Bank of Israel

INFLATION REPORT

April-June 2010

31

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Bank of Israel

3 August 2010

Letter of the Governor accompanying the Inflation Report for April–June 2010

This Inflation Report, covering the second 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.*

The CPI rose by 1.5 percent in the second quarter of 2010, mainly due to seasonal factors. The CPI excluding the seasonal components—fruit and vegetables and clothing and footwear—rose by 0.7 percent. The housing component, which reflects the price of housing services by means of apartment rentals, increased by 2.3 percent in the second quarter, faster than the other components. The rate of inflation over the previous twelve months moderated in the second quarter to 2.4 percent, after a lengthy period in which it was close to or even above the upper limit of the target inflation range.

In the first quarter, the recovery in real global activity and world trade continued, led by the U.S. and the emerging market economies, while growth in Europe was slower. Against the background of the lower than potential level of activity and relatively high unemployment rates, the global inflation environment remained low.

The fiscal debt crisis in several countries, mainly in South Europe, became more severe in the second quarter, leading to a significant rise in the level of uncertainty in the financial markets around the world, including Israel's. This was most notable at the beginning of the second quarter, until the EU and the IMF announced the availability of funds to assist countries in financial difficulties in the euro zone, and until these countries started to tighten fiscal policies to deal with the crisis. These halted the decline in the financial markets, but the level of uncertainty remained high.

Economic activity in Israel continued to expand in the second quarter, although some of the indicators relating to that quarter point to a slowdown in the rate of expansion. Available data indicates that although domestic demand continued to grow, the increase in exports, which are affected directly by developments around the world, slowed. The recovery trend was also evident in the labor market, with a decline in the rate of unemployment and an increase in the real wage.

The fiscal crisis in some European countries is likely to have an impact on Israel's economy due to its potential effect on the demand for Israel's exports and the effect on Israel's capital markets due to its close links with financial markets around the world.

The shekel appreciated in both nominal and real terms during most of the second quarter; however, in mid-June the trend reversed, and the shekel depreciated until the end of the quarter and in July. Purchases of foreign currency by the Bank of Israel in April and May served to moderate the appreciation of the shekel in those months. In June the Bank of Israel did not intervene in the foreign currency market.

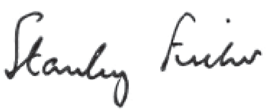
The Bank of Israel's monetary policy in the second quarter was set in the framework of the process of returning the interest rate to a normal level appropriate to the economic conditions and the inflation environment. At the same time the heightened uncertainty regarding the global economic situation and its effect on Israel's economy was reflected in a slowing of the pace of increases in the interest rate in the second quarter. The Bank of Israel interest rate was increased by 25 basis points in April 2010 to 1.5 percent, and was left unchanged until July. For August the interest rate was increased by 25 basis points to 1.75 percent. The downward trend in inflation, measured over the previous twelve months, towards the midpoint of the inflation target range, the increased uncertainty about the rate of Israel's economic recovery later in the year, and the expectation that the major central banks around the world would leave their interest rates at low levels for a considerable time, all lent support to the decision to leave the interest rate unchanged in the second quarter.

To moderate the continued steep increase in housing prices at the beginning of 2010 and the rapid growth of housing credit, affected among other things by the low rate of interest, and to support financial stability, the Supervisor of Banks issued a directive which went into effect on July 1, instructing banks to investigate their housing credit closely, and requiring an additional provision for housing loans with a high loan-to-value ratio. This step is in accord with the approach that in order to implement the central bank's policy, macroprudential tools should be employed in addition to the usual monetary instruments, to deal with issues related to financial stability. The use of such tools enables a more focused effect than can be achieved by changes in the interest rate, which have broader implications for the economy as a whole.

The inflation rate in the next twelve months is expected to be in the upper part of the inflation target range, and growth is expected to be slightly below 4 percent, so that the negative output gap will contract a little. Nevertheless, due to uncertainty about the development of the crisis in Europe and its effect on the global economy and on Israel's economy, economic activity and inflation may deviate significantly from the forecasts. The development of housing prices in the near future is also expected to affect the inflation rate.

The Bank of Israel will continue to monitor developments in Israel and world wide and will act to maintain inflation within the target, while supporting real economic activity and the maintenance of financial stability. The path of the interest rate will continue to be determined in accordance with the inflation environment, the situation in Israel's economy, global developments, including the path of global interest rates, and developments in the exchange rate of the shekel.

The Knesset passed the new Bank of Israel Law in March 2010, and it became effective in June. The new law provides the legal basis for the independence of the Bank of Israel, by clearly defining the Bank's objectives, its functions, its decision-making methods, and the tools the Bank can use for achieving its objectives and how they can be operated. The Law sets the maintenance of price stability as the main goal of the central bank , together with the support of other objectives of the Government's economic policy and the support of the stability of the financial system When the Monetary Committee is appointed in accordance with the Law, monetary policy decisions, including decisions on the interest rate, will be made by the Committee.



Stanley Fischer
Governor, Bank of Israel

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Summary*

- **Inflation**: The CPI rose by a cumulative 1.5 percent in the second quarter of 2010 (the period reviewed in this Report). Much of the increase in the index was due to seasonal price increases—mainly in the fruit and vegetables and clothing and footwear components of the index. The CPI excluding those items rose by 0.7 percent. The annual inflation rate dropped in the course of the quarter, and in June it was 2.4 percent—within the inflation target range. Inflation expectations for all terms showed slight increases, and remained in the upper part of the target range.

- **The global economic environment**: The fiscal debts crisis became more severe in the quarter reviewed, leading to an increase in the risk level in the financial markets, and a slump in prices of financial assets. The deterioration led to the European Union (EU) and the IMF announcing an aid package for countries with debt crises. This had the effect of halting the drop in asset prices, but the level of uncertainty remained high. The global economic recovery continued in the second quarter, but not uniformly: the rate of recovery in the U.S. and in the emerging market economies was higher than that in Europe.

- **Real activity**: In the first quarter of 2010 Israel's economy continued to recover, based on increases in private consumption and exports, and the negative output gap contracted. Indicators of activity in the second quarter point to a slowdown in the rate of recovery against the background of the slowdown in exports.

- **The exchange rate**: Exchange rate developments in the second quarter were not uniform. At the beginning of the quarter the nominal effective exchange rate showed shekel appreciation, against the background of the weakness of the euro, the surplus in the balance of payments and the interest rate differential between Israel and other countries. In this period the Bank of Israel continued to intervene in the foreign currency market when the shekel appreciated exceptionally. The trend reversed at the end of the quarter, and the nominal effective exchange rate reflected sharp depreciation of the shekel. During the quarter there was moderate depreciation of the shekel, in terms of the nominal effective exchange rate.

- **The financial markets**: Prices of financial assets in Israel dropped markedly in the second quarter, against the background of growing severity of the fiscal debt crises in Europe. At the same time financial risk increased, and investors switched to safer investment channels. As in the financial markets in other countries, in Israel too the fall in prices of financial assets halted in June, but uncertainty remained at a high level.

- **Monetary policy**: In the quarter under review the Bank of Israel continued with the adjustment of the pace of monetary expansion to the rate of economic recovery, intended to entrench the rate of inflation firmly within the target range, and to contribute to the continuation of the recovery while supporting financial stability. Against the background of the deterioration in the fiscal debt crisis and the consequent developments, the pace of increases in the interest rate was reduced in the second quarter. The interest rate for April was increased by 25 basis points to 1.5 percent, and was kept at that level from May to July. The rate for August was increased by 0.25 percentage points. In light of the rapid rise in house prices, and since most indicators justified leaving the interest rate at a low level, the Bank of Israel introduced macroprudential measures to deal with the rise in housing prices because of its potential effect on the stability of the financial system.

- **The Bank of Israel forecast**: The Bank of Israel assessment is that inflation in the next twelve months will be about 2.6 percent. The effective shekel appreciation in the last few months and the negative output gap that still exists—the effect of the global crisis on economic activity in Israel—will help to restrain inflationary pressures. The Bank's assessment of growth in Israel in 2010 is 3.7 percent, and in 2011, 4.0 percent, so that the output gap will narrow in those years. The unemployment rate is expected to continue to decline moderately. These forecasts are expected to be realized along with the gradual process of increases in the Bank of Israel interest rate.

* 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

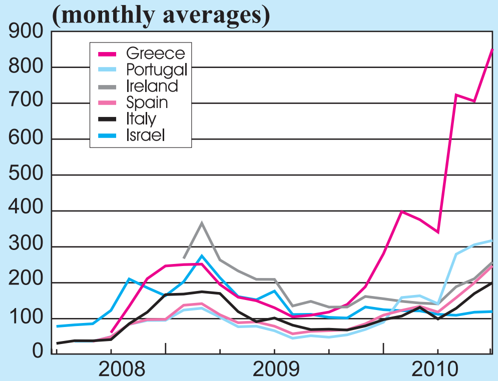
In managing monetary policy, the Bank of Israel monitors developments in the global environment, in inflation, and in real and financial activity in Israel. By monitoring the entire range of developments, it is possible to discern the markets' reaction and the likely implications of this reaction on inflation. On the basis of these parameters, it is possible to determine the level of interest rate appropriate to the attainment of price stability while encouraging employment and growth and maintaining stability in the financial markets. During the second quarter of 2010 (the quarter reviewed), the Bank of Israel continued to restore the interest rate gradually to a more "normal" level, and adopted a policy in line with its assessment of the following effects on the economy: (1) the worsening of the global fiscal debt crisis, which pushed down prices of financial assets and led to an increase in financial risk, and to the deferment of increases in interest rates by leading central banks; (2) continued but more moderate recovery in real activity; (3) an inflation environment matching the price stability target and the negative output gap, which contributed to the current low inflation environment; (4) a rapid increase in house prices. Detailed below are the principal developments in the global economy, the exchange rate, real activity, financial activity and inflation—developments which provide the background to the Bank of Israel's monetary policy decisions.

a. The global environment

(1) Global financial stability

The fiscal debt crisis became more severe in several European countries during the second quarter of 2010. Against the background of high fiscal debts, which increased considerably as a result of the policy measures that were taken to cope with the recession, there was growing concern during the quarter reviewed that a number of countries would fail to adhere to their debt repayments. The crisis became more intense due to fears that Greece would have difficulty in repaying or rolling-over its short-term debts, a development that led to a large increase in yields and CDS spreads[1] on Greek government bonds. As a result, the

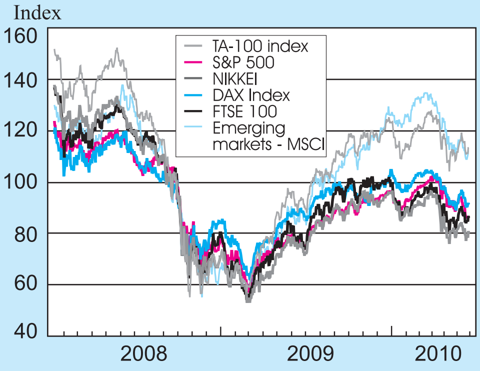
Figure 1
CDS Spreads in Selected Countries, June 2008 to June 2010, (monthly averages)



SOURCE: Bloomberg.

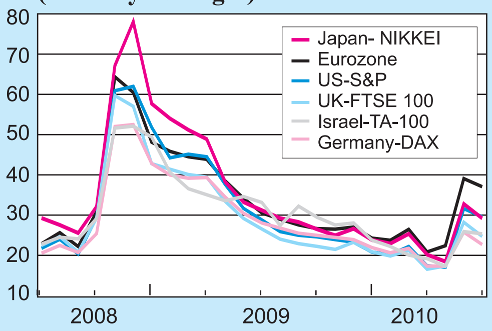
[1] CDS spreads are an indicator of the risk premium on bonds. For more details, see the Bank of Israel press release of September 29, 2003.

Figure 2
Share Indices Around the World (Based on Dollar Prices), 2008 to June 2010 (daily data, 15 September 2008 = 100)



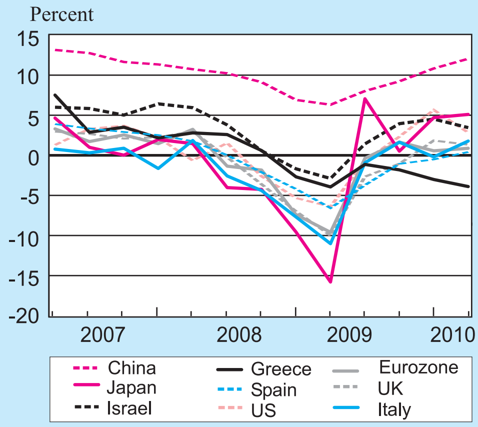
SOURCE: Bloomberg.

Figure 3
Implied Volatility Derived from Share Options in Selected Countries, June 2008 to June 2010 (monthly averages)



SOURCE: Bloomberg.

Figure 4
GDP Growth Rates in Selected Countries, 2007–2010:Q1 (annual rates, seasonally adjusted)



SOURCE: OECD and Bloomberg.

Greek government had difficulty in issuing bonds and rolling-over its public debt. This development in Greece rapidly spilled over into other economies, mainly in southern Europe, and led to a rise in the CDS margins of additional countries (Figure 1). The credit ratings of Greece, Portugal and Spain were reduced again following the reduction made at the end of 2009, due to concern that they would be unable to repay their debts.

In response to the worsening fiscal debt crisis, the EU and the IMF provided assistance to Greece, and announced the establishment of an aid fund for countries suffering from a debt crisis. Because of concern that repayment default by Greece could lead to a financial crisis in other countries in the eurozone, due to their exposure to Greek government bonds, the EU and the IMF decided to extend an aid package to Greece. The package includes a €110 billion loan over three years for the purpose of helping the Greek government to repay its debts for that period of time. In return, the Greek government undertook to implement a program for reducing its debt, including tax hikes and budget cuts. In another major step towards preventing a financial crisis in Europe, the EU and the IMF decided on an additional €720 billion aid program. This program is intended to supply the financing requirements of countries that encounter debt roll-over difficulties. In return, those countries will be required to adopt a policy of fiscal restraint and streamlining measures such as those applied in Greece. In addition, the European Central Bank (ECB) applied a program for coping with the deterioration in the fiscal debt crisis, which included the purchase of bonds in the European market and a number of measures for increasing liquidity. The scale of the aid programs announced by the EU was exceptional, and numerous disputes and bureaucratic problems had to be resolved before they were approved, thereby increasing the uncertainty regarding the development of the crisis.

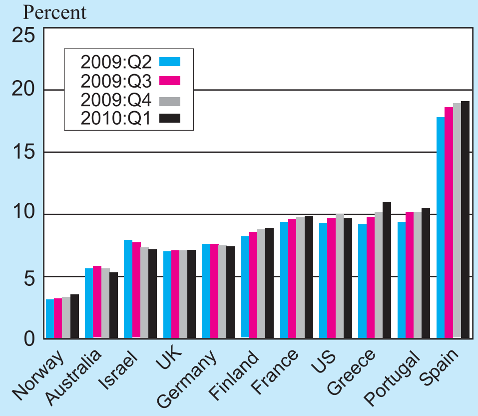
Global financial markets reacted to the deterioration in the fiscal debt crisis with heavy price slides and an upturn in risk. Following the EU's announcement of the establishment of its aid fund, the world's leading stock indices stabilized, although the uncertainty in the markets remained high. In reaction to the increased severity of the economic situation in Greece, and concern over its possible defaulting on debt repayments and the possible spillover to other European countries and a renewed recession, share prices in the leading stock exchanges slumped, by between 10 percent and 17 percent (Figure 2). The ongoing discussions on the approval of the aid packages and the difficulties encountered in the process led to a large rise in the level of uncertainty and level of risk in the markets, a development that was reflected by an increase in the implied volatility of the stock indices (Figure 3). The EU's announcement of the aid packages at the end of May 2010 had the effect of halting the downturn in the stock indices, and some of them actually rose. However, the level of uncertainty remained high because the aid packages are only expected to supply the financing requirements of countries experiencing debt repayment problems in the short term. A fundamental solution of the crisis will require measures for reducing the amount of debt, and such measures are difficult to apply. Moreover, even if they are applied, fiscal reduction programs could suppress demand and reduce economic activity.

(2) Global real activity

The rebound in global real activity continued during the first quarter of 2010. According to national accounts data,[2] positive growth rates were recorded in most of the world's economies (Figure 4). Leading the recovery process were the US and the Chinese economies, which expanded by 3 and 12 percent respectively. In Europe however, only moderate and non-uniform growth was recorded. A number of countries, principally Spain and Greece, are having difficulty in recovering from the recession due to high unemployment (Figure 5) and the fiscal debt crisis. The recovery in world trade evident in the previous quarters continued, with an increase of 3.5 percent, quarterly rate, in the first quarter of 2010 (Figure 6).

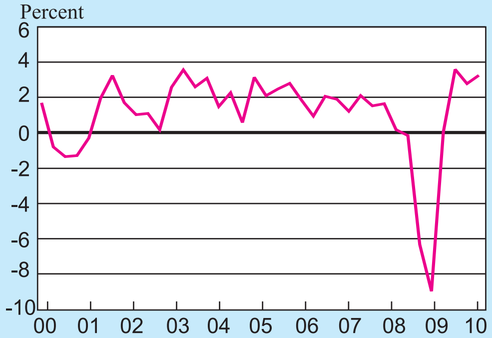
Indicators of global real activity in the second quarter of 2010 provide a mixed picture. In the US, the recovery, which in the second quarter was based largely on an improvement in the private sector, continued, but no substantial rebound was apparent in the labor, housing and credit markets. The remarks regarding the need for fiscal restraint made by Federal Reserve Bank Chairman Ben Bernanke reflected the fact that the recovery process in the US is accompanied by a large increase in the debt-GDP ratio (Figure 7).[3] **In Europe**, most indicators show a continued but slow recovery. However, the recovery in the eurozone is not uniform: a number of countries, principally Spain and Italy, are still stagnating, with no improvement in the industrial production index and unemployment rates that are still rising. Activity in the EU was affected in the second quarter by two opposing forces: on the one hand was the effect of the worsening of the fiscal debt crisis; on the other, the depreciation of the euro acted to support exports and economic activity. **In the UK**, recent data

Figure 5
Unemployment Rates in Selected Countries,
(last four quarters)



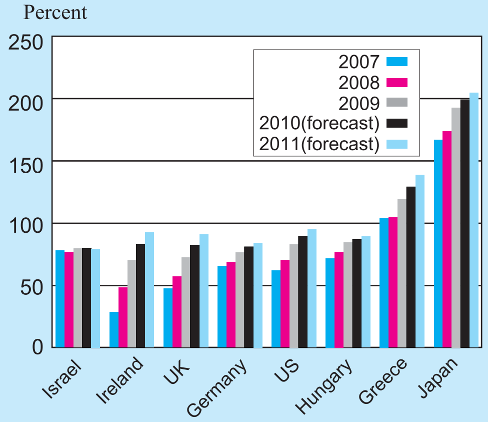
SOURCE: Based on OECD data.

Figure 6
World Trade in Goods and Services
(quarterly rates of change,
2000–2010:Q1)



SOURCE: OECD.

Figure 7
Debt/GDP Ratio, Selected Countries, 2007-09, and Forecasts for 2010 and 2011



SOURCE: Based on OECD data.

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

3 See Ben Bernanke's speech of April 27, 2010 to the National Commission on Fiscal Responsibility.

on economic activity show stability at a far lower level than the peak of 2008, without any major change in unemployment and the industrial production index. **In the emerging markets**, the majority of indicators show continued growth. China's economy continued growing rapidly, although the growth rate appears to be slowing due to the policy measures that have been adopted to prevent excessive expansion in the housing and credit markets.

The fiscal debt crisis in Europe could affect the Israeli economy in three main channels: foreign trade, the exchange rate and the financial channel. Since Israeli exports to the countries at the center of the debt crisis (Italy, Greece, Spain and Portugal) are relatively low, at 5 percent of the country's total exports, the direct effect of the crisis in those countries is expected to be limited. However, the crisis in the countries in question could contaminate other European countries, and thereby affect Israel more extensively. In order to cope with the debt crisis, the majority of European countries and other countries world wide have begun to formulate fiscal restraint measures to reduce the deficit and the debt. (See the Box below for more details of the fiscal programs that are being compiled in European countries.) If these programs are actually applied (some countries have already begun to apply them), they are expected to lead to a substantial drop in demand, including demand for Israeli exports. Europe absorbs 35 percent of Israel's total exports, with the result that a drop in demand there could seriously affect the economy. Another possible channel via which the fiscal debt crisis in Europe could affect the Israeli economy is the exchange rate: continued relative weakness in the European economy could prompt a continued weakening of the euro, and thereby impair export profitability. The elasticity of Israel's exports to the real exchange rate is estimated at 0.2,[4] and as stated exports to Europe account for a considerable proportion of the country's total exports. The exchange rate channel could therefore have a major impact on the Israeli economy. A further worsening of the debt crisis in Europe which exacerbates the situation in the financial markets could affect Israel via the financial channel as well. This is because of the high degree of correlation between global capital markets (Figure 2), and Israeli investors' direct exposure to financial assets in Europe.[5]

[4] See Y. Lavi and A. Fridman (2007), "The Real Exchange Rate and Israel's Foreign Trade," Bank of Israel Review, 79 (Hebrew).

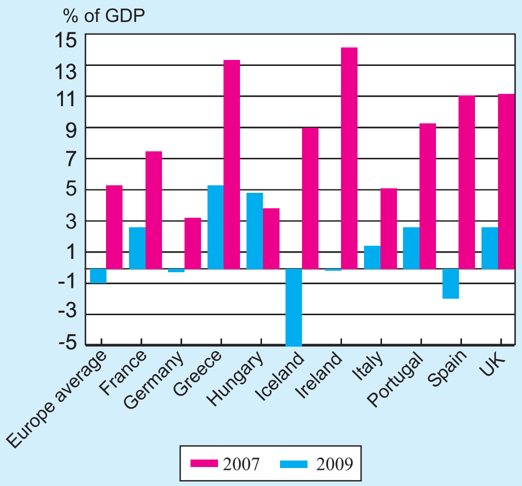
[5] According to Bank of Israel estimates, 12 percent of the public's asset portfolio is held abroad, 25 percent of it in assets from Europe.

Fiscal deficit reduction programs in the European Union

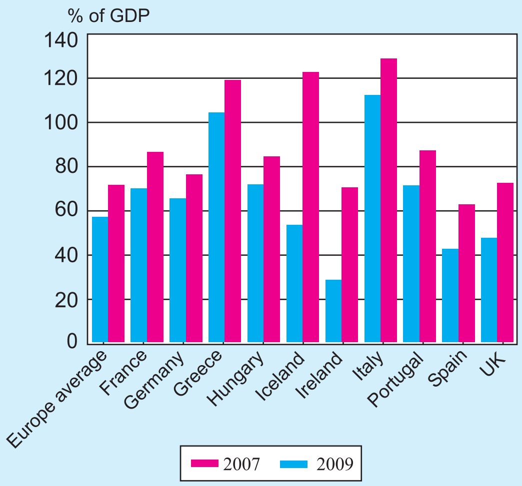
The majority of the developed countries responded to the global recession by implementing fiscal stimulus programs in order to increase demand in their economies, and thereby reduce the impact of the recession. Part of these measures were intended to support populations that were particularly hard hit by the recession, by means of such measures as increased unemployment benefit, a longer period of eligibility to this benefit, and an expansion in employee training programs. This was in addition to the operation of automatic stabilizers, which was reflected by a decrease in tax revenue and an increase in expenditures, principally expenditures aimed at supporting the unemployed. Part of the developed countries also implemented programs for supporting the local financial system. These programs included the nationalization of banks, injections of capital to the banks, increasing the public's deposit insurance and the purchase of toxic assets.

The global recession and the programs that were implemented in response to it led to a considerable increase in the budget deficits and the debt-GDP ratio of the developed countries including European Union countries, most of whose deficits exceeded the Maastricht principles calling for a deficit ceiling of 3 percent of GDP at times of economic recession (see figure below). These deficits and debts threatened fiscal stability, especially in countries that had to provide large-scale support for their financial systems (Ireland and the UK) and in countries whose fiscal situation or competitiveness were weak prior to the recession (Greece, Spain and Portugal). The large deficits are particularly problematical in view of many developed countries' need for substantial fiscal consolidation due to demographic developments that are expected in those countries.

Government Deficits in Selected European Countries, 2007 and 2009 (percent of GDP)



Debt/GDP Ratio in Selected European Countries, 2007 and 2009 (percent)



SOURCE: OECD Economic Outlook 87, May 2010.

As a result of the large deficits exceeding the Maastricht ceiling, and at the recommendation of the European Union, the G-20 group and the IMF, most European countries had been expected to begin fiscal consolidation in 2011, subject to a continuation of economic recovery. At the end of 2009 and the beginning of 2010 however, it was revealed that the Greek government's reporting on its budget deficit was inaccurate, and that the actual deficit in 2009 was 12.7 percent of GDP and not 6 percent as initially reported. This disclosure led to an increase in the risk premium of Greece and to repeated reductions in the rating of its bonds, bringing the Greek government to the verge of insolvency. These shocks created concern in the markets, pushing up the risk premiums of Spain, Portugal and Ireland, which were perceived as economically unstable. As a result, those countries' rating was reduced, and fears arose that the entire European Union would be contaminated by the fiscal problems. This was due inter alia to the risk posed to the stability of the banks as a result of their holdings of unstable countries' bonds.

In order to cope with the crisis of confidence in the markets, the European Union (and especially the eurozone member states) and the IMF implemented an extensive rescue program for Greece, and additional frameworks for supporting other countries as necessary. As a condition for the receipt of the aid, Greece had to apply a comprehensive program for reducing its deficit, and the program is already being applied this year. Immediately thereafter, Spain and Portugal launched their own deficit reduction programs, even though they had not yet requested aid from the European Union, in order to convince the markets and the EU that they were committed to a process of fiscal consolidation. (In both cases, the EU called for increased cuts in 2011.) Spain's program is centered on reducing expenditures, while the Portuguese plan is focused on increasing the level of taxation. Ireland began a process of fiscal consolidation back at the beginning of 2009 when it applied a program for reducing the deficit by 11.25 percent of GDP in the years 2009–14, including spending cuts amounting to 2.5 percent of GDP in 2010, inter alia by reducing public sector wages by between 5 and 15 percent. The Czech Republic, back in 2009, also implemented a short-term consolidation program for 2010 alone (the government in 2009 was a transitional government), in order to improve the fiscal situation at the exit from the recession and to facilitate future consolidation. In July, Greece succeeded in issuing six-month bonds at a relatively low rate of interest, and according to IMF reports is meeting its commitments in accordance with the program. Portugal and Spain also managed to issue medium- and long-term bonds.

Apart from the previously-mentioned countries, which already had to apply fiscal restraint this year because of market pressure, other countries have been quick to present the measures which they will adopt in 2011 in order to reduce the deficit and calm the markets. Germany and Italy announced fiscal reduction programs for 2011 onwards earlier than planned, and in May France announced that it was freezing public spending for the years 2011–13 and selling 1,700 public buildings, then in June announced a plan for reducing the deficit in the years 2010–14. The UK had already initiated fiscal consolidation in the previous government's 2010 budget, which began to be implemented in March this year, and in June presented extensive measures starting from 2010 in order to convince the markets and the rating companies that it is capable of reducing the deficit.

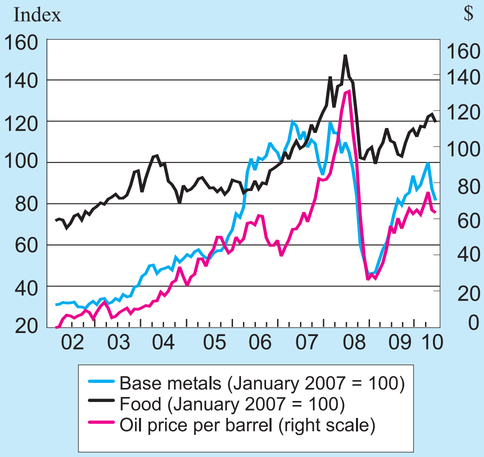
Up to the time of writing of this document, nine European Union member states have announced detailed fiscal reduction programs, which brought forward planned contractionary measures or the announcement of them due to the urgency expressed in the markets. The main elements of the programs are detailed in the table below, which shows that they are based on spending cuts more than on tax hikes, that most of them (six of the nine) have implemented a wage freeze and salary cuts in the public sector, and four out of the nine programs include employee retrenchments in the public sector or the cancellation of vacancies

Fiscal debt reduction programs—Europe 2010

	Size of adjustment (% of GDP)	Dispersal (non-cumulative, % of GDP)	Expenditure cut	Revenue growth	Principal measures
Portugal	3.4	2010-1.2% 2011-2.2%	2010-0.6% 2011-0.8%	2010-0.6% 2011-1.4%	• 1% VAT hike • 1% income tax hike • 5% cut in wages of members of parliament and civil service
Spain	1.5	2010-0.5% 2011-1.0%	Expenditure reduction only	-	• 5% cut in public sector wages from June and freeze in 2011 • Abolition of €2,500 child allowance from 2011 • 0.6% of GDP cut in public investment • Dismissal of 13,000 public sector employees
Greece	11.0	2010-2.5% 2011-4.1% 2012-2.4% 2013-2.0%	5%[a]	4%	• 2% VAT hike • Increase in excise duty • Payment of 12 instead of 14 months salary in the public sector and additional wage cuts • Pension cuts • Amalgamation of local authorities • Dismissal of public sector employees
Germany	3.4	2011-0.5% 2012-0.8% 2013-1.0% 2014-1.2%	2.20%	1.20%	• Taxation of civil aviation, nuclear energy and the financial sector • Reduction in guaranteed income support and abolition of pension subsidies and allowance for guaranteed income support recipients • Dismissal of 10,000 public sector employees • Reform in the army, including reducing the army by 40,000 soldiers • Transforming unemployment benefit from compulsory payment by the state to discretionary payment by the Welfare Ministry
Italy	1.5	2011-0.5% 2012-1.0%	Expenditure reduction only	-	• 3-year wage freeze for civil servants • 10% transverse cut in government ministries' budgets • Reduced transfers to the local authorities
France	3.4	2010-14	3.10%	0.30%	• Freeze in government spending apart from interest and pension payments in the years 2011-13. • Increase in retirement age from 60 to 62 • Abolition of stimulus measures in the amount of 0.8% of GDP • Closure of tax breaks in the amount of 0.25% of GDP • Other spending cuts in the amount of 2.3% of GDP
Czech Republic	2.0	2010-2.0%			• 1% VAT hike • Income tax hike • Doubling of property tax • Increase in excise duty
Ireland	11.25	2010-2.5% 2011-1.75% 2012-2.75% 2013-2.25% 2014-2.0%	2010 measures-2.5%		• 5-15 percent public sector wages cuts in the amount of 0.63% of GDP • Cut in unemployment benefit and child allowance • Cut in public investment in the amount of 0.63% of GD
UK	8.6	2010-0.6% 2011-1.1% 2012-1.7% 2013-2.3% 2014-2.9%	6.24%	2.35%	• Increase in VAT from 17.5% to 20% • Tax on the bank's balance sheets • Public-sector wage freeze in the years 2011-12 • Cuts in housing allowance and tax credits • Indexation of allowances and pensions to the consumer price index instead of the wholesale price index • 0.4% of GDP spending cut in 2010

[a] The Greek program includes a structural reform in budget management and planning and in the tax management and collection systems, which are expected to lead to a reduction in the deficit of 1.8 percent of GDP.

Figure 8
Price Indices of Base Metals, Energy and Food, January 2002–June 2010 (monthly averages)



SOURCE: Bloomberg.

(3) Global inflation

Against the background of the worsening fiscal debt crisis, the energy and commodity indices have fallen heavily since May 2010 and food prices have stopped rising. The increase in food, commodity and energy prices, which started at the beginning of 2009 with the rebound in the global economy, continued at the beginning of the period reviewed, especially in the emerging market economies. Due to concern over the ability of a number of countries, principally from the eurozone, to repay their debts, the markets' assessments regarding future growth declined, leading to a large decrease in commodity and oil prices from May 2010 (Figure 8).[6] The impact of the worsening crisis on food prices was more moderate, and was reflected merely by an end to the increase in these prices.

Global inflation remained low during the period reviewed. The negative output gaps that still exist in most of the world's economies, high unemployment rates, energy price decreases and the worsening of the fiscal debt crisis all had the effect of keeping global inflation at a low level during the quarter reviewed (Table 1). While the expansionary monetary policy adopted in many countries and the recovery in the global economy had the effect of pushing up inflation, their effect was less dominant.

Table 1
The CPI and Selected Components in Israel and Abroad, 2008-10:Q2

(percent change)

	Israel				US				Europe			
	2008	2009	2010: Q1*	2010: Q2*	2008	2009	2010: Q1*	2010: Q2*	2008	2009	2010: Q1*	2010: Q2*
CPI	**3.8**	**3.9**	**-3.4**	**6.3**	**0.1**	**2.7**	**3.2**	**0.6**	**1.6**	**0.9**	**1.9**	**2.2**
CPI (seasonally adjusted)[a]			**-0.4**	**2.5**			**0.9**	**-1.5**			**2.1**	**0.5**
Energy[b]	-9.5	13.1	-9.5	-5.7	-21.3	18.2	16.1	3.2	-3.7	1.8	19.5	8.9
Food (excluding fruit and vegetables)	9.1	1.1	2.0	0.0	5.9	-0.5	2.5	0.5	3.5	0.7	0.4	1.6
Fruit and vegetables	-2.0	8.4	-8.3	19.7	3.4	-3.0	11.0	-11.6	2.8	-1.5	9.0	1.6
Housing	12.1	5.6	-0.7	9.7	2.4	-0.2	0.9	1.4	2.2	1.9	2.6	1.6
CPI excluding energy, food, and fruit and vegetables	**3.6**	**3.4**	**-3.5**	**8.2**	**1.8**	**1.8**	**1.9**	**0.4**	**1.8**	**1.5**	**-0.7**	**1.7**

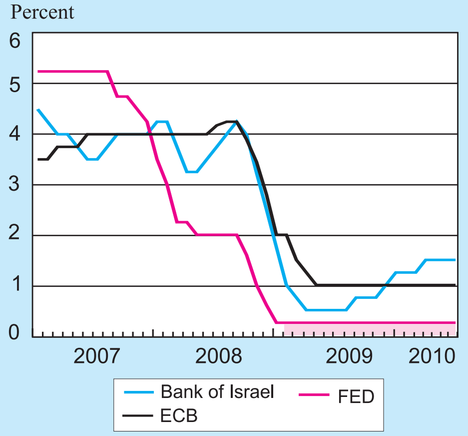
[a] The estimates of the CPI (seasonally adjusted) for Israel are Bank of Israel calculations. The estimates of the CPI (seasonally adjusted) for Europe do not include tobacco products.
[b] An index made up of several components of the CPI.
* In annual terms.
SOURCE: Based on Central Bureau of Statistics, ECB, Eurostat, and US Bureau of Labor Statistics data.

[6] From May 2010 and until the end of the quarter reviewed, the metals and the oil indices fell by 21 percent and 13 percent respectively.

(4) Monetary policy world wide

The monetary policy of central banks throughout the world was left largely unchanged during the quarter reviewed, and remained expansionary. The ECB announced a program for increasing liquidity against the background of the tightening of the terms in the credit market. Due to negative output gaps and the low inflation environment, monetary policy world wide was left largely unchanged during the quarter reviewed. Central banks' interest rates remained at historically low levels: the US Federal Reserve Bank's interest rate was 0–0.25 percent, and the ECB's interest rate remained at one percent (Figure 9).[7] Concern over the fiscal debt crisis, the resulting increase in uncertainty, expectations of a slow recovery and the low inflation environment led to the deferment of leading central banks' transition to interest rate increases. According to the projections of the US Federal Reserve Bank, it will take a long time before US rates of growth, unemployment and inflation will return to their long-term rates,[8] and hence the interest rate in the US is expected to remain at its present level for a long time. Assessments are that the Fed interest rate will remain at its current level until the beginning of 2011, and that the ECB's interest rate will only be raised in the second quarter of 2011.[9] The postponement of the timing of interest rate hikes in the US and Europe means that an increase in the Bank of Israel's interest rate will widen the interest rate differential vis-à-vis those countries. In order to cope with the growing uncertainty in the markets and prevent a shortage of credit, the ECB again began to use quantitative easing instruments as part of the program for increasing liquidity.[10] This program includes the purchase of bonds in the European market, swap tenders against the dollar in cooperation with the US Federal Reserve Bank, and the renewed opportunity for taking loans for terms of three to six months.

Figure 9
The Short-Term Interest Rate in Israel, the US and the Eurozone, 2007–July 2010



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

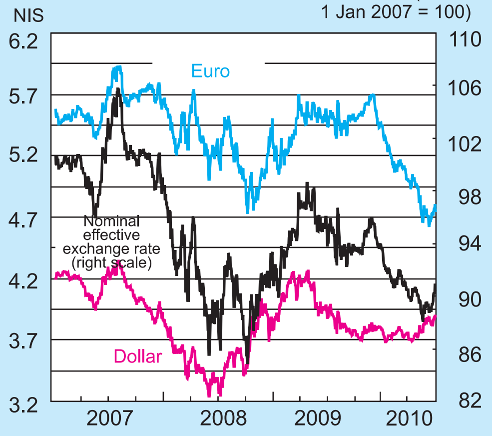
[7] Most of the world's central banks left the interest rate unchanged during the quarter reviewed. The central banks of the Czech Republic, Hungary and South Africa cut the interest rate by a moderate extent, while the central banks of Australia, Canada, India and Norway raised the interest rate moderately. The only country whose monetary policy was changed extensively was Brazil, where the interest rate was raised by 1.5 percentage points during the quarter reviewed.

[8] See the statement dated 14 July of the Federal Open Market Committee, http://www.federalreserve.gov/monetarypolicy/files/fomcminutes20100623.pdf

[9] According to the average expectations of leading investment houses. Source: Bloomberg.

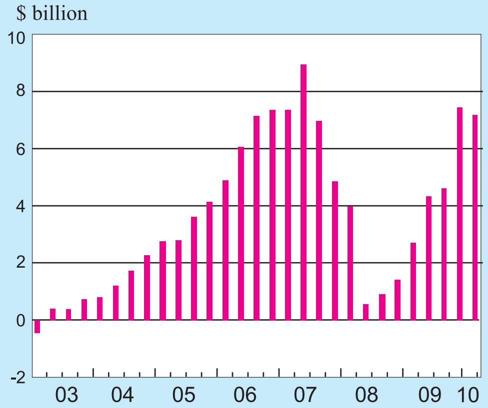
[10] See the European Central Bank's press release of May 10, 2010.

Figure 10
The NIS/$, NIS/Euro and the Nominal Effective Exchange Rate, 2007 to June 2010
(daily data)



SOURCE: Bank of Israel.

Figure 11
The Current Account, Running Four-Quarter Totals, 2003-2010:Q1



SOURCE: Based on Central Bureau of Statistics data.

b. The development of the shekel exchange rate

The effective nominal exchange rate[11] did not develop uniformly during the second quarter: while the shekel continued to strengthen at the beginning of the quarter, it depreciated considerably from the middle of June. Continuing the trend apparent since the end of 2009, the shekel strengthened at the beginning of the second quarter, with the result that the effective nominal exchange rate strengthened by 1.5 percent by mid-June (Figure 10). During that period, the shekel strengthened by 6 percent against the euro and for the first time since the end of 2008 the exchange rate of the euro fell to less than five shekel. The shekel weakened against the dollar by 3 percent. The upturn in the shekel reversed in the second half of June, and the effective nominal exchange rate weakened by 2 percent during that month as a result of the weakening of the shekel against the euro. During the whole of the second quarter, the effective nominal exchange rate reflected moderate depreciation of a half percent.

During the first quarter of 2010 and most of the second quarter, most of the economic fundamentals continued to act towards an appreciation of the shekel. The strengthening of the shekel until the middle of June resulted from: (1) The current account surplus in the previous quarter (Figure 11)[12]—although the current account surplus contracted during the first quarter of 2010, it is still high and therefore acting towards an appreciation of the shekel. (2) The weakening of the euro due to the worsening of the fiscal debt crisis in Europe. (3) The expansion of the interest rate differential between Israel and other economies, which resulted from the increase in the Bank of Israel interest rate for April. (4) Israel's accession to the OECD, which is likely to lead to increased foreign investment in Israel. Acting against these factors the Bank of Israel's purchases of foreign currency acted to moderate the strengthening of the shekel.

The weakening of the shekel in the second half of June derived from the strengthening of the euro during that period, which resulted from the EU's announcement of aid packages to help members cope with the crisis.

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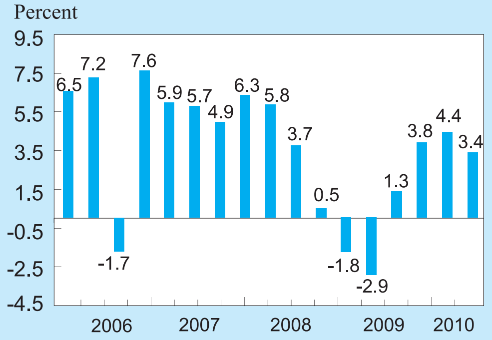
[11] The effective nominal exchange rate is calculated as the weighted average of the shekel exchange rates against 28 currencies (which represent 38 countries), according to the proportions of Israel's trade with those countries.

[12] The seasonally adjusted current account surplus amounted to $1.6 billion in the first quarter of 2010, and to $7.1 billion in the last four quarters.

c. Real developments

The recovery in the Israeli economy that began in the second quarter of 2009 continued. National Accounts data for the first quarter of 2010 show an expansion in economic activity. The rapid GDP growth in the last quarter of 2009 and the first quarter of 2010 led to a high level of activity compared with the level at the time of the recession at the beginning of 2009. During the first quarter of 2010, GDP expanded by 3.4 percent (Figure 12)[13] while business sector product increased by 4.4 percent due to increases in private consumption and exports (Table 2). Due to the continued expansion of business sector product, the growth in employment and the onset of a long-term growth trend, the negative output gap continued to contract during the first quarter (Figure 13). However, no signs of recovery are apparent in fixed investment, which rose only moderately in the first quarter of 2010, with the result that its level remained low.

Figure 12
GDP, Quarterly Growth Rates, 2006–2010:Q1
(annual rates, seasonally adjusted)



SOURCE: Based on Central Bureau of Statistics data.

Table 2
GDP, Imports and Uses, 2007-10:Q1

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

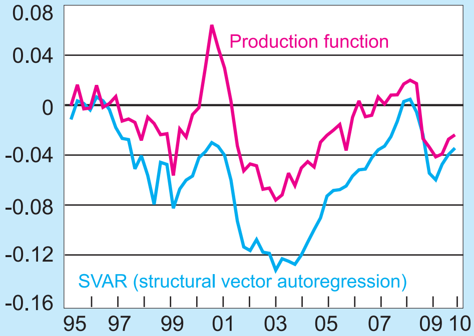
	2007	2008	2009	2008: Q4	2009: Q1	2009: Q2	2009: Q3	2009: Q4	2010: Q1
GDP	5.2	4.0	0.7	-2.0	-2.9	1.3	3.8	4.4	3.4
Business sector output	5.6	4.5	-0.2	-3.2	-5.3	1.3	3.5	4.8	4.4
Imports excluding defense imports, ships, aircrafts and diamonds	13.6	7.2	-12.3	-8.8	-40.0	1.0	13.8	8.2	12.6
Private consumption	6.3	3.6	1.4	-2.0	-2.7	10.0	6.1	5.0	4.4
of which: Private consumption excluding consumer durables	5.1	2.7	2.5	0.6	0.8	8.6	6.3	5.0	5.8
Public consumption	3.4	2.1	2.2	-1.1	-3.0	10.2	2.9	3.9	4.1
of which: Public consumption excluding defense imports	4.1	2.2	3.7	-0.6	-1.9	13.6	5.4	2.5	-0.8
Gross domestic investment	10.1	1.4	-8.9	30.9	-21.3	-28.3	-10.3	-30.6	29.5
of which: Fixed investment	15.3	4.4	-6.0	-4.5	-14.4	2.7	5.0	-8.2	1.3
Exports excluding diamonds	10.4	10.5	-9.6	-26.2	-27.2	-3.7	10.3	33.3	1.0
of which: Exports excluding diamonds and start-ups	10.9	9.7	-9.1	-27.8	-28.7	2.4	10.1	27.4	2.9

SOURCE: Based on Central Bureau of Statistics data.

Although the external terms of trade (import prices relative to export prices) deteriorated during the first quarter of the year,

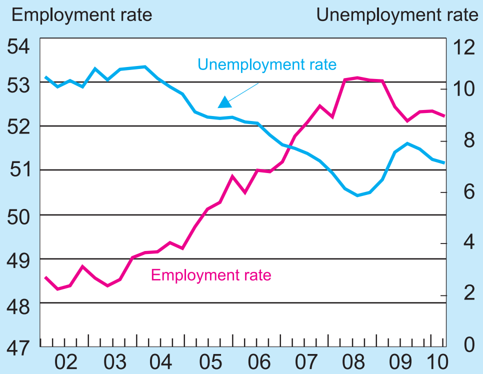
[13] National Accounts figures are expressed in annual terms , and are seasonally adjusted.

Figure 13
Indices of the Output Gap,[a]
1995-2010:Q1



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

Figure 14
The Employment Rate and the Unemployment Rate,[a]
2002-2010:Q1
(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.

they are still far more convenient than prior to the recession. The real effective exchange rate[14] indicated substantial appreciation during the first quarter of 2010, the result of a higher inflation rate in Israel than abroad and the strengthening of the effective nominal exchange rate.

Indicators of real activity during the quarter reviewed show a continued growth trend, but at a more moderate rate than in the previous quarter because of reduced demand from abroad. Bank of Israel's Companies Survey data and the composite state-of-the-economy index for the second quarter are indicative of continued expansion in business sector activity, although at a lower rate than in the previous quarter. The growth in activity was centered mainly in the domestic market, and less in the export market. Manufacturing production, which rose in April and May despite the fall in manufacturing exports during the quarter reviewed, confirmed that the Israeli economy was expanding despite the slowdown in demand from abroad. The slowdown in demand from abroad appeared to derive from the difficulty in maintaining a high rate of recovery, especially during a period of uncertainty regarding the global economy.

Foreign trade data for the second quarter showed a decrease in exports for the first time in a year, and a slower pace of import growth. Foreign trade data (in current dollar terms) for the second quarter of 2010 show a decrease in exports, although their level is still high compared with last year due to continued expansion during 2009 and the first quarter of this year. The downturn in exports may have resulted from the slower increase in world trade. During the quarter reviewed, the import growth rate slowed following an increase in the majority of import components during the first quarter. The slower pace of import growth is attributed to reduced demand for raw materials resulting from the decrease in exports, and from the drop in demand for capital goods due to uncertainty over whether or not the recovery would be sustained. However, the growth in imports of consumer goods continued.

The recovery in the labor market is continuing. This is apparent from the fall in the unemployment rate and the increase in wages. Manpower Survey data for the first quarter of the year show an increase in the number of employed persons, concurrent with a decrease in the rate of employment among the working age population (Figure 14) and the number of persons employed in full-time posts. The decline in the labor force participation rate led to a moderate decline in the unemployment

[14] 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.

rate compared with the previous two quarters among both men and women. Unemployment in the economy is still higher than the low level prevailing before the recession, and the slower decrease in the unemployment rate derives from the more moderate growth in demand for workers during the first quarter. The Job Index and the Survey of Vacancies reveal the resumption of a more rapid pace of recovery during the quarter reviewed. Real and nominal wages in the economy, especially in the business sector, rose considerably during the first quarter of the year following stability in nominal wages during the second half of 2009. From a long-term perspective, the wage increase in the first quarter restored the average real wage in the economy to its level a year ago, in March 2009. That said, the real and nominal wage both declined in April.

Based on the development of the budget deficit since the beginning of 2010, the government is expected to adhere to the deficit ceiling. During the quarter reviewed, the rate of increase in tax revenues slowed, a development that could indicate a slower pace of recovery in the economy. The domestic budget deficit in the first half of 2010 amounted to about one percent of GDP. This rate is less than planned due to higher than forecast tax revenues, and to expenditures that were slightly less than the seasonal pattern consistent with full implementation of the budget. Accordingly, and based on the budget forecast, the government is expected to adhere to the deficit ceiling, and the deficit is expected to be about 4 percent of GDP. Despite the high level of revenues, trend data (exclusive of legislative changes and non-recurring revenues) show that the rate of increase in tax revenues slowed during the quarter reviewed. Particularly apparent was the decrease in VAT receipts on domestic production, which appears to reflect a slower pace of recovery in activity.

In July the government approved the biannual budget for the years 2011 and 2012, a process that will contribute to fiscal stability and reduce uncertainty in the economy. As part of the budget plan, the government is expected to increase the indirect taxes on several products, including cigarettes and fuel, which is expected to lead to a non-recurring rise in their price and thereby affect the CPI.[15]

Based on the majority of indicators, the recovery in the Israeli economy continued during the second quarter, but at a slower pace than in previous quarters. This development is expected to reduce the negative output gap in the economy,

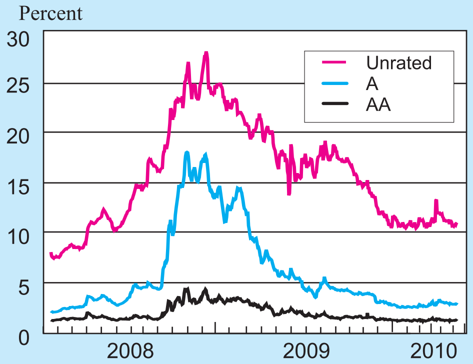
[15] The taxes on cigarettes were already raised in practice at the beginning of July.

and thereby also reduce the moderating effect of real activity on prices. The nominal wage in the economy is rising, and this could lead to upward pressure on prices.

d. Financial developments

As elsewhere in the world, prices of financial assets in Israel fell markedly in response to the worsening of the fiscal debt crisis. Concurrently, the level of risk in the financial markets increased, bond issues decreased, and mutual funds specializing in corporate bonds and shares recorded net withdrawals. During the quarter reviewed, a high degree of correlation was maintained between the equities markets in Israel and abroad, and asset prices in Israel dropped significantly due to the worsening of the worldwide fiscal debt crisis (Figure 2). The positive developments in the energy market and especially in the area of gas exploration led to price increases in that sector, which slightly moderated the average decline in prices in the economy. At the same time, the level of risk and uncertainty in the Israeli capital market increased, in a development that was reflected by a sharp rise in the implied volatility of the Tel Aviv 100 index (Figure 3). Due to the increased risk in the capital market, investors moved from high-risk holdings to more solid forms of investment. This is apparent from developments in the mutual funds: during the quarter reviewed, the funds specializing in stocks and corporate bonds recorded net withdrawals while net issues by money market funds were positive. In May, a large decrease was recorded in issues of corporate bonds, which reached their lowest level since January 2009 in light of the expansion of the yield spread between corporate bonds and government bonds (Figure 15). As elsewhere in the world, asset prices in Israel stabilized at the beginning of June in light of the aid programs announced by the EU, and corporate bond issuance increased, although the level of uncertainty remained high. Developments in the financial markets during the quarter reviewed contrasted with the upturn in asset prices that began in March 2009. Developments in a single quarter cannot be expected to have a major impact on real activity; However, if the decline in asset prices continues coupled with the high level of uncertainty resulting from the fiscal debt crisis, it could lead to a contraction of business sector credit and to a moderation in private consumption because of the wealth effect and a result, suppress real activity.

Figure 15
The Average Weighted Yield Gap between CPI-Indexed Corporate Bonds, by Rating, and CPI-Indexed Government Bonds, 2008 to 2010:Q2 (daily data)



SOURCE: Based on Tel Aviv Stock Exchange data.

Since the beginning of the year, the volume of new mortgage loans has continued to grow, and the majority of these loans are unindexed and floating-rate. Outstanding credit to the

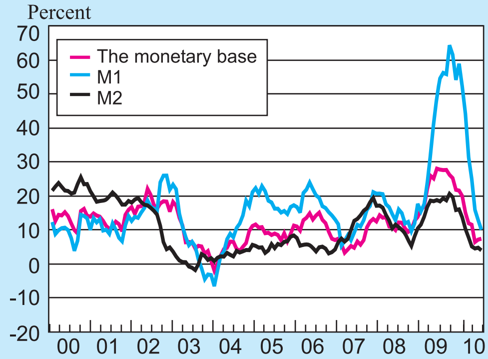
business sector did not change to any significant extent in that period. Outstanding bank credit to households continued to increase from the beginning of the year until May, following the relatively rapid rates of growth in this credit since 2007. The increase is due mainly to growth in outstanding mortgage loans, which expanded by 4 percent since the beginning of the year, compared with 2.6 percent in the equivalent period in 2009. Most new mortgage loans taken were unindexed local currency loans at floating rates which alter with changes in the Bank of Israel interest rate. The proportion of such loans to total new mortgage loans taken in 2010 averaged 51.6 percent, compared with about 60 percent in 2009. The overall cost of unindexed local currency credit (for households and the business sector) rose by 0.23 percentage points from March to May, similar to the increase in the Bank of Israel interest rate. Although the interest rate in the unindexed mortgage market rose as well, the rate of increase was more moderate that in the Bank of Israel interest rate, and the interest rate in the CPI-indexed mortgage market actually fell.

Outstanding credit to the business sector increased by only a moderate 0.4 percent from the beginning of the year until May, following a moderate decrease in 2009. The increase this year was mainly in bank credit, while outstanding non-bank credit remained practically unchanged. This was despite NIS 9 billion in gross issues by the non-financial business sector, because these issues were offset by bond redemptions of a similar amount.

The rate of increase in the narrow monetary aggregates continued to decline during the quarter reviewed, albeit more slowly. When the Bank of Israel interest rate was raised again at the beginning of the quarter reviewed, the rate of expansion in the narrow monetary aggregates fell again (Figure 16): the annualized rate of expansion in the M1 aggregate reached 65 percent in August 2009 and then fell to 10 percent in June, which was less than the long-term rate of increase.[16] During the quarter reviewed, the decline in the annual rate of increase in the narrow monetary aggregates became more moderate, due to the reduced pace of Bank of Israel interest rate increases and investors' move to safer assets resulting from the increased uncertainty and risk in the financial markets.

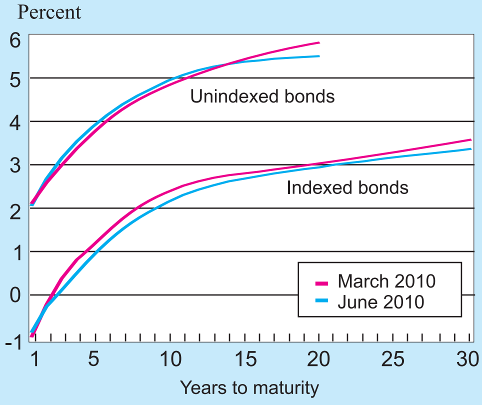
Real short-term yields showed no significant change in the second quarter, while real medium- and long-term yields declined. Real yields to one and two years did not change in the second quarter. Yields to three years and longer fell during

Figure 16
The Monetary Aggregates, 2000 to June 2010
(rates of change over previous twelve months)



SOURCE: Bank of Israel.

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



SOURCE: Bank of Israel.

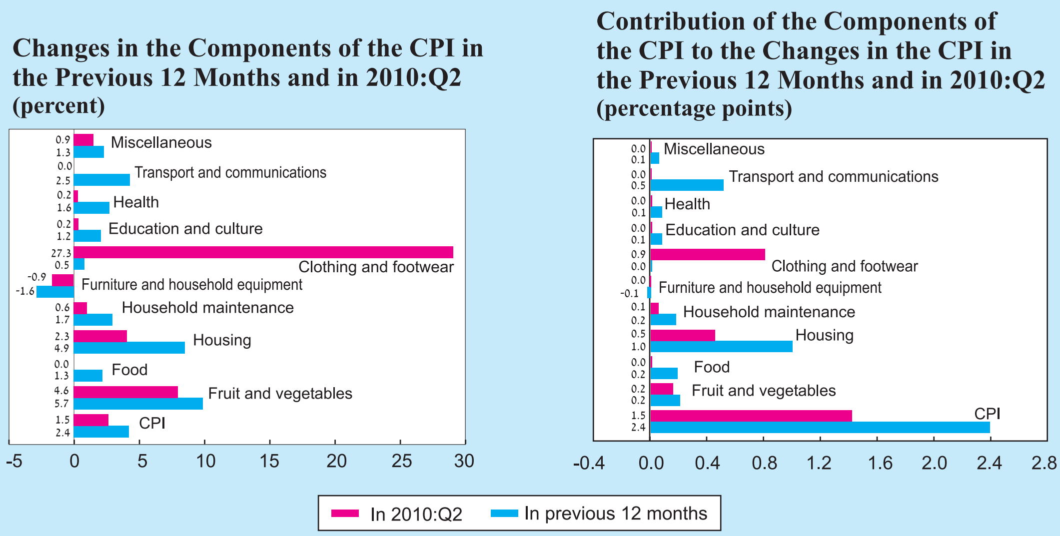
[16] The annual rate of increase in the M1 monetary aggregate during the years 2000–10 averaged 17.5 percent.

the second quarter (Figure 17) as the result of several factors. The main factor was the worsening of the fiscal debt crisis, which prompted a move to lower-risk assets, including Israel Government bonds.[17] The decline in yields may possibly also reflect expectations of a slower pace of recovery as a result of the worsening crisis. Another factor contributing to the decline in yields was the lower-than-forecast budget deficit, which is expected to reduce the government's borrowing requirements. Acting against these factors, the Bank of Israel interest rate hike in April had the effect of moderating the decline in yields.

e. Inflation and inflation expectations

Although the CPI rose to a considerable extent during the quarter reviewed, seasonally adjusted[18] it increased at a rate close to that commensurate with the center of the inflation target. The CPI rose by 1.5 percent during the quarter reviewed (Figure 18). Much of the rise in the index was due to seasonal factors—mainly in the clothing and footwear, and the fruit and vegetable items. The index exclusive of these items rose by 0.7 percent, and the seasonally adjusted index went up by 0.6 percent.[19] Another factor contributing to the price increase during

Figure 18



SOURCE: Based on Central Bureau of Statistics data.

[17] During May and June, mutual funds specializing in government bonds recorded a positive net volume of issues following several months of negative net issues.

[18] The seasonally adjusted estimates of the CPI are based on Bank of Israel calculations. For more details on the approach to and the motivation for seasonal adjustment under this approach, see Box 1 in Inflation Report Number 30.

[19] The seasonally adjusted index according to the Central Bureau of Statistics estimate rose by 0.5 percent in the second quarter.

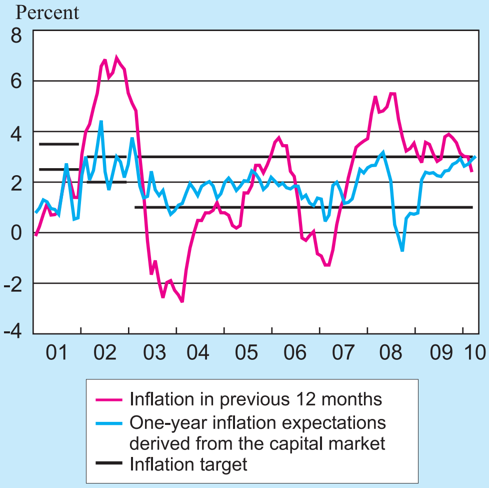
the quarter reviewed was the renewed increase in housing prices, which had ceased in the previous quarter. As a result of the fall in energy prices world wide, in the second quarter the energy component of the CPI dropped by 1.5 percent.

Most of the economic fundamentals supported a moderate inflation environment during the second quarter. The output gap, which appears to have remained negative during the quarter reviewed, contributed to a moderate inflation environment. Other factors that helped to hold down the rate of price increase were the worsening of the fiscal debt crisis, low inflation abroad and the appreciation of the shekel during most of the quarter. Acting against these factors and exerting an upward effect on prices were the price increases in the housing market, the rise in inflation expectations and the continued increase in wages.

The annualized inflation rate moderated during the quarter reviewed and entered the targeted range of price stability (1 to 3 percent). The annualized inflation rate fell considerably during the quarter reviewed, from 3.2 percent in March to 2.4 percent in June—it lowest level since October 2007—and reverted to within the targeted range of inflation (Figure 19). Fruit and vegetable prices rose at a rate of 5.7 percent in the last 12 months, while food and energy prices rose moderately. Accordingly, the increase in the core index—the index excluding fruit and vegetables, food and energy—was close to that in the general index, at 2.7 percent. The most significant contribution to the rise in the index during the past year came from the housing component, which contributed 1 percentage point to the rise in the CPI in the last twelve months, and the transport and communications component, which contributed 0.5 percentage points. In addition, the government's decisions on tax hikes contributed about 0.2 percentage points to the rise in the CPI during the last 12 months. (The government's taxation decisions had no direct effect on the CPI during the quarter reviewed.) From the beginning of the year to June, the CPI rose by 0.7 percent and seasonally adjusted, by 0.5 percent.[20] Since government intervention had the effect of reducing the CPI by 0.6 percent during that period, exclusive of seasonality and government intervention, the index has risen by 1.1 percent since the beginning of the year.

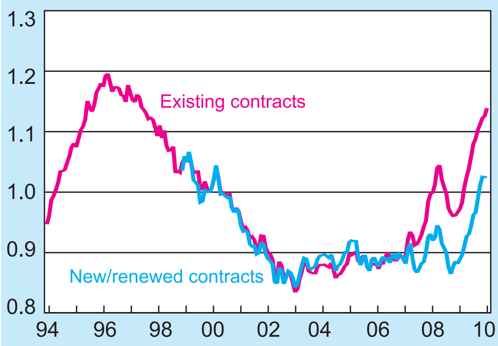
Apartment prices (which are not included in the CPI) have continued to rise since the beginning of the year by more than the rate derived from the housing market fundamentals—those factors that affect the capitalized value of housing

Figure 19
Inflation in Previous 12 Months, Inflation Expectations and Inflation Targets, 2001 to June 2010
(monthly averages)



SOURCE: Based on Central Bureau of Statistics data.

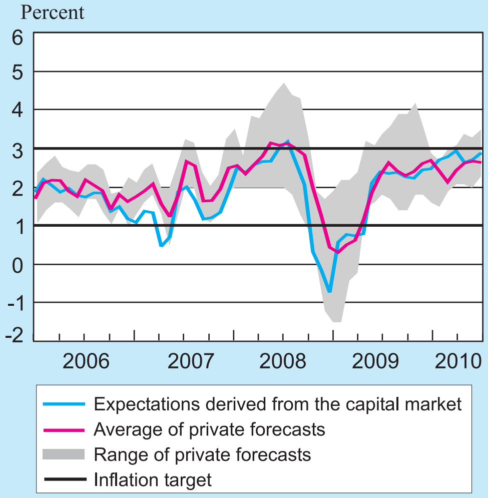
Figure 20
Ratio of Apartment Prices to Rent, 1994 to April 2010
(January 2000 = 1)



SOURCE: Based on Central Bureau of Statistics data.

[20] According to the Central Bureau of Statistics estimate, the seasonally adjusted index rose by 0.6 percent since the beginning of the year.

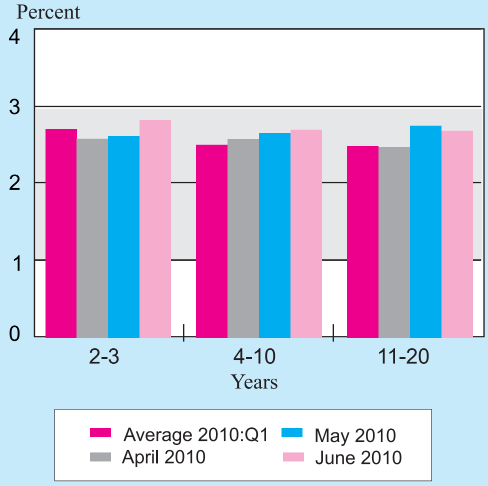
Figure 21
Inflation Expectations for the Next Year Derived from the Capital Market and According to Private Forecasters, 2006 to June 2010[a]
(monthly averages)



[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.

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



SOURCE: Bank of Israel.

services[21]—and their level approached that derived from those fundamentals. The owner-occupied housing price index has continued to rise since the beginning of the year, and to April rose by 4.3 percent. The rate of increase in housing prices continues to exceed that in rental prices (Figure 20) as well as the rate of price increase derived from economic fundamentals.[22] Before the price increases began in 2008, the level of housing prices was less than the long-term level derived from the economic fundamentals. Now however, their increase has brought them close to—and according to a number of indices even higher than— that level.

Inflation expectations for a year—from the capital market and according to private forecasters—rose moderately during the quarter reviewed, and remained in the upper part of the inflation target. Inflation expectations from the capital market, which shot up to the upper limit of the inflation target in March, fell by 0.3 percentage points in April (Figure 21), apparently due to the Bank of Israel's interest rate hike. Subsequently, these inflation expectations rose again, and in June averaged 2.9 percent.[23] Private analysts' assessments regarding inflation for the coming year rose by a moderate 0.2 percent point in April, and remained largely unchanged for the rest of the quarter. From the third quarter of 2009, concurrent with the economy's recovery from the recession, inflation expectations from the capital market and private analysts' average inflation forecasts for the next twelve months have been in the upper part of the targeted range of inflation. During the quarter reviewed, inflation expectations for medium and long terms derived from the capital market rose moderately (Figure 22), and remained in the upper part of the inflation target. The fact that forecasters' inflation expectations and those derived from the capital market are in the upper part of the inflation target range may reflect assessments that in its monetary policy decisions the Bank of Israel, in addition to the maintenance of price and financial stability, currently places relatively greater emphasis on support for a recovery of real activity.

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[21] For a more detailed discussion of the fundamental factors in the housing market, see Box 3.2, "The development of house prices," on page 136 of the Bank of Israel Annual Report, 2009.

[22] Additional indices for assessing apartment prices relative to the prices deriving from economic fundamentals and the long-term development of these indices are presented in Box 3.2, on page 136 in the Bank of Israel Report for 2009.

[23] Nominal and real yields contain a premium, which is intended to compensate investors for inflation risks and for the lack of liquidity. The longer the term of inflation expectations, the larger is the risk premium. Due to the low supply of CPI-indexed government bonds, inflation expectations may have been upward biased during recent months. Interpretation of inflation expectations is therefore a complex issue.

2. MONETARY POLICY

Although the indicators available to the Bank of Israel during the quarter reviewed did not provide a uniform picture of the extent of the monetary expansion required, most of these indicators supported a continuation of the policy. Alongside these indicators and against the background of expansionary monetary policy, the increase in apartment prices at a rate higher than that derived from the economic fundamentals continued. During the quarter reviewed, the Bank of Israel had to adapt the rate of monetary expansion to economic activity and inflation in Israel and abroad. Another challenge facing the Bank of Israel was to strike a balance between the need for maintaining expansionary monetary policy, and the desire to react to the price increases in the housing market. Accordingly, the Bank of Israel maintained an expansionary monetary policy during the quarter reviewed by means of two policy instruments—the interest rate and intervention in the foreign-currency market—and concurrently the Bank Supervision Department at the Bank of Israel issued directives that were aimed at reducing the risks inherent in housing loans. The intention was to react in a way that focused on the development of risks in the housing market, and to increase the cost of credit in that market alone.

During the second quarter the Bank of Israel continued to adjust the interest rate to the rate of recovery in the economy. Due to the worsening of the fiscal debt crisis and the developments resulting from it, the pace of interest rate hikes was reduced during the quarter reviewed, and remained low. The negative output gap, the downturn in the annualized inflation rate and its convergence to within the inflation target, the fact that inflation expectations were within the inflation target range (albeit in its upper part), expectations that central bank interest rates in the leading developed economies would remain low during the coming months, and the appreciation of the shekel for most of the quarter reviewed, were all factors that supported leaving the Bank of Israel interest rate at a low level, while adjusting the interest rate to the pace of recovery in Israel and world wide. The objective was to consolidate inflation within the target range and contribute to a continued recovery in economic activity while supporting financial stability. Due to the improvement in the global economy and the continued recovery in the Israeli economy, the Bank of Israel raised the interest rate for April by 0.25 percentage point to a level of 1.5 percent. Later in the quarter reviewed, the worsening of the fiscal debt crisis worldwide led to increased uncertainty regarding the continued process of recovery. This evoked serious reactions in the financial markets, and prompted the leading central banks to postpone their plans for interest rate hikes. Indicators on the state of the Israeli economy also showed a more moderate pace of recovery during the quarter reviewed. In view of these developments, the Bank of Israel left the interest rate for May, June and July unchanged. The rate for August was increased by 0.25 percentage points.

The Bank of Israel continued to intervene in the foreign-currency market during the quarter reviewed. In order to reduce the pressures acting towards further appreciation of the shekel (strengthening of the effective exchange rate), which could harm exports and real activity, and in order to maintain stability in the economy, the Bank of Israel continued to purchase foreign currency. The Bank purchased $2,525 million in April, and $625 million in May. The Bank of Israel did not purchase any foreign currency in June.

In view of the rapid increase in house prices and the expansion of housing credit, the Bank Supervision Department issued a directive to the banks instructing them to examine their housing credit portfolios and their policy in this area thoroughly, and to hold a reserve by making an extra provision for housing loans with high loan-to-value ratios. Against the background of the low interest rate environment, which permits leverage at low cost and increases the feasibility of investment in housing due to the low alternative yields available, apartment prices have continued to rise during 2010 following their rapid increase in 2009. If they continue further, the large increases in apartment prices will have negative implications for the stability of the financial sector. Although an increase in the Bank of Israel's interest rate is likely to reduce the upward pressure on housing prices, it could also affect other macroeconomic conditions from which a low interest rate environment is derived, as stated. The Bank of Israel therefore decided to use macroprudential instruments in order to moderate the rise in house prices. Accordingly, the Bank Supervision Department issued a directive to the banks, ordering them to carefully examine their housing credit portfolio and their policy in that field, and to make an extra loan-loss provision for housing loans in which the leverage rate exceeds 60 percent.[24]

The Bank of Israel's use of macroprudential instruments to deal with risk factors that could affect the entire financial system was an exceptional measure, that constituted an example of the use of tools complementing the monetary policy tools. In this

[24] Macroprudential tools were also used in February, when a directive was issued to the banks concerning purchase groups.

the Bank of Israel was one of the first central banks in the world to use such measures. It is worth noting that although the term macroprudential supervision was coined in the financial stability literature more than a decade ago, the overall approach to using tools with supervisory characteristics for systemic purposes is still in its formative stage both world wide and in Israel.[25] The most recent recession greatly increased the importance of the concept of macroprudential supervision, and emphasized the need for the addition of such instruments to enable the central bank to meet its various policy objectives

3. UPDATE OF THE FORECASTS

a. The global environment

Despite the worsening of the fiscal debt crisis, the majority of international organizations' global growth forecasts have been upward adjusted, albeit to a modest extent. A continued slow recovery in the global economy is expected. Despite global developments in the quarter reviewed—the worsening of the fiscal debt crisis, which evoked serious reactions in the financial markets and resulted in many countries announcing fiscal restraint programs—the OECD and the World Bank

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

(percent)

	Actual	IMF Forecast	
	2009	2010	2011
Average GDP growth			
Global	-0.6	4.6	4.3
Advanced economies	-3.2	2.6	2.4
US	-2.4	3.3	2.9
EU	-4.1	1.0	1.3
Japan	-5.2	2.4	1.8
Emerging markets	2.5	6.8	6.4
Inflation (during the year)			
Advanced economies	0.1	1.4	1.3
Emerging markets	5.2	6.3	5.0

SOURCE: IMF World Economic Outlook Update, July 2010.

[25] For a detailed discussion of macroprudential tools, see "Macroprudential Instruments and Frameworks: A Stocktaking of Issues and Experiences," the Committee on the Global Financial System (2010).

upward adjusted their growth forecasts in June, and in July the IMF raised its global growth forecast for 2010. (Following the adjustments, the OECD forecasts are close to those of the IMF, and the World Bank forecasts are slightly lower than them.) According to the IMF, the global economy will expand by 4.6 percent and 4.3 percent in 2010 and 2011 respectively, and growth in the developing countries is expected to be more rapid than in the developed countries (Table 3). The recovery in world trade is expected to continue, with forecast expansion of 9 percent in 2010 and 6.3 percent in 2011.

The inflation environment in the developed countries is expected to remain low. Fuel and commodity prices are expected to rise. According to the IMF, inflation in the developed countries will remain low, and is expected to reach 1.4 percent in 2010 and 1.3 percent in 2011. This forecast is in line with the assessments of the large investment houses. The IMF also expects that worldwide fuel and commodity prices will rise during the coming years, and that this will lead to price increases in the emerging market economies.

Table 4
Economic Indicators

(rates of change, percent, unless stated otherwise)

	Actual	Bank of Israel Forecast[b]	
	2009	2010	2011
GDP	0.7	3.7	4.0
Private consumption	1.4	4.5	4.3
Gross domestic investment	-8.9	6.2	9.0
Public consumption	2.2	1.0	1.0
Imports (civilian, excluding ships, aircrafts and diamonds)	-12.3	10.2	9.2
Exports (excluding diamonds)	-9.6	9.2	7.4
Current account ($ billion)	7.2	4.8	3.9
Unemployment rate	7.6	7.0	6.7
Public deficit (percent of GDP)[a]	5.0	4.0	3.0
Gross debt (percent of GDP)[a]	79.5	79.8	78.4

[a] Excluding the Bank of Israel.
[b] The Bank of Israel forecast on April 21, 2010. The development of the public deficit and the debt/GDP ratio in 2011 depend on the policy of the government.
SOURCE: Based on Central Bureau of Statistics data.

b. Real activity in Israel

The Israeli economy is expected to continue expanding during the coming years, but at a lower rate than before the recession. No major changes were made in forecasts on the development of real activity in the economy during the quarter reviewed. Gross domestic product is expected to grow by 3.7 percent in 2010 and by 4 percent in 2011 (Table 4). The growth in the economy is expected to continue during the second half of 2010, and the unemployment rate is expected to decline further.

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

The Bank of Israel estimates that the inflation rate in 12 months' time will be in the upper part of the target range concurrent with a gradual increase in interest rates. The inflation rate in the last 12 months was 2.4 percent, within the target inflation range, following several months in which it exceeded the upper limit of the target range. The Bank of Israel estimates that inflation will remain within the target range, and that its rate in 12 months' time will be 2.6 percent. It should be noted that annual inflation rate is likely to decline in the next few months, because of the tail effect of the price decreases during the initial months of 2010. (These decreases derived partly from non-recurring factors—the change in water fees and the change in the rate of VAT.) Subsequently, annual inflation is expected to revert to the upper part of the target range. A gradual concurrent increase in the Bank of Israel's interest rate is expected (Figures 23 and 24).

Explanation of the Research Department's staff forecast

The assessment of inflation presented in this report is part of the staff forecast which the Bank of Israel's Research Department compiles every quarter, and which serves as an input in the determination of monetary policy. The uniqueness of the staff forecast as compared to other indicators that are examined prior to interest rate decisions lies in the fact that it is accompanied by the course of the interest rate that is expected to restore inflation to within the targeted range within a reasonable period of time (a year to two years). Unlike past practice, the staff forecast is not based on a single econometric model, but rather on a wide range of econometric models from various areas (as will be detailed below), indicators that provide information in real time (including the Bank of Israel Companies Survey and capital market indices) and judgment employed at their discretion by the Bank's economists. The models reflected in the staff forecast include: (1) a medium scale Dynamic Stochastic General Equilibrium (DSGE) model which was recently developed at the Bank of Israel's Research Department;[1] (2) the annual macro model of the real sector—an econometric model that has been used for several years in compiling the Bank's annual growth forecast; (3) the nowcasting model, which is used for assessing the development of the national accounts' principal

[1] The model was recently presented at an international conference that was held in Israel. A presentation explaining part of the model's components can be found on the conference site:
http://www.boi.org.il/modelworkshop/ws_info.htm

aggregates which have materialized, but have yet to be published (in the present case, the second quarter of 2010); (4) the quarterly econometric models (the small scale DSGE model and the error correction model), which have served as an indicator in the monetary process during recent years; (5) Vector Auto Regression type quarterly statistical models, which are used for forecasting inflation, interest rates, the exchange rate and GDP; and (6) monthly models for forecasting the changes in the CPI.

The medium scale DSGE model plays a key role in the process of compiling the staff forecast. It is a structural model that describes the relationships between the nominal variables (the interest rate, inflation, the exchange rate and wages) and the central real variables (GDP and its components, employment) on a basis of solid microeconomic foundations. In this approach the economic units in the economy (households, local manufacturers, importers, exporters and the central bank), make their decisions on the range of variables under their control on the basis of an optimization process. The model's parameters are estimated by means of the Bayesian Likelihood Estimation method on the Israeli economy's quarterly data in the period 1995-2008. DSGE-type models are at the forefront of monetary economic research and are used by or are undergoing development in every central bank that operates in an inflation targeting regime. The basic form of the model that was selected for the Israeli economy and the econometric approach for estimating its parameters were based on the experience of the world's leading central banks. The model's structure is very similar to that of the central banks of Europe, Sweden, Norway and Canada.

The medium scale DSGE model's unique function in the staff forecast process is to combine all the information obtained from the previously mentioned models, external indicators and judgment into a single, internally consistent basic forecast reflecting the assessment of the Research Department. The model helps the bank's economists to compile the overview and explanations behind the staff forecast. The model also makes it possible to examine alternative courses for the Bank of Israel's interest rate and scenarios that deviate from the main assessment, such as the materialization of risk worldwide.

According to the Bank of Israel assessment presented here, inflation in 12 months' time will amount to 2.6 percent as stated, in the upper part of the target range. This assessment reflects the effect of a number of opposing forces, such as those that have the effect of restraining inflation and those that have the effect of increasing it.

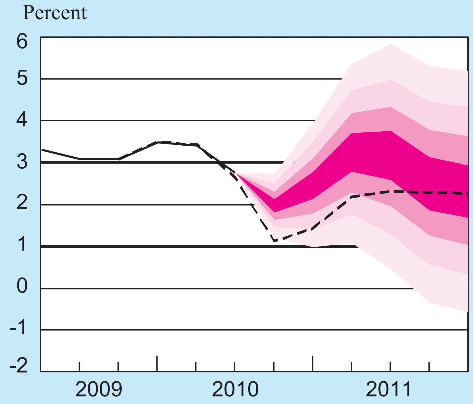
A major factor that will have the effect of reducing inflation is the 5 percent effective nominal appreciation of the shekel since the second quarter of 2009. An appreciation of the exchange rate has the effect of reducing the prices of goods that are imported to Israel. Prices to the consumer are not reduced as soon as an appreciation occurs however, and such a reduction is a gradual process that can last for a year. (The transmission from the exchange rate to prices is not immediate.) It therefore appears that import prices have not fully adjusted to the new level of the exchange rate and as a result, their downward adjustment will continue during the second half of 2010. Although in June and July the shekel depreciated by 3.5 percent, which clearly eases the pressure to reduce import prices, there are nevertheless forces acting towards the appreciation of the nominal exchange rate—including the current account surplus and the interest rate spread between Israel and abroad—which could again have an effect in the future. Another factor holding down import prices is the expectation of moderate inflation worldwide (an average of 1.3 percent in the advanced economies).

The negative output gap, which emerged because of Israel's moderate GDP growth in 2009 resulting from the global financial crisis and its implications for real activity, will also have the effect of holding down inflation during the coming year. Based on the Bank of Israel's assessment that the growth rate in 2010 will amount to 3.7 percent, slightly more than the potential growth rate, the contraction in the negative output gap is expected to continue although this gap will remain negative during the coming year. The negative output gap implies that the economy's production capacity exceeds the level of demand for local production, a situation that alleviates inflationary pressures. Moreover, activity growth in 2010 and 2011 is expected to be based not only on an expansion of inputs (employee recruitment and investment in physical capital), which necessitates a parallel increase in their cost, but also on productivity growth, a development that makes it possible to increase activity at a low cost, which does not necessarily imply inflationary pressure.

Another moderating factor on prices, which holds down an increase in the local interest rate, is the very low level of central bank interest rates worldwide (0.0-0.25 percent in the US, 1.0 percent in Europe), which is expected to persist at least until the middle of 2011.

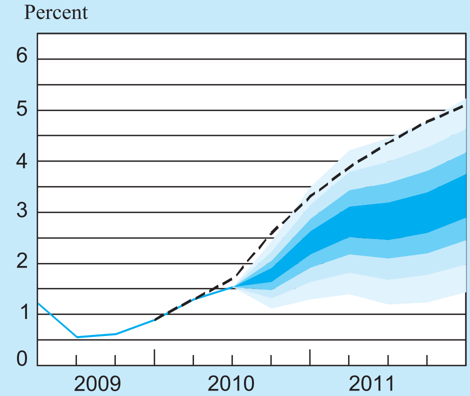
In the short term however, forces exerting an upward effect on prices also appear to be operating. One of these is the government's indirect tax hikes: the increase in the tax on cigarettes in July and the government's intention to raise the tax on fuel and coal. We estimate that these tax hikes will push up the CPI by 0.3 percentage point. Another factor pushing up prices is the increase in the prices of imported inputs and especially energy, which began in the second half of 2009 and continued for most of the first half of 2010. (In May energy prices were adjusted downward due to the debt crisis in Europe.) Consolidation of the public's expectations (for example, in accordance with private analysts' forecasts, capital market expectations, and Companies Survey reports) that inflation will exceed the target could also increase inflation in the immediate term. This is because manufacturers take future inflation into account when adjusting prices and concluding wage agreements. Finally, a factor that could push up

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



[a] The center of the fan chart is based on the Bank of Israel Research Department assessment.
The width of the chart is based on the Department's medium-scale DSGE (dynamic stochastic general quilibrium) 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. 30, January to March 2010).
SOURCE: Bank of Israel.

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



[a] The center of the fan chart is based on the Bank of Israel Research Department assessment. The width of the chart is based on the Department's 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. 30, January to March 2010).
SOURCE: Bank of Israel.

prices in the short term is the large increase in asset prices during the past year, principally the 21 percent increase in apartment prices. (A downward adjustment was recorded in prices of high-risk financial assets such as stocks as a result of the debt crisis in Europe.) Although asset prices are not directly included in the CPI, they can lead to a general increase in prices in the economy indirectly via creation of a wealth effect for example, or via a continued rise in apartment rental prices, which are included in the CPI.

The inflation forecast is higher than in the previous quarter, and the course of the interest rate was adjusted downwards. Figures 23 and 24 present a comparison with the assessments that were included in the previous Inflation Report (May 2010): it can be seen that the course of the interest rate was revised downwards, even though the inflation rate and the interest rates published since May 2010 did not reveal any unexpected developments. This update derived mainly from the worsening of the crisis in European countries—a development that was reflected by a postponement of forecast interest rate hikes abroad and an increase in real risks. The interest rate course lower than that expected in the previous report (especially in the second half of 2011) can be explained partly by the recent crises in real activity in the US and Europe, as well as by the persistent decline in real yields on long-term government bonds, which led to reduced assessments regarding the long-term interest rate. With respect to inflation, the weaknes of the shekel in June and July, the persistent rise in housing prices, and the increase in indirect taxes led to a rise in the forecast.

Market assessments mainly predict that the annual inflation rate will be higher than the Bank of Israel estimate (Table 5). Inflation expectations for a year as measured from the capital market averaged 3.0 percent in July, which was higher than their 2.7 percent level at the time when the Inflation Report for the previous quarter was written. Private analysts' forecasts averaged 3.2 percent at the end of July, compared with 2.7 percent average in the previous Inflation Report. The Companies Survey forecast average was 2.6 percent compared with 2.5 percent in the previous quarter. These expectations are accompanied by assessments that the interest rate will continue to be increased gradually, and will be about 2.5 to 2.7 percent in a year's time.

Attempting to discover the sources of the differences between different entities' forecasts is no simple matter. The differences may derive from disparate assumptions regarding the development of variables exogenous to the Israeli economy, or from assessments regarding the intensity of factors that affect inflation. As an example, the markets may give more weight to the inflationary effect of the increase in output and demand and less weight to the restraining effect of the levels of such factors—which the Bank of Israel estimates are still low and reflect a surplus of production capacity, as stated. The markets may also place more emphasis on the potential inflationary effect of actual wage increases. It is also possible that the markets assess the transmission from the appreciation during the past year to prices to the consumer as very low. Another possibility is that certain entities believe that the situation in the housing market will lead to a more rapid increase in apartment rental prices. At the same time however, it could be that certain economic bodies assume that prices of commodities and of oil in particular will continue to rise during the coming year, while the Bank of Israel assumes

Table 5
Assessments of Inflation over Next Twelve Months

(percent)

	Target	Capital market[a]	Private forecasters[b]	Companies Survey[c]	Bank of Israel's forecast[d]
Average	2.0	3.0	3.2	2.6	2.6
Range	1-3		2.3-3.7	0.8-4.0	

[a] July average.
[b] After publication of the June CPI.
[c] Range of assessments (covering 90 percent, i.e., excluding the tails). Based on companies' responses received in the second half of June.
[d] Bank of Israel Research Department assessment.
SOURCE: Bank of Israel.

that these prices will remain at their present level.

Apart from the above-mentioned economic factors, part of the difference between inflation forecasts derived from the capital market and Bank of Israel assessments could be attributed to a technical factor: inflation expectations from the capital market are calculated according to the difference between the yield on unindexed government bonds and the yield on CPI-indexed bonds. The problem with this calculation is that the actual yield spread reflects not only inflation expectations, but also premiums that cannot be measured directly. It should be noted that since the beginning of the year, redemptions of CPI-indexed government bonds exceeded issues to a considerable extent, with the result that the stock of CPI-indexed government bonds fell by NIS 10 billion. The CPI-indexed bond redemption surplus, and with it the possibility that the public does not wish to change the proportion of these bonds in its asset portfolio (principally mutual funds, which according to their prospectuses are continuing to increase the demand for CPI-indexed bonds to a major extent), is creating a premium in their price, which does not necessarily reflect a change in the assessment of future inflation. This premium leads to an upward bias in the calculation of inflation expectations from the capital market. Since it should be remembered that we are unable to measure the size of the premium, it may be very small and if so, the bias caused when calculating the expectations is negligible.

The main factor that could cause deviations of actual inflation, activity and the interest rate from the forecasts is the development of the debt crisis in Europe. Bank of Israel assessments are based on a number of assumptions (especially regarding global developments), which will not necessarily materialize. A deviation of inflation or the GDP growth rate from their forecast level will naturally require an adjustment of the course of the Bank of Israel interest rate. The main reason for a potential deviation of actual inflation and activity from the forecast is likely to be the emergence of risk associated with the debt crisis in Europe. The main assessment is that the crisis in Europe will not seriously harm the real activity of strong European countries and the other developed countries, which are Israel's most important trading partners. Accordingly, the main assessment is that GDP in Israel will continue to grow at a favorable rate. Nevertheless, concern has been expressed (which is not presently a main scenario) that the crisis in Europe will worsen, and lead to a substantial downturn in real activity in the strong European countries as well, a development that will adversely affect demand for Israeli exports. Moreover, a worsening of the crisis in Europe will further delay an upturn in the practically zero interest rates that are prevailing worldwide. Such a development, concurrent with the relative decrease in Israel's risk premium (since Israel is not the source of the crisis), will intensify the pressure for appreciation in the effective exchange rate. A further appreciation of the shekel together with a growth in the negative output gap (as the result of a drop in exports) might bring down inflation to around the lower limit of the target or even below it. A worsening of the crisis in Europe could also harm the Israeli economy as the result of increased uncertainty, which by its very nature is accompanied by financial and non-financial crises. Households' uncertainty regarding their future income and firms' uncertainty regarding the return on their investments will have the affect of reducing private consumption and investment in fixed assets, developments that could increase the output gap even more. It is reasonable to assume that the realization of that risk would result in a slowdown in the gradual rate of interest rate increases.

Another source of uncertainty is the exchange rate. In the main assessment, the exchange rate will appreciate to a moderate extent. However, in June and July an upward adjustment of about 3.5 percent in the nominal effective exchange rate was recorded. If this development continues during the quarter, it will offset the deflationary pressure deriving from the continued appreciation, and will thereby lead to higher inflation and a higher course of the interest rate than in the main scenario.

Another source of uncertainty at the basis of the inflation forecast is the housing item in the CPI. This item rose by 4.9 percent during the last twelve months, and thereby contributed one percentage point to inflation. Although in the months December 2009 until February 2010 it appeared that the rate of increase in housing prices was moderating, in March to May they rose again at a higher rate. A large increase in apartment rental prices as a result of the upturn in apartment prices could lead to an upward deviation in actual inflation from its forecast level, while a return to a low rate of increase in housing prices as well as a downward adjustment in apartment rental prices would result in inflation falling below its forecast level.

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

Appendix Table 1
The Domestic Assets Markets, January to June 2010

	01/10	02/10	03/10	04/10	05/10	06/10
Yields to maturity (monthly average, percent)						
3-month *makam*	1.2	1.3	1.4	1.5	1.5	1.6
1-year *makam*	2.0	2.0	2.0	2.2	2.1	2.1
Unindexed 5-year bonds	4.1	3.9	4.0	4.1	4.0	3.8
Unindexed 20-year bonds	5.8	5.8	5.7	5.7	6.0	6.0
CPI-indexed 1-year bonds	-0.7	-0.8	-0.9	-0.5	-0.6	-0.8
CPI-indexed 5-year bonds	1.5	1.3	1.2	1.3	1.2	0.9
CPI-indexed 30-year bonds	3.5	3.7	3.6	3.6	3.5	3.4
Yield gap between government bonds and private bonds rated AA–AAA[a] (percentage points)	1.4	1.3	1.3	1.3	1.4	1.3
private unrated bonds excluding real estate[a] (percentage points)	11.9	11.0	10.7	11.0	11.6	11.1
Share market (percentage change during the month)						
General share price index	0.7	4.3	5.1	-5.4	-8.2	-0.8
Tel Aviv 25 index	-2.2	3.6	6.0	-5.3	-7.0	-1.9
Foreign currency market (percentage change during the month)						
NIS/$	-1.4	1.9	-2.2	0.1	3.0	1.2
NIS/€	-4.3	-1.0	-3.1	-0.9	-3.8	0.0
Nominal effective exchange rate	-2.4	0.6	-2.3	0.1	-0.8	1.1
Risk indices derived from the trade in NIS/$ options in the Tel Aviv Stock Exchange (monthly averages, percent)						
Implied standard deviation	10.0	8.2	7.0	8.0	9.4	9.7
Probability of depreciation greater than 3%	4.5	3.1	1.4	2.3	4.3	5.1
Probability of appreciation greater than 3%	3.1	1.1	0.5	1.5	2.3	2.0

[a] The method of calculating the yield gap in this table is different from the method used till now. For each corporate bond the difference between its yield and the yield on a CPI-indexed government bond with the same duration is calculated. Then the weighted average of all the differences is calculated, with the weight of each corporate bond determined by the market value of bond series.
SOURCE: Bank of Israel.

Appendix Table 2
The Inflation Environment and Interest Rates, January to June 2010

(percent, monthly averages)

	01/10	02/10	03/10	04/10	05/10	06/10
Inflation environment (percent)						
Monthly change in CPI	-0.7	-0.3	0.1	0.9	0.4	0.3
Forecasters' predictions of monthly CPI (average of forecasts prior to publication of CPI)	-0.4	-0.4	0.1	0.6	0.4	0.2
Annual change in CPI	3.8	3.6	3.2	3.0	3.0	2.4
One-year inflation expectations derived from the capital market	2.7	2.8	3.0	2.7	2.7	3.0
Forecasters' one-year inflation predictions	2.5	2.1	2.4	2.6	2.7	2.7
Forward inflation expectations[a] to different terms						
Short term (second and third years forward)	2.7	2.5	2.7	2.6	2.6	2.8
Medium term (fourth to sixth years forward)	2.5	2.4	2.5	2.8	2.8	2.7
Long term (seventh to tenth years forward)	2.6	2.7	2.5	2.3	2.9	2.6
Interest rates and interest rate differentials						
Bank of Israel interest rate	1.25	1.25	1.25	1.5	1.5	1.5
Derived real interest rate	-1.4	-1.5	-1.6	-1.1	-1.2	-1.3
Short-term interest rate differential between Israel and the US (prior to decision on the next month's rate)	1.0	1.0	1.0	1.25	1.25	1.25
Short-term interest rate differential between Israel and the eurozone (prior to decision on the next month's rate)	0.25	0.25	0.25	0.25	0.25	0.25
Forecasters' predictions of nominal interest rate change for next month (prior to the decision)	0.1	0.0	0.0	0.1	0.1	0.1
Forecasters' predictions of interest rate a year forward	2.9	2.7	2.8	2.9	3.0	2.9
Long-term (10-year) nominal interest rate differential between Israel and US	1.6	1.5	1.3	1.3	1.8	1.8
Long-term (10-year) real interest rate differential between Israel and US	1.2	1.1	0.9	1.0	1.0	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.