BANK OF ISRAEL
Office of the Spokesperson and Economic Information

Press Release

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Research Department Staff Forecast, September 2013

Abstract

This document presents the forecast of macroeconomic developments compiled by the Bank of Israel Research Department in September 2013. The forecast was presented to the Monetary Committee on September 22, 2013 during its meeting prior to the decision on the Bank of Israel interest rate for October 2013. According to the staff forecast, the rate of inflation over the next year (ending in the third quarter of 2014) is expected to be 1.9 percent. The Bank of Israel interest rate, which was 1.25 percent when the forecast was compiled, is expected to decline in the final quarter of the year to 1 percent, and to remain at this level until the middle of 2014, and then to increase and stand at 1.25 percent at the end of 2014. Gross domestic product (GDP) is projected to grow by 3.6 percent in 2013 and by 3.4 percent in 2014. In the previous forecast, compiled in June, it was assessed that GDP will grow by 3.8 percent in 2013 and by 3.2 percent in 2014.

In addition to the baseline forecast, we present a fan chart which presents the risks to the baseline forecast.

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 June, the assessments of these institutions in terms of growth of imports in OECD countries in 2013 have been revised downward, from 1.5 percent to 1.2 percent. The reason for the downward revision derives primarily from a negative surprise in the first quarter of 2013. Together with deferring the time for tapering its quantitative easing program at the end of September, the US Federal Reserve revised downward its growth projections for 2013 and 2014.[3] Indicators also accumulated which pointed to a decline in the growth rate of OECD imports in 2014 to around 3.5 percent (compared with 4.5 percent in the June forecast).

Since May, long term yields have consistently increased worldwide, at a cumulative 1 percentage point. With that, assessments at this stage are that central bank interest rates in advanced economies are expected to remain at their low levels in 2013 and 2014. At the same time, the rate of inflation in those countries is expected to be moderate at 1.5 percent in 2013, and 2.0 percent in 2014.[4]

The price of oil (Brent crude) increased by about 10 percent since the previous forecast was compiled in June, and during the third quarter stood at about $108 per barrel. Global commodity prices, excluding energy, declined by about 2 percent in the third quarter, compared with the second quarter.

b. Real activity in Israel

GDP growth is expected to be 3.6 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 (3.6 percent) is slightly lower than in the previous forecast (at the end of June), when it was 3.8 percent. The downward revision derives primarily from the moderation in the rate of growth of public consumption in 2013. In the previous forecast (June), we assumed that the government would deviate by about NIS 6.5 billion from the expenditure rule in 2013 (in accordance with the current budget law), while the assessment now is that the deviation will be lower (around NIS 2 billion). The implication is that real growth in public consumption will be 5 percent, as opposed to 8.1 percent in the previous forecast. A reduction in the forecast of world trade, and the possible negative impact on exports (primarily tourism) should geopolitical tension continue, also contributed to the reduction in the 2013 growth forecast. In contrast, the change in the National Accounts definitions[5] by the Central Bureau of Statistics contributed to increased GDP growth calculated for 2013.

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[3] The Fed reduced its growth projections for 2013 and 2014 by 0.3 percent.

[4] We are working under the assumption that the recent increase in long term yields worldwide is already reflected in international institutions' forecasts for real activity, inflation, and interest rates.

[5] The Central Bureau of Statistics switched to a new method of measuring and calculating the National Accounts – "System of National Accounts 2008".

With regard to components of GDP, the full year forecast for **private consumption** increased, primarily as a result of higher than expected consumption in the second quarter of the year. The forecast **investment** growth rate also increased, as a result of a significant upward revision of 2013 first half data. As a result, projected **imports** were revised upward as well. The forecast for **exports** remained virtually unchanged. The virtual standstill in exports in 2013 is attributed to a moderate growth rate of world trade (OECD imports), the marked appreciation in the effective exchange rate of the shekel which occurred from the beginning of 2013, and the possible negative impact on tourism of security-related tension in the Middle East.

Table 1: Economic Indicators

Research Department Staff Forecast for 2013 and 2014

(rates of change, percent, unless stated otherwise)

	Actual 2012	Bank of Israel forecast 2013	Bank of Israel forecast 2014
GDP	3.4	3.6	3.4
Civilian imports (excluding diamonds, ships, and aircraft)	5.2	-6.1	2.7
Private consumption	3.2	3.7	2.3
Fixed capital formation	3.5	-5.4	4.2
Public sector consumption (excluding defense imports)	2.8	5.0	4.1
Exports (excluding diamonds and start-ups)	4.1	-1.1	2.6
Unemployment rate[a]	6.8	6.9	7.4
Inflation rate[b]	1.6	2.1	1.9
Bank of Israel interest rate[c]	2.10	1.00	1.25

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 .

In 2014, growth is projected to be 3.4 percent, a projected growth rate which is 0.2 percentage points higher than in the previous forecast in June. Excluding the effect of natural gas production, the growth rate is expected to be 2.7 percent. The decline in the growth rate (including natural gas production) in 2014 relative to 2013 reflects first and foremost the lower contribution of gas[6] to growth, as well as a slowdown in the growth rate of public consumption, based on the assumption that the government will return to the path consistent with the expenditure rule. Likewise, the annual growth rate of private consumption is expected to moderate, due to the tax increases in 2014 and the negative effect of higher long term interest rates around the

[6] The evaluated contribution to GDP growth of natural gas production is 0.7 percent in 2014, compared with 1 percent in 2013.

world. In contrast, the growth rates of exports and of investments[7] are expected to accelerate, the result of expected recovery around the world over the course of 2014. This factor is expected to be slightly moderated due to the effect of the appreciation which occurred in 2013 and due to some negative impact on tourism due to the geopolitical tension.

We assess that in 2014 the **unemployment rate** is expected to rise, relative to 2013, by 0.4 percentage points. The increased unemployment rate derives from the combination of an increase in the labor force participation rate and a moderate growth rate in 2014. The expected increase in the participation rate is partly a result of the decline in transfer payments.

Excluding the contribution of natural gas production, growth rates in 2013 and in 2014 are expected to be below the economy's long term growth rate. This situation derives, in essence, from the low level of activity in the world in recent years, with recovery only expected from the middle of 2014. The low interest rate level expected in the domestic economy along with fiscal measures adopted in the past and those expected in the future, are intended to support domestic real activity while maintaining price stability and financial stability.

c. Inflation and interest rate estimates

In our assessment, the rate of inflation during the four quarters ending in the third quarter of 2014 will be 1.9 percent, close to the midpoint of the inflation 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).

Major factors contributing to inflation expected during the next four quarters are increases in housing (rent) prices and in oil prices.[8] In contrast, the marked appreciation of the shekel over the past 3 quarters is expected to restrain inflation during the coming period.

The **Bank of Israel interest rate**, which was 1.25 percent at the time the forecast was formulated, is expected to decline to 1 percent in the final quarter of the year, remain at that level until mid-2014, and then increase to 1.25 percent at the end of 2014. In our assessment, under current global and domestic conditions, this interest rate path will support real domestic activity while maintaining price stability and financial stability. With that, a greater than expected improvement in the real situation worldwide or carrying out a plan to reduce quantitative easing in the US earlier than expected and/or with greater than expected strength will create pressures to increase the interest rate in Israel by more than projected in the forecast.

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[7] Investment is expected to increase at a rate of 4 percent, with an increase of 1 percent in investment in construction and an increase of about 5.5 percent in investment in primary industries (excluding ships and aircraft).

[8] The effect of high inflation in the third quarter of 2013, derived from VAT and import duty increases, on annual inflation ends in the second quarter of 2014.

Table 2 indicates that, with regard to the coming year, **the Research Department's forecast of the inflation rate is identical to that of private forecasters and slightly higher than expectations derived from capital markets. The interest rate forecast is similar to that of the forecasters and expectations derived from capital markets.** It should be noted that there is considerable uncertainty regarding the rate of inflation expected over the coming year, reflected in the wide range of private forecasters' projections.

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]	1.9	1.6	1.9
(range of forecasts)			(1.2-2.3)
Interest rate[d]	1.10	1.22	1.33
(range of forecasts)			(1.0-1.75)

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

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

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 at the end of the third quarter of 2014.

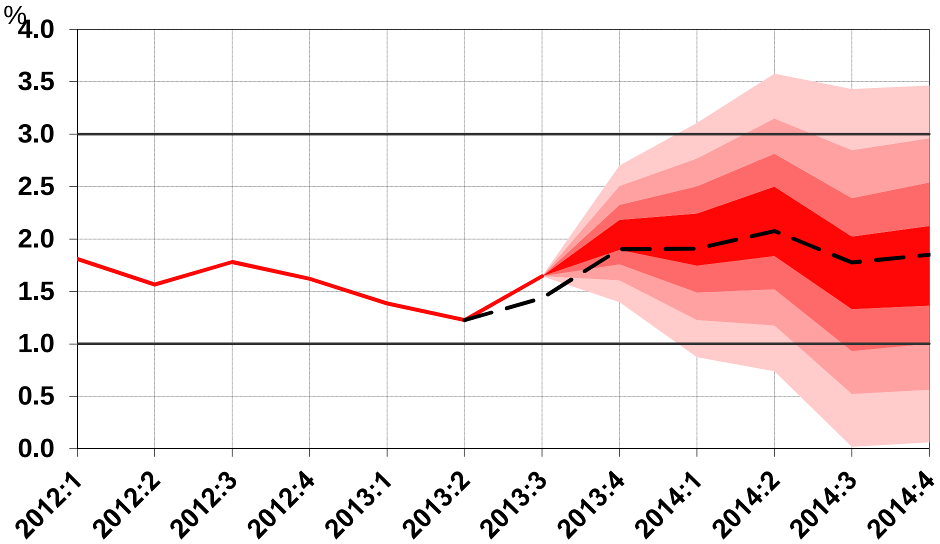
Source: Bank of Israel.

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. At this time, the risk factors which receive greater weight in Israel's balance of risks include the uncertainty about real global activity, the geopolitical situation in the Middle East, and the timing, strength, and effects of a reduction in quantitative easing in the US. All these have an effect both on nominal variables in the economy, such as the inflation and exchange rates, and on real variables such as GDP and exports.

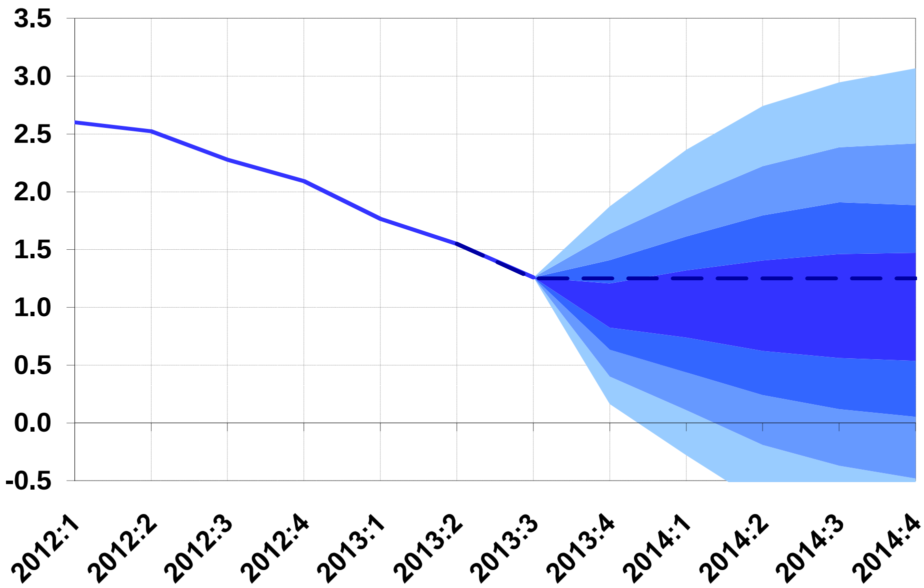
Figures 1 and 2 present fan charts around the inflation rate and interest rate forecasts (the broken line represents the baseline forecast of June 2013). The width of the fan distribution is derived from the **estimated** distributions of the shocks in the Research Department's DSGE model. The shocks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

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 June 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 June 2013).
Source: Bank of Israel.