



**Bank of Israel**

# **INFLATION REPORT**

*April-June 2009*

**27**

*August 2009*

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2 August 2009

Bank of Israel

## **Letter of the Governor accompanying the Inflation Report for April–June 2009**

This Inflation Report, covering the first quarter of 2009, is submitted to the government, the Knesset and the public as part of the process of monitoring the inflation rate and comparing it 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.

The CPI rose steeply in the second quarter of 2009, by 2.3 percent, largely due to an 8.0 percent increase in energy prices, and seasonal factors, the most pronounced of which was the 17.1 percent increase in prices of clothing and footwear.

In the first half of 2009 prices increased by 2.1 percent, led by two main categories: energy prices, which increased by 8.1 percent, and housing prices, which increased by 2.8 percent. The rise in the housing component, expressing an increase in rents, which actually started in the middle of 2008, apparently reflects a possible shortage of rental accommodation. The index excluding housing and energy rose by a relatively moderate 1.3 percent (i.e., at an annual rate of 2.6 percent).

Relatively steep price increases are expected in the third quarter in the wake of the increase in indirect taxes and the water surcharge (see below). Despite the above, our assessment at this stage is that the risk of inflation in the next twelve months is low, as there are still forces acting to moderate price increases: the level of demand for domestic production is still far below production capacity; around the world there is substantial excess capacity, a low level of interest rates, and low expected inflation; furthermore, the probability of a sharp depreciation of the shekel, that in the past constituted an inflationary risk factor, currently seems low.

In the last quarter of 2008 and the first half of 2009, economies world wide experienced a serious recession. The decline in activity was accompanied by a significant reduction in world trade, reflecting reduced demand for durables, raw materials, intermediate goods and in particular for final goods. The IMF predicts a 12 percent drop in world trade in 2009. Nonetheless, in the second quarter there were firmer signs that the global recession is approaching its turning point. The expansionary monetary and fiscal policies adopted by most countries started to show results: in the second quarter the global financial crisis eased, share prices rose in stock markets around the world, the credit shortage became less acute, and there were signs of renewed corporate bond and share issues. Global demand and activity, however, are still in a recession.

In the first quarter of 2009, the decline in real activity in Israel's economy that had started in the last quarter of 2008 became more severe, the output gap widened, and the unemployment rate increased. In the second quarter there were indications of a slowdown or even a halt to the decline in activity, and there were several signs suggesting the possibility that in some areas a turnaround was starting (mainly in private consumption and foreign trade). The Bank of Israel Companies Survey for the second quarter shows a moderate decline in total business

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\* This report incorporates the report on the rise in the money supply, in accordance with section 35 of the Bank of Israel Law, 5714–1954: in each month from April to June 2009 (inclusive) the money supply exceeded that in the preceding twelve months by more than 15 percent. The change in the money supply is discussed in section 1d in this report.

sector activity, after two quarters of steep drops. Indicators of private consumption<sup>1</sup> show that it was stable in the second quarter, with the possibility of a slight increase, following its decline of 3.9 percent (annual rate) in the previous two quarters. Foreign trade data show a moderation in the decline in goods imports and a modest increase in exports. The fall in direct and indirect tax revenues also moderated in the second quarter.

The rate of unemployment increased to 7.6 percent in the first quarter of 2009, alongside an increase in the participation rate in the labor market, with indications suggesting that the unemployment rate continued to increase in the second quarter.<sup>2</sup> As the decline in demand affects the labor market with a lag, it can be assumed that the rate of unemployment will continue to rise for the rest of 2009. Wages increased in the first quarter of 2009 compared with the previous quarter, but the real wage was about 3.5 percent lower than in the first quarter of 2008. Health tax revenues in April and May were also lower than in April and May 2008, and also lower than in the first quarter, indicating a further drop in wage payments (meaning either a fall in the number of employees or in the wage per employee, or both).

In the first half of 2009 public expenditure declined (against the background of the delay in passing of the budget), but due to reduced activity, there was a greater fall in tax revenues, and the government deficit grew. In the second half of the year government expenditure is expected (and planned) to increase steeply, following the approval of the budget and in light of the underspending in the first half-year, and the budget deficit is expected to increase further. In order to reduce the deficit, the government decided to increase indirect tax rates. This step together with the increased price of water are expected to contribute an increase of about 1 percent in the price level in the third quarter of the year.

In the second quarter the Bank of Israel interest rate was held at its low level of 0.5 percent, a level set in April 2009. At the same time the Bank of Israel continued with its policy of quantitative easing: it bought foreign currency at a rate of \$100 million a day, and bought NIS 200 million of government bonds a day. These steps are intended, among other things, to lower interest rates in the economy, (i.e., to reduce the gaps between longer-term market interest rates and the Bank of Israel rate), and to increase the NIS/\$ exchange rate, and thereby to some extent to soften the contractionary impact of the global crisis on domestic demand. These steps also moderated the increase in the second quarter in the yield to maturity on long-term government bonds, a development affected by the expected increase in the government deficit and the increase in long-term yields around the world.

The improvement in the financial sector in Israel continued in the second quarter. This resulted from the improvement in the global financial sectors (which were affected by the expansionary policies of central banks around the world) and from the expansionary monetary measures taken by the Bank of Israel. The effect could be seen in the continued rise in share prices and the significant increase in the issue of corporate bonds by the private sector together with the continued narrowing of the gap between their yields and those on government bonds. These developments indicate the reduced market assessment of risk regarding repayment of corporate debt. This conclusion is supported by company responses to the Companies Survey for the second quarter of 2009, showing that the credit constraint on company activity eased.

Data on credit is available up to May 2009. Total credit to the business sector in May reached close to its December 2008 level. On the one hand its stability reflects an increase of 4.9 percent in nonbank credit, after a decline of 2.8 percent in 2008. The development of nonbank credit reflects the increase in corporate bond issues on the Tel Aviv Stock Exchange which occurred at the same time as the reduction of the yield to maturity, as company risk fell. On the other hand, bank credit to the public dropped by 2.4 percent in the first five months of 2009, having increased by 8.0 percent in 2008. The fall in bank credit occurred concurrently with the decline in its cost, and may mean that there is some slack in demand for bank credit.

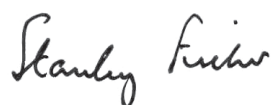
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<sup>1</sup> Imports of nondurable and durable goods, indices of consumer confidence, chain store sales, trade and services revenue, purchases via credit cards, Israelis' hotel bed nights, and VAT on imports.

<sup>2</sup> According to the Central Bureau of Statistics trend data, the unemployment rate continued to increase in May, and reached 8.4 percent.

Inflation expectations for a year ahead increased in the second quarter to around the midpoint of the target range, both those based on the capital market and those of forecasters (following publication of the June CPI, expectations increased further, and came close to the upper limit of the target range). Apparently the increase in indirect tax rates and in water prices, which are expected to affect prices in the third quarter, and the increase in commodity and oil prices in the second quarter, contributed to the increase in inflation expectations. The next few months may see relatively high price increases, with a rise in the rate of inflation (measured over the previous twelve months), but this is expected to moderate later in the year. This, against the background of the continued recession in domestic and global demand, and the slack that is expected to persist for some time, at least in the labor market.

The Bank of Israel continues to monitor developments in Israel and abroad and will act to keep inflation within the target range, while encouraging real activity and supporting financial stability.

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

Stanley Fischer  
Governor, Bank of Israel

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## Summary

- **Inflation:** The Consumer Price Index (CPI) rose in the second quarter of 2009 by 2.3 percent; seasonally adjusted it increased by 1.4 percent. In the last twelve months it increased by 3.6 percent. After a steep decline in the rate of price increases in the last quarter of 2008 and concern over possible deflation as the economy entered a recession, prices increased at a rate that exceeded the upper limit of the inflation target range, despite a modest level of real economic activity. The background to the price increases was the increase in world commodity prices, expansionary monetary policy pursued by central banks around the world and in Israel, recovery in the financial markets, and forecasts that the slowdown in real activity would soon come to an end. Housing prices made a significant contribution to the increase in the CPI over the last twelve months, but were not a major factor in the second quarter of 2009. Inflation expectations rose from their low level in the previous quarter, and are currently consistent with the inflation target range.
- **Real activity:** In the first quarter of 2009 real economic activity contracted, the output gap widened, and the rate of unemployment increased. The slowdown in economic activity was strongly affected by the fall in exports, reflecting the drop in world trade. Preliminary indicators relating to the second quarter of 2009 suggest a continued decline in domestic demand, albeit at a slower rate, with a small increase in exports. The recovery in the financial markets, the rise in consumer confidence indices, and the moderation of the reduction in tax revenues show that the economy is close to the trough of the current business cycle.
- **The financial markets:** The financial markets recovered in the second quarter of 2009, but the risk level remains relatively high. Share prices in the Tel Aviv Stock Exchange (TASE) increased, the risk premium on corporate bonds was reduced, and there was a significant increase in capital raised from nonbank sources. Nonetheless, these did not revert to the levels prevailing prior to the deterioration of the crisis in September 2008. The real yield curves of government bonds steepened; short-term real yields fell and became negative, against the background of the low Bank of Israel interest rate, while long-term yields increased. The nominal and real effective exchange rates remained stable, with the shekel appreciating against the dollar and depreciating against the euro.
- **Around the world:** The effects of the financial crisis are evident in real economic activity, and the advanced economies are experiencing the most severe contraction of real activity in sixty years. That said, there are firmer indications that the global recession is approaching its turning point. In the second quarter the IMF and the OECD revised their forecasts of world growth in 2010 upwards, for the first time in more than a year. Alongside slack levels of activity, low levels of inflation were recorded, and monetary policy continues to keep interest rates low, with quantitative easing instruments being used.
- **Monetary policy:** In the second quarter of 2009, the Bank of Israel maintained an expansionary policy, using three tools: the interest rate, purchases of foreign currency, and purchases of government bonds. At the beginning of the quarter the Bank reduced the rate of interest for April to 0.5 percent, its lowest ever level, and it has stayed at that level since then. The Bank also continued to buy an average of \$100 million a day of foreign currency to increase the level of the forex reserves and to support the exchange rate. In addition, since February the Bank has bought NIS 18 billion of government bonds on the secondary market; at first these purchases were on a relatively limited scale, and then the rate was increased to NIS 200 million a day. Once the Bank had reached its purchase target— between NIS 15 billion and NIS 20 billion—it announced that it was ending the program at the beginning of August.
- **Forecast:** The output gap is expected to widen, despite the initial signs of recovery in the markets, as growth rates are still low compared with the economy's potential growth. GDP is expected to contract by 1.5 percent in 2009, and unemployment to average 7.7 percent. In 2010 GDP is expected to grow by 1 percent. Inflation, measured over the previous twelve months, is expected to enter the target range in the third quarter of 2009, and to remain there for the following twelve months. Its relatively high level in the first half of 2009 despite the recession may indicate a higher inflation environment. The Bank of Israel will absorb liquidity when the conditions show this to be necessary, in order to meet the inflation target.

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\* 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.)

## 1. THE BACKGROUND AND INFLATION

### a. The global environment

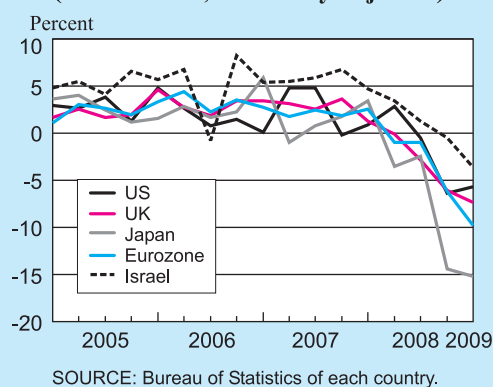
#### (1) Real global economic activity

**The global economy is experiencing the sharpest downturn in economic activity for sixty years.** Since the exacerbation of the financial crisis in September 2008 national accounts figures worldwide have attested to a slowdown which in many developed countries has even involved a genuine reduction in economic activity and a rise in unemployment (Figure 1). The growth rate of the developed economies is the lowest since WWII. In the US GDP shrank by 6.0 percent in the six months following September 2008, in annual terms and seasonally adjusted, by 6.7 percent in the UK, by 8.0 percent in the eurozone, and by 14.8 percent in Japan. The extensive stimulus packages throughout the world may have prevented the development of a scenario similar to the Great Depression of the 1930s, but they were not sufficient to prevent the credit crunch from affecting real economic activity. The International Monetary Fund (IMF) expects global GDP to contract by 1.4 percent in 2009, and the output of the developed countries to fall by 3.8 percent. According to the IMF, recovery is expected to begin only in the course of 2010.

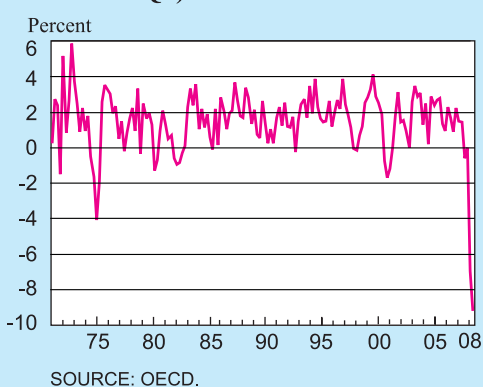
**The slack economic activity worldwide has led to a sharp drop in the extent of global trade.** Against the backdrop of the contraction of the developed economies the extent of global trade fell by 6.9 percent in 2008:IV and by another 9.1 percent in 2009:I (Figure 2). This came in the wake of the contraction of demand for raw materials and intermediate goods as a result of the decline in the extent of global production, and was also due to the fall in demand for final goods, mainly consumer durables.<sup>1</sup> The IMF expects that during 2009 as a whole global trade will shrink by about 12 percent. The decline in the extent of trade, which is the sharpest in recent decades, reflects the intensity of the global slump, even though there is a possibility that in the current slowdown global trade is more sensitive to the extent of production than was the case with the declines of the mid-1970s and early 1980s, due to the greater globalization of production and the subsequent increased flow of intermediate goods between countries.

**In 2009:II the financial crisis moderated, world stock markets rose, and public issues resumed.** Alongside moderate activity, and after the decline in share prices that characterized

**Figure 1**  
**GDP Growth rates in Advanced Economies, 2005:Q1-2009:Q1**  
(annual rates, seasonally adjusted)



**Figure 2**  
**World Trade in Goods and Services**  
(quarterly rates of change, 1971:Q1 to 2009:Q1)



<sup>1</sup> For a discussion of the contraction of world trade, see box: 'What Has Driven the Sharp Fall in World Trade,' in Bank of England, Inflation Report, May 2009.



stock markets all over the world in the second half of 2008, there was a trend shift in the financial markets and from March 2009 to the end of 2009:II share-price indices rose by 20 to 40 percent (in dollar terms, Figure 3). In Israel the rate at which the share-price indices rose outstripped those in the developed countries. Concurrently, both corporate bond and share issues resumed, after contracting markedly when the crisis worsened in September 2008.

Since Israel's economy is small and open, the global recession has led to a decline in the demand for domestic production. The slump in the developed economies and the contraction of global trade has had an adverse effect on Israel's exports and hence on domestic economic activity in general. The world crisis, which trickled down to Israel initially via the financial channel, is currently having an effect primarily via the reduction of demand for domestic production. The contraction of demand, and the subsequent decline in Israel's output, exerts pressure for the moderation of inflation in Israel.

## (2) Inflation in the world

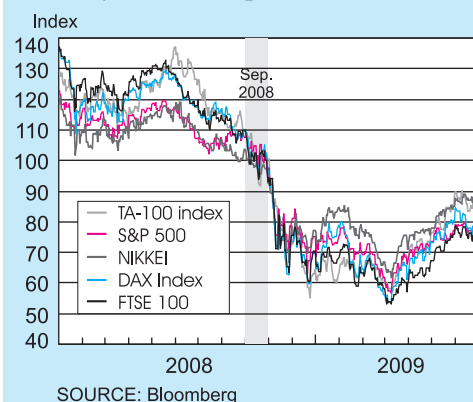
After falling sharply in the second half of 2008, global prices of commodities, energy, and food rose once more in 2009:II.

In the last few years, in the context of the strong growth of the emerging markets, global prices of commodities, energy, and food rose consistently, reaching a peak in mid-2008. As the crisis began to affect real economic activity and the demand from the emerging markets declined, these prices plummeted in the second half of 2008 (Figure 4). At the beginning of 2009:I, after the markets had calmed, prices stabilized and rose markedly in 2009:II. According to the Bloomberg indices, in 2009:II prices of basic metals rose by 28.8 percent, of food by 5.1 percent, and of a barrel of Brent crude by 45.9 percent.<sup>2,3</sup> The increase in prices stems inter alia from the reawakening of demand from China—due to aggressive fiscal policy intended to expand Chinese investment—as well as from expectations of a global economic recovery, but also from the weakening of the dollar. The recent rise in energy prices caused consumer price indices to rise in the US and Europe, but adjusting for their effect and for that of fruit and vegetables prices, whose influence is seasonal, prices in the US rose by 1.2 percent in annual terms, and by 1.7 percent in Europe (Table 1). These rates reflect the moderation of real economic activity in the US and Europe.

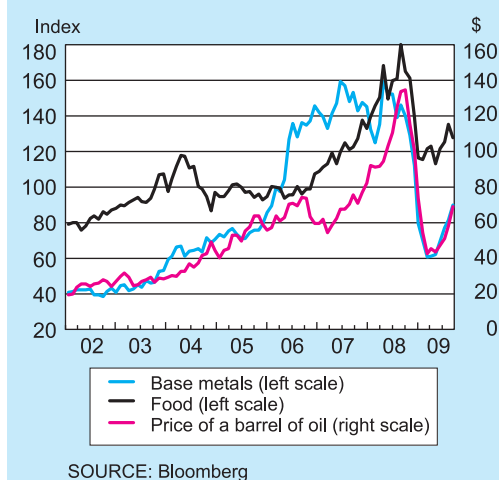
<sup>2</sup> June 2009 average vis-à-vis March 2009 average, dollar prices.

<sup>3</sup> The index of basic metals comprises aluminum, copper, nickel, lead, zinc, and tin. The food index comprises livestock, field crops, sugar, coffee, and cocoa.

**Figure 3**  
Share Price Indices around the World,  
January 2008 to June 2009  
(adjusted by dollar exchange rate,  
daily data, 15 Sep 2009 = 100)



**Figure 4**  
Price Indices of Base Metals and  
Food (January 2006 = 100), and the  
Price of Oil, January 2002 to  
June 2009



**Table 1**  
**The CPI and Selected Components in Israel and Abroad, 2007, 2008 and 2009**

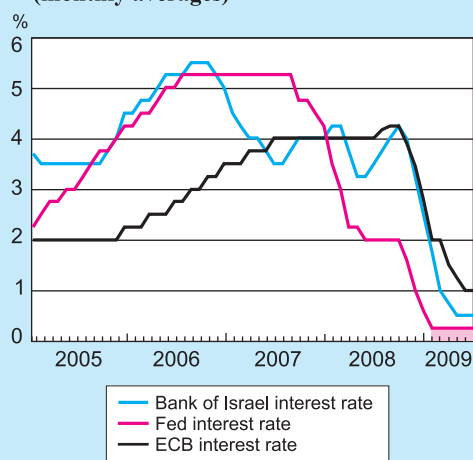
	Israel				US				Europe			
			June	2009:			June	2009:			June	2009:
	2007	2008	2009*	Q2**	2007	2008	2009*	Q2**	2007	2008	2009*	Q2**
<b>CPI</b>	<b>3.4</b>	<b>3.8</b>	<b>3.6</b>	<b>9.4</b>	<b>4.1</b>	<b>0.1</b>	<b>-1.4</b>	<b>5.7</b>	<b>3.1</b>	<b>1.6</b>	<b>0.3</b>	<b>2.5</b>
Energy	14.4	-9.5	-7.3	36.0	17.4	-21.3	-25.5	79.5	9.2	-3.7	2.4	13.0
Food (excluding fruit and vegetables)	6.3	9.1	1.1	0.4	4.8	5.9	2.2	-1.5	5.1	3.5	0.4	0.4
Fruit and vegetables	7.0	-2.0	1.0	7.5	5.9	3.4	-1.9	-3.1	3.1	2.8	0.0	-1.1
<b>CPI excluding energy, food, and fruit and vegetables</b>	<b>1.6</b>	<b>3.6</b>	<b>5.4</b>	<b>9.1</b>	<b>2.4</b>	<b>1.8</b>	<b>1.7</b>	<b>1.2</b>	<b>1.9</b>	<b>1.8</b>	<b>1.3</b>	<b>1.7</b>

\* In previous 12 months.

\*\* In annual terms.

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

**Figure 5**  
**Short-Term Interest Rates in Israel, the US, and the Eurozone, 2005 to June 2009**  
**(monthly averages)**



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

### (3) Monetary policy in the world

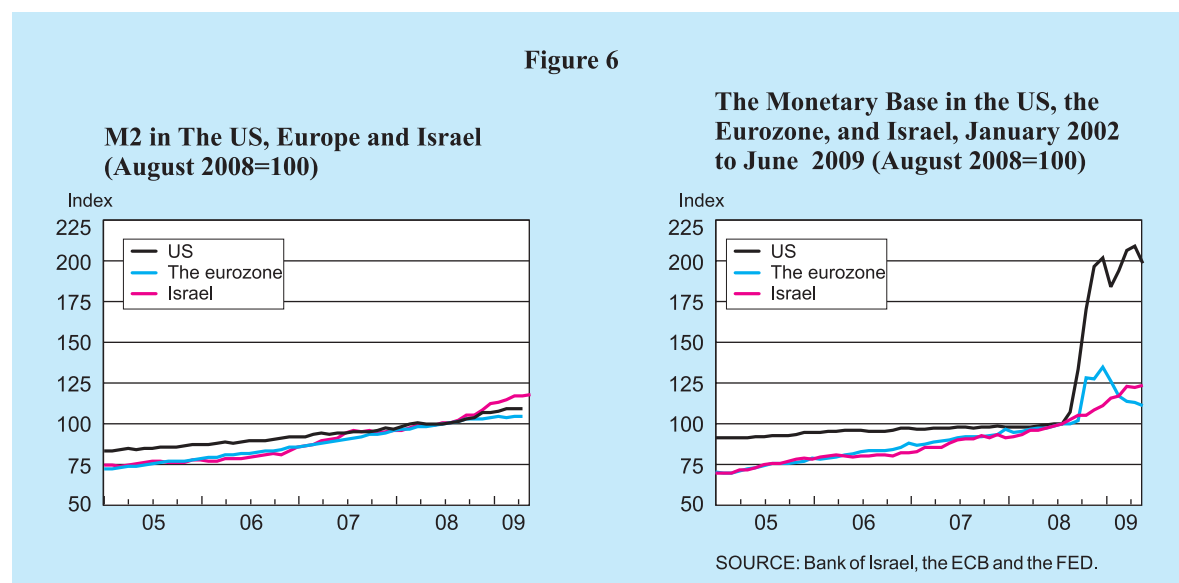
**Expansionary monetary policy in the US led to a marked rise in the Fed's balance sheet and the monetary base, but the rate at which they expanded moderated during 2009:II.** Starting from mid-December 2008 the Fed (Federal Reserve) interest rate in the US ranged from 0 to 0.25 percent (Figure 5), and according to the bank's announcements it expects the economic conditions to continue to support a low interest rate for an extended period of time. At the same time, the Fed also continues to operate via stimulus plans and the purchase of various financial assets—mainly mortgage-backed bonds and T-bonds. The purpose of purchasing mortgage-backed bonds was to remove toxic assets from the commercial banks' balance sheets, thereby stimulating the flow of credit to the markets, while the purchase of T-bonds was intended primarily to reduce long-term yields. Note that US government borrowing in order to finance the exceptional public deficit created this year serves to increase yields, and hence to some extent offsets the effect of the Fed's T-bond purchases. Despite the continued extensive purchases of T-bonds and mortgage-backed bonds, the level of the Fed's assets has stabilized in recent months, due to the repayment of loans extended to financial entities in the framework of the various bail-out plans. The Fed's expansionary activities led to a marked rise in its balance sheet, and hence in the monetary base, which grew at an exceptional rate, particularly during 2008:IV. Note,

however, that the broader monetary aggregates expanded at a far more moderate rate (Figure 6).

**The exceptional monetary expansion in the US arouses apprehensions of future inflation in the markets.** The expansion of the monetary base is essential in order to reduce credit risk in the markets and bolster economic activity in the US, but once the first signs of recovery become evident on the demand side the exceptional monetary expansion could create inflationary pressures. If the fears of inflation in the US are realized, the real value of dollar assets will be eroded. This could impact on entities and countries that own unindexed dollar assets, lead to the depreciation of the dollar vis-à-vis other currencies including the NIS, and cause commodity prices to rise further. Against the backdrop of apprehensions regarding inflation in the US it has recently been suggested, mainly by China and other developing countries, that an international currency should be created to serve as a substitute for the dollar and to be used in international trade as well as for foreign-currency reserves.

**The relatively slow expansion of the broader monetary aggregates in the US attests to lower inflationary pressures than those denoted by the narrow aggregates.** Monetary expansion in the US has not trickled down to the broad monetary aggregates to the same extent as is expressed by the monetary base (Figure 6). Their relatively slow expansion indicates a lower multiplier than in the past—making it possible to absorb excess liquidity rapidly when required, so that the inflationary pressures embodied in the monetary expansion appear to have been weaker than was indicated by an examination that was limited to the narrow monetary aggregates. Be that as it may, with the recovery

Figure 6



of demand, the Fed intends to rapidly mop up the excess liquidity from the markets, both by selling the assets it purchased during the crisis—an action which in itself will reduce the monetary base—and by raising the interest rate on the commercial banks' reserves. In addition, since some of the assets bought by the Fed are short-term, when they are redeemed it will automatically absorb some of the liquidity that was formerly channeled to the markets.<sup>4</sup>

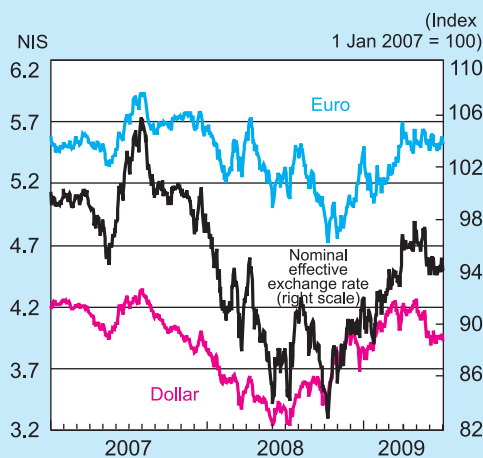
**In Europe the expansionary monetary policy persisted, albeit to a more limited extent than in the US.** Since the aggravation of the financial crisis in September, the European Central Bank has reduced the interest rate by a cumulative 3.25 percentage points, and since May 2009 interest has been 1 percent. Alongside the reduction of interest, the monetary base grew in 2008:IV, although since the middle of 2009:II it has begun to contract despite the low interest rate (Figure 6). Monetary expansion in Europe has been more limited in extent than that in the US, even though the contraction of real activity in Europe was more marked.

#### b. The exchange rate and the balance of payments

**After six months the trend of NIS depreciation stopped, and during 2009:II the shekel remained stable vis-à-vis most of the principal currencies, and even appreciated vis-à-vis the dollar.** The effective nominal exchange rate showed depreciation of 0.2 percent (June average vis-à-vis March average) during 2009:II, the NIS depreciated by 1.5 percent vis-à-vis the euro, and appreciated by 5.2 percent vis-à-vis the dollar, in the context of the weakening of the dollar worldwide (Figure 7). The effective real exchange rate stabilized, after depreciating consistently since October 2008. The implied volatility of NIS/\$ options also declined during 2009:II, and it varied in a similar range to that evident in the months prior to the exacerbation of the crisis in September 2008. This decline reflects some resolution of economic uncertainty.

**According to the balance of payments data, the local-currency depreciation of 2008:I stemmed primarily from activities on the financial account.** In 2009:I the current account was in surplus due to the positive trade balance and net transfers into Israel. A surplus on the current account exerts pressure for appreciation, but in 2009:I the NIS depreciated against most

**Figure 7**  
The NIS/\$, NIS/Euro and the  
Nominal Effective Exchange Rate,  
2007 to June 2009 (daily data)



SOURCE: Bank of Israel.

<sup>4</sup> For further discussion of the Fed's exit-strategy from the expansionary policy, see B. Bernanke's speech of 13.01.2009: <http://www.federalreserve.gov/newsevents/speech/bernanke20090112a.htm>

of the principal currencies, so that it may be inferred that the pressures for depreciation came from the financial account. The main balance of payments items which contributed to the depreciation were Israel's foreign reserves, which rose as a result of the Bank of Israel's foreign-currency purchases, and the net investment in securities, although these investments are on the decline due to the contraction of investment abroad by residents and the rise in investment in Israel by nonresidents, a trend which moderates the pressure for local-currency depreciation.

### **c. Real economic developments<sup>5</sup>**

#### *(1) Demand*

##### **In 2009:I all the components of aggregate demand declined.**

The contraction of economic activity, which began in 2008:III, worsened, and in 2009:I all the components of aggregate demand—private consumption, investment, public consumption, and especially imports and exports—contracted. A simultaneous decline in all components of demand is rare, and expresses the depth of the current recession.<sup>6</sup> The Bank of Israel's Survey of Companies for 2009:I shows that the contraction of activity derives mainly from the demand side. According to initial indicators for 2009:II, the contraction of aggregate demand will persist, albeit at a more moderate rate.

#### **Private consumption**

**Private consumption contracted in 2009:I.** Private consumption was down by 3.5 percent in 2009:I from 2008:IV. The contraction of consumption stemmed inter alia from the deterioration in purchasing power—the fall in the value of the public's asset portfolio, the rise in the unemployment rate, and the erosion of the real wage in the last year—but also from precautionary saving in view of uncertainty regarding the economic situation in the future. The contraction of demand encompassed both purchases of consumer durables and current consumption. The demand for consumer durables fell for the fourth quarter in succession, though this is the first quarter since the previous recession in which current consumption has fallen. The demand for consumer

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<sup>5</sup> The data in this section are given in seasonally-adjusted annual terms.

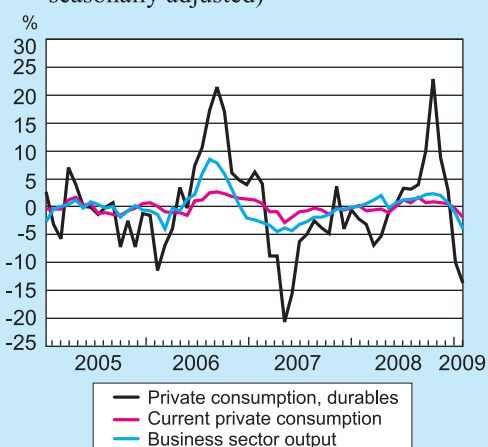
<sup>6</sup> This is the first quarter in which all the components of aggregate demand have declined, at least since 1995, when the Central Bureau of Statistics (CBS) switched to measuring the national accounts according to the SNA93 system. At the height of the previous recession, at the end of 2002 and the beginning of 2003, the rise in exports bolstered the domestic economy, while during the current recession the decline in exports is one of the main causes of the recession.

**Table 2**  
**GDP, Imports and Uses, 2005-09**

	(volume change from previous period, percent, seasonally adjusted, in annual terms)							
	2005	2006	2007	2008	2008:Q2	2008:Q3	2008:Q4	2009:Q1
GDP	5.1	5.2	5.4	4.0	3.4	0.7	-1.5	-3.7
Business sector output	6.2	6.4	6.2	4.4	3.7	0.3	-2.4	-5.2
Imports excluding defense imports, ships, aircraft and diamonds	5.3	5.4	13.5	6.7	-8.4	-0.4	-10.7	-46.0
Private consumption	3.9	4.0	6.7	3.9	-0.7	0.1	-4.3	-3.5
<i>of which: Private consumption excluding consumer durables</i>	4.0	3.7	5.5	3.4	3.8	3.2	-0.1	-1.6
Public consumption	1.7	2.7	2.9	2.8	-6.5	3.7	3.3	-6.9
<i>of which: Public consumption excluding defense imports</i>	0.7	2.0	3.5	2.9	-1.2	7.0	3.9	-8.1
Gross domestic investment	12.7	6.5	12.0	3.3	14.1	10.0	31.3	-9.6
<i>of which: Fixed investment</i>	2.9	9.9	15.5	5.1	-0.8	-10.7	-0.5	-15.9
Exports excluding diamonds	6.5	10.3	9.5	8.0	-11.2	1.6	-35.1	-31.4
<i>of which: Exports excluding diamonds and start-ups</i>	7.1	9.7	10.0	7.2	-6.4	3.3	-36.6	-33.0

SOURCE: Based on Central Bureau of Statistics data.

**Figure 8**  
**The Cyclical Component in Business Sector Output and in Consumption**  
(deviation from the HP trend of the log of the variables, quarterly data, seasonally adjusted)



SOURCE: Based on Central Bureau of Statistics data.

durables is volatile, sensitive to the business cycle, and acts in a similar way to investment.<sup>7</sup> Consequently, the contraction of demand for consumer durables is not unusual, but its extent—four consecutive quarters—reflects the gravity of the current recession. Current consumption, on the other hand, is smoothed over time, and is less sensitive to changes in the business cycle (Figure 8), so that a fall in it is unusual and indicates the extent to which consumer confidence has been affected.

**Preliminary indications for 2009:II attest to the moderation of the decline in consumption.** During 2009:II the decline in VAT returns and imports of consumer durables moderated, sales in retail chains rose slightly, in contrast with the continued decline in the index of revenues in the commerce and services industries. All these indicate that the decline in private consumption has moderated. In addition, the rise in share prices since the beginning of the year and the moderation of apprehensions regarding further economic decline, have led to a rise in the ‘Globes’ and ‘Bank Hapoalim’ indices of consumer confidence.

<sup>7</sup> In the National Accounts, the purchase of consumer durables is recorded as consumption at the time of purchase, even though their use, namely, the consumption of the services they provide, extends over several years.



## Investment

**In 2009:I fixed capital formation declined.** Fixed capital formation was down by 15.9 percent in 2009:I from 2008:IV, due to the sharp fall in nonresidential investment with some increase in residential construction. Whereas in 2008 the contraction of investment was evident mainly in vehicle imports, in 2009:I it was seen in imports of machinery and equipment. Imports of capital goods, which account for about half of nonresidential investment, continued to fall in 2009:II, albeit at a slightly more moderate pace. The severity of the decline in global demand that began at the end of 2008 is particularly prominent in the development of inventories—which are recorded as investment.<sup>8</sup> In 2009:I there was an exceptional rise in inventories, further to their increase in 2008:IV. The development of inventories and imports of capital goods indicate that investment has apparently declined in 2009:II, too.

## Imports and exports

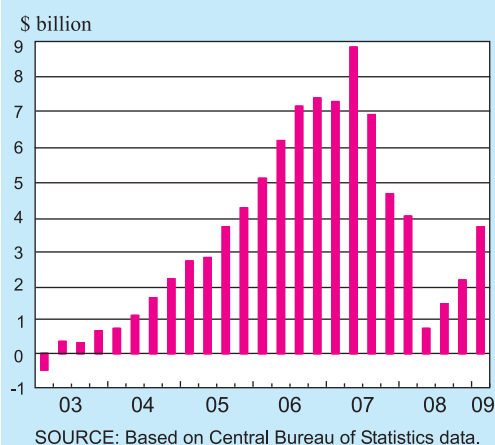
**Imports and exports fell in 2009:I alongside an expansion of the current account.** In 2009:I the seasonally-adjusted surplus on the current account rose to \$ 2.7 billion, compared with \$ 0.8 billion in 2009:I. This increase was accompanied by the contraction of foreign trade as regards both exports and imports, alongside an exceptional surplus in the trade balance. Nondiamond exports were down by 31.4 percent in 2009:I from 2008:IV, and civilian goods and services imports (excluding diamonds, ships and planes) fell by an even sharper rate—46 percent. The current account surplus in 2009:I stemmed from a marked improvement in the terms of trade—a sharp rise in export prices and a decline in prices of raw materials, especially oil. According to foreign trade indicators for 2009:II, the decline in imports has been checked and exports have begun to rise. The increase in exports stems from the expansion of goods exports and exports of the high-tech industry, primarily due to the inauguration of the new Intel plant. The stabilization of the effective real exchange rate during 2009:II, compared with depreciation in 2009:I, creates pressure to reduce the current account surplus.

## Public consumption and the budget

**Despite the decline in public expenditure, there was a budget deficit in the first half of the year, irrespective of the surplus**

<sup>8</sup> This means that due to the existence of excess production as a result of the contraction of demand, considerable investment in inventory has been recorded.

**Figure 9**  
**The Current Account, Running**  
**Four-Quarter Totals,**  
**2003:Q1-2009:Q1 (quarterly)**



**in the equivalent period in 2008. The deficit was the result of a sharp drop in tax receipts.** Public consumption was down by 6.9 percent in 2009:I from 2008:IV, public consumption excluding defense imports fell by 8.1 percent, and civilian public consumption dipped by 1.7 percent. The decline in public consumption stemmed from the failure to approve the budget in the first half of the year and the resulting expenditure restrictions. Over and above this, the repayment of an exceptional debt in 2009:I reduced permissible public expenditure still further. In 2009:II government expenditure rose, but was below the monthly limit of 1/12 of the previous year's budget. In view of the approval of the budget and the underperformance in the first half of the year, some increase in government demand is expected in the second half of the year. Domestic revenues in the first six months of 2009 were down by 15 percent in real terms from the equivalent period in 2008—primarily expressing the 12.9 percent fall in direct and indirect tax receipts in this period.<sup>9</sup> In addition, there was a decline in the surplus of the National Insurance Institution which is transferred to the government. This was due to the low rate of increase of receipts and the rise in expenditure on unemployment benefit. However, the extent of tax receipts was in accordance with forecasts, so that the decline in revenues is not expected to exert pressure for an expansion of the deficit this year beyond the level planned in the budget proposal, namely, 5.9 percent of GDP.

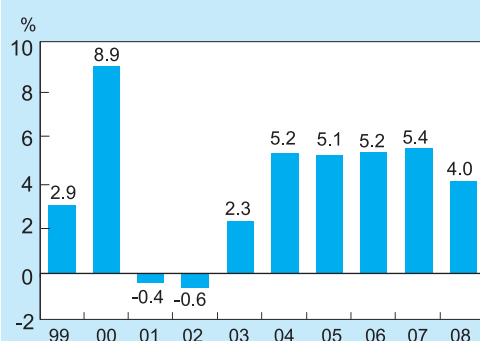
**The increase in indirect tax rates will contribute to a one-off rise in prices.** In order to meet the budget target, both the excise tax on fuel and the tax on cigarettes were raised at the end of the period reviewed. VAT was also increased by 1 percent for eighteen months (from 15.5 percent to 16.5 percent) as of July 2009. The increase in indirect taxes is expected to contribute to a rise in the level of prices, but not to an ongoing increase in the inflation rate.

## 2. Supply

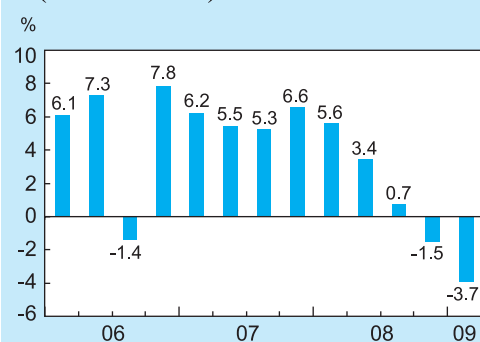
### GDP

**GDP contracted in 2009:I, albeit at a slower rate than the fall in domestic demand.** As a result of the contraction of demand, GDP was down by 3.7 percent in 2009:I from 2008:IV, and business-sector product fell at an even sharper rate, by 5.2 percent. The decline in GDP was more moderate than that in demand, because a large part of it was demand for imports (consumer durables,

**Figure 10**  
**GDP, Annual Growth Rates, 1999–2009**



**Quarterly Growth Rates,  
2006:Q1-2009:Q1**  
(in annual terms)



SOURCE: Central Bureau of Statistics.

<sup>9</sup> Adjusted for legislative amendments and one-off revenues.



raw materials, and capital goods). A survey of manufacturers' expectations shows that a considerable slowdown in economic activity was expected in 2009:II, and according to the Survey of Companies for 2009:II the rate at which the business sector contracted moderated considerably relative to the two preceding quarters. The Composite (State-of-the-Economy) Index also indicates that the slowdown moderated in the course of 2009:II, and in June it even rose, for the first time since July 2008.

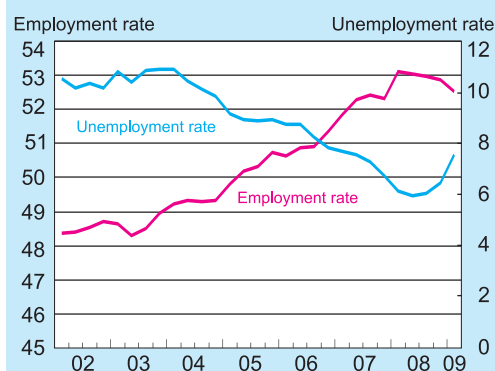
### The labor market

**The economic slowdown is evident in the rise in the unemployment rate, although preliminary indicators attest to some moderation of the deterioration in the labor market.**

The number of persons employed fell by 0.3 percent in 2009:I—8,000 employed persons—and the number of unemployed persons rose by about 35,000. Accordingly, the unemployment rate rose for the third consecutive quarter, to stand at 7.6 percent in 2009:I. Note that about 0.5 percent of the increase in the unemployment rate stemmed from the rise in the labor force participation rate. The rise in unemployment characterized both men and women, and encompassed all regions. The number of persons employed in the business sector remained virtually unchanged, while in the public sector it fell by 1.5 percent. Preliminary unemployment figures indicate that the upward trend persisted, and reached 8.4 percent in May. The Survey of Companies also shows that the demand for employees continued to decline in 2009:II, too. The Ministry of Industry, Trade and Labor's Survey of Employers indicates that there was a negative employment balance, i.e., the number of posts filled was lower than the number of employees dismissed, for the third quarter in succession, even though there was some improvement over the preceding two quarters. The number of work-seekers also rose, according to Labor Exchange data, alongside a decline in the demand for new employees. This picture is also supported by the Manpower index. By contrast, however, the number of hours worked per employee rose slightly in 2009:I, indicating that the deterioration in the labor market has been checked, because as economic activity recovers and grows, the rise in labor input is initially evident in the increase in hours worked per employee; only later do firms hire additional employees.

**Both the nominal and real wage were up in 2009:I over 2008:IV, but were below their level in the equivalent period in 2008.** The average real wage per employee post was up by 1.4 percent in 2009:I over 2008:IV, but 3.5 percent lower than in the equivalent period in 2008—a decline that was due primarily

**Figure 11**  
**The Employment Rate and the**  
**Unemployment Rate,<sup>a</sup>**  
**2002:Q1-2009:Q1**  
**(seasonally adjusted, quarterly, percent)**



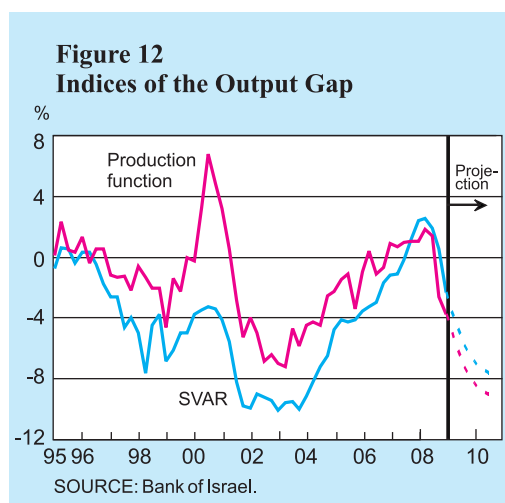
<sup>a</sup> Unemployment rate, percent of labor force; employment rate, percent of working-age population.

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

to the banking, commercial, and manufacturing industries. Similarly, the average nominal wage per employee post was up by 2.4 percent in 2009:I over 2008:IV, but 0.2 percent lower than in 2008:I. Unit labor cost in the business sector rose by 3.3 percent in 2009:I, after plunging by 23.5 percent in 2008:IV.

### Capital utilization

**Capital utilization fell in 2009:I.** The investment/capital ratio in the business sector fell below its long-term trend<sup>10</sup> in 2009:I. An investment/capital ratio that is below its trend indicates that the capital stock is higher than its desired level, and hence capital utilization is low. The decline in this ratio stemmed from the decline in investment in equipment, while investment in structures remained stable. According to the Survey of Companies, capital utilization in manufacturing continued to decline in 2009:II, too, albeit at a more moderate rate than in 2009:I. The increase in unemployment and decline in the overall number of hours worked also attest to the reduction in capital utilization.



### (3) The effect of real economic activity on prices

**In mid-2008 demand began to slow, the output gap widened, and hence inflationary pressure from the real economy was weakened.** The output gap expresses the difference between the economy's long-term potential production—supply—and actual demand. Actual GDP that is higher than the potential indicates that there is excess demand, which exerts inflationary pressure which is above its long-term level, while GDP that is lower than the potential indicates that there is excess supply in the economy, and inflationary pressure is low. According to the indices used by the Bank of Israel's Research Department, demand relative to potential production reached its peak in mid-2008, since when it has moderated (Figure 12).<sup>11</sup> Particularly prominent is the decline in indices of the output gap in 2008:IV and 2009:I—attesting to the moderation of inflationary pressures from the real economy side during this period. The output gaps derived from the growth and unemployment forecasts also support the assessment that the inflation environment will continue to remain moderate in the coming months.

<sup>10</sup> As measured by the HP trend.

<sup>11</sup> The Research Department uses three measurement methods: the production function system, the NAIRU (Non-Accelerating Inflation Rate of Unemployment), and the SVAR (Structural Vector Auto-Regression) system. For further information about the measurement systems, see Chapter 2 in Bank of Israel, Annual Report, 2008.

The decline in demand alongside the surplus in production capacity operate to expand the output gap and moderate inflationary pressures. The decline in demand and the slowdown in the rate at which it contracts indicate that the economy is approaching the nadir of the current business cycle. On the supply side, the decline in capital utilization indicates that there is surplus production capacity in the economy. These two factors—demand and supply—show that the output gap has widened in the last few months, and will continue to widen as long as actual economic growth is below its long-term rate. Consequently, inflationary pressures from the real economy in the coming months are expected to be most moderate throughout the business cycle. The low levels of unit labor costs and wages also support the assessment regarding the moderate inflation environment from the real economy.

#### d. Financial developments

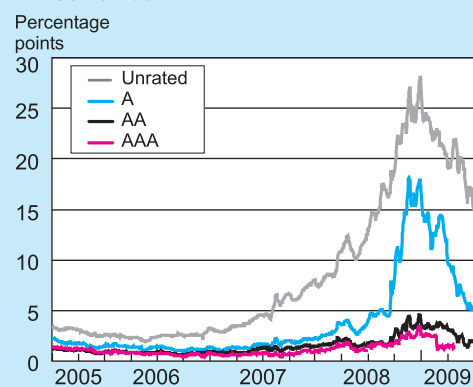
**In 2009:II prices of financial assets rose, but they reflect a higher level of credit risk than in the period prior to the crisis.**

As a result of the global financial crisis share prices on the Tel Aviv Stock Exchange (TASE) fell by about 35 percent during 2008:IV; however, since January 2009 they have been rising constantly, so that the decline following the worsening of the crisis in September 2008 has been almost completely offset. Note that the rise in share prices on the TASE outstripped the increases recorded in the stock markets of other developed countries. The recovery of share prices on the TASE could be seen inter alia against the backdrop of the Bank of Israel's interest-rate cuts, which made the share channel more attractive. Concurrently, during 2009:II the yield gap between CPI-indexed corporate bonds and indexed government bonds narrowed (Figure 13). Note that even though the gap is wider than it was before September 2008, it is not expected to return to its pre-crisis level, as it was too small then and did not accurately reflect the risk level of bonds. There has also been a decline in the volatility of the gap, primarily in bonds with a high rating. These developments reflect the process of risk pricing in the markets, the dispersal of uncertainty regarding the extent and depth of the crisis, and the contribution of monetary policy to the stabilization of the financial markets.

**The value of the public's asset portfolio grew in 2009:II, continuing its rise in 2009:I.<sup>12</sup>** In April and May 2009 the value of the public's asset portfolio was up by 4.9 percent over the 2009:I average primarily because of the rise in asset prices.

<sup>12</sup> The data in this paragraph are partial due to their limited availability.

**Figure 13**  
The Average Weighted Yield Gap between CPI-Indexed Corporate Bonds, by Rating, and Galil-type Government Bonds, July 2005 to June 2009



SOURCE: Based on Tel Aviv Stock Exchange data.

**Table 3**  
**The Domestic Assets Markets, October 2008-June 2009**

	10/08	11/08	12/08	01/09	02/09	03/09	04/09	05/09	06/09
<b>Yields to maturity (monthly average, percent)</b>									
3-month <i>makam</i>	3.6	3.0	2.1	1.3	0.6	0.5	0.4	0.4	0.3
1-year <i>makam</i>	3.5	3.0	2.0	1.5	1.1	1.1	0.9	1.1	1.3
Unindexed 5-year bonds	5.3	5.3	4.2	3.9	3.7	3.7	3.7	4.3	4.7
Unindexed 20-year bonds	6.8	7.0	5.9	5.7	5.5	5.3	5.5	6.0	6.3
CPI-indexed 1-year bonds	3.2	3.2	2.8	0.9	0.3	0.3	0.1	-0.7	-0.6
CPI-indexed 5-year bonds	3.7	3.8	3.2	2.3	1.8	1.5	1.3	1.6	2.0
CPI-indexed 30-year bonds	4.1	4.4	3.8	3.6	3.4	3.5	3.6	3.8	3.9
<b>Yield gap between governments bonds and</b>									
private bonds rated AA–AAA <sup>a</sup> (percentage points)	2.8	3.6	3.9	3.4	3.3	3.4	2.9	2.2	1.8
private unrated bonds exclud- ing real estate <sup>a</sup> (percentage points)	16.2	19.1	20.7	20.0	18.4	17.6	17.2	16.2	12.9
<b>Share market (percentage change during the month)</b>									
General share price index	-17.6	-5.8	-4.4	6.9	5.4	6.8	8.2	8.0	0.1
Tel Aviv 25 index	-18.2	-8.0	-1.9	0.9	0.8	9.4	11.5	8.5	-2.7
<b>Foreign currency market (percentage change during the month)</b>									
NIS/\$	10.6	3.6	-3.0	6.9	2.4	0.6	-0.6	-4.9	-0.6
NIS/€	-3.5	4.5	5.0	-1.2	0.7	5.7	-0.9	-0.9	0.7
Nominal effective exchange rate	2.0	3.1	1.0	2.0	0.5	3.0	0.6	-2.5	0.2
<b>Risk indices derived from the trade in NIS/\$ options in the Tel Aviv Stock Exchange (monthly averages, percent)</b>									
Implied standard deviation	19.5	19.5	18.7	19.8	17.3	13.1	11.9	13.9	15.3
Probability of depreciation great- er than 3%	16.2	22.0	20.3	18.0	15.9	8.8	6.0	8.1	9.6
Probability of appreciation great- er than 3%	17.7	12.1	12.0	16.9	12.1	7.3	6.1	10.4	11.7

<sup>a</sup> 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.

During this period the balance of assets of institutional entities continued to increase, returning to its August 2008 level. Total assets of the mutual funds also rose, in the context of positive net capital raised by funds specializing in shares and bonds, alongside negative net capital raised by the money funds. This trend began in February in the context of the low interest rate.

**The slope of the real yield curve on government bonds became steeper in the course of 2009:II.** Real yields on short-term government bonds (up to two years to redemption) are negative—their lowest level in the last decade. While this low yield, which derives from the low level of the Bank of Israel's interest, indicates the intensity of the crisis, it also helps the recovery from it. Real medium- and long-term yields (up to ten years) rose during 2009:II, although they are still lower than those

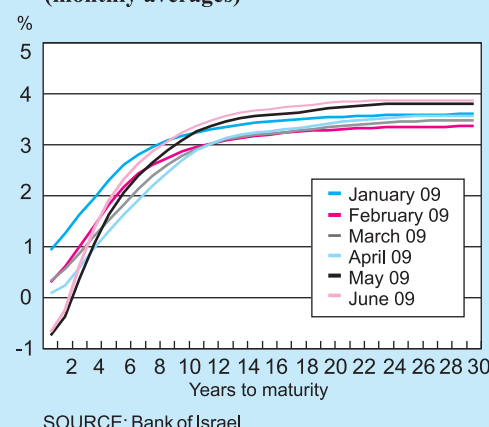
of the last decade. The increase in risk implicit in government bonds as a result of the expected rise in the budget deficit, as well as indicators of an imminent recovery, supported the rise in real yields for these terms, whereas the purchases of bonds by the Bank of Israel served to depress yields. These factors caused the slope of the yield curve to rise: the gap between the real yield on 10-year and 1-year bonds was 3.4 percent in 2009:II, compared with an average of only 0.4 percent throughout the last decade.

**The extent of nonbank credit taken by the business sector rose in 2009:II.** Nonbank borrowing, which was renewed at the beginning of the year, persisted during 2009:II, expanding significantly and even returning to its level in the first half of 2008, alongside a reduction in the yield gap relative to government bonds. The borrowing also included firms from industries which had not taken nonbank credit in the second half of 2008, and was also evident in firms whose credit rating was lower than in 2009:I. This increase in the range of firms taking nonbank credit alongside the decline in yield differentials attests to the decline in the market's assessment of risk. In 2009:II the banks' credit reserves for the business sector contracted. At the same time, banks' interest rates on new credit remained at their lowest level for ten years, and Survey of Companies data indicate that there has been some easing of banks' credit restrictions vis-à-vis firms. According to these findings, the decline in banks' credit balance to the business sector derives from the contraction of the demand for credit, against the backdrop of the reduction in economic activity and the revival of nonbank borrowing, rather than from the supply side.

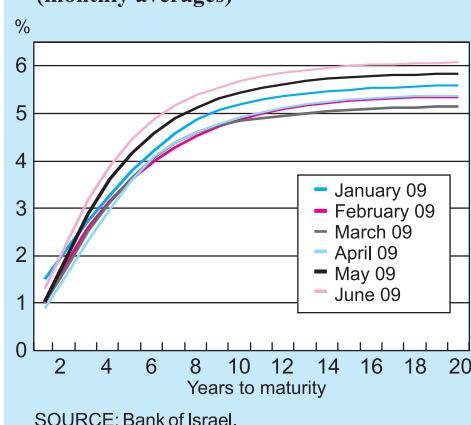
**In the context of expansionary monetary policy, the narrow monetary aggregates continued to expand at an exceptional rate.** With the steep interest-rate cuts since September 2008 and the fact that in April the Bank of Israel's key interest rate reached 0.5 percent—its lowest level ever—the growth rate of the various monetary aggregates accelerated (Figure 18). The monetary base and the narrow money supply (M1) expanded markedly, and in the last twelve months their growth rates have been faster than they were in the previous decade. The monetary base expanded by 28 percent and the narrow money supply by 56 percent. M2 also expanded, by 19 percent. Although this is a rapid growth rate, it is not exceptional relative to the previous decade; the component that supplements M1 to bring it up to M2 rose by 10 percent.<sup>13</sup>

<sup>13</sup> M2 consists of the narrow money supply (M1) and unindexed local-currency deposits of up to one year.

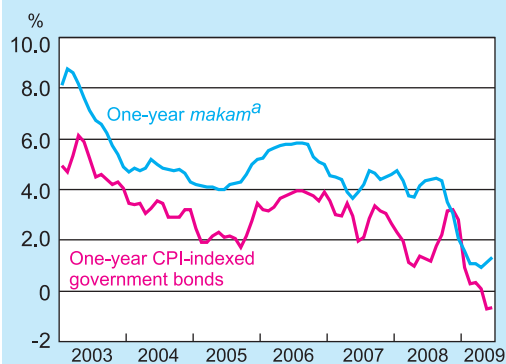
**Figure 14**  
**Yield To Maturity Curve of CPI-Indexed Bonds,**  
**January to June 2009**  
(monthly averages)



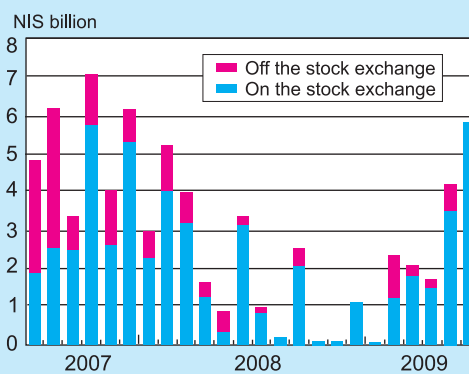
**Figure 15**  
**Yield To Maturity Curve of**  
**Unindexed Bonds,**  
**January to June 2009**  
(monthly averages)



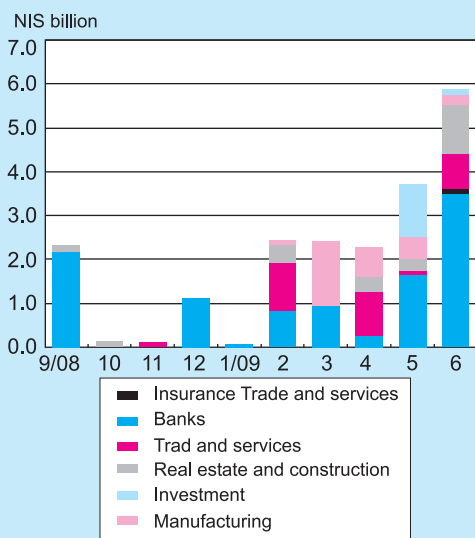
**Figure 16**  
Nominal and Real Yields to One Year,  
January 2003 to June 2009  
(monthly averages)



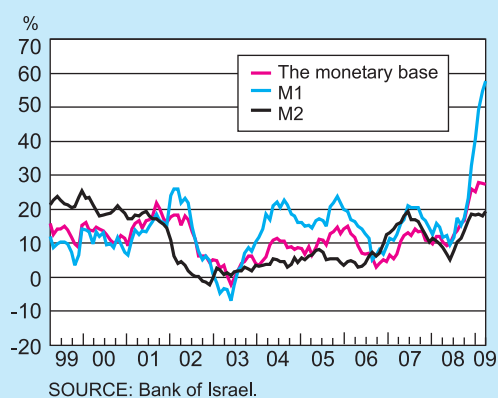
**Figure 17a**  
Capital Raised from Nonbank Sources,  
July 2007 to June 2009



**Figure 17b**  
Issues of Corporate Bonds,  
September 2008 to July 2009



**Figure 18**  
The Monetary Aggregates,  
March 1999 to June 2009  
(rates of change over previous  
twelve months)





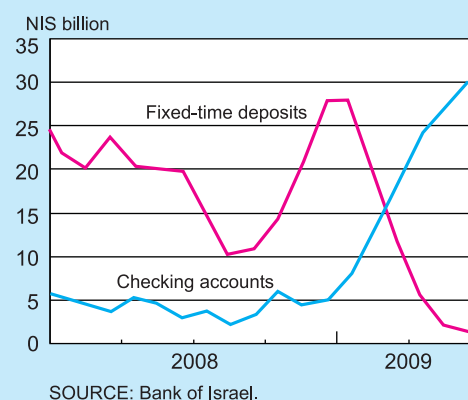
The expansion of the monetary aggregates could lead to inflationary pressures in the future, albeit at a lower level of intensity than those that derive from the exceptional expansion of the narrow aggregates. The steep rise in M1 vis-à-vis the other components of M2 attests to a shift in the composition of the public's asset portfolio from interest-bearing deposits to cash, in view of the low interest rate (Figure 19). The change in the composition of the portfolio suggests that the exceptional increase in the narrow monetary aggregates stems from the considerable flexibility of the demand for liquidity and hence does not create inflationary pressures, because once interest rises in the future, after demand has recovered, the cash component will be rapidly reduced. Monetary policy is confronted with the challenge of timing interest-rate increases correctly; if the timing is too late it could cause the inflation rate to overshoot the target range, while if it is too premature it could impair economic recovery.

#### e. Inflation in 2009:II

**During 2009:II the CPI rose, primarily due to the effect of seasonal factors and energy prices.** In 2009:II the CPI rose by 2.3 percent. The main factors behind the high CPI were seasonal, the most prominent among them being the 17.1 percent increase in the clothing and footwear item. The seasonally adjusted CPI rose by 1.4 percent. Energy prices, which rose by 8.0 percent in 2009:II, also contributed to the increase in the CPI; adjusting for energy prices the CPI rose by 1.9 percent. The rate of increase of the seasonally-adjusted CPI is higher than the upper limit of the government's inflation target range of 1–3 percent, and reflects an increase in the inflation environment, particularly in comparison with the moderate environment evident at the end of 2008.

**Inflation measured over the last 12 months is above the upper limit of the inflation target range, but its development during this period was not uniform.** Measured over the last 12 months, the CPI rose by 3.6 percent, and during 2009:II it remained near the upper limit of the inflation target. The development of inflation over the last year was not uniform. In 2008:III the seasonally adjusted CPI rose by 6.6 percent in annual terms. The high inflation rate during this period was due to the lagged response to the rise in global commodity prices, as well as to the fact that the economy was approaching full employment. In 2008:IV the inflation environment declined, while seasonally-adjusted prices remained unchanged. The decline in inflation stemmed from the economic slowdown and the sharp drop in global commodity prices. In the last six months the inflation rate has accelerated once more, and despite the downturn seasonally-

**Figure 19**  
**The Volume Change in Fixed-Time Deposits and Checking Accounts (previous twelve months)**



**Figure 20**  
**Inflation in Previous 12 Months, Inflation Expectations and Inflation Targets, 2001 to June 2009 (monthly averages)**

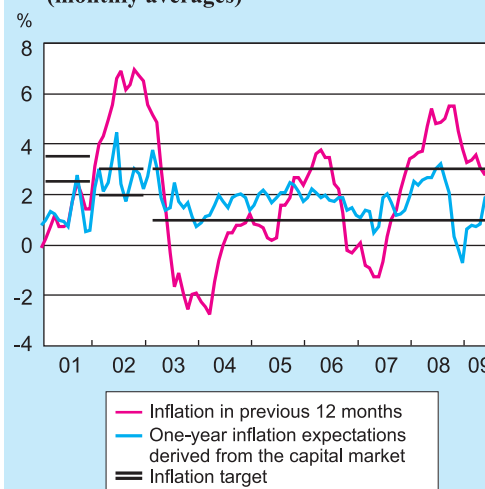
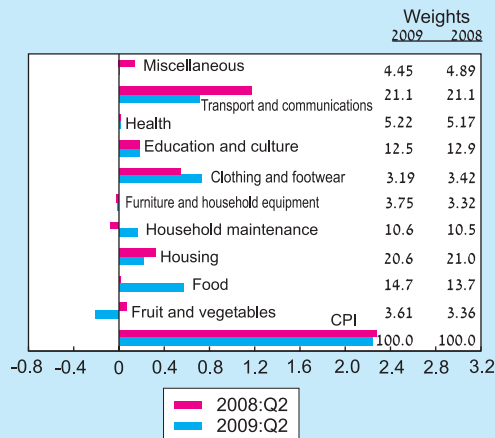
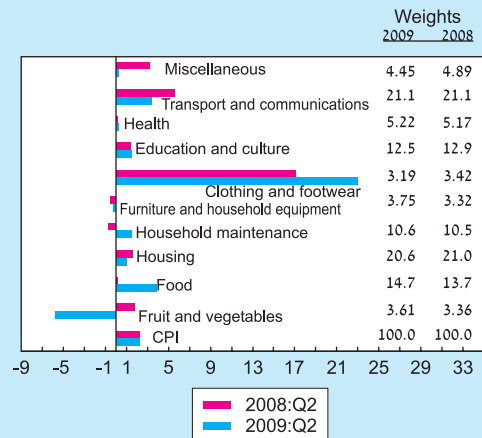


Figure 21

**Contribution of the Components of the CPI to the Changes in the CPI, 2008:Q2 and 2009:Q2 (percentage points)**



**Changes in the Components of the CPI, 2008:Q2 and 2009:Q2 (percent)**



SOURCE: Based on Central Bureau of Statistics data.

adjusted prices have risen at an annual rate of 4.0 percent. Housing prices also contributed to the development of the CPI in the last year; the CPI excluding housing rose by 0.3 percent in the last year, compared with a 3.6 percent increase in the general CPI, as stated.

**Housing prices rose despite the economic slump.** In 2009:II the price of housing in the CPI rose by 1.5 percent, and in the last 12 months it has gone up by 16.8 percent. The housing item in the CPI largely reflects changes in rents, and in the past, as a result of the practice of denominating rents in dollars, it reflected exchange-rate shifts. In the last two years, however, with the shift to rents quoted in local currency, the link between housing prices and the dollar exchange rate has weakened, and in 2009:II housing prices in the CPI rose despite local-currency appreciation against the dollar. In 2009:I apartment prices rose by 3.6 percent, in the context of the reduction of mortgage interest and the low level of the Bank of Israel's key interest rate. Price increases in the housing market, both rents and purchases of dwellings, are surprising in view of the slowdown in real economic activity.

**Wholesale prices reflect a lower inflation environment than do consumer prices.** The index of wholesale prices rose by 1.6 percent in 2009:II, after falling in the three preceding quarters. In the last 12 months the wholesale price index has fallen by 10.3 percent, most of the decline being due to the decline in prices in 2008:IV. Commodity prices constituted the major factor contributing to the development of the index. Wholesale prices are consistent with global commodity prices and respond to their



**Table 4**

**Changes in Selected Components of the Consumer Price Index (CPI), their Weights, and their Contribution to the CPI,**

	Weight in index	Previous 12 months		2009:Q2 <sup>a</sup>	
		Rate of change in index	Contribution to CPI	Rate of change in index	Contribution to CPI
<b>CPI</b>	<b>100.0</b>	<b>3.6</b>	<b>3.6</b>	<b>9.4</b>	<b>9.4</b>
Housing	20.7	16.8	3.5	6.3	1.3
Food (excl. fruit and vegetables)	14.8	1.1	0.2	0.4	0.1
Energy	7.7	-7.3	-0.6	36.0	2.8
Fruit and vegetables	3.6	1.0	0.0	7.5	0.3

<sup>a</sup> Annual rate.

SOURCE: Based on Central Bureau of Statistics data.

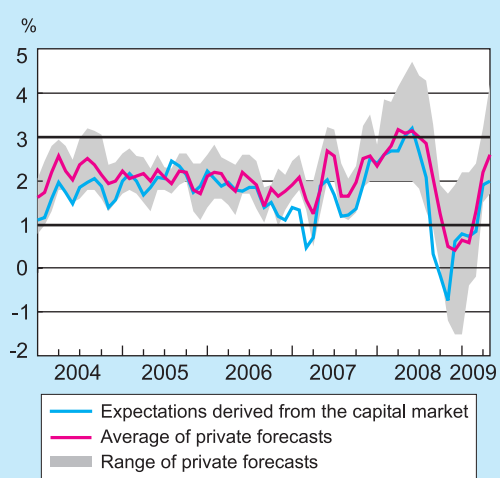
development with a lag of several months; consequently, they are expected to rise in the next few months.

**During 2009:II inflation expectations derived from the capital market and forecasters' predictions rose, stabilizing in the middle of the inflation target.** With the exacerbation of the financial crisis in 2008:IV, expected inflation for the next 12 months derived from yields in the capital market plunged, and in December they reflected negative inflation, of -0.7 percent. Once relative calm had been restored to the capital markets, in 2009:I, expectations began to rise, and in the last two months of 2009:II they ranged around the middle of the inflation target range—at about 2 percent. Forecasters' predictions of inflation for 12 months ahead also rose, from 0.5 percent in December 2008 to 2.0 percent during 2009:II (Figure 22). The range of private forecasters' predictions widened markedly during the last year, reflecting the difficulties of forecasting inflation during this period.

**Expected inflation in the medium and long term remained stable.** Since the exacerbation of the crisis in September 2008 inflation expectations for four years ahead and longer have remained relatively stable, and during the period as a whole they varied within the upper half of the inflation target. Towards the end of 2009:II expectations for these terms stabilized at about 2.5 percent.<sup>14</sup> In view of the recent shocks to the economy, the stability of expectations reflects the credibility of monetary policy in the public's eyes, and the government's commitment to keeping inflation within the bounds of the target range.

<sup>14</sup> Since mid-February the Bank of Israel has been buying government bonds in the secondary market. As a result of this intervention and since its inception, there is a possibility that the yield gap between CPI-indexed and unindexed bonds does not accurately reflect the public's inflation expectations.

**Figure 22**  
**Inflation Expectations for the Next Year Derived from the Capital Market and According to Private Forecasters, 2004 to June 2009<sup>a</sup>**



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

SOURCE: Private forecasters' reports and Bank of Israel.

## 2. MONETARY POLICY

**The various indicators available to the Bank of Israel during 2009:II endorsed the maintenance of expansionary monetary policy.** The deceleration of the slowdown in economic activity, the stabilization of the inflation environment within the target range, and the low level of global interest rates all supported the maintenance of expansionary monetary policy in order to attain the inflation target and financial stability as well as to stimulate

**Table 5**  
**The Inflation Environment and Interest Rates, October 2008 to June 2009**

	(monthly averages)								
	10/08	11/08	12/08	01/09	02/09	03/09	04/09	05/09	06/09
<b>Inflation environment (percent)</b>									
Monthly change in CPI	0.1	-0.6	-0.1	-0.5	-0.1	0.5	1.0	0.4	0.9
Forecasters' predictions of monthly CPI (average of forecasts prior to publication of CPI)	0.2	-0.2	-0.4	-0.5	-0.3	0.2	0.7	0.6	0.4
Annual change in CPI	5.5	4.5	3.8	3.3	3.4	3.6	3.1	2.8	3.6
One-year inflation expectations derived from the capital market	0.3	-0.1	-0.7	0.6	0.8	0.7	0.9	1.9	2.0
Forecasters' one-year inflation predictions	2.0	1.3	0.4	0.3	0.5	0.6	1.5	2.2	2.6
<b>Forward inflation expectations<sup>a</sup> to different terms</b>									
Short term (second and third years forward)	1.5	1.4	0.7	1.4	2.0	2.1	2.2	2.9	2.9
Medium term (fourth to sixth years forward)	2.2	2.3	2.2	2.2	2.1	2.9	3.3	2.6	2.7
Long term (seventh to tenth years forward)	3.1	3.4	3.1	2.8	2.4	1.9	2.0	2.2	2.4
<b>Interest rates and interest rate differentials</b>									
Bank of Israel interest rate	4.0	3.2	2.5	1.7	1.0	0.7	0.5	0.5	0.5
Derived real interest rate	3.6	3.4	3.3	1.1	0.2	0.0	-0.3	-1.4	-1.4
Short-term interest rate differential between Israel and the US (prior to decision for the next month's rate)	2.4	2.2	1.9	1.5	0.8	0.5	0.3	0.3	0.3
Short-term interest rate differential between Israel and the eurozone (prior to decision for the next month's rate)	-0.2	-0.2	-0.3	-0.3	-1.0	-0.9	-0.8	-0.5	-0.5
Forecasters' predictions of nominal interest rate for next month (prior to the decision)	-0.2	-0.4	-0.6	-0.4	-0.5	-0.1	0.0	0.0	0.0
Forecasters' predictions of interest rate a year hence	4.4	2.1	1.9	1.6	1.0	1.0	1.0	1.3	1.7
Long-term (10-year) nominal interest rate differential between Israel and US	2.5	3.1	3.1	2.8	2.5	2.1	2.1	2.3	2.1
Long-term (10-year) real interest rate differential between Israel and US	1.1	1.2	1.2	1.2	1.1	1.0	1.1	1.3	1.3

<sup>a</sup> 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.

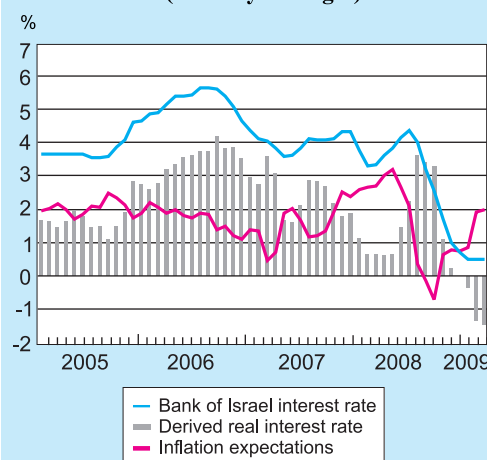
SOURCE: Based on Central Bureau of Statistics data and private forecasters' reports.

economic activity. This is the first quarter since the worsening of the crisis in September 2008 in which there have been positive indicators on both the financial and the real economic sides.

**In 2009:I the Bank of Israel adhered to expansionary monetary policy.** Recently the monetary policy has been based on three main instruments: the interest rate, purchases of foreign exchange, and purchases of government bonds. 1. The interest rate: after steep interest-rate cuts in the two preceding quarters, the Bank of Israel reduced its key interest rate by 0.25 percentage points to 0.5 percent in April, since when it has remained unchanged. 2. Foreign-exchange purchases: during 2009:II the Bank of Israel bought an average of \$ 100 million a day. In addition, it reduced the absorption of the excess liquidity resulting from the foreign-exchange purchases by issuing Treasury bills, and excess liquidity was mopped up via banks' interest-bearing deposits in the Bank of Israel—deposits which are not part of the monetary base. 3. Purchases of government bonds: since mid-February the Bank of Israel has been buying government bonds in the secondary market. Once the Bank had met its target for purchases—NIS 15–20 billion—it announced that these would cease at the beginning of August.

**Because of the low level of the Bank of Israel's key interest rate the pass-through from it to commercial banks' interest rates was weakened; this made it necessary for the Bank to act through additional channels.** The commercial banks maintain a spread between the average interest on the public's deposits and the average interest rate at which they extend credit. Following the decline in the Bank of Israel's key interest rate the commercial banks' scope for acting to determine the interest on deposits, at least in the short term, has been restricted, as it cannot be negative and is almost zero, although the Bank of Israel's key interest rate is still positive. Given this situation, in view of the fact that the banks seek to maintain a spread between borrowing and lending rates, a further reduction in the Bank of Israel's key interest rate is not transmitted into an equivalent decline in the cost of new bank credit. As a result, interest-rate policy becomes less effective, and if additional monetary expansion is required all that remains is to use the instruments that affect the prices of assets other than bank deposits, such as purchasing foreign currency and government bonds. Note that from the standpoint of monetary policy, the minimum rate of Bank of Israel interest is not necessarily zero, but the rate below which further interest rate cuts are not transmitted into a reduction in other interest rates. Hence, the Bank of Israel has kept the interest rate at 0.5 percent during 2009:II, and has not continued to reduce it towards zero.

**Figure 23**  
**The Bank of Israel Interest Rate,<sup>a</sup>**  
**Inflation Expectations,<sup>b</sup> and the**  
**Derived Real Interest Rate, 2005 to**  
**June 2009 (monthly averages)**



<sup>a</sup> The effective interest rate in the Bank of Israel auctions.

<sup>b</sup> For 12 months, derived from the capital market.

SOURCE: Bank of Israel.

**Foreign-exchange purchases continued during 2009:II.** In accordance with the Bank of Israel's policy, foreign-exchange purchases continued at the rate of \$ 100 million a day. Since the inception of these purchases in March 2008 the Bank of Israel has bought about \$ 22.5 billion, and at the end of 2009:II the foreign reserves stood at \$ 50 billion. Over and above the increase in the reserves and their contribution to the reduction of Israel's risk premium, foreign-exchange purchases bolster the exchange rate and hence also exports. Further to its activity in 2009:I, the Bank of Israel has also reduced the Treasury-bill issues intended to absorb the excess liquidity created by its foreign-exchange purchases; this was done even though the effect of this activity on the monetary base is minimal as, given the Bank of Israel's key interest rate, in the final event the banks' excess liquidity is mopped up via the auction for monetary deposits.

**Since mid-February the Bank of Israel has been buying government bonds in the secondary market in order to influence medium- and long-term interest rates. These purchases of government bonds will come to an end at the beginning of August.** The Bank of Israel determines only the short-term interest rate, and changes in it usually lead to similar shifts in the interest rates for all other terms. In recent months, as a result of the low level of the Bank of Israel's key interest rate, the Bank's influence on medium- and long-term interest via cuts in the short-term interest rate has diminished. Consequently, in February the Bank began buying government bonds in the secondary market in order to have a direct effect on yields for these terms. At first the purchases were relatively limited, but rose subsequently to NIS 200 million a day, and to date government bonds in the amount of NIS 18 billion have been bought. These purchases have contributed to reducing the spreads between corporate bonds and government bonds, putting the capital market on a more even keel, and in particular renewing issues and borrowing by the business sector. However, the effectiveness of government bond purchases appears to have been restricted primarily to the period close to the Bank's announcement of its intention to pursue this policy. Once the Bank had met its target for purchases—NIS 15–20 billion—it announced that the purchases would cease at the beginning of August.

### 3. REVISED FORECAST

#### a. The global environment

**The global crisis is approaching its nadir, but the recovery is expected to be slow, with a low rate of inflation.** At the

beginning of July the IMF revised its prediction for global growth in 2010 upwards to 2.5 percent, and to 0.6 percent for the developed economies—the first positive revision in over a year. For 2009 the forecast has remained virtually unchanged—global GDP will contract by 1.4 percent and by 3.8 percent in the developed countries. The OECD has also revised its forecast of global growth upwards for the first time in two years. Growth in the OECD countries in 2009 is expected to be negative, -4.1 percent, and in 2010 some recovery is expected with 0.7 percent growth. Economists in the IMF and the OECD predict that the global economy is near the low point of the recession, but recovery from it will be slow. The US Fed also assesses that the recovery of the US economy will begin towards the end of 2009, but will be slow, and the return to the long-term growth path is expected to occur only in another five or six years. The slowdown in economic activity is predicted to be accompanied by moderate inflation of about 0.6 percent in the OECD countries in 2009, compared with 3.2 percent in 2008, and inflation in the US is expected to be 0.2 percent, as compared with 3.8 percent in 2008.

**Central banks' interest rates are expected to remain low at least until the end of 2009.** In view of the deterioration in economic activity and the decline in inflationary pressures, the central banks of the developed countries have slashed interest rates sharply and frequently. The low level of global interest rates is expected to be maintained as long as real economic activity does not recover, namely, at least until the end of 2009.

**Table 6**  
**GDP Growth in 2008, and IMF Forecasts for 2009 and 2010**

	2008	2009	2010
<b>Average GDP growth, percent</b>			
Global	3.1	-1.4	2.5
Advanced economies	0.8	-3.8	0.6
US	1.1	-2.6	0.8
EU	0.8	-4.8	-0.3
Japan	-0.7	-6.0	1.7
Emerging markets	6.0	1.5	4.7
<b>Inflation (annual average, percent)</b>			
Advanced economies	3.4	0.1	0.9
US*	3.8	-0.9	-0.1
EU*	3.3	0.4	0.6
Japan*	1.4	-1.0	-0.6
Emerging markets	9.3	5.3	4.6

\* World Economic Outlook, April 2009.

SOURCE: IMF World Economic Outlook Update, July 2009.

## b. Real economic activity in Israel

**2009 is expected to go on record as a year in which economic activity contracted vis-à-vis 2008. Recovery is expected in 2010. The forecast of real economic activity has remained unchanged since the previous Inflation Report.** Against the backdrop of the global recession economic activity in Israel is expected to remain moderate for the rest of the year, although the contraction of GDP appears to have been checked. In 2009 GDP is expected to contract by 1.5 percent. The expected decline in GDP derives from an anticipated 7.1 percent fall in nondiamond exports and 0.9 percent reduction in private consumption. The average unemployment rate in 2009 is predicted to be 7.7 percent, compared with 6.1 percent in 2008. The assessment is that the budget deficit will reach about 6 percent of GDP in the wake of the sharp drop in tax receipts. In 2010, against the backdrop of the expected stabilization of global trade and rise in public consumption, recovery is expected: GDP will grow by 1 percent on average. However, the unemployment rate is expected to remain high, and to average 8.3 percent. The significance of these developments, if they are realized, is that the output gap will widen in the next eighteen months, inflationary pressures will be low, below the long-term trend, and prices may even fall.

**Table 7**  
**Economic Indicators for 2008, and Bank of Israel Forecasts for 2009 and 2010**

(rates of change, percent, unless stated otherwise)

	Actual	Forecast	
	2008	2009	2010
GDP	4.0	-1.5	1.0
Private consumption	3.9	-0.9	2.2
Gross domestic investment	3.3	-7.1	-8.3
Public consumption	2.8	3.1	1.1
Imports (civilian, excluding diamonds)	6.7	-6.2	-0.3
Exports (excluding diamonds)	8.0	-7.1	3.1
Current account (\$ billion)	1.6	3.2	2.0
Unemployment rate	6.1	7.7	8.3
Public deficit (percent of GDP) <sup>a</sup>	2.4	5.9	5.5
Gross debt/GDP ratio (percent of GDP) <sup>a</sup>	78.0	84.4	87.4

<sup>a</sup> Excluding the Bank of Israel.

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

## c. Assessments regarding the exchange rate and the balance of payments

**The current account surplus and global pressure for a weaker dollar are expected to strengthen the NIS. In 2009 the current**

account is expected to have a surplus of \$ 3.2 billion, compared with \$ 1.6 billion in 2008, in the context of the improvement in Israel's terms of trade. The moderation of economic activity is expressed in foreign trade in the reduction of both imports and exports. The surplus on the current account is expected to create pressure for local-currency appreciation. The monetary expansion in the US is expected to weaken the dollar worldwide, thereby contributing to the strengthening of the NIS vis-à-vis the dollar. On the other hand, if the foreign-exchange purchases by the Bank of Israel persist they will serve to offset the pressure for local-currency appreciation.

#### **d. Assessments regarding the development of inflation and the balance of its risks**

**In accordance with market assessments, the inflation rate in the next 12 months is expected to be near the middle of the inflation target range.** In view of the recovery in the financial markets, the slower rate at which economic activity in Israel has contracted and the rise in the actual inflation rate, the predictions of inflation in the next 12 months by the various entities have risen to the middle of the inflation target range (Table 8). The predictions in the Survey of Companies are higher, averaging 2.7 percent.<sup>15</sup> Note that in 2009:II the distribution of assessments shifted upwards: about 27 percent of participants in the survey estimated that inflation in the next 12 months would be above the upper limit of the target, compared with 1 percent in the previous report, 68 percent estimated that inflation would be within the limits of the target range, compared with 73 percent in the previous report, and 5 percent estimated that inflation would be below the lower limit of the target range compared with 26 percent in the previous report.

**The forecast by the Bank of Israel's central model shows 1.6 percent inflation in the next 12 months and a rise in the interest rate only in 2010:II.** The change in the economy's

**Table 8**  
**Assessments of Inflation over Next Twelve Months (percent)**

	Target	Capital market	Private forecasters	Companies Survey	Bank of Israel's model
Average	2	2.0	2.6	2.7	1.6
Range	1–3		1.7–4.2	1.0–4.5 <sup>a</sup>	

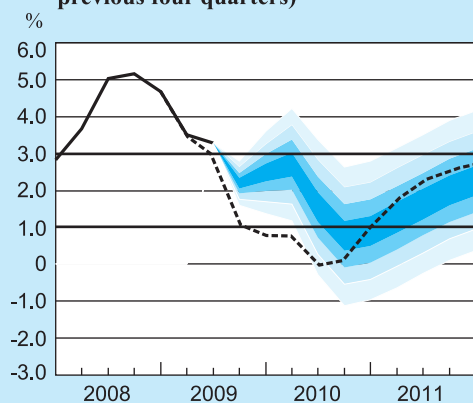
<sup>a</sup> Covering 90 percent of the inflation expectations (excluding the tails).

SOURCE: Bank of Israel.

<sup>15</sup> Adjusting for the influence of the distribution tails—5 percent to each side.



**Figure 24**  
**Actual Inflation and Fan Chart<sup>a</sup>**  
**of Expected Inflation,<sup>b</sup> 2008–11**  
 (rate of cumulative price increases in  
 previous four quarters)

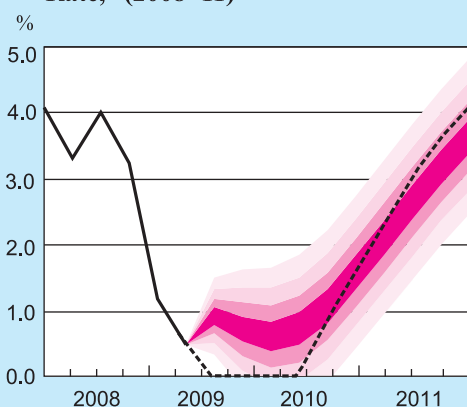


<sup>a</sup> The full fan covers 66 percent of the distribution of the expected inflation.

<sup>b</sup> The dotted line is the middle of the fan chart shown in the previous Inflation Report (No. 26, January to March 2009).

SOURCE: Bank of Israel.

**Figure 25**  
**Actual Bank of Israel Interest Rate**  
**and Fan Chart<sup>a</sup> of Expected Interest**  
**Rate,<sup>b</sup> (2008–11)**



<sup>a</sup> The full fan covers 66 percent of the distribution of expected interest rate.

<sup>b</sup> The dotted line is the middle of the fan chart shown in the previous Inflation Report (No. 26, January to March 2009).

SOURCE: Bank of Israel.

underlying conditions in 2009:I led to a change in forecast inflation and the interest-rate path derived from the models used by the Bank of Israel. The revised forecast assumes, inter alia, that the extent of world trade will contract by 12 percent on average in 2009 and grow by 1 percent in 2010; that central banks all over the world will keep interest rates low until the end of the year, gradually raising them starting in 2010; that the global crisis will continue to impact on real domestic economic activity; and that the rate of indirect taxes will rise, in accordance with the government's decision.<sup>16</sup> These assumptions produce forecast inflation of 1.6 percent in the next 12 months, compared with 0.8 percent in the previous report. The upward revision of the forecast stems primarily from the increase in global goods prices in 2009:I, beyond the rise predicted in the previous report, as well as from the increase in indirect tax rates in accordance with the government's decision. Indirect taxes have a one-off effect on the level of prices, so that when the change in the CPI is measured over 12 months their effect is not evident after a year, and the inflation path derived from the model declines starting from 2010:II (Figure 24). Because of the rise in forecast inflation the interest-rate path that is expected now is above the path obtained in the previous report; however, the increase in interest is expected in accordance with the model only in 2010:II (Figure 25), once the output gap in the model starts to contract.

**In 2009:II inflation risks balanced, and the existing trends indicate that inflation will rise to a level that is consistent with the inflation target set by the government.** The persistence of existing trends—the moderation of the global crisis and of the slowdown in economic activity, the rise in goods prices, and the weakening of the dollar worldwide—indicates that the inflation environment can shift upwards from a moderate, and even deflationary, environment to one that is higher, and which currently appears to be consistent with the inflation target. On the other hand, slow recovery from the crisis will keep demand at a moderate level, widen the output gap, and hence inflation might deviate from the lower level of the target range. Given the present forecasts, it would seem that the scenario in which inflation remains within the target range is more reasonable. In addition, the expected expansion of the budget deficit and the rapid rise in the monetary aggregates could create inflationary pressures, so that special attention must be paid to these issues by policymakers.

<sup>16</sup> In July VAT increased by 1 percent, and a levy will be imposed on water use that exceeds a certain level. This comes after the hike in the tax on cigarettes in May.