BANK OF ISRAEL
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Press Release

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RESEARCH DEPARTMENT STAFF FORECAST, DECEMBER 2012

Abstract

This document presents the forecast of macroeconomic developments compiled by the Bank of Israel Research Department in December 2012. The forecast was presented to the Monetary Committee on December 23, 2012 during its meeting prior to the decision on the Bank of Israel interest rate for January 2013. According to the staff forecast, **the inflation rate over the next four quarters (ending in the fourth quarter of 2013) will be 1.8 percent. The Bank of Israel interest rate,** which stood at 2 percent when the forecast was compiled, **is expected to be reduced to 1.75 percent in the near future, and then to remain unchanged until, at least, the end of 2013. Gross domestic product (GDP) growth in 2012 is estimated at 3.3 percent.** On the assumption that natural gas production from the "Tamar" drilling site will begin as planned during the second quarter of 2013, **expected growth during 2013 is 3.8 percent.** This reflects the Central Bureau of Statistics (CBS) decision regarding the methodology of recording natural gas production (and the replacement of fuel imports) in National Accounts data at fixed prices. Based on this methodology, natural gas production contributes one percentage point to GDP growth for 2013. **Excluding the effect of the natural gas from the "Tamar" site, GDP in 2013 is expected to grow by 2.8 percent,** compared with a forecast of 3 percent in the previous quarter. Should there be a delay in the flow of natural gas, the growth forecast for 2013 will be revised downward, although there is not expected to be any effect on the levels of employment and unemployment.

FORECAST

The Bank of Israel Research Department compiles a staff forecast of macroeconomic developments on a quarterly basis. The staff forecast is based on several models, various data sources, and assessments based on economists' judgment.[1] The Bank's medium scale Dynamic Stochastic General Equilibrium (DSGE) model developed in the Research Department—a structural model based on microeconomic foundations—plays a primary role in designing the macroeconomic forecast.[2] The model provides a framework for analyzing the factors which have an effect on the economy, and allows for integrating information from various sources into a coherent macroeconomic forecast for real and nominal variables, with an internally consistent "economic story". In addition to formulating the base forecast, the DSGE model is also used to assess alternative scenarios and to evaluate the risks to the baseline forecast.

a. The global environment

The assumptions about the global economy are primarily based on forecasts by international financial institutions and investment houses (such as the IMF and OECD). Since the formulation of the previous forecast in September, the assessments of these bodies have been revised slightly downward, both in terms of GDP growth in major economies, and in terms of the growth rate of world trade. According to the latest IMF projection, GDP growth in advanced economies is expected to grow at a moderate rate of 1.3 percent in 2012 and 1.5 percent in 2013. OECD member state imports are expected to grow at a low rate of 1.7% in 2012, and to rise to 3.6% in 2013. At the same time, interest rates in advanced economies are projected to remain at their low levels in the coming year. Quantitative easing programs that were recently implemented in the United States and in Europe are intended to support real activity and financial stability in those economies.

During the past quarter, oil traded at relative stability, at a price of about $110 per barrel of Brent Crude. World prices of agricultural commodities moderated in recent

[1] An explanation of the staff macroeconomic forecast, and an overview of the models on which it is based, can be found in Inflation Report 31 for the second quarter of 2010, section 3-C.

[2] A Discussion Paper on the model was published in April, under the title: "MOISE: A DSGE Model for the Israeli Economy, Discussion Paper No. 2012.06".

months, after marked increases in the third quarter against the background of drought in the US.

b. Real activity in Israel

GDP growth is expected to be 3.3 percent in 2012. The forecast for 2012 remained similar to that published in September. The direct harm to GDP as a result of the IDF's "Operation Pillar of Defense" is estimated at a loss of NIS 500 million to NIS 750 million (less than 0.1 percent of annual GDP).

GDP is forecast to grow by 3.8% in 2013, assuming that natural gas production from the "Tamar" drilling site begins as planned during the second quarter of 2013. **Excluding the effect of the natural gas from the "Tamar" site, GDP in 2013 is expected to grow by 2.8 percent,** compared with a forecast of 3 percent in the previous quarter. The reason for including natural gas only in the current forecast, rather than in previous ones, is primarily technical: the recent decision by the CBS regarding how to record natural gas production (and the replacement of fuel imports[3]) in the National Accounts data at fixed prices. Should there be a delay in the actual flow of natural gas, the growth forecast for 2013 will be revised downward accordingly, although there is not expected to be any effect on employment and unemployment. **The GDP growth forecast excluding natural gas** was revised slightly downward compared with the forecast from the previous quarter, due to a worsening of forecasts regarding global activity, and due to the continued effect that Operation "Pillar of Defense" may have on incoming tourism. Excluding the effect of the natural gas, the growth rate in 2013 is expected to slow compared with that of previous years, with a slowdown in the growth rates of most uses, other than public consumption (Table 1). Developments in the global economic environment will weigh heavily on the growth rates of uses at least until the second quarter of 2013. Fixed capital formation is particularly prominent in this context, where growth of its two main components—both investment in economic sectors and in residential construction—is expected to show a marked slowdown. At the same time, it is

[3] Natural gas production is also expected to be reflected in a marked slowdown in the growth of imports.

important to mention that the expected slowdown in investments comes after two years of particularly rapid growth.

Table 1: Economic Indicators
Research Department Staff Forecast for 2012 and 2013
(rates of change, percent, unless stated otherwise)

	Actual 2011	Bank of Israel forecast 2012	Bank of Israel forecast 2013
GDP	4.8	3.3	3.8
Civilian imports (excluding diamonds, ships, and aircraft)	9.4	5.9	-1.4
Private consumption	3.8	3.0	2.2
Fixed capital formation	16.0	3.5	0.3
Public sector consumption (excluding defense imports)	2.7	3.2	4.3
Exports (excluding diamonds and start-ups)	4.5	5.0	3.2
Unemployment rate[a]	7.1	6.8	7.1
Inflation rate[b]	2.5	1.5	1.8
Bank of Israel interest rate[c]	2.92	2.08	1.75

a) Unemployment rate is consistent with the new estimation method of the CBS. The data for 2011 is chained.
b) Average CPI reading in the final quarter of the year compared with the final quarter average in the previous year.
c) Average for the final quarter of the year.
Source: Data - based on Central Bureau of Statistics and Bank of Israel; forecast - Bank of Israel .

c. Inflation and interest rate estimates

The staff forecast of the Bank of Israel Research Department is that the rate of inflation in the next four quarters will be 1.8 percent, slightly below the midpoint of the target range of 1–3 percent. Inflation as measured over the previous four quarters is expected to remain within the target range during the next year. Figure 1 shows that the forecast for the inflation rate in the coming year is 0.4 percentage points lower than our forecast in September (which was 2.2 percent).

The forecast for the inflation rate reflects the combination of a number of economic forces—most of which are acting to restrain inflation. We assess that the marked appreciation of the shekel that has recently taken place, as well as the continued slowdown in global activity and the moderation of worldwide commodity prices, will continue to restrain inflation in the next period. Other factors that are expected to restrain inflation, even though they do not reflect weakness in economic activity, are the expansion of government subsidies for kindergartens and afternoon child care and the continued effects of the reforms in the cellular market. We further note that for the past few months, there has been a moderation in the increase of rental prices, which had until recently been a significant and long-term contributor to a rise in inflation.

In contrast, we can also indicate a number of factors that contribute to a rise in the inflation rate: taxation measures taken by the government (raising VAT, and import taxes), the expected increase in real wages in the public sector in 2013, and the planned significant increase in electricity rates for private consumption during the second quarter of 2013 (in accordance with the framework, which is spread over three years, and which takes into account the expected start of the supply of natural gas from the "Tamar" reservoir).

The **Bank of Israel interest rate**, which was 2.0 percent at the time the forecast was formulated, is expected to fall to 1.75 percent in one of the upcoming decisions. Thereafter, it is expected to remain at that current level at least until the end of 2013. The major reason for this interest rate level is the low level of the real long-term interest rate globally, which is expected to remain at its low level in the next few years, due to the low level of activity and employment in advanced economies, and due to concerns over a possible widening of the recessions in Europe and Japan. In contrast, at this stage, it does not seem that the Bank of Israel interest rate will fall to the low interest rate levels of the ECB or the Fed, since the slowdown in the Israeli economy is far from being as severe as that of the European or American economies, which are weighed down by the prolonged need to deal with debt crises and deep and prolonged unemployment.

Table 2 shows that **the Research Department's assessments of the inflation rate and the interest rate are similar to the average of private forecasters and to expectations derived from the capital markets.**

Table 2
Forecasts for inflation rate and interest rate for the coming year
(percent)

	Research Department	Capital markets[a]	Private forecasters[b]
Inflation rate[c]	1.8	2.2	1.8
(range of forecasts)			(1.6-2.1)
Interest rate[d]	1.75	1.75	1.77
(range of forecasts)			(1.50-2.25)

a) Average for the month of December (until the 23).
b) Inflation and interest rate forecasts are after the publication of the CPI reading for November.
c) Inflation rate over the next 12 months.
d) Interest rate at the end of the fourth quarter of 2013. Capital markets forecast derived from Telbor rates.
Source: Bank of Israel.

d. Balance of risks in the forecast:

The global environment continues to be the main source of significant downward risks to real activity and inflation in the coming year. The principal risks continue to be the debt crisis in Europe and serious fiscal restraint in the United States (the "fiscal cliff", with the variety of possibilities for dealing with it). At the same time, we assess that the likelihood of realizing the extreme scenarios is low.

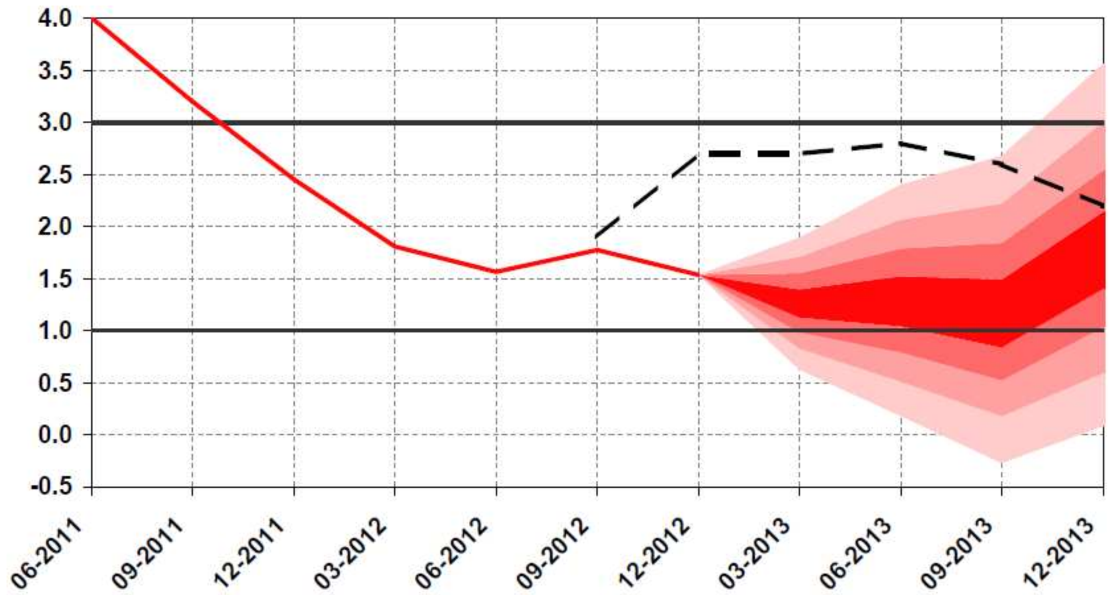
It appears that the risks originating in the local environment are primarily on the downside: geopolitical risks—both regional and those concerning relations between Israel and the Palestinians—as well as uncertainty concerning the future government's ability, after the coming elections, to continue conducting a responsible budgetary policy while coping with these challenges.

An additional risk is connected with the appreciation of the shekel that took place in the past quarter. Following the sharp devaluation of the shekel in the third quarter, the appreciation in the fourth quarter showed a certain moderation in the idiosyncratic risks to the Israeli economy, as evaluated by those active in the foreign currency market. However, a continued appreciation could weigh heavily on economic activity, thereby also constituting a risk of a slowdown in economic activity and a further slowdown in inflation.

Figure 1

Actual Inflation and Fan Chart of Expected Inflation in 2013

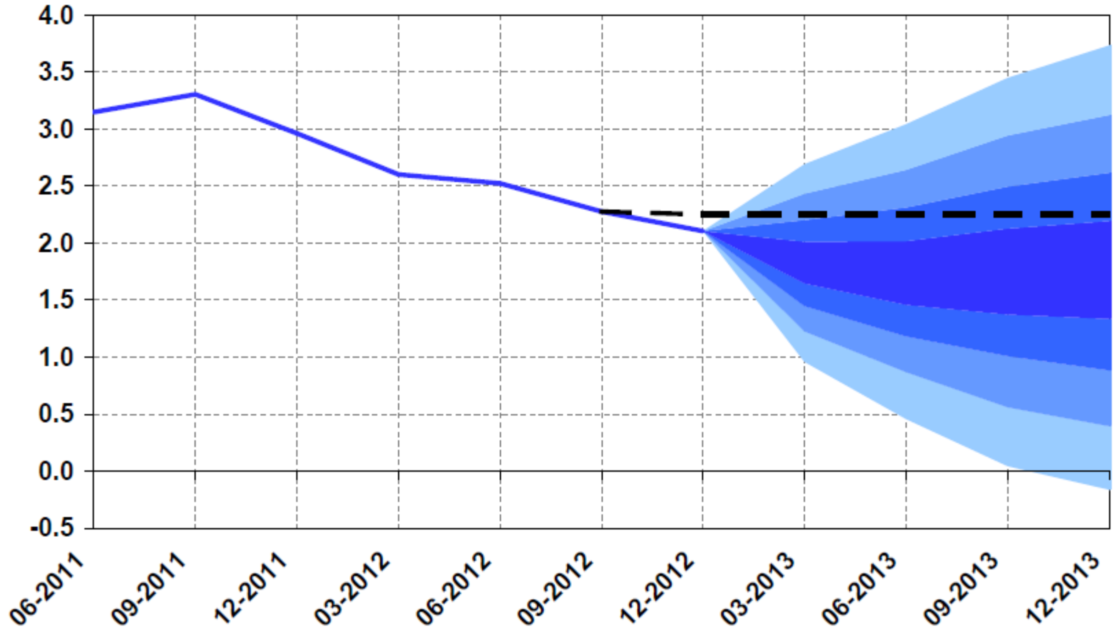
(cumulative increase in prices in previous four quarters)



The center of the fan charts is based on the Bank of Israel Research department assessment. The width of the chart is based on the department's medium-scale DSGE (dynamic stochastic general equilibrium) model. The full fan covers 66 percent of the distribution of expected inflation.
The dotted line corresponds to the previous staff forecast (published in September).
Source: Bank of Israel.

Figure 2

Actual Bank of Israel Interest Rate and Fan Chart of Expected Interest Rate in 2013



The center of the fan charts is based on the Bank of Israel Research department assessment. The width of the chart is based on the department's medium-scale DSGE (dynamic stochastic general equilibrium) model. The full fan covers 66 percent of the distribution of expected interest rate.
The dotted line corresponds to the previous staff forecast (published in September).
Source: Bank of Israel.

Figures 1 and 2 present fan charts around the inflation rate and interest rate forecasts (the broken line represents the baseline forecast of September 2012). The width of the fan distribution is derived from the **estimated** distributions of the shocks in the Research Department's DSGE model.