Bank of Israel

MONETARY POLICY REPORT

First Half of 2019

51

July 2019

CONTENTS

According to the Bank of Israel Law, 5770–2010, the Bank of Israel has three objectives: (1) to maintain price stability, as its central goal; it was established that price stability is defined as an annual inflation rate of between 1 percent and 3 percent; (2) to support other objectives of the Government's economic policy, particularly growth, employment and reducing social gaps, provided that this support shall not prejudice the attainment of price stability; and (3) to support the stability and orderly activity of the financial system. In order to attain these objectives, the Bank of Israel employs various tools, chief among them the decision on the appropriate level of the short-term interest rate. In addition, the Bank may intervene in the foreign exchange market.

Section 55(a) of the Bank of Israel Law, 5770–2010, establishes the publication of this report, which is submitted by the Bank of Israel to the government and the Knesset Finance Committee twice a year. The report surveys the economic developments that took place during the period covered by the report. It also surveys the policy required—in the view of the members of the Bank of Israel's Monetary Committee, the forum in which monetary policy decisions are reached—to maintain the inflation rate within the range set by the government and to achieve the other objectives of the government's economic policy. A survey of financial stability appears in the Bank of Israel's Financial Stability Report for the period covered.

The Monetary Policy Report for the first half of 2019 was prepared by economists in the Research Department, within guidelines set by the Bank of Israel Monetary Committee. This report is based on data that were published up to the interest rate decision reached on July 8, 2019, and thus refers to the CPI through the month of May 2019.

SUMMARY OF RECENT ECONOMIC DEVELOPMENTS

Monetary policy: This report reviews the monetary policy in the first half of 2019 and in the beginning of the second half of 2019.[1] In the first half of 2019, the Monetary Committee kept the interest rate unchanged, after increasing it to 0.25 percent at the end of the previous half year. The Committee's decisions kept the forward guidance, which stated that the Committee assesses that the rising path of the interest rate in the future will be gradual and cautious, in a manner that supports a process at the end of which inflation will stabilize around the midpoint of the target range, and that supports economic activity. In the period reviewed, the Bank of Israel bought a small amount of foreign exchange—$86 million.

The inflation environment: The 1-year inflation rate was slightly above the lower bound of the target range during the entire reviewed period (the CPI for January through May), similar to its level in most months in the previous half year, and one-year inflation expectations, based on most sources, were as well. Inflation expectations for medium and long terms remained well entrenched within the target range throughout the half year. With regard to the inflation environment, the Monetary Committee members noted that for a notable period of time there had not been a significant change in it. Inflation in nontradable goods prices (an approximation of the domestic component of inflation) was above 2 percent throughout the half year, and the inflation rate in tradables became slightly negative in some of the months, as opposed to the previous half year, but afterwards it returned to being positive. After the end of the period reviewed, the CPI for June, which was lower than expected, was published, and the 12-month inflation rate in June was slightly below the lower bound of the target range.

Real domestic activity: The data on real activity published during the reviewed period supported the assessment that activity is converging to growth at a pace slightly lower than its potential of approximately 3 percent, and that data on the previous half year indicated a transitory slowing in the second and third quarters of 2018 that derived from supply constraints. This assessment is supported mainly by the tight labor market and the continued increase in wages, primarily in the business sector.

Fiscal policy: During the course of the half year reviewed, the marked uncertainty in the fiscal sphere was discussed, among other things in view of the general elections that were held during the period: this derived from the possible ramifications of the coalition-forming negotiations, from the steps that the future government might take in order to deal with the expected deficit and from their possible effects on economic activity and on the inflationary path. In any case, the fiscal uncertainty is expected, in the Committee's assessment, to continue for some time.

Capital market developments: Telbor market-based expectations with regard to an interest rate increase declined for all ranges during the course of the half year, and they reflect a relatively high probability of no change in the interest rate in the coming year, in contrast to forecasters' assessments and the Research Department's staff forecast. In the half year

[1] Decisions in 2019 were reached on February 25, April 8, May 20, and July 8.

reviewed, a downward trend in nominal and real yields in Israel for all ranges was seen, similar to their declines worldwide.

The housing market: Data published toward the end of the period reviewed[2] indicated an increase in home prices of 1 percent in the past 12 months, following a year over year decline of more than 2 percent in some months of the previous half year. This is in parallel to the marked increase in the number of transactions. Despite the increase in home prices, the Committee members agreed that it is still too early to assess if the trend of rising prices is renewing or if their decline will continue. There has been a continued moderate rising trend in new mortgage volume since the end of 2017, against the background of a slight decline in the weighted real interest rate on mortgages, which started in the beginning of 2019.

The global economy: The Committee discussed the global economy—the moderation of activity, the uncertainty and the risks, as well as the downward revision of growth forecasts and the expected change in the interest rate path and in monetary policy worldwide. In the US, a lower interest rate path than before, and even an interest rate reduction, is expected, and in Europe, the expected date of the beginning of raising the interest rate was deferred. The Committee members assessed that the decline in world trade is expected to continue to impact on activity in Israel. The Committee discussed additional risk factors that impact on the global economy, including the possible US-China trade agreement and the uncertainty regarding Brexit.

The shekel exchange rate: During the half-year reviewed, the shekel strengthened markedly against major currencies, after it had depreciated in the fourth quarter of 2018. From the beginning of the half year, the shekel strengthened in terms of the nominal effective exchange rate, the dollar, and the euro; it appreciated by 5.4 percent in nominal effective exchange rate terms. The Committee members noted that the appreciation is the main factor delaying the continued increase of the inflation rate toward the midpoint of the target.

Research Department staff forecast: The Research Department's staff forecast did not change markedly during the period reviewed. Based on the forecast compiled by the Research Department and published with the interest rate decision on July 8, 2019, GDP is expected to grow by 3.1 percent in 2019 and by 3.5 percent in 2020, a downward revision of 0.3 percentage points for 2019 (compared with the forecast compiled in January 2019). Inflation is expected to be 1.6 percent in 2019 (an upward revision of 0.3 percentage points for 2019 vis-à-vis the forecast in January) and 1.6 percent in 2020 (a downward revision of 0.2 percentage points for 2020 vis-à-vis the forecast in January). According to the forecast, the Bank of Israel interest rate is expected to increase to 0.5 percent toward the end of the third quarter of 2019 and to continue to increase gradually to 1 percent by the end of 2020 (a downward revision of 0.25 percentage points for 2020, compared with the forecast compiled in January 2019). Since the publication of the forecast, there were two developments in relatively significant parameters that impact on it: the CPI for June surprised to the downside, and there was a slight increase in the probability ascribed by the markets to monetary accommodation soon in the US.

[2] Home Prices Survey data for March-April 2019.

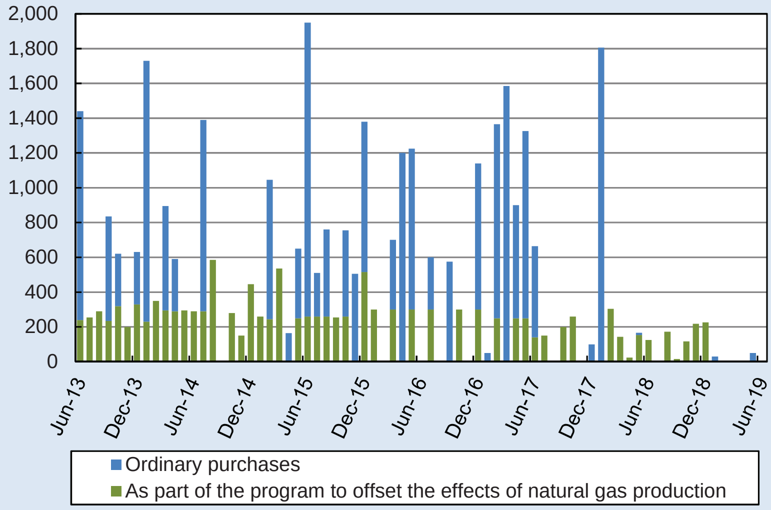
MONETARY POLICY AND BACKGROUND CONDITIONS

This report reviews the monetary policy in the first half of 2019 and in the beginning of the second half of 2019.[3] In the first half of 2019, the Monetary Committee kept the interest rate unchanged, after increasing it to 0.25 percent at the end of the previous half year, in the November interest rate decision.

In addition, the Committee kept its forward guidance—a monetary tool that it has used in recent years in order to impact on market expectations regarding the future path of the interest rate. The interest rate decisions maintained the sentence that stated that the Committee assesses that the rising path of the interest rate in the future will be gradual and cautious, in a manner that supports a process at the end of which inflation will stabilize around the midpoint of the target range, and that supports economic activity.

In the period reviewed, the Bank of Israel bought a small amount of foreign exchange—$86 million (**Figure 1**).

Figure 1
Bank of Israel Intervention in the Foreign Exchange Market, June 2013–June 2019 ($ million)



SOURCE: Bank of Israel calculations.

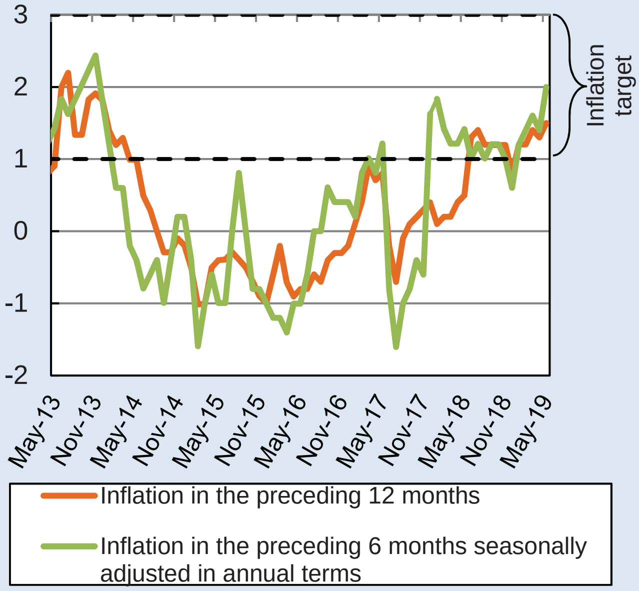
The main developments that were considered by the Monetary Committee in the first half of 2019:

1. The inflation environment

It could be seen that during the half year reviewed (the January–May CPI readings), the inflation environment in Israel stabilized within the target range. The Committee assessed that at the end of the reviewed half year, the inflation environment stabilized slightly

[3] Decisions in 2019 were reached on February 25, April 8, May 20, and July 8.

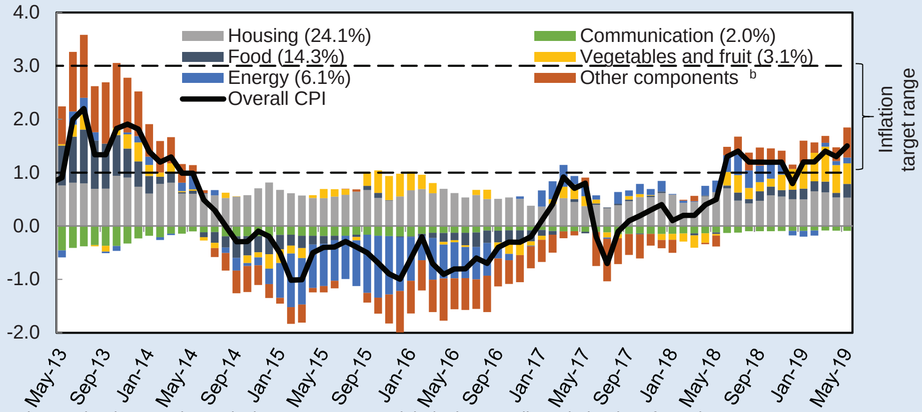
Figure 2
Annual Inflation and Inflation in the Preceding 6 Months in Annual Terms, May 2013–May 2019
(percent)



SOURCE: Based on Central Bureau of Statistics.

above the lower bound of the target, based on actual inflation (January–May CPI) as well as expectations and forecasts from the various sources. Over the course of 2018, the inflation environment was on an upward trend. During the first half of 2019 (the period reviewed), various indicators supported the assessment that inflation had stabilized within the target range: (a) the annual inflation rate hovered above the lower bound of the target and remained stable at 1.2–1.5 percent. Semiannual inflation (seasonally adjusted, in annual terms) has been in the target range since December 2017 (**Figure 2**). (b) Almost all of the main CPI components contributed positively to annual inflation in the months of the half year (**Figure 3**). (c) Annual inflation of the nontradable index, a figure that serves as an approximation of the domestic component of inflation, continued to increase, and its level in the months of the half year was relatively high—above 2 percent. (In contrast, tradable inflation turned slightly negative in some of the months, in contrast to the previous half.) (d) Stability was seen in the adjusted index, which is an approximation for

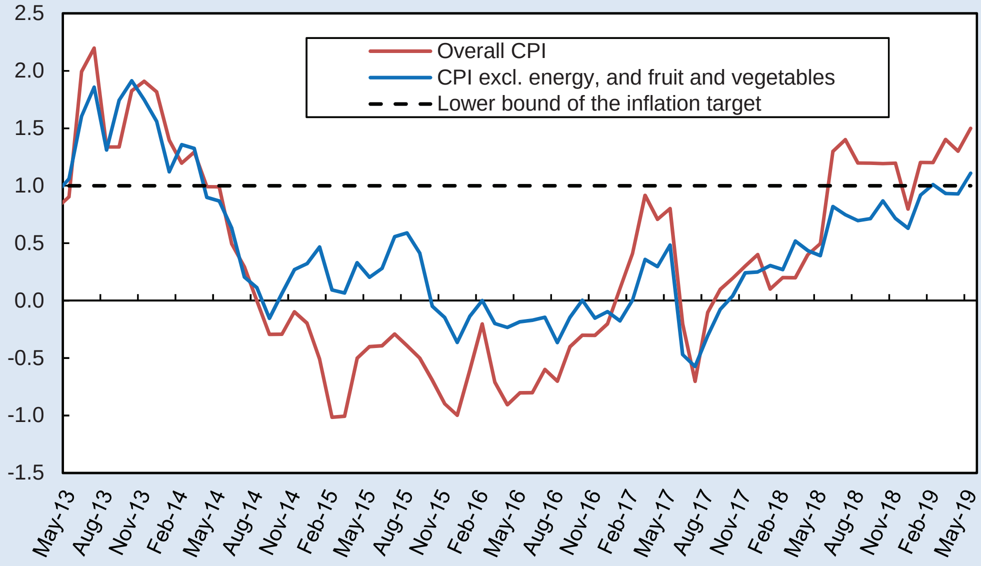
Figure 3
Contribution of the Main CPI Components to Annual Inflation[a], May 2013–May 2019
(percent)



[a] The number in parentheses is the component's weight in the overall CPI index (as of 2019).
[b] "Other components" includes Health; Education, Culture and Entertainment; Furniture and Household Equipment; Clothing and Footwear; Miscellaneous; and the Dwellings Maintenance and Transport components minus the sub-components relating to energy prices.
SOURCE: Based on Central Bureau of Statistics.

"core inflation"[4]—the annual inflation rate net of the volatile energy and fruit and vegetables component—and by the end of the period reviewed it even rose slightly above the lower bound of the target range (**Figure 4**).

Figure 4
Actual Inflation over the Preceding 12 Months, Overall CPI and Excluding Energy, Fruits and Vegetables, May 2013–May 2019 (percent)



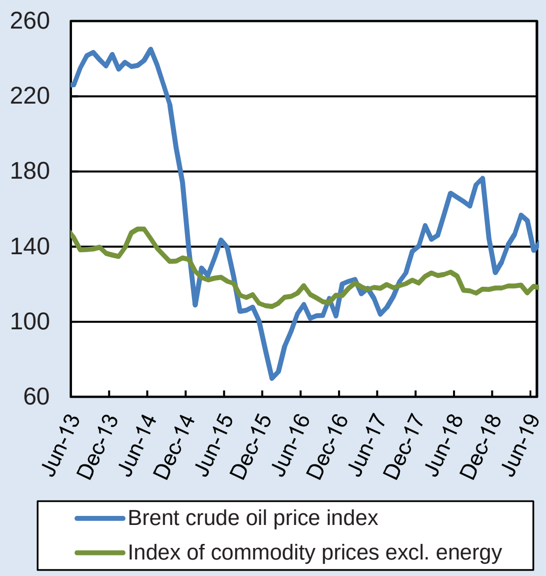
SOURCE: Based on Central Bureau of Statistics.

The stability of the inflation rate is partly explained by the relative stability of oil prices at the end of the half year reviewed, after notable declines in the final quarter of 2018. At the beginning of the half year they began to increase, subsequently they declined again, and in June they began to increase again, so that overall, during the course of the half year they increased relatively moderately by approximately 20 percent (**Figure 5**). In fact, looking at the contributions to annual inflation in the general CPI, a distinction can be made between the very small contributions of the energy components in the period reviewed, in contrast to their positive contribution in the previous half year.

In order to analyze the inflation environment, inflation expectations must be examined as well: 1-year expectations increased slightly, and based on most of the sources they continued to be above the lower bound of the inflation target range (**Figure 6**). Inflation expectations for medium and long terms increased slightly and remained well anchored within the target range over the course of the half year.

[4] Israel does not have a formal core index.

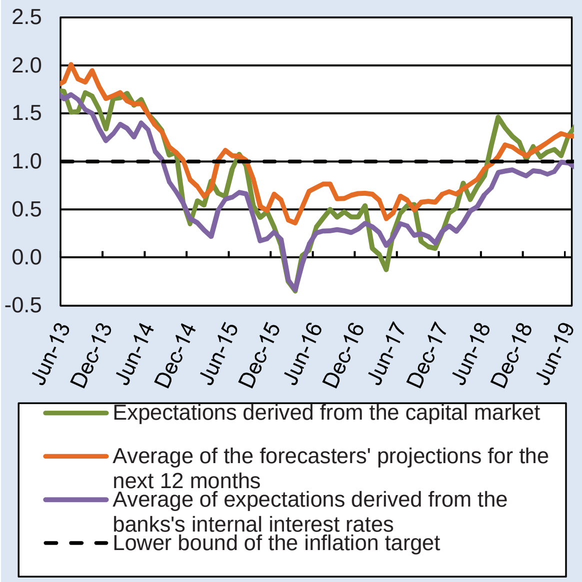
Figure 5
Commodity and Oil Price Indices, Monthly Average, June 2013–June 2019 (index)



SOURCE: Based on Bloomberg.

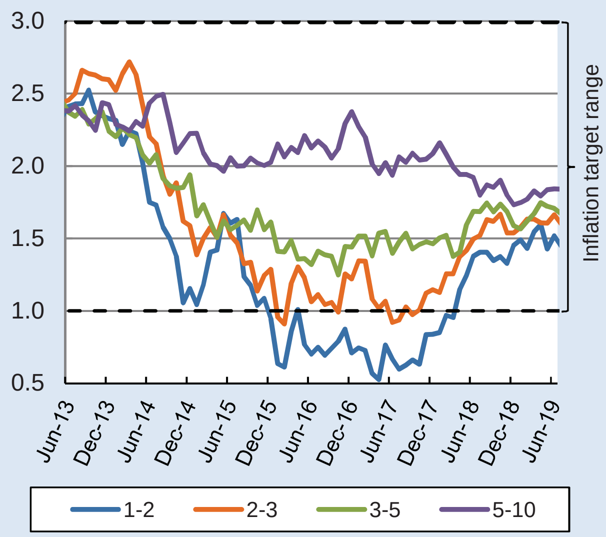
Twelve-month inflation expectations derived from the capital market, and private forecasters' projections, hovered during the course of the period reviewed above the lower bound of the target, in a range of 1–1.4 percent (**Figure 6**). Forward inflation expectations were characterized during the course of the period by a moderate increase within the target range: 1–2 year forward expectations hovered around 1.5 percent (**Figure 7**). Expectations for longer ranges —from the second year to the third year forward and from the fifth year forward to the tenth year forward—hovered between 1.6 percent and 1.8 percent, slightly below the midpoint of the inflation target.

Figure 6
One-Year Inflation Forecasts from the Various Sources[a], June 2013–June 2019 (percent)



[a] Monthly averages.
SOURCE: Bank of Israel calculations.

Figure 7
Forward Inflation Expectations Derived from the Capital Market[a], June 2013–June 2019 (percent)



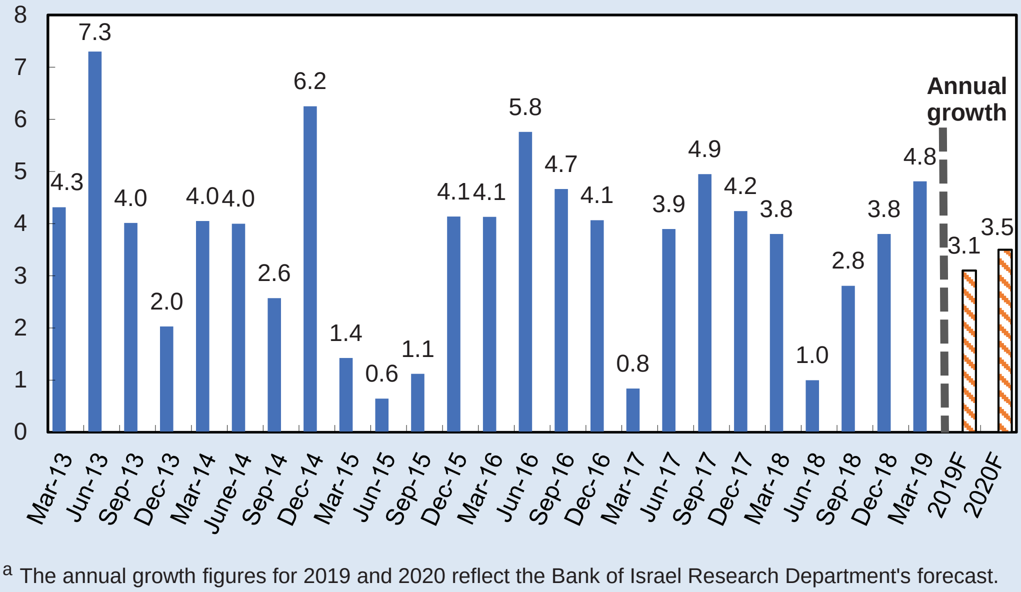
[a] Monthly averages.
SOURCE: Bank of Israel calculations.

2. Real activity in Israel

The data on real activity published during the reviewed period drove the Monetary Committee members to assess that activity is converging to growth at a pace slightly lower than its potential of approximately 3 percent, and that data on the previous half year indicated a transitory slowing in the second and third quarters of 2018 that derived from supply constraints (**Figure 8**). This is in view of the growth in domestic demand, which was reflected in a recovery of private consumption, and that was responded to more by an increase in imports than by domestic production (**Table 1**). This assessment is supported mainly by the tight labor market: employment and participation rates remained high, at approximately 80 percent (**Figure 9a**); the unemployment rate among the prime working ages is very low at 3.2 percent; the job vacancy rate (demand for workers) remains high, even though it declined in the past half year (**Figure 9b**); and wages continued to increase, driven by the business sector, and in a range of industries and salary levels, by approximately 3.7 percent in the economy overall and by 4.4 percent in the business sector (**Figure 10**). During the course of the half year, the Committee members noted that according to several indicators it is likely that the labor market strength has reached its peak, but they assessed that despite this, the labor market remains tight.

In further detail regarding the GDP and its composition—National Accounts data published during the course of the half year indicated several developments: in the first quarter of 2019, GDP grew by 4.8 percent, and the Research Department assessed that growth net of the value added incorporated in vehicle imports was more moderate—slightly below 3 percent,

Figure 8
GDP Growth Rates[a], March 2013–March 2019
(Seasonally adjusted quarterly data, in annual terms, percent)



[a] The annual growth figures for 2019 and 2020 reflect the Bank of Israel Research Department's forecast.
SOURCE: Bank of Israel and Central Bureau of Statistics.

Table 1

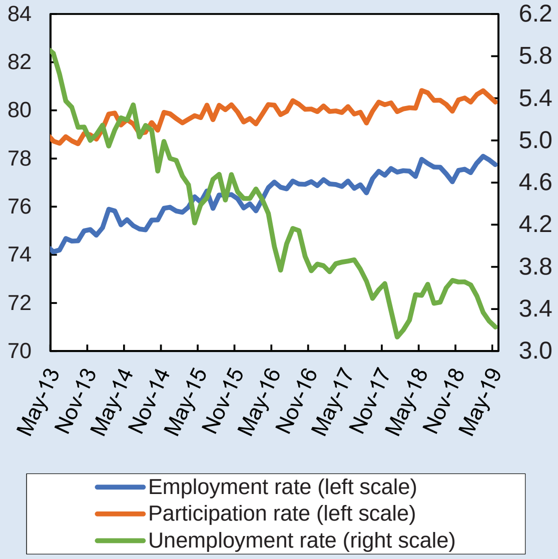
National Accounts - data available at the time of the interest rate decisions

(seasonally adjusted data, quantitative rates of change compared to previous period, in annual terms)

Decision made in		January	February	March	April	May	June	July
GDP	2018:Q3	2.1	2.3	2.4	2.7	2.8	2.8	2.8
	2018:Q4			3.1	3.0	3.1	3.9	3.8
	2019:Q1						5.2	4.8
Business sector product	2018:Q3	1.1	1.2	1.6	2.2	2.4	2.5	2.4
	2018:Q4			3.1	2.8	3.0	3.9	3.7
	2019:Q1						5.8	5.4
Private consumption	2018:Q3	2.7	2.3	3.3	3.5	3.2	3.4	3.4
	2018:Q4			4.9	5.7	6.1	7.2	7.3
	2019:Q1						7.6	6.6
Fixed capital formation	2018:Q3	-10.5	-10.4	-7.8	-7.6	-6.6	-7.2	-7.7
	2018:Q4			3.0	3.4	10.4	14.2	14.5
	2019:Q1						10.0	9.8
Exports excluding diamonds and startups	2018:Q3	0.7	4.8	5.0	6.2	6.6	6.1	6.1
	2018:Q4			2.8	1.1	-0.8	0.8	0.5
	2019:Q1						4.9	3.9
Civilian imports excluding ships, aircraft, and diamonds	2018:Q3	-5.3	-6.2	-5.2	-5.0	-4.1	-3.7	-3.6
	2018:Q4			7.1	6.6	10.0	12.2	12.9
	2019:Q1						12.2	14.6

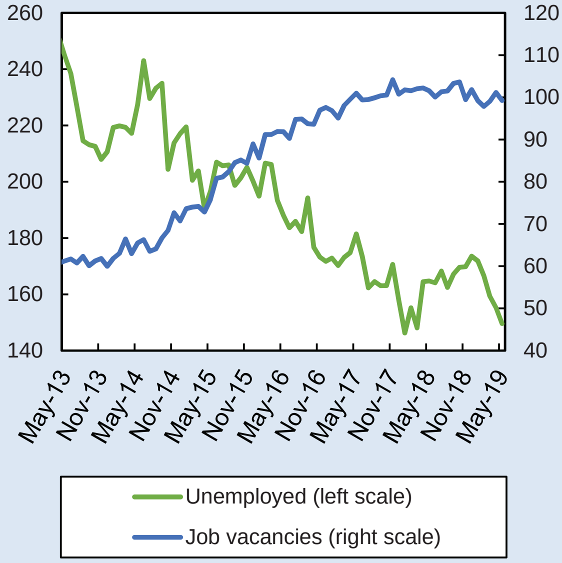
SOURCE: Based on Central Bureau of Statistics.

Figure 9a
Unemployment, Employment, and Participation Rates, Prime Working Ages (25–64), May 2013–May 2019 (Seasonally adjusted monthly data, percent)



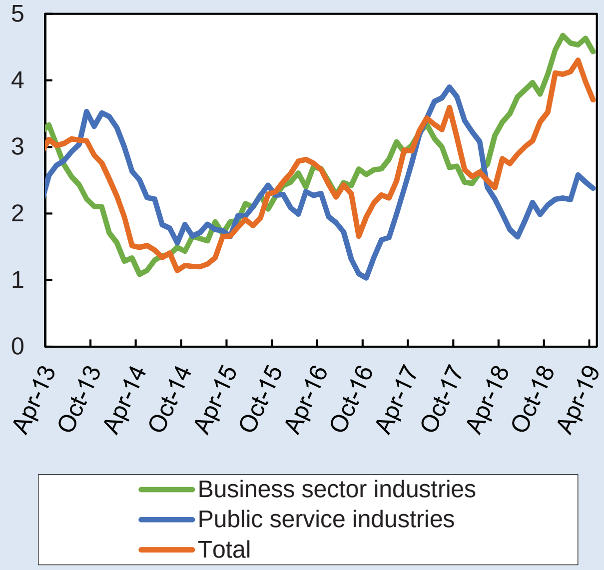
SOURCE: Central Bureau of Statistics.

Figure 9b
Job Vacancies and Number of Unemployed, May 2013–May 2019
(Seasonally adjusted data, thousand)



SOURCE: Central Bureau of Statistics.

Figure 10
Nominal Wage per Employee Post, April 2013–April 2019
(Rate of change from same period in the previous year, seasonally adjusted moving 6-month average, percent)



SOURCE: Based on Central Bureau of Statistics.

similar to its pace during 2018. The rapid growth was reflected in all the uses, particularly in the private consumption and fixed capital formation components. However, net of the effect of vehicle imports—which reflects purchases brought forward as a response to the updated formulation of the "green taxation" in April 2019—the development of these uses appears different—private consumption excluding durable goods expanded only moderately, and most other investment components (excluding passenger cars) contracted. In contrast, exports and public consumption contributed to growth of GDP: exports excluding diamonds and start-up companies grew by 3.9 percent, and reflected continued rapid growth of services exports alongside solid growth of goods exports, and public consumption excluding defense imports expanded by 3.5 percent. On the sources side, imports excluding defense imports, ships and aircraft, and diamonds expanded by 14.6 percent, mainly as a result of car imports. In summary, the macro picture conveyed by the data in the second estimate of National Accounts data indicates that the acceleration in the fourth quarter of 2018 did not continue. From the perspective of the moderate growth of private consumption alongside continued weakness of investment in residential construction, the economy returned to growth at a pace slightly lower than its potential, similar to its growth rate during 2018 (**Table 2**).

Table 2
Development of GDP, imports and uses

(seasonally adjusted data, quantitative rates of change compared to previous period, in annual terms)

	2016	**2017**	**2018**	**2017:Q4**	**2018:Q1**	**2018:Q2**	**2018:Q3**	**2018:Q4**	**2019:Q1**
GDP	4.0	3.5	3.3	4.2	3.8	1.0	2.8	3.8	4.8
Business sector product	4.2	3.6	3.4	4.5	4.9	0.1	2.4	3.7	5.4
Imports excluding defense, ships, aircraft and diamonds	9.0	7.3	5.1	8.6	0.1	1.5	-3.6	12.9	14.6
Private consumption	6.4	3.4	3.9	2.3	7.3	-2.3	3.4	7.3	6.6
of which : private consumption excluding durable goods	5.2	4.5	3.7	3.8	3.6	1.9	3.3	6.3	0.3
Public consumption	4.2	3.4	3.7	10.6	9.3	-6.7	9.4	-0.1	1.1
of which : public consumption excluding defense imports	4.2	4.5	3.7	11.7	4.5	-3.6	10.5	-1.4	3.5
Gross domestic investment	10.1	3.5	3.6	6.0	-1.5	29.7	-33.4	32.8	20.3
of which : in fixed assets	12.8	3.0	3.3	-0.2	10.6	-4.7	-7.7	14.5	9.8
Exports excluding diamonds	0.9	7.0	4.8	9.1	5.0	-6.2	12.9	-4.0	12.9
of which : exports excluding diamonds and startups	-0.2	7.3	4.2	12.7	6.5	-11.0	6.1	0.5	3.9

SOURCE: Based on Central Bureau of Statistics.

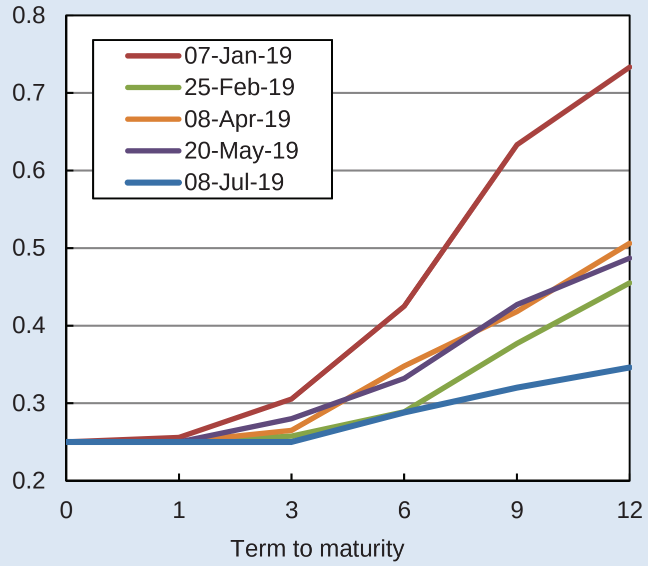
3. Fiscal policy

During the course of the half year reviewed, the Monetary Committee members discussed the marked uncertainty in the fiscal sphere, among other things in view of the general elections that were held during the period. This derived from the possible ramifications of the coalition-forming negotiations, and the steps that the future government might take in order to deal with the structural deficit and on economic activity and on the inflationary path. The domestic deficit in January–June 2019 was NIS 18.7 billion, a deviation of NIS 10.8 billion from what was expected based on the seasonal path that is in line with deficit target. In the 12 months that ended in June 2019, the government's deficit was 3.9 percent of GDP, markedly higher than the deficit target established for 2019 (2.9 percent). The deviation of expenditures from the path that is in line with the budget was focused in January, and since then they returned to the expected monthly path. In contrast, revenues were lower than expected throughout the entire half. The high deficit in the budget reflects a structural deficit that has grown in recent years, and that was not reflected in actual data until the second half of 2018, due to short-term fluctuations in tax revenues and one-off revenues. The Committee assesses that the fiscal uncertainty is expected to continue for a time, until the next government establishes the fiscal path for the coming years and decides on the policy steps that will support it. The impact of fiscal policy steps on inflation and activity will depend on the composition of the steps that will be taken.

4. Capital market developments

According to the Telbor market, the assessments regarding an increase in the Bank of Israel interest rate declined for all ranges during the half year, and incorporate a relatively high probability of no change in the interest rate in the coming year, in contrast to private forecasters' projections and the Research Department's forecast.

Figure 11
Forward Yield Curve According to Telbor Market Data at the Time of Interest Rate Decisions, January 2019–July 2019
(percent)



SOURCE: Bank of Israel calculations.

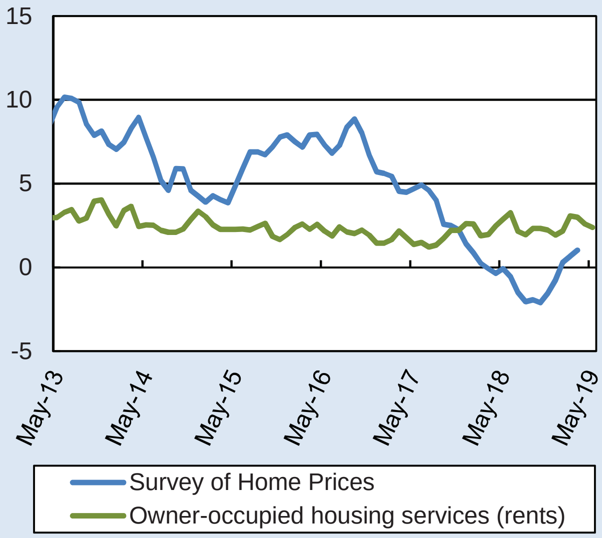
Expectations for an increase in the Bank of Israel interest rate, derived from Telbor market interest rates for all terms, declined markedly in the beginning of the half year, apparently against the background of the publication of the January interest rate decision, which was viewed by the market as relatively "dovish". The decline noted was apparently a correction to the marked increase of those interest rates after the increase in the Bank of Israel interest rate to 0.25 percent at the end of November. Afterward, those interest rates fluctuated without a clear trend—they continued to decline moderately until March, and afterward they increased moderately until several days before the May interest rate announcement, and since then declined again. By the end of the half year, the 3-month forward interest rate was 0.25 percent and reflected no change in the interest rate in the third quarter of 2019. The 9–12 month forward interest rate was 0.35 percent and remained essentially unchanged after the July decision, implying that the Telbor market attributes a probability of slightly more than a one-third to one increase in the Bank of Israel interest rate in the coming year (**Figure 11**). This is in contrast to the Research Department's forecast for two interest rate increases in the coming year and private forecasters' projections regarding the interest rate in another year, which were relatively stable over the period reviewed (other than a decline in January), hovering around an interest rate of 0.5 percent. That indicates that the forecasters expect one interest rate increase in the coming year.

During the half year reviewed, a downward trend was seen in nominal and real yields in Israel for all ranges, similar to their decline worldwide. For a range of up to 3 years, the cumulative decline was relatively slight—0.2 to 0.4 percentage points; in longer terms to maturity (above 3 years) the decline was greater—approximately 0.7 percentage points, on average. In June, the average nominal yield for 1–3 years was 0.4 percent, for 4–6 years it was 0.9 percent, and for 7–10 years, it was 1.5 percent. The decline in the nominal curve is similar to the decline in the real curve, and does not reflect a decline in inflation expectations. The background to the decline in nominal and real yields in Israel was the decline of such yields in the US, Europe, and in other countries, among other things due to signs of economic slowing around the world and trade tensions.

5. The housing market

Data published toward the end of the period reviewed[5] indicated a year over year increase in home prices of 1 percent, following price declines in the previous half year, and in parallel there was a marked increase in the number of transactions. Despite the increase in home prices, the Committee members agreed that it is still too early to assess if the trend of rising prices is renewing or if their decline will continue. The most recent data (March-April 2019) indicates a 12-month increase of 1 percent in home prices, following a year over year decline of more than 2 percent in some months of the second half of 2018. The pace of annual increase of the Owned-dwelling Housing Services Index (rents) during the half year was still high, at 2.2–3.1 percent, slightly higher than in the previous half year (**Figure 12**).

Figure 12
Rates of Change in Home Prices, and Owner-Occupied Housing Services over the Preceding 12 months, May 2013–May 2019 (percent)

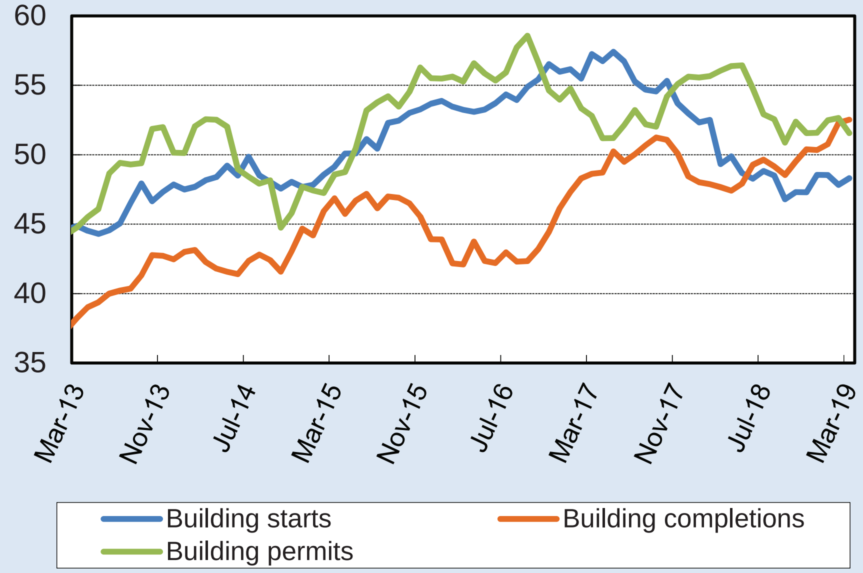


SOURCE: Based on Central Bureau of Statistics.

In parallel with the increase in home prices, Carman[6] database data indicated a sharp increase in the number of transactions (moving average of the most recent 6 months) for all buyer types, with the increase among first home buyers the most notable. Looking at Carman data on first home buyers, it is found that the increase was in new home purchases, and the increase was smaller in second hand home purchases. Among new home buyers, the share of home buyers in the framework of the "buyer's price" program increased gradually (based on Central Bureau of Statistics data). According to March-April data, such purchases' share was 43 percent, compared with 33 percent, on average, in the previous half year.

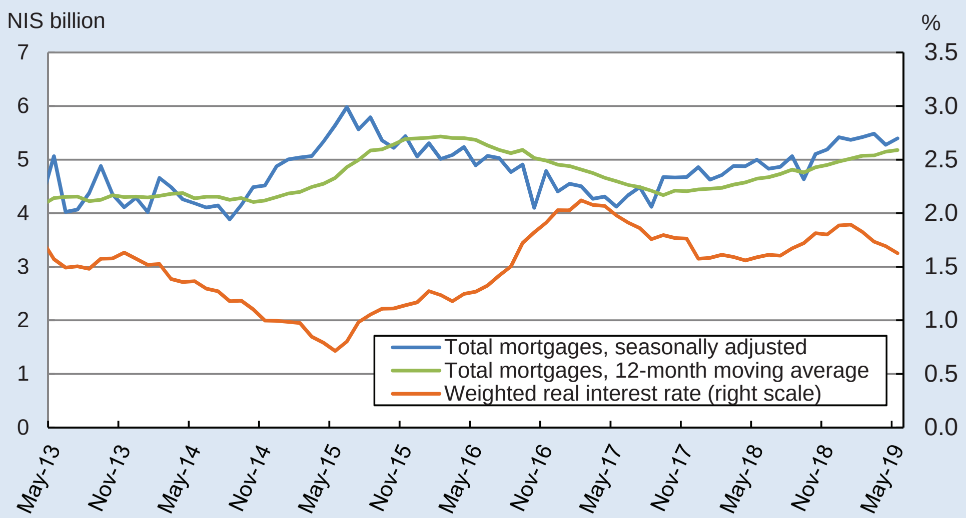
[5] Home Prices Survey data (March-April 2019).
[6] Carman is a real estate prices database, an information system operated by the Israel Tax Authority to document and process property transaction data.

Figure 13
Building Permits, Starts and Completions, Past 12 Months, March 2013–March 2019 (Residential units, thousand)



SOURCE: Based on Central Bureau of Statistics.

Figure 14
Total New Mortgages and the Weighted Real Interest Rate on Mortgages, May 2013–May 2019



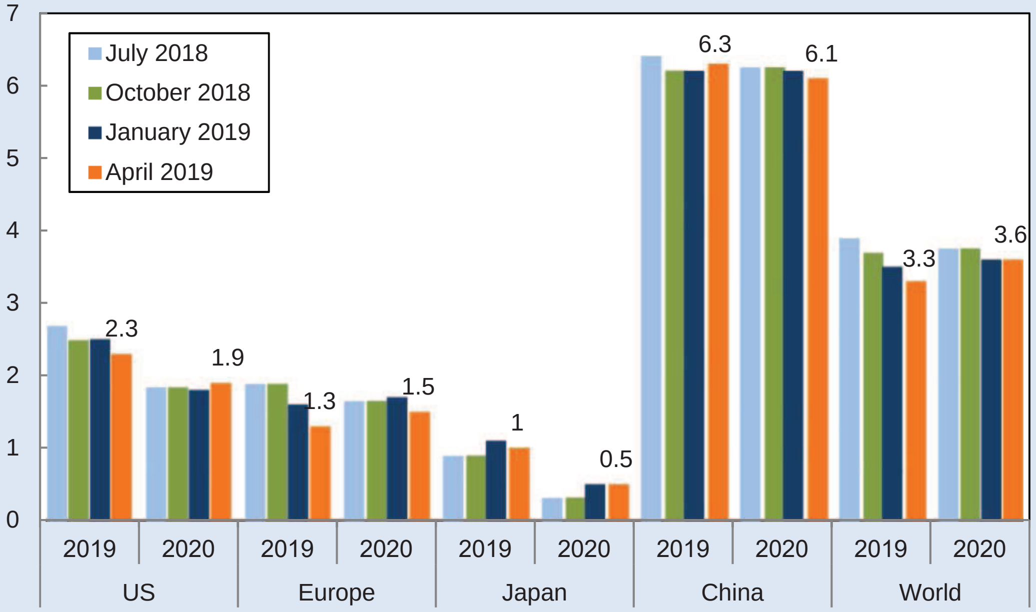
SOURCE: Bank of Israel, Banking Supervision Department.

The number of building starts and the number of building permits were stable, while building completions continued to increase (**Figure 13**). The moderate rising trend in new mortgage volume has continued since the end of 2017, and is increasing moderately. The monthly average over the past 12 months was approximately NIS 5.2 billion in May 2019, compared with NIS 5 billion at the end of the previous half year, against the background of a slight decline in the weighted real interest rate on mortgages, which began in the beginning of 2019 (**Figure 14**).

6. The global economy

Numerous data indicated weakness in the global economy during the course of the half year reviewed, and as of now a recovery is not seen, among other things due to the renewed trade war between the US and China. Global growth forecasts were revised downward several times (**Figure 15**). The Committee discussed the risk factors impacting on the global economy, including the possible trade agreement between the US and China; the increasing severity of the trade war during the half year, and growing assessments that the agreement will be delayed and will be more partial than expected. After the crisis surrounding the trade talks, financial markets endured declines in equity indices, but they increased again after the G20 meeting, where it was decided to continue negotiations, so that for the half year overall, there were marked increases in leading indices. Government bond yields continued to decline moderately, against the background of the halt in the global monetary contraction process and the deterioration of market sentiment. All this was in addition to the uncertainty surrounding Brexit.

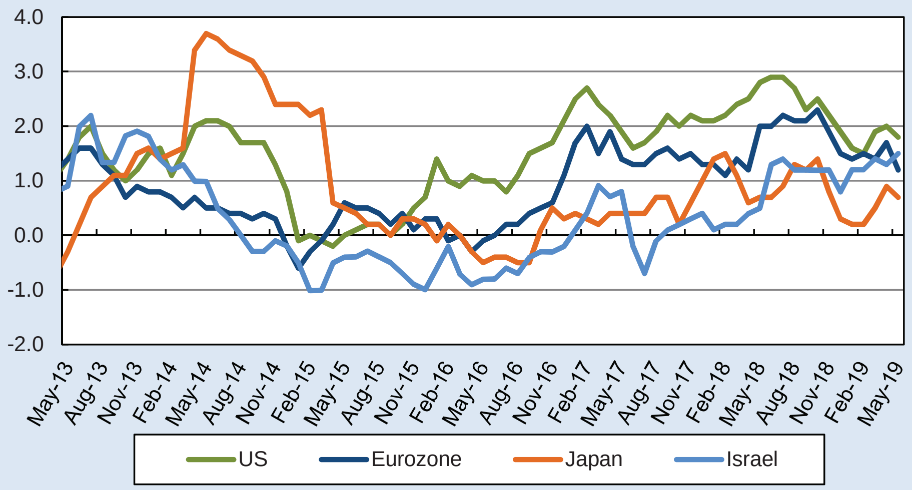
Figure 15
IMF Annual Growth Forecasts for 2019 and 2020 (percent)



SOURCE: Bloomberg.

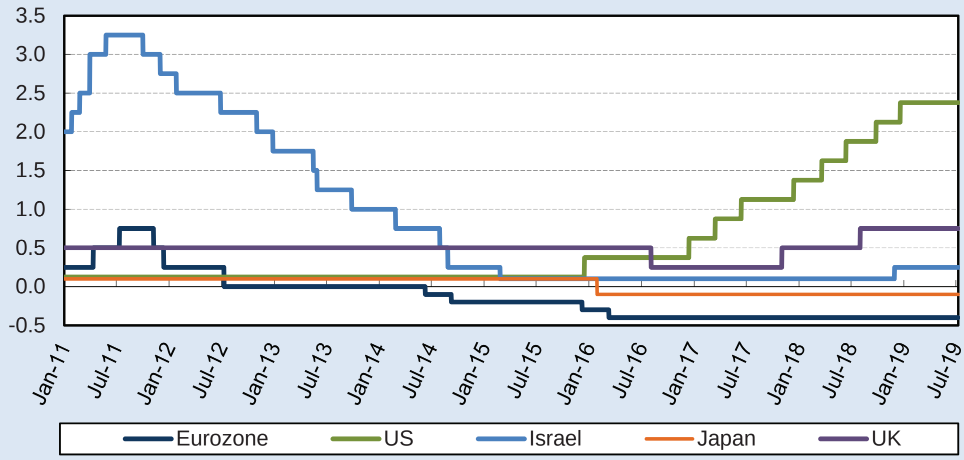
In the US, there was some moderation of inflation in the half year reviewed, compared with the previous half year (**Figure 16**). The Federal Reserve kept the interest rate unchanged (**Figure 17**), and noted that despite the robust growth in the first quarter, moderation can be seen in private consumption and in investment. In its last decision in the half year, the Fed even hinted at possible accommodation in the future, and continued to pass on the

Figure 16
Consumer Price Index in the Major Economies and in Israel, May 2013–May 2019
(percent)



SOURCE: Bloomberg and Central Bureau of Statistics.

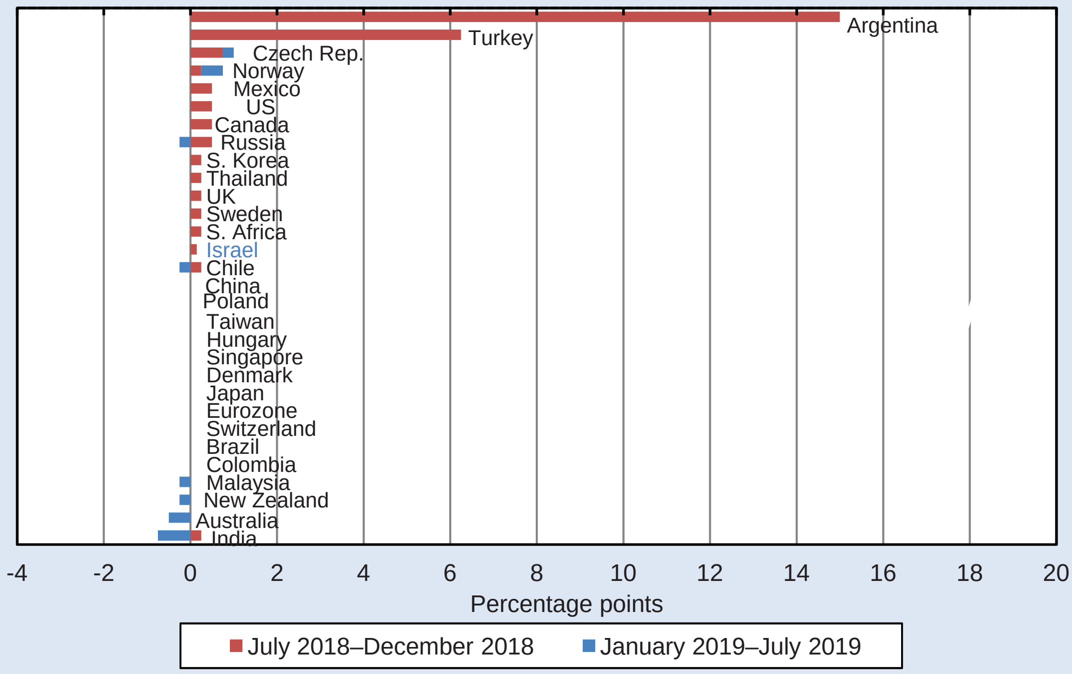
Figure 17
Central Bank Interest Rates: Israel, US[a], Eurozone[b], UK, and Japan, January 2011–July 2019 (Percent)



[a] Mid-range interest rate.
[b] The interest rate on the deposit facility, through which commercial banks deposit surplus balances overnight with the ECB.
SOURCE: Bloomberg and Bank of Israel.

"dovish" messages in July as well. In Europe, the general picture still indicates weakness, even though first-quarter growth data in several major economies surprised to the upside. The ECB kept the interest rate unchanged, but clarified that "all the policy tools are on the table" and noted that an interest rate increase was not expected until at least the middle of 2020. In the UK as well, first-quarter growth data were encouraging, but the risks regarding Brexit remained high, and its implementation was deferred again, to October. In Japan, the moderation of economic activity has continued since the beginning of the year, and its parliament approved an incentive plan to support the economy. Growth in China stabilized in the first quarter after moderating at the end of 2018, but activity data point to continued moderation. During the half, the central bank of Norway increased the interest rate by 0.5 percentage points and the central bank of the Czech Republic increased the interest rate by 0.25 percentage points, while other central banks lowered the interest rate—India (by 0.75 percentage points), Australia (by 0.5 percentage points), Chile (by 0.25 percentage points), and Malaysia (by 0.25 percentage points) (**Figure 18**). The price of oil increased moderately from the beginning of the half year reviewed, against the background of a decline in supply as well as deterioration in market sentiment.

Figure 18
Changes in Central Bank Interest Rates in OECD Countries and in Developing Economies, July 2018–July 2019[a]



[a] The interest rate for any month is the rate known on the last day of that month, except for July 2019, when it is the rate known on July 8, 2019.

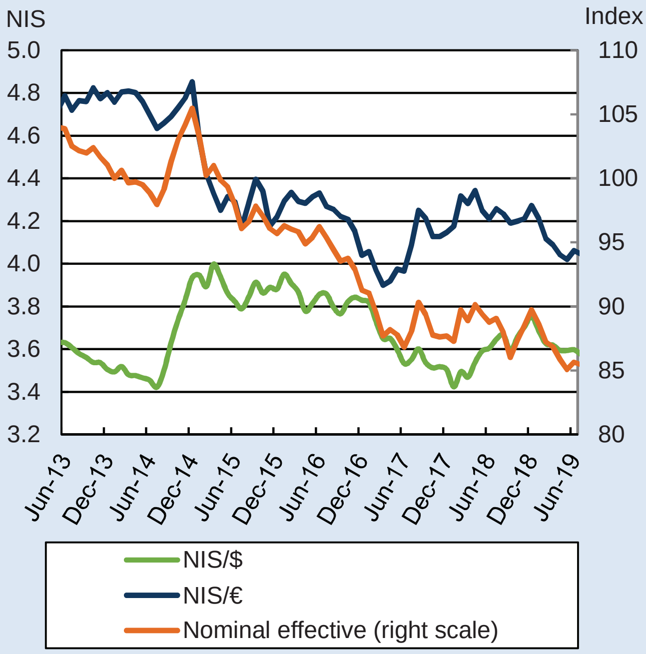
SOURCE: Bloomberg.

In the Committee's discussions during the half year reviewed, the members discussed the global economy—the moderation of activity, the continued slowdown in world trade as well as the uncertainty and the risks, and the change in the expectation regarding the interest rate path and in monetary policy worldwide. In the US, a lower interest rate path than before is expected, and in Europe, the expected date of the beginning of raising the interest rate was deferred. The Committee members noted that the decline in world trade is expected to continue to impact on activity in Israel.

7. The shekel exchange rate

During the half-year reviewed, the shekel strengthened markedly against major currencies, after it had depreciated in the fourth quarter of 2018. From the beginning of the half year, the shekel strengthened in terms of the effective exchange rate (a cumulative appreciation of 5.4 percent), the dollar (a cumulative appreciation of 4.7 percent), and the euro (a cumulative appreciation of 6.6 percent) (**Figure 19**).[7] The Committee members noted that the appreciation is the main factor delaying the continued increase in the inflation rate toward the midpoint of the target.

Figure 19
Selected Exchange Rates, June 2013–June 2019
(Monthly average)



SOURCE: Bank of Israel.

In the period reviewed, the Bank of Israel purchased foreign exchange at a small scope of $86 million (**Figure 1**).

8. The Research Department's staff forecast

During the period reviewed, the Research Department published 3 forecasts with interest rate announcements—in January, April and July (**Table 3**). In all three, the Research Department assessed that the accelerated growth that characterized the economy in recent years had been exhausted, among other things in view of supply constraints in the labor market. Accordingly, the Department expected that in 2019 and 2020 the economy's growth rate would be slightly higher than the long term pace (estimated to be

[7] The strengthening of the shekel against the representative exchange rates of the currencies was measured from December 31, 2018 and July 8, 2019.

Table 3
Research Department Forecasts

(rate of change in percent, unless otherwise noted)

Forecast for the years	2019				2020		
Date of forecast	**10/18**	**01/19**	**04/19**	**07/19**	**01/19**	**04/19**	**07/19**
GDP	3.6	3.4	3.2	3.1	3.5	3.5	3.5
Inflation[a]	1.5	1.3	1.5	1.6	1.8	1.6	1.6
Bank of Israel interest rate[b]	0.5	0.5	0.5	0.5	1.25	1.0	1.0

Date of forecast	**10/18**	**01/19**	**04/19**	**07/19**
Inflation in the coming year[c]	1.4	1.3	1.3	1.4
Interest rate one year from now[d]	0.5	0.5	0.5	0.75

[a] Average CPI inflation in the last quarter of the year compared with the average in the last quarter of the previous year.

[b] Year-end.

[c] In the four quarters ending in the same quarter the following year.

[d] In the same quarter the following year.

SOURCE: Bank of Israel.

approximately 3 percent)—3.1 percent in 2019 and 3.5 percent in 2020 (based on the July forecast)—among other things due to the activity of several large companies in the economy. In April and July, the growth forecast for 2019 was revised downward, due to the downward revision of world trade forecasts and the expected impact on Israeli exports.

In terms of inflation, the inflation rate over the next 4 quarters is expected to be 1.4 percent, and in 2020 it is expected to be 1.6 percent (according to the July forecast). The Research Department assessed that the tight labor market will continue to support wage increases, and thus also the convergence of inflation to the midpoint of the target. However, the Department expects the increase in inflation to be gradual, against the background of processes that have apparently mostly been exhausted—the increase of competition, steps being taken by the government to reduce the cost of living and the development of e-commerce. The changes in the inflation forecasts from January to April to July derived mainly from changes in oil prices and in the exchange rate.

In terms of the interest rate, the Research Department forecasts that the Bank of Israel interest rate will rise to 0.5 percent toward the end of the third quarter of 2019, and will be raised twice during 2020, so that at the end of that year the interest rate will be 1 percent (according to the July forecast). In the Department's assessment, the forecast interest rate path supports the convergence of inflation to the midpoint of the target range, and the growth of GDP at its potential rate. The interest rate paths in the April and July forecasts are identical and moderate, compared to the January forecast, and are in line with the forecast inflation rate path, which was also revised downward, and with the moderation of the forecast interest rate path worldwide. In addition, it is in line with the decrease of the interest rate path expected by the market (as the Telbor curve flattened).

Since the publication of the forecast, there were two developments in relatively significant parameters that impact on it: the CPI for June surprised to the downside, and there was a slight increase in the probability ascribed by the markets to monetary accommodation soon in the US.

9. The expected inflation and growth paths

During the reviewed half year, the Monetary Committee discussed the expected path of inflation, and agreed that the relatively low inflation rate apparently does not derive from weakness in demand. This is indicated by the strength of real activity, the tight labor market, and the wage increases, which act to increase the inflation rate. It was also noted during the half year that the wage increases have not yet been reflected in sharp increases in prices, and it could be that this derived from enhanced competition. The Committee also discussed the factors contributing to a slowdown in the pace of inflation converging to the midpoint of the target, and agreed that the main factor holding it back is the strengthening of the shekel, which appreciated during the half year by approximately 5.4 percent in terms of the nominal effective exchange rate. During the course of the half year, there were also discussions on the decline in energy prices, the slowdown, to an extent, of activity worldwide, and the enhancement of competition as additional factors delaying the continued increase in inflation. Looking to the future, the main risk factors that could hold back the continued increase in inflation derive from developments in the global economy and a scenario of continued appreciation of the shekel.

With regard to expected growth, there were discussions on the uncertainty and the risks to global economic activity, in view of the increasing severity of the trade war between the US and China as well as Brexit. The Committee also was of the opinion that with regard to fiscal policy, it is still too early to assess how it will impact on real activity and on the inflation path, and that in any case, the fiscal uncertainty is expected to continue for some time, at least until a new government is established.

With regard to the monetary policy, the Committee noted that it assesses that the rising path of the interest rate in the future will be gradual and cautious, in a manner that supports a process at the end of which inflation will stabilize around the midpoint of the target range, and that supports economic activity.

Appendix Table 1
Developments in the Domestic Asset Markets

(rates of change)

	01/19	02/19	03/19	04/19	05/19	06/19
Yield to maturity (monthly averages, percent)						
3-month *makam*	0.3	0.3	0.3	0.3	0.3	0.3
1-year *makam*	0.4	0.3	0.3	0.3	0.4	0.3
Unindexed 5-year notes	1.4	1.2	1.2	1.2	1.1	0.9
Unindexed 20-year bonds	3.2	3.1	3.1	2.9	2.8	2.7
CPI-indexed 1-year notes	-0.6	-0.8	-0.8	-0.7	-0.9	-1.0
CPI-indexed 5-year notes	-0.1	-0.2	-0.3	-0.3	-0.4	-0.6
CPI-indexed 10-year notes	0.7	0.5	0.4	0.3	0.2	0.0
Yield spread between government bonds and corporate bonds rated AA (percentage points)[a]	1.5	1.3	1.2	1.2	1.3	1.2
Stock market (rate of change during the month)						
General shares index	7.5	-0.4	-0.5	3.0	-3.6	3.3
Tel Aviv 35 Index	6.2	1.1	-1.8	3.6	-3.4	3.5
Foreign exchange market (rate of change during the month)						
NIS/$	-2.8	-1.0	0.8	-0.7	0.7	-1.9
NIS/€	-2.5	-1.7	-0.9	-0.8	0.1	0.3
Nominal effective exchange rate	-1.9	-1.3	-0.3	-1.1	0.0	-0.5

[a] The calculation is based on fixed-rate, CPI-indexed bonds, excluding convertible and structured bonds, with a yield of up to 100 percent and a term to maturity of more than 6 months.
SOURCE: Bank of Israel calculations.

Appendix Table 2

The inflation and interest rate environment

(monthly averages)

	01/19	02/19	03/19	04/19	05/19	06/19
Inflation environment indicators (percent)						
Monthly change in CPI	-0.1	0.1	0.5	0.3	0.7	
Forecasters' predictions of monthly CPI (average of forecasts prior to publication of CPI)	-0.3	-0.1	0.4	0.5	0.5	
12-month change in CPI	1.2	1.2	1.4	1.3	1.5	
One-year inflation expectations derived from the capital market	1.0	1.1	1.1	1.1	1.3	1.4
Forecasters' one-year inflation predictions	1.1	1.2	1.2	1.3	1.3	1.3
Inflation expectations for various terms[a]						
Forward inflation expectations for the short term (from the end of the first year through the end of the third year)	1.5	1.5	1.6	1.6	1.5	1.6
Forward inflation expectations for the medium term (from the end of the third year through the end of the fifth year)	1.6	1.6	1.7	1.7	1.7	1.7
Forward inflation expectations for the long term (from the end of the fifth year through the end of the tenth year)	1.7	1.8	1.8	1.8	1.8	1.8
Interest rates and interest rate differentials						
Bank of Israel interest rate	0.25	0.25	0.25	0.25	0.25	0.25
Real interest rate dervied from the zero curve	-0.60	-0.8	-0.8	-0.7	-0.9	-1.0
Short-term interest rate differential between Israel and the US	-2.25	-2.25	-2.25	-2.25	-2.25	-2.25
Short-term interest rate differential between Israel and the eurozone	0.25	0.25	0.25	0.25	0.25	0.25
Forecasters' predictions of change in the Bank of Israel interest rate (average of forecasts prior to the decision)	0.1	0.0	-	0.0	0.0	-
Telbor interest - 3-month forward rate in 9 months	0.6	0.5	0.4	0.5	0.5	0.4
Forecasters' predictions of the interest rate a year hence	0.5	0.5	0.5	0.5	0.5	0.5
Nominal long-term interest rate differential between Israel and the US	-0.4	-0.5	-0.5	-0.5	-0.5	-0.3
Real long-term interest rate differential between Israel and the US	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3

[a] Inflation expectations are measured by the difference between yields on local currency unindexed and CPI-indexed bonds. These expectations include an element of risk premium, which increases with the length of the term to which the expectations relate.

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