BANK OF ISRAEL
Office of the Spokesperson and Economic Information

December 23, 2013

Press Release

Research Department Staff Forecast, December 2013

Abstract

This document presents the forecast of macroeconomic developments compiled by the Bank of Israel Research Department in December 2013. The forecast was presented to the Monetary Committee on December 22, 2013 during its meeting prior to the decision on the Bank of Israel interest rate for January 2014. According to the staff forecast, Gross domestic product (GDP) is projected to grow by 3.5 percent in 2013, by 3.3 percent in 2014, and by 3.2 percent in 2015. Excluding the estimations of the effect of natural gas production from the "Tamar" site, the GDP growth rate is expected to improve from 2.6 percent in 2013 to 2.9 percent in 2014 and to 3.2 percent in 2015, in view of an improvement in the global environment and forecasts of a continued trend of improvement in 2014 and 2015. The rate of inflation over the next year (ending in the fourth quarter of 2014) is expected to be 1.8 percent. The Bank of Israel is expected to leave the monetary interest rate at 1 percent—its level when the forecast was compiled—until the second half of 2014, and the interest rate is expected to reach 1.25 percent in the fourth quarter of 2014.

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 formulating the macroeconomic forecast.[2] The model provides a framework for analyzing the forces which have an effect on the economy, and allows the integrating of information from various sources into a 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 the effects on the economy of changes in the interest rate, to assess alternative scenarios and to evaluate the risks to the baseline forecast.

[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 is available on the Bank of Israel website, under the title: “MOISE: A DSGE Model for the Israeli Economy,” Discussion Paper No. 2012.06.

a. The global environment

The assumptions about the global economy are primarily based on forecasts by international financial institutions (such as the IMF and OECD) and investment houses. Since the formulation of the previous forecast in September, our assessments in terms of growth of global trade in 2014 have been revised upward. Against the background of the improvement in the US economy, the Federal Open Market Committee (FOMC) decided at its meeting in December to reduce the pace of asset purchases made by the Federal Reserve as part of its quantitative easing program starting in January 2014.[3] Together with the announcement of tapering in the quantitative easing program, the Federal Reserve noted that it estimates that the short-term interest rate will remain at its low level for a considerable period after the unemployment rate declines to 6.5 percent. Most members of the FOMC believe that the short-term interest rate will begin rising in 2015.

Alongside the improvement in estimates relating to the US and other advanced economies, there is concern of a slowdown in the growth rates of emerging market economies, both in view of various local factors and in view of capital outflows from these markets with the increase in yields in the US that began with the expectation of tapering in the quantitative easing program.

Estimates of inflation rates expected in the next year in advanced economies are similar to those that were in place when the last forecast was prepared in September—near 2 percent on average.[4]

The price of oil (Brent crude) stood at about $109 per barrel in the fourth quarter, close to its level when the previous forecast was prepared. Global commodity prices, excluding energy, were stable in the second half of the year, following declines in the first half of the year.

b. Real activity in Israel

GDP growth is expected to be 3.5 percent in 2013. Excluding the effect of natural gas production from the "Tamar" site, GDP in 2013 is expected to grow by 2.6 percent.

The GDP growth forecast for 2013 is similar to the estimate in the previous forecast (at the end of September), when it was 3.6 percent. The forecast for this year is based primarily on data published up to the third quarter and on estimations regarding the development of GDP and its components during the fourth quarter of the year.

The GDP growth forecast for 2014 (3.3 percent) is close to our estimate from September (3.4 percent). The forecast for growth excluding the effect of natural gas production from the “Tamar” site, increased from 2.7 percent in September to 2.9 percent, with an upward revision of estimates for the growth rates of exports and of

---

[3] A reduction of the pace of asset purchases to the equivalent of $75 billion per month instead of $85 billion per month.

[4] For instance, the inflation forecast in OECD countries during 2014, found in the OECD Economic Outlook published in November, was 2 percent.

private consumption in view of the improvement in estimates regarding global growth, and the cancellation of the income tax increase that was planned for January 2014. The GDP growth rate excluding the effects of natural gas production is expected to increase in 2014 compared to 2013, led by an increase in growth rates of exports and of investments, with the expected improvement in the global economy.

GDP in 2015 is expected to grow by 3.2 percent. The improvement in growth in 2015 compared with 2014 (excluding the effect of natural gas production) is led by exports, the growth rate of which is expected to increase with the improvement in the growth rates of global trade. Beyond increasing demand for Israeli exports, an improvement in the global economy is expected to moderate the forces for appreciation of the shekel, supporting exports in that manner as well. With that, an increase in the global interest rate environment (and consequently in the domestic economy as well) is expected to have a moderating impact on growth rates of private consumption and investments.[5] Thus, the macroeconomic picture in 2015 reflects a situation in which monetary and fiscal policy will be required to support economic activity to a lesser extent, in view of the expected global recovery.

Table 1: Economic Indicators
Research Department Staff Forecast for 2013 to 2015
(rates of change, percent, unless stated otherwise)

	Bank of Israel forecast 2013	Bank of Israel forecast 2014	Bank of Israel forecast 2015
GDP	3.5	3.3	3.2
Civilian imports (excluding diamonds, ships, and aircraft)	-3.2	4.0	4.5
Private consumption	4.2	3.1	2.8
Fixed capital formation	-1.9	4.1	4.0
Public sector consumption (excluding defense imports)	3.8	2.4	1.5
Exports (excluding diamonds and start-ups)	-2.6	4.0	5.4
Unemployment rate[a]	6.4	6.4	6.5
Inflation rate[b]	1.8	1.8	2.0
Bank of Israel interest rate[c]	1.00	1.25	2.00

a) Annual average.
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

In our assessment, the rate of inflation during the four quarters ending in the fourth quarter of 2014 will be 1.8 percent, close to the midpoint of the inflation

5 We expect growth in infrastructure investments in 2015, so that the forecast growth rate of investment in fixed assets in 2015 is similar to the growth rate in 2014.

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).

A major factor moderating inflation is the exchange rate of the shekel. In terms of the nominal effective exchange rate, the shekel is 8 percent stronger in the fourth quarter of 2013, compared to its level in the fourth quarter of 2012.[6] Israel's risk premium as measured by the 5-year CDS spread is relatively low, which contributes to the forces for appreciation of the shekel. Fiscal policy measures as part of the 2013–14 budget, which were intended to reduce the budget deficit, are contributing to the decline in Israel's risk premium. It seems that the P5+1 agreement with Iran relating to its nuclear program and the agreement with Syria to dismantle its chemical weapons arsenal have also contributed to the decline in the risk premium at this time. With that, an increase in the global interest rate environment alongside the improvement in global economies is expected to moderate the forces for appreciation of the shekel.

The stability of commodity prices and the absence of inflationary pressure globally against the background of economic slack are also contributing to restraining inflation. In contrast with the moderating factors, the housing component (based on rents) in the Consumer Price Index is expected to be a contributing factor to inflation. In addition, the unemployment rate in the economy is relatively low.

The **Bank of Israel interest rate**, is expected to remain at its current level of 1 percent during the first half of 2014, and then to increase to 1.25 percent at the end of 2014. The interest rate is expected to start increasing against the background of the improvement in global economic conditions that will be accompanied by an increase in the global interest rate environment, supported by the tapering of quantitative easing in the US. With that, the level of global activity is still low, and the recovery is expected to be gradual, short-term interest rates globally are expected to remain at their low levels in the coming year, and inflation in advanced economies is expected to remain moderate. The interest rate is expected to continue increasing at a moderate pace in 2015, and to reach 2 percent at the end of the year, while short-term interest rates in other developed economies, particularly in the US, are also expected to begin rising.

Table 2 indicates that, with regard to the coming year, **the Research Department's forecast of the inflation rate is similar to that of private forecasters and expectations derived from capital markets.** Regarding the interest rate forecast for one year from now, expectations derived from capital markets are slightly lower than the Research Department's forecast and the average of the private forecasters' forecasts.

[6] The shekel appreciated in the first half of 2013, and was relatively stable in the second half of the year.

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	1.7	1.8
(range of forecasts)			(1.5-2.0)
Interest rate[d]	1.25	1.0	1.2
(range of forecasts)			(0.75-1.50)

a) Average for the month of December (through December 21). Seasonally adjusted inflation expectations.

b) Inflation and interest rate forecasts are after the publication of the CPI reading for November.

c) Inflation rate over the next 12 months (Research Department: in the next four quarters).

d) Capital markets forecast derived from Telbor rates. Forecasters and market: the interest rate one year from now. Research Department: Interest rate in the fourth quarter of 2014.

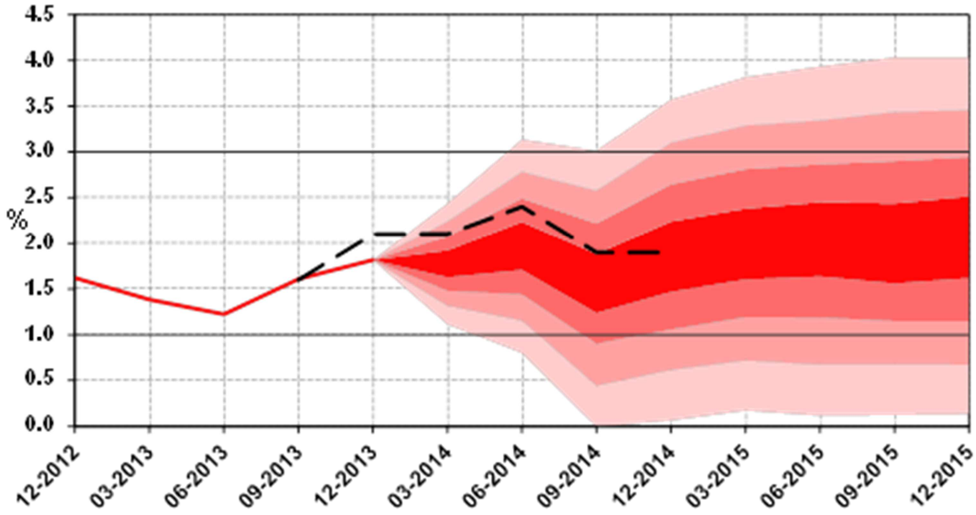
Source: Bank of Israel.

d. Balance of risks in the forecast

There are many factors, domestic and global, which can lead to developments that are different than those in the baseline forecast. Globally, the estimates of major international institutions are that the risks to growth forecasts still tend to the downside. A major risk is disappointing developments in real activity in various countries worldwide, such that the improvement may be slower than expected in the baseline forecast. In particular, there is concern regarding the recovery in major emerging markets and in Europe. On the domestic level, we note the uncertainty regarding the effect of the planned tapering of quantitative easing in the US, particularly on capital flows and, through them, on the exchange rate of the shekel, as well as the geopolitical uncertainty in our region.

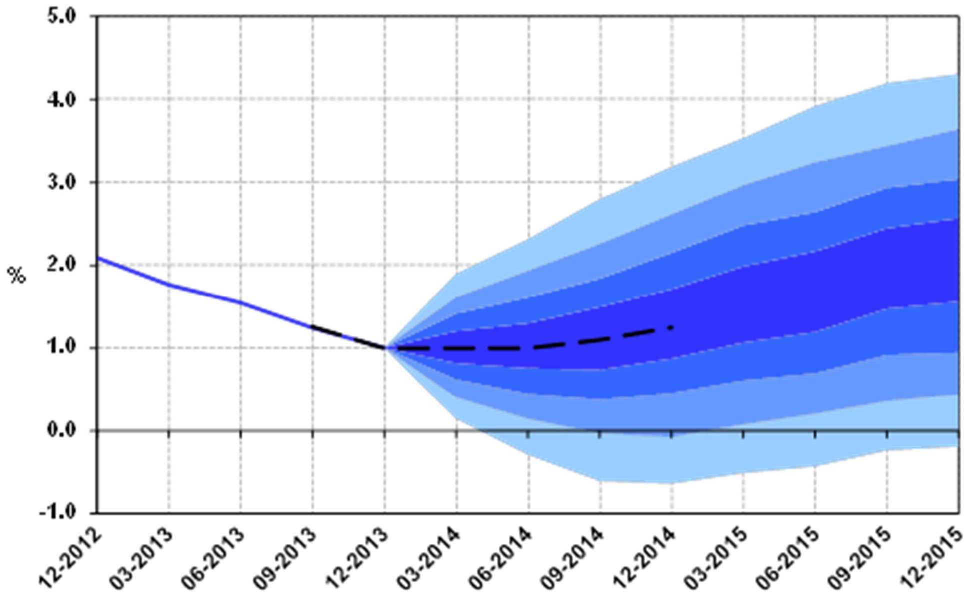
Figures 1 and 2 present fan charts around the inflation rate and interest rate forecasts (the broken line represents the baseline forecast of September 2013). The width of the fan distribution is derived from the **estimated** distributions of the shocks in the Research Department's DSGE model.

Figure 1
Actual Inflation and Fan Chart of Expected Inflation
(cumulative increase in prices in previous four quarters)



The center of the fan chart is based on the Bank of Israel Research Department assessment. The width of the chart is based on the Department's medium-scale DSGE (dynamic stochastic general equilibrium) model. The full fan covers 66 percent of the distribution of expected inflation.
The dotted line corresponds to the previous staff forecast (published in September 2013).
Source: Bank of Israel.

Figure 2
Actual Bank of Israel Interest Rate and Fan Chart of Expected Interest Rate



The center of the fan chart is based on the Bank of Israel Research Department assessment. The width of the chart is based on the Department's medium-scale DSGE (dynamic stochastic general equilibrium) model. The full fan covers 66 percent of the distribution of expected interest rate.
The dotted line corresponds to the previous staff forecast (published in September 2013).
Source: Bank of Israel.