Bank of Israel

Monetary Policy Report

First Half of 2021

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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.

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's 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.

In accordance with Section 55(b) of the Bank of Israel Law, the current report explains why the inflation rate deviated downward from the target range determined by the government for more than 6 consecutive months—since the publication of the CPI for June 2019 (on July 15, 2019) through the CPI for May 2021 (published on June 15, 2021), when it returned to within the target range.

The Monetary Policy Report for the first half of 2021 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 5, 2021, and thus refers to the CPI through the month of May 2021.

Summary

Monetary policy: This report reviews the monetary policy during the first half of 2021 and the beginning of the second half of 2021.[1] During the reviewed period, and after the exit from the third lockdown, the Israeli economy recovered at a rapid pace. This was against the background of the efficiency of the vaccinations, which led to a sharp decline in morbidity rates and made a broad easing of limitations on activity possible.

During the first half of 2021, the interest rate was kept unchanged at 0.1 percent. In addition, the Monetary Committee continued to operate some of the range of tools it announced during the course of 2020—government bond purchases, long-term monetary loans, and to a small degree, repurchase agreements (repos) with institutional investors. This policy was intended to provide macroeconomic support to exiting the economic crisis, to assist in the functioning of the credit market so that it would provide stable and low interest rates and an adequate supply of credit, and to support the attainment of the policy targets. This was in addition to ensuring the continued orderly functioning of the financial markets, enhancing the passthrough from the Bank of Israel interest rate to market interest rates, and encouraging demand and inflation.

As part of the monetary tools implemented by the Monetary Committee during the reviewed period, the Bank of Israel continued to purchase foreign exchange. In the middle of January, against the background of the rapid and outstanding appreciation of the shekel, the Committee announced a program in which it would purchase $30 billion in 2021. This was with the aim of supporting the attainment of the Bank of Israel's targets and the recovery of the economy from the COVID-19 crisis, and particularly in order to support export industries and import substitute industries.

Domestic real activity: The data and indicators that were presented to the Monetary Committee in the half year reviewed showed the resilience of the economy after the 2 lockdowns that were imposed in 2020, and the rapid pace of recovery after the exit from the third lockdown and the broad easing of limitations on activity, with the fading of the coronavirus in Israel.

The labor market: Labor market data indicate that before the imposing of the third lockdown, the broad unemployment rate had stabilized at around 13 percent, and during the lockdown, it increased to 20 percent, a lower level than in the previous lockdowns. After the third lockdown, its rate declined gradually, reaching 9.8 percent in May. However, in March and April 2021, a sharp increase was seen in companies reporting a difficulty in hiring employees, alongside a marked increase in reports of job vacancies.

The inflation environment: During the first half of 2021, there was a gradual increase in the inflation environment. The year over year rate returned to positive values, after approximately a year of negative rates, and after the publication of the May 2021 CPI, the inflation rate returned to the target range. Year over year inflation through May 2021 was 1.5 percent. The annual inflation rate net of energy and fruit and vegetables was 1.0 percent. One-year inflation expectations from all sources increased during the half year, and beginning from April, they were within the target range. There was also an increase in forward expectations for all ranges. These expectations for medium and long terms remained anchored within the target range.

[1] The decisions in 2021 were made on January 4th, February 22nd, April 19th, May 31st, and July 5th.

The exchange rate: At the end of 2020 and the beginning of 2021, there was a sharp appreciation in the shekel due to the strengthening of foreign currency flows into the Israeli economy. On January 14, 2021, the Monetary Committee announced a change in the policy of the Bank's activity in the foreign exchange market in 2021, with a declaration in advance of a program to purchase $30 billion during the year. From that date until the beginning of February, the shekel weakened by about 6 percent against the dollar, to a level of NIS 3.3/$. From then through the end of the reviewed period, the shekel remained stable both in terms of the nominal effective exchange rate and against the dollar and euro. This was while the Bank purchased approximately $25 billion since the beginning of the half year.

The global economy: During the half year reviewed, data on activity indicated the continued recovery of the global economy and of foreign trade in some countries, as a result of the increased pace of vaccinations and their efficiency. The improvement in activity also led to an upward revision in April of the IMF's forecast. However, in some countries, morbidity levels remained high, and the broadening of the lockdowns, the limitations, and difficulties in vaccination campaigns moderated the pace of the exit from the crisis for those countries. The inflation rate increased in all the main blocs. Monetary policy in most countries remained very accommodative. Major equity indices in advanced economies reached record highs in the second quarter of 2021, though volatility was seen during the half year.

The credit market: Bank credit balances of large and medium-sized businesses increased over the course of the half year reviewed, and the pace of the change accelerated. In the small and micro business sector, credit balances increased slightly and their increase accelerated in May. The credit market continued to function with low and stable interest rates. Based on the Business Tendency Survey conducted by the Central Bureau of Statistics, the average level of difficulty in obtaining credit declined to levels seen before the crisis, except in the hotels industry.

Financial market developments: Since the beginning of the COVID-19 crisis, as well as during the half year reviewed, many central banks, including the Bank of Israel, continued to operate a variety of asset purchase programs. In Israel, the nominal government bond yield curve steepened slightly during the first quarter of the year, a process that continued in May and June as well. Corporate bond spreads continued to decline during the reviewed period, with their levels near those of just before the crisis. Prices have increased on Israel's equity markets since the beginning of the half year. The Tel Aviv 125 Index increased by approximately 13 percent, surpassing its level of just before the crisis. During the half year, the Monetary Committee continued to follow equity market developments, with regard to maintaining financial stability.

Fiscal policy: Throughout the half year, Committee members expressed concern about the continued uncertainty deriving from the lack of a budget. The government deficit in the 12 months ending in May 2021 was NIS 149 billion, or about 10.5 percent of GDP. At the end of the year, it is expected to be around 7.1 percent of GDP.

The housing market: At the end of 2020 and in the beginning of 2021, an acceleration was seen in the rate of home price increases. In contrast, the pace of rent price increases remained moderate.

The Research Department's staff forecast: The Research Department published three forecasts during the period being reviewed, in parallel with interest rate announcements—in January, April, and July 2021. Whereas during the crisis, at the time of uncertainty, the Research Department's staff forecasts included 2 scenarios—one that assumed continued improvement in morbidity rates and a second that assumed a

return to deterioration in morbidity rates—in the April 2021 forecast the Department returned to presenting a macroeconomic forecast based on a single baseline scenario, in light of the progress in the vaccination campaign and the decline in morbidity.

According to the forecast from July 2021, GDP will grow by 5.5 percent in 2021. The broad unemployment rate is expected to decline to 8.0 percent of the labor force at the end of 2021. In 2022, growth of 6.0 percent is expected, so that the level of GDP at the end of 2022 is expected to be only about 0.5 percent lower than the level that would have been expected before the crisis. The unemployment rate in 2022 is expected to reach 5.5 percent in the final quarter, still above its pre-crisis level. Assuming that the State budget is passed as planned and that fiscal consolidation will be deferred to 2023 and later, the debt to GDP ratio in those two years is expected to be 74 percent. Inflation during the course of the coming 4 quarters (ending in the second quarter of 2022) is expected to be 1.0 percent. The rates expected for 2021 and 2022 are 1.7 percent and 12 percent, respectively.

During the half year reviewed, the Committee discussed the economic risks to the forecast. Although the opening of the economy, the return to routine in Israel and the rapid recovery of economic activity are expected to support continued growth in the coming year, there are still challenges to activity. This is in view of the health risks in Israel and abroad—the risk of a renewed spread of the coronavirus, and particularly of the Delta variant in Israel toward the end of the half year, a situation that is liable to extend the closure of the economy to incoming and outgoing tourism. In addition to these, there are security risks, financial risks, and fiscal uncertainty. In addition, there is uncertainty regarding inflation abroad and its impact on inflation in Israel.

Monetary policy

During the first half of 2021, the interest rate was kept unchanged at 0.1 percent. In addition, the Monetary Committee continued to operate some of the range of tools that it announced in 2020—government bond purchases, long-term monetary loans, and to a small degree, repurchase agreements (repos). In the foreign exchange market, the Bank of Israel increased its intervention and in the middle of January, the Committee announced a program to purchase $30 billion in 2021.

At the time of decision of January 2021, Israel stood out, compared to other countries, for its rapid pace of vaccinations, though due to an increase in morbidity, a third lockdown and significant limitations on economic activity were imposed. At the time of the decision of February 2021, the economy was in the midst of significant easings on activity ahead of the end of the third lockdown. This was against the background of the rapid pace of vaccinations, the high effectiveness of the vaccinations, as well as data on real activity that indicated that the adverse impact to the economy in the third lockdown was more moderate than expected. At the time of the decision of April 2021, economic data indicated recovery at a rapid pace after the exit from the third lockdown. At the time of the decision of May 2021, the economy was on the verge of an almost complete return to routine—against the background of the removal of most of the limitations on activity that remained until then, including the cancellation of the use of the green shield and purple shield—due to the efficiency of the vaccination campaign and the fading of the COVID-19 pandemic in Israel. The process of return to routine in Israel supported the rapid recovery of economic activity, which was characterized by a significant increase of consumption, including in industries that were markedly adversely impacted by the limitations during the course of the crisis. At the time of the decision of July 2021, the rapid recovery in economic activity continued,

and at that time, there were essentially no significant limitations. Although the COVID-19 morbidity returned and increased against the background of the spread of the Delta variant, the level of morbidity remained low.

Toward of the end of the half year, the year over year inflation rate returned to the target range, and inflation developments returned to being one of the main issues discussed during the period. During that time, the Committee expressed concern over the labor market situation and the slow pace of the recovery expected in it, as it noted that the return of the unemployment rate to the low pre-crisis levels was expected to take a long time. The Committee discussed the importance of the labor market's recovery to economic activity, as well as being a factor impacting on inflation via the wage increase mechanism. Also noted was the importance of the labor market's recovery to the reduction of the adverse impact on weaker population groups and the inequality in the economy. With regard to financial stability, the Committee noted that it is following developments in equity markets in Israel in view of the price increases throughout the half year. At the times of the interest rate decisions in April, May, and July, the Committee clarified that it will continue to conduct a very accommodative monetary policy for a prolonged time, using a range of tools as necessary, including the interest rate tool, in order to continue supporting the attainment of the policy targets and the recovery of the economy from the crisis, and to ensure the continued orderly functioning of the financial markets.

During the half year reviewed, the Monetary Committee kept the interest rate unchanged at 0.1 percentage points, with an emphasis that it could use a range of tools as necessary. The Committee assessed that the extent of the monetary accommodation through the range of its tools, was sufficient. The Committee decided in April 2020 to reduce the monetary interest rate by 15 basis points, to 0.1 percent, and since then the interest rate has been kept unchanged. In the first 4 interest rate decisions of the half year reviewed (January through May), five of the Committee members were of the view that the interest rate should be kept unchanged at 0.1 percent. Their view was that this low level of the interest rate supports the recovery of economic activity and a gradual return of the inflation rate to the target range, particularly in view of the Bank of Israel using additional tools in the credit and foreign exchange markets. One Committee member voted to reduce the interest rate to 0 percent. He was of the view that an interest rate lower than 0.1 percent was more appropriate due to the intensity of the crisis and the unusually intense impact on employment. In the decisions of January and February, he even added that he does not rule out that a more accommodative policy and a reduction of the monetary interest rate to a negative rate will be needed in the future. In the July 2021 interest rate decision, all 6 members of the Committee were of the opinion that the interest rate should be kept unchanged at 0.1 percent. They were of the view that the low level of the interest rate supports the continued recovery of economic activity.

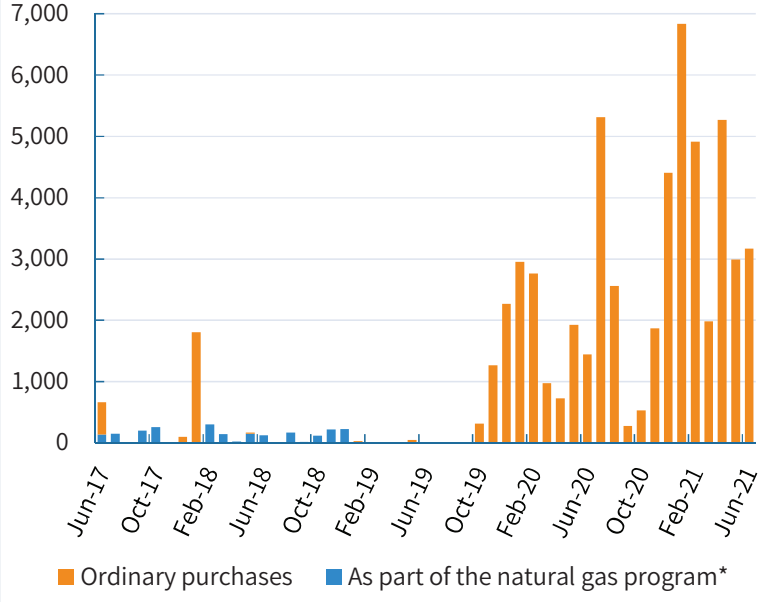
In addition to the predetermined dates of the Monetary Committee decisions, and as part of the Bank's policy in foreign exchange market intervention, on January 14 the Monetary Committee announced that the Bank of Israel will purchase $30 billion in 2021. This step reflects a change in the Bank's policy regarding its foreign exchange market activity. The goal of the advance announcement on the scope of the purchases was to provide the market with certainty regarding the Bank's commitment to dealing with the sharp appreciation that there was at that time, and thus to support the economy's continued dealing with the economic implications of the COVID-19 crisis. At that point in time, the Monetary Committee was of the view that there was a need to continue intervening in the foreign exchange market at an extensive scope

in 2021, in order to support the attainment of the Bank's targets and the recovery of the economy from the coronavirus crisis, and in particular to support the export industries and import substitute industries. In the interest rate decisions of April and May 2021, the Committee added that the plan would be expanded to the extent necessary in accordance with economic conditions and their development. In the July 2021 interest rate decision, it was noted that the Bank of Israel is not limited to a maximum intervention of $30 billion in 2021, and that at the end of the program it would operate in the foreign exchange market as needed, taking economic activity into account.

With the implementation of the program, the pace of foreign exchange purchases was accelerated in January and February, while it was slowed in March, against the background of the stabilization of the exchange rate. In April through June, an increase was seen in the pace of purchases. Overall, from January through June 2021, the Bank of Israel purchased around $25 billion as part of its foreign exchange market policy (Figure 1).

Figure 1: The Bank of Israel's Purchases in the Foreign Exchange Market

$ million, June 2017–June 2021



* The program to offset the effects of natural gas production on the exchange rate.
SOURCE: Bank of Israel.

During the half year reviewed, the Committee continued to use part of the tools whose implementation was decided on during 2020—government bond purchases, long-term monetary loans, and to a small degree, repurchase agreements (repos) with institutional investors.

Government bond purchases on the secondary market: The program was launched in March 2020 against the background of the Committee's assessment, at that time, that credit needs were expected to remain significant due to the continuation of the crisis, and with that, the need for policy steps that would prevent

future difficulties in the markets. In October 2020, the Committee decided to increase the bond purchase program by NIS 35 billion, to a maximum of NIS 85 billion. The Committee members agreed that an increase in the scope of government bond purchases, as decided upon, could moderate the increase in the real and nominal yields and thus support an increase in expected inflation. The Bank of Israel's purchases in the reviewed period totaled about NIS 22 billion, and from the beginning of the program through the end of June 2021, the purchases totaled about NIS 69 billion (Figure 2).

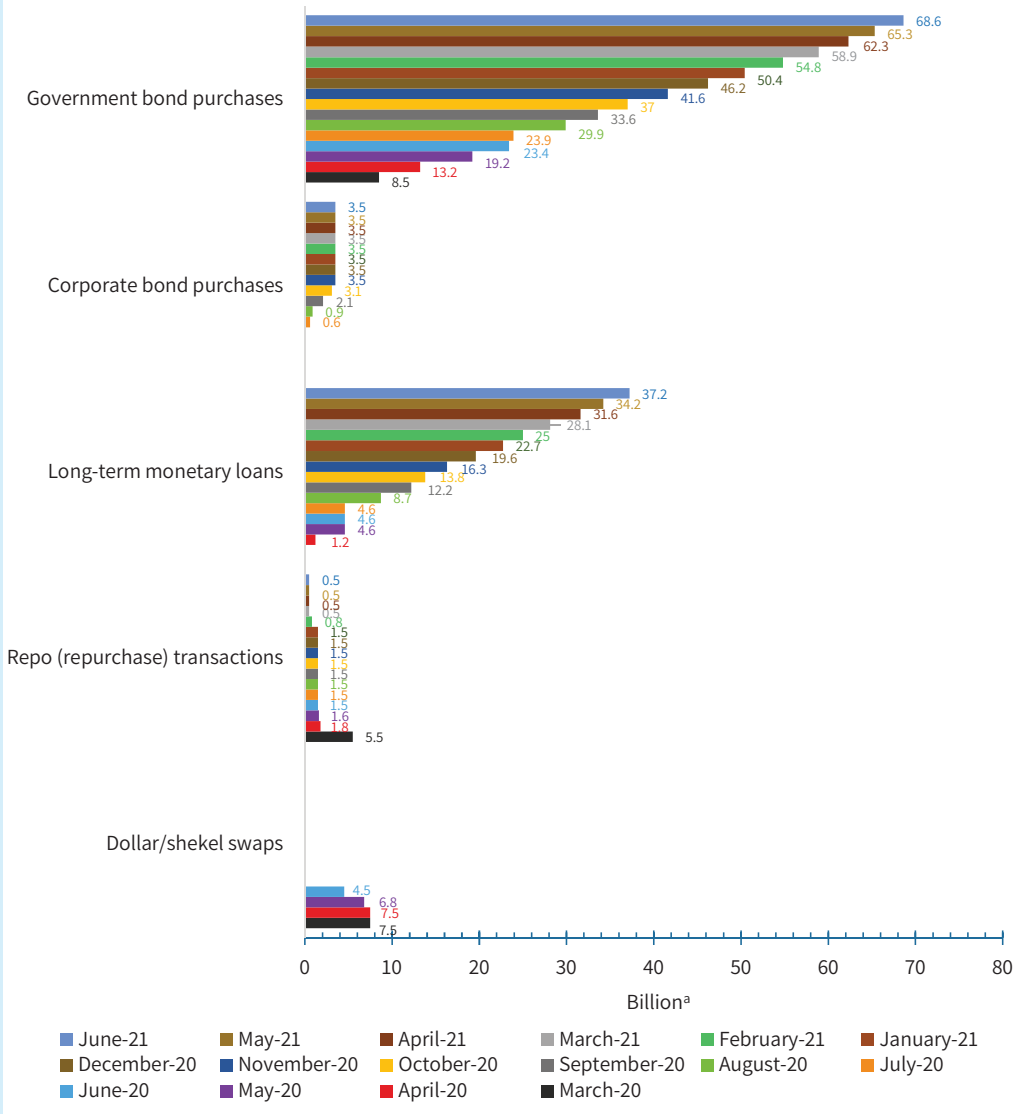
Corporate bond purchases on the secondary market: This tool was launched in July 2020. The Bank of Israel decided to buy only corporate bonds rated A minus and higher. Through the end of June 2021, the purchases totaled NIS 3.5 billion. The Bank's goal in operating this tool was to expand the possibility for large companies to raise credit and to direct bank and nonbank credit to smaller companies. Against the background of the plan being carried out, spreads declined and issuances increased (Figure 2).

Repurchase agreements (Repos): The tool was launched in March 2020, and as part of it loans were extended to institutional investors against their placing collateral, such as a bond. In the initial stage, the collateral could be only government bonds or makam (central bank bills), and in April 2020, it was decided that corporate bonds could also serve as collateral. In the first half of 2021, the use of this tool was narrowed to NIS 0.5–1.5 billion per month.

Long-term monetary loans: This tool was launched in April 2020, and in October 2020, a new tier of the program was decided upon. Under the most recent version of the tool, which was valid through the end of June 2021, the Bank of Israel provided the banking system with loans at a negative interest rate of -0.1 percent for a term of 4 years. The Committee decided to operate this focused unconventional tool so that the support provided by the Bank of Israel will reach, to the extent possible, small and micro-business borrowers. This was with the goal of making things easier for them, recognizing their importance to employment and to economic activity. These loans were provided to the banking system at a negative interest rate of -0.1 percent against loans extended to small and micro businesses, with the condition that the interest rate on the loans will be convenient and will not exceed Prime + 1.3 percent. The tier through which loans were provided to banks at an interest rate of -0.1 percent ended as planned in June and the tier through which loans were provided to banks at an interest rate of 0.1 percent will end October 1 or upon the utilization of NIS 40 billion in the program. The Committee will continue to examine market conditions constantly and will continue to operate the other special tools for a crisis, as needed. The total amount of the monetary loans extended via the two paths through the end of June 2021 was about NIS 37 billion (Figure 2).

Swap transactions in the shekel-dollar market: This tool began to be used in March 2020, against the background of a shortage in dollar liquidity. This tool has not been used by the Bank of Israel since July 2020 (Figure 2).

Figure 2: The Bank of Israel's Main Policy Steps During the Crisis
End-of-month balances, March 2020–June 2021



[a] Transactions are denominated in shekels, except for dollar/shekel swaps, which are denominated in dollars.
SOURCE: Bank of Israel.

Alongside the monetary tools that the Committee decided to use during the reviewed period, the Bank of Israel's Banking Supervision Department continued to act in the regulatory sphere, as was done from the beginning of the COVID-19 crisis. This was by continuing part of the steps decided upon in 2020, steps that impact markedly on the credit market and on the functional continuity of the financial system. The Banking Supervision Department announced a series of regulatory easings that were intended to grant banks the business flexibility required to provide services to the public, and particularly the extension of credit. A framework for deferring loan payments was announced in May 2020 and adopted by the banking system,

and through May 2021, loan payments for hundreds of thousands of borrowers, from all activity segments, were deferred. The total balance of the loans for which payments were deferred was about NIS 180 billion, of which NIS 21 billion were added between January 2021 and May 2021. From the beginning of 2021, the number of loans for which payments were deferred increased by 86,000, to 745,000 loans from the beginning of the program. At the end of May 2021, 43,500 loans remained with payments being deferred.

Additional directives were extended until the end of September 2021—the reduction of the leverage ratio required from the banking system by one-half of a percentage point, the reduction of the regulatory capital requirement by one percentage point, and contraction of the capital requirements for mortgages in order to prevent an increase in interest rates for the public.

During January and February 2021, the limitation on the share of mortgages at prime rate was cancelled. Under the limitation, the share of the loan at this interest rate was not to exceed a third of the total mortgage loan.[2] This measure was intended reduce the interest payments for borrowers, while maintaining the balances between enhanced flexibility in taking a mortgage and the level of risk to which borrowers are exposed.

The background conditions from the Monetary Committee's perspective

1. Real activity in Israel

The data and indicators presented to the Monetary Committee during the period reviewed showed the resilience of the economy after the two lockdowns that were imposed in 2020, and the rapid pace of recovery after exiting the third lockdown and the broad easing of limitations on activity, with the fading of the coronavirus in Israel.

At the beginning of 2021, a third lockdown was imposed on the economy, against the background of an increase in COVID-19 morbidity. This lockdown was not as tight as previous ones, and its impact on aggregate economic activity was, despite its length, more moderate than expected and than those of previous lockdowns. The Committee's assessment was that the third lockdown's more moderate than expected adverse impact on the economy is a direct result of the adjustment by the public and by businesses, reflected in, among other things, an upward trend in online purchases from one lockdown to the next, as seen in credit card transaction data. This is in addition to the Israeli economy's comparative advantage in the services exports area—for which global demand during the COVID-19 period even grew (except for tourism services)—particularly exports of high technology services, which continued to grow during the crisis. Together with that, there is a differential adverse impact among various industries—between those that were negatively impacted by the limitations and social distancing requirements and those that were not negatively impacted or that were able to adjust. Real time surveys by the Central Bureau of Statistics in December 2020 indicated an increase in the scope of businesses closing down, and the share of negative impact was higher among small businesses. However, at the beginning of January the surveys indicated an encouraging increase in the share of companies that were of the opinion that they would be able to continue to exist more than six months under the conditions that were in effect at that time. The surveys also indicated that the companies' resilience increases with their size.

[2] The limitation on the variable interest rate alone, according to which the total share of the housing loans at variable interest rate, of any type, and particularly based on the Prime rate, will be limited to two thirds of the total loan—remains.

Data presented to the Committee during the half year reviewed indicates that despite the second lockdown in October 2020 and the imposing of the third lockdown at the end of December, GDP grew in the fourth quarter of 2020 by 6.3 percent, and in 2020 as a whole it contracted by 2.6 percent, a lower rate than had been forecasted throughout the crisis. Toward the end of the half year, first quarter National Accounts data became available, and based on the estimate, GDP contracted by an annual rate of 6.2 percent (Tables 1 & 2). However, this data reflected a complex picture, as in the first half of the quarter the economy was in lockdown, due to record morbidity, while the end of February and March were characterized by a rapid exit from the crisis and recovery of the economy. The Committee members agreed that despite the contraction of GDP in the first quarter of 2021, an examination of the composition of uses conveys a positive portrait of the state of the economy and that the contraction is mainly a result of transitory factors. Therefore, the Committee assessed that the economy's recovery is expected to continue. GDP data were impacted significantly by the bringing forward of vehicle imports to the end of 2020 as a result of changes in tax rates, and by the shift of timing of government expenditures on public consumption.

The Research Department's assessment is that net of the effect of the decline in vehicle imports, the rate of contraction of GDP in the first quarter was only 2.9 percent. At that time, services exports data indicated a prolonged upward trend and a level that was higher than what it was before the crisis, even though tourism exports remained at a low level. It was seen that because of the prolonged consequences of the coronavirus crisis, there was a shortage in equipment and raw materials, which weighed on economic activity worldwide. In Israel, the shortage impacted during the half year on the activity of the manufacturing and construction industries. On one hand, consumer goods orders and manufacturing input imports increased, yet on the other hand, a shortage in the work force and in storage areas in ports weighed on supply chains.

Indicators available regarding activity showed that already in March, the level of activity was the highest since the beginning of the crisis, and later in the half year indicators continued to accumulate showing a trend of improvement. The marked increase in activity was also seen in industries that had a significant adverse impact from the limitations (restaurants; tourism and leisure and education activities).

Based on a real time survey by the Central Bureau of Statistics, it can be seen that the adverse impact on revenue of industries in March was the lowest since the outbreak of the crisis. In addition, total revenues in the economy's industries in April exceed the trend that had been expected just before the crisis. Despite the growth of domestic consumption of tourism services, until that time internal tourism had not fully compensated for the lack of tourism from abroad, and the hotels industry still suffered from a marked adverse impact. The level of consumption via credit cards since the end of the first quarter is in line with the long-term trend.

In May 2021, there was a military confrontation with Gaza. The Committee assessed that the negative impact on activity as a result of the deterioration in the security situation, which lasted about 10 days, had only a limited adverse impact on the economic recovery process: the length of the deterioration was relatively short, and as a result of the COVID-19 crisis large parts of the economy had gotten used to remote work and consumption. In addition, a large part of the adverse economic impact in similar past situations was in tourism export services, which this time were already low due to the coronavirus crisis.

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		4/1/21	22/2/21	19/4/21	31/5/21	5/7/21
GDP	2020:Q3	38.9	39.7	41.7	42.4	42.4
	2020:Q4			6.4	6.3	6.3
	2021:Q1				-6.5	-6.2
Business sector product	2020:Q3	44.1	45.8	48.4	49.6	49.6
	2020:Q4			8.5	8.4	8.4
	2021:Q1				-7.1	-7.2
Private consumption	2020:Q3	42.3	42.3	41.9	43.7	43.7
	2020:Q4			17.5	17.7	17.7
	2021:Q1				-3.2	-3.4
Fixed capital formation	2020:Q3	15.1	17.2	17.4	16.1	16.1
	2020:Q4			62.6	66.7	66.7
	2021:Q1				-14.2	-16.0
Exports excluding diamonds and startups	2020:Q3	41.6	43.7	51.5	47.3	47.3
	2020:Q4			-1.5	-0.6	-0.6
	2021:Q1				22.7	24.8
Civilian imports excluding ships, aircraft, and diamonds	2020:Q3	-11.6	-11.6	-10.9	-10.2	-10.2
	2020:Q4			117.6	117.8	117.8
	2021:Q1				4.9	7.2

SOURCE: Based on Central Bureau of Statistics.

Table 2

Development of GDP, imports and uses

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

	2018	**2019**	**2020**	**2019/4**	**2020/1**	**2020/2**	**2020/3**	**2020/4**	**2021/1**
GDP	3.5	3.4	-2.6	4.5	-7.1	-30.7	42.4	6.3	-6.2
Business sector product	3.7	4.0	-3.3	5.5	-8.2	-35.7	49.6	8.4	-7.2
Imports excluding defense, ships, aircraft, and diamonds	5.1	5.0	-8.0	11.7	-23.2	-36.8	-10.2	117.8	7.2
Private consumption	3.6	3.8	-9.5	9.1	-22.7	-45.1	43.7	17.7	-3.4
of which: private consumption excluding durable goods	3.5	3.7	-9.8	5.2	-18.1	-45.4	33.2	9.3	7.0
Public consumption	3.9	2.8	2.7	-2.4	-13.8	19.3	7.7	26.5	-23.0
of which: public consumption excluding defense imports	4.3	2.7	2.9	4.6	-13.2	8.9	20.2	19.7	-22.3
Gross domestic investment	2.5	3.5	-1.3	11.7	27.9	-50.7	-18.9	104.4	6.4
of which: in fixed assets	5.1	2.5	-4.8	11.6	-17.9	-33.1	16.1	66.7	-16.0
Exports excluding diamonds	6.6	5.9	-0.9	4.9	12.5	-33.5	44.2	2.8	22.9
of which: exports excluding diamonds and startups	6.0	5.5	1.3	6.5	14.3	-33.9	47.3	-0.6	24.8

SOURCE: Based on Central Bureau of Statistics.

2. The labor market

Labor market data indicate that just before the imposing of the third lockdown, the broad unemployment rate[3] had stabilized at around 13 percent, and that during that lockdown it increased to 20 percent, a lower level relative to the previous lockdowns[4] (Figure 3). It appears that the unemployment rates rose during the lockdowns primarily in those industries in which the social distancing impacted on them more, such as hospitality and food services, art, leisure, and education, and that the negative impact on employment is stronger in industries in which wages are lower. As far as the gap between GDP data, which in the beginning of the year were relatively encouraging in international comparison, and the labor market situation, the Committee noted that this suggests that most of the unemployment in Israel is focused in industries that are characterized by low labor productivity and wages. This highlighted the differential adverse impact in labor market sectors in the wake of the crisis. Against this background, the Committee members expressed concern about the ramifications of the crisis on inequality in the economy.

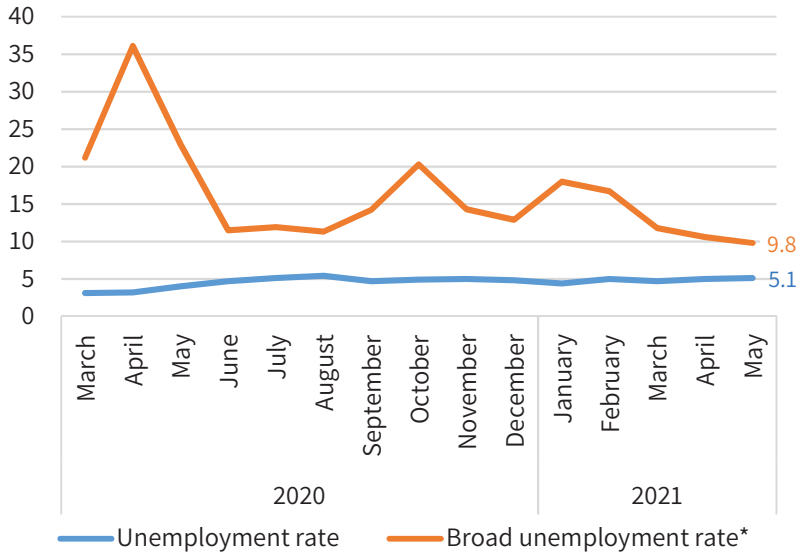
After the exit from the third lockdown, in February, the broad unemployment rate declined gradually. In March, it reached 12 percent, and in April and May, it declined to below 11 percent and 10 percent, respectively. In addition, since February, there has been an increase in the adjusted employment rate—according to which COVID-19 absentees are not considered employed—from a level of 51 percent during the third lockdown to 57 percent in May, in contrast to a level of 61 percent before the crisis in 2019. The number of employed people in May was about 300,000 lower than potential according to the trend expected just before the crisis—the smallest gap since the beginning of the crisis. Alongside this, some of the data pointed to difficulties in the labor market's recovery process: the number of job vacancies increased markedly, and employers' difficulty in hiring workers in some industries increased sharply in March and April 2021. This was against the background of the government plan in the area of employment, which provided unemployment benefits to workers who were placed on unpaid leave because of the crisis. The program was set to be valid through the end of June 2021, unless the unemployment rate—including those temporarily absent due to COVID-19—reached below 7.5 percent. In such a case, payments would have ended within 30 days. As this scenario occurred only in May, the end of the program was set for the date set in law—the end of June 2021.[5] At the beginning of July, a new framework for the plan was approved, in which the provision of unemployment benefits to workers aged 45–67 (excluding workers in the tourism field) is extended by half the number of eligibility days that they utilized from March 2020 through June 2021, at a daily rate equal to 85 percent of the amount for which they are eligible by law. The Committee's assessment was that part of the difficulties in the process of labor market recovery were transitory, a result of the rapid cancellation of coronavirus limitations.

[3] Broad unemployment includes 3 groups: those not employed (unemployment under the regular definition), employed people that are temporarily absent from the workforce the entire week due to reasons related to COVID-19 (including those on unpaid leave), and those not participating in the workforce who stopped working due to being laid off or the workplace being closed down since March 2020. The broad unemployment rate is the share of individuals included in these three groups out of total labor market participants aged 15 and older (and also out of those not participating in the labor market who stopped working due to being laid off or the workplace being closed down since March 2020).

[4] The broad unemployment rate reached 36 percent in the first lockdown and 23 percent in the second lockdown.

[5] Based on the government's decision, when the unemployment rate, including those temporarily absent, declines to below 10 percent, the unemployment allowance within the framework of unpaid leave is to be partially reduced. This rate reached 9.8 percent in the first half of March 2021. However, since some industries were still facing limitations while the rate declined below 10 percent, a dilemma was created between keeping the decision or deferring it, as this development was not known at the time of the decision—in particular, in the external tourism industry, whose activity is limited due to the government's decisions. Carrying out the decision supported the providing of incentives to work, and it sharpened the incentive problem reflected in the data—according to which there is a high level of job vacancies that are not filled because of the incentive problem in the labor supply. The unemployment rate reached 7.9 percent in April. Afterward, it declined to below 7.8 percent and was at 6.8 percent in May.

Figure 3: The Unemployment Rate
Percent, March 2020–May 2021



* See footnote 3 in the text.
SOURCE: Based on Central Bureau of Statistics.

3. The inflation environment

In the first half of 2021, there was a gradual increase in the inflation environment, led by the rise in global oil and commodity prices. The year over year rate returned to being positive after about a year of negative rates, and after the publication of the CPI for May 2021, it entered the target range.

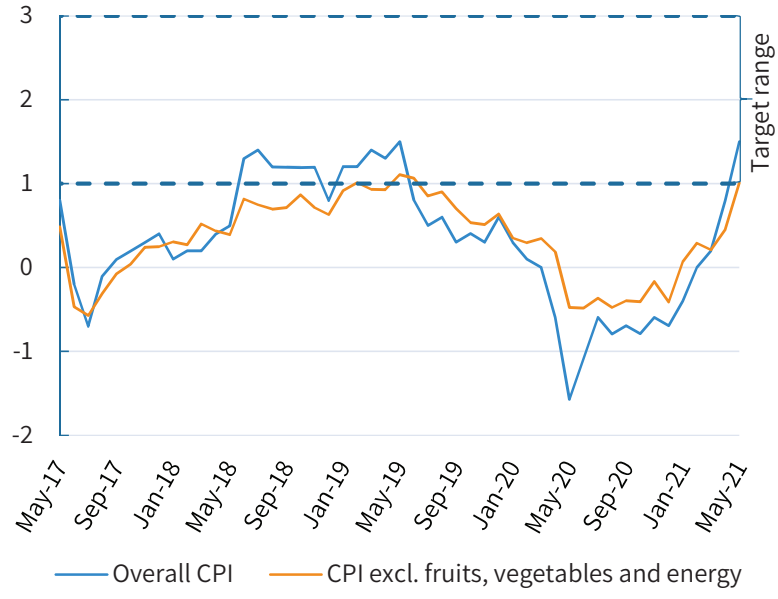
During the course of the half year reviewed, the Committee discussed the question of whether, and to what extent, the increase in prices was transitory, or if it reflected the entrenchment of inflation in a more fixed manner. The Committee members analyzed the possible causes for the increase in the inflation environment in Israel—supply problems including delays in the raw-material supply chain, difficulties in filling vacancies, and the fact that the increase in overall inflation was based mainly in the rise in prices of tradable goods and in a significant "base effect".[6] All these supported the assessment that the price rises were transitory. In contrast, one-year inflation expectations from all sources increased during the half year and were within the target beginning from April, and forward inflation expectations derived from the capital market for all the ranges were already around the midpoint of the target range beginning from May—which could have reflected market expectations of the persistence of the increase in the inflation environment for a prolonged time. In a Research Department analysis that was presented to the Monetary Committee, it was found that the recent acceleration of inflation in Israel was based mostly on global factors. Another analysis indicated that a large part of the rise in prices in the US, which led to the sharp increase in the inflation rate, was concentrated in a small number of CPI components. As such, most assessments are that the high US inflation

[6] The" base effect "refers to the rate of change in the CPI at the latest figure compared with the starting point ,which is the base .The base effect is significant when there is a marked change in the level of prices relative to a low base .We have already seen such a scenario in the time of the recovery from the coronavirus crisis—the price level corrects upward from low levels reflected in a rising rate of inflation .This is because in the coronavirus crisis period the level of prices declined sharply ,led by a decline in oil and commodity prices.

is not expected to persist. The Committee assessed that the extent to which worldwide inflation is transitory will impact on the extent to which inflation is transitory in Israel, but it was of the view that it is still difficult to answer this question. It added that the inflation rate in Israel is much lower than in the US, and that there is no concern of an outbreak of inflation.

Inflation over the past 12 months ending in May 2021 was 1.5 percent, and net of energy, fruit and vegetables it was 1.0 percent. The gap between the two indices, which reached 0.9 percent during the crisis, contracted, and by the end of March 2021 it had closed (Figure 4).

Figure 4: Development of the Overall CPI and the CPI Excluding Fruits, Vegetables, and Energy
Percent, May 2017–May 2021

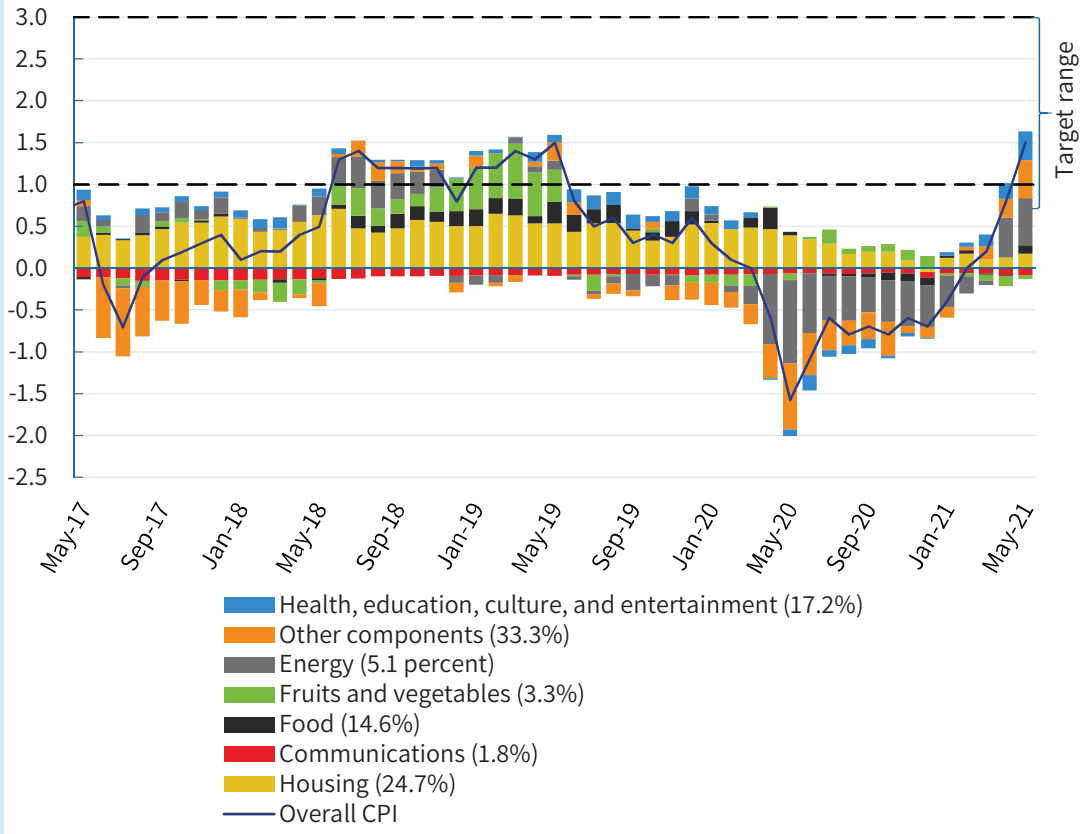


SOURCE: Central Bureau of Statistics.

The increase in the annual inflation rate is driven by the tradable component of the CPI, particularly the energy item. The negative contribution of this item to the general CPI during 2020 moderated from the beginning of 2021 and in April became positive, at 0.5 percentage points (Figure 5). This was against the background of the recovery in energy prices, which began in the second half of 2020 and continued in 2021, in parallel with an increase in commodity prices worldwide (Figure 6). The inflation rate in tradable goods, which declined sharply with the outbreak of the pandemic (-4.7 percent, at the low in May 2020), increased in the first half of 2021, and in the 12 months through May 2021 it was 2.4 percent. The inflation rate in the nontradable component returned to a pace of increase that had been seen just before the crisis, 0.8 percent, after moderating markedly during the course of 2020.

Figure 5: Contributions of the Main CPI Components to Inflation[a,b]

Percent, May 2017–May 2021



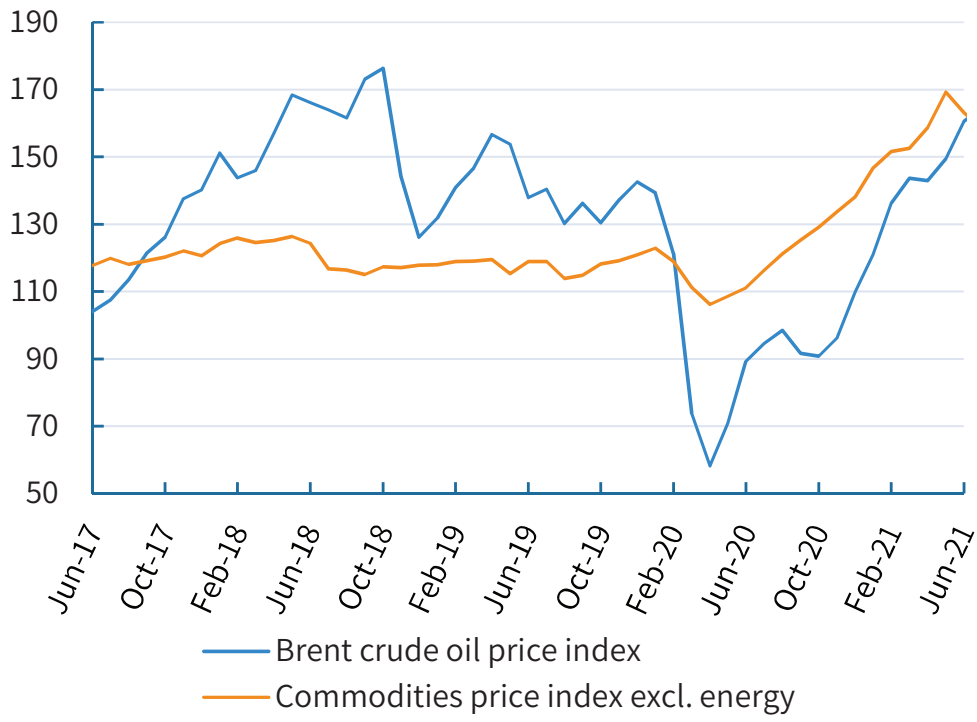
[a] The number in parentheses is the component's weight in the overall CPI (as of 2021).

[b] Other components includes furniture and household equipment, clothing and footwear, miscellaneous, and the household maintenance and transportation components minus the subcomponents relating to energy prices.

SOURCE: Based on Central Bureau of Statistics.

The Committee members referred to the various indicators of inflation expectations, which for several months have been on an upward trend, and thus reflected the expectation that inflation will return to the lower part of the target range in the coming period. The Committee members assessed that the increase in inflation expectations can be explained by the trend of increase in actual inflation, in the rapid recovery of economic activity in Israel, the improvement in the global economy as well as the increase in inflation expectations worldwide, the increase in global commodity prices, the rising prices of raw materials and of maritime transport, the accommodative monetary policy and the stabilization of the exchange rate against the background of the Bank of Israel's intervention policy.

Figure 6: Indices of Commodity and Oil Prices
Monthly average, June 2017–June 2021, Index: 2009=100

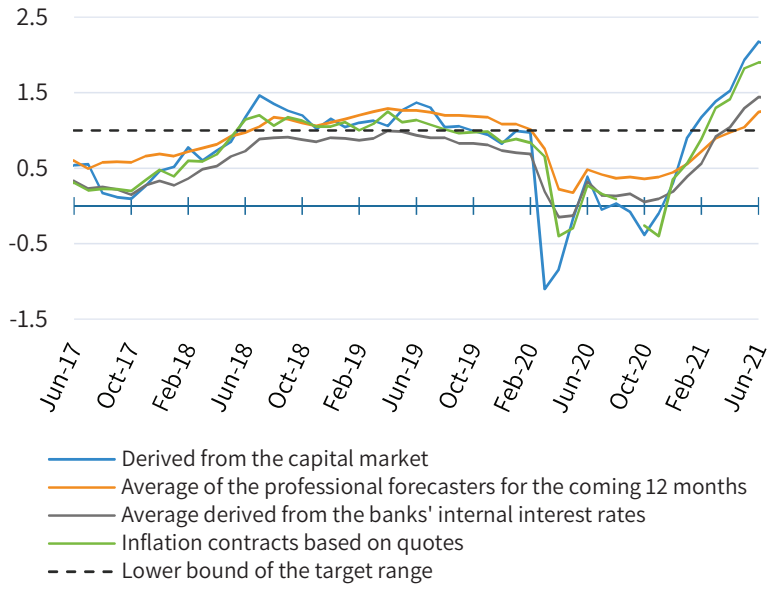


SOURCE: Bank of Israel calculations based on Bloomberg.

One-year inflation expectations from all sources increased during the course of the half year and are within the target range. Expectations derived from the capital market, which during the crisis reached negative rates and toward the end of 2020 returned to the positive range, reached the middle of the target range in May. Short-term forward expectations increased from the beginning of the half year through the middle of June by 1.3 percentage points, to a level of 2.4 percent. In the second half of June, they declined by a half of a percentage point. These expectations for medium and long terms increased by about 0.4 percentage points from the beginning of the half year though the middle of June, and remained anchored at the middle of the target range. In the second half of June, they declined slightly by about 0.2 percentage points. In addition, professional forecasters expect that the importance of wages as a factor weakening inflation declined relative to its explanatory power at the beginning of the crisis (Figures 7 ad 8).

Figure 7: One-Year Inflation Forecasts from the Various Sources[a]

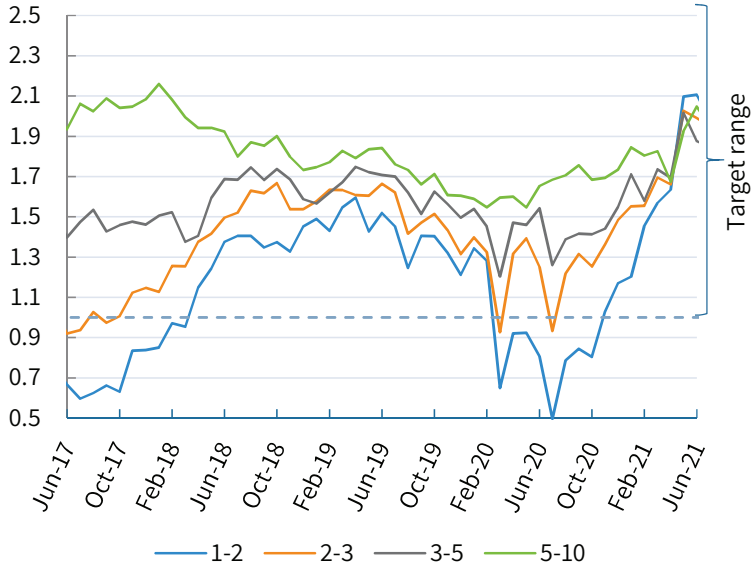
Percent, June 2017–June 2021



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

Figure 8: Forward Inflation Expectations Derived from the Capital Market[a]

Percent, June 2017–June 2021



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

4. The exchange rate

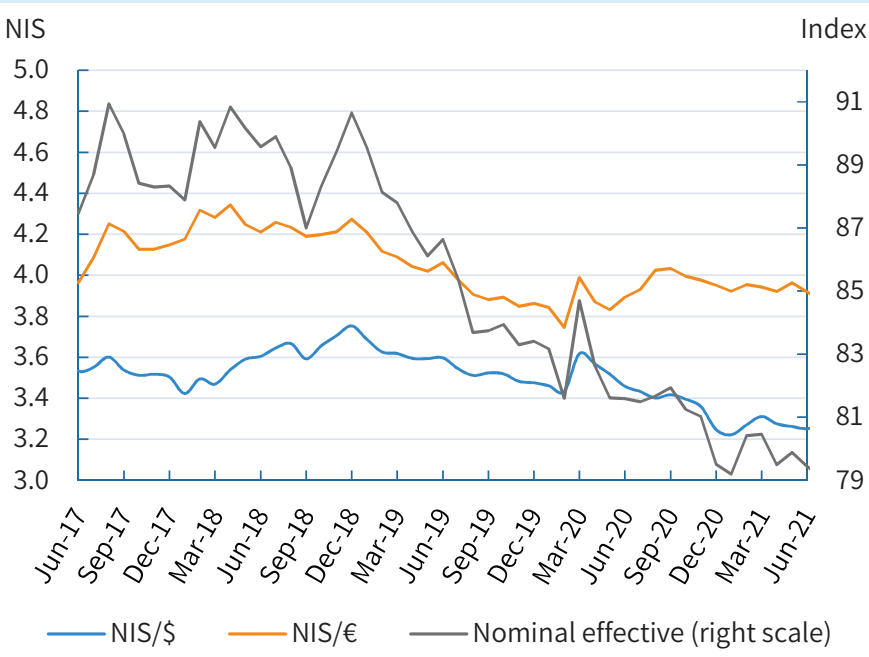
At the end of 2020 and the beginning of 2021, there was a sharp appreciation in the shekel, due to the strengthening of foreign currency flows into the Israeli economy. This was against the background of the current account surplus, direct investments in Israel, large-scale foreign currency sales by institutional investors against their investment profits in capital markets abroad, and an increase in investments by nonresident investors in Israeli government bonds, which is also an outcome of Israel being included in the WGBI global bond index.

At the beginning of the half-year reviewed, the Committee noted that exports increased despite the appreciation, but at some point there may be a nonlinear impact of the exchange rate on exports, which would lead to a severe adverse impact on it, and that would likely come at a lag. The Committee members assessed that the continued appreciation is liable to lead to the closure of exporting companies, particularly small companies. They added that continued appreciation is expected to act toward a further slowdown in inflation.

On January 14, 2021, the Monetary Committee announced a change in the Bank's policy regarding foreign exchange market activity in 2021—and declared in advance a $30 billion purchase program for that year. From that date through the beginning of February, the shekel weakened by about 6 percent against the dollar, to a level of NIS 3.3/$. The Committee noted that this trend was expected to support export performance on the exit from the crisis, and in the return of inflation to within the target range. From then through the end of the reviewed half year, the stability of the shekel was maintained, both in terms of the nominal effective exchange rate and against the dollar and euro. This was while the Bank purchased approximately $25 billion from the beginning of the half year.

In April and May, it was noted that the program would be expanded to the extent necessary in accordance with economic conditions and their development. In the beginning of July, it was clarified that the Bank of Israel is not limited to a maximum intervention of $30 billion in 2021, and that at the end of the program it would intervene in the foreign exchange market at its discretion, given the state of the economy. For the half year overall, the shekel weakened by 1.4 percent against the dollar and strengthened by 1.8 percent against the euro. The nominal effective exchange rate remained essentially unchanged (Figure 9).

Figure 9: Selected Exchange Rates
Monthly averages, June 2017–June 2021



SOURCE: Bank of Israel.

5. The global economy

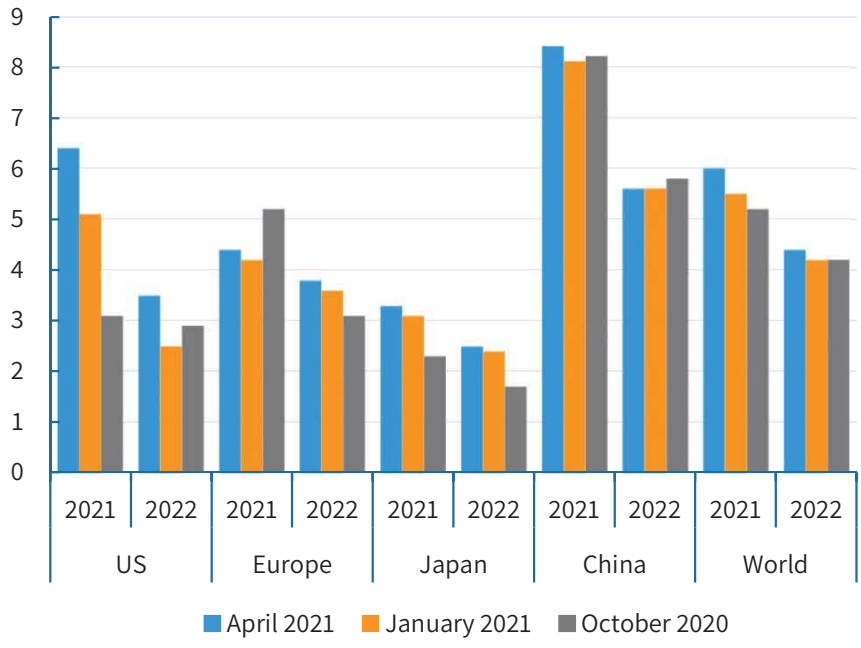
Activity data indicated continued recovery of the global economy and foreign trade in some countries during the reviewed half year, due to the acceleration of the pace of vaccinations and their efficiency. The Monetary Committee's assessment was that this is a development that will help with the continued driving forward of the Israeli economy due to its being a small and open economy that is impacted by global developments. The improvement in worldwide activity led in April to an upward revision of the IMF forecast in all major blocs, and in 2021, the global economy is expected to grow by 6 percent (Figure 10). However, the OECD expects that among the G20 countries, only in the US will GDP reach, by the end of 2021, its potential level, as forecast in 2019, and will even surpass it slightly. Global output is expected to be about 3 percent lower than the pre-crisis forecast. World trade continued to increase, and its level is higher than before the crisis. However, in some countries, the morbidity rates remain high, and the expansion of the lockdowns and limitations and difficulties in vaccination campaigns moderated the pace of exit from the crisis.

The US led the economic recovery relative to advanced economies worldwide as a result of a rapid distribution of vaccines, reduction of limitations and the launch of a fiscal plan of significant scope, alongside a planned tax reform, which if it is implemented, is expected to have global impact. The fiscal plan is expected to have a positive impact on the growth rate and on the labor market in the US, and should encourage the continued upward trend of inflation. In contrast, in Europe in the first quarter of the year there was a contraction of economic activity, but the acceleration in the pace of vaccinating the population, alongside a decline in

morbidity and expectations for the launch of a fiscal plan in the second half of the year, led to an upward revision of the growth forecast for 2021. China's economy continued to expand, though at a relatively slow pace, similar to the pace of its expansion before the crisis.

During the second quarter of 2021, the global Purchasing Managers Index increased to its highest level in more than 15 years, and the expansion of activity was reflected both in the service component and in the manufacturing component. In addition, for the first time since the outbreak of the COVID-19 crisis, the index of the services sector was higher than that of the manufacturing sector.

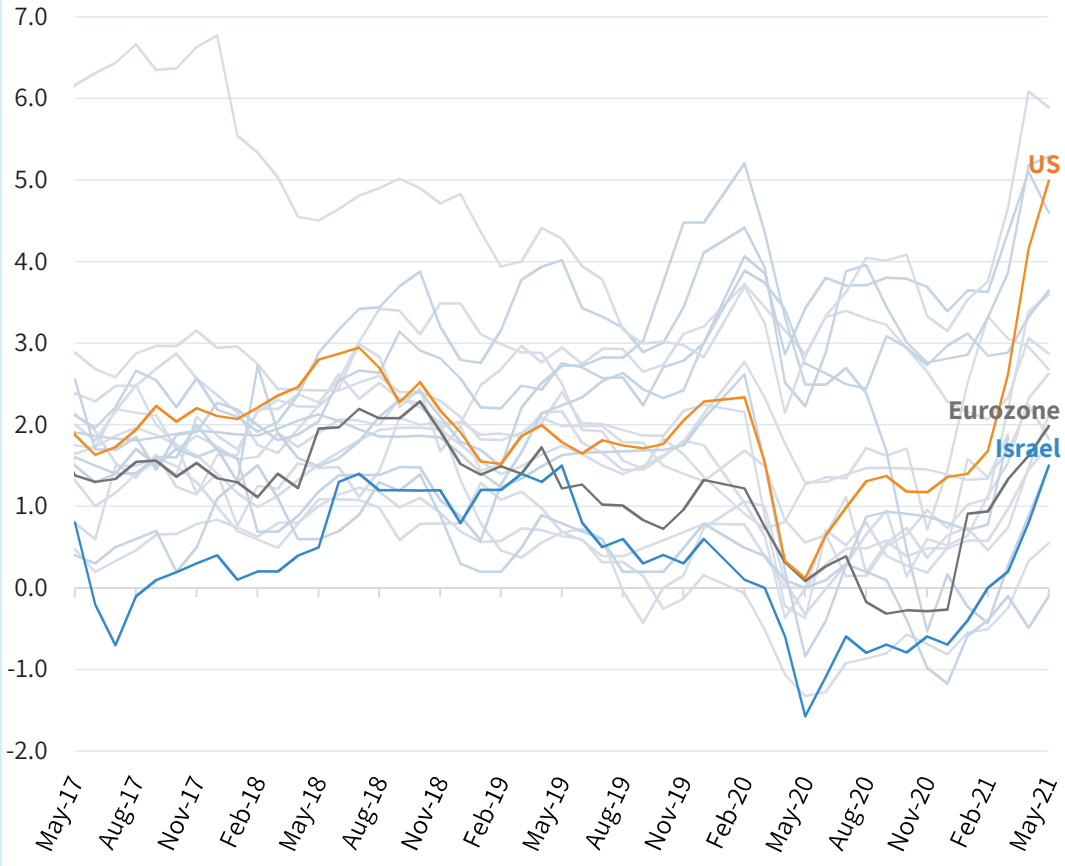
Figure 10: IMF Annual Growth Forecasts for 2021 and 2022
Percent



SOURCE: International Monetary Fund.

Inflation increased in all the major blocs, supported by a sharp increase in commodity and oil prices, against the background of supply limitations and rising demand (Figure 11). However, inflation expectations remained close to central bank targets. In the US, the year over year inflation rate increased during the half year, and in May 2021 the overall CPI increased by 5.0 percent, with the core index rising 3.8 percent. In the eurozone, the inflation rate in May reached 2.0 percent and the core index rose by 0.9 percent. Based on ECB assessments, the increase recently seen in the inflation rate is based on transitory factors, including the increase in energy prices and a significant base effect.

Figure 11: Annual Inflation in Israel and Other Countries[a]
Percent, May 2017–May 2021

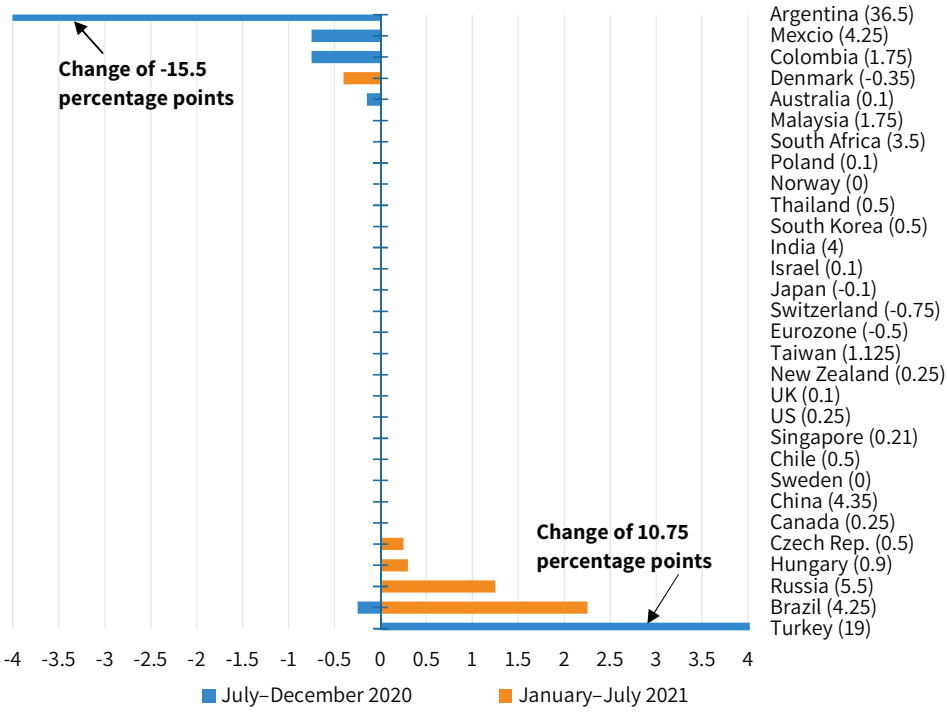


[a] Eurozone, US, Switzerland, Sweden, Denmark, Norway, Czech Republic, South Korea, Canada, UK, New Zealand, Israel, Japan, Chile, Poland, Hungary, Australia, Mexico, and China.
SOURCE: Statistics agencies of the various countries.

Equity markets were characterized by high volatility during the half year, against the background of the increase in morbidity and the imposing of limitations on activity in some economies. This was alongside progress in the vaccination process and approval of the fiscal incentive program in the US. Major equity indices reached record high levels. The Committee members claimed that the pricing of some financial assets may not necessarily reflect all risks.

The very accommodative monetary policy, which in 2020 characterized most major central banks worldwide, was maintained in the first half of 2021 as well. This was despite the signs of acceleration in some indicators as presented above. The central banks continued to signal their readiness to adopt additional unconventional steps to ease financial conditions. In contrast, in some markets, mainly developing ones, in which inflationary pressures were seen, there were interest rate increases (Figure 12).

Figure 12: Change in Central Bank Interest Rates, Israel and Other Countries[a]
Percentage points, December 2020–July 2021



[a] The number in parentheses is the central bank interest rate on July 1, 2021.
SOURCE: Central banks of the various countries.

The US Federal Reserve—the central bank of the US—kept the interest rate at a level of 0–0.25 percent during the period reviewed, and kept in place the purchase program of $120 billion per month as well as various programs to support markets and the economy. In addition, the Fed announced in the beginning of June that it would gradually sell its holdings in corporate bonds on the secondary market. Alongside this, the Fed adjusted the overnight interest rate in reverse repo transactions as well as the interest rate it pays on required excess reserve balances, raising it by 5 basis points. In addition, they noted that it would be appropriate to consider a plan for reducing purchases at a future meeting. The ECB—the European central bank—kept the interest rate at -0.5 percent and also left untouched the scope of PEPP[7]—its purchase plan for dealing with the coronavirus crisis. The Bank of Canada kept the interest rate unchanged at 0.25 percent, but announced in April a contraction of the scope of the maximum weekly purchases from CAD 4 billion to CAD 3 billion. The Bank of Japan—that country's' central bank—kept the interest rate unchanged at -0.1 percent, and continued to maintain the 10-year yield around 0 percent. In addition, the Bank of Japan continued to operate the plan to purchase ETFs and REITs up to a maximum amount of 12 trillion yen and 180 billion yen, respectively. It also kept its corporate bond purchases at up to 20 trillion yen, through September 2021. The Bank of England kept the interest rate unchanged at a level of 0.1 percent and the government bond purchase program at a scope of £895 billion, while announcing the reduction of the scope of weekly purchases in May, and also kept unchanged the program of purchasing corporate bonds at a scope of £20 billion.

[7] Pandemic Emergency Purchase Programme.

6. The credit market

At the beginning of the half year reviewed, the Committee members noted that the financial system functioned adequately at that time, and that the various indicators did not point to a severe credit distress. However, they noted that the small business sector was facing much greater difficulty in raising credit.

From the beginning of the half year reviewed through the end of April 2021, bank credit balances to large and medium-sized companies increased, and the pace accelerated. About half the increase was recorded in March, and there was a slight decrease in May. In the small and micro business sector, credit balances increased slightly through the end of April, and the pace increased in May. The credit market continued to function with low and stable interest rates, supported by a range of steps taken by the Bank of Israel and the Ministry of Finance. According to the Business Tendency Survey conducted by the Central Bureau of Statistics, the average level of difficulty in obtaining credit declined in February and March to levels seen before the crisis in all industries except the hotels industry (Figure 13). In that industry there was in fact a sharp decline during March, but there are still reports of relatively high levels of difficulty in obtaining credit. In March–April, small companies reported an increase in average difficulty of obtaining bank credit, but in May, an improvement was reported, with a decline in the level of difficulty to that of 2019. Large companies reported continued decline in the difficulty of receiving bank credit. In raising nonbank financing, there was stability in the average difficulty reported among all sizes of companies. Bank credit for housing continued to increase alongside a decline in interest rates in CPI-indexed tracks. Consumer nonhousing credit balances remained stable, as did interest rates.

Figure 13: Constraints on Businesses in Obtaining Bank Credit[a]
Percent, May 2017–May 2021

[a] Out of survey participants. The numbers on the axis indicate the rate of business owners who reported a serious constraint in obtaining bank credit.
SOURCE: Based on Central Bureau of Statistics.

Government guaranteed funds

In the half year reviewed, the activity of the government guaranteed funds continued on the three designated tracks (by business type as delineated by the Ministry of Finance). Their activity began in March 2020, with the goal of extending loans to small and medium sized businesses in order to deal with the effects of the coronavirus pandemic on companies in the economy. From the beginning of the reviewed half year through the middle of June 2021, about 15,000 new requests were submitted on the tracks designated for small and medium sized businesses on the regular and the heightened-risk tracks; more than 60 percent of them were submitted by the end of February, when limitations on activity were in place against the background of the third lockdown.

The scope of the track designated for small businesses is NIS 36 billion. Through June 15, 2021, 114,083 requests were submitted to the fund, of which 64,272 (56 percent) were approved, at a scope of NIS 21.7 billion. The utilization rate of the overall fund is about 60 percent. The track designated for small and medium sized businesses at heightened risk has a scope of NIS 4 billion. The fund provides guarantees at a high rate of 60 percent, and is intended to help businesses for which credit at the general track terms has not been granted, or for which the credit they received was insufficient for their needs. By June 15, 2021, 6,659 requests were submitted to the fund, of which 5,321 (about 80 percent) were approved. The financial scope of the requests approved is NIS 2.6 billion.

In the fund for large companies, which was established for industries that due to the crisis endured cash flow difficulties, and that has a scope of NIS 6 billion, by June 15, 2021, 76 requests were submitted, of which 44 (58 percent) were approved, with a value of about NIS 1.7 billion. In recent months, there were no notable changes in the fund's activity.

The special plan for expanding the supply of bank credit to small and micro businesses

Within the framework of the program of monetary loans provided by the Bank of Israel to the banking system for the extending of credit to small businesses, by the end of June 2021 NIS 37.2 billion were allocated. Of the total amount, part was extended within the framework of the first tier, in which banks are granted loans at 0.1 percent interest for a term of 3 years. The remaining amount was allocated via the second tier, which was announced on October 22, 2020, and that was in operation until its planned termination at the end of June 2021. Within the framework of that tier, banks were provided with loans for a 4-year term at a fixed -0.1 interest rate, subject to the interest rate on the loans to small and medium sized businesses not exceeding Prime + 1.3 percent.[8] In July, the Monetary Committee announced that the first tier of the plan will be in effect until October 1, 2021 or when NIS 40 billion are utilized.

At the end of 2020, banks began to put up mortgage portfolios to the Bank of Israel as collateral against loans, in addition to highly liquid assets such as government bonds; this was after the completion of creating the legal and operational infrastructure that was decided on in July 2020, with the aim of granting credit to small and micro businesses. The use of this tool, which to date has been operated mainly by the central banks of the US, England, and other European countries, enhances banks' incentive to extend credit to businesses at relatively low cost and without eroding the liquidity ratios. In addition, it enables the Bank of Israel to support the rapid flow of credit to the economy if and to the extent such need arises.

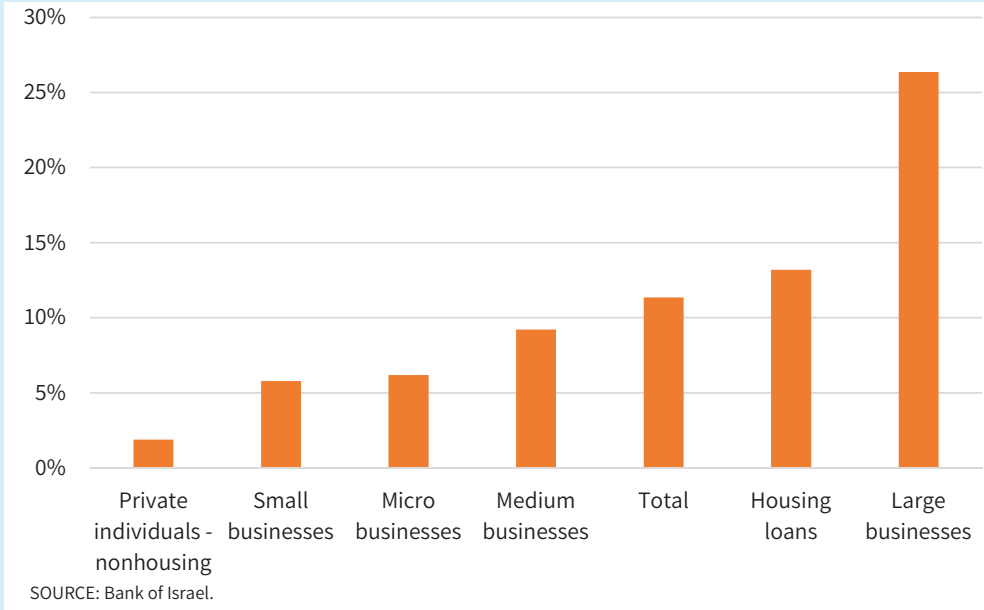
[8] For an expanded discussion, see the section on "Monetary Policy" in this report.

Deferral of loan repayments

From the beginning of the COVID-19 crisis, loan repayments have been deferred for hundreds of thousands of customers in all activity segments. The bank credit balances for which payments were deferred within the framework of the outlines for deferring loan payments, which was initiated by the Banking Supervision Department and that was adopted by the banking system, totaled about NIS 180 billion by the end of May 2021. The outline makes it possible to defer payments in three activity segments—mortgages, consumer credit, and business credit (Figure 14).[9]

Figure 14: Balance of Loans Still Under Deferral as a Share of Total Loans Deferred Since the Start of the Program

May 2021



SOURCE: Bank of Israel.

7. Financial market developments

From the beginning of the coronavirus crisis, and during the course of the half year reviewed, many central banks, including the Bank of Israel, continued to operate a variety of asset purchase programs. In Israel, the nominal government bond yield curve steepened slightly in the first quarter of this year, and the process renewed in May after stabilization in April, and continued until the first half of June. This was against the background of the decline in short-term yields on the nominal (unindexed) curve during the third lockdown, followed by increases for all ranges with the exit from the lockdown. This increase in yields is low compared with the parallel increase in the US and is similar to that in European countries. In the second half of June, there was a slight decline in nominal bond yields on the government bond yield curve for all terms, as well as a slight decline in the slope of the curve.

In the domestic capital market, there was a positive trend (Table 3). The Tel Aviv 125 Index increased by about 13 percent from the beginning of the year, similar to the rates of increase in the US and European markets, and it surpassed its level of just before the crisis, led by real estate and construction, as well as

[9] For an expanded discussion ,see the section on" Monetary Policy "in this report.

financial companies. The first months of the year were characterized by a wave of equity offerings, and from the beginning of the year through the end of May, the monthly average was NIS 1.9 billion. This was in contrast to monthly averages of about NIS 0.8 billion in 2020 and NIS 0.3 billion in 2019. The Monetary Committee continued to follow equity market developments during the half year, with regard to maintaining financial stability. The Committee noted that to date, capital market developments reflect investors' confidence in the Israeli economy despite the budget uncertainty.

Table 3

Developments in the Domestic Asset Markets

	01/21	02/21	03/21	04/21	05/21	06/21
Yield to maturity (monthly averages, percent)						
3-month *makam*	-0.1	0.0	-0.1	0.0	0.0	0.0
1-year *makam*	0.0	0.0	0.0	0.0	0.0	0.0
Unindexed 5-year notes	0.3	0.4	0.5	0.5	0.6	0.6
Unindexed 10-year notes	0.9	1.1	1.3	1.2	1.3	1.4
Unindexed 20-year bonds	1.8	1.9	2.1	2.1	2.3	2.3
CPI-indexed 1-year notes	-0.9	-1.1	-1.3	-1.5	-1.9	-2.1
CPI-indexed 5-year notes	-1.1	-1.1	-1.1	-1.1	-1.4	-1.4
CPI-indexed 10-year notes	-0.7	-0.5	-0.4	-0.4	-0.6	-0.6
Yield spread between government bonds and corporate bonds rated AA (percentage points)[a]	1.3	1.3	1.3	1.2	1.2	1.2
Stock market (rate of change during the month)						
General shares index	3.7	-2.1	3.6	4.1	3.3	-0.7
Tel Aviv 35 Index	5.0	-1.9	3.9	2.3	3.4	-0.8
Foreign exchange market (rate of change during the month)						
NIS/$	2.4	-0.3	1.6	-2.6	0.2	0.2
NIS/€	1.1	0.6	-2.5	0.4	1.1	-2.4
Nominal effective exchange rate	2.0	0.3	-1.0	-1.1	0.8	-1.0

[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.

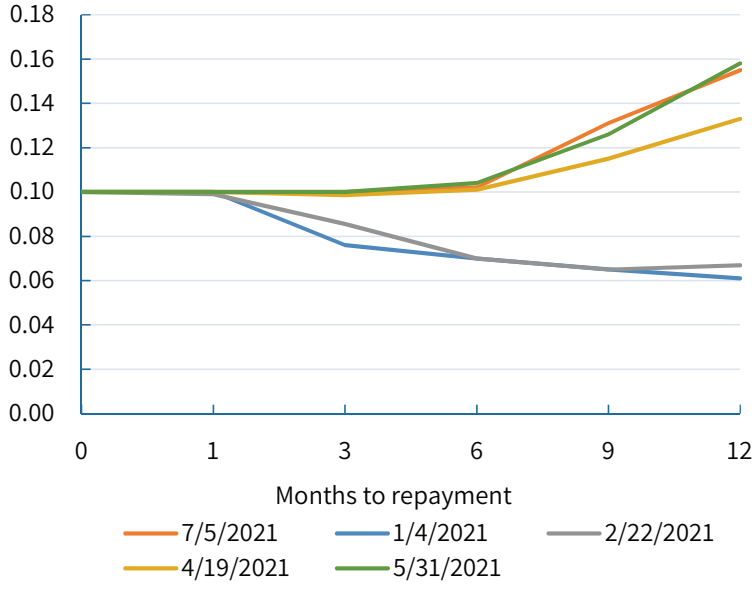
SOURCE: Bank of Israel calculations.

In the corporate bond market, spreads continued to decline, and their level is historically low in all industries. In this market, strong activity from the beginning of 2021 continues, and in most industries, the scope of average monthly issuances was similar to the average of previous years. Issuances are mainly concentrated in high ratings and in the construction and real estate industry.

Assessments based on the Telbor market regarding interest rate expectations changed during the course of the half year reviewed, and beginning in March, they reflected a probability of a Bank of Israel interest rate increase to 0.25 percent in the coming year. This was in contrast to assessments during the third lockdown, at the beginning of the half year, which ascribed some probability of an interest rate reduction in 2021. Beginning from May 2021, the probability of a Bank of Israel rate increase reached about 40 percent. Alongside this, the average of professional forecasters' assessments regarding the interest rate reflected, in June, a probability of about 14 percent of an interest rate increase in another year (Figure 15).

Figure 15: Forward Yield Curve According to Telbor Data on Interest Rate Decision Dates

Percent, January 2021–May 2021



SOURCE: Bank of Israel.

8. Fiscal policy

The fiscal deficit increased sharply in 2020 against the background of the spread of the coronavirus, due to the limitations imposed on mobility and on activity and the fiscal steps taken by the government. However, in recent months tax revenues increased. In accordance with the Research Department's forecast from July 2021, the deficit at the end of 2021 is expected to be about 7.1 percent of GDP, compared with 12 percent in 2020. In discussions on fiscal policy throughout the half year, Committee members expressed concern about the economy operating without an orderly state budget for 2021, and the reliance on an interim budget that was approved in 2018.

In view of the dispersal of the Knesset without approving a budget for 2021, and in order to prevent broad cuts in government activity, the government increased the budget base for 2020 so that the interim budget for 2021 will be less restrictive as may have been expected before the change. The framework for this budget is about NIS 420 billion. This budget is lower than the "regular" budget under the statutory ceiling, which is NIS 426 billion. In addition, additional specific spending budgets were approved for 2021, as was done for 2020 as well, in respect of the various aid programs for dealing with the coronavirus crisis. As the performance of the government assistance plan in 2020 was NIS 106 billion, in 2021 a plan totaling NIS 97 billion was approved, and its utilization rate through the end of May 2021 was about 45 percent.

The general government deficit (excluding the providing of credit) in the 12 months through May 2021 was NIS 149 billion, about 10.5 percent of GDP. The cumulative domestic deficit since the beginning of the year is about NIS 11 billion lower than the domestic deficit in the corresponding period of the previous year, and reflects acceleration in tax revenues alongside stabilization in domestic expenditure. Both expenditures

and income are higher than that of 2019, but the cumulative domestic deficit is higher by about NIS 21 billion than the corresponding figure for 2019 due to the larger positive gap in expenditure level. Through the end of May, coronavirus payments and contracts totaling NIS 43 billion were made.[10] Since August 2020, tax revenues returned to the pre-crisis level, and since October, there was even an acceleration relative to the long term trend of before the crisis.

9. The housing market

During the reviewed half year, the Committee discussed price increases in the housing market, against the background of the removal of the limitations on investors and the cessation of new building plans at government initiative. The accelerating trend of increase began toward the end of 2020 and continued in the beginning of 2021. The Committee expressed concern over the possible ramifications on income distribution and inequality in the economy if the trend of accelerated increase in home prices renews.

Home prices, as reflected in the Home Prices Index, increased through March-April 2021 by an annual rate of 5.6 percent (Figure 16), more than the average for 2020, which was 3 percent. This was with an increase in the number of purchase transactions and against the background of moderation in construction rates, both of building starts and building completions. In addition, the prices of construction inputs increased.

In the first half of 2021, the pace of increase of rent prices remained at a moderate level[11], following the marked moderation during 2020. The Owner Occupied Housing Services Index increased during the half year by an average annual pace of 1.2 percent, an identical rate to the average of the previous quarter.

Mortgage volume in May 2021 was about NIS 9.5 billion, markedly higher than the monthly average of new mortgages granted in the previous 12 months (NIS 7.3 billion). Likewise, seasonally adjusted mortgage volume reached NIS 9.2 billion (Figure 17). This was further to the mortgage volume from the beginning of the year and against the background of the entry into force of the Bank of Israel directive regarding the cancelation of limitations on the prime interest rate component to new borrowers and to those refinancing a mortgage loan.[12] In January 2021, the Monetary Committee assessed that the Banking Supervision Department's directive regarding the cancellation of the limitation on the prime rate component in the mortgage composition was expected to reduce the effective interest rate on the loans.

The percentage of new loans at prime rate increased from December 2020 through May 2021 by 5.8 percentage points (from 34.8 percent to 40.6 percent). The average LTV ratio (estimated) went back to increasing in February–May, from 54.2 percent to a level of 55.2 percent, after having declined in the three previous months (November 2020–February 2021). The weighted real interest rate on mortgages declined slightly in February 2021, remained stable through April, and declined again in May.

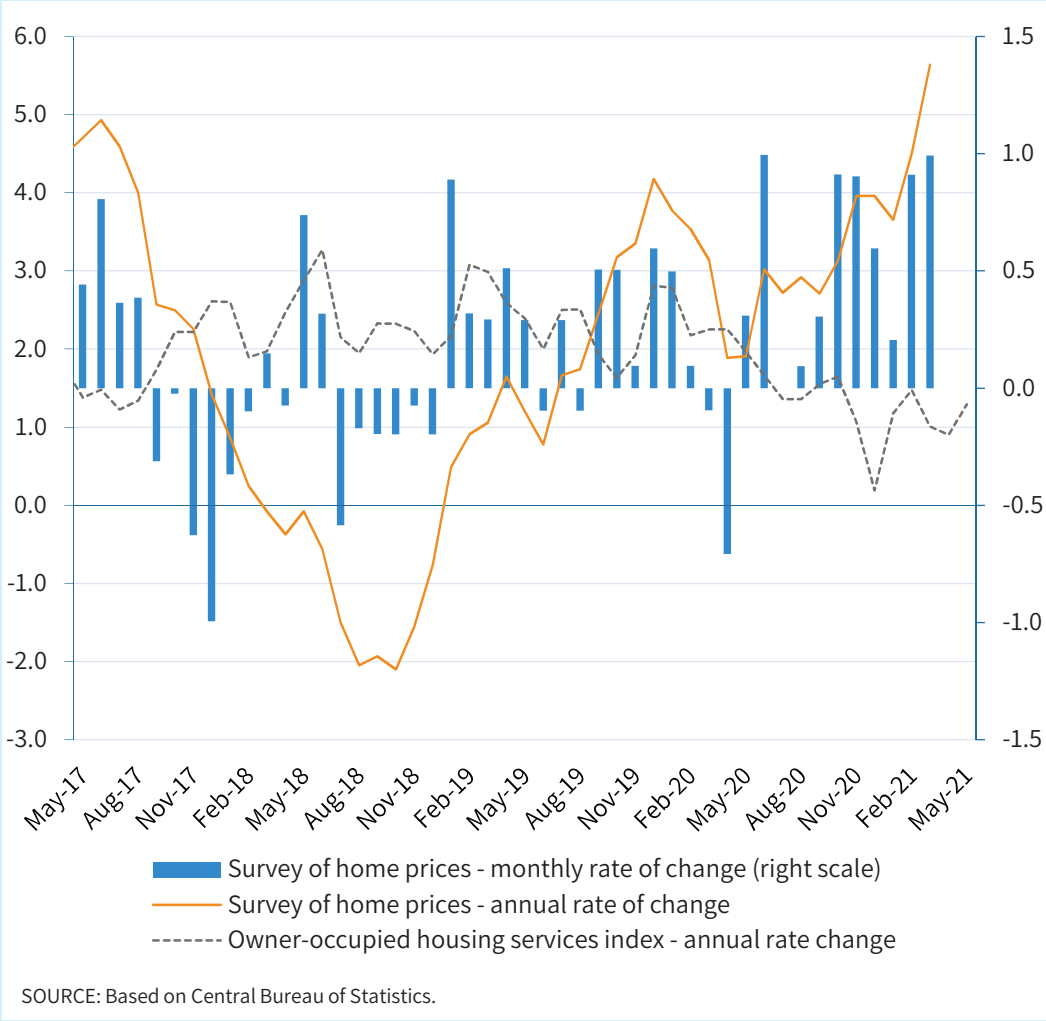
[10] The budget for special coronavirus programs by law is NIS 68 billion: NIS 52 billion in the original budget and additional surpluses totaling NIS 16 billion surplus from 2020.

[11] The cost of rent reflects the Owner Occupied Housing Services Index

[12] Cancelling the limitation on the share of the loan at the Prime rate for new borrowers went into effect on January 17, 2021, and for refinancing an existing housing loan on February 28. All that remained was the limitation on variable rate interest, according to which the total share of the housing loans at a variable interest rate, of any type, will be limited to two-thirds of the total loan.

Figure 16: Survey of Home Prices and Index of Owner-Occupied Housing Services (Rents)

Percent, May 2017–May 2021



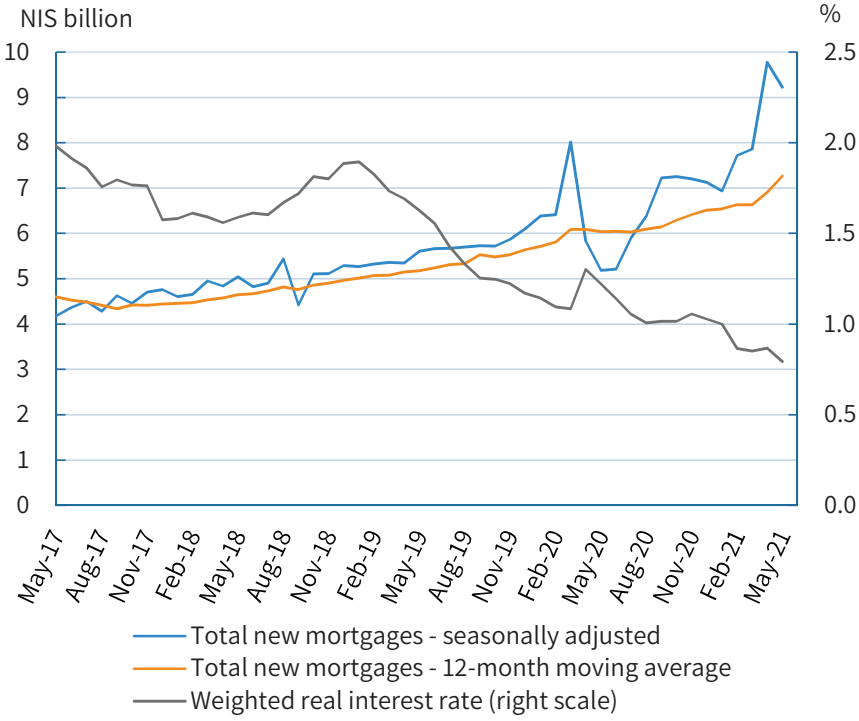
SOURCE: Based on Central Bureau of Statistics.

The Research Department's macroeconomic forecast and the expected paths of inflation and growth

1. The Research Department's macroeconomic forecast

The Research Department published three forecasts during the period reviewed, together with the interest rate announcements—in January, April, and July 2021. In April 2021, the Department returned to presenting a single macroeconomic forecast against the background of progress in the vaccination campaign and the decline in morbidity. At the beginning of the crisis, the forecast included two scenarios—one assumed continued improvement in the morbidity situation and a second one assumed another deterioration in it. In January 2021, the two scenarios began to refer to the pace of progress in the vaccination campaign: the "rapid vaccination scenario" assumed rapid vaccination of the population through May 2021, and the "slow vaccination scenario" assumed that the vaccination process would last until June 2022.

Figure 17: Total New Mortgages, and Real Weighted Interest Rate on Mortgages
May 2017–May 2021



SOURCE: Banking Supervision Department.

According to the July forecast, GDP will grow in 2021 by 5.5 percent, a rate more moderate than what was forecast in the April forecast (6.3 percent). The broad unemployment rate is expected to decline, according to the July forecast, to 8 percent of the labor force at the end of 2021 (7.5 percent in the April forecast). In 2022, growth of 6 percent is expected (5 percent according to the April forecast) so that the level of GDP at the end of 2022 is expected to be only 0.5 percent lower than the level that had been expected before the crisis. The unemployment rate in 2022 is expected to continue to decline and to reach about 5.5 percent in the final quarter—still above its pre-crisis level, which was 3.8 percent. Assuming that the State budget is passed as planned and that the fiscal adjustment is deferred to 2023 and onward, the debt to GDP ratio in those 2 years is expected to be 74 percent (77 percent according to the April forecast).

Inflation during the course of the next 4 quarters (ending in the second quarter of 2022) is expected to be 1.0 percent, and the rate is expected to be 1.7 percent in 2021 and 1.2 percent in 2022.

2. The expected paths of inflation and growth

In the beginning of June, the economy returned to nearly full routine, and in the Committee's assessment, this development will support continued rapid growth in the coming year. However, the Committee discussed the risks that remained despite the recovery of economic activity, and in this regard, the concern of the development of mutations of COVID-19 that are resistant to vaccines, or that will lead to severe morbidity among

the unvaccinated population. The spread of the Delta variant at the end of the half year reviewed constitutes some risk factor to continued recovery of the economy to the extent that the government will have to impose additional restrictions. In accordance with the Research Department's forecast, the Committee assessed that GDP would grow at a pace of 5.5 percent in 2021.

The Committee members agreed that despite the improvement in the labor market, which they expect will continue, even if at a relatively moderate pace, and that is reflected in a decline of the broad unemployment

Table 4
Research Department Forecasts
(rate of change in percent, unless otherwise noted)

Forecast for the years	2021				2022			
Date of forecast	01/21		04/21	07/21	01/21		04/21	07/21
Scenario	Rapid vaccination	Slow vaccination			Rapid vaccination	Slow vaccination		
GDP	6.3	3.5	6.3	5.5	5.8	6.0	5.0	6.0
Private consumption	12.5	7.5	11.0	10.5	8.0	10.5	7.0	8.0
Fixed capital formation (excluding ships and aircraft)	3.5	-1.5	5.5	5.0	8.5	7.5	4.5	5.5
Public consumption (excluding defense imports)	6.5	6.5	4.0	4.0	-1.0	-1.0	2.5	2.5
Exports (excl. diamonds and startups)	3.0	2.0	4.0	6.0	4.5	4.5	4.0	4.0
Civilian imports (excl. diamonds, ships, and aircraft)	11.0	6.5	11.0	15.0	7.5	10.5	6.0	4.5
Broad unemployment rate (ages 15+, annual average)	9.6	12.5	9.9	10.8	6.2	8.5	6.6	6.4
Broad unemployment rate (ages 15+, year-end)	7.7	11.0	7.5	8.0	5.4	7.0	6.0	5.5
Government deficit (percent of GDP)	8.0	11.0	8.2	7.1	3.6–4	6.0	3.6	3.8
Inflation[a]			1.3	1.7			1.2	1.2
Date of forecast	01/21		04/21	07/21				
Scenario	Rapid vaccination	Slow vaccination						
Inflation in the coming year[b]	0.6	0.1	1.1	1.0				
Interest rate one year from now[c]	0-0.1	0-0.1	0.1	0.1				

[a] Average CPI inflation in the last quarter of the year compared with the average in the last quarter of the previous year.
[b] In the four quarters ending in the same quarter the following year.
[c] In the same quarter the following year.
SOURCE: Bank of Israel.

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ate and an increase in the adjusted employment rate—the return of the unemployment rate to the low levels of before the crisis is expected to take a prolonged time. This was against the background of frictions that remained in the labor market as a result of the closure of some businesses throughout the year, government policy, and processes of increasing efficiency and of digitization that businesses experienced in the past year. The Committee members referred to the importance of implementing professional training for population groups that were particularly adversely impacted by the crisis. The Committee assessed that in accordance with the Research Department's forecast, the unemployment rate is expected to reach 5.5 percent at the end of 2022.

With regard to inflation, the Committee members analyzed the possible reasons for an increase in the inflation environment in Israel. The Committee's assessment was that it is still difficult to determine how transitory the increase in the inflation environment is, and that there is a need to continue following further developments. The Committee assessed that it is not plausible that there will be an outbreak of inflation and that in accordance with the Research Department's forecast, the inflation rate is expected to reach 1.7 percent at the end of 2021.

Box: Transformations in the labor market following the COVID-19 crisis

- The Beveridge curve plots the job vacancy rate against the unemployment rate. During periods of economic expansion, the economy moves up the curve: the job vacancy rate rises and the unemployment rate falls, and vice versa during a recession. A movement in the same direction of job vacancies and unemployment may indicate a shift in the curve. An increase in both variables (an outward shift of the curve) may indicate a structural change, one that leads to increased friction in the labor market and as a result slows the process of job search and hiring.
- The data for the labor market during the COVID-19 crisis indicate a shift of the Beveridge curve—an increase in both the rates of unemployment and of job vacancies. Furthermore, an analysis of the characteristics of the newly unemployed due to the COVID-19 crisis shows a sharp increase in the number of unemployed people with a relatively low probability of finding a job.
- These findings raise the concern that the high unemployment rate will persist even after the economy recovers, (a phenomenon known as a jobless recovery), due to the mismatch between the type of job vacancies and the skills of the unemployed. However, if the outward shift in the Beveridge curve is due to the negative incentive to return to work as a result of paid leave benefits, the current high unemployment rate may just be a temporary phenomenon
- An examination by industry indicates that in the accommodation and food services industries, the increase in unemployment is primarily due to temporary factors, whereas in the information and communication technology industries we may be witnessing a jobless recovery.

1. Introduction

The unique character of the COVID-19 crisis may result in a structural change in the labor market, manifested in a higher natural rate of unemployment, the rate of unemployment adjusted for movements in the business cycle.

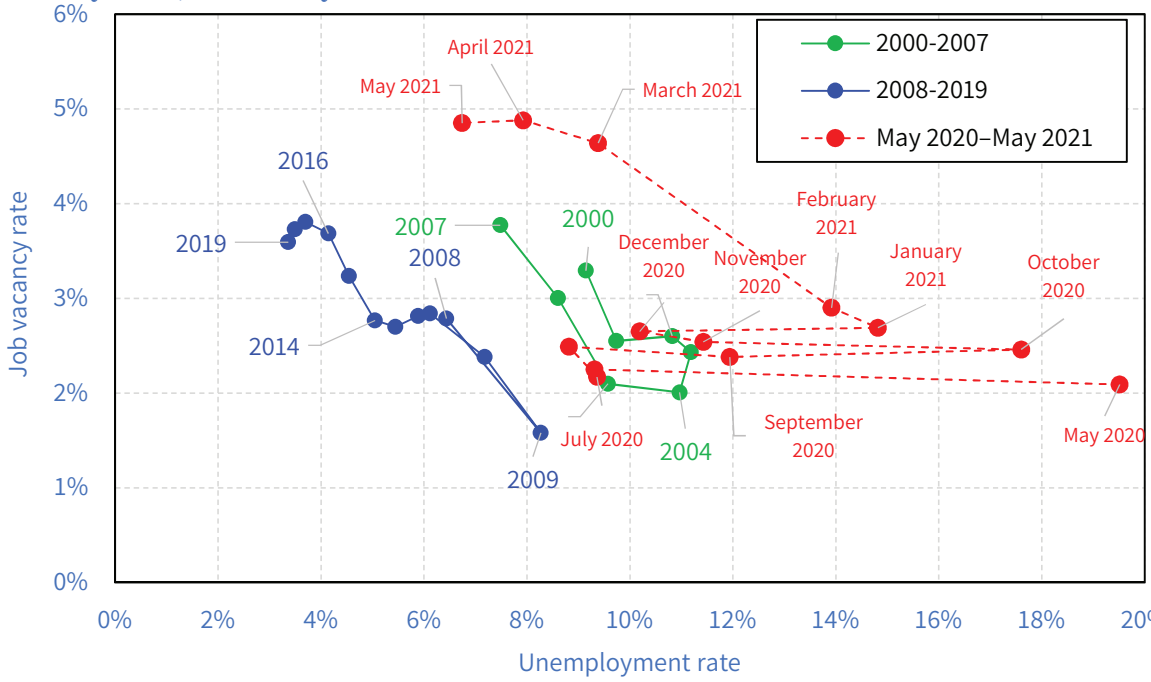
An examination of recent trends in Israel in the unemployment rate and the job vacancy rate (the Beveridge curve) points to an outward shift in the curve. In particular, endpoint data (for May 2021) show a sharp rise in both the unemployment rate and the job vacancy rate (out of total jobs) relative to their pre-crisis levels in 2019 (Figure 1). This phenomenon is likely to represent a mismatch between the features of the job vacancies and the skills of the jobseekers, particularly if the crisis has encouraged firms to increase efficiency and adopt new technologies. However, it may be that a shift of the curve also represents short-term effects that are a result of the disincentive to return to work, due to paid leave benefits and the time required to recruit workers. In the first case, the shift of the curve reflects a structural change, in which the recovery of the economy is accompanied by a relatively high rate of unemployment and a slow process of decline in unemployment (a jobless recovery).[1] In

1 This phenomenon was observed in the US and other countries as a result of the 2008–09 financial crisis, and there is an extensive literature that discusses the question of why the recovery following the crisis did not lead to a corresponding decline in the unemployment rate. Branichon and Figura (2015) and Hall and Schulhofer-Wohl (2018) show that this was the result of the decline in the suitability of the unemployed to the vacant jobs. Jaimovich and Siu (2020) link this phenomenon to the acceleration of automation.

the second case, the phenomenon is temporary and is expected to dissipate when the eligibility for paid leave benefits expires and with the recovery of the economy.

This box attempts to estimate the contribution of each of these channels to the shift of the Beveridge curve in Israel as a result of the COVID-19 crisis. To this end, we look at whether and in what way the characteristics of the unemployed changed during the crisis relative to the preceding two years. This examination makes it possible to estimate the probability of the newly unemployed integrating in the labor market, and in turn the degree of unemployment persistence following the exit from the crisis. In addition, we look at the trends in job vacancies, unemployment, employment and revenue in two industries that can be viewed as opposite case studies for the crisis period: information and communication technologies and accommodation and food services.[2] We also examined the characteristics of the unemployed as the economy recovers relative to the period prior to the crisis. We will mention that only after time has passed will it be possible to identify structural changes in the data; therefore, the tests presented here attempt only to provide an early indication of the possibility of an increase in the natural rate of unemployment due to a jobless recovery. Before presenting the analysis of the data for the COVID-19 crisis, we provide some background on the Beveridge curve and its trend in Israel.

Figure 1
Beveridge Curve: The Unemployment Rate* Among Those Aged 25–64, and the Job Vacancy Rate, 2000–May 2021



* Beginning in 2020, the unemployment rate includes furloughed employees.
SOURCE: Based on Central Bureau of Statistics.

2 We focus on these two industries because data constraints (an insufficient number of respondents in the Labor Force Survey) forced us to omit a large number of industries from the analysis.

2. The Beveridge curve—background

The Beveridge curve plots the unemployment rate against the job vacancy rate over the business cycle. The unemployment rate measures the proportion of workers who are searching for a job, while the job vacancy rate measures the proportion of jobs that need to be filled. Over the course of a business cycle, the unemployment rate and the job vacancy rate move in opposite directions. During periods of economic expansion, the demand for workers increases and with it the job vacancy rate, whereas the filling of job vacancies leads to a drop in the rate of unemployment; and vice versa during recessions. The cyclical movement in the unemployment rate and the job vacancy rate corresponds to movement along the Beveridge curve.[3]

The simultaneous existence of unemployment and job vacancies is a manifestation of the structural frictions in the labor market. They can be the result of inefficiency in the job search process and the filling of jobs, and the mismatch between the nature of the job offers and the characteristics of the unemployed. A structural change that improves the matching process between workers and jobs, such as the entry of employment agencies into the labor market, is expected to shorten the duration of unemployment and the time needed to fill a job vacancy, and thus reduce both the unemployment rate and the job vacancy rate. Vocational training for the unemployed to improve the match of their skills to the needs of employers is also expected to reduce both variables. Structural changes that reduce the aforementioned frictions shift the Beveridge curve inward toward the origin.

Figure 1 presents the changes in the unemployment rate and the job vacancy rate in Israel starting from the year 2000, divided into three periods: the years prior to the financial crisis in 2008, the period subsequent to that crisis and up until 2019, and the coronavirus crisis. There is a clear leftward shift of the Beveridge curve, particularly after the global financial crisis, which reflects greater efficiency in the labor market in terms of matching workers and jobs and correspondingly a decline in the natural rate of unemployment.[4]

The Bank of Israel Annual Reports for 2012 and 2013 discuss the reasons for the shift of the curve and point to a number of factors that led to greater flexibility in the labor market, to a decline in the natural rate of unemployment, and an acceleration in filling job vacancies. These were a government policy that encouraged employment through more stringent conditions of eligibility for unemployment benefits and a shorter period of eligibility, while at the same time extending the duration of vocational training; greater efficiency in the job search process by outsourcing much of the search and examination process to specialized agencies; expanding the use of online tools for job search and hiring; and a change in the sectoral composition of the economy, i.e., a larger proportion of jobs that require a relatively high level of human capital, together with an adjustment of labor supply to meet job requirements.

3 The Beveridge curve is named after Willian Beveridge. Beveridge (1944) discusses the relation between the demand for workers, as represented by job vacancies, and the unemployment rate. His analysis shows a negative relationship between the two variables, and although he did not depict it graphically, the curve is named after him.

4 The shift of the curve began already prior to the financial crisis. However, the change in the business cycle in 2008 made it clearly visible: Yakhin and Presman (2014).

In contrast, there was a sharp rightward shift in the curve during the COVID-19 crisis, a change that pushed it back about two decades. During most of this period, the increase in unemployment was of course a direct result of the lockdowns and social distancing, which forced companies to reduce their economic activity. Nonetheless, the shift of the curve can be seen in the period of March to May 2021 as well, during which most of the restrictions were lifted. Although during those months the economy was still in the early stage of recovery, this development nonetheless raises the concern that recovery in the labor market will be slow.

3. The labor market during the COVID-19 crisis

It is difficult to gauge the extent to which the increases in the unemployment rate and the job vacancy rate are a manifestation of structural change in the labor market. It is possible that the current high rate of unemployment is due to paid leave benefits or the time needed to recruit workers after the lifting of restrictions. However, in contrast, it is possible that the crisis led to a structural change in the labor market, due to an increase in production efficiency and the assimilation of technological improvements during the crisis.

The experience in past decades indicates that economic crises indeed tend to accelerate the adoption of efficiency measures and the assimilation of advanced technologies by firms. This scenario is particularly relevant in view of the unique characteristics of the COVID-19 crisis. The efficiency measures adopted by companies are liable to make some of the jobs that were lost during the crisis redundant. As a result, some of the unemployed will need to update their skills, a process that takes time and will slow the recovery. A similar scenario, in which the economic recovery does not fully impact the labor market, was observed in various countries after the financial crisis and came to be known as jobless recovery. According to one of the explanations, the financial crisis accelerated automation, and many of the unemployed found it difficult to upgrade their skills to suit the new jobs that were created during the recovery period.[5]

To examine the likelihood of such a scenario, we examined the changes in the composition of the unemployed during the period April–May 2021 relative to the pre-crisis period (Table 1). The comparison shows that the stock of unemployed is now composed of older workers, although their distribution by education has not changed significantly. It is possible that the rise in the age of the unemployed will hinder their return to employment. The comparison also shows that the wages of the newly unemployed in their last job were higher than the average wages among the unemployed prior to the crisis. This result indicates that the newly unemployed have higher skill levels relative to individuals who were already unemployed prior to the crisis.

5 For example see Jaimovich and Siu (2020) and Heathcote, Perri and Violante (2020). In an analysis of the Chief Economist Branch of the Ministry of Finance (June 2021), an attempt was made to estimate the negative effect of a decrease in compatibility between the skills of the unemployed and job vacancies on the rate of recovery in employment. The analysis demonstrates the possibility of a non-linear effect, whereby the negative effect on the rate of recovery in employment is amplified as compatibility declines. This derives from the assumption that the decline in compatibility increases the cost of search both for firms and for the unemployed. As a result, firms reduce the number of jobs offered while the unemployed reduce their search intensity. The combination of these forces leads to a non-linear effect.

Table 1: Characteristics of the unemployed before and after the COVID-19 crisis

T	Variable	25th percentile	50th percentile	75th percentile	Average
Prior to the crisis (January–February 2020)	Age	26	34	47	37.42
	Years of schooling	12	12	15	13.71
	Monthly wage*	2,187	4,697	8,163	6,508
Subsequent to the crisis (April–May 2021)	Age	29	39	50	40.16
	Years of schooling	12	13	16	13.88
	Monthly wage*	3,780	6,174	9,918	7,841

* Monthly wage in the individual's last job.

In a further analysis, we examined the patterns of employment in various occupations that can be assumed to be sensitive to technological improvements (Table 2). Many of these occupations had experienced a decline in employment prior to the crisis that has further accelerated their decline. Part of the decline may be attributed to unique behavioral changes during the coronavirus crisis, such as the shift to online commerce. Although this examination points to a sharp drop in employment in these occupations, it is difficult now to know to what extent this trend will persist after the conclusion of the paid leave benefits program.

Table 2: Decline in employment in selected occupations

March 2020–May 2021 relative to 2018–19

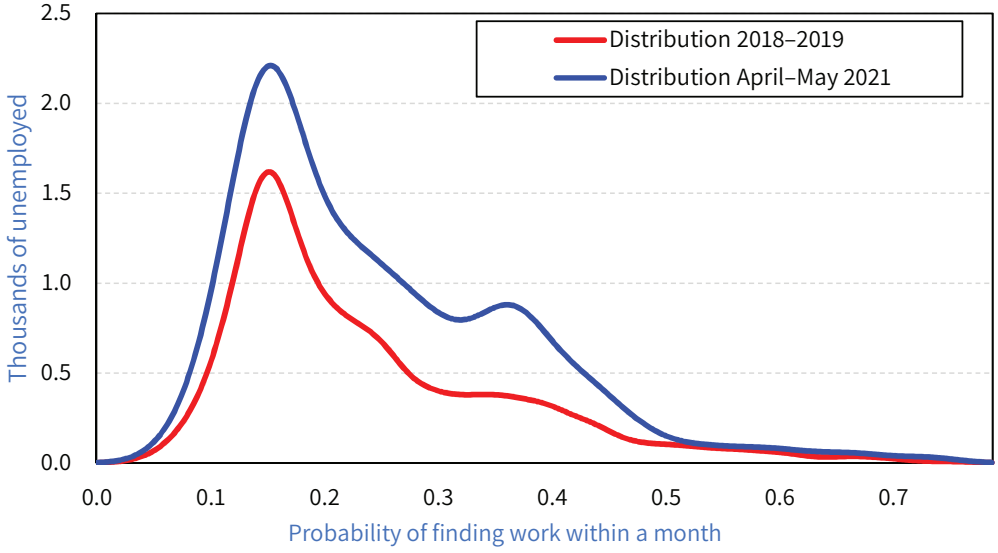
Occupation	Average 2018–19	Average March 2020–May 2021	Decrease in number of workers relative to 2018–19	Decrease in (%) employment
Vendors on the street and in the markets	6,928	2,754	4,174	-60.2%
Other non-professional workers	10,129	4,932	5,197	-51.3%
Tradesmen	6,960	3,798	3,161	-45.4%
Woodworkers, furniture makers and similar	10,043	5,444	4,599	-45.8%
Tradesmen in the clothing sector	8,558	5,184	3,374	-39.4%
Non-professional workers in manufacturing	25,314	15,550	9,764	-38.6%
Car washers, window cleaners, laundry workers, .etc	5,492	3,415	2,077	-37.8%
Printing workers	6,600	4,584	2,016	-30.5%
General clerks and other office workers	22,035	15,712	6,323	-28.7%
Store salesmen	126,695	93,126	33,569	-26.5%
Cleaners and helpers in private homes, hotels and offices	63,442	47,220	16,222	-25.6%
Other workers providing personal services	8,178	6,295	1,883	-23.0%
Inspectors of building maintenance and of household work	43,141	33,796	9,345	-21.7%
Tellers, money collectors and similar clerks	27,235	21,775	5,460	-20.0%
Secretarial	55,428	46,208	9,220	-16.6%
Cashiers and ticket sellers	25,828	21,834	3,994	-15.5%
Other salesmen	37,994	32,606	5,389	-14.2%
General office clerks	22,583	19,237	3,345	-14.8%
Total	512,583	383,471	129,112	-25.2%
Total employed	3,936,013	3,394,082	541,931	-13.8%

The location of the Beveridge curve is affected by the ratio between the flow of individuals that become unemployed (the separation rate) and the rate of unemployed who return to work (the finding rate). In order to shed light on the possibility that the current outward shift in the Beveridge curve will persist over time, we examined whether changes in the characteristics of the unemployed pool can indicate such an occurrence. This examination did indeed find evidence for this possibility.

As part of the examination, we looked at a broad set of characteristics of the unemployed in an effort to assess their potential finding rate. To conduct this examination we first estimated the likelihood of an unemployed individual to find employment based on a broad set of characteristics, including,

among others, age, education, occupation, family status and area of residence, based on data for 2018–19.[6] Given the estimation results, we matched the estimated likelihoods with the current pool of unemployed according to their characteristics.

Figure 2
Distribution of the Unemployed as a Function of the Probability of Finding a Job Within a Month



SOURCE: Based on Central Bureau of Statistics.

Figure 2 presents the results by plotting the stock of unemployed (the vertical access) against the estimated likelihood of finding a job within a month (the horizontal axis). The graph shows that the increase in unemployment is demonstrated by a relatively sharp increase in the number of unemployed for whom this likelihood is low. This increase may result in a slowdown in the return of the unemployed to work and a rise in the natural rate of unemployment. Thus, for example, the estimation indicates that about one-half of the unemployed that were added are expected to find jobs within about ten weeks if the conditions of the market resemble those prior to the crisis, and that reducing 90 percent of the surplus unemployment will take about 10 months. This implies that in the circumstances of a tight labor market (as in 2018–19), the integration of weaker workers would take close to a year. It is reasonable to assume that the number of new jobs that will be created during the recovery will be less than what is needed in order to return to the pre-crisis ratio of unemployed to job vacancies. Moreover, it is possible that the degree of compatibility between the unemployed and the vacant jobs

6 The estimation was carried out by means of the Stochastic Gradient Boosted Trees algorithm. This method, which is used in machine learning, provides a forecast based on serial implementation of simple models (in this case, decision trees), where each of them improves the quality of the forecast by choosing parameters that will improve the combined forecast of all of the simple models that preceded it in the series. The model was trained using 6,340 observations. A test of the quality of the forecast was carried out on 1,604 observations that were not used in the estimation (the test set) and it showed specificity of 81.9 percent and sensitivity of 89.2 percent. Testing the quality of the forecast in terms of the continuous value rather than in terms of classification produced an R-squared of 0.531, an RMSE of 0.32 and an MAE of 0.271.

has diminished due to structural change. For these reasons, there is a concern that following the return of more compatible individuals to the labor market there will remain a significant stock of individuals for whom finding a job will be a prolonged process. This examination therefore provides support for the possibility of a slow recovery in the labor market. In contrast, it is possible that the increase in the stock of unemployed with a low likelihood of finding a job is due to the paid leave mechanism. If this is the case, then when these benefits come to an end, it is possible that their return to work will be faster than indicated on the basis of the pre-crisis conditions in the labor market. An examination of the entire labor market during the crisis therefore does not generate unambiguous results with regard to the likelihoods of the various scenarios. An analysis by industry may provide greater insight.

4. Analysis by industry

In this section, we focus on the information and communication technology industry and the accommodation and food services industries. These two industries contrast in a number of ways. The demand for information and communication services was maintained during the crisis, and the industry's workers, who are characterized by high levels of human capital, were also more able to continue working under conditions of social distancing. In contrast, accommodation and food services is one of the industries hardest hit by the crisis: its workers could not work remotely and their jobs do not require a high level of human capital. It is reasonable to assume that these differences will help in identifying the factors responsible for the shift in the Beveridge curve. We will first look at the Beveridge curve by industry and then by the level of activity and of employment in each industry.

4.1 The Beveridge curve by industry

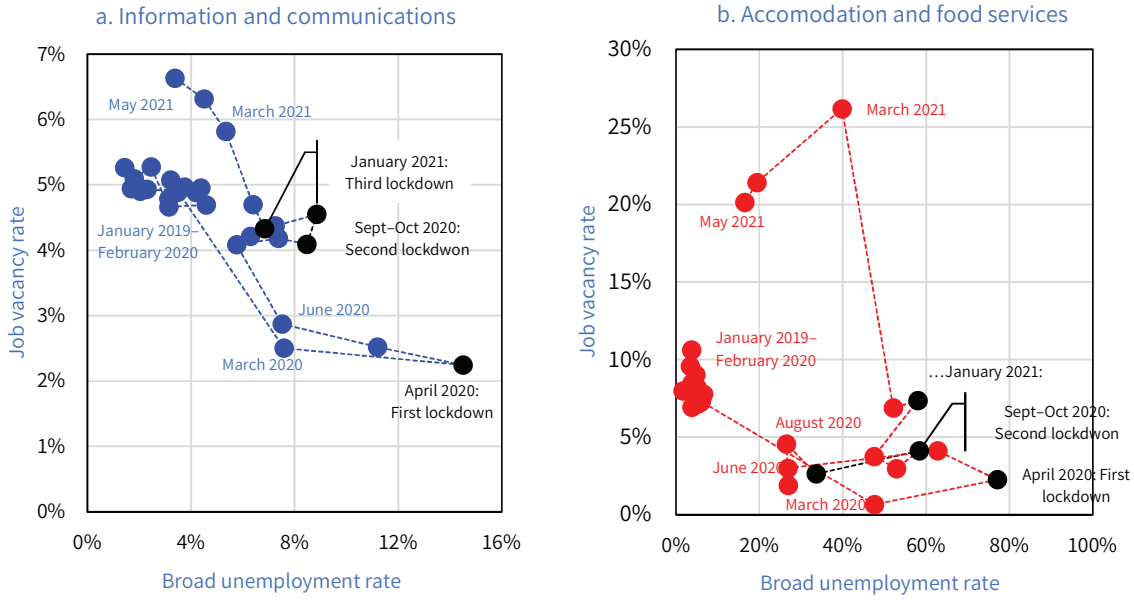
Figure 3 presents the Beveridge curves for the information and communication technologies industry and the accommodation and food services industry.[7]

The information and communication technologies industry: The graph shows that after the initial shock, in March–April 2020, the information and communication technologies industry recovered in a continuous manner (apart from temporary disruptions during the lockdowns) and moved approximately along the upper part of the Beveridge curve. Thus, the job vacancy rate rose while the unemployment rate declined. In particular, at the end point, i.e., May 2020, the unemployment rate in this industry was at its lowest level since the onset of the crisis and the job vacancy rate was at its highest level. The unemployment rate was only somewhat higher than its average in 2019. These findings reflect the fact that the high-tech industries were less affected by the crisis and at the endpoint, the labor market was tighter than it was prior to the crisis.

The accommodation and food services industry: A similar examination of the accommodation and food services industry shows that following the initial shock in March–April 2020, there were large fluctuations in the unemployment rate, though without a clear trend, and in parallel the job vacancy rate remained relatively stable, apart from a sharp rise during the final months of the sample. With the opening of the economy in March 2021, the job vacancy rate shot up and despite the decline in the unemployment rate

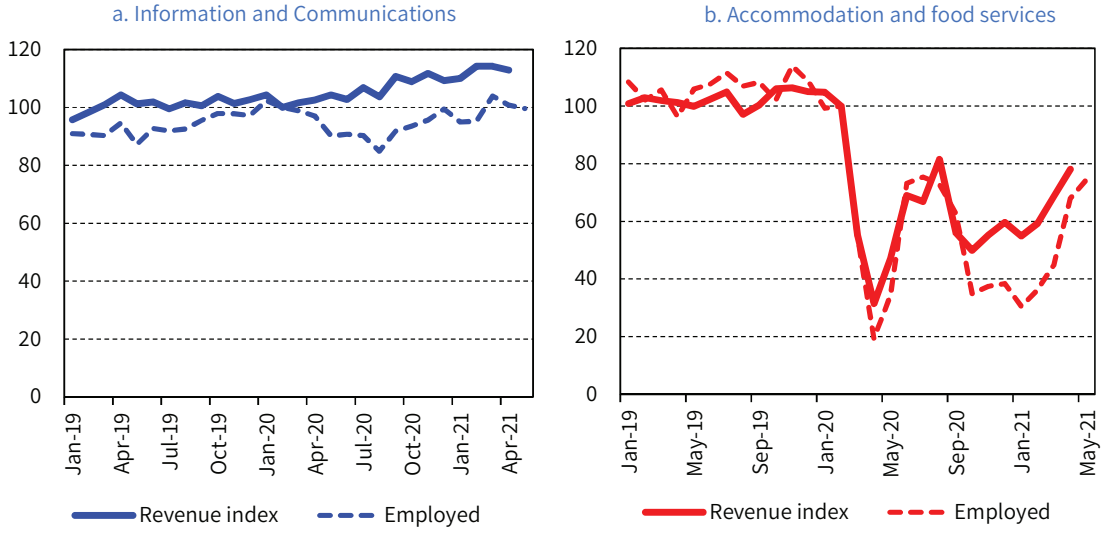
7 The classification of the unemployed according to industry is based on the individual's last industry of employment.

Figure 3
Beveridge Curve in the Information and Communication Technology and the Accomodation and Food Services Industries*
Broad unemployment: Job-seekers plus furloughed employees, January 2019–May 2021



* The classification of the unemployed into industries is based on the industry in which the person was last employed.
SOURCE: Based on Central Bureau of Statistics.

Figure 4
Indices of Economic Activity (Employed* and Revenue in Fixed Prices)
Index: February 2020=100, January 2019–May 2021



* Including those absent from their jobs for reasons not having to do with COVID-19.
SOURCE: Based on Central Bureau of Statistics.

in the following months, in May it remained more than 10 percent higher than its average rate in 2019. This finding supports the claim that the unemployed in this industry are not hurrying back to work.

4.2 Economic indicators

Figure 4 presents total employed (up to May) in each industry alongside revenue indices in fixed prices (up to April). These indices provide an indication of the level of activity in each industry from the perspective of both inputs and outputs. This examination is meant to determine the extent to which the level of activity in the two industries has diverged from its level prior to the crisis.

The information and communication technologies industry: Figure 4a demonstrates that although the crisis affected employment during March–August 2020, since then there has been a recovery in the industry, and starting from March 2021 its level was already higher than prior to the crisis. In contrast, revenue continued to grow without interruption and the crisis had no discernable effect. These data suggest that efficiency has improved in the industry, as companies managed to increase their output while using fewer inputs, at least during the crisis. It is reasonable to assume that the companies will seek to preserve the improvement in their efficiency, which, in turn, will have a long-term dampening effect on the demand for workers. These findings provide some support for the jobless recovery hypothesis, namely a recovery in business activity alongside a certain amount of stagnation in labor input. Nonetheless, the graph indicates that this effect somewhat eroded with the exit from the crisis, and it is not particularly large.

In order to provide an indication of the characteristics of the unemployed in this industry, Table 3 compares the characteristics of the unemployed prior to the crisis and during the opening of the economy, namely during April–May 2021. The table shows that the COVID-19 unemployed are somewhat older than the unemployed prior to the crisis are, but that their level of education is similar. In contrast, the salaries of the unemployed (in their last job) rose in the lower percentiles and dropped in the higher percentiles. Thus, most of the new unemployed do not come from the bottom of the distribution of employees in the industry but rather from the mid-levels. Therefore, the findings provide some support for the polarization of characteristics of the unemployed in the industry and for a scenario of jobless recovery.

Table 3: Characteristics of the unemployed before and after the COVID-19 crisis in the information and communication technologies industry

	Variable	25th percentile	50th percentile	75th percentile	Average
Prior to the crisis (January-February 2020)	Age	28	33	41	35.16
	Years of schooling	12	15	16	14.85
	Monthly *wage	4,041	8,932	20,764	12,148
Subsequent to the crisis (April–May 2021)	Age	29	34	42	35.98
	Years of schooling	12	14	16	14.34
	Monthly *wage	4,320	7,090	15,527	9,905

* Monthly wage in the individual's last job.

Accommodation and food services: In the accommodation and food services industry, there was an adverse effect with respect to both inputs and outputs, and their levels have yet to return to their pre-crisis levels (Figure 4b). The high level of job vacancies starting in March 2021 is an indication of an increase in activity in the industry, at least to the extent expected; however, the unemployment rate in the industry—even though it has declined—remains high at about 16.5 percent as of May (Figure 3b). These results support the idea that a significant portion of the unemployed in the industry are not hurrying back to work.

Table 4 compares the characteristics of the unemployed in the industry prior to the crisis and during the opening of the economy. In contrast to the findings for the information and communication technologies industry, it appears that the COVID-19 unemployed in accommodation and food services have stronger labor characteristics than the unemployed in the industry prior to the crisis: their wages are higher and their education levels are somewhat higher. This may reflect a tendency of employers to hire low-wage workers—since the work in the industry does not require a high level of skills in most cases—or a lack of desire among workers to return to work at this stage. In any case, the findings do not point to any improved efficiency in the industry that might have supported the hypothesis of a jobless recovery.

Table 4: Characteristics of the unemployed before and after the COVID-19 crisis in the accommodation and food services industry

	Variable	25th percentile	50th percentile	75th percentile	Average
Prior to the crisis (January-February 2020)	Age	18	25	42	30.69
	Years of schooling	11	12	12	12.29
	*Monthly wage	1,200	4,060	6,846	4,558
Subsequent to the crisis (April–May 2021)	Age	26	36	48	38.28
	Years of schooling	12	12	14	13.02
	*Monthly wage	3,990	5,532	8,051	6,243

* Monthly wage in the individual's last job.

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