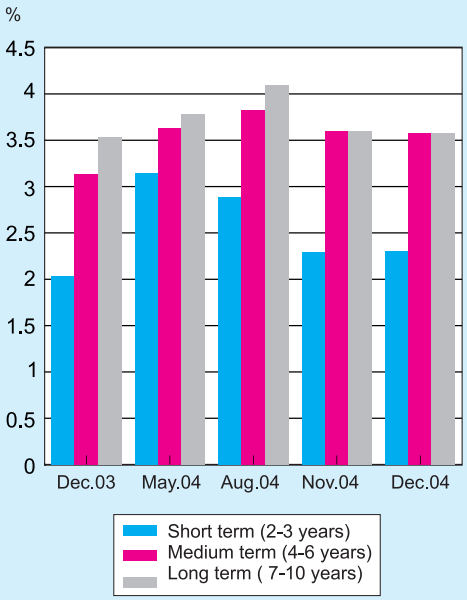
2. Predictions by private forecasters regarding inflation for a one-year period

The predictions made by forecasters throughout the year were near the limits of the target, but the average of these predictions for the entire year was higher than the expectations derived from the capital market by an average of around 0.5 percent (Figure 2.4). During the first quarter the average predictions by forecasters was slightly below the center of the target range, and after a gradual increase until May they stabilized for the rest of the year at the center of the target or slightly higher than center, and varied within a relatively narrow range of 2–2.5 percent. For most of the year, forecasters' predictions relied

on the assessment that the process of lowering interest rates would exhaust itself during the second quarter of 2004, and that towards the end of the year interest rates would climb back up to a cumulative rate of about one percentage point. The projected date for the rise in interest was pushed back from one month to the next several times during the year.

Despite the relative stability in the financial markets and stability in the level of expectations derived from the capital market, the range of the forecasters' predictions was relatively broad, and throughout the year there was a steady gap of about 1 percent-1.5 percent between the highest and the lowest inflation expectations.

Figure 2.6
Long-term Inflation Expectations Derived from the Capital Market, December 2003-December 2004
(monthly averages)



SOURCE: The Monetary Department, Bank of Israel.

3. Long-term inflation expectations from the capital market (2 to 10 years)
Long-term inflation expectations can be derived from yield differentials between the nominal yield curve ("Shahar") and the real yield curve ("Galil") for the appropriate terms. From these yield differentials we can graph inflation expectations for longer periods. Until May, the curve was headed upward, parallel to the Bank of Israel's reductions in interest and the deprecation of the NIS, while from July to December (except for August), the curve was downward again (Figure 2.5). The expectations derived ("forward") on the basis of terms indicate that for shorter terms (2-3 years) expectations through 2004 were at the limit of the target, at a level of about 2.5 on average; while for longer periods of time they deviated upward from the target by about 0.5–1 percent (Figure 2.6). However, since the risk premium rises as expectations rise, it would appear that this deviation is not significant.

4. Econometric model developed by the Bank of Israel
These models help to assess inflation expectations and to determine the interest range needed in order to achieve the inflation target. They enable an analysis of the processes that generate inflation using various assumptions regarding changes in the variables that may affect it, and this is their advantage. The models rely on the past to predict future developments, and thus provide a structure and convenient framework for analyzing the developments. However, since the models cannot reflect the unique developments for each period, then in a period of high uncertainty or a period of

change in the macroeconomic conditions, their use is limited. At the beginning of 2004, the models showed that interest rates at that time were appropriate to the level needed in order to achieve the inflation target in the range of 1-2 years. Later on the models showed that interest was lower than necessary, and indicated the possibility that towards the end of 2004, higher interest rates would be necessary.

b. Other indicators

1. Fiscal policy

Israel's fiscal policy this year supported stability in the financial markets and enabled the monetary policy to continue supporting monetary expansion. During the year the government employed a policy of fiscal restraint with regard to expenditures, which led to a decline in the public sector share in the GDP together with a tax reduction. Thanks to this policy, the government deficit in 2004 stood at 3.9 percent of the GDP, significantly lower than it was in 2003 (5.6 percent), and even slightly lower than the target defined for 2004, which was 4 percent of the GDP.

Surplus tax revenues at the beginning of the year were used to lower taxes and to relieve the tax burden. Among the taxes that were lowered were purchase taxes on electrical appliances and construction inputs, and the corporate tax rate was also eased; in addition, the VAT was reduced by one percentage point sooner than was originally planned.

Table 2.3
Government Borrowing, 2004

(NIS billion)

	Q1	Q2	Q3	Q4	Total annual borrowing
Domestic borrowing					
Total, gross	13.7	10.6	9.4	6.1	39.8
Total repayments	9.8	8.5	6.6	2.9	27.8
Total, net	3.9	2.1	2.8	3.2	12.0
Privatization	0.5	0.5	–0.2	0.2	1.0
Borrowing abroad					
Total, gross	3.6	5.9	1.8	7.1	18.4
Total repayments	1.9	4.2	1.7	2.8	10.6
Total, net	1.7	1.7	0.1	4.3	7.8
Total net borrowing, domestic and abroad	5.6	3.8	2.9	7.5	19.8
Deficit (–)/surplus (+)					
Domestic	–1.1	–5.0	–2.1	–9.2	–17.4
Abroad	1.2	–2.4	–1.2	–0.6	–3.0
Total	0.1	–7.4	–3.3	–9.8	–20.4
Absorption (+)/injection (–)[a]	3.3	–2.4	0.5	–5.8	–4.4

[a] Domestic deficit plus domestic borrowing and privatization.
SOURCE: Ministry of Finance and Bank of Israel Monetary Department.

Table 2.4
Total Government Gross Debt, 1997–2004

	1997	1998	1999	2000	2001	2002	2003	2004
a. Reserves at end of period				*NIS billion, current prices*				
1. Internal debt	268.3	295.1	307.7	305.2	326.2	372.0	389.8	403.4
2. External debt	91.0	112.8	113.0	110.3	119.5	129.8	131.0	135.8
3. Total government debt	359.3	407.9	420.7	415.4	445.7	501.8	520.8	539.2
b. Debt-GDP ratio				*Percentage of GDP*				
1. Internal debt	75	75	72	65	68	75	78	77
2. External debt	26	29	26	23	25	26	26	25
3. Total government debt	101	103	98	88	93	102	104	102
c. Total government debt by type of indexation				*Percent*				
1. CPI-indexed	65	61	60	58	54	53	52	50
of which: Nontradable debt	37	35	35	34	33	32	31	29
2. Unindexed	7	7	9	11	15	18	22	25
3. Dollar indexed	3	4	5	4	4	3	1	0
4. External debt, foreign-currency denominated	25	28	27	27	27	26	25	25
5. Total	100	100	100	100	100	100	100	100
d. Average term to maturity of government debt				*Years*				
1. Internal debt	6.5	6.4	6.3	6.2	6.5	6.6	6.6	6.2
2. External debt	7.9	8.0	7.6	7.1	6.8	6.5	8.0	8.6
3. Total debt	6.8	6.8	6.6	6.5	6.6	6.6	6.9	6.8

SOURCE: Bank of Israel, and Central Bureau of Statistic data.

This year the government continued to promote several major structural reforms, including the pension reform, which was approved in 2003; and the tax reform, including equalizing tax rates on investments in foreign securities to the beginning of 2005. There was also government action to facilitate the privatization of government corporations, and another important reform in the financial markets based on the recommendations of the Bachar Commission.

Along with these measures the government decided, when it approved the 2004 budget, to limit the real rate of increase in government expenditures each year to no more than 1 percent relative to the government's expenditure for the previous year. This decision, together with the decision to limit the deficit-to-GDP ratio to 3 percent, is likely to contribute towards a more rapid drop in the debt-to-GDP ratio.

Towards the end of the year fiscal uncertainty grew somewhat, due to difficulties in approving the budget for 2005. This uncertainty has not yet been expressed in the financial markets, because the public seems to believe that the budget will ultimately be approved without deviating with the long-term policy of endeavoring to reduce the deficit and government debt. However, given the high government debt and the lack of any long-term basis for fiscal reliability, it is important that the government work to approve the budget for 2005 without deviating at all from the budgetary framework.

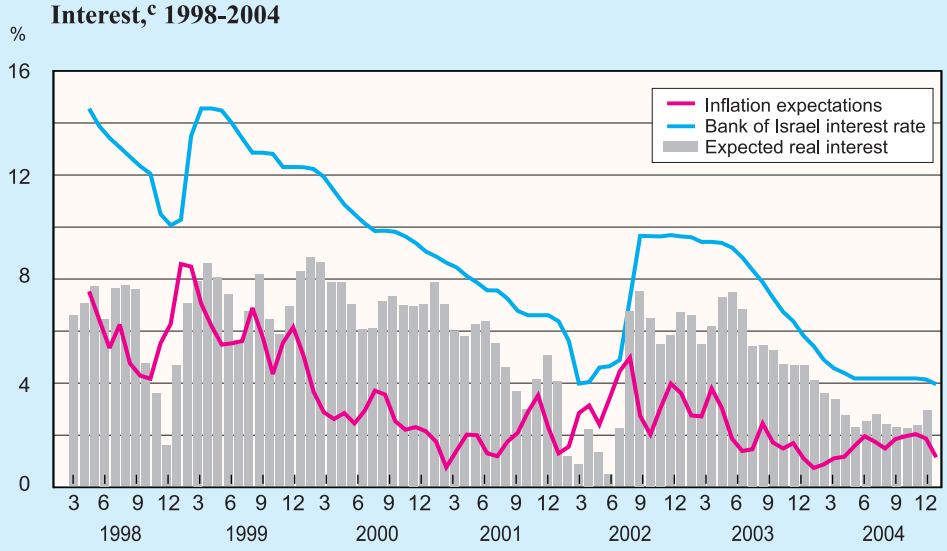
The decline in the government deficit this year, and the possibility of also raising capital overseas from the loan guarantees enabled the government to significantly reduce the amount of capital raised in the local market, and this stood at some NIS 12 billion net, compared with more than NIS 20 billion for each of the two previous years (Table 2.3). This development supported the drop in yield to maturity on bonds and freed up financial sources in the private sector, which grew extensively this year.

The government's debt-to-GDP ratio dropped this year to 102 percent of the GDP, compared with 104 percent at the end of 2003, following three years of sharp increases, from 88 percent at the end of 2000 (Table 2.4). The decrease focused on the proportion of the internal debt in the GDP, while the proportion of the external debt remained unchanged. The debt-to-GDP ratio in Israel is significantly higher than is accepted in other developed economies, and requires that a significant portion of budgetary sources be allocated to pay interest on the debt. Since this index is considered by foreign investors as a key indicator for examining the stability of an economy, this ratio must be lowered over time.

2. The expected real interest on Bank of Israel key interest rates

This interest, which is derived from the difference between Bank of Israel interest and one-year inflation expectations from the capital market, is an indicator of the degree of monetary restraint. Up until May, expected real interest dropped from 4.1 percent in 2003 to a rate of 2.3 percent, in the wake of interest reductions by the Bank of Israel, which were also accompanied by a rise in inflation expectations (Figure 2.7). Later

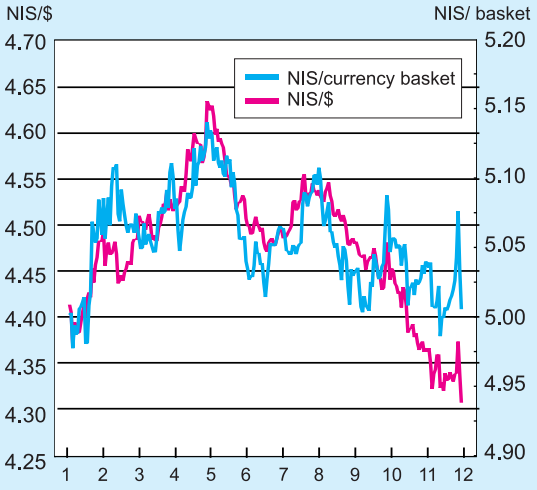
Figure 2.7
Bank of Israel Interest Rate,[a] Inflation Expectations[b] and Expected Real Interest,[c] 1998-2004



[a] The effective rate of interest in Bank of Israel auctions.
[b] For 12 months, derived from the capital market.
[c] Bank of Israel interest rate minus inflation expectations.
SOURCE: The Monetary Department, Bank of Israel.

on in the year, interest hovered at an average of some 2.4 percent as expectations stabilized, and without any change in the Bank's interest rates. In December real interest rose once again to 2.9 percent, in spite of the fact that the Bank of Israel lowered its interest rates—as a result of the large drop in inflation expectations. Real interest rates hadn't been so low since the first half of 2002, and it was possible owing to the stability of the financial markets and prices.

Figure 2.8
Exchange Rate Against the Currency Basket and the Dollar, 2004



SOURCE: Foreign Exchange Activity Department, Bank of Israel.

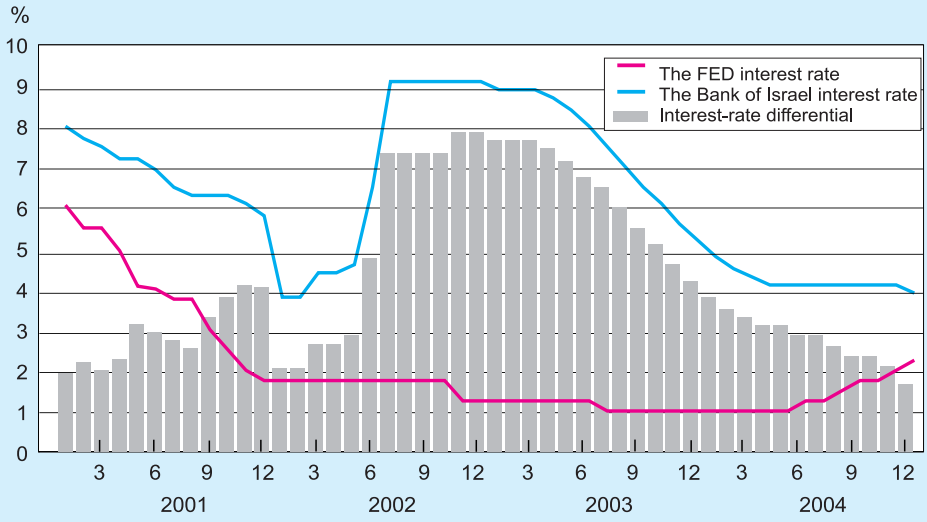
3. Yields on government bonds

One indicator concerning the reliability of the macroeconomic policy is the development of yield to maturity on government bonds. These are influenced by numerous factors, including the deficit and government debt, monetary policy, yields overseas and the economy's risk premium. In January the downward trend of nominal and real yields, which had already started in the second quarter of 2003, was halted, and since February the yields began to climb, particularly for medium- and long-term bonds. This was the result of local factors and outside influences, including rising yields in the US and emerging markets, the recovery in real activity, increased inflation expectations and higher expectations of rising interest rates. In June, yields dropped once again but strengthened in the fourth quarter, particularly because of lower yields overseas and moderated expectations that the rapid growth rates seen at the beginning of the year would continue. The drop in yields focused mainly on the short- and medium-term ranges of the curve.

4. Foreign currency market, capital transactions and import costs

The development of the exchange rate during the year was not consistent. Up until May the shekel depreciated by about 6 percent and 3 percent relative to the dollar and the basket of foreign currencies respectively; later on in the year it appreciated by some 7 percent and 2 percent (Figure 2.8). These changes were influenced primarily by the development of the dollar on world markets: until May the dollar strengthened against a significant number of international currencies, due to the rapid recovery of the American economy. Towards the end of the first half of the year, as growth rates slowed in America and the extent of the commercial and budgetary deficit became clear, the dollar weakened on world markets, as well as in trading in Israel. Rates of

Figure 2.9
Short-Term Interest Rates in Israel and the US, and the Differential Between Them, 2001-04



SOURCE: The Monetary Department, Bank of Israel.

depreciation and appreciation of the shekel against the dollar were lower than those of other currencies against the dollar, and the NIS exchange rate was less volatile than other currencies. Actual standard deviations for the exchange rate dropped this year, as did the implied volatility derived from trade in options, which reached historically low levels this year.

In addition to international forces that influenced the exchange rate, interest differentials between the shekel and foreign currencies, and the economy's level of risk, also had an effect. During the year, interest differentials between Federal Reserve interest rates and Bank of Israel interest rates narrowed, due to continuous declines in Bank of Israel interest rates until April and in December, and rising Federal Reserve interest rates beginning in July. The interest differentials, which stood at 7.85 percentage points at the end of 2002, dropped gradually and came to only 1.65 percent by the end of 2004 (Figure 2.9). At the beginning of 2005 they continued to drop, reaching only 1 percent in February 2005—the lowest differential ever. It is interesting to note that at the beginning of 2002, when interest differentials were double these figures, the Bank of Israel was forced to raise its interest rates sharply because of the potential danger to the economy's financial stability. The stability of the financial markets this year, despite lower interest differentials, indicates that macroeconomic conditions have changed and that the interest differentials needed to maintain stability can vary according to the degree of faith in the macroeconomic policy. Another index of the degree of faith and economic reliability is the continued drop in the risk premium—which is measured by the CDS on Israel government bonds traded abroad. This premium dropped

Table 2.5
The Exchange Rate, Import and Export Prices, and Consumer Prices, 1997–2004

	Basket rate	Dollar rate	Export prices[a]	Import prices[a]	Prices of tradables[b]	CPI
	(Change from previous period, annual averages)					
1997	4.3	8.2	–2.9	–5.1	3.8	9.0
1998	9.6	10.2	–3.2	–6.2	5.0	5.4
1999	8.3	9.0	–1.6	–2.3	6.8	5.2
2000	–4.8	–1.6	–2.3	2.4	–1.6	1.1
2001	1.3	3.1	–1.9	–2.1	1.0	1.1
2002	14.3	12.7	–0.7	–0.2	12.2	5.7
2003	1.1	–4.1	3.2	7.2	0.9	0.7
2004	2.2	–1.5	4.3	8.5	4.9	–0.4
	(Change from previous period, last quarter)					
1997	4.7	8.7	–3.7	–4.9	4.0	8.1
1998	20.8	18.9	–2.7	–5.8	13.9	7.8
1999	–1.7	0.7	–0.4	0.4	0.7	1.9
2000	–7.8	–3.0	–2.7	–0.7	–4.7	0.0
2001	4.2	4.3	–3.4	–3.5	0.7	1.6
2002	14.1	10.6	1.4	4.5	13.9	6.7
2003	–0.6	–6.0	2.7	7.3	–1.3	–2.1
2004	2.0	–1.0	5.9	10.1	7.0	1.0
	(Change from previous period)					
2003						
I	4.2	2.1	2.9	3.4	5.4	0.1
II	–5.7	–7.2	–1.1	0.2	–7.6	–0.5
III	–1.5	–1.2	–0.3	0.8	–1.0	–1.3
IV	2.7	0.4	1.2	2.8	2.4	–0.5
2004						
I	2.5	0.5	2.3	2.4	2.8	–0.3
II	0.6	2.0	0.6	1.8	3.2	1.4
III	–0.6	–0.9	1.3	2.1	0.8	0.0
IV	–0.6	–2.4	1.6	3.4	0.1	–0.1

[a] In dollars.
[b] Average prices of imports and exports multiplied by the exchange rate of the dollar.
SOURCE: Bank of Israel and Central Bureau of Statistic data.

sharply from the end of 2002 and during 2003, due to the receipt of the loan guarantees and increased faith in the macroeconomic policy. In 2004 there was a further moderate decline, and the premium reached historically low levels.

The exchange rate has a significant impact on local prices, because of the high proportion of imports and exports in the GDP, and due to the existence of local products that are comparable replacements for the imported and exported goods and are influenced by their prices. Another channel that increases the relationship between developments in the exchange rate and prices in the Israeli economy is the mechanism for indexing to the exchange rate, particularly the strong link between housing prices, which are a key component of the CPI, and the exchange rate. This relationship also causes relatively high fluctuations in Israeli inflation.

Prices of imports and exports (hereinafter: tradable goods) are influenced by two factors: the exchange rate, and price developments around the world. We can define the tradable goods price index as the product of the shekel-dollar exchange rate and the average price in dollars for imported and exported goods, and examine whether the prices of tradable goods rise at the same rate as local prices. During 2004 prices of tradables rose at a relatively high rate due to the rise in oil prices and other commodities, an increase that was somewhat offset by the appreciation of the shekel (Table 2.5). Despite this sharp increase, price development was very moderate. In

Table 2.6
Rates of Change in the Monetary Aggregates, 1997–2004

	Total credit to public C3	CPI-indexed credit to public	Unindexed NIS credit C1	Credit in and indexed to foreign currency: In $ terms	Credit in and indexed to foreign currency: In NIS terms	Monetary aggregates: M1[a]	Monetary aggregates: M2[b]	Monetary base	Change in nominal GDP[c]	CPI
1997	17.1	17.1	10.1	13.9	22.9	13.9	24.1	16.4	13.0	7.0
1998	19.3	14.8	20.3	5.9	25.2	11.7	19.1	26.1	10.5	8.6
1999	11.9	10.7	15.1	10.7	11.2	14.3	28.3	15.4	9.1	1.3
2000	10.1	2.9	28.9	8.6	5.7	7.5	19.2	11.6	9.5	0.0
2001	9.0	6.7	11.1	4.9	9.9	15.4	17.0	16.1	1.5	1.4
2002	9.8	6.2	5.5	8.1	18.6	4.9	–4.9	4.3	3.3	6.5
2003	–2.8	–5.6	3.1	2.2	–4.3	7.7	2.5	6.3	1.7	–1.9
2004	0.9	–3.9	6.9	2.2	1.0	18.7	7.8	8.3	5.0	1.2
2002										
I	10.2	9.0	5.5	3.6	16.1	25.9	4.6	18.2		4.3
II	13.0	8.4	5.0	6.8	26.7	21.8	0.5	17.0		6.6
III	9.5	7.5	5.4	4.8	15.7	7.7	–1.5	6.1		6.4
IV	9.8	6.2	5.5	8.1	18.6	4.9	–4.9	4.3		6.5
2003										
I	5.9	3.4	5.2	6.8	9.5	–4.8	1.1	2.7		4.8
II	–1.3	–0.7	7.4	3.0	–8.7	–6.8	0.6	–2.3		–0.3
III	–1.8	–4.2	4.0	3.0	–3.7	3.4	0.8	4.1		–1.9
IV	–2.8	–5.6	3.1	2.2	–4.3	7.7	2.5	6.3		–1.9
2004										
I	–2.1	–6.0	5.5	2.0	–3.9	14.1	3.2	4.8		–2.7
II	1.1	–4.5	3.6	2.5	5.7	21.0	5.6	11.0		0.0
III	0.8	–4.4	7.3	0.3	1.1	22.8	6.1	10.6		0.8
IV	0.9	–3.9	6.9	2.2	1.0	18.7	7.8	8.3		1.2

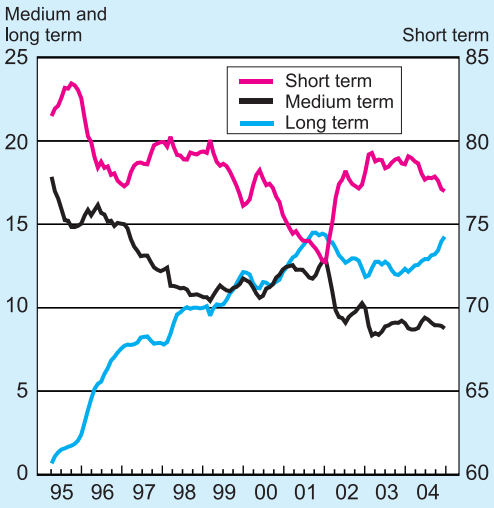
[a] M1: cash and demand deposits.
[b] M2: M1 plus NIS term deposits plus long-term NIS deposits.
[c] During the year.
SOURCE: Bank of Israel and Central Bureau of Statistics data.

the first quarter of 2004, prices of tradable goods rose by some 2.5 percent, due to an increase in the prices of imports and exports, which was accompanied by a moderate depreciation. The CPI dropped during this period of time by a moderate rate of 0.3 percent, and it appears that the rise in the price of tradables has not yet trickled down to the prices of local goods and was absorbed by the manufacturers. During the second quarter, prices of tradable goods continued to rise, and even strengthened, and this was compounded by a relatively significant depreciation. During this period, prices for local goods rose at an accelerated rate and reached 1.4 percent. During the second half prices of tradables continued to rise, but at a more moderate rate, and the depreciation trend was replaced with an appreciation trend, which grew even stronger in the final quarter of the year. During this time the CPI remained almost unchanged.

5. Monetary and credit aggregates

(a) *Money supply (M1):* The money supply (narrow money = currency in circulation + demand deposits) grew in 2004 at a significant rate, some 19 percent, after rising in 2002 and 2003 at a more moderate rate of 5 percent and 8 percent, respectively (Table 2.6). Although M1 did increase at a higher rate than the GDP plus the price increases, it did not deviate from the rise needed according to the money-demand equation, since it was a response to the sharp drop in interest rates over the past two years (see Box 2 in the Inflation Report for the second half of 2004). The principal rise in M1 focused on current deposits, which rose by some 28 percent, while the cash component increased more moderately by about 9 percent. Additional reasons for the rise in M1 are the levying of a tax on interest income from deposits, and increased stock market activity. It should also be noted that in a regime of inflation targets, changes in M1 are less significant as an indicator for expected price increases. This is because in such a regime the nominal anchor is the target, the instrument for achieving this is the interest fixed by the central bank, and the money supply is defined as the amount demanded by the public at any point in time. Therefore the conventional channel whereby an excess supply of money influences prices does not exist. Nevertheless, since the rate of increase this year was higher than necessary for an economy where prices are stable and growth rates are normal, the Bank of Israel is monitoring money supply growth rates in order to see if they continue to do so when interest rates remain stable, or even rise.

Figure 2.10
The Composition of M2, By Term, 1995-2004 (percent)



SOURCE: The Monetary Department, Bank of Israel.

(b) *Monetary aggregates (M2):* The rate of growth for broader monetary aggregates (M2 = M1 + interest-bearing local currency deposits) was very moderate since the end of 2001, and during the past year it grew at a rate of only about 8 percent compared with annual average growth rates of about 30 percent during the 1990s. This moderation in the M2 growth rate for the past two years is explained by the cancellation of the tax advantage of these deposits when they were taxed as of January 2003, and continuous cuts in interest rates. The relatively low interest rates motivated the public to search for alternative investments bearing higher interest, and contributed towards the greater share of tradable assets in the public's portfolio. This trend was reinforced by the change in the Bank of Israel's policy at the end of 2001 when treasury bill ceilings

were eliminated, a change that saw the Bank gradually go from managing its monetary policy through deposits, to managing the policy through treasury bills.

The proportion of short-term deposits (up to three months) declined once again during the past two years, in parallel with the rise in the proportion of longer-term deposits; however, short-term deposits still make up the bulk of shekel deposits—77 percent (Figure 2.10).

(c) *Bank credit (C3):* This aggregate, which expanded in 2000-2002 at an average annual rate of about 10 percent, remained almost unchanged in 2004, after having contracted in 2003 by 2.8 percent. The moderate development of this aggregate stands out, given the recovery in economic activity beginning in the second half of 2003, and is explained, *inter alia*, by the expansion of credit alternatives outside the banking system. These alternatives, which include bond issues both through and outside the stock market, expanded significantly in the last two years due to dropping interest rates, the easing of investment regulations for institutional investors and effective limitations on banks' supervision over single borrowers or a group of borrowers. The lessening of these limitations during the past two years has forced large borrowers to find credit substitutes outside the banking system, and thus contributed to a drop in the concentration of credit in banks and the growth of the extra-bank credit market. There appear to be additional reasons for the stability of this aggregate, such as the fact that growth focused on high-tech firms, which are usually financed through stock offerings; and efficiency measures implemented by companies during the recession, which led to surpluses for financing working capital and even enabled them to reduce the amount of their bank credit.

6. Real activity

The recovery in economic activity had already begun in the second half of 2003, and became more rapid in 2004. The rate of growth of the GDP this year stood at 4.3 percent and the business-sector gross product grew at a rate of 6.2 percent. The economic forces contributing to the accelerated growth were the rapid increase in international trade, the relative calm in the security situation, and the combination of a contracting fiscal policy in order to achieve the deficit targets and monetary expansion, which were expressed in a marked drop in real interest (see Box 1). Although the sharp rise in oil prices offset the international and local growth rate somewhat, it appears that the impact of rising oil prices was significantly mitigated by greater efficiency in energy usage and increased use of oil alternatives.

Leading this year's growth was an accelerated increase in the export of goods and services, and greater private consumption. The growth in goods exported is a result of faster expansion of international trade and renewed demand for high-tech products; the growth in services exported stems from the rise in tourist services due to the relative calm in the security situation. Greater private consumption reflected the continued expansion of economic activity, and was aided by a cut in direct and indirect taxation. Despite the recovery in economic activity, investments in fixed assets

Table 2.7
Nominal Labor Cost per Unit of GDP, Unemployment Rate, and Prices, 1997–2004

	Wage per employee post		Business-sector product	Nominal labor cost per unit of business-sector product[a]	CPI	Unemployment rate
	Business sector	Public sector				
	Average annual change over previous year					
1997	12.8	8.9	3.9	11.0	9.0	7.6
1998	8.5	5.8	4.3	4.7	5.4	8.6
1999	9.1	5.4	2.2	8.9	5.2	9.0
2000	7.8	6.5	10.2	1.3	1.1	8.8
2001	4.4	3.8	–2.4	7.0	1.1	9.3
2002	–1.4	1.1	–2.6	0.9	5.7	10.3
2003	–1.8	–3.5	1.7	–3.9	0.7	10.7
2004	1.5	4.0	6.2	–2.8	–0.4	10.4
	Change compared with previous period, in annual terms					
2002						
I	–1.5	5.0	–8.1	6.2	3.8	10.5
II	0.0	–2.1	–3.7	2.4	5.7	10.2
III	–1.9	0.3	–3.5	2.0	6.5	10.4
IV	-2.3	1.7	1.1	–2.5	6.7	10.3
2003						
I	–1.5	–2.0	1.6	–3.6	5.2	10.6
II	–4.3	–7.8	–0.2	–4.5	1.4	10.5
III	–0.7	–2.5	4.0	–5.0	–1.6	11.0
IV	–0.6	–1.3	–0.5	–0.6	–2.1	10.9
2004						
I	1.3	8.5	2.3	–0.5	–2.5	10.8
II	1.3	0.2	3.6	–0.4	–0.7	10.5
III	0.8	–0.1	4.4	–1.5	0.6	10.2
IV	2.4	7.4	6.5	–1.5	1.0	10.0

[a] Wages per employee post less real business-sector product per labor unit.
SOURCE: Monetary Department, Bank of Israel and Central Bureau of Statistic data.

dropped this year again, continuing the decline from 2001-2003. This is an ongoing outcome of decreased investment in housing, buildings and other construction work, while investment in machinery and equipment saw a positive upturn this year, and grew after declining since 2001.

The growth in economic activity was reflected in the drop in unemployment rates, from a peak of 11 percent in the third quarter of 2003 to 10.2 percent in the third quarter of 2004, despite a higher rate of participation in the labor force (Table 2.7). The drop in unemployment rates was accompanied by a moderate rise in wages, both in the business and the public sector, following a decline in wages in 2003. In spite of the rise in wages, the unit labor cost also declined in the business sector, continuing the decrease of 2003. Lower unit labor costs contribute to a decline in the companies' wage costs, and indicates a lack of pressure from the labor market on prices; this was one of the factors that contributed to the moderate development in prices.

Box 2.1
The "Siachazit" Project for Assessing the State of the Economy

The Bank of Israel puts a great deal of effort into analyzing the state of the economy and forecasting developments as an input for its interest policy. This analysis is based on data from the capital markets and macroeconomic data supplied by the Central Bureau of Statistics (CBS). The nature of the data received from the CBS is such that it arrives following a certain period of delay, and therefore the Bank of Israel, like many other central banks throughout the world, try to develop additional instruments that can provide an indication regarding real developments as close as possible to the period to which the data refers. In addition, the Bank tries to develop tools that will provide it with better forecasts of the future, and this is because the interest policy operates partially with a delay. Among the tools the Bank uses, are the State of the Economy (Combined) Index, and the Companies Survey. In recent years the Monetary Department of the Bank of Israel has developed another instrument, and this is the Siachazit Project—organized and focused discussions with key players from the financial sector, especially the banking system, and with several umbrella organization for non-financial companies that have a direct connection to commercial activity. (Siachazit is a word coined by the Bank of Israel, and is a combination of two Hebrew words that mean "dialogue" and "forecast.") The dialogues take place with about 10 agencies three times a year, based on a list of timely subjects prepared in advance, and the purpose is to study the real status of the economy at present and to present forecasts for the near future (within about half a year). The direct exchange with bodies that are in constant contact with the business sector also enables a better understanding of unique developments in macroeconomic data and provides feedback "from the field" regarding the macroeconomic policy being implemented and its anticipated ramifications.

The substance of these discussions is reported constantly to the Bank's administration, and provides additional input for the interest policy. Similar instruments are used in other central banks around the world, for example the Federal Reserve Bank of the United States (The Beige Book), or the Central Bank of England (The Bank of England Agents' Summary).

During 2004, three series of discussions were held—at the beginning of the first and third quarters of this year, and in the middle of the fourth quarter. At the beginning of the first quarter, the report indicated a positive change in the business environment, with stable activity and moderate growth. At the beginning of the third quarter, reports indicated a strong recovery in economic activity during the first months of the year, with a more moderate rate of growth towards the end of the first half of the year.

These reports coincided with those resulting from the Companies Survey for the second quarter of the year. In the dialogues held at the beginning of the last quarter, reports told of a significant slowdown in the rate of growth for the second half of the year, and a feeling that the momentum for growth in companies concentrating on local activity had halted. For companies focused on exports, it was reported that forecasts continue to indicate steady growth, but at more moderate rates. This report differs from the data obtained from the Companies Survey for the third quarter of the year, which reported on continued increases in activity in all key economic sectors (except for construction), but with expectations for more moderate growth in the last quarter of the year.

The difference in the findings reported are likely to serve as an indication of uncertainty in the economy regarding expected developments, and highlights the importance of gathering data from a variety of sources. By obtaining a broad range of assessments and examining the differences between them, the Bank of Israel will be able to apply its policy instruments with caution, taking into account these factors of uncertainty.

4. PRICES

The Consumer Price Index (CPI) rose in 2004 at a moderate rate of some 1.2 percent, slightly higher than the bottom limit of the price stability target. Price development during the year was not uniform: during the first half of the year, prices rose by 1.4 percent, while in the second half they dropped by 0.2 percent. Adjusted indexes rose this year by a higher rate than the CPI. Thus, for example, the CPI without housing rose by 2.3 percent, and the CPI without fruits and vegetables, controlled goods and clothing and footwear rose by 2.5 percent.

If we examine whether price stability targets were met, as is evident from actual inflation for the past 12 months, we learn that inflation was below the bottom limit of the target until November (and was even negative during part of that period), but began to rise beginning from the second quarter of the year and reached the bottom limit of the target in December. Among the factors behind the

Figure 2.11
Changes in the Components of the CPI, 2004 (percent)

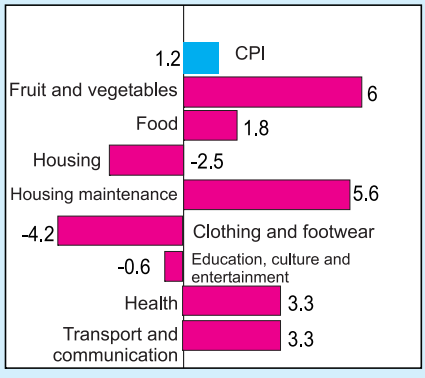


Table 2.8
Price Developments, 1997–2004

	CPI	Fruit & vegetables	Food	Housing	Apartment maintenance	Clothing and shoes	Education, culture and entertainment	Health	Transport and communication	Core index[a]	Index of controlled and supervised products	Wholesale price index of industrial production[b]
						Year-end, percentage annual change						
1997	7.0	7.6	8.5	7.5	7.7	–4.4	8.6	9.2	6.6	7.8	6.7	6.5
1998	8.6	11.0	8.6	8.8	8.5	6.7	8.4	9.2	7.1	8.8	6.9	9.3
1999	1.3	6.5	2.9	–0.9	3.1	–4.0	3.3	4.9	0.8	2.4	2.0	1.1
2000	0.0	–5.9	3.3	–2.4	3.1	–0.1	–1.4	3.2	1.1	0.6	2.9	0.8
2001	1.4	6.9	1.1	5.2	0.9	–5.7	–0.3	6.0	–0.5	0.2	1.5	0.5
2002	6.5	–1.2	4.9	8.2	10.7	–3.5	3.5	5.7	9.3	6.9	7.3	5.6
2003	–1.9	4.2	0.3	–6.7	0.0	–4.0	–0.5	–0.4	–0.6	–0.3	–0.6	2.9
2004	1.2	6.0	1.8	–2.5	5.6	–4.2	–0.6	3.3	3.3	2.5	2.6	5.2
						Percentage monthly change						
2004												
January	–0.2	0.2	0.2	–0.9	0.6	–6.7	–0.2	0.5	0.4	0.2	0.3	–0.1
February	0.2	–1.0	0.4	0.3	0.2	–5.6	0.0	1.2	0.9	0.5	0.4	1.3
March	–0.1	–2.5	0.2	0.5	–0.1	–3.3	–0.6	0.9	0.0	–0.1	–0.1	0.8
April	1.1	0.8	0.4	0.8	0.8	6.0	0.8	0.3	2.8	1.3	0.7	1.5
May	0.4	–2.0	–0.1	0.9	0.7	2.8	0.4	0.0	0.2	0.3	0.4	–0.1
June	0.0	–8.1	–0.2	–0.2	0.8	6.0	0.0	0.4	0.4	0.2	0.1	0.2
July	–0.2	–2.0	0.2	–0.3	0.3	–5.3	0.4	–0.1	0.2	0.1	0.2	–0.5
August	0.2	2.8	0.1	0.6	0.1	–5.6	0.4	0.0	0.3	0.2	–0.1	–0.1
September	–0.2	2.3	0.0	–0.2	0.1	–3.8	–0.9	0.0	–0.4	–0.2	–0.3	0.9
October	0.0	1.2	0.4	–1.1	0.6	3.8	–0.4	0.1	0.5	0.3	0.3	0.9
November	–0.1	2.6	0.0	–1.2	1.1	4.2	–0.2	0.0	–1.1	–0.3	0.4	0.4
December	0.1	12.7	0.3	–1.7	0.5	4.6	–0.3	0.1	–0.8	–0.1	0.2	0.0

[a] The CPI excluding housing, fruit and vegetables, clothing and shoes, and price-controlled products.
[b] Excluding fuel.
SOURCE: Central Bureau of Statistics data.

return of inflation to the target limits are the recovery in economic activity, continuous cuts in interest rates by the Bank of Israel and a rise in the price of production inputs imported from overseas. Despite the forces that intensified the rate at which prices rose, price changes were very moderate—apparently due to surplus production capacity remaining in the market following the recession from 2001 to 2003, and the revaluation in exchange rates for the second consecutive year.

Month-to-month fluctuations in the CPI were higher than last year, but when seasonally adjusted they dropped to a level that was relatively lower than in the past (see Box 1, Chapter 1). The main components that contributed to the rise in prices this year were transportation and communications, which rose by 3.3 percent, and housing maintenance, which rose by 5.6 percent (Table 2.8, Figure 2.11). These two components together contributed to a 1.2 percent rise in the CPI. The housing component, which was greatly influenced by the shekel/dollar exchange rate, dropped this year by a rate of 2.5 percent, and contributed to a 0.6 percent drop in the CPI. During the first half of the year, when the shekel depreciated by 2.7 percent, the housing component rose by 1.4 percent and contributed to a rise in the CPI of 0.3 percent; in the second half of the year, when the shekel appreciated by 4.2 percent, the housing component dropped by 3.8 percent and contributed to a 0.9 percent drop in the CPI. The contribution of seasonal components (fruits and vegetables, clothing and footwear) to the rise in this year's CPI was marginal, and eliminating these components does not alter the aforementioned 1.2 percent rise in the CPI.

In 2004 oil prices rose by some 35 percent[3] in shekel terms (until October they had risen by about 68 percent). All of the items in the CPI that are affected either directly or indirectly by oil prices—heating oil and kerosene, electricity, gasoline and motor oils, fares for public transportation (bus and taxi) and overseas travel—all rose in 2004. The prices for most of the goods and services in these items are controlled or monitored by the government, and their weight in the CPI is relatively small, about 6 percent.

Oil and kerosene for home heating, which has a high correlation with oil prices, rose by around 33 percent in 2004, but its weight in the CPI is only some 0.1 percent. Electricity, which comprises 2.3 percent of the CPI, rose by around 10 percent; but since oil as an input for the production of electricity was lower due to the start of the transition to natural gas, it is likely that the impact of oil prices on this item would be lower than in the past. Gasoline and motor oil, which makes up 2.6 percent of the CPI, rose by about 13 percent. For the remaining items there was no correlation with oil prices. Even the rise by some 11 percent in overseas transportation, mainly in April, is primarily a seasonal rise that we have been seeing for the past five years.

In contrast with 1999-2002 when changes in the wholesale price index kept pace with changes in the CPI, in the past two years these two indexes changed at different rates. Changes in the CPI were much more moderate than changes in the wholesale price index without fuel, which rose in 2003 and 2004 at relatively high rates: 2.9

[3] Average for December 2004 compared with the average for December 2003.

percent and 5.2 percent respectively. Perhaps this development indicates a low level of local demand relative to production capacity in the economy, which forces suppliers to absorb part of the cost of the raw materials without being able to pass these price increases on to the customer. Another reason for the difference in the changes in these indexes is that the rate at which the price for production inputs included in the wholesale price index rose was higher than the rate for the consumer goods included in the CPI.

5. SOURCES FOR CHANGING THE MONETARY BASE AND THE MONETARY POLICY INSTRUMENT

Each month the Bank of Israel announces the interest it is prepared to pay to banks for their deposits. Public demand for the monetary base is derived from this interest, and the Bank of Israel supplies this by using the instruments at its disposal. Changes in the monetary base come from three sources—government monetary injections, conversion of foreign currency by the public, and Bank of Israel injections. Since the Bank of Israel has not intervened at all in foreign currency trading since 1999, foreign currency conversions have no effect on changing the monetary base. Regarding the remaining two, Bank of Israel determines the scope of its injection/absorption such that the desired addition to the monetary base is provided at an interest rate that is as close as possible to the interest it has set.

In 2004 the monetary base rose by some NIS 1 billion—the result of a Bank of Israel injection, while the government and national institutions had almost no impact on the monetary base (Table 2.9).

In order to inject into or absorb from the monetary base, the Bank of Israel uses various monetary instruments at its disposal—auctions on the banks' fixed time deposits with the Bank of Israel, treasury bills, swap transactions and quotas on discount-window loans. This year, the use of treasury bills as an absorption instrument rose significantly, while the use of deposits fell considerably. This is because treasury bill quotas were eliminated at the beginning of 2002, enabling the Bank of Israel to gradually switch to managing its policy using market instruments, which were open to investment by the public at large, rather than using deposits, which are available only to banks. Expanding the use of treasury bills rather than deposits raises the level of negotiability of the stock market allows new information to be reflected in the markets more quickly and with greater efficiency; this, in turn, helps the monetary policy achieve its goals with smaller interest rate fluctuations.

In light of the elimination of treasury bill quotas, the Bank of Israel continued to increase the issue of treasury bills this year as well, concomitant with reducing the scope of bank deposits deposited with the Bank of Israel (Table 2.10). The balance for treasury bills rose from NIS 57.7 billion at the end of 2003 to NIS 68.5 billion at the end of 2004, and this parallels the drop in deposit balances from NIS 25.6 billion to NIS 17.1 billion. Roughly 55 percent of the deposit balances by banks with the

Table 2.9
Sources of Change in the Monetary Base, 1996–2004

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2004 I	2004 II	2004 III	2004 IV
1. Monetary injection, govt.	7,005	1,889	1,901	4,067	–2,729	–2,611	–6,065	3,480	1,601	(4,276)	1,629	20	4,228
Of which: Government	6,096	939	781	3,139	–3,493	–4,341	–7,634	1,969	244	(4,646)	1,326	(164)	3,728
2. Conversions of foreign currency[a]	5,753	22,817	1,041	237	286	–723	–1,748	–1,358	(1,751)	(378)	(323)	(149)	(901)
Of which: Dealing room	6,451	23,324	1,746	0	0	0	0	0	0	0	0	0	0
3. Total (1+2)	12,758	24,706	2,942	4,304	–2,443	–3,334	–7,813	2122	(150)	(4,654)	1,306	(129)	3,327
4. Monetary injection by													
Bank of Israel	–8,958	–21,036	–2,700	–381	2,754	7,697	9,251	1,448	1,072	7,180	(781)	(2,042)	(3,285)
Of which: Monetary loan	–3,052	470	–631	–12	–3	21	68	–236	154	760	(1,192)	325	261
Treasury bills	–1,912	–1,059	–2,794	–1,843	–4,855	–4,866	–8,566	–9,387	(17,992)	(8,145)	1,273	(8,014)	(3,106)
Swaps	–917	1,111	–892	–20	145	–252	–573	379	(53)	(125)	(42)	18	96
Banks' term deposits	–5,000	–27,500	–7,500	–8,700	–1,800	5,500	10,500	4,243	14,257	13,761	(2,662)	4,852	(1,694)
Interest[b]	276	3,420	4,957	5,825	4,492	3,411	2,679	2,772	1,105	371	259	275	200
5. Change in monetary base	3,801	3,670	242	3,927	311	4,363	1,437	3,568	965	2,537	548	(2,177)	57

[a] Including inter alia Bank of Israel and government foreign-currency receipts and payments to the private sector, such as income tax. These do not alter the monetary base, and appear under "government injection," and with the opposite sign in this item.
[b] Excluding Treasury bills.
SOURCE: Bank of Israel.

Bank of Israel in December 2004 were daily deposits, and the remainder was weekly deposits (Table 2.11).

Table 2.10
Monetary Instruments, December 2003–December 2004
(monthly averages, NIS million)

	Total deposits	Deposit		Treasury bills total	*Of which*: held by banks	Total deposits plus Treasury bills
		Daily	Weekly			
2003						
December	25,637	9,960	15,677	57,746	6,816	83,383
2004						
January	29,565	10,081	19,484	58,557	8,167	88,122
February	26,305	10,822	15,483	59,979	10,286	86,284
March	22,871	10,774	12,097	61,248	10,940	84,119
April	22,934	10,234	12,700	61,716	10,475	84,650
May	17,027	8,479	8,548	62,457	11,363	79,484
June	18,672	10,572	8,100	63,689	10,376	82,361
July	22,180	8,825	13,355	64,127	8,229	86,307
August	20,705	9,705	11,000	65,889	8,082	86,594
September	20,753	9,620	11,133	65,035	7,508	85,788
October	17,534	9,308	8,226	67,104	7,005	84,638
November	16,385	9,585	6,800	67,937	6,532	84,322
December	17,096	9,419	7,677	68,520	6,824	85,616

SOURCE: Monetary Department, Bank of Israel.

Table 2.11
Monetary Deposits, 2002–2004

(total system, quarterly average)

	Utilization of auction deposits			Cost of auction deposits	
	Daily	Weekly	Total	Daily	Weekly
	NIS million			*percent*	
2002					
IV	12,663	20,000	32,663	9.64	9.62
2003					
I	13,152	20,700	33,852	9.45	9.40
II	11,955	18,330	30,285	8.81	8.78
III	11,282	18,098	29,380	7.30	7.30
IV	10,247	18,380	28,627	5.86	5.87
2004					
I	10,553	15,692	26,246	4.71	4.71
II	9,748	9,769	19,517	4.29	4.28
III	9,381	11,837	21,218	4.29	4.28
IV	9,436	7,576	17,012	4.20	4.19

SOURCE: Monetary Department, Bank of Israel.