



Bank of Israel

INFLATION REPORT

July-September 2010

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Bank of Israel

31 October 2010

Letter of the Governor accompanying the Inflation Report for July–September 2010

This Inflation Report, covering the third 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. *

Data relating to the second quarter of 2010 and most indicators relating to the third quarter show continued economic growth—albeit at a slightly slower pace in the third quarter—with inflation, except in real estate, still at a low level

Unlike the continued slow growth in many advanced economies despite their very expansionary monetary and fiscal policies, in Israel economic activity and employment grew rapidly in the second half of 2009 and the first half of 2010. In Israel, as in most other countries, an extremely expansionary monetary policy was implemented at the end of 2008 and the beginning of 2009, to help rescue the economy from the effects of the global crisis. But unlike in many of the leading economies, the Israeli economy responded quickly to the stimulus. By the end of the second quarter of 2010, the economy was close to pre-crisis levels of activity and employment. The return to growth and the closing of the output gap, accompanied by inflation around the upper level of the target range, necessitated adjustments in economic policy.

The challenge facing policy makers is to determine the pace of interest rate changes and the continued use of additional policy instruments, and in particular intervention in the foreign currency market and supervisory measures, such that the successful economic environment – supportive of price stability, growth, and financial stability -- is preserved without creating longer-term imbalances.

GDP grew at a rapid rate of 4.5 percent in the second quarter, maintaining the buoyant rate achieved since the middle of 2009. Output growth was led by the increase in exports, which are expected to expand by about 10 percent in 2010, following their decline at a similar rate in 2009; they are expected to grow by another 6 percent in 2011, despite the predicted continued sluggishness in Israel's main trading partners. The impressive recovery of exports is mainly due to companies' success in retaining existing customers even in target markets experiencing difficulties, while developing trading relations in new markets. The relatively rapid growth was accompanied by increased employment in the business sector and reduced unemployment in the economy, unlike the situation in the US and most Western European countries. Export-led growth was also reflected in the continuing surplus in the current account of the balance of payments. With regard to the budget, the current expectation is that the deficit in 2010 will be between 3.7 percent and 4 percent of GDP, well below the 5.5 percent ceiling for 2010 set when the two-year budget for 2009 and 2010 was approved. This sharply better fiscal performance is mainly a result of the more rapid than expected growth of the economy.

* When the Monetary Committee is appointed, in accordance with the new Bank of Israel Law (2010), interest rate decisions will be made by the Committee.

Inflation over the previous twelve months declined to 3 percent in May, and since then it has been within the target range of 1–3 percent a year. Twelve-month inflation forecasts from various sources are for the CPI to rise within the upper part of the target range. One important feature of price developments is the gap that has appeared in the last year between the rise in the housing component of the CPI on the one hand— 6 percent in the twelve months to September 2010, with an expected increase of up to 8 percent in the next four quarters—and on the other, the relatively slow increase in the other components of the CPI of about one percent in the last twelve months, with a similar increase forecast in the next twelve months.

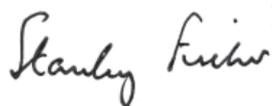
The general picture of Israel's economy in the third quarter and also assessments regarding the future is positive. Nevertheless, alongside this positive situation there are some developments that give cause for concern and confront macroeconomic policy with challenges: first, house prices and share prices have been increasing rapidly for more than a year; in each case partly due to fundamental forces—the former because the rate of building is slower than the increase in the number of households, and share

prices surging because of the high economic growth rate—but both apparently encouraged by the low rates of interest. In the case of housing, recent rates of price increase, at around 20 percent per annum, are not sustainable, and demand the attention of policymakers. Second, there is serious doubt about the rate of recovery from the crisis in many key economies, particularly the US, and also about the financial strength of several European countries and some states in the US.

Several leading economies, including the United States, leading countries in Europe, and Japan need to continue with a greater or lesser degree of expansionary economic policy, despite their large budget deficits and the marked increase in their public debt. In contrast, there is a group of countries that carry less weight in the global economy, that are showing good rates of growth of output and employment, inflation at or slightly above their domestic targets in goods and services prices, but rapid inflation in asset prices – particularly housing prices – that could pose threats to financial stability. In that group of countries, which includes Australia, Canada, Hong Kong, Norway, Singapore and Israel, the expansionary policies implemented since the peak of the crisis should be reversed more rapidly than in the first group. Typically this also requires increases in the interest rate.

These differences in policy requirements, in particular interest rate policy, create serious problems for policy makers in a world of free capital flows, which are sensitive to interest rate differentials among countries. In the absence of a framework for international coordination of monetary policies, including exchange rate policy, each country has been pursuing its policies independently, combining interest rate changes with an increasing element of intervention in the foreign currency market, leading to policy tensions in the international economy.

Against the background of the unusual increase in uncertainty in the currency arena, the Bank of Israel will continue closely to monitor the broad range of economic developments, and will use the instruments available to it to achieve its objectives of price stability, the encouragement of employment and growth, and support for the stability of the financial system, while keeping a close watch on developments in the housing market, and specially on house prices.



Stanley Fischer

CONTENTS

Summary	7
1. THE BACKGROUND AND INFLATION	9
a. The global environment	9
b. The development of the shekel exchange rate	14
c. Real developments	15
d. Financial developments	18
e. Inflation and inflation expectations	21
2. MONETARY POLICY	25
<i>Box</i> Measures adopted world wide for cooling down the housing market	28
3. UPDATE OF THE FORECASTS	31
a. The global environment	31
b. Real activity in Israel	32
c. Assessments regarding the development of inflation and the balance of its risks	34
APPENDIX TABLES	38

Summary*

- **Inflation:** The CPI rose rather steeply in the third quarter of 2010 (the period reviewed in this report)** by 1.2 percent percent (also seasonally adjusted). The annual inflation rate remained close to the midpoint of the target range, and in September stood at 2.4 percent. The main contribution to the rise in the index, both the annual and the quarterly increase, was from the housing component. The index excluding housing rose by only 1.4 percent in the last twelve months—due to the output gap that still exists and the continued appreciation of the shekel. Inflation expectations for all terms remained close to the upper limit of the target inflation range.
- **The global economic environment:** Despite relatively favorable National Accounts data for the second quarter of 2010 and an upturn in share prices around the world, uncertainty increased in the third quarter regarding the rate of economic recovery from the crises in the major economies. This resulted from weak labor markets world wide, problems in the US real estate sector, and concern over Europe's debt crisis. Inflation around the world stayed low despite the steep increase in food prices. All the above led to the expected timing of increases in interest rates being pushed back to the end of 2011, and some central banks even announced additional measures of quantitative easing. In addition, the number of central banks that intervened in their foreign currency markets increased in the third quarter, an issue that became a major topic for discussion in the international arena.
- **Real activity:** In the second quarter of 2010 Israel's economic growth continued, based on increases in exports, private consumption and fixed investment, with a marked improvement in employment together with a reduction in the number of hours worked per employee. Indicators of economic activity in the third quarter showed a continued increase, albeit at a slightly slower pace, in light of an apparent reduction in exports. Overall, developments show that the output gap is narrowing, so that its effect on holding back inflation is weakening.
- **The exchange rate:** Over the third quarter as a whole, the nominal effective exchange rate did not change, with the shekel appreciating against the dollar and depreciating against the euro. This, despite the fact that factors exerting pressure for shekel appreciation—the surplus in the current account of the balance of payments deriving from the strength of the export sector and the differential between Israel's interest rate and those abroad—persisted. Purchases of foreign currency by the Bank of Israel served to moderate these pressures.
- **The financial markets:** In line with the worldwide trends, prices of financial assets, and in particular of shares and government and corporate bonds, increased sharply in the third quarter, with a decline in risk indices. The Tel Aviv 25 share price index rose by 16.3 percent. The rise started concurrently with the temporary easing of concern over the debt crisis in Europe, but it continued even when apprehension about the debt crisis grew again.

* 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.)

** Although the main period surveyed in the report is the third quarter of 2010, it also includes important developments that were known until 25 October 2010—the time of the November interest rate decision.

- **The housing market:** House prices continued to increase rapidly, reflecting the low interest environment and the supply shortage. Nevertheless, despite the rapid rise, a long-term analysis shows that the level of house prices does not deviate significantly from that derived from the economic fundamentals in the housing market. A continuation of the rapid rate of increase in the future, however, is likely to result in a more significant deviation. Together with rising housing demand, the increase in house prices and the low level of interest, mortgages granted to households are also increasing rapidly, with most housing loans at floating unindexed interest rates. The Bank of Israel's assessment is that the level of house prices does not constitute a "bubble" and does not pose a real threat to the stability of Israel's financial system, because of the relatively conservative nature of its banking system. Against this background the Bank of Israel introduced two modest macroprudential steps (the first announced in May, and the second in October) with regard to mortgage loans, intended to prevent the severing of the link of house prices to the fundamentals of the housing market, and to prevent the development of a situation that could create a financial risk.
- **Monetary policy:** In the third quarter and in the following months the Bank of Israel reduced the extent of monetary expansion, in light of the inflation environment, the pace of the increase in economic activity, and the persistent surge in house prices. It did this by increasing its interest rates for July and October by 25 basis points each, so that the rate in November is 2 percent. The increases in the interest rate widened the differentials between the rate in Israel and those in other countries, thus increasing the pressure for appreciation of the shekel. The Bank therefore increased the rate of interest gradually, while integrating the modest macroprudential measures mentioned above for dealing specifically with the housing market.
- **The Bank of Israel Research Department forecast:** The Research Department assessment is that inflation in the next twelve months will be about 2.5 percent. The continued rise in the housing component will continue to constitute the main inflationary factor. According to the Bank's assessment, growth will be 4.0 percent in 2010, and 3.8 percent in 2011, so that the output gap will contract. The unemployment rate, which has declined to the full employment environment, is expected to remain at that low level (about 6.0 percent in 2011). These forecasts are expected to be realized along with the gradual process of increases in the Bank of Israel interest rate.

1. THE BACKGROUND AND INFLATION

In managing monetary policy, the Bank of Israel monitors developments in the global environment, in inflation, and in real and financial activity in Israel. By monitoring the entire range of developments, it is possible to discern the markets' reaction and the likely implications of this reaction on inflation. On the basis of these parameters, it is possible to determine the level of interest rate suited to the attainment of price stability while encouraging employment and growth, and maintaining stability in the financial markets. During the third quarter of 2010, the Bank of Israel continued to gradually restore the interest rate to its normal level, and adopted a policy conforming to an assessment of the following effects on the economy: (1) growing uncertainty regarding the recovery in the global economy in view of the slack in the global labor markets, the weakness in the real estate markets in the USA and the debt crisis in Europe, as a result of which leading central banks again postponed the expected date for raising the interest rate; (2) the continued rebound in the real sector, and especially the substantial improvement in the labor market; (3) an inflation environment matching the price stability target, but an unbalanced composition—a large increase in the housing component (reflecting rental prices) with a very moderate increase in the other index components; (4) a rapid increase in house prices; (5) the continued existence of pressures for an appreciation of the exchange rate.

Described below are the principal developments in the global economy, the exchange rate, real activity, financial activity and inflation, developments against the background of which the Bank of Israel made its monetary policy decisions.

a. The global environment

(1) Real activity and financial stability worldwide

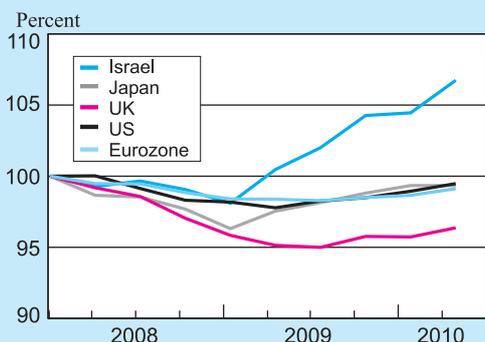
Global economic growth during the second quarter of 2010 was based almost entirely on exceptional monetary expansion, fiscal incentive programs and investment in inventories. According to National Accounts data,² global product continued to expand during the second quarter: growth was positive in the USA (1.7 percent) and Japan (1.5 percent), but lower than in the previous two quarters. In Europe, the growth rate increased to 4.1 percent, largely due to a growth in exports from Germany, which benefited from the depreciation of the euro resulting from the debt crisis in Europe, which became more severe in April. World trade

² National Accounts data are expressed in seasonally adjusted annual terms.

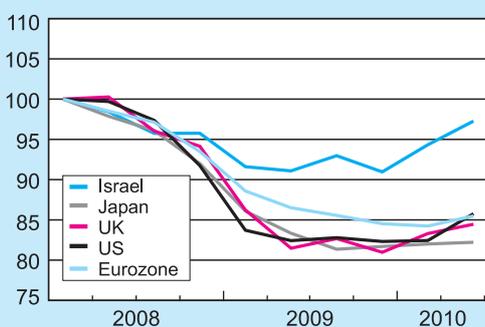
Figure 1
World Trade in Goods and Services
(quarterly rates of change,
2000–2010:Q2)



Figure 2
Private Consumption in Selected
Countries, 2008 to 2010:Q2, at
constant prices (index 2008:Q1 = 100)

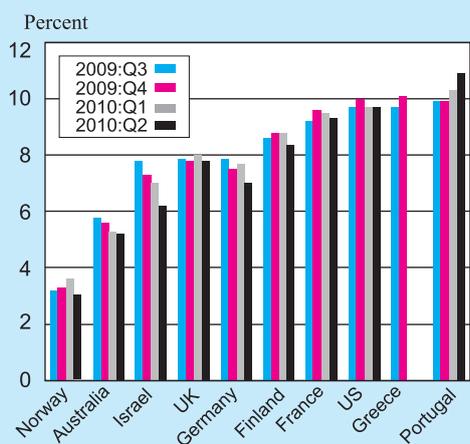


Fixed Capital Investment in Selected
Countries, 2008 to 2010:Q2, at constant
prices (index 2008:Q1 = 100)



SOURCE: OECD.

Figure 3
Unemployment Rates in Selected
Countries,



SOURCE: Based on OECD data.

expanded by a higher rate than in the second half of 2009 (Figure 1). However, growth in the large economies was fragile and based almost entirely on exceptional monetary expansion in the form of near-zero interest rates, fiscal incentive programs and the renewal of inventories (extensive investment in them following a long period of inventory reduction). Private consumption and fixed capital investment show no signs of rebounds (Figure 2), and it is feared that the pace of global expansion will slow in the wake of the declining impact of fiscal expansion programs, most of which have already ended and have even been followed by the fiscal restraint necessary because of the large deficits that have been accrued and the debt crisis in Europe. Indeed, such indicators as industrial production in the developed and developing countries and new estimates of world trade show that the growth rate already began to slow in the third quarter. Three main weaknesses are impeding the global economy's ability to revert to a growth pattern while reducing output gaps: the slack in labor markets, the weakness of the real estate sector in the USA, and the debt crisis that emerged this year in Europe. In contrast to developments in the USA and Europe, rapid growth continued in emerging Asia, and especially in China. In the four quarters up to and including the third quarter of 2010, China's GDP rose by 9.6 percent, when the impact of the policy measures taken to pull down economic activity had become less apparent.

The slack in the labor markets in the large economies and the problems in the real estate sector in the USA are preventing a rebound in private consumption and fixed capital investment, which are needed in place of the previous policy incentives in this respect. Because of the very high level of uncertainty regarding global economic recovery, firms are refraining from investing and from recruiting employees. As a result, the unemployment rates in the USA and Europe have remained at very high levels, without any signs of recovery (Figure 3). Moreover, unemployment rates among young people are particularly high (in Spain and the UK), the number of chronically unemployed is at an all-time high, and the labor force participation rate is falling steadily (the USA). This weakness in the labor market is preventing a rebound in private consumption despite the low level of interest rates. The situation in the real estate sector in the USA is still unfavorable, even though some degree of recovery was apparent in August: at the beginning of the quarter, home sales decreased, leaving large stock of unsold homes, building starts were at a low ebb, and the banks increased the extent of home attachments. The notable weakness in the real estate market at the beginning of the quarter also derived from

the end of the aid program for home-buyers, indicating that the real estate sector in the USA is heavily dependent on government support. Accordingly the US government launched a new billion-dollar program in August for assisting unemployed mortgage-holders who have a good chance of surmounting the crisis.

Despite the aid programs for European countries that are suffering from debt problems, the level of uncertainty and concern over a worsening of the crisis remained high at the end of the third quarter. In July, the debt crisis in Europe appeared to be becoming less severe due to the IMF and ECB aid programs for the problematic countries (Greece, Portugal, Italy and Spain), concurrent with the adoption of restrictive fiscal measures in those countries. This optimism was reflected by bond issues at relatively low yield by the governments of Spain, Portugal and even Greece, together with a contraction in the problematic European countries' CDS margins in July (Figure 4). During this period, prices of stocks in world markets began to rise above the low levels to which they had plummeted at the onset of the debt crisis in Europe in April (Figure 5). The improvement was short lived, however. In August and September concern again became apparent regarding the ability of the problematic European countries, which had now been joined by Ireland as well, to fulfill their obligations. This was reflected by the renewed expansion of CDS margins, sometimes to levels higher than those prevailing at the high point of the crisis in May. Unlike then however, stock prices did not plummet in response, and the implied volatility of options on them continued the decline from the high point which they had reached in May (Figure 6). This development indicates that the rise in stock prices during the third quarter largely resulted from the near-zero levels of the central banks' interest rates and possibly expectations of renewed unconventional interventions, which are prompting investors to search for yields in higher-risk assets.

(2) Global inflation

Global inflation remained low despite food price increases.

Inflation remained low in the USA and Europe (slightly more than 1 percent), mainly because of output gaps, stagnant domestic demand and the slack in labor markets. The annual inflation rate in Japan has been negative since 2009, causing concern over continued deflation to the accompaniment of weak growth. However, the worldwide upturn in agricultural commodity prices continued during the quarter. These prices rose by over 20 percent (Figure 7) during the last twelve months, largely due to the impact of adverse weather conditions and fires, which reduced

Figure 4
CDS Spreads in Selected Countries,
June 2008 to September 2010,
(monthly averages)

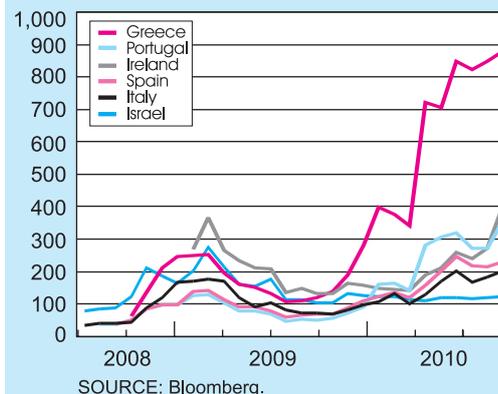


Figure 5
Share Indices Around the World
(Based on Dollar Prices),
2008 to September 2010
(daily data, 15 September 2008 = 100)

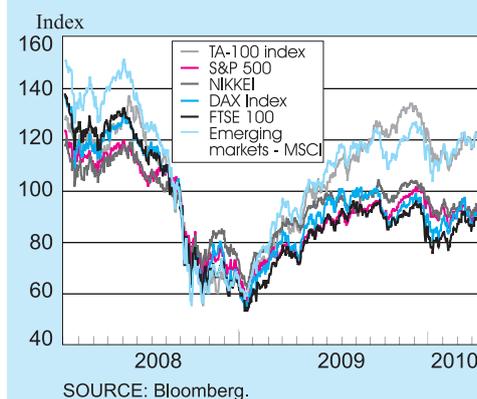


Figure 6
Implied Volatility Derived from Share
Options in Selected Countries,
June 2008 to September 2010
(monthly averages)

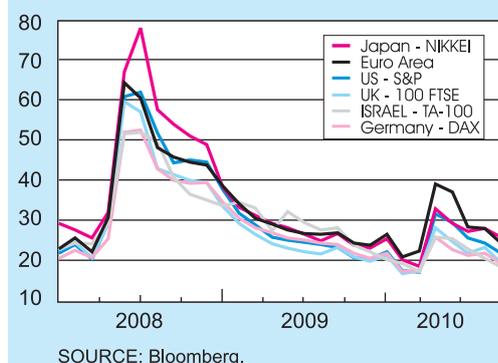
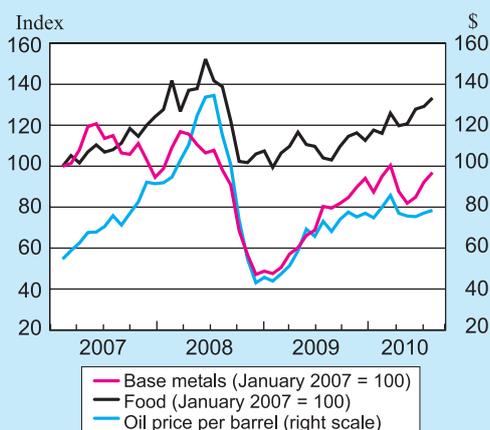
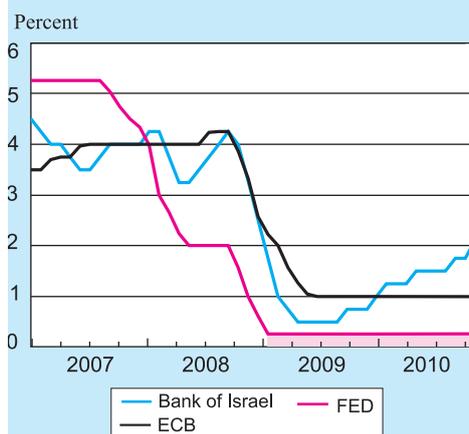


Figure 7
Price Indices of Base Metals, Food,
and Oil, 2007 to September 2010



SOURCE: Bloomberg.

Figure 8
The Short-Term Interest Rate in Israel,
the US and the Eurozone,
2007-October 2010



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

the global supply of the commodities. This development could lead to a moderate rise in inflation in the developed countries, where the level of inflation is expected to remain low during the coming year, and will have a greater effect on inflation in the developing countries in which food products account for a larger proportion of the consumption basket. As an example, year-on-year inflation in China rose from negative rates in 2009 to 3.6 percent in September due to food price increases.

(3) Monetary policy world wide

Monetary policy world wide, principally in the large economies, remained highly expansionary during the third quarter of 2010. The central banks in the USA, Europe, Japan and the UK retained the minimal interest rate levels which they had reached during 2009 (Figure 8). Moreover, as a result of the more pessimistic assessments regarding the exit from the recession, market forecasts regarding the commencement of interest rate hikes were put back to the end of 2011 and even later. In this respect, the central banks of the countries in question announced additional expansionary measures: the Federal Reserve Bank announced that it would continue to hold the securities which it had purchased, and that it was prepared to extend this policy if necessary. The ECB decided that it would continue to supply unlimited liquidity at least until the beginning of next year, and the Japanese central bank expanded its loan program for the commercial banks.

The policy of intervention in the exchange rate was stepped up during the quarter. The Japanese central bank purchased foreign currency for the first time since 2004, in order to halt the appreciation of the exchange rate of the yen. This intervention in the foreign-currency market came in the wake of the intervention by other central banks in the Far East, Latin America, Switzerland and Israel, which during the past year have tried to prevent an excessive appreciation of their exchange rates in order to protect export competitiveness. This development reached the top of the international agenda, although by the end of the third quarter it had yet to become clear where the phenomenon will lead.

The central banks in countries that were not in the focus of the recent financial crises continued to raise the interest rate. Year-to-date, a number of central banks in developed countries that were not at the focus of the recent financial crisis—those of Australia, Canada, New Zealand, Norway and Sweden—raised the interest by between 0.25 and 0.75 percentage points. Common to these countries and Israel is that the macroeconomic conditions prevailing in them are not typical of a crisis situation,

Table 1
The CPI and Selected Components in Israel and Abroad

(percent change)

	Israel		US				Europe					
	2008	2009	2010:	2010:	2008	2009	2010:	2010:	2008	2009	2010:	2010:
			Q1*	Q2*			Q1*	Q2*			Q1*	Q2*
CPI	3.8	3.9	6.3	5.0	0.1	2.7	0.6	0.9	1.6	0.9	2.4	0.3
CPI (seasonally adjusted)^a			2.2	5.0			-1.5	2.7			0.5	2.2
Energy ^b	-9.5	13.0	-5.7	3.1	-21.3	18.2	3.3	-3.2	-3.7	1.8	8.9	0.8
Food (excluding fruit and vegetables)	9.1	1.1	0.0	3.5	5.9	-0.5	0.4	1.8	3.5	0.7	1.7	3.2
Fruit and vegetables	-2.0	8.4	19.7	71.0	3.4	-3.0	-11.6	-4.5	2.8	-1.5	2.6	-3.0
Housing	12.1	5.6	9.7	14.3	2.4	-0.3	1.4	-0.3	2.2	1.9	1.3	0.1
CPI excluding energy, food, and fruit and vegetables	4.5	3.4	8.2	3.0	1.7	1.8	1.3	0.7	2.1	1.0	1.7	0.4

^a The estimates of the CPI (seasonally adjusted) for Israel are Bank of Israel calculations. The estimates of the CPI (seasonally adjusted) for Europe do not include tobacco products.

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

* In annual terms.

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

Table 2
Changes in GDP, Inflation, the Exchange Rate, and the Interest Rate in Countries that Increased the Interest Rate this Year

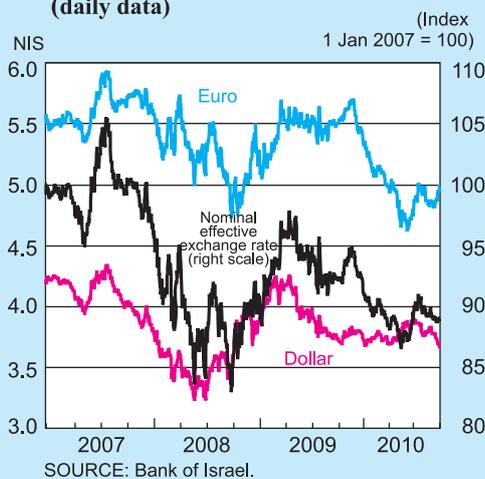
		Canada	Australia	New Zealand	Sweden	Norway	Israel
GDP growth	1995-2009	2.6	3.4	2.6	2.5	2.5	3.8
	2008	0.5	2.1	-0.2	-0.4	0.8	4.2
	2009	-2.5	1.2	-1.7	-5.1	-1.4	0.8
	2010*	3.1	3.0	3.0	4.4	0.6	4.0
Annual inflation	2000-2009	2.1	3.2	2.7	1.5	2.0	2.0
	2009	1.3	2.1	2.0	0.9	2.0	3.9
	2010*	2.1	3.1	4.1	1.6	1.6	2.2
Currency appreciation from 2009: Q1 to August 2010	Nominal effective	-14.6	-21.4	-17.1	-10.1	-6.4	-3.0
	Real effective	-14.2	-22.4	-17.3	-8.4	-6.0	-5.3
Central Bank Key interest rate	September 2008	3.0	7.0	7.5	4.3	5.8	4.3
	July 2009	0.3	3.0	2.5	0.3	1.3	0.5
	September 2010	1.0	4.5	3.0	0.8	2.0	1.8

* IMF forecast from World Economic Outlook, October 2010. For Israel—Research Department assessments.

SOURCE: Based on OECD, BIS, and WEO data and central bank websites.

while their interest rate environment is very low (Table 2). Although the growth rate in most of these countries was hit by the recession during the years 2008–2009, it is already estimated that their growth rates in 2010 will be close to their long-term level. Neither is inflation in those countries particularly low, and was not particularly low at the height of the recession either. In view of the relative strength of these countries, including Israel, they are undergoing an appreciation of their effective exchange rates (nominally and in real terms), which is supported by the opening of interest rate spreads with their trading partners.

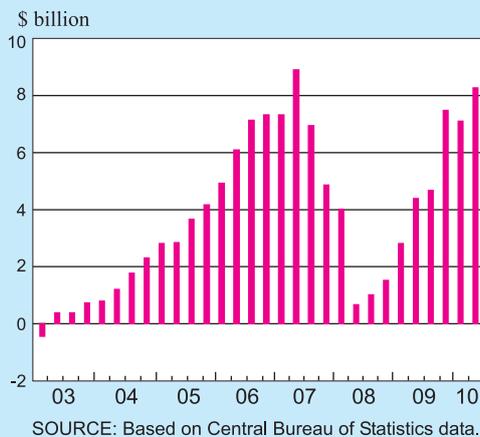
Figure 9
The NIS/\$, NIS/Euro and the Nominal Effective Exchange Rate, 2007 to September 2010 (daily data)



b. Development of the shekel exchange rate

The effective nominal exchange rate³ was stable during the third quarter as a whole, although appreciation pressures were still apparent. Over the third quarter of 2010 overall the effective nominal exchange rate remained unchanged, concurrent with a 5.4 percent appreciation of the shekel against the dollar and a 4.8 percent depreciation against the euro (see Figure 9). The development of the exchange rate over a slightly longer period, from the second quarter of 2009, shows a continued strengthening of the shekel against the effective basket. During the whole of that period it strengthened by 7.5 percent. The main factors responsible for the continued appreciation remained prevalent during the third quarter and the weeks following it: (1) The current-account surplus—Due to the strength of the Israeli export sector during the last four quarters, an \$8 billion dollar was accrued (Figure 10). In the second quarter, the surplus increased to \$9.2 million annualized. (2) The expansion of the interest rate spread between Israel and the large economies resulting from the Bank of Israel’s interest rate hikes for August and the expectation of a continued gradual rise in the interest rate in the course of the year, at a time when the date forecast for the commencement of monetary restraint in the developed economies was postponed. (3) The strong growth in domestic demand and GDP in Israel compared with the stagnant pace of growth among Israel’s trading partners is creating pressure for a real appreciation (which could be reflected by a nominal appreciation or a domestic price increase). Acting against these factors were the Bank of Israel’s continuing purchases of foreign currency, which were intended to moderate the strengthening of the shekel. As a result, the effective exchange rate was stable, as compared to the exchange

Figure 10
The Current Account, Running Four-Quarter Totals, 2003-2010:Q2



³ The effective nominal exchange rate is calculated as the weighted average of the exchange rate of the shekel against 28 currencies (which represent 38 countries), on the basis of the weight of Israel’s trade with those countries

rate of the shekel against the dollar.

The real appreciation evident since the second quarter of year 2009 halted in the third quarter of 2010. The decline in the real effective exchange rate (REER)⁴ ceased, and the rate actually rose by 0.4 percent (Figure 11). Nevertheless, its level is still appreciated by 9.0 percent relative to that prevailing in April 2009. The real appreciation derived from the nominal appreciation of the exchange rate, as described above, and from the level of inflation in Israel, which is higher than that in its trading partners.

c. Real developments

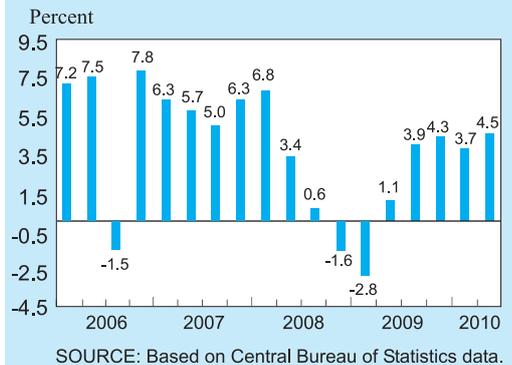
National Accounts data for the second quarter of 2010 reveal continued growth in the Israeli economy based on exports, private consumption and fixed capital investment. However, the sustainability of growth during the next quarters is uncertain. According to National Accounts data, Israel's GDP rose by the high annualized rate of 4.5 percent during the second quarter, more than in the previous quarters when GDP expanded by between 3.7 and 4.3 percent (Figure 12).⁵ This resulted from an expansion in the principal components of demand—exports, private consumption and fixed capital investment. The various indicators on activity in the third quarter of 2010 showed some moderation of the rate of growth relative to that in the second quarter, mainly reflecting the reduction in exports. The Bank of Israel Companies Survey shows continued growth and at a higher rate than in the previous quarters, and the Composite Index rose in the third quarter, although less than in the first half of the year. At the same time however, the decline in foreign trade in dollar terms may be indicative of a slower pace of growth.

Second quarter data continue to show a rapid and impressive export recovery from the global recession. However, this export growth could decrease later in the year in view of the present high level of exports, concern over a serious global downturn and the appreciation of the real exchange rate. Exports continued to recover from the recession during the second quarter of the year, and rose by an exceptional 25.6 percent, due to a sharp increase in pharmaceutical exports. In view of the relatively high level reached by exports as well as the large current account surplus, the growth in exports could slow

Figure 11
Index of the Real Effective Exchange Rate in Terms of the CPI, 2000 to September 2010



Figure 12
GDP, Quarterly Growth Rates, 2006–2010:Q2 (annual rates, seasonally adjusted)



⁴ The real effective exchange rate is defined as the effective nominal exchange rate, adjusted for Israel's inflation relative to that of its trading partners.

⁵ All the National Accounts growth data are seasonally adjusted and annualized.

Table 3
GDP, Imports and Uses, 2007-10:Q1

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

	2007	2008	2009	2009: Q1	2009: Q2	2009: Q3	2009: Q4	2010: Q1	2010: Q2
GDP	5.3	4.2	0.8	-2.8	1.1	3.9	4.3	3.7	4.5
Business sector output	5.9	4.7	0.1	-4.9	1.7	3.8	4.3	4.5	5.2
Imports excluding defense imports, ships, aircraft and diamonds	13.7	7.2	-12.3	-40.0	-0.4	14.8	7.6	13.0	16.4
Private consumption	6.3	3.0	1.7	-3.8	10.1	6.1	9.0	0.0	8.5
<i>of which: Private consumption excluding consumer durables</i>	5.1	1.8	2.6	1.0	6.4	3.3	0.9	6.2	0.4
Public consumption	3.1	2.6	2.5	1.7	5.1	-0.8	4.1	4.1	-1.1
<i>of which: Public consumption excluding defense imports</i>	3.7	2.7	4.0	4.1	7.0	0.8	0.6	-1.9	-0.2
Gross domestic investment	11.3	2.4	-8.9	-20.5	-17.5	-3.4	-34.0	71.4	-22.5
<i>of which: Fixed investment</i>	14.7	3.9	-5.8	-16.3	-2.4	8.7	-8.4	15.7	13.1
Exports excluding diamonds	10.3	11.3	-10.0	-31.0	-5.7	9.5	31.7	4.4	25.6
<i>of which: Exports excluding diamonds and start-ups</i>	10.9	10.5	-9.5	-32.5	0.1	9.2	25.9	6.4	26.5

SOURCE: Based on Central Bureau of Statistics data.

later in the year. In particular, goods export data for the third quarter show a decrease in comparison with the second quarter in dollar terms. A large decrease in exports could occur in the event of a renewed downturn in global trade resulting from the difficulties experienced by the large countries—USA, Europe and Japan—in exiting the recession. During recent quarters, however, the proportion of Israel's trade with Asian countries increased, a development that is indicative of Israeli exports' ability to adapt to unbalanced developments worldwide.⁶ It should however be remembered that a downturn in the large economies could bring down the developing economies with it, thereby reducing the opportunity for redirecting Israel's export trade. Another factor in this respect is the persistent pressure for an appreciation of the real exchange rate (part of which derives from the strength of the export sector) via a nominal appreciation or via an increase in domestic prices, which exert pressure for an increase in wages in all sectors, including exports. The real appreciation is adversely affecting export profitability, and is leading to a reduced supply of exports.

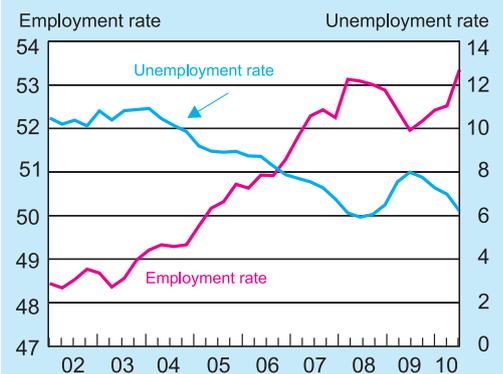
The expansion of the principal domestic demand

⁶ For details see Part B in Recent Economic Developments 128.

components—private consumption and fixed capital investment— is indicative of optimism regarding the consolidation of growth, an improvement in the labor market and the impact of the low real interest rate. A growth in private consumption followed on from its expansion during previous quarters. This expansion was based on: (1) a low short-term real interest rate; (2) optimism regarding the consolidation of the recovery in Israel, as reflected by the high level of the Consumer Confidence Index; and (3) a persistent improvement in the labor market as reflected by the decline in the unemployment rate and the increase in the participation rate. The growth in private consumption may slow to some extent in the third quarter. This is apparent from the decline in imports of consumer goods. For the first time since the onset of the recession, a rebound is apparent in fixed capital investment as well, reflecting firms' optimism regarding the exit from the recession and the impact of the low real interest rate which is encouraging investment in risky assets, such as investment in the principal industries. The previously mentioned growth in domestic demand also led to a substantial rise in imports, which expanded by 16.4 percent. The import expansion as a demand-supplying force was supported by the real appreciation, which has continued since the exit from the recession in mid-2009.

The growing demand for workers led to a considerable improvement in the labor market during the second quarter. However, the pace of this improvement appears to have declined in the third quarter due to the economy's proximity to full employment. The Labor Force Survey for the second quarter show a one percentage point decrease in the unemployment rate, to 6.2 percent, which is close to the level of 5.8 percent recorded prior to the onset of the recession in the second quarter of 2008 (Figure 13). This development would appear to reflect a growth in demand for workers resulting from high growth rates as well as the low level of capital stock, which resulted from the low rate of investment during the period of the recession. The increase in the participation rates, from 56.3 to 56.9 percent, may also derive from the growth in demand for labor, which is increasing the chances of finding a job and thereby prompting more households to join the labor force—a phenomenon that is typical of positive business cycles. It should however be noted that the growth in employment derived from an increase in the number of part-time posts (6.5 percent) concurrent with some decrease in the number of full-time posts (one percent). As a result, the total labor input hardly rose at all in the second quarter. A Bank of Israel study shows that the increase in the number of part-time posts does

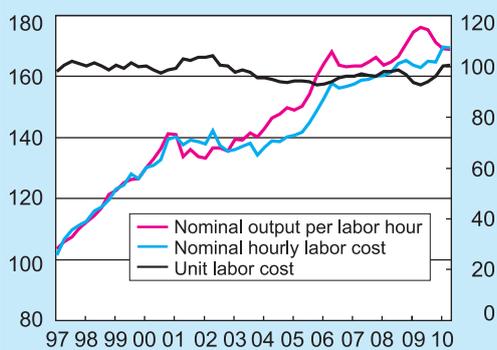
Figure 13
The Employment Rate and the Unemployment Rate,^a
2002-2010:Q2
(seasonally adjusted, quarterly, percent)



^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.

Figure 14
Index of Gross Unit Labor Costs in
the Business Sector, 1997-2010
(quarterly, seasonally adjusted)



SOURCE: Central Bureau of Statistics Manpower Survey.

not reflect unmeasured unemployment. This is because the proportion of involuntary part-time workers (workers who were available and who would have wanted work in a full-time post) within the labor force did not increase. According to initial labor market indicators for the third quarter, the improvement in the labor market may thereby have ceased: the rate of increase in the number of vacancies, according to the Ministry of Industry, Trade and Labor Employers Survey, and of the number of employee posts, slowed in the third quarter, and the decrease in the number of claims for unemployment benefit ceased (the state of the labor market in the third quarter still appears to be better on average than in the second quarter). The apparent end to the improvement in the labor market may not be indicative of a deterioration in the state of the economy, and may merely reflect its proximity to full employment, a situation in which it is difficult to respond to demand by expanding the labor input.

The growth in demand for workers led to an upturn in real wages. The mechanism via which the growth in demand in the labor market can be reflected by inflationary pressure is wages, which is an important cost component in local economic activity. The growth in demand in the labor market was reflected by an upturn in real wages per work hour in manufacturer's terms. As a result, in mid-year real wages reverted to their environment prior to the recession (in the first half of 2008). However, the level of real wages per employee post in CPI terms, which also increased, is still 3 percent lower than its level before the recession.

The retraining effect on inflation of the contracting output gap is decreasing. Although GDP is still less than its potential level, the output gap is clearly narrowing. This is evident from the rapid growth rate, which is characteristic of the closure of the output gap, the moderate increase in real wages per employee post and the inflation rate, which exclusive of the housing component is very moderate. The initial rebound in fixed capital investment will also have the effect of increasing supply. This will be reflected by an increase in the capital stock, which was eroded as a result of the reduced rate of investment during the time of the recession. Although the inflationary pressures deriving from real activity and the labor market do not currently appear to be significant, as the output gap continues to close, its restraining effect on inflation will decline. The very low unemployment rate will also hinder a further expansion of the labor input without pressure for a wage increase, which could be transmitted to inflation.

d. Financial developments

The local and international equities markets were buoyant during the quarter reviewed: prices of equities rose sharply, concurrent with a decrease in the implied volatility of their prices. After financial risks had increased during the second quarter of 2010 because of the debt crisis that developed in Europe and led to a large drop in asset prices and increased uncertainty, the third quarter was notable for a large upward adjustment in a situation where a high degree of correlation was apparent in worldwide developments. In July concern over the spread of the debt crisis in Europe to the large countries decreased. The financial risks in the global and Israeli capital markets thereby appear to have decreased. As elsewhere in the world, in Israel this was reflected by a halt to the upturn in the implied volatility of options on stock prices and an actual decrease in the implied volatility. As a result, by the end of the quarter implied levels of risk reverted to those prevailing before the debt crisis in Europe and the financial crisis in the USA (Figure 6). The decline in financial risks prompted investors to resume the purchase of risky assets, and this was reflected by a price increase in the equities market (Figure 5). Stock prices continued to rise throughout the entire quarter, even in August when the European debt crisis became more severe. During the quarter as a whole the Maof (Tel Aviv 25) share index rose by 16.3 percent. The rise in stock prices during the third quarter appears to have reflected an adjustment to the large downturn recorded with the onset of the debt crisis in Europe, and was facilitated by the publication of positive data on real activity in Israel and the low level of the interest rate, which is also encouraging a move to risk assets.

Yields on bonds of all types, and especially corporate bonds, fell during the quarter. Nominal and real yields in the government bond market fell during the quarter (Figure 15). The declines were particularly apparent in long terms, with the result that the positive slope of the yield curve became less steep, a development that also reflected a reduction in the extent of monetary expansion. The fall in yields was supported by a parallel decrease in the US government bond market. The fall in government bond yields and the optimistic climate in the capital market were clearly reflected in the corporate bond market. Yields-to-maturity on corporate bonds fell during the entire third quarter concurrent with a decrease in the spread between these yields and government bond yields (Figure 16). The public's growing demand for corporate bonds was reflected by the particularly high net amount raised by the mutual funds specializing in these bonds. The growth in demand provided the opportunity for increasing issues in the primary market, and these amounted to

Figure 15
Yield To Maturity Curves of Indexed and Unindexed Government Bonds, June 2010 and September 2010 (monthly averages)

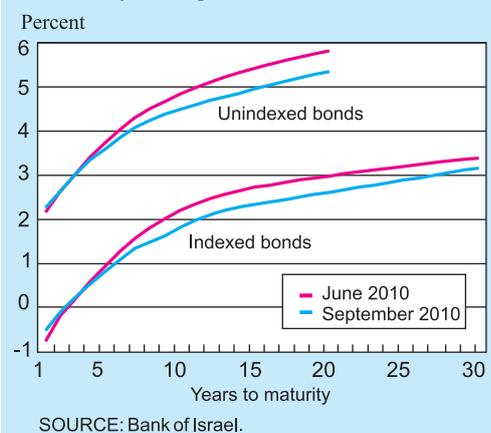
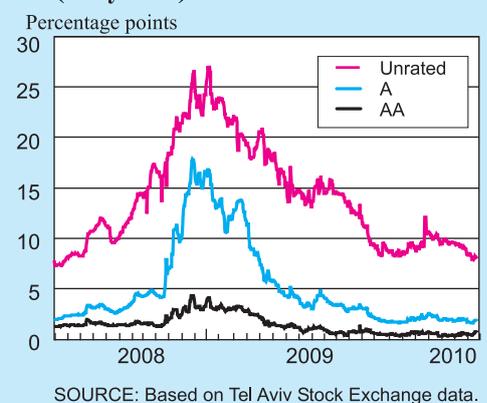


Figure 16
The Average Weighted Yield Gap between CPI-Indexed Corporate Bonds, by Rating, and CPI-Indexed Government Bonds, 2008 to 2010:Q3 (daily data)



NIS 13 billion in the third quarter compared with NIS 10 billion in each of the two previous quarters.

Mortgage loans continued to expand rapidly, and the majority of new loans were unindexed and floating-rate. Credit to households continued to grow rapidly, and mainly took the form of the increased extension of credit for mortgage loans. Total mortgage loans extended during the twelve months ending in September exceeded the amount granted in the previous year by 42 percent. The growth in demand for mortgage loans derived largely from the low interest rate environment for all terms and especially the long term, as reflected by the interest rates charged from recipients of credit for mortgage loans (Figure 17). The upsurge in apartment prices was another factor leading to the growth in the size of mortgage loans. (It should be noted that a simultaneous relationship exists here: the low interest rate, which reduces the cost of mortgage loans, facilitates a growth in demand for apartments, which has the effect of increasing prices.) As in the previous quarters, 50 percent of the new mortgage loans extended during the quarter reviewed were unindexed and floating-rate. Although this proportion is less than the record level (80 percent) prevailing at the beginning of 2009, when the Bank of Israel interest rate was particularly low, it is still high compared with the past when the majority of mortgage loans extended were CPI-indexed and fixed-rate. As apposed to household credit, total business sector credit grew in the last twelve months (to August) at a low rate of 2.2 percent. Given that the Bank of Israel Companies Survey does not indicate unusual financing constraints to growth, and against the background of the sharp expansion of household credit, it seems that the low rate of business sector credit growth reflects moderate demand for credit; this means that the firms' investment are funded by internal sources.

The annual rate of the increase in the narrow monetary aggregates fell considerably during the third quarter concurrent with the downward adjustment of the money supply to the rise in the interest rate. The annual rate of increase in the narrow monetary aggregates continued to decline during the third quarter concurrent with the rise in the Bank of Israel interest rate and the growth in demand for financial assets (which was reflected by an increase in the prices of stocks and bonds): the annual rate of increase in the M1 aggregate amounted to only 4.2 percent in September (Figure 18), less than the multi-year rate of increase,⁷ and slightly less than the rate of increase

Figure 17
Rates of Interest on New Mortgages,
2003 to September 2010

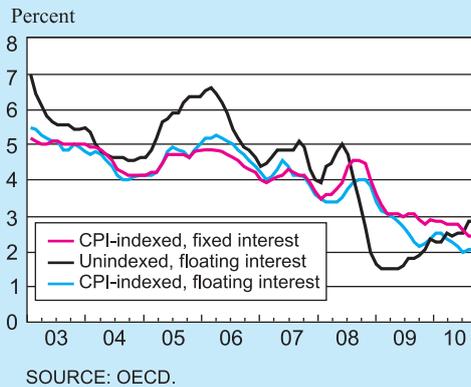
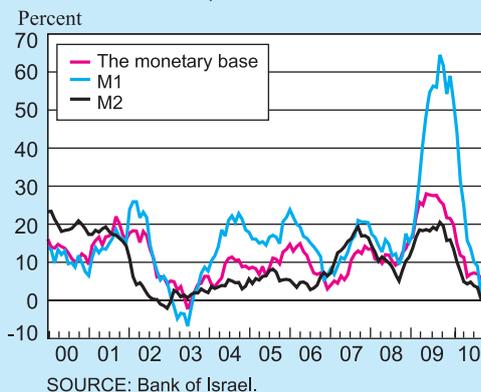


Figure 18
The Monetary Aggregates,
2000 to September 2010
(rates of change over previous
twelve months)



⁷ The annual rate of increase in M1 monetary aggregates during the years 2000–10 averaged 17.5 percent.

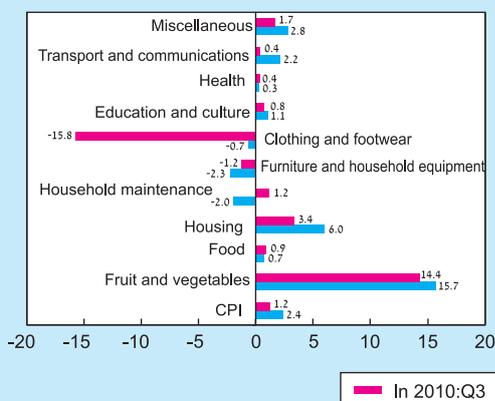
derived only from the expansion of nominal GDP (5 percent). This means that the velocity of money (nominal GDP relative to the amount of money) increased. This reflects an initial downward adjustment of the money demand—whose level was very high due to the reduction in the interest rate to near-zero levels—to the gradual increase in the interest rate to a normal environment. This adjustment could also be subsequently reflected by large decreases in the stock of money, when the public reduces the balance of its demand deposits in favor of interest-bearing short-term financial assets (deposits for example).

e. Inflation and inflation expectations

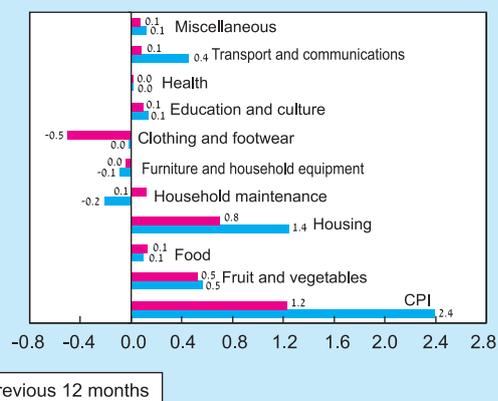
The inflation rate during the last twelve months amounted to 2.4 percent—close to the center of the inflation target. Exclusive of the large increases in the housing component, the CPI rose by only 1.4 percent. The consumer price index rose rapidly, by 1.2 percent, during the third quarter of the year (also seasonally adjusted). This high rate of increase derives from the upturn of the housing component in the index (which expresses apartment rental prices), which rose by 3.4 percent and contributed to a 0.8 percentage point increase in the index (Figure 19). The rise in the housing component in the index partly reflects the seasonal price increase in apartment rental contracts that were signed during the summer months, as well as demand pressures in the housing market. In addition, the 14.4 percent increase in fruit and vegetable prices contributed 0.5 percentage

Figure 19

Changes in the Components of the CPI in the Previous 12 Months and in 2010:Q3 (percent)



Contribution of the Components of the CPI to the Changes in the CPI in the Previous 12 Months and in 2010:Q3 (percentage points)



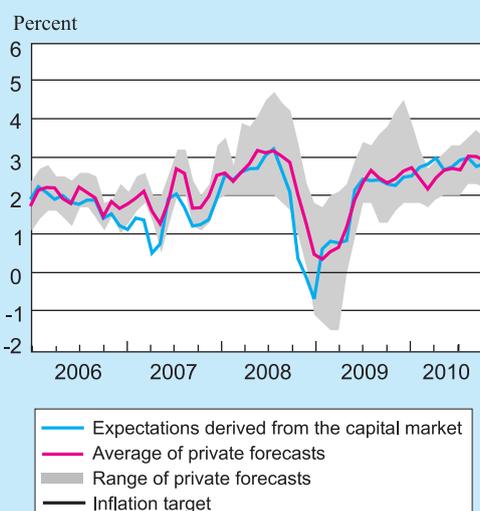
SOURCE: Based on Central Bureau of Statistics data.

Figure 20
Inflation in Previous 12 Months,
Inflation Expectations and Inflation
Targets, 2001 to September 2010
(monthly averages)



SOURCE: Based on Central Bureau of Statistics data.

Figure 21
Inflation Expectations for the Next
Year Derived from the Capital Market
and According to Private Forecasters,
2006 to September 2010^a
(monthly averages)



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

SOURCE: Based on private forecasters' reports and capital market data.

point to the rise in the index. The annual inflation rate during the third quarter remained close to the center of the inflation target, after exceeding the upper limit of the target during the first half of the year. Accordingly during the last twelve months the CPI rose by 2.4 percent (Figure 20). The 6.0 percent annual increase in the housing component was the main factor accounting for the rise in the index (to which it contributed 1.4 percentage points). Exclusive of the housing component, the index rose by only 1.4 percent.

The output gap and the continued appreciation of the exchange rate had the effect of holding down inflation. The very moderate increase in the consumer price index exclusive of the housing component appears to have derived from a still existing output gap. It is also possible that the gradual adjustment of import prices to the appreciation of the exchange rate during the year continued concurrent with the moderate increase in prices abroad. Factors contributing to a rise in the CPI during the past year were the worldwide increase in food prices and the increased prices of fruit and vegetables.

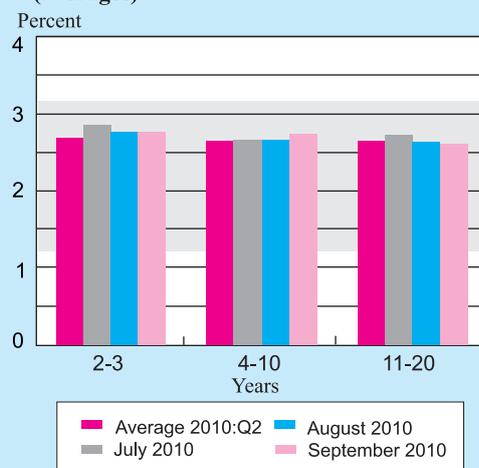
Inflation expectations—from the capital market and according to private forecasters' assessments—remained close to the upper limit of the inflation target. Inflation expectations from the capital market ranged between 2.7 and 3.0 percent for most of the quarter reviewed, similar to their level at the end of the previous quarter and slightly below the upper limit of the inflation target (Figure 21). Inflation expectations for longer terms, which were also slightly below the upper limit of the target, rose to some extent in the terms of two and three years, and remained stable in the longer terms (Figure 22). In contrast to capital market expectations, private forecasters' assessments regarding inflation during the coming year fell from 3.2 percent at the end of June to 2.9 percent at the end of September. The fact that private forecasters' and capital market expectations are in the upper part of the inflation target may reflect the major consideration given to the inflationary effect of the rapid GDP growth rate, the expectation of a continued increase in housing prices and continued monetary expansion. (During the quarter, an interest rate of 2.5-2.75 percent in a year's time was expected.) Moreover, the high expectations may have reflected assessments that the Bank of Israel's monetary policy decisions, apart from aspiring to maintain price stability and financial stability, placed considerable importance on supporting a rebound in economic activity and caution in the face of a possible resumption of the global recession.

2. MONETARY POLICY

Policy during the quarter reviewed was directed at reducing the extent of monetary expansion in view of the inflation environment, the expansion of economic activity and the continued rise in house prices to the accompaniment of a large increase in mortgage loan extensions. In June the Bank of Israel interest rate amounted to 1.5 percent. Thereafter the Bank of Israel made a policy of reducing the extent of monetary expansion by increasing the interest rates for August and October by 0.25 percentage point (the interest rates for July, September and November were left unchanged), so that the interest rate in November was 2.0 percent. The monetary expansion had to be curtailed due to the low level of the interest rates relative to the inflation environment (which is not low), and relative to the expansion of economic activity and the improvement in the labor market. Another factor necessitating the contraction was the continued upturn in house prices accompanied by a large increase in new mortgage loan. However, when selecting the appropriate pace of interest rate adjustment, the Bank of Israel took into account concern over the implications of an expansion of interest rate differentials with leading central banks worldwide and the uncertainty over the sustainability of the expansion in economic activity, particularly the expansion in exports.

The Bank of Israel took into account in its interest rate decisions the fact that inflation forecasts were in the upper part of the target range, while the inflation rate exclusive of the housing component (which expresses apartment rental prices) was in the lower part of the target range. Inflation in the last twelve months was in the upper part of the range, and according to assessments from the Bank of Israel Research Department, the capital market and private forecasters, inflation in a year's time will remain within this environment. (See below, Section 3—Forecast Updates). In itself, such a development requires a reduction in the extent of monetary expansion. However, in its decision-making process the Bank of Israel also examined the composition of inflation: exclusive of the housing component, the index rose by only 1.4 percent in the last twelve months. Moreover, the Research Department's outlook that inflation during the coming year will be in the upper part of the target range is based on the assessment that the housing component will remain the principal inflationary factor. The index exclusive of the housing component is actually expected to rise by a rate lower than the midpoint of the target range. Although an interest rate hike has a moderating effect on overall inflation (with respect to

Figure 22
Forward Inflation Expectations
Derived from the Capital Market
for Periods More Than One Year Ahead
(averages)



SOURCE: Bank of Israel.

which the inflation target is defined), at the same time it reduces the extent of support for those sectors of the economy in which negative output gaps are still apparent, a situation reflecting a low rate of inflation in the index exclusive of housing.

Monetary policy took into account both the continued consolidation of growth and the uncertainty regarding the continuation of this growth. During the quarter reviewed very positive indicators of economic activity in the second quarter of the year were published—especially concerning the high rate of GDP growth and the large decline in the unemployment rate. Also published during the quarter however were indicators that raised doubts concerning the continued growth of activity in the second half of the year: the Purchasing Managers Index fell during the months May to July. Initial estimates of goods exports in the second quarter showed a decrease. (These estimates were however subsequently upward adjusted.) Exports of goods in the third quarter fell in comparison with the second quarter, and the probability of a continued strong expansion in world trade is uncertain. This uncertainty makes it necessary for the Bank of Israel to act in a gradual manner at present, in order not to encounter downside real scenarios with a high interest rate and to prevent economic activity from over-heating, which would lead to an upsurge in inflation.

House prices rose by 19 percent in the last year. Based on long-term historical analysis, these prices do not appear to have substantially deviated from the level derived from housing market fundamentals. However, a further increase in house prices at this pace could lead to a significant deviation. While apartment rental prices rose by 6.0 percent in the last year, sale prices of new and second-hand apartments went up by the higher rate of 19 percent (July-August 2010 compared with July-August 2009), making for an increase of over 40 percent during the last two years (Figure 23). This is according to the Central Bureau of Statistics House Price Survey, which measures the average change over time in the prices of quality-adjusted apartments. The Bank of Israel’s focus on this index of house prices, rather than on other indexes that are published from time to time by various institutions, derives from the fact that it is the only index that measures house prices adjusted for the quality of the apartments on the basis of a basket of apartment criteria, such as size and location (the index reflects the average basket of owner-occupied apartments in Israel). This survey is not part of the Consumer Price Index. An analysis of estimation

Figure 23
Ratio of Apartment Prices to Rent,
1994 to July 2010
(January 2000 = 1)

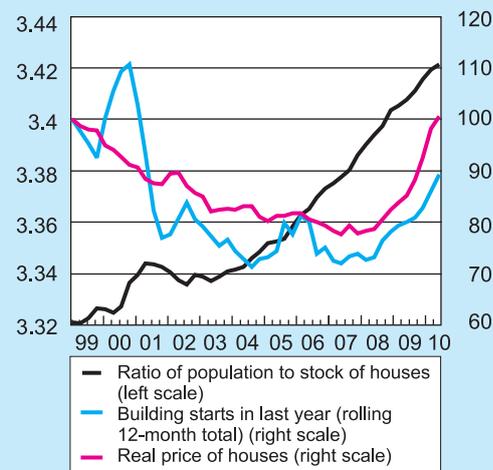


SOURCE: Based on Central Bureau of Statistics data.

equations conducted by the Bank of Israel⁸ shows that part of the apartment price increase during the past year can be attributed to the reduction in the Bank of Israel interest rate, and part can be attributed to the demand surplus for housing services deriving from a situation that has continued since the beginning of the decade: a rate of increase in the stock of apartments below the rate of increase in Israel's population (Figure 24). An analysis conducted at the Bank of Israel by means of a number of models and indices indicates that despite the high rate of increase in house prices, their level is not substantially higher than that matching the housing market fundamentals—those factors that affect the discounted value of housing services.⁹ This is because since the period when prices peaked, from 1996 to 2007, house prices have fallen in real terms. Before these prices began to rise in 2008 they were considerably less than the level derived from fundamental factors. Nevertheless, although the adjustment to the long-term level evident during the past two years was indeed necessary, it appears to have been rather rapid. It is feared that a continued increase in house prices at this pace will lead to a significant upward deviation from the level that can be attributed to housing market fundamentals, a development that will eventually lead to a large drop in the prices of real estate and as a result, in the prices of other assets as well.¹⁰ The increase in house prices has been accompanied by a substantial growth in the volume of mortgage loans granted to households. Most of these mortgage loans were taken as unindexed floating-rate loans due to the very low level of the short-term interest rate (see section 1.d). The extent of this trend may derive from the failure to internalize the fact that the short-term mortgage loan interest rate might increase substantially in the future. If this happens, the repayment burden will be heavier, and will have to be serviced by a larger proportion of borrowing households' current income.

According to the Bank of Israel, developments in the housing market to date are not representative of a bubble, and are not endangering the stability of the financial system in Israel. The Bank of Israel's activity is aimed at preventing the emergence of a situation that could create financial risk. At this stage, according to the Bank of Israel's assessment, the

Figure 24
Ratio of Population to Stock of Houses, Building Starts, and House Prices, 1999 to 2010:Q2



SOURCE: Based on Central Bureau of Statistics data.

⁸ See Part 2 of Recent Economic Developments 125 (May to August 2009) for a description of the framework for this analysis.

⁹ See Box 3.2 of the 2009 Bank of Israel Annual Report for a more detailed discussion of the fundamental factors in the housing market, and details of the indices that are selected for assessing the level of housing and apartment prices relative to these fundamentals.

¹⁰ See Chapter 2, Box 2.4 of the 2009 Bank of Israel Annual Report for a review of the implications of the downturn in real estate prices abroad.

previously mentioned developments cannot be perceived as a risk to the stability of the financial system in Israel, for several reasons: firstly, despite the upsurge in mortgage loan extensions, the terms of these loans in Israel have remained very conservative as reflected for example by the loan to value (LTV) ratio offered, which is low by worldwide standards (less than 60 percent in Israel compared with over 90 percent in many other countries). In view of these ratios only a very serious downturn in prices could reduce the value of collateral to below the value of the loan (the phenomenon that triggered the sub-prime crisis in the USA). Moreover, the banks in Israel are entitled in such a case to realize other assets of borrowers who fail to adhere to mortgage loan repayments. Accordingly, the Bank of Israel's activity with respect to the housing market has been directed at preventing the development of a bubble in the market. This has been done by means of two instruments: interest rate hikes resulting from the Bank's weighing all the relevant considerations; and macroprudential measures in the mortgage loans market.

Macroprudential measures such as those employed by the Bank of Israel in the mortgage loan market, affect the housing market directly. The measures taken were moderate, since the banking system in Israel is in any case conservative by worldwide standards. The Bank of Israel also used macroprudential instruments, meaning that it issued supervisory directives and guidelines that were intended to protect against extreme scenarios and implications for stability and a serious macroeconomic impact. At the beginning of May, the Supervisor of Banks issued a draft directive concerning the need for a special provision in respect of loans that were granted at an LTV ratio exceeding 60 percent. (The directive went into effect at the beginning of July). At the end of October directives were issued imposing a requirement for a larger capital provision for loans granted with an LTV ratio of more than 60 percent a significant part of which is at a floating interest rate. The directives will not apply to small housing loans or loans to those entitled to benefits when taking mortgages, in accordance with the criteria determined by the Ministry of Housing and Construction. The intention is to avoid harming first time house buyers with limited means. Such macroprudential measures have two implications: firstly, the extra provision and capital allocation reduces the risk to the banks' stability in the event of borrowers' repayment default. Secondly, the cost of mortgage loans at a high LTV ratio or with a floating interest component is likely to increase, with the result that the attractiveness of purchasing an apartment via these mortgage loans will decrease—a measure that restrains demand

for the purchase of apartments and the price of apartments with it. The advantage of employing macroprudential measures for dealing with the housing market is that these measures do not directly affect other demand components like an adjustment in the Bank of Israel interest rate, but deal with the problematic market on a point basis. It is still too early to assess the impact of these moderate measures on the mortgage loan market and the demand for housing. Inter alia, this is because the mortgage loans that were taken in recent months presumably reflect apartment purchase contracts that were signed several months previously, and therefore before the first directive went into effect. Policy measures for cooling down the housing market have also been applied in other countries that have experienced similar problems (see Box below). However, from the aspect of the measures that have been adopted, it is clear that the mortgage market in Israel is already quite conservative. This limits flexibility in the application of macroprudential measures, as well as the necessity of far-reaching measures for the purpose of maintaining financial stability.

The long-term solution for dealing with the problem of the upturn in apartment prices is to expand and increase the elasticity of the supply side. As the Bank of Israel noted in its decisions of recent months, the best way of dealing with the long-term problem of the upturn in apartment prices is to expand and increase the elasticity of the supply side. In contrast to fiscal policy, monetary policy does not have effective tools for affecting this side. In an effort to bring down house prices, since September 2009 the Ministry of Construction and Housing has stepped up its land marketing campaigns by means of public tenders. It should be noted that the supply side has in fact responded to the increase in house prices: building starts rose by 22 percent in the last two years (Figure 24). Clearly however, any measure that is taken in order to expand the supply side will only exert an effect after some considerable time because of the construction time necessary for expanding the stock of finished apartments. The Bank of Israel therefore chose to act in order to restrain the surplus demand for apartments by means of the instruments available to it.

Bank of Israel decisions have taken into account the global interest rate environment, and the bank has acted gradually in order to avoid a large appreciation that could develop as the result of the rapid opening of an interest rate differential between Israel and abroad. The interest rates of the main central banks in the USA, Europe, the UK and Japan are close to the zero bound, and are not expected to be increased during

the coming months. Accordingly, any interest rate hike by the Bank of Israel for reasons relating to inflation or developments in the housing market is accompanied by an expansion of the interest rate differential between Israel and abroad. The expansion of interest rate differentials encourages capital inflow to the economy, which exerts pressure for an appreciation of the exchange rate—a development that has the effect of holding down inflation (principally by means of import prices), and also leads to a downturn in activity (mainly by impairing export competitiveness). Although quantitatively, exports are not very sensitive to exchange-rate adjustments (according to estimates from a number of models, a real effective appreciation of 10 percent leads to a 2 percent quantitative decrease in exports), the adverse effect on export profitability is far more serious. This is because Israel as a small economy has little ability to affect export prices. The export sector is also having to cope with a relatively low level of global demand as a result of the deep recession prevailing among Israel's principal trading partners. In order to reduce the pressures for an appreciation of the effective exchange rate of the shekel and to maintain the stability in the economy, the Bank of Israel purchased in the third quarter \$1,300 million of foreign currency, which was less than in the previous two quarters. At the beginning of October however, when exceptional pressures for an appreciation of the exchange rate resumed, the Bank of Israel purchased larger amounts of foreign currency.

Measures adopted world wide for cooling down the housing market¹.

An increase in apartment prices accompanied by a substantial increase in the extension of mortgage loans is not a phenomenon unique to Israel. This type of development has occurred in a number of countries, which like Israel were not at the center of the financial crisis but nevertheless reduced interest rates to historically very low levels in order to limit the potential implications of the global recession. Even when the recession became less severe, these countries were intent on maintaining a policy of monetary expansion in order to support a rebound in the economy, and therefore used various other instruments for the purpose of cooling down the housing market. In this box we will review the increase in house prices in those countries and the measures which their central banks and governments took in order to cool down the market. In most cases these measures were taken due to concern that the rapid increase in house prices did not match the fundamental factors in the housing markets and would thereby lead to the emergence of a bubble.

The development of house prices in the economies in question:

- **Norway**—house prices continued to rise during the past two years despite their large increase over the past decade.

¹ The background materials for this box are various central bank reports (minutes of monetary policy discussions and periodical publications), lectures by central bank key officials and articles.

- **China**—house prices have been rising during the decade. Following a slight downturn in 2008, these prices increased more rapidly in 2009 by 14-25 percent and the amount of credit granted in respect of housing loans was double that extended in 2008. In major cities such as Beijing and Shanghai, home prices almost doubled in 2009. An increase of over 8 percent was already recorded in the first third of 2010.
- **Sweden**—house prices continued to rise during the past two years, in the continuation of a trend that began at the beginning of the decade. Later in the decade, prices rose by an annual average of 7 percent.
- **Switzerland**—Prices of owner-occupied apartments rose by 6.7 percent in 2009, an exceptional increase in historical terms.
- **Singapore**—House prices rose by 11 percent in the first half of 2010, and by 34 percent from mid-2009 to mid-2010.
- **Hong Kong**—Prices of purchase real estate assets rose by 21 percent from mid-2009 to mid-2010.
- **Australia**—House prices rose by 20 percent during the past two years. The increase derived not only from the reduction in the interest rate, but also from measures that were deliberately taken in order to stimulate the housing market.

The range of measures adopted in the above-mentioned countries can be divided into seven groups:

1. **An increase in the central banks' interest rate**—As in Israel, in the countries reviewed, interest rate hikes are not a special instrument for dealing with the housing market alone, and are mainly used for other purposes such as stabilizing inflation and activity. However, in Norway, Sweden and Australia which recently raised the interest rate, the situation in the housing market was among the considerations involved.
2. **Limitations on housing loans with high LTV ratios**—A common measure employed world wide for cooling demand for house purchases by tightening up the terms for the extension of loans is to cut the maximum LTV ratio (implying an increase in the equity capital required). One of the advantages of this measure is that it restrains demand while improving the resilience of the loan-providing banks against a large decrease in home prices. In part of the countries, the LTV ratio was reduced while making a distinction between first-time home buyers and those purchasing apartments for investment, in order to focus the demand restraint among the latter and to moderate the adverse effect on the former. Table 1 summarizes the measures that were taken worldwide in the matter of the LTV ratio. The current LTV ratio in Israel is already relatively low, below 60 percent on average. Directives issued by the Supervisor of Banks stipulates that an additional provision of at least 0.75 percent of the loan must be made in respect of loans granted from July 1, 2010 with an LTV ratio higher than 60 percent. Furthermore, at the end of October the Supervisor of Banks issued directives obliging banks to make a higher provision in respect of loans with an LTV ratio higher than 60 percent

Limitation on the LTV Ratio in Different Countries

Country	LTV before adoption of remedial measures	LTV after adoption of remedial measures	
		First apartment	Investment purchases
		percent	
Norway		90	
Sweden		85	
Canada	100	90	80
Singapore	90	80	70
China		70	50
Hong Kong	70	70	60

The numbers do not necessarily reflect an absolute ceiling for the LTV ratio, but also limitations intended to increase the cost of mortgage loans at high LTV ratios.

a significant part of which is at floating interest.² These risk-focused measures will increase the cost of high LTV ratio loans to some extent.

3. **Issue of directives for the behavior of the banks and borrowers**—The central bank or the supervisory body responsible for the banking system can provide the lender banks with behavior guidelines for the purpose of restricting the extension of housing loans and maintaining their resilience in the face of potential repayment default by borrowers. In Canada for example, all borrowers were required to take fixed-rate credit for five years (meaning that the possibility of taking floating-rate loans or fixed-rate loans for a shorter period was blocked). In addition, the loan period was restricted to 35 years. In Norway the credit providing banks were required to examine borrowers' debt-service capacity on the basis of the borrower's income, cost of the apartment and an examination of the sensitivity to an interest rate hike. This is because many loans were extended at floating-rate interest. In Switzerland, borrowers and the lender banks were merely warned that they should take the future interest burden into account in the event of an interest rate hike, since the present low interest rate is temporary. In Singapore the banks were issued new directives requiring a conservative approach to loan extension, and were required to ensure that borrowers' maximum debt-service capacity be no more than 50 percent of their income. (This directive was applied to all income levels, including the very highest levels.)
4. **Restrictions on apartment purchases by non-residents**—In Australia the terms for the purchase of an apartment by a non-resident were tightened, and information exchange between the authorities for supervisory purposes was increased. This was done in order to cool the demand for apartments from non-residents, from China and South Korea. The above-mentioned reduction in the LTV ratio in Hong Kong was also intended to cool demand by non-residents.
5. **Taxation measures**—The taxation system can be used as an instrument for regulating demand and transactions in specific markets. In China for example, a tax was imposed on the sale of apartments that are sold within five years of their purchase (if they are purchased from 2010 onwards), and it was indicated that purchase tax would be imposed on those owning two or more apartments. (Numerous difficulties are involved in applying this measure, especially because of the need to assess the value of the property.) In Singapore a cooling-off period of three years was stipulated during which an individual who buys and then sells an apartment will have to pay tax on the sale. Measures of this type are intended to cool down the housing market while focusing on those purchasing an apartment for investment purposes.
6. **Cessation of housing market incentive activity**—One of the reasons for the increase in housing prices in Australia was the provision of government grants for first-time apartment buyers at the time when the recession began. This incentive was gradually reduced until it was ceased. In China the interest rate discount on mortgage loans for first-time apartment buyers was reduced from 30 to 15 percent. Measures of this type obviously cool down the housing market by restricting demand from first-time buyers.
7. **Measures taken to increase and regulate the supply of apartments**—When a structural problem exists in the form of a housing demand surplus, which pushes up prices, the only long-term solution is to increase the supply and direct it to those most in need. In China it was stipulated that at least 70 percent of land for development must be designated for construction for the lowest deciles and for apartments smaller than 90 square meters. In addition, it was decided to cancel land tenders for winning bidders who failed to reach the deadline of the start of construction. In Singapore the government undertook to increase the supply of areas for the construction of new apartments.

² In order to avoid harming the entire population of mortgagors, the directives will not apply to housing loans of less than NIS 800,000 when granted. Neither will they apply to housing loans received by those entitled to housing benefits when taking a mortgage, in accordance with the criteria determined by the Ministry of Housing and Construction.

3. UPDATE OF FORECASTS

a. The global environment

In view of favorable second quarter growth data, the IMF upward adjusted the growth forecast for 2010. Concurrently, the growth forecast for 2011 was reduced slightly because the developed countries are having difficulty in recovering from the crises which plagued them. In October the IMF raised its global growth forecast for 2010 from 4.6 to 4.8 percent (Table 4). The upward adjustment in the forecast derived mainly from the publication of higher than expected growth data for the second quarter of 2010. However, the IMF estimates that the developed countries' growth rates will slow to some extent during the second half of 2010 and in the first half of 2011. Global growth in 2010 will therefore be lower at 4.2 percent compared with 4.3 percent in the previous forecast. In the IMF's assessment, the global economy's recovery from the recession depends on two balancing processes: (1) An expansion of private demand (consumption and fixed capital investment) in the advanced economies, which will make it possible to implement the required fiscal restraint as early as the beginning of 2011; (2) the decrease in the current-account deficit of part of the developed economies, and especially in the USA, concurrent with a decrease in the developing Asian countries' surpluses. The deficit reduction will moderate the adverse effect on global growth, as the largest economies become less dependent

Table 4
GDP Growth in 2009, and IMF
Forecasts for 2010 and 2011

	(percent)		
	Actual	IMF Forecast	
	2009	2010	2011
Average GDP growth			
Global	-0.6	4.8	4.2
Advanced economies	-3.2	2.7	2.2
US	-2.6	2.6	2.3
EU	-4.1	1.7	1.5
Japan	-5.2	2.8	1.5
Emerging markets	2.5	7.1	6.4
Inflation (annual average)			
Advanced economies	0.8	1.1	1.6
Emerging markets	4.8	5.9	4.4

SOURCE: IMF World Economic Outlook, October 2010.

on public demand and restocking of inventories. The recovery in world trade is expected to continue, and the growth forecast for it was upward adjusted to 11.4 percent in 2010 and 7.0 percent in 2011. The IMF notes that although according to its main forecast a renewed global recession is not expected, the main risks of it not being realized are downside risks.

The inflation environment in the advanced economies is expected to remain moderate, concurrent with continued monetary expansion. According to the IMF and the assessments of the largest investment houses, inflation in the developed countries will be low because of negative output gaps and high levels of unemployment in those economies. In view of the low pace of recovery in the largest economies and the low levels of inflation that are expected, monetary policy will likely dictate very low interest rates until the end of 2011 and possibly even later.

b. Real activity in Israel

The large increase in GDP and uses and low unemployment in the second quarter led to a slight upward adjustment in the annual GDP forecast for 2010, to an upward adjustment in uses and imports, and to a significant downward adjustment in the unemployment rate. Gross domestic product is expected to expand by 4.0 percent in 2010 compared with 3.7 percent in the previous forecast. This forecast reflects the continued expansion of GDP in the third quarter at a rate similar to that in the previous quarters. The GDP growth rate is expected to slow to some extent in the last quarter of the year, the unemployment rate, which fell heavily in the second quarter, is expected to amount to an annual average of 6.3 percent, and the current-account surplus is expected to amount to 6.8 billion dollars.

The growth rate is expected to slow to some extent in 2011 due to a contraction in the output gap, a smaller increase in exports and private consumption, and a growth in imports. GDP is expected to rise by 3.8 percent in 2011, slightly less than in the previous forecast (4.0 percent). The slight decrease in the forecast growth rate compared with 2010 derives from several factors: (1) The economy's rapid growth during 2010 and the low unemployment rate in the second quarter of the year (6.2 percent) are indicative of a continued reduction in the output gap that emerged during the global recession. A natural phenomenon in business cycles is that when actual GDP approaches its potential level, the growth rate slows because further expansion has to be based on a growth in production inputs (labor and capital)

concurrent with an increase in their cost. (2) The export growth rate is expected to be lower than the rate of increase in world trade, at 5.8 as compared to 7 percent. This is because of the low rate of growth expected in the USA, which has a major impact on Israeli exports. (3) A downturn is also expected in the rate of increase in private consumption, whose level relative to GDP is very high. However, the low level of the real interest rate will likely continue to contribute to the expansion of private consumption and fixed capital investment. (4) The expansion of demand will likely be based to an increasing extent of import intensity, which are expected to grow at a higher rate than GDP due inter alia to the real appreciation during the past year.

Table 5
Economic Indicators of the Real Activity

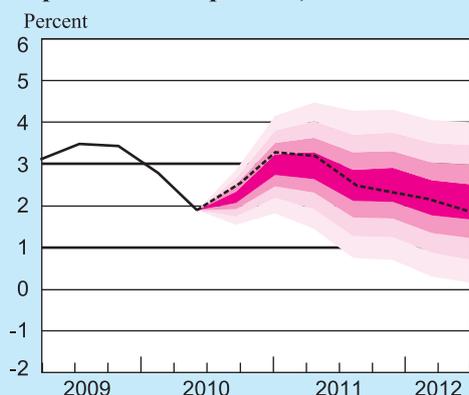
(rates of change, percent, unless stated otherwise)

	Actual	Bank of Israel Forecast	
	2009	2010	2011
GDP	0.8	4.0	3.8
Private consumption	1.7	5.2	3.6
Gross domestic investment	-5.8	6.0	5.7
Public consumption	2.5	1.5	1.0
Imports (civilian, excluding ships, aircraft and diamonds)	-12.3	13.1	9.1
Exports (excluding diamonds)	-10.2	11.3	5.8
Current account (\$ billion)	7.5	6.8	5.3
Unemployment rate	7.6	6.3	6
Public deficit (percent of GDP) ^a	5.1	4.1	3.0
Gross debt (percent of GDP) ^a	79.4	77.8	76.6

^a Excluding the Bank of Israel.

The unemployment rate is expected to fall only slightly in 2011. The unemployment rate in 2011 is expected to average 6.0 percent, slightly less than its present level. The end to the downturn in the unemployment rate derives from three factors: (1) The present low level of unemployment, which appears to be close to full employment, will likely not permit a further significant decrease without generating wage pressures. (2) The decline in the unemployment rate during recent quarters was based largely on the recruitment of workers in part-time posts, with the result that the average number of work hours in the economy decreased. Further growth in demand for the labor input could derive from an increase in the number of work hours and the more limited

Figure 25
Actual Inflation and Fan Chart^a of
Expected Inflation,^b 2009-12
(cumulative increase in prices in
previous four quarters)

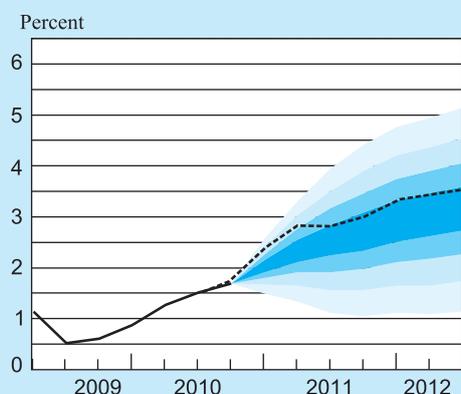


^a The center of the fan chart is based on the Bank of Israel Research Department assessment. The width of the chart is based on the Department's medium-scale DSGE (dynamic stochastic general equilibrium) model. The full fan covers 66 percent of the distribution of expected inflation.

^b The dotted line is the middle of the fan chart shown in the previous Inflation Report (No. 31, April to June 2010).

SOURCE: Bank of Israel.

Figure 26
Actual Bank of Israel Interest Rate
and Fan Chart^a of Expected Interest
Rate,^b 2009-12



^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 medium-scale DSGE (dynamic stochastic general equilibrium) model. The full fan covers 66 percent of the distribution of the expected interest rate.

^b The dotted line is the middle of the fan chart shown in the previous Inflation Report (No. 31, April to June 2010).

SOURCE: Bank of Israel.

recruitment of new workers. (3) GDP is expected to grow in 2011 by a slightly higher rate than its potential growth rate.

The budget deficit is expected to amount to between 3.7 and 4.0 percent of GDP in 2010. This deficit is well below the 5.5 percent ceiling for 2010 set when the two-year budget for 2009 and 2010 was approved. This sharply better fiscal performance is mainly a result of the more rapid than expected growth of the economy.

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

According to the Bank of Israel Research Department assessment,¹¹ the inflation rate 12 months ahead will be within the upper part of the target range concurrent with a gradual increase in the interest rate. The inflation rate in the last twelve months was 2.4 percent—close to the center of the target. According to the Research Department assessments, the inflation rate twelve months ahead will amount to 2.5 percent. During the first half of 2011, annualized inflation will likely be close to the upper limit of the target or even above it. Subsequently, inflation is expected to consolidate within the limits of the target. At the same time, it is expected that the Bank of Israel interest rate will be raised gradually from its current low level to an environment of 2.9 percent in a year's time (Figures 25 and 26).

The Bank of Israel estimates that the principal factor that could result in inflation persisting within the upper part of the target is the development of the housing component in the CPI (which reflects apartment rental prices). The housing component rose by 6.0 percent during the past year, mainly because of a shortage in the supply of apartments relative to housing requirements. The central bank does not believe that the demand surplus in the housing market will contract to any major extent during the short term. This situation and the accompanying transition to a positive business cycle will likely prevent any significant downturn in the rate of housing price increases during the coming year. As a result, the housing component will continue to push up inflation. However, it is estimated that the rate of increase in the purchase price houses (which are not included in the CPI) will slow during the year since the assessment that the high rate of increase prevailing in the past year (19 percent) was derived to a large extent from the interest rate cuts during the

¹¹ The assessment of inflation presented here is part of the staff forecast which the Bank of Israel Research Department compiles every quarter. See Inflation Report 31 for the second quarter of 2010, Paragraph 3.c, for an explanation of the Research Department's staff forecast and a review of the models on which it is based.

financial crisis. The resumption of a rising course in the interest rate together with a number of measures that were recently adopted (see Section 2) are expected to bring down the rate of increase in apartment prices.

Exclusive of the housing component in the CPI, inflation during the coming year is expected to be within the lower part of the inflation target. This assessment reflects the effect of a number of opposing forces—those that have the effect of pushing up inflation, and those that have the effect of restraining it.

Apart from the housing component, other factors pushing up inflation are the expansion in demand for the GDP with the recovery from the recession and the impact of the low real interest rate. Demand expansion, as reflected by the closure of the output gap could have the effect of increasing inflation by pushing up the prices of domestic production inputs and especially the labor input, concurrent with firms' attempt to increase their profitability. Nominal wages are expected to continue rising by a relatively high rate this year. However, wage increases can be attributed inter alia to the erosion of real wages during the last two years. The inflationary pressures from the labor market currently appear to be limited, although they could increase as demand continues to expand. Another inflationary factor is the worldwide increase in the prices of agricultural commodities, which rose by 20 percent during the past year and affect food prices in the index. In addition, some degree of inflationary pressure may be inherent in the level of energy prices worldwide. This is because of the increase in these prices, which began in the second half of 2009 and continued for most of the first half of 2010. Finally, the consolidation of the public's expectations (on the basis of forecasters' assessments, capital market expectations and the Companies Survey) that inflation will be higher than the target could push up inflation immediately. This is due to the fact that when manufacturers adjust prices and compile wage agreements, they take future inflation into account.

The principal factor that will have the effect of holding down inflation is the 7.5 percent appreciation of the effective nominal exchange rate compared with the second quarter of 2009. The exchange rate is having the effect of reducing the prices of goods that are imported to Israel, although the pass-through from the exchange rate to prices is gradual rather than immediate and can last for a year. It therefore appears that import prices are not yet fully matched to the new level of the exchange rate. As a result, their downward adjustment will continue during the second half of 2010. Apart from that, the forecasts predict that the pressures

for an appreciation of the nominal exchange rate—including the current-account surplus and the interest rate differential between Israel and abroad—will continue to exist. Other factors moderating import prices are the expectation of moderate inflation worldwide (an average of 1.4 percent in the developed countries) and the very low level of central banks' interest rates worldwide (0.0-0.25 percent in the USA, 1.0 percent in Europe), which is expected to last at least until the end of 2011, and which acts mainly to moderate the increase in the domestic interest rate.

The inflation forecast is similar to that of the previous quarter, and a downward adjustment in the course of the interest rate is expected. Figures 25 and 26 provide a comparison with the assessments that were presented in the previous Inflation Report (August 2010): it can be seen that the course of the interest rate was downward adjusted, even though the inflation and interest rates published from the beginning of August 2010 did not reveal any surprising developments. This adjustment derived mainly from the postponement of the date forecast for the commencement of interest rate hikes abroad due to the large economies' difficulty in recovering from the recession. With respect to inflation, the forecast of 2.5 percent for twelve months ahead is similar to that in the previous Inflation Report (2.6 percent), although the course of inflation for the coming quarters is slightly lower.

The majority of market assessments indicate that the annual rate of inflation will be higher than the Bank of Israel Research Department's assessment (Table 6). Inflation expectations for a year as measured from the capital market averaged 3.0 percent in October, similar to their level when the Inflation Report for the previous quarter was compiled (3.0 percent). Private forecasters' assessments at the end of October averaged 2.8 percent, which was less than their level at the time when the Inflation Report for the previous quarter was compiled (3.2 percent). The Companies Survey forecast average is 2.6 percent, like the forecast in the survey for the previous quarter. These expectations are accompanied by assessments regarding a continued gradual increase in the interest rate, which is thereby expected to amount to between 2.6 and 3.0 percent in a year's time, similar to the Bank of Israel assessment presented here.

The principal risk factor that could lead to the non-materialization of this forecast is the course of global developments. The principal forecast is based on the expectation that global economic activity and especially world trade will continue to expand despite the debt problems in several European countries, the weakness in labor markets worldwide

Table 6
Assessments of Inflation over The Next Twelve Months

	(percent)				
	Capital Target	Private market ^a	Private forecasters ^b	Companies Survey ^c	Bank of Israel's forecast
Average	2	3.0	2.8	2.6	2.5
Range	1-3		2.2-4.3	1.0-4.0	

^a October average.

^b After publication of the September CPI.

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

^d Bank of Israel Research Department assessment.

SOURCE: Bank of Israel.

and the difficulties in the real estate sector in the USA. However, a number of scenarios exist whereby these problems could drag the global economy into another recession that will lead to a freeze or actual downturn in global economic activity, which will also lead to a decline in global inflation due inter alia to a drop in commodity prices. These developments could result in a further postponement of the forecast date of the commencement of interest rate hikes abroad and possibly even the resumption of unconventional monetary policy measures. Such a scenario is expected to harm primarily the Israeli export sector, leading to a decrease in the current-account surplus and via this decrease to a slower pace of GDP growth. If the downturn is accompanied by a financial crisis or a large increase in the level of uncertainty, it could also be accompanied by a contraction in domestic demand, especially private consumption and fixed capital investment. The fall in demand (for exports, private consumption and investment) will have the effect of holding down inflation in Israel. The impact of a scenario such as this on the exchange rate is unclear: a lower course of the interest rate worldwide will increase the pressure for an appreciation while a decrease in the current-account surplus will reduce appreciation pressures. Realization of this scenario will delay the reversion of the interest rate to a normal environment.

The Bank of Israel will continue to monitor developments in the Israeli economy and the global economy and in the financial markets. The Bank will adapt the instruments available to it, and especially the course of the monetary interest rate, in order to achieve its objectives— price stability, encouraging employment and growth, and supporting the stability of the financial system.

Appendix Table 1
The Domestic Assets Markets, April to September 2010

	04/10	05/10	06/10	07/10	08/10	09/10
Yields to maturity (monthly average, percent)						
3-month <i>makam</i>	1.5	1.5	1.6	1.6	1.8	1.8
1-year <i>makam</i>	2.2	2.1	2.1	2.1	2.2	2.3
Unindexed 5-year bonds	4.1	4.0	3.8	3.7	3.5	3.7
Unindexed 20-year bonds	5.7	6.0	6.0	5.9	5.7	5.5
CPI-indexed 1-year bonds	-0.5	-0.6	-0.8	-0.8	-0.5	-0.5
CPI-indexed 5-year bonds	1.3	1.2	0.9	0.9	0.8	0.8
CPI-indexed 30-year bonds	3.7	3.5	3.4	3.4	3.2	3.2
Yield gap between government bonds and private bonds rated AA–AAA ^a (percentage points)	1.3	1.4	1.3	1.2	1.1	1.2
private unrated bonds excluding real estate ^a (percentage points)	11.0	11.7	11.3	11.1	10.0	9.1
Share market (percentage change during the month)						
General share price index	-5.4	-8.2	-0.8	1.4	2.6	6.5
Tel Aviv 25 index	-5.3	-7.0	-1.9	5.3	1.5	8.0
Foreign currency market (percentage change during the month)						
NIS/\$	0.1	3.0	1.2	-2.5	1.0	-4.0
NIS/€	-0.9	-3.8	0.0	3.5	-1.6	2.9
Nominal effective exchange rate	0.1	-0.8	1.1	0.6	0.0	-0.4
Risk indices derived from the trade in NIS/\$ options in the Tel Aviv Stock Exchange (monthly averages, percent)						
Implied standard deviation	8.0	9.4	9.7	8.1	7.8	7.1
Probability of depreciation greater than 3%	2.3	4.3	5.1	2.8	2.8	1.7
Probability of appreciation greater than 3%	1.1	2.3	2.0	1.0	0.9	0.9

^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, April to September 2010

	(percent, monthly averages)					
	04/10	05/10	06/10	07/10	08/10	09/10
Inflation environment (percent)						
Monthly change in CPI	0.9	0.4	0.3	0.5	0.5	0.3
Forecasters' predictions of monthly CPI (average of forecasts prior to publication of CPI)	0.6	0.4	0.2	0.8	0.3	0.2
Annual change in CPI	3.0	3.0	2.4	1.8	1.8	2.4
One-year inflation expectations derived from the capital market	2.7	2.7	2.9	3.0	2.7	2.8
Forecasters' one-year inflation predictions	2.6	2.7	2.7	3.0	3.0	2.9
Forward inflation expectations^a to different terms						
Short term (second and third years forward)	2.6	2.6	2.8	2.8	2.9	2.8
Medium term (fourth to sixth years forward)	2.8	2.8	2.7	2.5	2.5	2.8
Long term (seventh to tenth years forward)	2.9	2.6	2.7	2.7	2.7	2.6
Interest rates and interest rate differentials						
Bank of Israel interest rate	1.50	1.50	1.50	1.50	1.75	1.75
Derived real interest rate	-1.1	-1.2	-1.3	-1.4	-1.0	-1.0
Short-term interest rate differential between Israel and the US (prior to decision on the next month's rate)	1.25	1.25	1.25	1.25	1.50	1.50
Short-term interest rate differential between Israel and the eurozone (prior to decision on the next month's rate)	0.50	0.50	0.50	0.50	0.75	0.75
Forecasters' predictions of nominal interest rate change for next month (prior to the decision)	0.0	0.0	0.1	0.1	0.1	0.2
Forecasters' predictions of interest rate a year hence	2.9	3	2.9	2.8	2.8	2.8
Long-term (10-year) nominal interest rate differential between Israel and US	1.3	1.9	1.8	1.9	1.9	2.0
Long-term (10-year) real interest rate differential between Israel and US	1.0	1.1	1.0	0.9	0.9	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.

