Bank of Israel

MONETARY POLICY REPORT

January–June 2015

Preliminary version

(Text only, for graphs and tables see Hebrew version)

43

August 2015

Section 55(a) of the Bank of Israel Law, 5770–2010, establishes the publication of this report, which is submitted to the government and the Knesset Finance Committee twice a year. The report surveys the economic developments that occurred in 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, 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 Financial Stability Report for the period covered.

In accordance with Section 55(b) of the Law, this reports contains a detailed explanation of why the inflation rate deviated from the target range set by the government for twelve consecutive months, beginning with the publication (on July 15th, 2014) of the Consumer Price Index (CPI) for June. The rate of inflation during this period declined to below the lower bound of the target range, and explanations appear in Section 2 (Monetary Policy) inside.

The Monetary Policy Report for the first half of 2015 is prepared by economists in the Research Department, within guidelines set by the Bank of Israel Monetary Committee, the forum in which monetary policy decisions are reached. This report is based on data that were published up to July 27, 2015, the date of the decision on the interest rate for August 2015.

Summary

- **Monetary policy**: The Bank of Israel's Monetary Committee reduced the interest rate for March 2015 by 0.15 percentage points, bringing it to a historic record low of 0.10 percent. Financial market expectations had not reflected this reduction, and thus markets responded quite sharply. As the interest rate is near zero, the Committee considered alternative policy tools in the reviewed period. The Bank of Israel also continued to purchase foreign currency—$4.6 billion in the reviewed period—most of which ($3 billion) was purchased within the framework of the plan to moderate extreme foreign exchange rate fluctuations,[1] while the remaining purchases were made under a plan designed to offset the effects of natural gas production on the exchange rate. The Committee maintained the interest rate at this low level of 0.1 percent in July and August, subsequent to the reviewed period.
- **Macroprudential policy** – Committee members were of the opinion that the primary financial risk stems from credit to the housing sector, and that the steps taken by the Supervisor of Banks in recent years have alleviated those risks.
- **Inflation and inflation expectations**: In the 12 months ended in June, the Consumer Price Index declined by 0.4 percent, resulting in an inflation rate that was markedly below the lower bound (1.0 percent) of the inflation target range. The inflation rate, as measured by the change in the CPI over the preceding 12 months, was negative over the entire reviewed period, although the month-by-month development of the CPI shows variation across this period: In January and February, the CPI declined sharply, reflecting mainly one-off and anticipated reductions in water and electricity rates, as well as the declines in oil prices over the preceding six month period.[2] There was a turnaround in March, when prices rose once again, in line with the seasonal path consistent with achieving the inflation target. As a result, the pace of decline in the CPI, measured over the preceding 12 months, moderated. According to various sources, 12-month inflation expectations at the beginning of the period declined to below the lower bound of the inflation target range, and returned to around the lower bound at the end of the period. Medium to long term inflation expectations remained anchored near the midpoint of the inflation target range throughout the entire period.
- **Domestic real economic activity**: Data for the six month period that includes the fourth quarter of 2014 and the first quarter of 2015 indicate that the economy returned to the moderate rate of growth that had characterized it prior to Operation Protective Edge. More specifically, data for the fourth quarter of 2014 indicate accelerated activity—an increase of 6.5 percent—which reflected a correction to the previous quarter's slowdown triggered by Operation Protective Edge. In the first quarter of 2015, the economy continued to grow, albeit at a more moderate pace. In this period

[1] Under this plan, the Bank intervenes in the foreign exchange market in the event of unusual fluctuations in the exchange rate that are not in line with fundamental economic conditions, or when the foreign exchange market is not functioning appropriately. Under this plan, in contrast to the program designed to offset the effects of natural gas production, the Bank does not declare the extent of its purchases in advance.

[2] See "The fall in oil prices: Global view and the Israeli perspective" in the Monetary Policy Report for the Second Half of 2014 (page 20).

growth was driven by private consumption, while it was moderated by a relative standstill in exports amid a renewed trend of appreciation in the shekel and weakness in world trade.

- **The labor market**: Data for the fourth quarter of 2014 and the first quarter of 2015 indicate a correction, similar to the one in real domestic economic activity: the unemployment rate declined once again, this time to a low of 5.4 percent, after having reached 6.2 percent in the third quarter of 2014. At the same time, the labor participation rate and the employment rate were stable at an elevated level, while the share of employed people and the job vacancy rate increased. Real wages rose, as did the number of employee posts, with the expansion in public services compensating for contraction in the business sector.
- **The exchange rate**: In the reviewed period, there was a turnaround in the shekel in terms of the effective exchange rate. After a sharp depreciation in the preceding six month period, the shekel strengthened in terms of the nominal effective exchange rate and against the euro, and to a lesser extent against the dollar as well, during the period reviewed. The background to the shekel's appreciation in effective exchange rate terms was the ECB's launch of a quantitative easing asset purchase program, announced in January. As a result of these steps, the euro weakened sharply against major currencies, and, as noted, against the shekel, which led central banks around the world to weaken local currencies. The interest rate reduction for March and foreign exchange purchases over the period partially damped the effective appreciation of the shekel although, according to several estimates, the effective exchange rate of the shekel at the end of the reviewed period is overvalued relative to the equilibrium exchange rate.
- **The global environment**: The global economy continues to grow at a moderate rate, although with great variability between countries. At the same time, world trade slowed. Among advanced economies, the US economy continued to grow at a moderate pace despite the contraction in the first quarter of 2015, which apparently stemmed from transitory effects. The European economy showed signs of an improvement in growth although it was still affected by the looming Greek crisis. In developing economies, actual and projected growth rates were lower than in the past. Accommodative monetary policy measures were adopted by central banks worldwide, led by the ECB, which announced a large-scale expanded asset purchase program in response to deflation concerns in the eurozone. US Federal Reserve officials and leading market players anticipate an initial increase in the Fed funds rate toward the end of the year, in September or December 2015.
- **The housing market**: Home prices and activity levels in the housing market recovered after a virtual standstill in the market during the period of deliberations over the Zero VAT law. The annual rate of increase in home prices (through April-May) did moderate, to 3.2 percent from 4.3 percent in 2014, but prices increased at an annual rate of 6 percent since the beginning of the year (January–April). At the same time, the number of transactions rose markedly in the reviewed period, especially involving homes that would presumably be subject to the anticipated Zero VAT law. Total new mortgages granted in the period also increased, after holding stable in the preceding six month period.

- **Financial markets**: Key stock market indices (Tel Aviv 25 and Tel Aviv 100) increased in the reviewed period, in line with, but stronger, than the global trend. The economy's risk level, reflected in the CDS premium on five-year external debt, continued to decline, a trend which has been characteristic of recent years. Total credit to the nonfinancial business sector increased since the beginning of the year, primarily due to the increase in credit from banks and other financial organizations. Corporate bond yield spreads remained low. Outstanding credit to households continued to grow at a pace in line with recent years.
- **Fiscal policy**: The government's domestic deficit (excluding net credit granted) in January to June totaled NIS 0.6 billion, about NIS 1.7 billion less than the seasonal path consistent with achieving the target full year debt to GDP ratio of 2.5 percent. The new government's budget approval process is only set to be concluded toward the end of 2015, and the government has been operating since the beginning of the year under a law that allows it to spend 1/12 of the full-year 2014 budget each month (an interim budget). The deficit for 2015 is expected to be 2.5–2.8 percent of the GDP, near the statutory deficit ceiling.
- **Research Department staff forecast of June 2015**:[3] According to the forecast compiled by the Research Department in late June 2015, inflation in the next four quarters is expected to increase to 1.6 percent, near the midpoint of the target range. This forecast was influenced by, among other things, an increase in transfer payments, in the minimum wage, and in the growth rate. Nonetheless, there are downside risks to the inflation rate forecast from the renewed decline in oil prices and the continued appreciation of the shekel. GDP is expected to increase by 3.0 percent in 2015, and the pace of GDP growth is expected to improve to 3.7 percent in 2016. This forecast is slighter higher than the previous forecast, which was presented to the Committee in March, for several reasons, including the significant anticipated increase in public consumption and the upward revision in OECD import forecasts, which should improve Israel's exports. In line with these forecasts, and presuming that liftoff of the Fed funds rate will occur in 2015, the Research projected in June Department that the Monetary Committee will keep the interest rate at the 0.1 percent level throughout 2015 and increase it to 1.25 percent by the end of 2016. The Committee nonetheless felt that the uncertainty surrounding the inflation forecast is biased to the downside, mainly because oil prices continue to decline and in light of the continued shekel appreciation in terms of the effective exchange rate.

[3] The section on monetary policy includes a discussion of the development of the forecasts available to the Monetary Policy Committee over the reviewed period.

1. ECONOMIC DEVELOPMENTS IN THE REVIEWED PERIOD

The factors considered in monetary policy decisions

According to the Bank of Israel Law 5770-2010, the Bank of Israel has three objectives: (1) to maintain price stability, as its main goal; price stability has been defined as an annual inflation rate of between 1 percent and 3 percent; (2) to support other government objectives—especially growth, employment, and the narrowing of social gaps—provided that such support does not negatively impact price stability, and (3) to support the stability and orderly activity of the financial system. To achieve these aims, the Monetary Committee employs several tools, primarily a monthly decision on the appropriate short-term interest level. The Bank of Israel also intervenes in the foreign currency market.

Several factors influenced the Committee's decisions: (1) The inflation environment remained below the target range. The inflation rate as measured over the previous 12 months was negative throughout the reviewed period, and one-year inflation expectations fluctuated below the lower bound of the target range during most of the period. (2) The shekel once again appreciated against the currency basket, and especially against the euro. (3) The economy continued to grow at a moderate rate in the fourth quarter of 2014 and the first quarter of 2015, although activity in tradable sectors was sluggish. (4) Global growth was moderate with wide variability among countries—the Eurozone has shown the first indications of economic recovery, yet at the same time, the slowdown in most developing economies continues. Many central banks, led by the ECB, continue to adopt accommodative monetary policy measures. The ECB has, for the first time, launched a quantitative easing—expanded asset purchase—plan amid deflation concerns in the eurozone. At the same time, Fed officials and US market participants have increased their assessments of a rise in the federal funds rate before the end of the year, albeit at a moderate pace. (5) Home prices increased again, after stabilizing—and at times declining—in the previous six-month period in response to the uncertainty surrounding various government measures and the effective dates of such steps.

In view of these developments, the Monetary Committee maintained the interest rate at 0.25 percent in January and February, and reduced the interest rate for March by 0.15 percentage points, to 0.1 percent, its lowest level since the Bank of Israel began to determine monetary interest rates. Four Committee members supported this decision while the Committee's fifth member recommended keeping the interest rate unchanged. In the following five discussions, the Committee indeed decided to maintain the interest rate at this level. In addition to the interest rate decisions, the Bank of Israel decided to purchase foreign currency through conversion transactions. Most of the amount was purchased under a plan designed to moderate exceptional exchange rate fluctuations[4], while the remainder was purchased under a plan intended to offset the effects of natural gas production on the exchange rate.

[4] Under this plan, the Bank of Israel intervenes in the foreign exchange market when the exchange rate shows unusual fluctuations that are not in line with fundamental economic conditions, or when the foreign exchange market is not operating appropriately. In contrast to the program designed to set off the effects of natural gas production, in this plan the Bank does not announce the extent of its purchases in advance.

a. The global environment

As a small open economy, Israel is affected to a considerable extent by developments in the global environment. These developments have implications for key variables of the domestic economy, such as activity levels, scope of exports, price levels, and financial markets.

1) Activity, prices and policy

The global economy continues to grow at a moderate rate, with extensive variance between countries. Growth forecasts and actual growth rates in the developing countries are lower than the past. Among advanced economies, the US economy continues to grow at a moderate pace. There was some setback in the growth rate in the first quarter of 2015, but it stemmed mainly from one-off factors. The European economy also returned to a path of moderate growth, led by domestic demand, specifically private consumption, and by exports, which were supported by the significant weakening of the euro following the ECB's announcement of its new quantitative easing plan—against the backdrop of a looming Greek crisis. Growth in the Eurozone affected most of the countries in the bloc although high variance remained evident. Japan's economy apparently emerged from the recession that developed in response to a VAT hike and soaring government debt. Among developing economies, growth in most was lower than in the past, amid low global demand and structural changes. China's economy continues a slowing trend, in addition to a sharp decline in stock prices in June and July. Brazil's economy contracted over the past year (Figure 1).

Global growth is expected to remain moderate and world trade volume is expected to continue to increase at a slow pace. According to IMF forecasts published in July 2015, the global economy is expected to grow by 3.3 percent in 2015 and by 3.8 percent in 2016. Advanced economies are expected to grow at a rate of 2.1 percent in 2015 and by 2.4 percent in 2016—rates that reflect a gradual acceleration in growth compared with 2013 (1.4 percent) and 2014 (1.8 percent). In contrast, emerging economies are expected to grow in 2015 by a rate of 4.2 percent, which is lower than the growth rate of the last two years (between 4.6 percent and 5.0 percent, see Figure 2), and the forecast for 2016 in these countries is 4.7 percent. World trade volume is expected to increase by 4.1 percent in 2015 and by 4.4 percent in 2016. Although these growth rates are slightly higher than the past two years (about 3.2 percent, on average), they are still historically low. World trade is clearly an important factor affecting Israeli exports, and through them, impacts overall domestic economic activity.

The global inflation environment edged upward yet remains low, especially in advanced economies, and is still affected by, among other things, declining commodity prices, especially oil prices, which occurred in the previous six-month period (oil prices have since increased by 25 percent). Due to moderate global demand, the inflation environment continued to be restrained over the reviewed period, especially in advanced economies (Figure 2). Over the course of the reviewed period, this inflation environment was also supported by the decline in oil prices that occurred in the previous half year. This 60 percent drop to a low of $45 per barrel of Brent crude oil, resulted from an increase in oil supply and a decline in demand. Although oil prices recovered in the reviewed period and reached $65 per barrel, they are still down by about

40 percent from their mid-2014 high of $115 per barrel. Global food prices also continued a downward trend, and at the end of the surveyed period were 20 percent lower than their recent high, reached in the middle of the previous period (Figure 4).[5] Against this backdrop, annual inflation rates in many countries, especially Europe, became negative (Figure 3). Nonetheless, low inflation rates cannot be attributed solely to commodity, particularly oil, prices, because core inflation indices (excluding energy and food) are increasing at a relatively slow pace worldwide (although they have recently shown some improvement). According to April IMF forecasts, inflation in advanced economies is expected to be 0.4 percent in 2015 and to increase to 1.4 percent in 2016, primarily due to expectations of stabilizing oil prices and of changes stemming from accommodative monetary policies worldwide. In contrast, inflation in advanced economies is expected to reach 5.4 percent in 2015 and 4.8 percent in 2016.

Accommodative monetary policy continued worldwide. In advanced economies, the background was moderate activity and low inflation rates. The Fed ended its quantitative easing program in October 2014, but has not yet raised interest rates. Monetary easing in Europe widened: the ECB and the central banks of other countries[6] maintained a path of interest rate reductions, and in several countries, and the Eurozone overall, interest rates remained negative.[7] Moreover, in January, the ECB for the first time declared a quantitative easing—expanded asset purchase—program, committing to purchase €60 billion in government bonds per month. The Bank of Japan continued its own extensive quantitative easing program. In general, in the reviewed period, many advanced and developing economies pursued accommodative monetary measures, and especially small and open economies that were forced to deal with appreciating domestic currencies (Figure 5).

The US

Economic activity in the first quarter of 2015 contracted, after three quarters of growth, especially due to several one-off factors. In the first quarter of 2015, US GDP contracted by 0.2 percent, after having grown at an annual rate of 3.5 percent in the second half of 2014. However, a significant portion of the decline stemmed from transitory factors, headed by severe weather, a port strike on the West Coast, and statistical measurement errors. Also contributing to the slowdown was global appreciation of the US dollar and a decline in investments in oil production, an outcome of declining oil prices. Furthermore, personal consumption expenditure slowed although disposable income increased as a result of the decline in oil prices. Preliminary data for the second quarter do not indicate a significant correction (such as the correction that followed the slowdown in the first quarter of 2014). Especially notable in this context is the fact that personal consumption expenditure has not recovered, and various production indices remain weak. The number of jobs continued to grow at a steady pace, with the exception of relatively low data for March: These figures reflect the assessment that the first quarter slowdown is temporary. The unemployment rate continues to decline and in

[5] The food price index is based on S&P's livestock index and agricultural commodity index.
[6] The European countries outside the eurozone.
[7] In the eurozone, interest on deposits is negative, but basic interest rates are positive.

June reached 5.3 percent, although salaries have not increased at a pace commensurate with a strong labor market.

Federal Reserve officials and market players expect liftoff of the federal funds rate before the end of this year. Note that in response to the continued improvement in the US economy, the Federal Reserve gradually reduced the scope of its long-term bond purchases, and discontinued the program completely in October after declaring that the conditions for ceasing the purchases, as laid out in 2012, had been reached. Now the Fed faces a decision to increase the interest rate, although it is not yet clear when such an increase will take place and at what pace. This is because, even though the labor market shows signs of resilience, the activity slowed in the previous quarter and the fact that the core inflation index increased at a lower pace than the Fed’s target. According to the minutes of the June FOMC meeting, the median estimate of Fed officials is that the first federal funds rate increase is expected toward the end of the year (September or December), but the path will be more moderate than previously expected. The federal funds futures contracts indicate that financial market investors also expect a rate hike this year, and in their assessment there is a high probability that it will only occur in December (Figure 6).

The Eurozone

The eurozone is showing initial signs of economic recovery, led by domestic demand, and private consumption in particular. The eurozone economy, which suffered from a recession during most of 2014, is apparently beginning to recover. Growth rates were positive in the fourth quarter of 2014 and in the first quarter of 2015. Specific improvements were evident in indicators of households’ private consumption, such as the consumer confidence index, apparently affected by declining oil and food prices. In addition, more lenient credit terms were also observed, reflected in lower interest rates on loans, especially in countries in the periphery. Some eurozone countries—especially Spain—that had been adversely affected by the debt crisis that followed the financial crisis, continue to show sustained growth. Spain’s economy expanded for the sixth consecutive quarter and the country’s economy grew at a solid rate of 2.6 percent last year. These countries’ return to growth partially stems from the continued ramifications of structural reforms, such as the decline in labor costs per unit of output. These reforms, accompanied by the concurrent weakening of the euro, have increased competition in these countries and expanded export volumes. Unemployment levels in Europe declined slightly in the reviewed period, although they remained very high at 11.1 percent, including a high rate of unemployment among youth. In general, unemployment has remained virtually unchanged in the past two years. In July, some calm in the financial markets was achieved by a framework bailout package signed with Greece (the third package in the last five years), which will keep the country in the eurozone. This led, for the time being, to some calm in financial markets.

In May, inflation in the eurozone returned to positive values after several months of declining prices. Long term inflation projections were slightly below 2 percent. Annual inflation in Europe increased slightly in June to reach 0.2 percent, up from -0.6 percent in January. Recovery in inflation rates stemmed partially from a correction in energy prices and an improvement in domestic demand. Core inflation (excluding food and energy components) remains moderate at 0.9 percent. In several of the eurozone's smaller countries, including Greece, annual inflation effectively remained negative. Financial markets indicate that long-term inflation expectations[8] in Europe increased yet remained slightly under 2 percent.

The ECB announced a quantitative easing program. In March, the ECB launched the quantitative easing program announced in January in response to deflation concerns. Under this program, the ECB committed to purchasing at least €60 billion in government bonds a month until September 2016 or until inflation approaches the 2 percent target. Similarly to the Federal Reserve, the ECB is also making the purchases in order to reduce long-term interest rates, in order to stimulate the economy and restore inflation expectations to the 2 percent target.

Japan

Japan's economy has emerged from a recession after two quarters of positive growth. Japan's GDP increased by a quarterly rate of 0.4 percent in the final quarter of 2014 and by 1 percent in the first quarter of 2015, after contracting in the preceding two quarters, as a VAT rate hike damped investments and private consumption. GDP increased in response to a weakening yen, a decline in commodity prices, and expansionary measures by Japan's central bank. Inflation nonetheless remained low and the central bank revised downward its inflation and growth projections for 205 and 2016.

Emerging Economies

Actual growth rates of emerging economies continued to decline although recent growth forecasts remained unchanged. The pace of growth in the emerging markets declined relative to previous years, in response to low global demand; Growth rates in China continued to decline, especially as a result of weak demand. The slowdown in China was also affected by the slowdown in global demand. Toward the end of the reviewed period (from mid-June), share prices in China declined by about 30 percent within a month after an extended period of sharply rising share prices. In response to the slowdown and fluctuations in the market, Chinese officials initiated expansionary measures, including additional cuts in interest rates on deposits and loans. They also imposed partial restrictions on stock trades in an attempt to halt the declining prices. It is still early to determine the effect, if any, of the sharp drop in stock prices on real economic activity. In Russia, activity continued to wane this year, especially due to the low prices of oil, which is an important component of its GDP and due to the imposition of sanctions on Russia stemming from tensions with Ukraine. Economic activity in Brazil also slowed, while India's economy was relatively strong over the reviewed period.

2) The financial markets

In the first half of 2015, fluctuations in global financial markets showed variance. Market volatility, based on the VIX index which tracks implied volatility in stock index option prices, increased in the eurozone and declined in the US and Japan (Figure 7).

[8] Five year, five year forward inflation expectations, based on CPI futures contracts.

CDS spreads behaved similarly, increasing in the eurozone and stabilizing in the US (Figure 8). Toward the end of the period, uncertainty increased in most advanced economies, especially in the eurozone, mainly reflecting the growing threat of a Greek crisis.

G**overnment bond yields began to increase in the middle of the reviewed period**. From mid-April, yields on government bonds of the world's major economies rose sharply (Figure 9), with the most notable increases occurring in the eurozone. For illustration, within a period of around six weeks, yields on 10-year German and Spanish government bonds increased by 70 base points. Corresponding yields in the US rose at a slightly more moderate pace (50 base points), although this, too, was atypical. In Israel, yields increased by 100 base points. In the following days, these increases tapered off and some yields even declined in response to the evolving Greece crisis. It is important to note that, despite the sharp rises, the current level of long term yields is still historically low. Stock indices on most developed markets increased in dollar terms in this period (Figure 10).

b. Real economic developments

1) GDP and uses[9]

Economic activity accelerated in the fourth quarter of 2014, which corrected the virtual standstill that resulted from Operation Protective Edge. In the first quarter of 2015, the economy proceeded to grow at a moderate pace. Real activity continued to growth at a rate of 3 percent, the pace that has prevailed since 2012, with considerable fluctuations resulting from one-off events in Israel and overseas. This growth rate was high compared to other advanced economies, but was lower than the rate that prevailed in the five years preceding 2012 (Figure 11). In the first quarter of the year, GDP grew by an annual rate of 2 percent, after an absence of growth in the third quarter of 2014 due to Operation Protective Edge, and a correction in the fourth quarter. All in all, the economy expanded at an annual rate of 3 percent over the last three quarters. Private consumption continued to expand faster than its multiyear rate and faster than GDP, and continued to lead growth in the entire economy. Factors underlying this development include the low interest rate environment and the income effect that stemmed from the decline in commodity prices, especially of oil. Other factors include increased car purchases in response to "green taxation" coming into effect.[10] This reflected car purchases that were brought forward from 2015 to end 2014, and were not completely set off by purchases in early 2015. Growth was also the result of increased public spending, following IDF re-equipment.

Exports of commodities (excluding diamonds) and services (excluding start-up companies) was supported by the depreciation of the shekel, contributing to an increase in exports in the fourth quarter of 2014, although this effect dissipated in the first quarter

---

[9] The data in this section are presented in seasonally adjusted annual terms, and they reflect available information at the publication date of this report. A discussion of this issue appears in the section on monetary policy (Part 2).

[10] Imports of vehicles increases the GDP as it increases tax revenues on vehicle imports, which are recorded as part of the GDP.

of 2015 and exports declined. Partial second quarter data on commodity exports indicate further declines, primarily due to work disruptions in the chemicals industry; exports excluding chemicals remained stable. In general, Israel's commodity exports in the reviewed period are in line with world trade, which also declined in the first quarter of 2015. While tourism services exports recovered in the quarter following Operation Protective Edge, the recovery was halted in the first quarter of 2015, apparently due to the economic crisis in Russia. The increase in investments was effectively stalled. Investments in residential construction have similarly not grown in the past two years, with the exception of an increase in the first quarter of 2015, and it remains to be seen whether this signals a change in the trend.

2) The labor market

The labor market continued to show signs of resilience, and new data indicate that improvements have been sustained over the reviewed period. Unemployment among individuals 15 years and older and among the prime working ages (25-64) continued to decline and reached a record low of 5.4 percent in the first quarter of 2015 (4.7 percent in the prime working age group), after reaching 6.2 percent (5.1 percent) in the third quarter of 2014 against the background of Operation Protective Edge. The participation and employment rates remained high, around 63 percent and 60 percent (80 percent and 76 percent), respectively (Figure 12). Real wage rates per employee post continued to increase (in the business sector, and slightly less so in the public sector), the number of employee posts increased—as the increase in the number of posts in public services offset the slight decline in the number of business sector jobs—and the number of job vacancies also edged upward. According to data for part of the second quarter (April and May), a trend of decline continued in unemployment in the general population (to 4.9 percent) and in the prime working age group (to 4.2 percent), participation and employment rates remained high, the job vacancy rate remained stable, and real wages per employee post declined slightly (in April). At the same time, the number of employee posts in the business sector and in the public service sector declined slightly.

c. Financial developments[11]

1) Prices and yields

Share prices rose in the reviewed period. Major Israeli stock indices (Tel Aviv 25 and Tel Aviv 100) increased in the reviewed period, although the rise moderated toward the end of the half year. This development corresponded to the global trend, through stronger, continuing the gains observed in the preceding six-month period.

Government bond yields began to rise sharply toward the end of the reviewed period (Figure 14). Real and nominal long-term yields did not develop uniformly over the period. At the beginning of the reviewed period yields continued to decline, while a sharp shift occurred toward the end of the period (beginning in late April), and real and nominal yields increased by 100 basis points within six weeks. This turnaround corresponds to the trend in global yields in the reviewed period (Figure 9). In the US, nominal yields rose at a more moderate rate and consequently the spread between the 10-

[11] For elaboration see Bank of Israel (July 2015), Financial Stability Report.

year nominal yields in Israel and corresponding US yields reversed from negative to positive.

Market risk evaluations continued to decline in the reviewed period. Market risk, reflected in the CDS premium on five-year external debt, continued the downward trend that was characteristic of the period since 2012 (Figure 8).[12] The CDS premium is currently at a low but has not returned to its levels of before the financial crisis.

2) The credit market

Total credit to the nonfinancial business sector increased slightly, and corporate bond yield spreads stabilized at low levels. Total credit to the nonfinancial business sector increased in the final quarter of 2014 and the first quarter of 2015. This increase primarily reflects an increase in local credit granted by the banks and institutional lenders. A long term perspective reveals that credit to the nonfinancial business sector has increased moderately since 2012 (Figure 15). The average spread on nonfinancial sector corporate bonds once again declined in early 2015, after considerable increases were observed for some time in the final quarter of 2014 (Figure 16). Over the remainder of the period, the average spread remained relatively stable but spreads in various industries developed unevenly—spreads in the real estate and construction sectors and in the industrial sector narrowed while spreads in the investment and holding sectors widened.

Outstanding credit to households continued to grow in the reviewed period. Credit to households expanded at a rate of 6 percent over the 12-month period ended in May. Housing credit, which continued to account for the major share of household credit (Figure 17), expanded at a rate that reached 5.3 percent in the 12-month period ending in May—slightly lower than the average rate of growth in the last two years. In view of the rapid expansion of housing credit and the risks it entails, the Supervisor of Banks published several directives in recent years, designed to reduce risks to financial stability posed by housing credit. As a result of these directives, the risk characteristics of new mortgages improved and stabilized at lower levels (Figure 17). The annual rate of growth of non-housing credit to households (consumer credit) remained at the high level of 7.5 percent in May. Notably, in January, the Supervisor of Banks issued a directive that required the banks to increase their minimum allowance for loan losses in respect of consumer credit.

d. Fiscal policy

The deficit in the government's domestic activity (excluding net credit granted) was NIS 0.6 billion in January–June. The cumulative deficit since the beginning of the year was NIS 1.7 billion lower than the seasonal path consistent with achieving the 2.5 percent debt to GDP target. Since the beginning of the year, tax revenues increased by 6.3 percent (in real terms) compared with the corresponding period last year. At the same time, expenditures of government ministries rose by 4.8 percent (in nominal terms) compared with the corresponding period of 2014, an increase that primarily reflected defense establishment expenditure.

In the absence of an approved budget for 2015, the government has operated since the beginning of the year in accordance with a law that permits monthly

[12] Excluding the months of Operation Protective Edge, when the premium rose moderately.

expenditure at 1/12 of the full-year budget for 2014. According to a recently passed law, the budget approval process is expected to be concluded in late 2015, and therefore the government will operate without an approved budget until then. The cumulative budget based on the 1/12 rule exceeds the budget calculated according to the expenditure rule (which is part of the fiscal rule), and therefore the 1/12 rule fails to operate as an effective constraint on expenditure. The 2015 deficit is expected to reach 2.5–2.8 percent of GDP, near the deficit ceiling set by law.

e. Exchange rates

The shekel has once again strengthened in effective exchange rate terms. In terms of its nominal effective exchange rate, the shekel appreciated by 7 percent, by 11.3 percent against the euro, and by 2.2 percent against the US dollar. (The comparison is the average June 2015 exchange rates vis-à-vis the average December 2014 exchange rates; see Figure 19a). In general, the shekel appreciated against most world currencies (Figure 19b). The effective appreciation of the shekel occurred amid a globally weakening euro, a development triggered in August by the ECB's quantitative easing measures. The appreciation of the shekel was partly halted by the interest rate reduction in March and the Bank of Israel's foreign currency purchases.[13] There are two main factors in the basic appreciation pressure on the shekel: foreign direct investment inflows continue into the economy, and there is a notable, prolonged basic surplus in the current account, part of which is due to natural gas production.[14] In the first quarter of 2014, the current account surplus increased to NIS 4 billion, against the background of improvement in terms of trade. Several estimates by the Research Department indicate that the current effective exchange rate of the shekel reflects an over-appreciation of the shekel compared to the equilibrium exchange rate.

In the reviewed period, the Bank of Israel continued to purchase foreign currency, particularly to moderate exchange rate fluctuations that are not in line with economic fundamentals. Most of the purchases in the reviewed period—$3 billion—were part of a program designed to moderate unusual fluctuations in exchange rates, with $1.7 billion of that sum purchased in June. These purchases came against the background of the renewed effective appreciation of the shekel in the reviewed period. The remaining purchases—$1.6 billion—were made as part of a program announced by the Bank of Israel in May 2013, designed to offset the effects of gas production on the exchange rate.[15]

f. Inflation

Inflation measured over the preceding 12 months was effectively negative throughout the entire reviewed period. In effect, annual inflation has remained below

[13] According to a discussion paper recently published by the IMF—"Unveiling the effects of foreign exchange intervention: A panel approach" (Adler et al. 2015), foreign currency purchases of 1 percent of GDP lead to nominal depreciation of 1.7–2.0 percent and real depreciation of 1.4–1.7 percent, on average, and that this depreciation has a half-life that ranges from 12 to 23 months.

[14] Natural gas production affects the current account as it reduces imports of energy products, and thus contributes to shekel appreciation pressures.

[15] In December 2014, the Bank of Israel announced that it would purchase $3.1 billion in 2015.

the lower bound of the target range since June 2014, and has been negative since September 2014 (Figure 20a). The CPI declines occurred in January and February, with a cumulative decline of 1.6 percent. This decline was primarily influenced by the one-off and expected reductions in water and electricity rates, reductions that were based mainly on a multiyear plan formulated when investments in domestic natural gas came to fruition. The decline in the CPI also partially stemmed from an atypical drop in the housing component of the index in January. As a result of these declines, the rate of inflation as measured by the change in the CPI over the preceding 12 months reached a low of -1 percent. In the remaining months of this period (from March to June), positive indices were published as expected, in accordance with the seasonal path consistent with achieving the inflation target range. These CPI readings contributed to a moderation of the rate of decline in prices. Thus, in the 12 months ending in June 2015, the rate of change in the CPI was -0.4 percent, still markedly below the lower bound of the inflation target range (1.0 percent).

In the reviewed period, the general CPI index declined as a result of the drop in prices of tradable goods and of the decline in the rate of increase in the prices of non-tradable goods.[16] The Tradable Goods Index continued to decline against the background of notable drops in oil prices in the second half of 2014, resulting from increased supply, and against the backdrop of a decline in global prices of food inputs, a development that has a lagged effect (Figure 20a). In addition to these factors, there were low inflation rates overseas in response to low global demand, both in developed and developing countries (Figure 2). The Non-Tradable Goods Index ended the reviewed period nearly unchanged, although the annual rate of change was negative in February and March (Figure 20c). Structural changes such as the decline in communications prices had a negative impact on inflation through non-tradable goods prices. On the other hand, the CPI's housing component—which accounts for 40 percent of the Non-Tradable Goods Index—continued to be the dominant factor driving the increase in the index. Excluding the housing component, the Non-Tradable Goods Index declined by 0.4 percent over the preceding 12 months.

One-year ahead inflation expectations were below the lower bound of the target range during most of the reviewed period, and began again to increase, toward the lower bound, at the end of the period. Medium to long term expectations remained anchored at the midpoint of the target range. One-year ahead inflation expectations from various sources remained below the lower bound of the inflation target range during most of the reviewed period, and at the end of the period they returned to near the lower bound (Figure 21a). At the end of June, one-year inflation expectations derived from the capital market were 1.1 percent, on average (net of seasonal effects on the CPI), expectations based on banks' internal interest rates were 0.7 percent, and forecasters' expectations were 1 percent. The moderation of inflation expectations stemmed partly from transitory effects that are not expected to impact medium to long term inflation rates, such as the reductions in electricity and water rates, which were expected to reduce the CPI by 0.4 percent. Less this effect,[17] one-year inflation expectations were slightly below the lower bound of the target range. The halt in the decline of oil prices, and the

[16] The Tradable (Non-Tradable) Goods Index constitutes 36% (64%) of the overall CPI.
[17] Deduction was made from the average inflation expectations of the various sources.

subsequent increase in oil prices toward the end of the period, and the dissipation of the effect of one-off measures in electricity and water rates, are expected to support a return of the inflation environment to within the target range. Notably, although two-to-three-year forward expectations did decline during most of the reviewed period, nonetheless, even at their lowest points these expectations did not fall below the target range, bolstering an assessment that market players for the most part considered the declining inflation environment mostly as a temporary development (Figure 21b). Furthermore, long term (8-10 year) forward expectations remained well anchored near the midpoint of the target range during the entire period.

g. The housing market

Home prices and activity levels in the housing market recovered in the reviewed period after a virtual standstill in the market during the period of deliberations over the Zero VAT law. The home price index increased at annual rate of 6 percent from the beginning of the year (through April-May). Although the annual pace of increase in home prices moderated slightly—declining to 3.2 percent, continuing the downward trend that began in the middle of the previous year—it is important to remember that the past year included the period of virtual standstill that developed in response to market expectations of the legislation of the Zero VAT plan, and the effects of Operation Protective Edge (Figure 22). The number of transactions, especially new homes purchased directly from contractors, and the number of new mortgages granted began to increase again in October 2014, after showing signs of stability in the second half of 2014. The pace of new building starts is still at a record high, although some slowdown was evident in the previous year, The rate of building completions continue to rise and even reached 45,000 units per year (as of May 2015).

In June, the government introduced measures to resolve the housing crisis. In June, purchase tax for investors was increased to 8 percent on apartments under NIS 4.5 million (compared with 5–7 percent), and to 10 percent on more expensive apartments (compared with 8–10 percent). Expectations of such measures significantly drove up transactions (Figure 23), particularly involving investors, and new mortgage volume, although it is too early to determine how these developments will affect home prices and rents.

2. MONETARY POLICY[18]

a. Policy and targets

During the first half of 2015, the Monetary Committee reduced the interest rate once, by 0.15 percentage points, bringing the interest rate to its lowest ever level, 0.1 percent. The Monetary Committee reduced the interest rate for March, continuing the downward trend that began in October 2011. This reduction, and its predecessors, was designed to help restore the inflation rate to its target range and to support economic

[18] Since October 8, 2014, there has been a vacant seat on the Monetary Committee which currently has only five members.

activity. The Monetary Committee kept the interest rate for July and August, which are in the second half of 2015, unchanged at its low level.

Several factors affected the interest rate decisions in the surveyed period. The main factors supporting a reduction were the low inflation environment and renewed appreciation pressure, with its potential repercussions for exports. As to the low inflation environment, throughout the surveyed period annual inflation was negative, mainly due to one-off supply factors, both global and domestic. Inflation as measured by the change in the CPI over the preceding 12 months is expected to return to within the target range in the near future as the effects of the one-off factors dissipate. However, the renewal of oil price declines and the continued shekel appreciation are downside risks to the forecast. Regarding appreciation pressures, there was a turnaround in the exchange rate during the surveyed period as the shekel appreciated against a basket of currencies, giving the Committee cause for concern that the recovery in exports might be negatively impacted. Weak world trade and economic activity, and particularly growing monetary easing worldwide, low corporate bond yield spreads, and the continuing increase in housing prices, also were consideration in the decisions.

In accordance with these developments, most members of the Monetary Committee were of the opinion that a reduction of the interest rate for March would encourage exports as it would help halt the renewed trend of appreciation of the shekel against most other currencies, and that it would provide a response to the decline in the inflation rate as its has a direct impact on encouraging domestic demand. In addition, depreciation of the shekel leads to an increase in inflation directly—both immediately (for example through fuel prices) and with some lag—and indirectly, by increasing the demand for domestically produced tradable goods. The Committee assessed that this policy is consistent with the Bank of Israel Law, which requires returning the inflation environment to the target range within 24 months. To complement the interest rate policy, foreign exchange purchases continued during the surveyed period. Most of these foreign exchange purchases were made as part of the plan to moderate extraordinary fluctuations in the exchange rate, mainly in February and June.

According to the Research Department’s forecast at the end of June, and based on the forecasts prepared by some private forecasters, the inflation rate as measured over the preceding 12 months is expected to remain below the target range in the second half of 2015, after which it should return to within the range. Accordingly, the Research Department projects that the inflation rate will be 0.1 percent in 2015 and 2.0 percent in 2016.

Committee members assessed that the housing market poses the main financial risk, and that the measures adopted by the Supervisor of Banks over the last few years are working to mitigate this risk. One of the main risks to financial stability from the low interest environment is the fueling of demand for housing loans and the concern that when interest rates eventually rise, some borrowers will have difficulty repaying the variable rate component of their mortgage. Members were of the opinion that the housing market does in fact pose the key financial risk but that the measures adopted in recent years by the Supervisor of Banks are mitigating this risk, given that the risk characteristics of mortgages declined, and then stabilized at the lower level. Another risk pointed to by the Committee was low yield spreads on corporate bonds—members noted that the risks in this market might be underpriced. In contrast, the demand for business credit did not expand markedly, and no financial imbalance has been identified in this area.

b. Background conditions and their impact on interest rate policy[19]

Actual inflation as measured by the change in the CPI over the preceding 12 months was negative throughout the surveyed period, and was one of the factors supporting the reduction of the interest rate. At the beginning of the surveyed period, and several months previously, the annual inflation rate was negative. In January and February two negative CPI readings were published, producing the lowest annual rate of inflation since the appointment of the Monetary Committee. One-year ahead inflation expectations from various sources all declined to below the lower bound of the target range. At that time, Committee members assessed that one-off supply factors were the main cause of falling prices. They noted that although inflation expectations for the year had declined, this was mainly because the forecasts had taken the effect of the one-off factors into account, and as proof pointed to the fact that medium and long-term inflation expectations remained anchored in the center of the target range. Some of the Committee members noted that the lower rate of increase in the price of nontradable goods might indicate that structural factors also contributed to the price decline. They also expressed concern that the actual inflation rate would deviate from the target range for too long a period of time. These developments supported the reduction of the interest rate for March. Positive CPI readings, which were not surprising, were published for the rest of the period (March through June), and by and large the readings were in line with the seasonal path consistent with attaining the inflation target. These indices helped moderate the pace of price declines. Committee members assessed that this development was part of the process of convergence of the rate of inflation to within the target range, a process supported by the fact that the decline in global energy prices had been halted, and by improved employment data. Nevertheless, there are downside risks to this assessment, from possible renewed declines in oil prices and from continued shekel appreciation. The expectations and forecasts for the year from the different sources increased to around the lower bound of the target range, and longer-term expectations remain anchored near the midpoint of the target range.

The cumulative effective shekel appreciation in the surveyed period and its potential ramifications for exports were among the factors that led to the reduction of the interest rate and continued purchases of foreign currency. The trend of effective depreciation of the shekel which began in August last year, has been reversed since the beginning of the surveyed period. In the second half of 2014, the shekel had depreciated sharply against the dollar, and although this exchange rate has now stabilized, the shekel has appreciated sharply against the euro against the backdrop of the quantitative easing measures launched by the ECB. Similar easing measures adopted by other countries also contributed to the appreciation pressure and as a result, by the end of February, nearly all

[19] Table 3 details the background conditions that were available to the members of the Committee.

the effective depreciation of the second half of 2014 had been eroded. Committee members expressed concern at the time that this renewed shekel appreciation, particularly against the euro, might wear down the improvement in exports seen at the beginning of the surveyed period, and this concern intensified in view of the forecasts that world trade would continue to grow moderately and the fact that about a quarter of Israel's exports are directed to the eurozone. The interest rate reduction for March supported a temporary halt to the appreciation of the shekel in terms of the effective exchange rate. In this context the Committee members noted that following the March interest rate reduction, there was no noticeable trend in the effective exchange rate. However, in subsequent months the shekel began to appreciate again and in June members of the Committee noted that several estimates showed that the current shekel exchange rate was overvalued (relative to the equilibrium exchange rate). As a supplementary measure, the Bank of Israel therefore continued to purchase foreign currency.

At the beginning of the surveyed period, indicators of real activity showed that there had been a correction in the rate of growth following the virtual standstill in the growth rate after Operation Protective Edge in the third quarter last year. Subsequently, GDP growth returned to its moderate levels of before that period. Current data that became available at the beginning of the period indicated an accelerated rate of economic growth after the virtual standstill that followed Operation Protective Edge, but the strength of this acceleration was unclear until official figures were published in February. The first estimate for the fourth quarter of 2014 was higher than expected and the Committee members concurred that this figure was partly consistent with preliminary assessments that pointed to a correction occurring after the slowdown during the period of Operation Protective Edge, and partly reflected the one-off increases in defense expenditure and durable goods consumption (mainly as a result of bringing forward car purchases). Committee members emphasized the marked improvement in exports by labor-intensive low technology industries, and most members agreed that the shekel devaluation in the previous half year had impacted those exports relatively rapidly. Consequently, most members of the Committee reiterated the view that as long as the growth of world trade is expected to remain moderate, the exchange rate plays an important role in supporting economic activity, and exports in particular. As noted, in this context most members of the Committee expressed their concern over a possible resumption of the trend of appreciation in the effective exchange rate of the shekel, given that it had eroded nearly the entire sharp devaluation that began in August 2014. This concern was one of the reasons for reducing the interest rate as a preventive measure against a further negative impact on exports. At the time, one of the Committee members favored leaving the interest rate unchanged, due to the rapid recovery of economic activity that also incorporated non-exporting sectors, the impressive growth of private consumption, and the resilience of the labor market, and in view of the long term risks emanating from the housing and capital markets. In view of the current data published for the first quarter of 2015, the Committee members were of the opinion that the Israeli economy had returned to the moderate growth seen prior to Operation Protective Edge, an opinion that was generally supported by the first quarter National Accounts estimates published in May.

The moderate global economic activity supported the low domestic interest rate. In the surveyed period, there were signs that the rate of growth in the US was moderating. This included first-quarter contraction of GDP, which the members of the Committee believed was transitory. In the eurozone, moderate growth of the economy resumed, but the threat of the Greek crisis has not yet been averted. As for most developing economies, their growth rates were revised downwards and they are not growing at rates demonstrated in the past. In part, this seems to be the result of structural changes.

The accommodative monetary policy worldwide intensified and supported the interest rate reduction. For the first time, in January, the ECB announced a quantitative easing (QE) program. Monetary Committee members estimated that central banks in economies outside the eurozone—small open economies in particular—were pressured by the ECB's actions into taking similar action to prevent the strengthening of their domestic currencies. This was accompanied by market uncertainty over the timing and path of the increase in the federal funds rate in the US, against the backdrop of disappointing growth data in the first quarter. These developments provided additional motives for reducing the interest rate for March.

Activity in the housing market—home prices, transaction volume, and new mortgages—began to rise again after a prolonged virtual standstill resulting from the high level of uncertainty created by expectations of various government decisions, and it once again became a key consideration against reducing the interest rate. However, most risk characteristics of new mortgages continued to decline, in the wake of measures introduced by the Supervisor of Banks, providing policymakers with room to maneuver and enhancing stability. The surveyed period was characterized by a resurgence in housing market activity, reflected in another wave of price rises and a sharp increase in the number of transactions, particularly for apartments targeted by buyers eligible for housing rights. Over the course of the period, Committee members assessed that housing market data reflected a correction from the period in which buyers had waited during discussions on the Zero VAT plan, which was subsequently set aside, as many potential buyers had held off purchasing a home during that time. As evidence, Committee members noted that activity had returned to its levels from before that time. During the reviewed period, mortgage volume remained high but risk characteristics remained low, some even falling, as a direct continuation of the various directives published in recent years by the Supervisor of Banks. Furthermore, the decline in long-term bond yields led to an increase in the share of loans taken with fixed interest. Toward the end of the period, members of the Committee expressed concern that uncertainty in the housing market might increase again in view of indecisive government policy in this sector. Rising home prices do not support maintaining a low interest rate environment, although the Supervisor's measures reduce the risk faced by households and by the banking system from difficulties in repaying mortgages. This gives monetary policy makers more room to maneuver regarding activity which is designed to achieve its key goals—to support a rate of inflation that is consistent with the goal and level of economic activity.

Yield spreads in the corporate bond market remained low and were a consideration against reducing the interest rate. Yields increased toward the end of the period.

Activity in the corporate bond market remained strong and the number of net issuances increased. The public's demand for corporate bonds moderated during the surveyed period, continuing the trend that began in July 2014, of a shift away from mutual funds that specialize in corporate bonds and toward mutual funds specializing in investments in all types of bonds (mixed funds) and to those specializing in government bonds. Yield spreads on corporate bonds remained low for most of the surveyed period, although toward the end of the first half year there was some increase in all industries. In itself, the low interest rate should not affect bond risk levels, although in periods of low interest investors tend to seek higher yielding investment channels, thus reducing yield spreads on risky assets. The bond yield spreads were therefore a consideration against reducing the interest rate.

The forecasts presented to the Committee by the Research Department changed significantly during the surveyed period, against the background of changes in the global environment. At the end of March 2015, the Research Department significantly reduced its inflation forecast for 2015 (-0.1 percent, compared with 1.1 percent in the forecast published at the end of December 2014). This reduction incorporated, among other things, the decline in oil prices and the effect of the one-off reduction of electricity and water prices at the beginning of the year. The forecast for inflation in 2016 was revised slightly lower (to 1.7 percent, compared with 2 percent in the previous forecast). At the same time, the forecast path for the Bank of Israel interest rate was also revised downward due to the interest rate reduction for March 2015. The forecast for growth of GDP in 2015 remained unchanged, while the forecast for growth in 2016 was revised upward, in part in the wake of expectations for expansion of construction and the acceleration of imports by advanced economies.

In the forecast presented at the end of June, the Research Department estimated that inflation for the full year of 2015 would be near to zero and that it would return to the midpoint of the target range at the end of 2016. This is due to supply side factors, such as a renewed increase in oil prices in the first half of 2015, and to demand side factors such as the increase in the minimum wage and transfer payments. The interest rate path rose in comparison with the previous forecast—the interest rate at the end of 2016 is expected to be 1.25 percent, compared with a projection of 1 percent in the forecast given in March 2015. The interest rate is expected to increase during the course of 2016, though with a lag compared to the expected increase in interest rates in the US and other advanced economies. The forecast for GDP growth in 2015 declined somewhat due to the negative surprises in the investment and exports components in the first quarter of 2015, while the forecast for GDP growth in 2016 increased as a result of the expectation of higher public expenditure and a downward revision of the forecast for imports to OECD countries.

At the end of the surveyed period, there was a change in monetary policy communication, and the Bank of Israel held a quarterly press briefing, the first of which took place after publication of the interest rate decision for July. This is common practice by many central banks, including the most important ones, in various formats and frequencies. The Monetary Committee is of the opinion, *inter alia*, that the new form of communication between policymakers and financial market participants will improve transparency as well as market participants' understanding of the considerations that guide the Committee in policymaking.

Box: Secular stagnation or a long business cycle? Global expectations of growth and the real rate of interest

The global financial crisis led to a decline in growth in the advanced economies, accompanied by a decline in interest rates. Eight years after the onset of the crisis, long term expectations have not improved: potential growth is declining and long term yields remain low. Accordingly, there is an increasing need to investigate the causes of this ongoing situation and to analyze their implications for optimal macroeconomic policy. Some senior economists around the world believe that we are experiencing secular stagnation, which is due to the structural changes in society's patterns of economic activity, and that these will continue in the future. An opposing position is that the situation is one of a long, but temporary, recession which is part of the business cycle. Each of these positions has broad implications for optimal economic policy, both in Israel and worldwide. Below, we will review the two positions and their conclusions regarding optimal policy.

Those who support the first position, led by Larry Summers (2014), claim that in the long term it will not be possible for economies to return to pre-crisis growth rates, due to the limits of monetary policy in the short term. These policy limits are manifested in the inability of central banks to provide incentives for growth without harming financial stability, as a result of the permanent decline in the real "natural" rate of interest at full employment. The real "natural" interest rate is that component of the monetary interest rate determined in equilibrium between savings and investment and which is not influenced by the business cycle. This decline has limited the use of the monetary interest rate as a tool for achieving growth in crises, since in order to incentivize growth the monetary interest rate must be lowered such that the real interest rate will be below its "natural" level. However, the monetary interest rate cannot go below zero, i.e., there is a zero lower bound. At the same time, the low interest rates that are necessary to encourage growth are likely to induce investors to look for higher yields among riskier assets, which will threaten financial stability.

Summers claims that the main reason for the decline in the "natural" interest rate is related to the expansion of savings in parallel to the decline in demand for investment, developments that create a persistent surplus of saving over investment, which in turn leads to lower yields on investment. The persistent increase in saving derives primarily from the increase in economic inequality, which leads to a concentration of capital in the hands of the wealthy, a group that tends to save more. At the same time, demand for investment is declining due to three main factors: The first is a lower rate of population growth, which leads to moderation in the growth of the labor force and therefore a decline in the necessity for capital investment. The second factor is that the business world has shifted away from the production of investment-intensive goods to a situation in which start-up companies can achieve growth with a minimal initial investment. The demand for investment in the era of Facebook and Google is therefore much smaller than during the era of General Motors or even Sony. A third factor is the decline in the relative prices of capital goods, such as machinery and equipment, which has also reduced the demand for investment. These factors, which are behind the drop in the "natural" interest rate, have a structural character and therefore Summers does not expect an improvement in the situation without a change in the thinking behind macroeconomic policy. Like Summers, Robert Gordon (2014) also foresees a long period without an improvement in growth, although he claims that this is not the result of monetary policy's limits but rather of long-term processes related to changes in the composition of the workforce and its level of education, growth in the public debt and other processes that lead directly to a drop in potential growth.

In contrast to the secular stagnation approach there are the theories of cyclicity, which expect an improvement in growth and an increase in interest rates in the near future. Ben Bernanke (2015) believes that there is indeed a surplus of saving over investment on the global level (the global savings glut) but it is the result of cyclical factors and therefore the drop in interest rates and rates of growth is temporary. The reasons for the surplus in saving include: the export policies of countries in Asia, primarily China; oil exporters who save beyond the domestic demand for investment; and the low demand for investment in post-crisis Europe. However, these are temporary and reversible processes, since they are the result of policies that encourage a saving surplus. If countries act to neutralize the effects of this policy, interest rates and growth rates will return to their previous levels.

Kenneth Rogoff (2015) also believes that future growth will exceed the currently pessimistic expectations although he attributes the continuing crisis to a "debt supercycle". In his opinion, when an economic crisis intensifies due to failure in the financial markets, it generates a shock in the economic system and the recovery from it is a prolonged one. The world is, therefore, experiencing a very long cycle, indeed a super-cycle, but it would be a mistake to call this a permanent change. He further states that historically, the most recent crisis is not materially different from previous financial crises.

Each of these approaches leads to a different conclusion regarding optimal macroeconomic policy. According to the cyclical theories, at this stage there is little that can be done. Bernanke advocates that countries need to remove barriers to the international flow of capital and to stop encouraging a saving surplus, in order to allow interest rates to rise. However, Rogoff emphasizes that policy makers have so far not learned the lessons of the past and have not adopted less conventional approaches to ending the crisis. He claims that in the existing situation, moderate fiscal expansion can contribute to a faster recovery from the crisis. Both of them feel that appropriate policy can help in accelerating the recovery, but they expect that in any case conventional monetary policy tools will again become effective and global growth will return to its long-term trend, as before the crisis.

In contrast, the secular stagnation theory believes that interest rates will stay low and global growth will not return to its previous level unless an attempt is made to deal with the structural problems by means of special policies. Summers believes that if fiscal policy is used to raise the "natural" interest rate by increasing the demand for investment and reducing saving, it will enable the monetary interest rate to rise and in this way freedom of action will be restored to monetary policy and potential growth will increase.

To this end, fiscal policy should encourage private investment and increase public investment, while at the same time take steps that can be expected to reduce saving, such as reducing inequality. This goal-oriented fiscal policy differs from the anti-cyclical fiscal expansion proposed by Rogoff. As part of this policy, the countries of the world must recognize the problem and take active measures that are complex and unconventional, in order to bring about an improvement in the situation. However, since the chances that they will do so are slim, it is possible that the stagnation in growth and global demand will continue for many years to come.

The Israeli economy weathered the global crisis with relative success; however, since it is a small and open economy which is exposed to large scale capital flows relative to its size, the interest rate in Israel was adjusted to the low rates worldwide. In the long run, the low interest rates may make it difficult for the economy to deal with future crises, and they may act to create “bubbles” that undermine financial stability. The interest rate is therefore a primary channel through which the global crisis affects the Israeli economy and as a result the predictions according to the various approaches have important implications. According to the cyclical theories, the global rate of interest will rise and this will allow the interest rate in Israel to be increased as well. In contrast, according to Summers, global interest rates will not rise and the Israeli economy will find it difficult to increase the interest rate when domestic factors call for it. If Israel alone raises the interest rate the shekel is likely to appreciate and exports will be negatively impacted. Global developments can also influence the Israeli economy through another channel, namely global demand. Long-term stagnation in global demand, as predicted by Summers, is liable to negatively impact world trade and this will also adversely affect Israeli exports, thus reducing growth in the economy. In contrast, an increase in global demand, as predicted by the cyclical approaches, is expected to help Israeli exports and support growth.

In summary, the various analyses of the current situation lead to different conclusions regarding the future of the global economy. Since Israel is a small and open economy, it will be affected by global developments, particularly those in the large advanced economies. Therefore, whether or not the debate over the significance of the slowdown in global growth is settled, it is important to continue monitoring the variables that are considered to be its possible causes, to recognize the possibilities and limitations of monetary policy in Israel and to adopt additional policy measures that will encourage long-term growth.

References:

Bernanke, B. S. (2015). "Why are Interest Rates So Low, Parts 1-4". *Brookings,* http://www.brookings.edu/blogs/ben-bernanke.

Bernanke, B. S. (2015). "Monetary policy in the future". *Brookings,* http://www.brookings.edu/blogs/benbernanke.

Gordon, R. J. (2014). "The Turtle’s Progress: Secular Stagnation Meets the Headwinds". *VoxEU.org*, http://www.voxeu.org/sites/default/files/Vox_secular_stagnation.pdf.

Rogoff, K. (2015). "Debt Supercycle, Not Secular Stagnation". *VoxEU.org,* April 22, http://tinyurl.com/onkbpf8.

Summers, L. (2014). "U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound". *Business Economics*, 49(2), http://tinyurl.com/pyzw9e3.

Summers, L. (2014). "Reflections on the ‘New Secular Stagnation Hypothesis’". *VoxEU.org*, http://www.
voxeu.org/sites/default/files/Vox_secular_stagnation.pdf.