



Bank of Israel

INFLATION REPORT

January-March 2010

30

May 2010

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Bank of Israel

2 May 2010

Letter of the Governor accompanying the Inflation Report for January–March 2010

This Inflation Report, covering the first quarter of 2010, is submitted to the government, the Knesset and the public as part of the process of assessing the inflation rate in relation to the inflation target set by the government. The Report was prepared in the Senior Monetary Forum of the Bank of Israel, headed by the Governor, the forum in which the Governor makes decisions on the interest rate.¹

The CPI declined by 0.9 percent in the first quarter of 2010, mainly due to seasonal factors, but also reflecting government actions—the reduction in the VAT rate and the cancellation of the water surcharge—the cuts in electricity prices, and falls in housing and energy prices. In the previous twelve months the CPI rose by 3.2 percent, and the index excluding housing and energy by about 2.1 percent.

The recovery around the world which had started in the last quarter of 2009 continued, but not uniformly: in the advanced economies the modest recovery was based mainly on very heavy monetary and fiscal intervention, which cannot continue indefinitely but the duration of which will vary, depending on individual country circumstances. In the emerging market economies, however, growth was driven more by domestic demand from households and companies and increases in commodity prices. Inflation rates around the world are generally low, although in the emerging markets there are initial indications of a rise in inflation. Central banks in most advanced economies are keeping their interest rates at a low level, but some of them have started reducing the extent of their use of unconventional instruments.

In the Israeli economy, the recovery in real economic activity and the decline in unemployment continued in the fourth quarter of 2009. Growth was based on the increase in private consumption, which was partly driven by the low level of interest rates, and on the growth of exports, reflecting the effect of the expansion of world trade. Indicators relating to the first quarter of 2010, particularly the Bank of Israel Companies Survey for that quarter, show that business activity continued to increase.

During the first quarter of 2010 prices of financial assets—shares and corporate bonds—and house prices continued to rise. Around the world share prices also rose but somewhat more slowly than in Israel. The increase in share prices world wide and in Israel is due in part to the economic recovery and the expectation that it will persist, but it is certainly also partly the result of the low interest rates prevailing in most countries. Similarly the rise in house prices in Israel is also in significant part a result of low interest rates.

In the first quarter of 2010 the Bank of Israel continued the process of increasing the interest rate, which it sees as part of a process of gradual normalization of the rate. Thus the interest rate was increased from 0.5 percent in September 2009 to reach 1.25 percent in January 2010 and 1.5 percent in April 2010. The reasons for the increases were: the rate of inflation over the previous twelve months, which was above the upper limit of the target inflation range throughout the period; the relatively high level of one-year-forward inflation expectations, both those of forecasters and those derived from the capital market; the continued entrenchment of growth; and

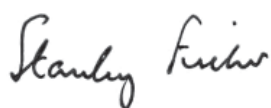
¹ This report incorporates the report on the rise in the money supply, in accordance with section 35 of the Bank of Israel Law, 5714–1954: in each month from January to March 2010 (inclusive) the money supply exceeded that in the preceding twelve months by more than 15 percent. The change in the money supply is discussed in section 1d.

the continued increase in the prices of assets, including shares and houses. There were indications, however, that in the last quarter of 2009 and the first quarter of 2010 the rate of price increases in the domestic market moderated to some extent, and there were signs of a slowdown in economic activity in Europe, against the background of debt financing difficulties in several countries.

The nominal effective exchange rate of the shekel continued to appreciate, as it had in the period from April to December 2009, strengthening by a further 3.9 percent from December 2009 to March 2010. The Bank of Israel continued to intervene in the foreign currency market, with the intention of preventing excess appreciation in the effective exchange rate.

On April 21, the Bank of Israel updated its forecast of economic activity for 2010 and issued its first forecast for 2011. The Bank's assessment is that growth will be 3.7 percent in 2010, and that unemployment will continue to decline to reach an average for the year of about 7 percent. The rate of inflation is expected to moderate during the next twelve 12 month to about 2.2 percent. For 2011, the forecast is for some further improvement in the real economy, and inflation near the midpoint of the target range. The Bank of Israel interest rate is expected to increase gradually during the remainder of this year. The real appreciation reflected by the effective exchange rate in the last eight months of 2009 and its continuation in the first quarter of 2010, and the level of GDP, which is still expected to be below its potential level—the effect of the global crisis on economic activity in Israel—are expected to contribute to the reduction of inflation.

The Bank of Israel will continue to monitor developments in Israel and abroad and implement a policy supportive of growth and financial stability, while striving to return inflation in the next twelve months to around the midpoint of the target range. At this stage the Bank assesses that it will increase the interest rate gradually, at a rate determined by the inflation environment, the entrenchment of growth in Israel and around the world, the development of shekel exchange rates and of asset prices, and interest rate adjustments by other central banks.

A handwritten signature in dark ink, reading "Stanley Fischer". The signature is written in a cursive, flowing style.

Stanley Fischer
Governor, Bank of Israel

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SUMMARY²

- **Inflation:** In the first quarter of 2010 the CPI declined by a total of 0.9 percent. Inflation in the quarter essentially reflected seasonal price reductions, and was also affected by government actions in 2010—the cut in the VAT rate and the removal of the water surcharge—the lowering of electricity tariffs, and the fall in the housing and energy indices. In the course of the quarter the annual rate of inflation moderated, and in March it reached 3.2 percent, close to the upper limit of the target inflation range. This inflation rate was mainly due to the increase in housing and energy prices, and the price increases that resulted from government decisions in 2009, and their smaller reduction at the end of 2009 and the beginning of 2010.
- **The global economic environment:** The recovery in the global economy continued. It was stronger than expected, but was not uniform: in the advanced economies growth was weak, and its future strength is as yet uncertain, because its main cause—extremely expansionary monetary and fiscal policies and unconventional tools—cannot continue. Growth in the emerging market economies is faster and sounder, as it is driven mainly by domestic demand and increases in commodity prices. The problem of heavy public debt in some countries, concern over a slowdown in growth, and risks to financial stability in several countries in Europe still cast a shadow over a return to normal global growth.
- **Real activity in Israel:** In the fourth quarter of 2009 the growth of real economic activity accelerated, and unemployment continued to fall. Growth was based to a large extent on private consumption and the increase in exports resulting from the expansion of world trade. The increase in demand halted the expansion of the negative output gap, and thus the moderating effect of the output gap on prices also weakened. Initial indications regarding the first quarter of 2010 point to a more rapid expansion of economic activity.
- **The financial markets:** In the first quarter of 2010 prices of financial assets continued to rise, and at an even faster pace, extending the positive trend that started after the recession at the end of 2008 and the beginning of 2009. This was in line with the upward price trend around the world, especially in the emerging market economies, and occurred against the background of the continued strengthening of real activity and the low interest rate in Israel.
- **The exchange rate:** Over the quarter as a whole the trend of appreciation of the shekel in terms of the nominal effective exchange rate continued, against the background of the surplus in the current account of the balance of payments and the positive difference in interest rates between Israel and other countries. The Bank of Israel intervened in the foreign currency market when the shekel appreciated abnormally; thus the Bank bought \$1,573 million in January, \$200 million in February, and \$500 million in March.
- **Monetary policy:** In 2010:Q1 the Bank of Israel continued the process of gradually increasing the interest rate to a normal level appropriate to the new economic conditions, as the effects of the global crisis weakened. Thus it increased the interest rate by 0.25 percentage points in each of the months December 2009, January 2010, and April 2010, when it reached 1.5 percent. The Bank left the rate for May unchanged at that level. The increase in the interest rate was made possible by (1) the reduction in the risks of a continuation of the recession as growth became more firmly entrenched, (2) the rate of inflation that was above the upper limit of the target range, and (3) the stability of the financial system. The pace of increase in the interest rate was determined by several factors—actual and expected inflation; the exchange rate; asset prices; the pace of recovery in the global economy, the strength and maintenance of which are essential for continued growth in Israel; and the adjustment of interest rates around the world.

² The monetary regime within which the Bank of Israel operates is aimed at achieving price stability, defined as an inflation rate of between 1 percent and 3 percent a year. (For details see Box 1 on page 11 in the Bank of Israel Inflation Report No. 17, July–December 2005.)

- **The Bank of Israel forecast:** The Bank of Israel's assessment is that the annual inflation rate will moderate in 2010, so that mid-year it will enter the target range, and in a year's time it will be 2.2 percent. The decline in inflation will continue due to the effective appreciation of the shekel in the last few months and the negative output gap that resulted from the impact of the global crisis on economic activity in Israel. The Bank forecasts growth of 3.7 percent in 2010, a decline in the unemployment rate to an average of 7 percent, and a narrowing of the negative output gap—all these expected to happen alongside the gradual process of increasing the interest rate .

1. THE BACKGROUND AND INFLATION

In its management of monetary policy, the Bank of Israel monitors developments in the global environment and the domestic economy's real and financial activity. Taking into account the economic situation as a whole enables the Bank to continuously monitor the reaction of the markets and its implications for expected inflation and thus to determine the appropriate rate of interest for achieving price stability, as well as encouraging employment and growth and maintaining stability in the financial markets. During the first quarter of 2010 (hereafter: the period under review), the Bank of Israel continued to gradually adjust the very low Bank of Israel interest rate to the level called for by the new economic environment. The gradual raising of the interest rate reflected a balance between continued support for real expansion, which became more solidly grounded during the quarter, as the global recovery continued, and the maintenance of price stability. This report will describe the main developments in the global economy, the exchange rate, real and financial activity and developments that influenced the Bank of Israel's interest rate decisions during the period under review.

a. The global environment

(1) Real activity and financial stability abroad

The continued recovery of the global economy was particularly evident in the positive growth statistics for the US and China in the fourth quarter of 2009, as well as other indicators for the first quarter of 2010. These were led by the increase in manufacturing output which was driven by the renewal of inventories. Despite the global economic improvement and the expansion in global trade (Figure 1), the rate of annual growth was still at a moderate level (Figure 2) and lower than that characteristic of economic recoveries. Although the intensity of the global recovery was stronger than expected, it was unevenly distributed: in the advanced economies, growth was weak and is still fragile since the main factors behind it, i.e., massive monetary and fiscal intervention, are not sustainable and it is felt that there exists a not insignificant risk of another recession. However, as time goes on and the financial markets stabilize and real activity expands, the probability of such an event diminishes. In the emerging market economies, growth is primarily led by increasing local demand and the continuing increase—though at a more moderate pace—in commodity prices. Thus, the economic expansion in these countries, particularly those in Asia, is more rapid and more

Figure 1
World Trade in Goods and Services
(quarterly rates of change,
1990 - 2009)

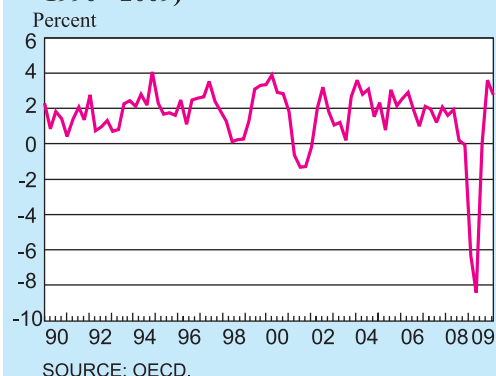


Figure 2
GDP Growth Rates in Selected
Countries, 2005 - 2009
(annual rates, seasonally adjusted)

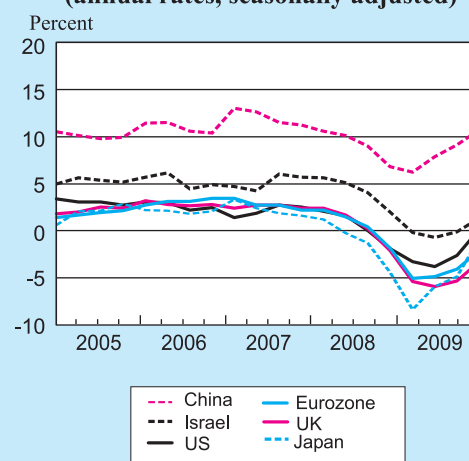


Figure 3
Share Indices Around the World
(Based on Dollar Prices), January
2008 to March 2010
(daily data, 15 September 2008 = 100)

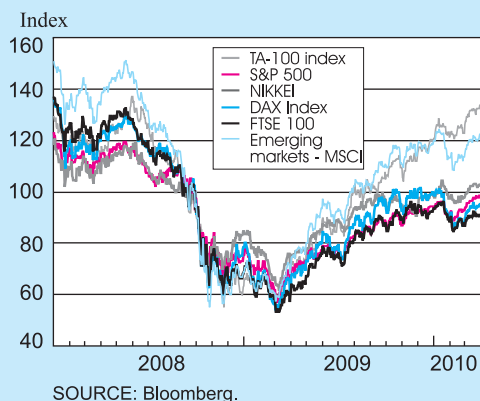


Figure 4
Unemployment Rate, Selected
Countries, 2009

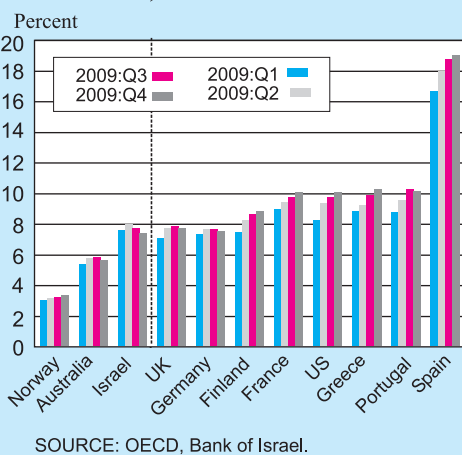
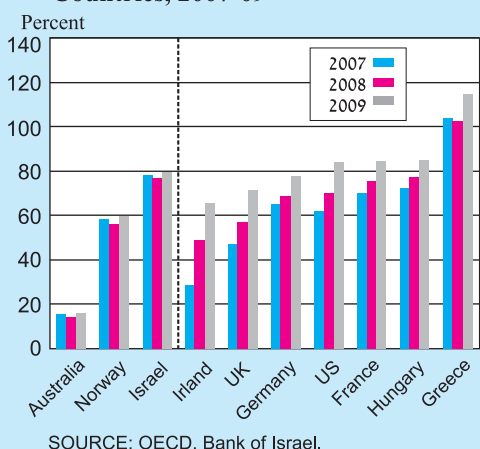


Figure 5
Debt/GDP Ratio, Selected
Countries, 2007-09



stable than in the advanced economies. The share markets in the emerging market economies also rose more sharply than did the advanced economies (Figure 3). The problem of huge public debts in some countries, concern over a slowdown in growth, and risks to financial stability in some European countries, particularly Greece, cast a shadow over the return to normal global growth.

The rate of growth in the US increased in the fourth quarter of 2009 and was corrected upward to 5.9 percent in annual terms. This growth, together with the renewal of inventories, reflects the increase in utilization of productive capacity, in private consumption and in retail sales and at the same time the continuing improvement in manufacturing output. There has also been improvement in employment, including a lower-than-expected loss of jobs and an increase in the participation rate in the workforce. However, the recovery and financial stability are still threatened by the fiscal situation, which reflects the massive intervention by the government and which continues to worsen due to the burden of financing the fiscal stimuli. The budget deficit has ballooned and the ratio of public debt to GDP has risen steeply. The rate of unemployment fell somewhat and stabilized at 9.7 percent, a level not observed since the beginning of the 1980s (Figures 4 and 5). This motivated policy makers to adopt a new program of incentives to increase employment, in addition to the existing programs that involve tax breaks and assistance to small businesses. Despite the drop in the level of debt in the business and household sectors and among financial institutions, their level of leverage was still high and their ability to redeem debt weak. In this environment, the situation of many banks was still fragile. Thus, there has been an upward trend in the banks' write-off of debt and in payment arrears and there are no signs of improvement. As a result, total credit has declined which is constraining the economic recovery. The crisis in the housing market continues and is evident in the sharp drop in sales of new and existing housing, the decline in housing starts and the issue of building permits, as well as the decline in prices, which is expected to continue in view of the high rate of foreclosures and the expected increase in mortgage interest rates.

In Europe, the recovery, which began in the second quarter of 2009, is continuing at a slow pace. Growth in the fourth quarter was only 0.5 percent in annual terms, accompanied by a small decline in the rate of unemployment. However, this growth does not have a strong foundation and there are fears that it will falter, particularly in view of the close links between economies that are in the midst of recovery and those that have not yet emerged from the recession. Local demand is still low, as reflected in household

Table 1
The CPI and Selected Components in Israel and Abroad, 2008 and 2010

	(percent change)											
	Israel				US				Europe			
	2008	2009	2009: Q4*	2010: Q1*	2008	2009	2009: Q4*	2010: Q1*	2008	2009	2009: Q4*	2010: Q1*
CPI	3.8	3.9	1.9	-3.4	0.1	2.7	0.0	3.2	1.6	0.9	2.7	1.9
Energy ^a	-9.5	13.1	10.0	-9.5	-21.3	18.2	0.1	16.1	-3.7	1.8	2.6	19.5
Food (excluding fruit and vegetables)	9.1	1.1	-2.7	2.0	5.9	-0.5	0.7	2.5	3.5	0.7	1.0	0.4
Fruit and vegetables	-2.0	8.4	-4.4	-8.3	3.4	-3.0	8.6	11.0	2.8	-1.5	2.4	9.0
Housing	12.1	5.6	1.4	-0.7	2.4	-0.2	-3.0	0.9	2.2	1.9	1.3	2.6
CPI excluding energy, food, and fruit and vegetables	3.6	3.4	2.4	-3.5	1.8	1.8	-0.2	1.9	1.8	1.5	2.7	-0.7

* In annual terms.

^a An index made up of several components of the CPI.

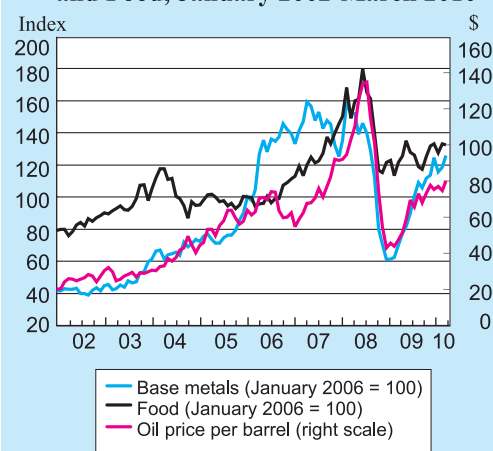
SOURCE: Based on Central Bureau of Statistics, ECB, Eurostat, and US Bureau of Labor Statistics data.

consumption and investment by firms. Against this background and in view of the weak real estate market, the losses of the banks in the EU continue to grow and are threatening financial stability. At the same time, the Greek debt crisis continues to threaten the stability of global markets although fears that it will trigger a crisis have diminished somewhat as a result of the plan for cutbacks and the raising of capital (though at high rates). There have not been any signs of recovery in Spain and its labor market is becoming increasingly weak. Real activity in Ireland and Portugal continues to stagnate. As a result of this situation, the rate of unemployment in the EU remains high at 9.9 percent, its budget deficit has expanded and the ratio of public debt to GDP has grown (Figures 4 and 5).

(2) Global Inflation

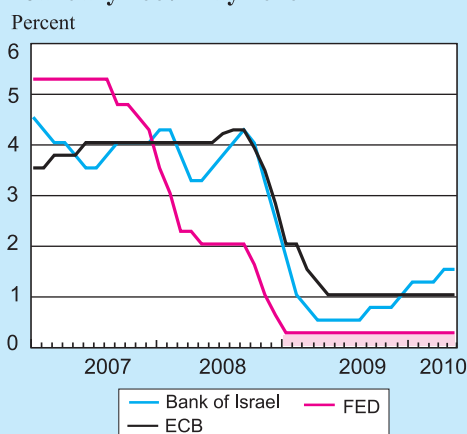
During the quarter under review, the upward trend in the prices of commodities and oil leveled off somewhat due to the weakening in real economic activity, in particular low demand and the stagnation in global growth (Figure 6). In addition, output gaps are still wide which has contributed to the continuing downward pressure on inflation in the emerging market economies. As a result of these factors, global rates of inflation are generally still low (Table 1) and in some economies, in particular Japan, there is even fear of disinflation. Prices are beginning to rise in the emerging market economies as a result of the increase in food prices towards the end of 2009 and the increase in demand and there are even fears of inflation.

Figure 6
Price Indices of Base Metals, Energy and Food, January 2002-March 2010



SOURCE: Bloomberg.

Figure 7
The Short-Term Interest Rate in Israel,
the US and the Eurozone,
January 2007-May 2010



SOURCE: The Bank of Israel, the ECB and the FED.

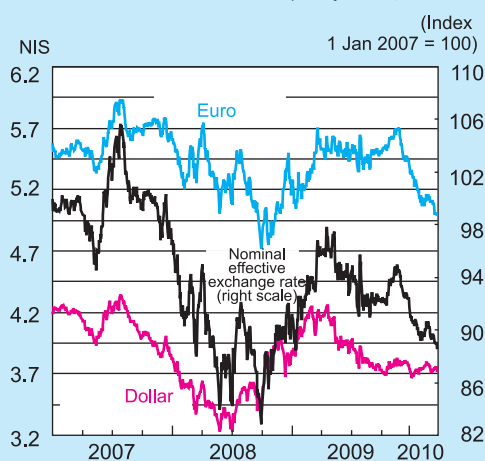
(3) Monetary policies abroad

The central banks have continued to implement an expansionary monetary policy, along with various assistance programs that are meant to increase liquidity in the markets, although some are reducing their use of such programs. The public debt problems and the concerns about slipping into another recession have led to the deferment of expectations of a pullback from expansionary monetary policies in some of the countries by the end of 2010, as indicated by data from the markets. The Fed has left interest rates in the range of 0–0.25 percent (Figure 7). In addition, it raised the rate of interest at the discount window by 0.25 basis points in February to 0.75 percent and even announced that the program to purchase mortgage-backed securities (MBS) will be halted, as part of the plan to cut back the various support programs. The European Central Bank left the interest rate unchanged at 1 percent in view of the expectations of moderate growth and lower-than-target inflation and it is expected that its expansionary policy will remain in place during 2010. In Australia, the output gap is nearly closed and as a result the central bank continued to raise the interest rate. In India, the interest rate was raised for the first time since the crisis in reaction to an increase in inflation and following an increase in the reserve ratio required of the banks.

b. The development of the NIS exchange rate

The nominal effective³ exchange rate did not follow a consistent trend during the quarter under review, which was also the case for the shekel/euro and shekel/dollar exchange rates. For the quarter as a whole, the shekel appreciated. Thus, in January it continued the trend of appreciation from December 2009 while during February and the beginning of March, as the dollar strengthened in international markets, the shekel depreciated and recorded a partial correction to the appreciation. Later in March, the shekel continued to strengthen (Figure 8) in parallel with global developments. These trends were accompanied by a decline in uncertainty relative to its high level during the crisis, as can be seen in the implicit standard deviation derived from the trade in shekel/dollar options on the stock exchange. The trend of appreciation that began in April 2009 therefore continued, supported by a surplus in the balance of payments and an expansion in the interest rate gap between Israel and

Figure 8
The NIS/\$, NIS/Euro and the
Nominal Effective Exchange Rate,
2007 to March 2010 (daily data)



SOURCE: Bank of Israel.

³ The effective exchange rate is calculated as a weighted average of the exchange rates of the shekel against 28 currencies (representing 38 countries), according to the proportion of Israel's foreign trade accounted for by each country. The weight of the dollar in this exchange rate is about 24 percent and that of the euro about 35 percent.

other countries. The Bank of Israel continued to intervene in the foreign exchange market in order to prevent over-appreciation of the effective exchange rate.

c. Real economic activity and its effect on prices

During the last quarter of 2009, the upward trend in economic activity continued: The annual rates of growth in GDP and business output increased for the third consecutive quarter, reaching 4.8 and 5 percent respectively (Figure 9). This represented a return to the record pre-crisis level achieved during the third quarter of 2008. Total growth in 2009 totaled 0.7 percent (Table 2).

A number of indicators point to continued growth during the first quarter of 2010. The Survey of Companies indicates that the positive trend in growth strengthened beyond expectations during the first quarter of 2010. This growth was based on increased sales, both in Israel and abroad, and was manifested primarily in increased manufacturing output, particularly for domestic sales. The expectation of continued growth is based on the increase in orders for export goods and services, as well as the loosening of demand constraints in all sectors and an easing of financing difficulties. The Composite State of the Economy Index for February rose by 0.2 percent and indexes for the last two months were corrected upward. The level of the Purchasing Managers Index, which was high in comparison to corresponding indexes in other countries, reflects a continuation of the expansion in real activity, although the rate of increase moderated to some extent. The foreign trade figures indicate that the increase in goods imports and exports continued. Despite the positive indicators described above, the index of the probability of a slowdown according to Google searches has risen since the end of 2009 and has stabilized at a low positive level.

The growth in the fourth quarter of 2009 was led by a sharp increase in the export of goods and services that followed the recovery in global demand and by the growth in domestic demand, primarily led by private consumption. An improvement in the terms of trade, which was due to a sharp drop in the prices of raw materials and the expansion of global trade, was partly responsible for the sharp growth in exports (though they were still far below their record level). The recovery in imports was more moderate and together with increased exports led to a significant increase in the surplus of the current account of the balance of payments during the fourth quarter of 2009 (Figure 10). Since exports are highly sensitive to developments in global trade, their continued growth is dependent to a large extent on

Figure 9
GDP, Quarterly Growth Rates,
2006–2009
(in annual terms)

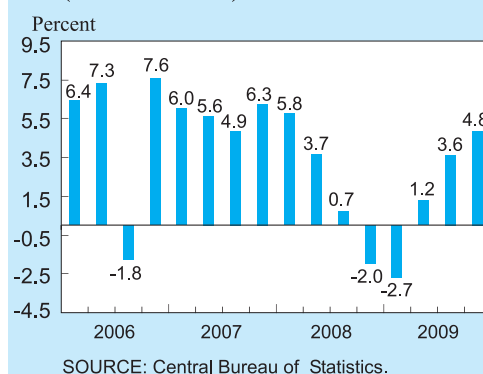


Figure 10
The Current Account, Running
Four-Quarter Totals,
2003-2009 (quarterly)

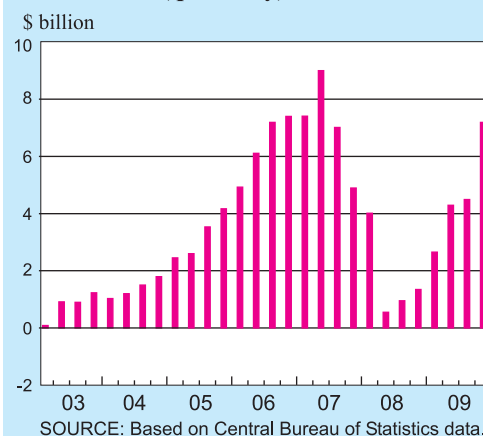


Table 2
GDP, Imports and Uses, 2007-09

(volume change from previous period, percent, seasonally adjusted, in annual terms)

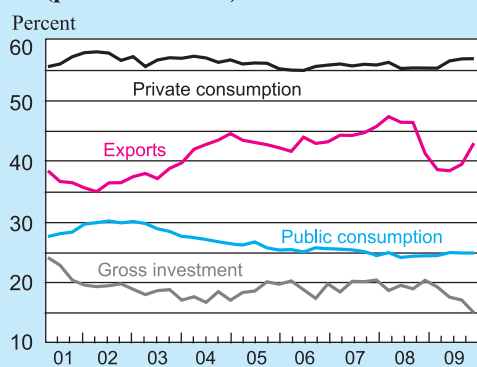
	2007	2008	2009	2008:Q3	2008:Q4	2009:Q1	2009:Q2	2009:Q3	2009:Q4
GDP	5.2	4.0	0.7	0.7	-2.0	-2.7	1.2	3.6	4.8
Business sector output	5.6	4.5	-0.2	0.2	-3.2	-4.8	1.2	3.1	5.0
Imports excluding defense imports, ships, aircraft and diamonds	13.6	7.2	-12.3	-3.6	-8.8	-39.0	0.6	14.5	4.5
Private consumption	6.3	3.6	1.4	1.2	-2.0	-2.8	10.3	6.1	5.0
<i>of which:</i> Private consumption excluding consumer durables	5.1	2.7	2.5	9.1	0.6	1.2	2.8	3.7	5.4
Public consumption	3.4	2.1	2.2	3.4	-1.1	-2.3	10.0	7.2	6.4
<i>of which:</i> Public consumption excluding defense imports	4.1	2.2	3.7	8.2	-0.6	-3.9	15.7	6.0	3.5
Gross domestic investment	10.1	1.4	-8.9	-10.6	30.9	-22.4	-30.3	-7.3	-38.4
<i>of which:</i> Fixed investment	15.3	4.4	-6.0	-15.2	-4.5	-13.6	2.1	5.3	-8.5
Exports excluding diamonds	10.4	10.5	-9.6	4.4	-26.2	-26.7	-3.7	10.0	39.0
<i>of which:</i> Exports excluding diamonds and start-ups	10.9	9.7	-9.1	6.1	-27.8	-28.2	2.3	9.8	32.9

SOURCE: Based on Central Bureau of Statistics data.

the intensity and persistence of the recovery in global demand for imported goods. Thus, the resilience and magnitude of growth in Israel is dependent to a large degree on global growth. The increase in private consumption was a result of, among other things, the increase in disposable household income and the expectation of its continued growth, the increase in the value of the public's portfolio of financial assets, which reinforced consumer optimism,⁴ and low interest rates, which worked to increase household spending by reducing the price of credit. Early indications for the first quarter of 2010 point to continued growth in private consumption. These include an increase in tax revenues, an increase in credit card purchases and continued growth in the sales of retail chains and in the index of revenues in the commerce and services industries during the fourth quarter.

On the other hand and despite the recovery in economic activity and the low interest rate, investment has not yet recovered (Figure 11). This can be explained by the existence of a surplus in productive capacity following the decline in investment at a more rapid rate than output. This is characteristic of a recession in which the recovery in investment is slower than that in output. Public consumption increased in the fourth quarter of 2009 at an annual rate of 4.6 percent, which was largely due to the increase

Figure 11
The Composition of Uses,
2001 to 2009
(percent of GDP)



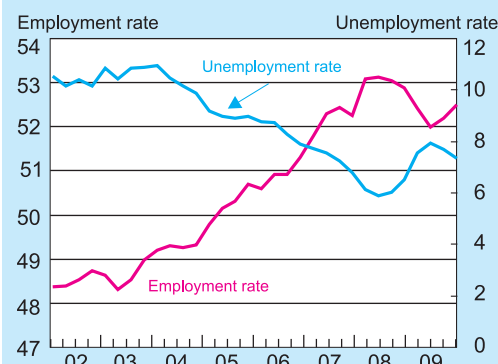
SOURCE: Based on Central Bureau of Statistics data.

⁴ This can be seen in the indexes of consumer confidence which are at pre-crisis levels.

in non-defense consumption. During the first quarter of 2010, a surplus was recorded in budget revenues,⁵ which was the result of the continuing upward trend in tax revenues.⁶ This trend was due both to direct taxes, primarily the increase in revenues from the capital market and land taxes, and from indirect taxes, primarily the growth in local VAT revenues and VAT on imports at higher than expected rates. The composition of uses that characterizes the current recovery in Israel, i.e. a low and even decreasing share of public consumption in GDP (Figure 11), is noticeably different from that in other economies. Also noticeable is the ratio of public debt to GDP which remained almost unchanged, in contrast to the sharp increase in other economies (Figure 5).

The improvement in the labor market continued during the fourth quarter of 2009 and even increased in intensity following the turnaround that began in the third quarter of 2009 as growth in real activity trickled down to the labor market. This improvement was manifested in increased demand for labor, the improved balance of employment (as the total number of posts filled increased and the number of layoffs decreased), the decline in the number of firings, the stabilization of wages and improved expectations among employers. According to the Survey of Manpower, the number of unemployed began to fall in the fourth quarter by 9.1 thousand (which represents a decrease of 3.9 percent). The number of employed grew by 28.3 thousand (a one percent increase)⁷ and the participation rate remained unchanged at 56.6 percent. Thus, the rate of unemployment continued to decline to 7.4 percent, a decrease of 0.3 percentage points (Figure 12), which was particularly significant relative to other countries (Figure 4). Another indication of the improvement in the labor market was the increase in total wage payments in the economy, as indicated by the continuing growth in revenues from the health tax, even after taking into account the added revenues from the doubling of the ceiling on National Insurance payments. The average real wage per salaried post fell from November 2009 until January 2010 by 1.7 percent relative to the same period in the previous year. The cost of labor per unit of output remained stable at a level somewhat higher than its low level during the

Figure 12
The Employment Rate and the
Unemployment Rate,^a
2002-2009
(seasonally adjusted, quarterly, percent)



^a Unemployment rate - percent of labor force (aged 15-64);
Employment rate - percent of working-age population.

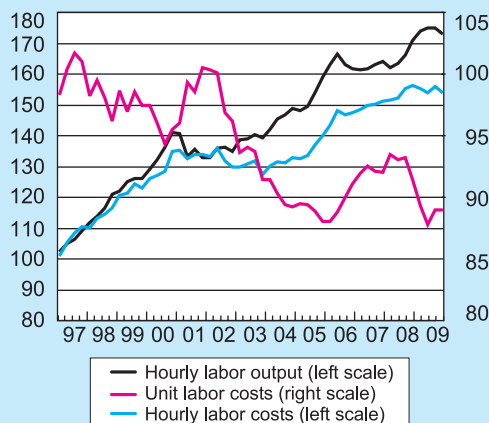
SOURCE: Labour Force Surveys of the Central Bureau of Statistics.

⁵ It is worth mentioning that an increase beyond the seasonal trend on the expenditure side was possible as a result of the early transfer of surpluses from 2009 to 2010 (in March rather than May) as a result of the approval of the bi-annual budget and the long-term planning of government activity.

⁶ The seasonally adjusted growth rate slowed relative to the rapid increase during the second half of 2009.

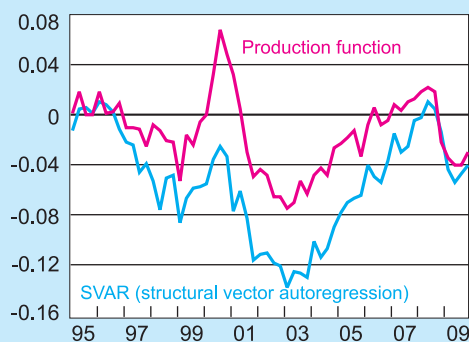
⁷ This increase took place completely within public services and contrasted with a decline in the business sector. Furthermore, the number of fulltime workers increased significantly and for the first time since the third quarter of 2008 there was a small increase in the manufacturing industry.

Figure 13
Index of Gross Unit Labor Costs in the
Business Sector, 1997 to 2009
 (quarterly, seasonally adjusted, nominal)
 (1997:Q1=100)



SOURCE: Based on Central Bureau of Statistics data.

Figure 14
Indices of the Output Gap,^a
1995-2009



^a For details of the calculation of the output gap see Chapter 2, p.69, in the Bank of Israel Annual Report, 2008.

SOURCE: Bank of Israel.

second quarter of 2009 and reflected a drop in hourly wages and in output per hour worked, despite the shrinking surplus in productive capacity. This low level is still acting as a constraint on price increases (Figure 13).

During the period under review, there was a certain amount of downward pressure on prices although its effect is diminishing. The surplus in productive capacity continued to shrink during the fourth quarter of 2009, which represented a continuation of the trend that began in the third quarter of 2009, and was accompanied by a continuation of the increase in aggregate demand. This was manifested in a declining rate of unemployment, as the number of employed increased and the utilization of capital stabilized at a slightly higher level than that during the second quarter of 2009. These developments were apparently evidence that the turnaround in the business cycle is gaining momentum. Indeed, according to some of the indexes used by the Bank of Israel's Research Department, the expansion of the still negative output gap came to a halt and during the last two quarters it even narrowed (Figure 14). This process acted to reduce its moderating influence on prices, even though the process is not certain to continue. Nonetheless, in view of the fragility of growth worldwide, among other things, it is reasonable to assume that the closing of the gap will proceed at a slower pace.

d. Financial developments

The prices of financial assets in Israel continued to increase during the quarter under review and the rate of increase even accelerated from February onward. This represented a continuation of the upward trend that began following the low point reached at the end of 2008 and the beginning of 2009. The steep upward trend in share indexes has continued and is significant also in comparison to stock exchanges abroad, even those in the emerging market economies (Figure 3). This is explained by the expectation of a continuing recovery in real activity, the low Bank of Israel interest rate (despite the beginning of an upward trend) and the lack of attractive investment alternatives as a result of the low yields on domestic low-risk financial assets. The increase in share prices was concentrated primarily in the following industries: communication, pharmaceutical, real estate and commerce and services. At the same time, the rise in share prices slowed in industries that had been leaders in the previous quarter, particularly the banks and oil and gas exploration. The high correlation between the stock markets in Israel and other countries is evidence of the strong connection between the Israeli

and global economies, even though share prices in Israel are increasing at a more rapid rate. In the market for government bonds, and in particular the market for corporate bonds, prices continued to rise as a result of low interest rates and the lower-than-expected amount of capital raised by the government. The yields derived from bond prices imply a significant decrease in the risk premium to close to the particularly low pre-crisis level. This can be seen from a calculation of the yield spread between corporate CPI-indexed bonds (primarily of non-rated companies) and similar government bonds.

The value of the public's portfolio of financial assets continued to rise during the period under review and reached NIS 2.4 trillion. This was even higher than prior to the crisis and 28 percent higher than the lowest level reached in November 2008 at the height of the crisis. Most of the increase occurred in shares and CPI-indexed assets and was based on the increase in prices of financial assets in Israeli and global markets. Total issues of corporate bonds to the private sector (including the banks) continued to grow during the quarter under review and totaled NIS 9.2 billion. Similarly, the assets of the mutual funds and their net absorption of funds continued to grow, particularly in the case of mutual funds specializing in bonds. In contrast and as a result of the still low interest rates, withdrawals increased from money market mutual funds, which represented a continuation of the trends that began in early 2009. The composition of the portfolio of assets improved thanks to positive developments in the local capital market. Thus, the share of tradable assets in the portfolio increased as a result of the price increases on the stock exchange and the shift from deposits to tradable assets; the share of intermediate-run assets rose, primarily at the expense of short-run assets; and there was a significant increase in investment by foreign residents in government bonds and *makam* in Israel. Notwithstanding these positive developments, it has become increasingly important to maintain financial stability for several reasons: the growth in corporate bonds issues by low- and non-rated companies alongside the aforementioned decline in returns to a level that raises the question of whether they accurately reflect implicit risk (Figure 15); the increase in the share of issues by real estate companies, which were at the center of the financial crisis, though at a slower pace than prior to the crisis; and the possible effect of the recovery and stabilization of the still fragile global financial system on the local financial system.

As the Bank of Israel continued to raise the interest rate during the quarter under review, the trend of moderation in the annual increase in the money aggregates became more pronounced

Figure 15
The Average Weighted Yield Gap between CPI-Indexed Corporate Bonds, by Rating, and *Galil*-type Government Bonds, July 2008 to April 2010

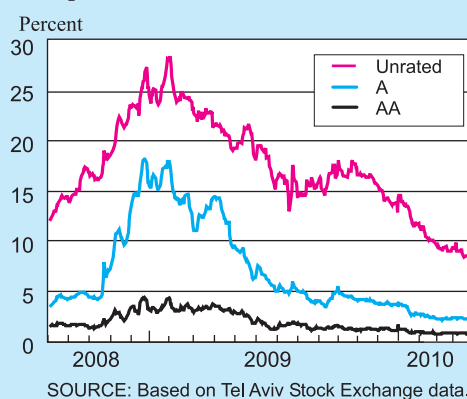


Figure 16
The Monetary Aggregates,
March 1999 to March 2010
(rates of change over previous
twelve months)

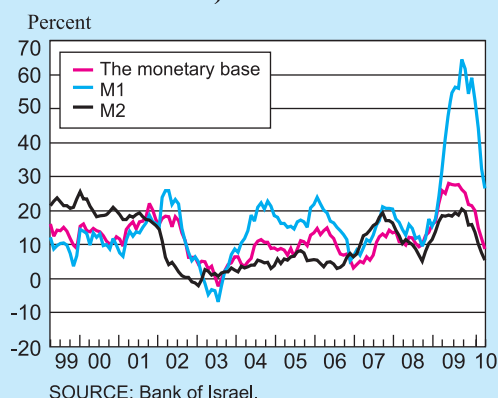
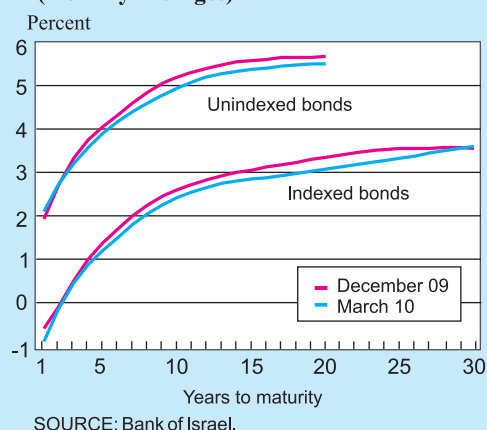


Figure 17
Yield To Maturity Curves of Indexed
and Unindexed Bonds,
December 2009 and March 2010
(monthly averages)



(Figure 16). The expansion of the money aggregates, which reflected a rapid shift of funds to liquid assets, was the result of the interest rate reductions to an unprecedented level of 0.5 percent by April 2009, which was left unchanged until August 2009. The slowing of the growth in monetary aggregates is evidence of the change in the public's preferences and the resulting transfer of funds into other assets. It is expected that further increases in the interest rate to a more normal level, which reflects economic conditions following the recovery from the crisis, will shift funds to interest-bearing bank deposits that are by their nature less liquid. Total bank credit did not change in 2009. Total credit to the business sector declined while credit to households continued to grow, particularly credit to homebuyers, while non-bank credit to the business sector increased. In 2010, there total credit to the business sector declined, and its composition was reversed, such that bank credit increased while non-bank credit decreased. This was in spite of the increasing pace of bond issues, apparently as a result of the large-scale redemptions of corporate bonds.

The yield-to-maturity on government bonds, both nominal and real, continued to decline to historic lows during the quarter being reviewed along almost the entire yield curve (Figure 17). This decline is consistent with the rate of interest, which has been low for some time, and the positive domestic fiscal developments, including the reduced capital needs of the government in spite of the raising of the deficit ceiling to 5.5 percent of GDP. As a result of the higher interest rate and the expectation that it will continue to rise, the slope of the yield curves has leveled off somewhat, with a larger reduction in long-term yields and an increase in very short-term yields. Real short-term yields have remained negative, even though they have increased, and the positive slope of the real yield curve reflects the continuing large-scale monetary expansion and the expectation in the market of a rise in the interest rate and continued economic growth. Despite the identical developments in the nominal and real yield curves, the drop in real yields was somewhat stronger and reflected somewhat of an increase in inflationary expectations.

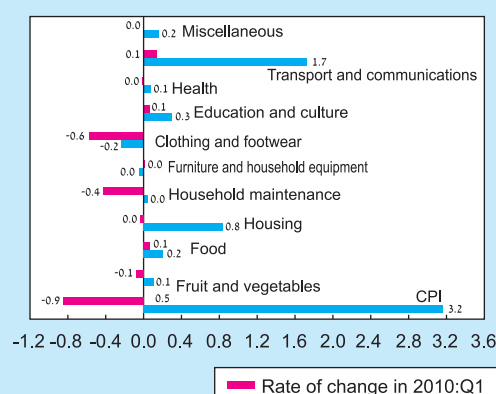
e. Inflation and inflation expectations

The CPI fell during the period reviewed at a cumulative rate of 0.9 percent (Figure 18). The trend in prices during this period was the result of several main factors: seasonal factors,⁸ primarily the Clothing and Footwear Index; the drop in prices as a result of government measures in 2010, including the reduction in VAT

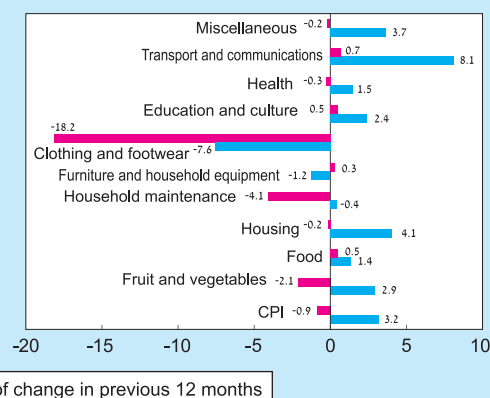
⁸ See Box in this Report.

Figure 18

Contribution of the Components of the CPI to the Changes in the CPI in the Previous 12 Months and in 2010:Q4



Changes in the CPI in the Previous 12 Months and in 2010:Q4



SOURCE: Based on Central Bureau of Statistics data.

and the cancellation of the drought levy, which offset half of the inflationary effect its policies had in 2009 (which totaled more than one percentage point);⁹ lower electricity prices as a result of the transition to production using natural gas; the slowing of the rate of increase in energy prices, which began in 2009 and contributed to inflation that year, and which led to a downward correction in the Energy Index in 2010; and the decline in the Housing Index which began in December 2009 and gained momentum at the beginning of 2010 and which was offset somewhat in March. (This is in spite of the continuing significant increases in the prices of owned houses reported in the Survey of Owned Houses of the Central Bureau of Statistics. Although they are not included in the prices of housing services as measured by the CPI, they can work indirectly to raise general prices in the economy.)

In addition the aforementioned new factors that worked to reduce prices, there were fundamental moderating forces at work as well. These included a negative output gap, which implied that the economy's productive ability exceeded domestic demand (which, although it has narrowed, is expected to remain negative); the low rate of labor costs per unit of output; and the low rate of inflation abroad. On the other hand, the sharp rise in global food prices at the end of the previous quarter led to an increase in domestic prices during the quarter under review, though the effect was small.

⁹ The previous Inflation Report forecasted that the cancellation of these costs would lead directly to a similar decline in prices.

During the period under review, the annual rate of inflation slowed from 3.9 percent in December 2009 to 3.2 percent in March 2010, which is close to the upper boundary of the inflation target range. This rate of increase is primarily an expression of the increase in energy and housing prices and the price increases that resulted from government intervention during 2009, along with the smaller decrease in those prices at the end of 2009 and beginning of 2010. If the effects of government intervention are ignored,¹⁰ the annual CPI rose by 2.7 percent. The development of inflation indicates that changes in commodity prices and the prices of imports, as well as changes resulting from government intervention, may have only a transitory effect on inflation, although this effect may sometimes be of a large magnitude. In contrast, monetary policy is critical in the achievement of long-term stability in inflation. The recent hikes in the interest rate will contribute to reducing inflation, but with a certain lag.

Seasonal adjustment of the Consumer Price Index: a structural approach

The seasonal adjustment of economic and social data is an accepted practice both in Israel and other countries and is implemented by the public institutions responsible for providing statistics; in Israel, this is the CBS (Central Bureau of Statistics). Most time series are adjusted using the X12 method, which is widely used by providers of statistics. X12 was originally developed by the US Census Bureau and has been extended by many statistical and academic organizations over the years. The X12 method is used by the CBS to seasonally adjust data, including the CPI. One of its more important characteristics is that it is based solely on the series' original data, without introducing any other information (apart from the effects that are technically related to the calendar, such as the seasons of the year and the dates of holidays). Data adjusted using this method is used in economic analyses of all types, including the formulation of policy.

In some cases, policy formulation requires some additional consideration of seasonality, especially when a seasonally related phenomenon is discovered in variables that are linked to the target variable. In such a situation, a structural analysis of the phenomenon in both variables is worthwhile in order to ascertain whether joint seasonality or some other effect, perhaps even a random one, is involved. This box presents such an analysis for the CPI in recent years and shows that for the formulation of monetary policy it is important to differentiate between regular seasonality in the CPI and the connection between the exchange rate and prices abroad on the one hand and the CPI on the other. This differentiation requires a structural analysis of seasonality in the CPI that complements the standard analysis of the CBS.

The inflation represented by changes in the CPI is characterized by a strong seasonal element, which makes it difficult to analyze. This is particularly true for the month of April, in which there is generally a large jump in prices relative to other months of the year, although there are other months that also show a

¹⁰ Intervention that, as mentioned, led to price increases in 2009 and price decreases in 2010.

significant seasonal effect. Thus, for example, according to the latest seasonality coefficients of the CBS, the negative seasonal effect of January is close in absolute value to that of April.

The most common method used for seasonal adjustment is the abovementioned X12 program. Though it has many advantages, it also has some disadvantages, which include:

1. The identification of time-varying seasonality and its separation from the trend/cycle component are carried out without using any information beyond the lags of the variable itself.
2. There is no specific analysis of the statistical characteristics of the series being seasonally adjusted.

Over the years, various methods have been developed to deal with these disadvantages, one of which is the structural method presented by, among others, Harvey (1993). This method will be used below to remove the seasonality from the changes in the CPI. The structural method makes it possible to estimate an equation in which some of the variables are unobserved and some of the coefficients (the equation's parameters) can vary over time.

An important advantage of this method is that it enables the inclusion of external information in the process to identify seasonality and separate it from the trend/cycle component. The use of this method does not require a complete model of inflation; partial information is also beneficial. Thus, we use a priori information on the inflation process. For example, an analysis of inflation from 1999 to 2010 indicates the lack of an upward or downward trend. This implies that inflation during this period was a stationary variable, which is a desirable characteristic for statistical analysis. In addition, we know that the rate of depreciation and the increase in prices abroad influence local prices. We also believe that the effect of the rate of depreciation on inflation has diminished in recent years. Harvey's approach makes it possible to use all of this information and thus to improve the separation between seasonality and the trend/cycle component.

Prior to presenting the results of the structural method and comparing them to the CBS's seasonally adjusted data, it is important to emphasize that we are not denying the validity of the CBS treatment of seasonality. On the contrary, we believe that the approach of the CBS, which does not involve any judgment based on a particular economic theory, is in principle a correct approach. The goal of this box is to present an additional estimator, which provides an additional perspective on the analysis of this important variable in the formulation and monitoring of monetary policy in recent years.

It is worth mentioning that the X12 method also permits the use of explanatory variables to separate between seasonality and the trend/cycle component; however, Harvey's method provides a larger scope of possibilities. Furthermore, the X12 method does not deal with a situation in which the effect of an explanatory variable varies over time.

The table below presents the results of seasonal adjustment using the structural method as compared to the CBS results. The structural method was applied to the period from January 1999 until February 2010. A number of constraints that embody a priori information were imposed on the analysis. Thus:

1. We used the fact that inflation was stationary during the sample period (1999 to 2010).
2. We added two important explanatory variables to the equation: the rate of increase in global import prices in dollars¹ (contemporaneous and with a lag of one month) and the rate of depreciation in the shekel/dollar exchange rate (contemporaneous and with a lag of one month).

¹ Seasonally adjusted data using the fixed seasonality method. Harvey's approach makes it possible to remove seasonality from several series simultaneously, but it is a complicated process. Therefore, we made do at this stage with a separate estimation of the seasonality in import prices.

3. When estimating² the equation, we allowed for the effect of the rate of depreciation on inflation to vary over time and indeed it decreased over time (see below).

The table presents the CBS's seasonality coefficients and those obtained using the structural method, as well as the seasonally adjusted rates of inflation obtained using the CBS method and the structural method.

Seasonally Adjusted Rates of Change in the CPI, January 2009 to March 2010

(in monthly terms, percent)

	Seasonality coefficients		Seasonally adjusted data		Original data
	Structural method	CBS method (X12)	Structural method	CBS method (X12)	
2009					
January	-0.40	-0.63	-0.13	0.10	-0.53
February	-0.30	-0.39	0.20	0.30	-0.10
March	-0.05	0.10	0.55	0.39	0.50
April	0.65	0.69	0.34	0.29	0.99
May	0.21	0.00	0.18	0.39	0.39
June	0.12	0.29	0.76	0.58	0.88
July	0.30	0.67	0.76	0.39	1.06
August	0.04	0.29	0.44	0.19	0.48
September	-0.36	-0.48	0.07	0.19	-0.29
October	0.12	-0.19	0.07	0.38	0.19
November	-0.28	-0.19	0.57	0.48	0.29
December	-0.07	-0.19	0.07	0.19	0.00
2010					
January	-0.40	-0.67	-0.27	0.00	-0.67
February	-0.30	-0.38	0.01	0.10	-0.29
March	-0.05	0.10	0.15	0.00	0.10

One of the characteristics of the seasonality coefficients obtained using the structural method is the smaller variation relative to the X12 method. One of the reasons for this is the use of the information that inflation was stationary (i.e., lacking a clear upward or downward trend) during the sample period when defining the trend/cycle component. It appears that the addition of this information greatly facilitated the separation between the trend/cycle component and time-varying seasonality and reduced the magnitude of seasonal changes relative to those obtained by the X12 method. The addition of the rate of depreciations and prices abroad further reduced the variation in the seasonality coefficients. It appears that using the X12 method makes it difficult to separate between the trend/cycle component and time-varying seasonality. As a result, some of the changes in the trend/cycle component³ are attributed to changes in the seasonality structure.

² Estimation using the structural method was carried out using a Kalman filter, which is a widely used method of estimating unobservable variables, and is used to, among other things, estimate and solve models of the DSGE type.

³ Which are determined, by definition, by factors that are not seasonal or random.

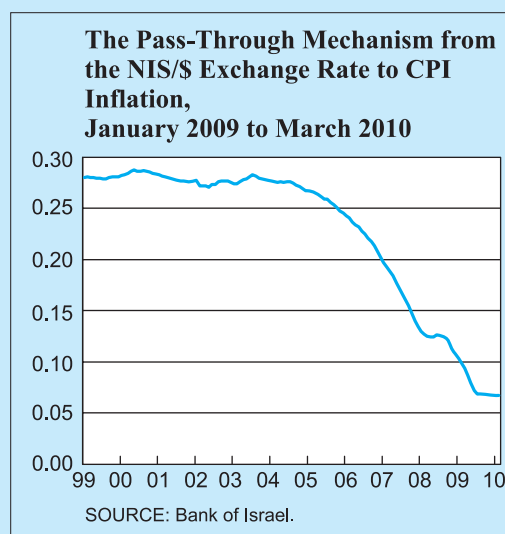
It was found therefore that when using the structural method in this case, variation in the seasonality coefficients is reduced as information is added. Thus, it appears that the seasonal structure of inflation during this particular period (1999 to 2010) was closer to being fixed than variable. Nonetheless, the seasonality coefficients still have some degree of variation. In addition, the coefficients (and as a result the seasonally adjusted inflation figures as well) differ from the fixed coefficients obtained from an estimation using dummy variables.

The graph presents estimates of the changing rate of pass-through from the rate of depreciation (contemporaneous and with a lag of one month) to inflation as measured by the CPI. As can be seen, the pass-through was constant until 2006 and since then gradually declined. The main decline was a result of the reduced transmission in the housing sector (which was verified by applying the structural method to the housing component).

An examination of the figures in the table indicate that for almost all the months there is a significant difference between the seasonality coefficients estimated using the structural method and those estimated using the CBS method. Thus, for example, according to the CBS, the months of June, July and August are characterized by high seasonality (i.e., are expected to have relatively high indices) while according to the structural method they have low seasonality. There was also a significant difference with respect to October, such that according to the CBS it has negative seasonality of 0.29 while according to the structural method it has a positive coefficient of 0.12.

These differences are also manifested in the seasonally adjusted rate of inflation. Thus, for example, cumulative inflation during the months of June to August 2009 was 1.1 percent according to the CBS while according to the structural method it was 2.0 percent. According to the structural method, inflation has slowed significantly in recent months while according to the CBS inflation has remained high. During the six months from September 2009 to February 2010, unadjusted inflation was -1.5 percent in annual terms. After seasonal adjustment using the structural method, inflation was 1.0 percent in annual terms during this period as compared to 2.7 percent according to the CBS method.

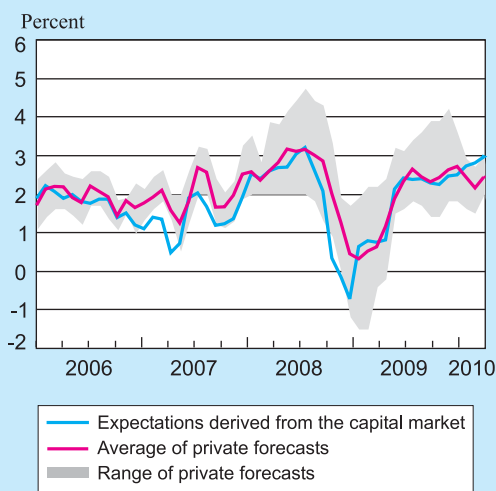
The fact that different methods provide such different results indicates the high level of uncertainty involved in removing seasonality from consumer prices. This uncertainty provides support for one of the guidelines in formulating monetary policy, which warns against basing a decision on the rate of inflation for only one particular month.



The expectations of inflation for the year (derived from the capital market¹¹ and the average prediction of inflation for the year by private analysts), which stabilized during the second half of 2009 and were somewhat above the center of the inflation

¹¹ The nominal and real yields include a premium that compensates investors for the risk of inflation and the lack of liquidity and therefore the interpretation of the expectations of inflation is complicated. The risk premium increases with the term of the expectations.

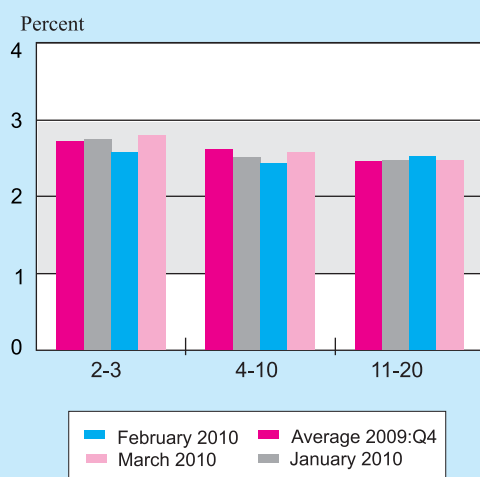
Figure 19
Inflation Expectations for the Next Year Derived from the Capital Market and According to Private Forecasters, 2006 to March 2010 (monthly averages)



^a From April 2007, the real yield used in the calculation of inflation expectations is based on the entire yield curve.

SOURCE: Private forecasters' reports and Bank of Israel.

Figure 20
Forward Inflation Expectations Derived from the Capital market for Periods More Than One Year Ahead



target range up to October, rose to near the upper boundary of the range towards the end of the year (Figure 19). Up until the announcement of the February index and in parallel to the upward correction of forecasted interest rate hikes and the decline in the uncertainty with respect to expected inflation, which could be seen in the narrower range of analysts' forecasts—expectations derived from the capital market continued to rise slowly and eventually exceeded the expectations of inflation from the capital market for terms of more than one year. On the other hand, the predictions of private analysts decreased on average and only after the announcement of the February index did they rise somewhat. Later on in the quarter, expectations of inflation, both those of forecasters and those calculated from the capital market, continued to rise, although they did not exceed the upper boundary of the target range. The expectations from the capital market were still higher than the average prediction of private analysts, while previously the opposite had been the case. Similarly, the fact that the interest rate was still low, as mentioned, and that the deviation of actual inflation from the target range has continued for a relatively long period is also not generally characteristic of the economy.

Forward expectations for periods of longer than one year remain stable at the average level of the previous quarter, which was located in the upper part of the inflation target range (Figure 20). We conclude from this that the public perceives as transitory the changes in inflation due to external factors, i.e. imported inflation which is determined by commodity prices (such as food, energy and agricultural produce) and government intervention. These price increases were perceived as factors that offset each other within a short period of time and which do not affect inflation in the long run. The stable level of expectations of inflation is also an expression of the public's confidence in monetary policy. The expectations-of-inflation curve shows that the path of inflation is expected to level off somewhat and in about 10 years is expected to reach 2.5 percent.

2. MONETARY POLICY

During the first quarter of 2010, monetary policy continued to work towards achieving price stability within a flexible inflation target regime. The Bank of Israel raised the January interest rate by 0.25 percentage points to 1.25 percent, and left it unchanged for February and March. It increased the interest rate for April to 1.5 percent, and kept it at that rate for May.

During the period under review and in view of the policy implemented in September 2009, monetary policy-makers were faced with the challenge of continue the gradual process of raising the rate of interest to a normal level that is consistent with the new economic conditions, as the effects of the global crisis diminish and in view of the predicted continuation of growth in GDP. The goals of the upward path for the rate of interest are to return inflation to within the target range by seeking price stability and to ensure the continued recovery of the economy by maintaining financial stability. The achievement of these goals is dependent on fine-tuning the pace of interest rate increases to both actual and expected developments in a way that will achieve a balance between the goals. This gradual process will make such balance possible and will prevent situations in which interest hikes are too rapid and may constrain growth or in which interest hikes are too slow and may not be sufficient to bring down inflation. These situations could lead to an overreaction at a later stage.

The speed of return to a normal rate of interest is dependent on the development of a number of factors, both domestic and foreign, including the stabilization of expected inflation at the center of the target range and following that a return of actual inflation to within the range; the solidification of the economic recovery in Israel with a mix of uses that supports long-term growth and a rate of growth that approaches its potential level; the stabilization of the shekel exchange rates at a long-term level that is consistent with the fundamentals of the balance of payments; the interest rate policies of central banks in the major economies, which are expected to maintain low interest rates during 2010 in view of the more gradual and deferred recovery relative to Israel's and the high level of uncertainty regarding its continuation, as well as the lower level of inflation in other countries. The global uncertainty increases the uncertainty of continued growth in Israel and thus restricts the freedom of policy makers in Israel, whose economy is small and open and closely linked to the global economy. If the interest rate gap is widened too quickly relative to the large central banks (Figure 21), the shekel is liable to appreciate which will harm the profitability of exports and thus reduce economic growth.

While during the third quarter of 2009 the risk of a continuation of the recession still outweighed the growing inflationary forces, the two risks were equally weighted during the fourth quarter. During the first quarter of 2010, there was an increase in the rate of growth and a more rapid-than-expected slowdown in the rate of inflation towards the upper bound of the target range. However, the level of inflation and the expectations of inflation were still high

Figure 21
Short-Term and Long-Term Interest
Rate Differentials between Israel and
the US, January 2007 to April 2010

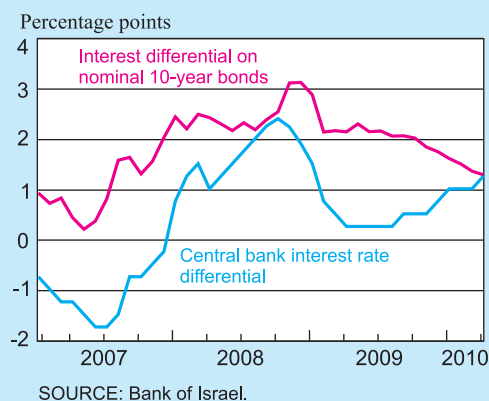


Figure 22
Inflation in Previous 12 Months,
Inflation Expectations and Inflation
Targets, 2001 to March 2010
 (monthly averages)



SOURCE: Based on Central Bureau of Statistics data and Bank of Israel.

(Figure 22), the prices of domestic assets, particularly housing, continued to rise and risk factors continued to threaten the positive trends in global growth, which are critical to continued growth in Israel. These factors led central banks in the leading economies to leave interest rates at very low levels and it was expected they would remain there in the coming months as well. As debt financing problems appeared in a number of countries in Europe, signs began to appear of a possible slowdown in the recovery there. In order to provide an appropriate solution to the variety of risks and the need to reduce monetary stimulus while supporting continued growth and financial stability, the Bank of Israel raised the interest rate by 0.5 percent to 1.5 percent between September 2009 and April 2010,¹² and left it unchanged for May.

The Bank of Israel has continued to intervene in the foreign exchange market¹³ with the goals of preventing over-appreciation of the effective exchange rate and minimizing its negative effect on exports and real activity and of maintaining stability in the economy. The Bank purchased foreign currency in the amount of \$1573 million in January, \$200 million in February and \$500 million in March.

3. UPDATE OF FORECASTS

a. The global environment

The forecasts of the global recovery in real activity in 2010 were corrected upward by the various international organizations. The IMF slightly updated its forecast of growth in global output for 2010 to 4.2 percent (in comparison to a forecast of 3.9 percent in the previous report) in view of the continuation of the gradual recovery in global trade at a somewhat slower pace (Table 3). The forecast for growth in 2011 stands at 4.3 percent. This growth is based on the stimulus policies of the various governments, which were adopted to deal with the global crisis. The rates of growth will vary across blocs of countries. Thus, growth in most of the advanced economies, which is based primarily on the transition in the inventory cycle and the increase in private consumption, is expected to remain moderate while growth in most of the emerging and emerging market economies, which is based primarily on domestic demand, is expected to intensify.

¹² Via increases of 0.25 percentage points in each of the months September and December 2009 and January and April 2010.

¹³ The Bank of Israel takes into consideration changes in the effective exchange rate and thus takes into account the value of the shekel against the basket of currencies, whose weights reflect the relative shares of Israel's main trading partners.

Table 3
GDP Growth in 2009, and IMF
Forecasts for 2010 and 2011

	(percent)		
	2009	2010	2011
Average GDP growth			
Global	-0.6	4.2	4.3
Advanced economies	-3.2	2.3	2.4
US	-2.4	3.1	2.6
EU	-4.1	1.0	1.5
Japan	-5.2	1.9	2.0
Emerging markets	2.4	6.3	6.5
Inflation			
Advanced economies	0.1	1.5	1.4
Emerging markets	5.2	6.2	4.7

SOURCE: IMF World Economic Outlook Update, April 2010.

The IMF expects that the price of oil will rise by 29.5 percent in 2010 and that the price of commodities will rise by 13.9 percent. The increase in food prices towards the end of the year has raised fears of future inflation in the emerging economies. Nevertheless, rates of inflation are in general still low worldwide and the major central banks are maintaining their assessment that inflation will remain moderate as a result of the wide output gap. According to the IMF forecasts, annual inflation in the developed and emerging economies will be 1.5 and 6.2 percent, respectively and in some economies, particularly Japan, there is a prospect of disinflation. Against this background, the major central banks are expected to gradually raise interest rates once the recovery has gathered steam and the production surplus is expected to decline significantly. Therefore, it is expected that the major central banks will maintain low interest rates in coming months and that most of them will perhaps not even raise them at all in 2010.

b. Real activity in Israel

GDP grew by 0.7 percent in 2009 and the unemployment rate stood at 7.7 percent. In view of the updates to the 2009 data and the new data for 2010, the Bank of Israel updated its real macroeconomic forecasts (Table 4). Thus, GDP is expected to grow by 3.7 percent in 2010, while unemployment will fall to 7 percent on average. The increase in GDP is expected to be led by exports as a result of the recovery in global demand and the increases in private consumption and investment are expected to be less than the forecast published in the previous report. Therefore, the main risk to the forecast is a slower global recovery.

Table 4
Indicators of Real Economic Activity

(rates of change, percent, unless stated otherwise)

	Actual	Bank of Israel Forecast ^a	
		2010	2011
GDP	0.7	3.7	4.0
Private consumption	1.4	4.5	4.3
Gross domestic investment	-8.9	6.2	9.0
Public consumption	2.2	1.0	1.0
Imports (civilian, excluding ships, aircraft and diamonds)	-12.3	10.2	9.2
Exports (excluding diamonds)	-9.6	9.2	7.4
Current account (\$ billion)	7.2	4.8	3.9
Unemployment rate	7.6	7.0	6.7
Public deficit (percent of GDP) ^b	5.0	4.0	
Gross debt/GDP ratio (percent of GDP)	79.5	80.0	

^a The Bank of Israel forecast on 21 April 2010. The forecasts of the public deficit and the debt/GDP ratio in 2011 depend on the policy that the government adopts in the course of its budget discussions. For details of the possibilities it faces see the Bank of Israel Annual Report for 2009, Chapter 6, Section 7 (the English version of the Report is currently under preparation, and is due to appear in the near future).

^b Excluding the Bank of Israel.

SOURCE: Central Bureau of Statistics and the Bank of Israel.

In this context, the surplus in the current account of the balance of payments is expected to decline somewhat in 2010 to \$4.8 billion as compared to \$7.2 billion in 2009 and \$1.6 billion in 2008, as a result of a worsening in the terms of trade and the higher rate of increase in imports than exports during the year. This will also work to limit the rate of increase in output during the year. As opposed to most of the leading economies, the government deficit and the ratio of public debt to GDP are expected to shrink to only 4 and 80 percent of GDP, respectively. In 2011, GDP is expected to grow by 4 percent and the rate of unemployment to drop to only 6.7 percent. The rate of growth is expected to accelerate to more than 4 percent during the second half of 2011. This is due to the forecast for global growth mentioned above, the relatively moderate increase in domestic demand and the relatively low rate of unemployment relative to the long-term average.

c. Assessments regarding the development of inflation and the balance of inflation risks

The rate of inflation during the last 12 months was 3.2 percent, which is in proximity of the upper boundary of the inflation target range. However, according to most of the assessments in the markets the rate of inflation will slow this year. Thus, the expectation of inflation, as measured in the capital market, stood

at 2.7 percent in April, which is similar to its level at the time of writing of the Inflation Report for the previous quarter. The forecasts of private analysts stood at 2.7 percent at the end of April, as compared to 2.3 percent in the previous quarter. The average forecast from the Survey of Companies is 2.45 percent, as compared to 2.8 percent in the previous quarter. These expectations are accompanied by forecasts that the rate of interest will have risen to 2.75 percent a year from now.

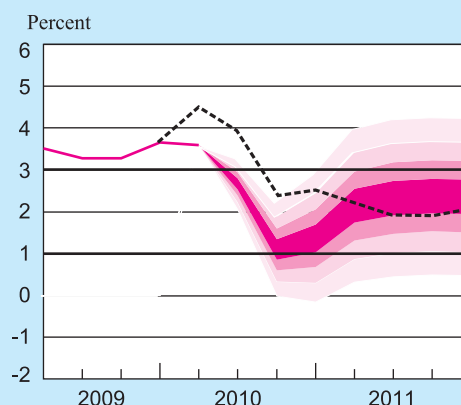
According to the Bank of Israel's forecast¹⁴ inflation will decline at a faster rate than that predicted by the markets and is expected to be 2.2 percent in another 12 months (Table 5). According to the Bank's assessment, inflation will enter the target range already in mid-2010 and will decline even to the lower part of the target range for several months due to the tail-end effects of the drop in prices during the first few months of 2010. Annual inflation will then return to the center of the inflation target range. At the same time, it is expected that the Bank of Israel interest rate will be gradually raised (Figures 23 and 24).

Inflation will be affected this year by a number of opposing forces. The main factors that will operate in the short run to constrain inflation are the effective appreciation in recent months and the negative output gap that appeared as a result of the moderate growth in Israel's output in 2009 during the global financial crisis. According to the Bank's forecast of a 3.7 percent rate of growth in 2010, which is somewhat higher than the potential growth rate, the negative output gap is expected to continue narrowing, though it will remain negative during the coming year. A negative output gap implies that the economy's productive capacity (which was almost unaffected by the crisis) exceeds the level of domestic demand, which represents a constraint on inflation. In addition, the current decline in inflation¹⁵ may continue to put downward pressure on inflation in the future as a result of inertial mechanisms. Another factor that tends to moderate inflation and which works primarily by constraining the rise in the local interest rate, is the very low level of central bank interest rates in other countries (0.0–0.25 in the US and 1.0 in Europe), which are expected to persist during the course of 2010 at least.

¹⁴ The Inflation Report presents the rate of inflation forecasted by the Research Department of the Bank of Israel. The forecast is based on the combination of two quarterly models, several monthly models and indicators and a certain amount of judgment. This was also the case for the previous Inflation Report but previous to the fourth quarter of 2009, the Inflation Report's forecasts of inflation and the rate of interest were based primarily on one of the quarterly models used by the Bank of Israel, i.e. the DSGE model.

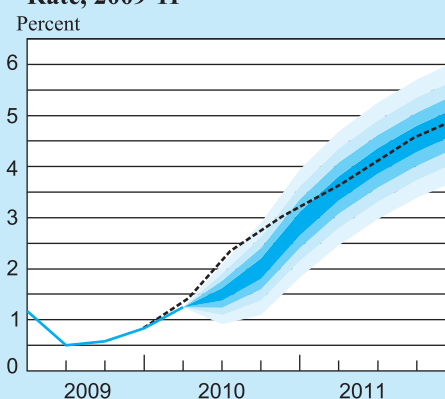
¹⁵ According to the method of measurement appearing in Box, the seasonally adjusted rate of inflation since September has been 1.2 percent on average in annual terms.

Figure 23
Actual Inflation and Fan Chart^a of Expected Inflation, 2009-11
(cumulative increase in prices in previous four quarters)



^a The center of the fan chart is based on the Bank of Israel Research Department assessment. The width of the chart is based on the Department's DSGE (dynamic stochastic general equilibrium) model. The full fan covers 66 percent of the distribution of expected inflation. SOURCE: Bank of Israel.

Figure 24
Actual Bank of Israel Interest Rate and Fan Chart^a of Expected Interest Rate, 2009-11



^a The center of the fan chart is based on the Bank of Israel Research Department assessment. The width of the chart is based on the Department's DSGE (dynamic stochastic general equilibrium) model. The full fan covers 66 percent of the distribution of the expected interest rate. SOURCE: Bank of Israel.

Nonetheless, it appears that there are also a number of factors working to increase prices, such that in another 12 months inflation will be somewhat higher than the center of the target range. These include the increase in import prices, in particular raw materials for production such as energy; which began in the second half of 2009 and is expected to continue during the first half of 2010. In addition, the increased certainty of the public's expectations (for example, according to the forecasts of analysts, the capital market and the Survey of Companies) that inflation will be somewhat higher than the midpoint of the target range can raise inflation already in the present since when adjusting prices or negotiating wage agreements producers take into account future inflation. Finally, a factor that is liable to work towards an increase in prices in the short term is the significant increase in asset prices during the past year, particularly the jump in housing prices by 22 percent. Although the prices of assets are not included directly in the CPI, they can work indirectly to raise general prices in the economy (for example, through the wealth effect). It is important to mention that the expectations of high inflation and the increase in asset prices were reinforced by the low rate of the Bank of Israel interest rate at the end of 2009.

Figures 30 and 31 present a comparison to the forecasts in the previous Inflation Report, which for the coming year were lower and for the subsequent year were higher. The downward correction of forecasted inflation for the year is primarily a result of the inflation during the first quarter of 2010, which was lower than expected, and may be an indicator of a turning point in the rate of inflation. The correction was also a result of the growing concern over an intensification of the crisis in Europe, which would lead to a postponement of the expected hikes in the interest rate abroad. Accordingly, it can be seen that the expected pace of interest rate hikes during the coming quarters has also slowed.

The publication of solid national accounts data for the end of 2009, together with the accumulation of indicators that the economy's recovery is sustainable and the assessments that import prices will continue to rise at a relatively high rate, have led to an upward correction in the forecast of inflation for 2011.

These forecasts are based on a number of assumptions, in particular that the effective exchange rate will remain close to its present level (and therefore the shekel/dollar rate will be in the vicinity of 3.7), that the central bank interest rates in other countries will rise only minimally in 2010, that global trade will gradually recover and grow by 7.0 percent in 2010 (in comparison to a long-term rate of 6.5 percent) and that the prices of commodities, in particular oil, will rise this year at a rate of

somewhat more than 2 percent. Clearly, these assumptions may not necessarily be realized, such that actual inflation may deviate from its forecast and therefore will necessitate an adjustment of the path of the Bank of Israel rate of interest. The Bank's assessment is that the balance of inflation risks (relative to the forecast presented above) is level. The main risk factors for the actual rate of inflation to exceed the forecast are as follows:

- A rapid global recovery from the financial crisis that will result in accelerated growth in world trade, a rise in central bank interest rates already this year and the renewal of accelerated increases in the prices of commodities, particularly oil. Such a scenario of rapid global recovery will work to increase inflation and the interest rate relative to the above forecast.
- The assessments are based on the assumption that potential output was only minimally affected by the crisis and that its rate of growth in coming years will be about 3.25 percent (as it was during the past decade). An error in these assumptions, in particular slower growth in potential output, will lead to a more rapid closing of the output gap and perhaps even a more rapid transition to demand surpluses, which will increase the upward pressure on local prices.
- A possible depreciation of the exchange rate as a correction to the effective appreciation in recent months, which will create upward pressure on inflation through import prices.
- Possible wage increases in the business sector when the recession ends are likely to create inflationary pressures.

In contrast, following are the main forces that could lead to a faster decline in the rate of inflation, perhaps even to the lower boundary of the target range:

- A sharp deterioration in the global situation (the realization of scenario W). The main concern in this regard is the spread of the Greek and Spanish crises to the large European countries.
- A significant appreciation in the exchange rate which will constrain inflation through import prices.

Table 5
Assessments of Inflation over Next Twelve Months

	(percent)				
	Target	Capital market ^a	Private forecasters ^b	Companies Survey ^c	Bank of Israel's forecast
Average	2	2.7	2.7	2.45	2.2
Range	1-3		2.1-3.3	0.9-4.0	

^a April average.

^b After publication of the March CPI.

^c Range of assessments (covering 90 percent, i.e., excluding the tails). Based on companies' responses received in the second half of March.

^d Bank of Israel Research Department assessment.

SOURCE: Bank of Israel.

Appendix Table 1
The Domestic Assets Markets, September 2009 to March 2010

	09/09	10/09	11/09	12/09	01/10	02/10	03/10
Yields to maturity (monthly average, percent)							
3-month <i>makam</i>	0.7	0.7	0.7	1.1	1.2	1.3	1.4
1-year <i>makam</i>	1.7	1.5	1.6	1.9	2.0	2.0	2.0
Unindexed 5-year bonds	4.0	3.8	3.7	4.1	4.1	3.9	4.0
Unindexed 20-year bonds	6.1	6.1	5.8	5.8	5.8	5.8	5.7
CPI-indexed 1-year bonds	-0.5	-0.7	-0.8	-0.6	-0.7	-0.8	-0.9
CPI-indexed 5-year bonds	1.5	1.2	1.0	1.4	1.5	1.3	1.2
CPI-indexed 30-year bonds	3.7	3.7	3.5	3.6	3.5	3.7	3.6
Yield gap between government bonds and private bonds rated AA–AAA ^a (percentage points)	1.6	1.4	1.4	1.4	1.1	1.0	1.1
private unrated bonds excluding real estate ^a (percentage points)	13.2	12.6	11.8	10.5	8.4	6.8	6.8
Share market (percentage change during the month)							
General share price index	3.4	3.0	5.4	4.9	0.7	4.3	5.1
Tel Aviv 25 index	7.4	2.7	5.9	5.8	-2.2	3.6	6.0
Foreign currency market (percentage change during the month)							
NIS/\$	-1.0	-0.3	1.2	-0.4	-1.4	1.9	-2.2
NIS/€	1.0	0.7	2.7	-4.5	-4.3	-1.0	-3.1
Nominal effective exchange rate	0.4	0.2	2.0	-2.4	-2.4	0.6	-2.3
Risk indices derived from the trade in NIS/\$ options in the Tel Aviv Stock Exchange (monthly averages, percent)							
Implied standard deviation	11.7	10.2	10.4	10.1	10.0	8.2	7.0
Probability of depreciation greater than 3%	5.7	4.9	5.1	5.0	4.5	3.1	1.4
Probability of appreciation greater than 3%	4.5	2.8	3.2	2.6	3.1	1.1	0.5

^a CPI-indexed bonds, excluding convertibles, with a yield of up to 60 percent, and with a duration of more than one year.

SOURCE: Bank of Israel.

Appendix Table 2
The Inflation Environment and Interest Rates, September 2009 to March 2010

(monthly averages)

	10/09	11/09	12/09	01/10	02/10	03/10
Inflation environment (percent)						
Monthly change in CPI	0.2	0.3	0.0	-0.7	-0.3	0.1
Forecasters' predictions of monthly CPI (average of forecasts prior to publication of CPI)	0.2	0.3	0.3	-0.4	-0.4	0.1
Annual change in CPI	2.9	3.8	3.9	3.8	3.6	3.2
One-year inflation expectations derived from the capital market	2.2	2.5	2.5	2.7	2.8	3.0
Forecasters' one-year inflation predictions	2.4	2.6	2.7	2.5	2.1	2.4
Forward inflation expectations^a to different terms						
Short term (second and third years forward)	2.8	2.9	3.0	2.7	2.5	2.7
Medium term (fourth to sixth years forward)	2.8	2.7	2.5	2.5	2.4	2.5
Long term (seventh to tenth years forward)	2.6	2.6	2.6	2.6	2.7	2.5
Interest rates and interest rate differentials						
Bank of Israel interest rate	0.75	0.75	1.0	1.25	1.25	1.25
Derived real interest rate	-1.5	-1.6	-1.4	-1.4	-1.5	-1.6
Short-term interest rate differential between Israel and the US (prior to decision for the next month's rate)	0.5	0.5	0.75	1.0	1.0	1.0
Short-term interest rate differential between Israel and the eurozone (prior to decision for the next month's rate)	-0.25	-0.25	0.0	0.25	0.25	0.25
Forecasters' predictions of nominal interest rate for next month (prior to the decision)	0.1	0.1	0.2	0.1	0.0	0.0
Forecasters' predictions of interest rate a year hence	2.5	2.5	2.7	2.9	2.7	2.8
Long-term (10-year) nominal interest rate differential between Israel and US	2.0	1.8	1.7	1.6	1.5	1.3
Long-term (10-year) real interest rate differential between Israel and US	1.1	1.2	1.2	1.2	1.1	0.9

^a Inflation expectations are measured from the difference between yields on local currency unindexed and indexed bonds. These expectations include an element of risk premium, which rises with the length of the term to which the expectations relate.

SOURCE: Based on Central Bureau of Statistics data and private forecasters' reports.

