



Bank of Israel

Financial Stability Report

Second half of 2020

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Table of Contents

1. INTRODUCTION AND HIGHLIGHTS	5
1.1 The framework and structure of the report.....	5
1.2 The challenges in view of the COVID-19 crisis	5
1.3 Main findings	6
1.4 Boxes in the report.....	9
2. THE ENVIRONMENT IN WHICH THE FINANCIAL SYSTEM OPERATES	11
2.1 Economic activity.....	11
2.1.1 The domestic environment	11
2.1.2 The global environment.....	13
2.2 The asset market	18
2.2.1 Financial assets	18
2.2.2 Real estate	25
2.3 Credit to the private sector.....	27
2.3.1 Credit to the nonfinancial business sector	28
2.3.2 Credit to the household segment	39
3. RESILIENCE OF THE FINANCIAL INSTITUTIONS	46
3.1 The banking system	47
3.2 Insurance companies.....	52
3.3 Resilience of nonbank credit companies in view of the COVID-19 crisis	56
4. RISK SCENARIOS IN VIEW THE COVID-19 CRISIS	58
4.1 The imposition of restrictions in view of the continuation of the pandemic beyond the winter, and the effect on debt repayment abilities.....	58
4.2 A sharp correction in the equity market in view of the apparent large gaps between the real economy and the capital markets	59
Box 1: Fiscal risk factors priced into government bonds, and Israel's credit rating in view of the COVID-19 crisis	61
Box 2: The decline in value of commercial real estate companies in view of the COVID-19 crisis	73
Box 3: Institutional Investors' Exposure to Futures Contracts on Foreign Equity Indices.....	79
Box 4: The COVID-19 Crisis's Impact on Credit Insurance Companies.....	87

The Bank of Israel's Financial Stability Report is published twice a year. In the report, the Bank's economists provide their assessments regarding the main risks to the financial system, analyze the main exposures, and assess potential stress scenarios and the likelihood of their realization. The assessments and analyses in the report are based on a review of economic and financial developments, an examination of the structural characteristics of the financial system, use of analytical models, and an assessment of the background conditions in the global and domestic economies. The report presents the risks that could affect the financial system in the short and medium terms should they materialize, with the goal of enhancing awareness of them among policymakers and the public, and of enabling suitable preparations.

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Financial Stability Report

Second half of 2020

1. INTRODUCTION AND HIGHLIGHTS

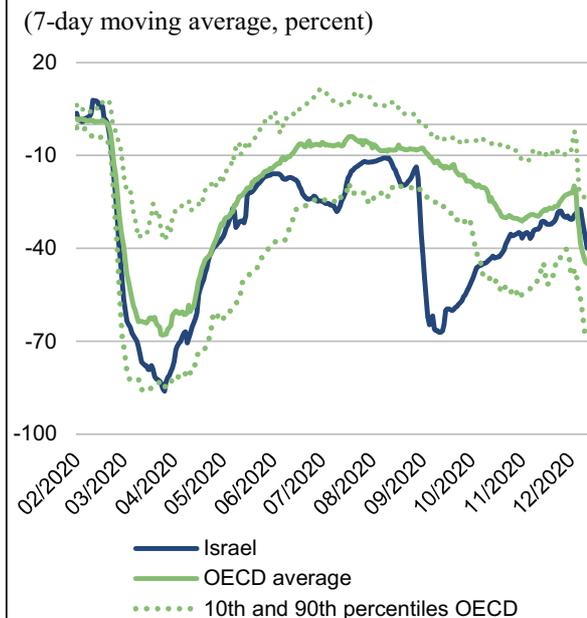
1.1 The framework and structure of the report

The Financial Stability Report for the second half of 2020 assesses the stability of the domestic financial system based on an assessment of the environment in which the system operates—the macroeconomic situation, the asset markets, credit to households and to the business sector—and an analysis of the resilience of the financial institutions. The Report thus provides an indication of the economy’s various exposures to shocks originating in Israel and abroad. Based on the review of developments, the analytical models, the findings of the Financial Stability Monitor, and an analysis of the financial institutions’ resilience, the Report presents the financial system’s risk channels, and formulates assessments of the risks to the economy. The Report also presents risk scenarios as derived from the economy’s financial exposures, which pose a threat to continued economic activity.

1.2 The challenges in view of the COVID-19 crisis

The current crisis began during the first quarter of 2020. As a result of the crisis, Israel, like other countries, implemented a broad shutdown of the economy, which caused significant damage to economic activity in most industries. The crisis poses challenges to policymakers that are unlike any that have been faced in the past. The high morbidity rate led to the imposition of unprecedented restrictions on the population in order to reduce the spread of the disease. The broad shutdown of the economy as a response to the morbidity waves that have so far taken place has led to economic, personal, and social damage. Like many other countries, Israel has not managed to maintain low morbidity rates over time after exiting from lockdowns. Israel is the first of the OECD countries to have decided on a third broad lockdown, even though morbidity rates in many

Figure 1
Google Mobility Trends Report for the Retail Trade and Leisure Industries, February–December 2020
(7-day moving average, percent)



This graph outlines the weekly moving average gap (in percent) between the number of trips to retail and leisure outlets each day and the number of trips during the base period, defined as the medial number of trips per day between January 3 and February 6, 2020. A review of the data for mobility to places of work shows a similar picture.

SOURCE: Based on Google Mobility Data.

countries are increasing. Some countries began a second lockdown of some economic activity toward the end of the year (Figure 1). The longer the crisis lasts, and the more difficult the country finds it to maintain low morbidity levels, the worse the negative impact to economic impact will be. The significant increase in the government deficit, and the resulting increase in government debt, are currently necessary in order to support those harmed by the economic crisis. However, they will weigh down on government activity in the coming years by increasing the expected burden of interest payments. In view of this, broad support of the business sector and households may decrease, which leads to concern that the health crisis may spill over into the financial system. However, the FDA's approval of vaccinations by various pharmaceutical companies toward the end of the reviewed period, and the start of vaccinations of the population, are significantly increasing the likelihood that the health crisis will end during the first half of 2021.

1.3 Main findings¹

Table 1 provides a summary of the environment in which the financial system operated during the reviewed period, using a heat map that presents the intensity of the economy's exposures over time. The following are the main developments during the reviewed period.

- The world is dealing with the health crisis by using fiscal and monetary policy tools of unprecedented scope and with rapid response times that have helped maintain the flow of credit to the economy, thereby preventing an additional negative impact on activity. The growth of government expenditures, particularly in the healthcare field and as part of decisions to provide compensation to businesses and workers, alongside a significant decline in taxes, has led many countries to deficits, and thereby to marked increases in debt. Box 1 outlines the effect of the increase in Israeli government debt on the cost of debt through fiscal risk factors, including the increased likelihood of a reduction in credit rating, particularly in view of the political and economic instability.
- Monetary policy utilized new tools in dealing with the crisis. In addition to foreign exchange and government bond purchases, the Bank of Israel purchased corporate bonds for the first time (Section 2.1). During the second lockdown, the Bank increased its volume of government bond purchases to NIS 85 billion, accounting for about 14 percent of total registered capital.² These and other tools enabled the capital market to operate with stability in the financial asset indices relative to many risk factors, and to support economic activity even under conditions of great uncertainty.
- In contrast to the large impact of the crisis on the volume of government debt relative to GDP, the effects of total private debt were not large, but its composition and risk were greatly impacted (Section 2.3). The interest rates on credit remained relatively low thanks to many steps taken by policymakers, with the main measures including: state-backed credit funds for businesses; Banking Supervision Department directives regarding increasing the possibility of financing through consumer loans backed by a dwelling; and Monetary Committee measures including the provision of monetary loans with an interest rate of -0.1 percent against credit to small businesses.
- The option for banks to defer loan payments for the business sector and for households through a simple and quick process prevented many borrowers from having to enter debt restructuring in view of

¹ This Report is based on data published until the end of 2020.

² The monetary capital of Israel government bonds on the stock exchange totals about NIS 600 billion as of October 2020.

high unemployment rates and the stoppages of business activity in many industries, particularly during lockdown periods. The volume of deferrals increased during the lockdowns, and the balance of credit in respect of which payments were deferred³ totaled NIS 51.8 billion at the end of November, accounting for about 8.5 percent of the total household credit portfolio, and NIS 14.3 billion to the business sector, accounting for about 2.9 percent of total credit. The percentages were higher among small businesses and lower among large businesses.⁴ At the end of November, the Banking Supervision Department announced the formulation of an additional outline for deferring mortgage and consumer loan payments, which was adopted by the banking system. The new outline is intended to help customers who have been significantly impacted by the crisis and who meet a number of cumulative conditions. It enables higher credit risks to be realized over a greater amount of time, which can slow and even reduce the rate of loan losses to the banking system.

- The effects of the crisis and government restrictions can clearly be seen in the residential real estate market in Israel, and particularly in the number of building starts and transactions. These developments had some impact on demand for housing during the lockdowns, and also had an impact on the supply side, which will have an effect on prices in the intermediate range.
- The direct economic impact of the current crisis is concentrated mostly among small companies, which are more vulnerable than the large corporations that are more flexible in managing their expenses and have access to the capital markets at low interest rates.
- The volume of business closures, according to Israel Tax Authority data, declined markedly during the crisis, and we cannot identify any increase in the number of bankruptcies relative to the preceding period. However, these data may change for the worse as government grants that are based on declines in operating turnover relative to 2019 are reduced. The rate of businesses whose operating turnover declined by 80 percent or more in July and August, when there were very few government restrictions, is 12 percent compared with 17 percent during the first lockdown (March and April).
- The large companies that absorbed a significant impact to their value include commercial real estate companies (which account for about 20 percent of credit to the economy), financial firms, and mainly commercial banks. Despite the declines in value of companies in these industries, the bond spreads of companies operating in these industries did not increase relative to those of companies from other industries. This combination of changes in financial asset prices shows that while the crisis it corporate profits in those industries, the markets did not materially change their assessment of their stability.

The global environment

Countries worldwide continued with the trend of increasing debt with the aim of supporting the struggle against the health and economic crisis, assisting the unemployed, and enabling the business sector to continue employing workers. Actions were taken to maintain employment and prevent many bankruptcies despite the economic damage. Central banks around the world increased their accommodative monetary policies. In particular, the Federal Reserve and the ECB revised their forward guidance to the public. According to the current guidance, the interest rate level is expected to remain low for a long time. The Fed even changed how it defines the inflation target, and clarified that as of now, it will not increase the interest

³ The balance remaining with the status of “deferred”.

⁴ More information and details are available in Section 2.3.

rate even if inflation expectations are higher than the inflation target, and that from now on, meeting the target will be determined against the average actual inflation. The low interest rate environment made it easier for the US and European countries to increase government expenditure despite the broad impact on the tax base resulting from the impact to economic activity.

Many international agencies revised their growth forecasts, which now indicate contraction of the global economy to an unusual and historic scope. The IMF growth forecast published in October is for global contraction of 4.4 percent, accompanied by tremendous uncertainty regarding revenues in view of the difficulties in forecasting morbidity trends and government restrictions imposed with the aim of reducing morbidity.

Resilience of financial firms in Israel

Credit providers' loan loss provisions increased, and the profitability of the insurance companies was significantly impacted during the crisis. However, financial firms' ability to absorb these losses is derived from their capital adequacy ratios prior to the crisis. The financial firms have so far not recorded significant credit losses, partly thanks to the financial assistance provided by the government and the option of deferring loan repayments. These measures, alongside the reduced capital ratio requirement in the banking system, enabled the banking system to continue providing credit and supporting economic activity while maintaining capital ratios that are higher than the regulatory requirement.

The resilience of the insurance companies is mainly measured by their median repayment capacity. That capacity (as of the most recent statements published in December 2019) is 103 percent, excluding the leniencies issued pursuant to the transition directive—slightly higher than the regulatory requirement. This is despite the decline in the insurance companies' profitability. (For more information, see Section 3.2.)

Nonbank credit providers account for a very small share of total credit in the economy. As such, they do not pose a risk to the resilience of the financial system, but they do increase access to credit for small and medium businesses that have been adversely affected by the current crisis, hence their importance. Outstanding credit from these providers declined significantly, and there was an increase in loan loss rates. However, the resilience of the nonbank credit companies traded on the Stock Exchange was not adversely affected.

Table 1
Vulnerability of selected exposure channels

	2019:H2		2020:H1		2020:H2
Macro					
Asset markets					
Credit					
Resilience					

Very high intensity	High intensity	Medium - high intensity	Medium intensity	Low intensity	Very low intensity
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* The basis for these assessments is the results obtained from the Financial Stability Monitor. The Monitor is a "heat map" summarizing 51 indicators of possible vulnerability in the financial system. (See the Financial Stability Report for the first half of 2020.)

Economic policymakers around the world are currently dealing with two main challenges—the need to support economic activity, which involves fiscal expansion and monetary accommodation of particularly large scopes, and macrofinancial stability risks that may develop in the medium to long terms. The aim of this Stability Report is therefore to monitor the implications of this policy for the financial system. In the private sector, this policy may enable companies that are already insolvent to continue to survive, thereby leading to the improper allocation of credit, which will make it more difficult for efficient companies to operate. In the capital markets, easier financial conditions and financial asset purchases by the central banks may continue and even increase support for financial asset prices, thereby increasing the risk of a future impact to the financial system through a sharp correction of asset prices. Among the banks, the use of capital buffers may lead to a reduction in the availability of those buffers to stop future shocks. Finally, it is important to note that the significant increase in government debt around the world may reduce the possibility of continuing the broad government assistance and limit the optimal policy in the medium term.

It is important to emphasize that there is still a high level of uncertainty regarding the development of the COVID-19 pandemic and its effect on economic activity, due to the many challenges faced by countries around the world in inoculating the population in order to bring the health crisis to an end. This situation makes it necessary for us to discuss two different health scenarios when analyzing the stability of the financial system, and to assume in both scenarios that there is little control over morbidity rates. In the first scenario, with the distribution of the vaccine to many countries, and particularly to Israel, the health crisis is expected to end during the summer of 2021. In the second, additional morbidity cycles continue around the world, and particularly in Israel, accompanied by the imposition of additional lockdowns in the second half of 2021.

If the health crisis ends thanks to the distribution of vaccines to the entire population by the summer of 2021, the main sources of risk to the financial system are, in our opinion, a wave of bankruptcies together with the development of a credit crunch and an increase in risk spreads. This would weigh down on current operations of large companies as well.

In contrast, if the health crisis continues into the second half of 2021 and beyond, the damage to economic activity together with the continued increase in debt will pose many more challenges for economic policy, since the debt repayment capacity declines as leverage increases. In formulating our assessments regarding all of the risks that the health crisis poses for the financial system, we relate in this report to both health scenarios. Section 4.1 outlines the risk to the financial system in the scenario based on a continuation of the health crisis throughout 2021 and beyond, with uncontrolled morbidity rates. Section 4.2 explains the apparent large gaps between the real economy and the capital markets, and examines the extent of risk of a sharp correction in the equity market.

1.4 Boxes in the report

Box 1: Fiscal risk factors priced into government bonds, and Israel's credit rating in view of the COVID-19 crisis

The increase in public debt and in the deficit due to the COVID-19 crisis gave rise to the question of to what extent it could lead to an increase in yields and a decline in Israel's credit rating as a reflection of the markets' concern over the increasing risk of insolvency. The main finding in the box is that neither the level of public debt in Israel in 2020 or the forecast for 2021 are excessive when compared with the other OECD countries, but Israel is in the higher part of the distribution in terms of the deficit rate. The ratings agencies noted in

their reviews that the absence of a budget for 2021, the extent of political stability, and the way in which the government will deal with the structural deficit following the COVID-19 crisis are impacting the State of Israel's debt risk.

Box 2: The decline in value of commercial real estate companies in view of the COVID-19 crisis

The box shows that a decline in share values mainly reflects the market's pricing relative to fundamental prices and not a decline in the book value of commercial assets beyond their current fair value. Likewise, at this stage, there is no significant increase in company leverage or in yield spreads. These findings show that investors do not expect these companies to suffer a significant long-term adverse impact, but that it is possible to distinguish certain differences between real estate companies in the decline in their value based on their mix of assets (offices, commercial, or manufacturing), which may point to investor's expectations of a structural change.

Box 3: Institutional investors' exposure to futures contracts on foreign equity indices

Futures contracts represent about 20 percent of institutional investors' exposure to abroad, while it was near zero in 2008. A significant portion of the money used to manage collateral for these contracts is invested in government bonds, thereby creating a very strong link between changes in asset prices abroad and changes in government bond holdings. The rapid developments that took place at the beginning of the crisis with the sharp declines on international equity markets had a tremendous effect on the foreign exchange and government bond markets in Israel, and the Bank of Israel acted to provide liquidity to these markets.

Box 4: The COVID-19 crisis's impact on credit insurance companies

Credit insurance is intended to insure domestic exporters and suppliers in transactions in which the customers do not pay for the goods at the time of transfer. Due to the COVID-19 crisis, and in view of the increased risk, credit insurance companies lowered coverages and even completely closed coverages in certain industries that were hit hard by the crisis. In order to help exporters and suppliers in the domestic market continue their operations, the State provided insurance companies with \$750 million in guarantees to enable them to reinstate credit insurance coverages. This box outlines the impact to economic activity through the activity of credit insurance companies, and shows the effect of government assistance to these companies on business sector activity.

2. THE ENVIRONMENT IN WHICH THE FINANCIAL SYSTEM OPERATES

This chapter analyzes the environment in which the financial system operates (the Monitor) based on three main sources of risk: economic activity, distinguishing between the domestic environment in which the economy operates and the global environment; developments in the asset markets; and credit in the economy.

2.1 Economic activity

	H1:2020	H2:2020
The domestic environment: real activity, monetary policy, fiscal policy		
The global environment		

Domestic and global economic activity has a direct effect on the financial system, particularly during the current crisis. This crisis, which is due to the difficulty in continued current economic activity, has more of a direct impact than all other crises on the economic environment, and the increasing concern now is that the many risks will spill over from economic activity to the financial system. In the base scenario, the health crisis ends during the first half of 2021, but control over morbidity rates remains low. In this situation, the worsening of the crisis is halted, but the exit from the crisis poses significant challenges for policymakers. On one side, the high debt created during this period and the possibility of its cost increasing will be an increasing burden on expansionary fiscal policy. On the other, the difficulties with which the business sector is dealing will lead to increased bankruptcies if government assistance is reduced. Unemployment will remain relatively high under this scenario, the financial system will make further financial provisions against doubtful debts, and the supply of credit will decline alongside an increase in interest rates. **Our assessment is that the macro risk in general remained high during the reviewed period, since the health crisis continues to weigh down on economic activity, and the marked increase in fiscal expenditure that is helping the business sector and households in dealing with the restrictions accompanying the crisis increases the fiscal risk factors. However, reports regarding the distribution of the vaccine increase the likelihood that the health crisis will end at the beginning of the second half of 2021.**

2.1.1 The domestic environment

In mid-September, Israel entered a second lockdown and shutdown economic activity for about eight weeks. The economy remained in a continued exit from this lockdown until the end of November.⁵ This second shutdown led to an additional direct impact to activity, while the number of job-seekers again increased as about 230,000 new job-seekers joined the roughly half-million workers who were already unemployed

⁵ Some businesses whose operations were prohibited during the lockdown (such as street-front stores) returned to operation, as did part of the education system. At the beginning of December, a number of shopping malls returned to operations, as did the education system, but others—including many malls and outdoor markets, restaurants, hotels, places of culture and entertainment—remained closed.

under the broad definition.⁶ While the unemployment rate jumped again during the second lockdown, it was slightly lower than during the first lockdown because many firms had already made adjustments and were thus able to continue functioning. Many workers became more efficient and obtained appropriate equipment for themselves and their children, and can therefore continue working from home.⁷ According to National Accounts data, business output declined sharply in the second quarter of the year, and increased in the third quarter, but year over year (third quarter compared with the third quarter in the previous year), business output contracted by almost 2 percent, compared with growth of 3.5–4 percent in 2018 and 2019. According to the Bank of Israel Research Department's staff forecast published at the beginning of January 2021, growth in 2020 is expected to be -3.7 percent, 7 percentage points lower than the pre-crisis GDP trend.

It is important to emphasize that fiscal and monetary policy acted decisively and rapidly, and the volume of expansion was unprecedented even relative to the 2008 crisis. Since the start of the crisis, the government deficit has grown at an unprecedented scope, and with the imposition of the second lockdown in late September, the deficit rate continued to increase. The deficit at the end of 2020 is expected to reach 12 percent of GDP, and government debt is expected to be close to 75 percent of GDP compared with 60 percent prior to the crisis. The increase is due to the sharp impact on expenditures and on revenue, with the main impact coming during the shutdown of the economy. The increase in government expenditure was mainly due to unemployment benefits, assistance to businesses and the self-employed, and the distribution of grants to households. The decline in state revenue was also significant, as stated, mainly during the lockdowns, although the impact was slightly less sharp during the second lockdown than during the first.

The increase in government debt as a share of GDP in Israel is large, but not excessive relative to many countries in the world. Israel's starting point at the beginning of the crisis was better than many other countries. Figure 2 shows the jump in the debt to GDP ratio of selected countries, including Israel. These developments have a tremendous effect on the risk of sovereign bankruptcies, and therefore also on their cost of raising debt. Box 1 provides a more detailed description of the risks derived from this policy as adopted in Israel and many other countries.

The annual inflation rate has been below the lower bound of the inflation target for a number of years. With the development of the crisis, inflation declined to negative levels, and was -0.6 percent in November. These declines encompassed all components of the CPI except for housing, which continued to increase, but at a more moderate rate than prior to the crisis.⁸ With the start of the second lockdown, 12-month inflation expectations also declined to negative territory, but since the start of November, they are again positive, but still below the lower bound of the inflation target. The negative inflation rate, alongside the impact to activity, confirms the assessment that this health crisis, with its negative effect on household income, is generating a negative demand shock, which will have a greater impact on the economy's ability to recover following the crisis the longer it lasts.

The Bank of Israel utilized new monetary tools in dealing with the crisis. In addition to foreign exchange and government bond purchases, the Bank for the first time purchased corporate bonds. Government bond purchases at the end of December totaled NIS 46.2 billion (about 7.3 percent of total value). Corporate bond

⁶ In order to deal with the unique characteristics of the COVID-19 crisis, the Central Bureau of Statistics built an additional index for calculating unemployment. This index includes the old definition plus those put on unpaid leave for reasons having to do with the COVID-19 crisis and those not participating in the labor market due to the crisis. The full definition can be found on the Central Bureau of Statistics website.

⁷ There may have been less public discipline than during the first lockdown.

⁸ For more information on the housing market, see Section 2.2.2.

purchases totaled NIS 3.5 billion (about one percent of total value), and foreign exchange purchases totaled about \$21 billion in 2020.⁹

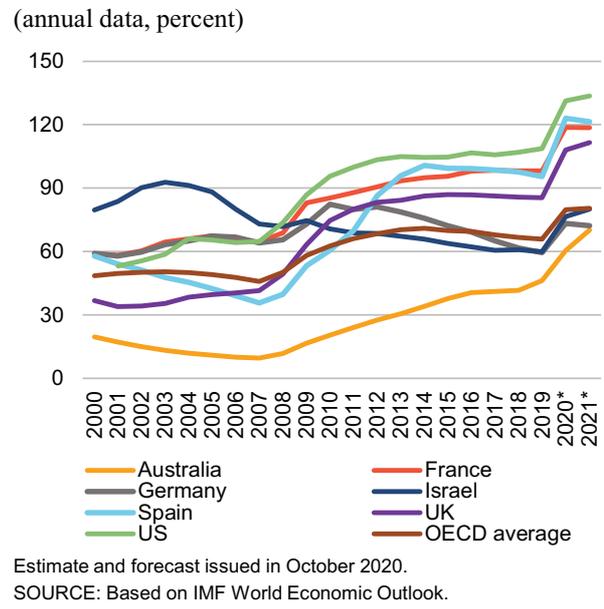
In the second half of the year, following the start of the second lockdown, the Bank of Israel announced an expansion of the government bond purchase program to NIS 85 billion, about 14 percent of total value. The Bank of Israel thus enabled the continued financing of the many government expenditures in the domestic market in a low interest rate environment. The volume of tradable domestic bond issuances jumped in 2020, reaching NIS 131 billion (excluding swap tenders), compared with NIS 70 billion in 2019, which itself was an exceptional year¹⁰, and an average of NIS 45 billion in the two previous years.¹¹

The adverse impact to activity did not encompass all industries. It is directly dependent on government restrictions to limit gatherings, chiefly the restrictions on opening restaurants and shopping malls, holding events, and both domestic and incoming tourism. Certain manufacturing industries, such as food and communications, were not directly impacted, and the high-tech industry even continued to grow. Accordingly, the impact was concentrated on industries typified by small companies and the self-employed, and less on the larger corporations, particularly those registered for trading. In view of this situation, the Monetary Committee decided to launch an additional component of providing credit to banks, as part of which, loans bearing an interest rate of -0.1 percent will be issued against loans that the banks provide to small businesses at a maximum interest rate of Prime +1.3 percent. In addition, in December, the Bank of Israel provided supervised nonbank credit institutions with financing on tracks similar to those developed for the banks.

2.1.2 The global environment

Following a significant recession in the second quarter¹², the global economy recovered in the second half of the year. The low GDP levels that were typical of the peak of the COVID-19 crisis increased, but have

Figure 2
Government Debt to GDP Ratio, Selected Countries, 2000–19, and Estimate and Forecast for 2020 and 2021
(annual data, percent)



⁹ The monetary capital of Israeli government bonds totals about NIS 630 billion, and the monetary capital of government bonds traded on the Stock Exchange totals about NIS 357 billion, as of December 2020.

¹⁰ Debt raised in 2019 was greater than in previous years due to the increase in the government deficit and the decline in debt raised abroad during that year.

¹¹ However, the Ministry of Finance also financed its expenses by raising debt in a variety of international markets, including €3 billion in the second half of the year, which followed the raising of \$10 billion and €1.6 billion in April and May. These volumes made it possible to lower the volume of debt raised in the domestic market relative to financing needs.

¹² During the second quarter, most economies contracted by historic proportions, including the US (9 percent), Europe (14.7 percent), and Japan (9.9 percent), in year-over-year terms.

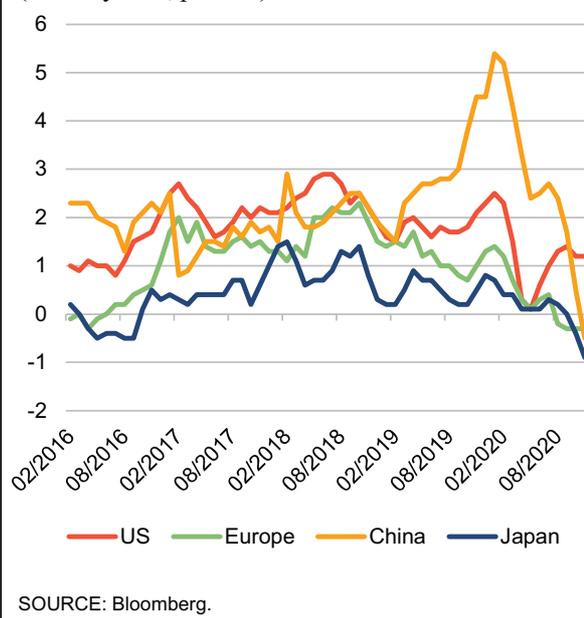
not yet returned to their pre-crisis levels—largely due to the continued spread of the pandemic and restrictions imposed on economic activity in order to fight morbidity. The most moderate recovery was in segments that suffered more significant harm, chiefly air travel, hospitality, and leisure.

The pace of global recovery differs widely between the economic blocs. China is recovering most rapidly, and has even surpassed the level of activity that was prevalent prior to the crisis.¹³ In the western world, the economic recovery in the United States is faster than in Europe, while Japan's recovery is particularly weak. Some emerging countries with high morbidity levels are expected to suffer a more significant impact than the global average.¹⁴ A particularly significant impact is apparent in the emerging countries, partly due to the high rate of spread of the disease, and in view of their limited ability to react fiscally. World trade activity volumes, which were significantly impacted during the initial outbreak of the disease¹⁵, point to continued recovery, but early data such as the export orders component of the global Purchasing Managers Index indicate moderation in recent months.

Many international organizations revised their growth forecasts upward during the period, in view of the increased clarity regarding the extent of the impact to the global economy and the faster-than-expected recovery in the advanced economies. However, the forecasts still indicate contraction in the global economy that is anomalous to a historic extent, and their assessments are that the recovery will be slow. In October, the IMF revised its global growth forecast to -4.4 percent, compared with -4.9 percent in June, and the OECD and the World Bank made similar upward revisions to their forecasts.¹⁶ However, these forecasts involve a high level of uncertainty due to difficulties in forecasting the trends in the spread of morbidity and the government restrictions that may be imposed with the aim of lowering morbidity, as well as forecasts of the timing of the broad distribution of vaccinations and its safety and efficacy.

The inflation environment remained low around the world. In Europe, the Consumer Price Index declined in annual terms during some of the period (Figure 3). This environment enabled central banks around the world to continue with very accommodative monetary policies, but the trend of interest rate decreases that was typical of the first half of the year slowed¹⁷, and such decreases were mainly observed in emerging economies in which the inflation environment allowed it. The central banks continued taking unconventional measures. The balance sheets of leading central banks continued to increase and supported the environment

Figure 3
Consumer Price Index, Major Economies,
February 2016–November 2020
(monthly data, percent)



¹³ Partly affected by significant infrastructure initiatives led by the State.

¹⁴ India, Mexico, and South Africa. This is based on revised GDP data and growth forecasts by international organizations.

¹⁵ World trade contracted by about 14.2 percent in April according to CPB data—the sharpest contraction in the past decade.

¹⁶ On January 6, 2021, the World Bank revised its 2020 growth forecast upward by 0.9 percentage points to -4.3 percent. On December 1, 2020, the OECD revised its 2020 growth forecast upward by 1.8 percentage points to -4.2 percent.

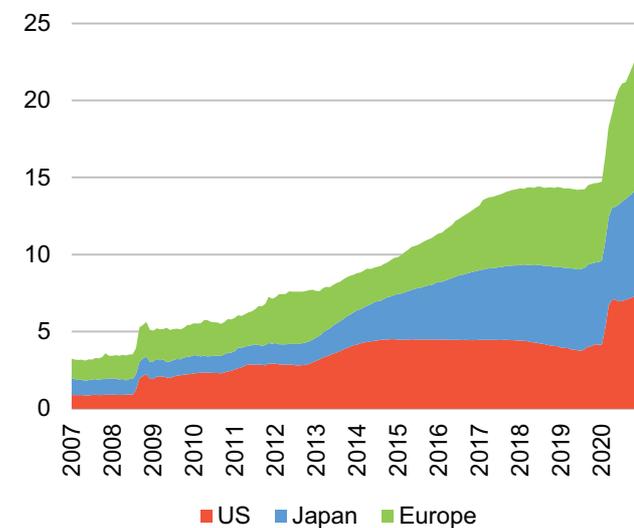
¹⁷ Partly due to the difficulty in lowering the interest rate to negative and deeply negative rates.

of low interest rates on both government and corporate debt (Figure 4). Many central banks, led by the Federal Reserve and the ECB, revised their forward guidance to the public to say that the interest rate is expected to remain low for a long time. For instance, members of the Federal Open Market Committee expressed the assessment that the interest rate in the US would not be increased before 2023.¹⁸

The Fed even changed the way in which it defines the inflation target, and clarified that from now on, it will not increase the interest rate even if actual short-term inflation is higher than the target, and that it will examine how the target is met against the average actual inflation. This is a significant change, because beforehand, the Fed increased the interest rate on several occasions when its assessment was that inflation was expected to reach the target in the medium term.¹⁹ Further to this, the President of the ECB announced that it is worth considering a similar change in Europe.²⁰ These measures support the stated forward guidance.

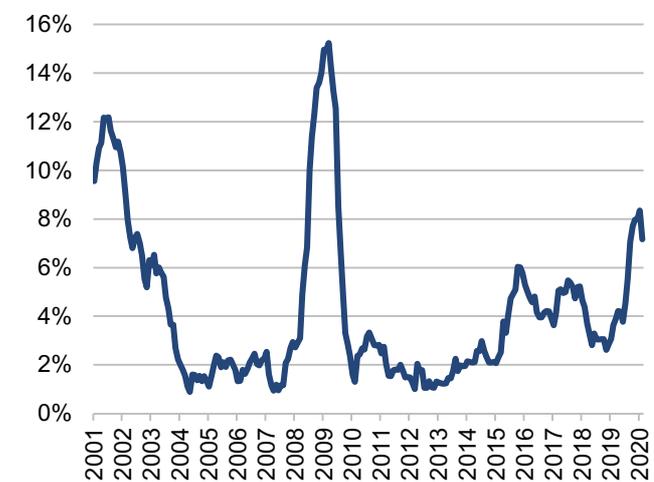
In the fiscal sphere, many countries continued the trend of increasing deficits with the aim of supporting the struggle against the economic and medical crises, including support for the unemployed, and later on the employment of workers and support for the business sector with emphasis on sectors that are particularly hard-hit.²¹ These actions had a positive effect on the recovery of employment and on the insolvency rate. The insolvency rate of companies with a speculative rating²² increased less than during previous crises (Figure 5).

Figure 4
Central Bank Balance Sheets, 2007–20
(monthly data, \$ trillion)



SOURCE: Bloomberg.

Figure 5
Global Speculative Grade Default Rates for Bond and Loan Issuers, October 2001–October 2020
(previous 12 months, monthly data, percent)



SOURCE: Moody's.

¹⁸ According to forecasts by members of the FOMC, which were published on September 16, 2020 and December 16, 2020.

¹⁹ For instance, at the beginning of 2016, the Fed embarked on a path of increasing the interest rate even though the core CPI indices (CPI and PCE) did not increase beyond the central bank target. This was based on its assessments that inflation was expected to reach the target in the medium term.

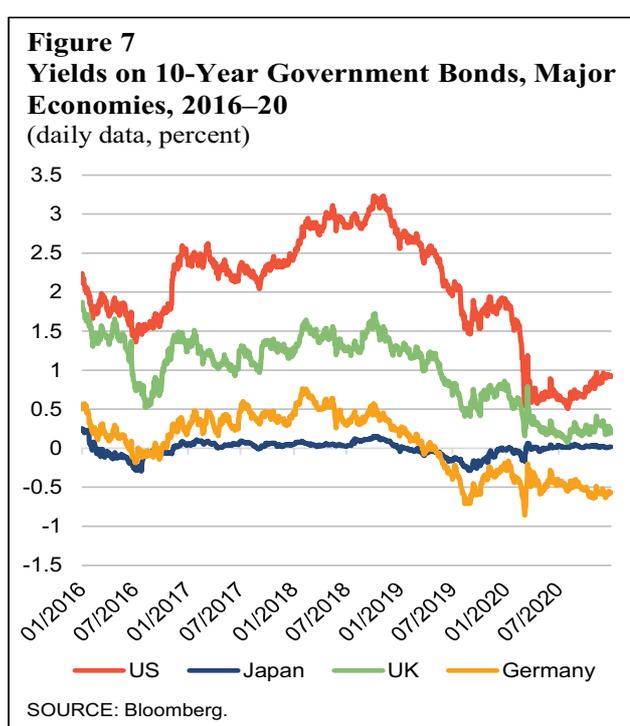
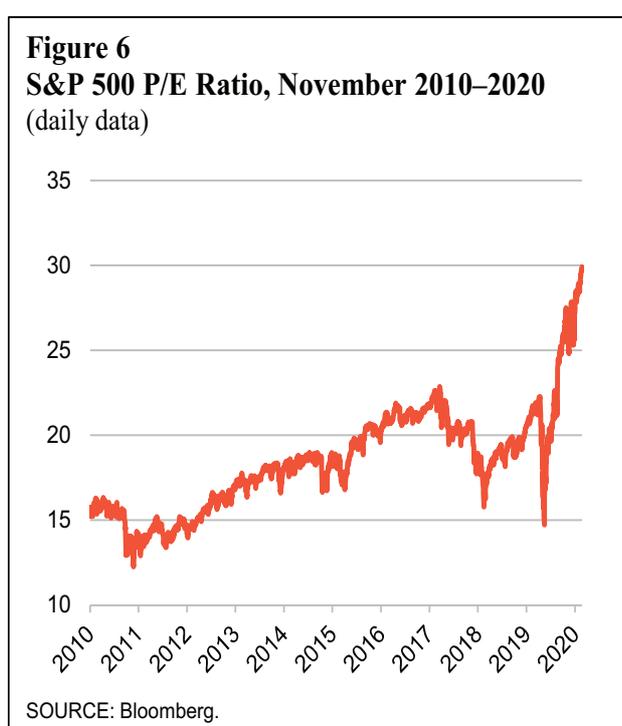
²⁰ Christine Lagarde, ECB Chairman, Frankfurt, September 30, 2020.

²¹ Such as airlines.

²² A rating equal to or lower than Ba1.

The global markets

Equities markets around the world continued to recover, and the major indices in the US achieved positive returns in 2020, led by the over-performance of the large technology companies, affected by the monetary and fiscal measures taken by the governments and central banks with significant speed and scope. The apparent disconnect between the real economy and the financial markets raises the concern that financial asset prices are disconnected from economic activity, which is partly reflected in the P/E ratios of the indices, which are at all-time highs²³ (Figure 6). However, it should be noted that the yields on government bonds, a low-risk alternative asset, declined to low levels. This is particularly true of yields on US Treasury Bonds, which declined to a historic low (Figure 7). The sharp increase in equity prices, influenced by the very accommodative interest rate policy, led senior central bankers around the world to take note of the need to balance accommodative monetary policy with the concern of creating financial bubbles.²⁴



The aforementioned significant fiscal support led to an increase in the debt-to-GDP ratios of countries around the world. On its own, this should have increased the risk inherent in such debt, but the quantitative easing programs of central banks around the world led to a decline in yields on government debt and reduced the risk inherent in such debt. With that, in the medium term, increasing debt should weigh down on repayment abilities, and countries around the world will therefore need to navigate between the need to reduce the volume of debt and not harming the pace of the recovery.

The volume of debt in the nonfinancial business sector increased sharply during the year, despite the slight decline in the third quarter (Figure 8). This is in contrast with previous crises, which were generally characterized by a credit crunch, due to tremendous uncertainty combined with an increase in the banking

²³ An estimation of the index multiplier that neutralizes the large technology companies shows a multiplier of about 22, a level that is less anomalous from a historical standpoint.

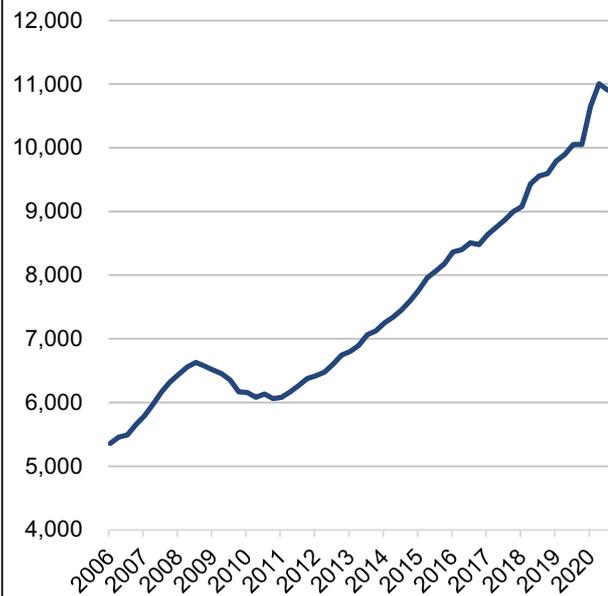
²⁴ Including comments by Eric Rosgern, President of the Federal Reserve Bank of Boston, to the Financial Times on October 17, 2020.

system's losses, which reduced their volume of surplus capital. The reason for this has to do with the rapid actions of central banks and governments, which led to the continued injection of credit and to maintaining easy credit spreads. The credit spreads for both investment-grade companies and those below investment grade remained stable at levels slightly higher than those that prevailed before the crisis, despite the high level of uncertainty during the period. The risk level of debts in the medium range depends on the pace of development and broad distribution of the vaccination or of effective treatment of morbidity, since the shutdown of activity and the raising of further debt due to it may weigh down on repayment ability or increase the number of companies with low profitability for whom most of their income is used to service their debt.

The global banking system entered the crisis in a better financial state than in the 2008 crisis, both from the standpoint of capital and from the standpoint of liquidity. The good state of the banks and the regulatory leniencies issued around the world enabled them to continue provided credit during the crisis. According to an IMF analysis of the stability of the global financial system, most banks can absorb the losses from credit failures and continue holding adequate levels of capital, beyond the minimum requirements.²⁵ It seems that in the third quarter of the year, a downward trend began in the volume of the banks' loan loss allowances around the world, particularly in the US and Europe.

All of the aspects mentioned above, particularly the actions of the central banks and the positive sentiment in equity values, have led to continued improvement in the measures of financial conditions around the world. However, in the view of the IMF, the negative effects of external debt have worsened the financial conditions in the emerging markets relative to the advanced markets.

Figure 8
Nonfinancial Business Sector Debt in the US, 2006–2020:Q3 (quarterly data, \$ billion)



SOURCE: Board of Governors of the Federal Reserve System.

²⁵ GFSR, Chapter 4, October 2020.

2.2 The asset market

	H1:2020	H2:2020
Financial assets: equities, government and corporate bonds		
Real estate		

Financial asset prices stabilized in the second half of 2020, with a decline in volatility, in view of asset purchases by the central banks in Israel and abroad. Residential real estate prices continued to increase during the crisis, while commercial real estate prices declined. Our assessment is that the risk to the financial system posed by the asset markets declined slightly throughout the second half of the year, but remains at a medium to high intensity level, since the direct impact of the health crisis on asset prices is low and the distribution of the vaccine increases the likelihood that the health crisis will end at the beginning of the second half of the 2021.

2.2.1 Financial assets

During the second half of 2020, the risk indices in the financial markets remained stable, at a lower level than the peak that was reached in March–April. The stress index²⁶ in the financial markets returned to the near-zero levels that prevailed prior to the crisis, as shown in Figure 9. Examining the risk of the equities market, Figure 10 shows that the fear index (an index based on the prices of options on the equities index) remained stable during the second half of the year at a lower level than at the peak of the crisis, but slightly higher than the level that prevailed prior to the crisis. While bond prices are recovering from the peak of the crisis, equity prices have not yet returned to their pre-crisis levels, in contrast to the global trend.

The equities market absorbed a significant impact at the start of the crisis. The General Shares Index declined by 32 percent from the start of the year through March 22, but since then the declines have been offset, coming to a total of about 1 percent. The declines in equity prices is slight compared with the declines in previous crises and relative to the impact on economic activity.

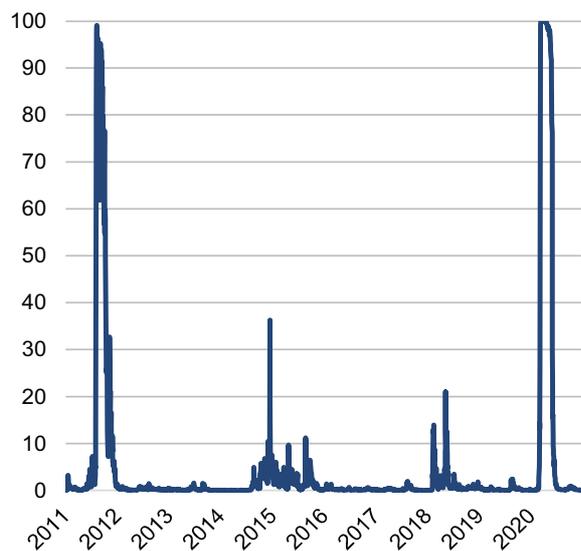
The developing gap in Israel and abroad between the equities indices and the GDP growth rate raises many questions regarding the long-term link between stock exchange performance and the growth rate. This link exists because the aggregate profits of companies have an effect on the rate of economic growth.²⁷ Since equity prices include companies' expectations regarding future profits, insofar as the companies registered for trading represent a larger share of economic activity, the General Shares Index will more properly represent expectations regarding the state of the economy and will serve as a leading index of economic activity and GDP growth. Eldor and Melnick²⁸ examined this equation using a Granger Causality equation based on data from the Composite State of the Economy Index, which serve as a monthly estimate of GDP,

²⁶ See Y. Sa'adon and M. Graham (2013), "A Composite Index for Tracking Financial Markets in Israel", Discussion Papers Series 2013.01, Bank of Israel Research Department.

²⁷ Corporate profits also affect corporate demand for labor, which lowers the unemployment rate and/or increases the average wage, and therefore increases household expenses. Profits also impact new investments by those companies. Hence the connection, at least in the long term, between the performance of equity indices and the growth rate.

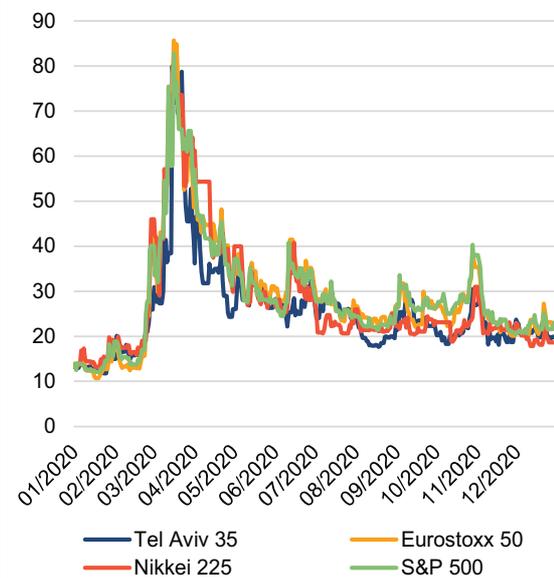
²⁸ Rafi Eldor and Rafi Melnick (2006). "The Stock Market as a Leading Indicator of the Israeli Economy", *Economic Quarterly*, 53(3): 554–565, Israel Economic Association.

Figure 9
Financial Stress Index, 2011–20
 (daily data, percent)



SOURCE: Bank of Israel.

Figure 10
Implied Volatility of Selected Leading Equity Indices, 2020
 (daily data, percent)



SOURCE: Bloomberg and Tel Aviv Stock Exchange.

and the General Shares Index from 1995 to 2004, and found a significant leading link between the shares index and the Composite Index in an average range of 5 months.

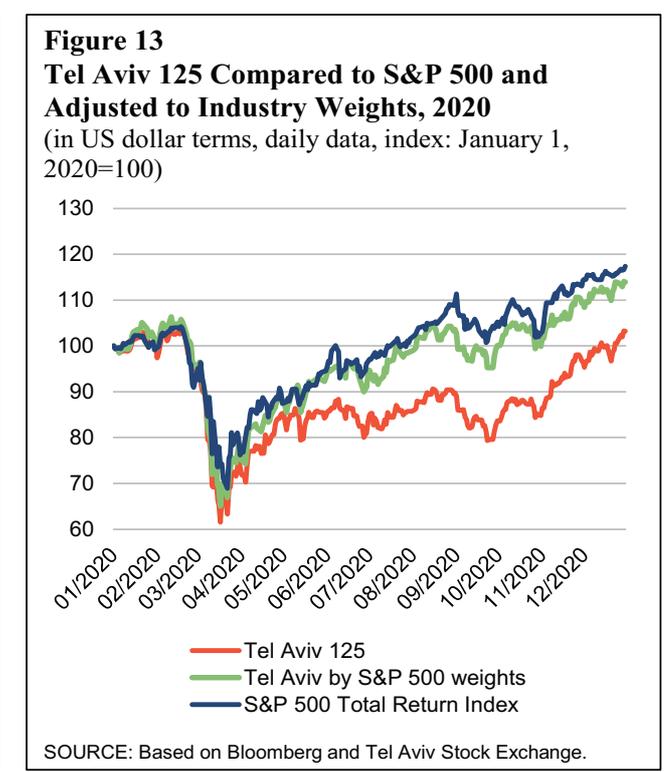
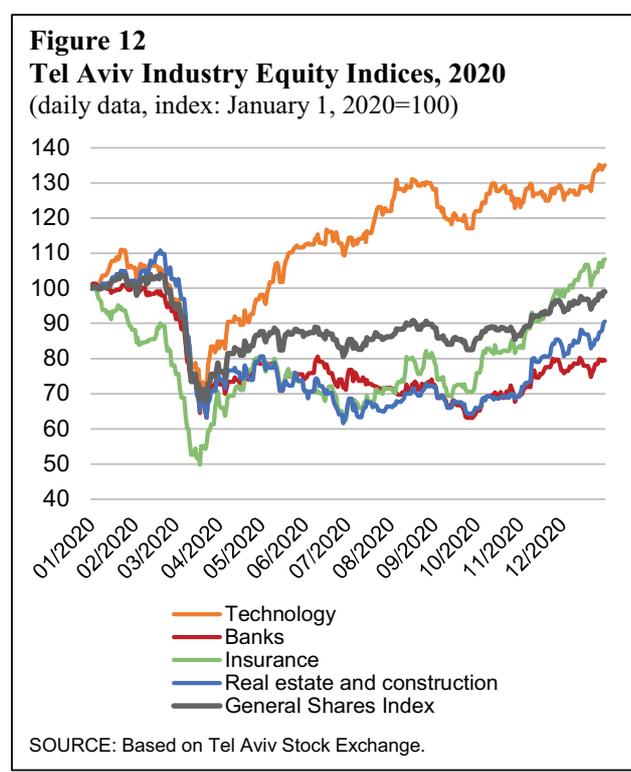
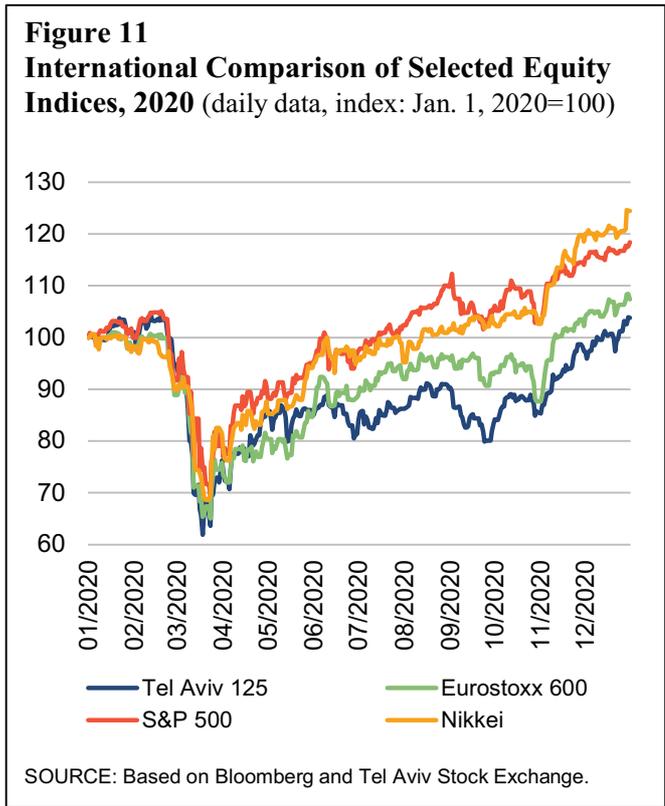
However, in the current period, a significant gap is developing between economic activity and share performance. The reasons for this have to do with the characteristics of the current crisis, which mainly hit small businesses that are more vulnerable than large corporations that enjoy more flexibility in managing their expenses and greater access to the capital market at low interest rates. Another main reason for the existence of the gap has to do first with the public's assessments regarding finding an effective vaccination that will obviate the need for further government restrictions, which strengthened greatly toward the end of 2020 when the inoculation of the population began. When such assessments exist, it is likely that share prices will remain relatively high, because they rely on future cash flow, which is expected to return to the pre-crisis levels. The International Monetary Fund²⁹ also discussed the emerging gap between the equity indices and economic activity, and argued that the effect of lower profitability of companies registered for trading, both actual and expected, was offset thanks to the low basic interest rate and the decline in the risk unit price (increase in risk appetite). Yield spreads on corporate bonds also declined beyond the economic factors that are consistent with their inherent risk pricing.

Fiscal expansion and monetary accommodation have for years been among the tools used to support economic activity and maintain the stability of the inflation environment. This policy, particularly bond purchases by the central banks, makes it possible for interest rates to remain low, thereby increasing consumption and investment. While monetary policy is helping economic activity, low interest rates have a greater effect on the equity indices, acting not only to increase activity and profits, but also to decrease the capitalization interest rate on the future flow of receipts. In addition, expansionary policies increase risk appetite and investment in products and assets that involve risk, but also, by their nature, greater expected yields than near-zero interest rates, such as corporate bonds or equities. As long as this policy is maintained,

²⁹ October 2020.

the upward pressure on financial asset prices will continue.

An international comparison can show that the main stock indices in the world reacted to the COVID-19 crisis in a very uniform manner—a sharp decline in March and April followed by recovery. However, Figure 11 emphasizes the fact that the Israeli market declined slightly more than the markets in other reviewed countries, and increased less thereafter. Large portions of this difference are explained by industry composition differences between the indices. While financial firms³⁰ and real estate companies, which account for a high proportion of the Israeli equities index, pulled the index downward, technology companies, which account for a lower proportion of the Israeli equities index pulled it upward, as shown in Figure 12 and Table 2. These differences in industry weights have a negative impact on the Tel Aviv 125, compared with the S&P 500. For instance, on both indices, there are similar negative returns in the energy industry, but in the Israeli index, the weight of this industry is almost double what it is on the S&P 500. In the technology and communications services industries, returns are positive

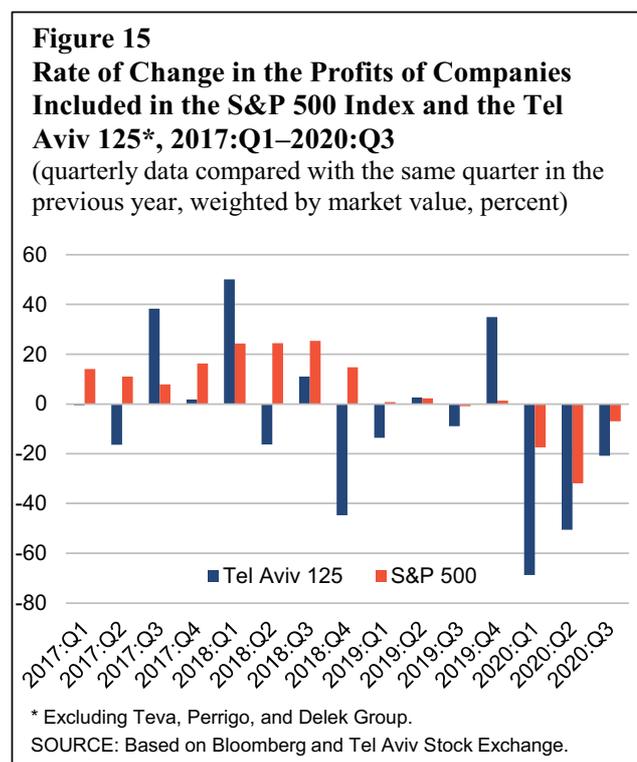
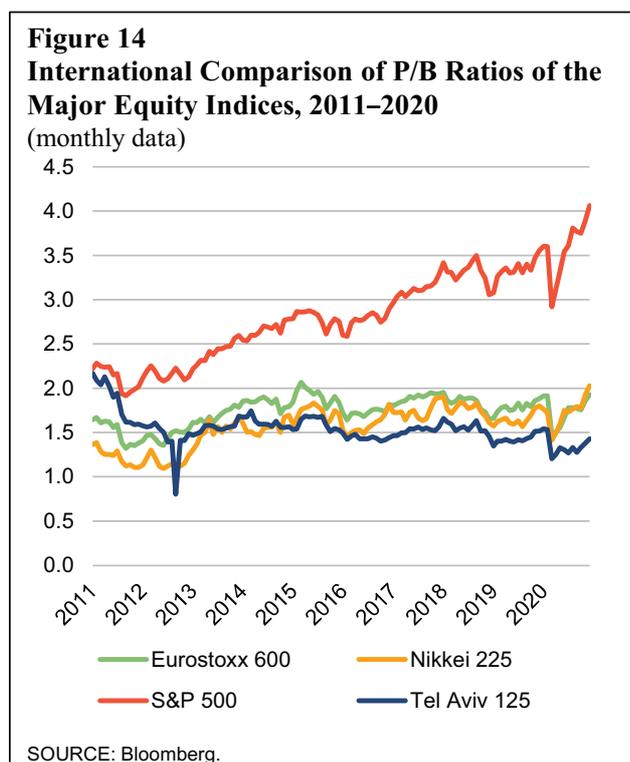


³⁰ By international comparison, Israeli bank and insurance shares declined at a similar rate to the parallel industries abroad.

and significant in both indices, and returns on technology shares on the Tel Aviv 125 are even much higher than in the parallel industries on the S&P 500, but they account for a much lower proportion of the Tel Aviv 125 than of the American index. In contrast, the financial industry has a negative return in both markets, but its share of the Tel Aviv index is much more significant than its share of the American index. Figure 13 shows the development of these two indices, and also presents the Tel Aviv 125 when the industry weights of the S&P 500 are attributed to it. The figure shows that the industry composition explains a large portion of the difference in returns between the indices.

Another possible reason for the yield gap between these two indices is the Federal Reserve’s intervention in the financial markets. When the COVID-19 crisis began, the Fed broadly increased liquidity in the financial markets and intervened directly in the government and corporate bond markets. We can assume that this intervention had a positive effect not only on bond prices and maintaining the low interest rate, but also on equity prices³¹ (see Section 2.1.2).

Figure 14 shows that the P/B ratio on the Tel Aviv 125 index, which reflects the total market value of the companies included in the index relative to their total book value, declined in the first quarter of the year, similar to the ratios in the reference countries, but in contrast with the ratios of the other indices, which increased markedly in the second half of the year, it remained lower than the ratio at the beginning of the year. The decline in this ratio shows that the decline in the market value of companies was greater than the erosion of their equity, as reflected in the third quarter financial statements. It is important to remember that there are time gaps between the two variables that make up the P/B ratio. While share prices rely on the economic information available on the trading day itself, equity data is correct as of the end of the third quarter—September 2020—such that it does not reflect the effect of developments in the fourth quarter of the year, particularly during the second lockdown. A glance at the profitability of companies included in the Tel Aviv 125 and S&P 500 indices (Figure 15) shows that in both countries, profitability in the first three quarters of the year declined relative to the same quarters in the previous year, but the harm to profitability



³¹ This intervention by the Fed may have had an effect on financial asset prices in other countries as well.

Table 2
Industry composition of the Tel Aviv 125 and S&P 500 indices, and cumulative industry returns for 2020 (percent)

Industry (GICS classification)	Industry's weight in the index				2020 cumulative return	
	January 2020		December 2020		Tel Aviv 125	S&P 500
	Tel Aviv 125	S&P 500	Tel Aviv 125	S&P 500		
Energy	7.1	4.4	4.7	2.5	-33.9	-35.3
Technology	12.9	23.3	19.8	27.4	54.6	21.6
Communications services	1.7	10.5	2.4	11.2	40.0	40.9
Financial companies	22.2	12.9	20.5	10.5	-6.9	-3.3
Real estate	20.3	2.9	18.8	2.5	-6.9	-1.8

SOURCE: Based on Bloomberg and Stock Exchange data.

of Israeli companies is more significant than to those in the US.

Bloomberg data regarding the default probability of public companies (Figure 16), calculated based largely on the companies' share prices, show that the COVID-19 crisis led to a jump in this risk index, which reflects the risk of corporate bankruptcies. The level has remained high since the start of the crisis, with an additional increase at the start of the second lockdown and a significant drop in the fourth quarter. By historical comparison, the increase in default probability during the current crisis is much smaller than the increase that was observed during the Global Financial Crisis of 2008–9, when the index reached a level more than three times higher than its current level.

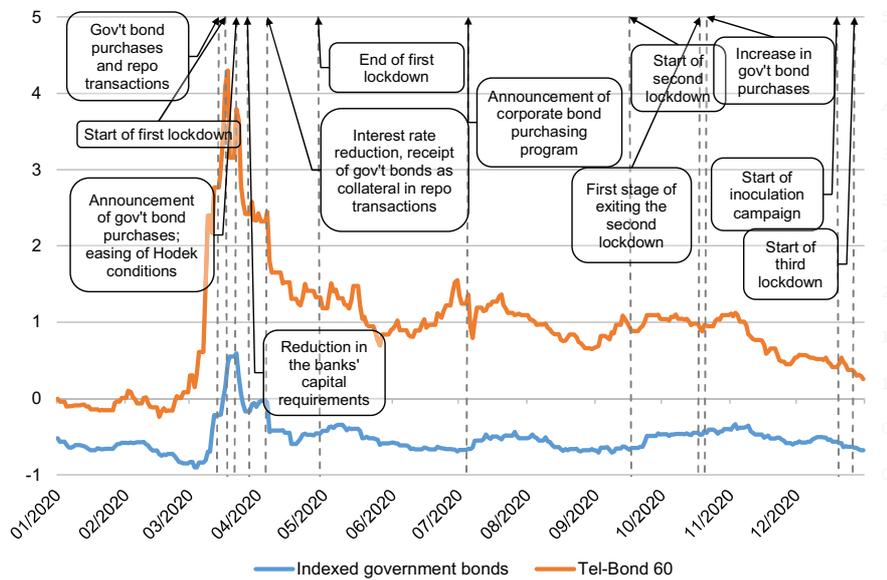
In the second half of the year, there was a slight decline in the yield to maturity of government bonds, alongside a slight increase in yields on corporate bonds, following the high level of volatility that typified the period around the start of the crisis. Figure 17 shows some of the significant measures taken by the Capital Market, Insurance and Savings Authority, the Ministry of Finance, and the Bank of Israel in response to the COVID-19 pandemic, and the yields on government and corporate bonds. Regarding the impact on corporate bond yields, which affect companies' abilities to raise debt and finance their operations during the crisis, there are two significant measures: an easing of the Hodek guidelines, which was announced by the Capital Market, Insurance and Savings Authority on March 22, 2020, and the announcement of the Bank of Israel's NIS 15 billion purchase program in the corporate bond market on July 6, 2020.

As stated in the Financial Stability Report for the first half of 2020, due to the high level of public withdrawals in March, the mutual funds were forced to sell off many assets, which led to surplus supply in the corporate bond market, and a decline in their prices. Due to regulatory restrictions imposed on institutional

Figure 16
Median Probability of Default Within Five Years, All Public Companies in Israel, 2020
 (daily data, percent)

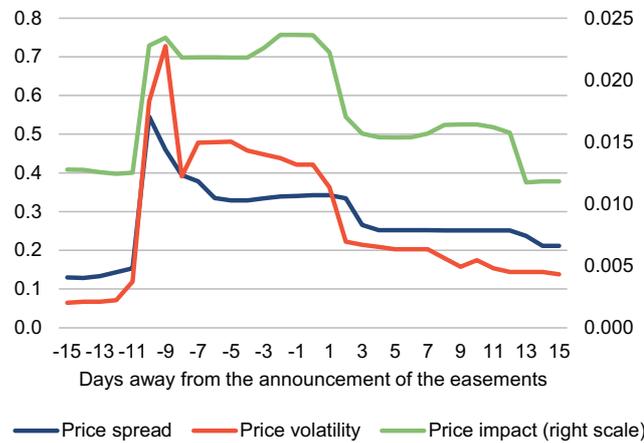


Figure 17
Yield to Maturity, 10-Year Indexed Government Bonds and Tel-Bond 60 Index, in View of Government and Bank of Israel Actions, 2020 (daily data, percent)



Very similar pictures are obtained from the unindexed bond market, and when looking at bonds with various terms.
 SOURCE: Based on Tel Aviv Stock Exchange data.

Figure 18
Intraday Liquidity Indices Calculated on Bonds Included in the Tel-Bond 20 Index Around the Announcement of Easements in the Hodek Conditions
 (daily data, March 23, 2020=0, percent)



Price volatility: The average actual volatility of the transaction price of a security during the trading day. The index is calculated as the standard deviation of the gap between the highest and lowest prices in half-hour time windows. The trading day of a security is divided into round half-hour segments, and the change between the maximum and minimum transaction is calculated among trades made during the opening of trading and those made during continuous trading. The daily volatility of a security is the standard deviation of the rates of change.

Price spread: Calculated as the gap between the best purchase and sale prices relative to the average mid price throughout the continuous trading day. The daily spread is the average spread of the quotes from continuous trading.

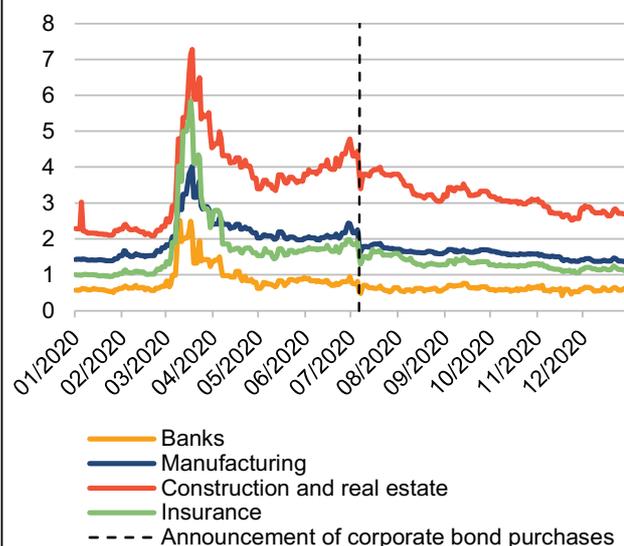
Price impact (PI): Describes the link between activity volume and change in the bond price. The index is calculated using a linear regression in which the dependent variable is a log of the change in the bond's price during a 5-minute window, and the explanatory variable is the net number of transactions - total transactions in which the purchaser is the initiator minus total transactions in which the seller is the initiator. The regression's coefficient properly reflects the cost to the investor making the transactions, as reflected in the price change. A low coefficient reflects a more liquid market.

SOURCE: Based on Tel Aviv Stock Exchange.

investors according to the Hodek Committee recommendations³² (heretofore and hereinafter “the Hodek guidelines”), the institutional investors were unable to absorb this surplus and make unrestricted bond purchases, which increased the gap between demand and supply and increased the negative trend at the height of the crisis period. The leniencies announced by the Capital Market Authority enabled institutional investors to temporarily purchase these bonds, which they would not have been permitted to do in a normal situation, and thereby, basically, to exploit the low market prices in favor of those whose savings they manage. Figure 18³³ shows the positive effect of this step on three intraday liquidity indices of thirty days around the easing of the Hodek guidelines.

Figures 19 and 20 show that the announcement of a purchase program by the Bank of Israel apparently led to a decline in spreads in all sectors and in all ratings at least in the short term, even though the Bank did not directly purchase bonds rated lower than A-. The decline in yields means that companies can now recycle their debt and obtain financing at easier terms. (For more information on issuances, see Section 2.3 on Credit.) By the end of the year, the Bank of Israel had made just NIS 3.5 billion worth of the purchases that were planned, such that it is still quite able to intervene in this market in the future, as necessary, until the program is utilized in full.

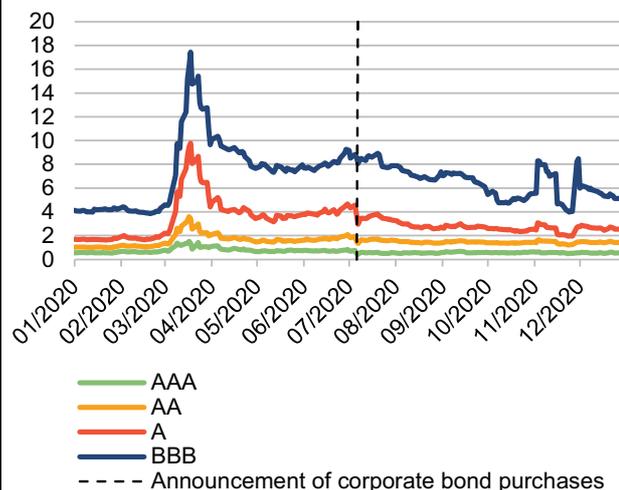
Figure 19
Yield Spreads Between Corporate Bonds and Similar Government Bonds, by Industry, 2020
(daily data, percent)



The spreads are calculated for ordinary corporate bonds only (excl. convertibles, deletables, and so forth), CPI-indexed and unindexed, with terms of half a year and up.

SOURCE: Based on Tel Aviv Stock Exchange data.

Figure 20
Yield Spreads Between Corporate Bonds and Similar Government Bonds, by Rating, 2020
(daily data, percent)



The spreads are calculated for ordinary corporate bonds only (excl. convertibles, deletables, and so forth), CPI-indexed and unindexed, with terms of half a year and up. The calculation does not include bond series of the Delek Group. The ratings groups include sub-ratings of that rating. For instance, A includes A- and A+

SOURCE: Based on Tel Aviv Stock Exchange data.

³² The Hodek Committee imposed restrictions on the institutional investors regarding corporate bond purchases, including a requirement to conduct a pre-purchase debt analysis on each bond series. The removal of this restriction enabled the institutional investors to immediately purchase investment-grade bonds.

³³ The liquidity indices calculated for the Tel-Bond 20 index under-estimate the effect, because that index includes large liquid series regarding which we can assume that the institutional investors already have debt analyses.

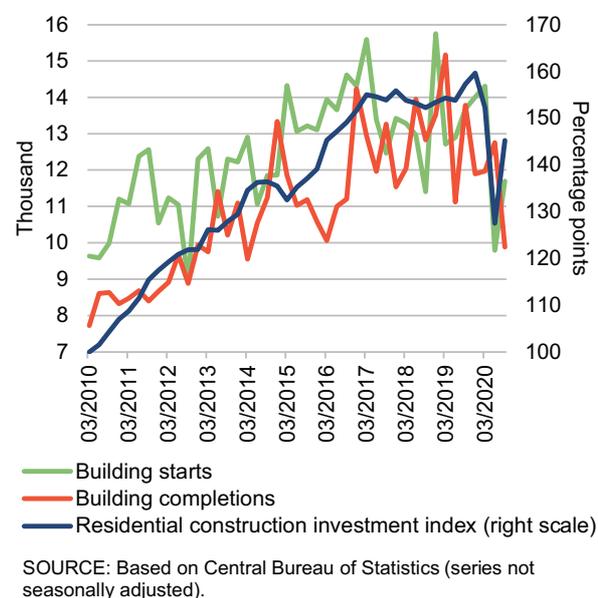
2.2.2 Real estate

Residential real estate prices have a tremendous impact on the financial risks of households, and commercial real estate prices have an impact on operational risks in the business sector, since sharp changes in these prices increase the uncertainty regarding the current operations of businesses. Since ownership of such assets is accompanied by high leverage rates, a sharp decline in prices has implications for the stability of the financial system.

The housing market

National Accounts data published in December show that investment in residential construction increased by 14 percent in the third quarter, but this followed declines of 15.7 percent in the second quarter and 5 percent in the first quarter (Figure 21). These declines in investment, amounting to 7.6 percent over the past four quarters, are well reflected in building starts, which declined markedly due to the COVID-19 crisis. Even though the construction industry was excluded from the lockdown regulations, the general restrictions on employing workers were reflected in a significant decline in the number of people employed in construction. Data show that transactions declined mainly during the first lockdown, but to a certain extent between May and August as well, in most purchaser classes (first-time home buyers and those improving their housing).³⁴ This collection of data shows that the COVID-19 crisis is having an impact on the demand side for housing, particularly during the lockdowns, as well as on the supply side, which will have an impact in the medium term.

Figure 21
Residential Building Starts and Completions, and Investment in Residential Construction Index, 2010–2020:Q3 (quarterly data)



After home prices (according to the owner-occupied dwellings price survey) declined slightly in 2017–18, they again creased in 2019 and 2020, even during the period when there were fewer transactions due to the lockdown. The annual rate of increase in the Housing Price Index, an index that is largely based on rental prices, tended to increase in 2019 and the beginning of 2020, but slowed since March 2020 (Figure 22), in view of the high unemployment rates. In order to deal with the difficulties in the housing market, the government lowered the purchase tax on those purchasing a second apartment or beyond (defined as investors) from July, thereby increasing demand of home purchases among them. Another contributing factor to this trend was the decline in the mortgage interest rate (Section 2.3.2), mainly on the unindexed

³⁴ According to Central Bureau of Statistics real-time surveys (Wave 7), about 40 percent of the surveyed companies in the construction industry noted demand as a constraint on their operations. It is important to remember that the lockdown also lowered the possibility of looking for homes, and the decline in demand that the companies experience during the second quarter was temporary and does not indicate long-term changes in demand. However, transaction data show that the impact of the second lockdown, which began in mid-September, was weaker than that of the first lockdown.

tracks where the interest rates declined to levels that were even lower than those that prevailed before the crisis.

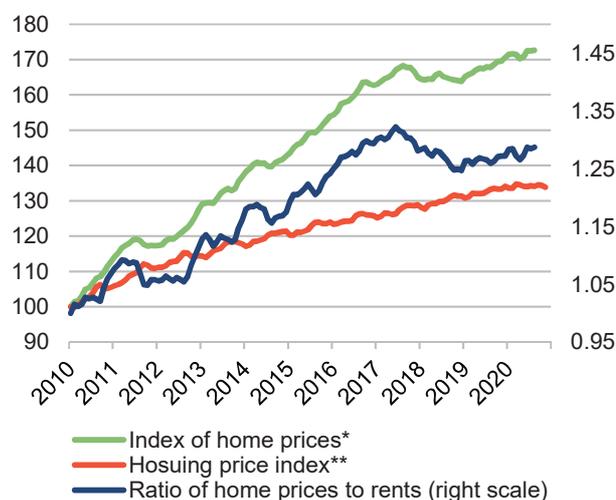
In the short term, mainly in view of the high unemployment rates, the slowing trend in the increases of housing service prices due to the crisis will continue for some time, and will mainly be reflected in the Housing Price Index—rents. In the longer term, in view of the decline in investment in residential construction during the crisis, our assessment is that the growth in surplus demand will increase due to the difficulty in adjusting supply to changes in demand.

In December, the Banking Supervision Department published a directive regarding the cancellation of the restriction on the prime interest rate component of the mortgage and making do with a restriction on the variable rate component. Under the new rules, at least one-third of the total mortgage will be given at a fixed rate, with the type of interest on the remainder being decided by the borrowers without any restriction. The implementation of the directive, which will begin gradually in January 2021, is expected to lower the cost of mortgages to some extent, thereby leading to an increase in the volume of mortgage refinancing and of demand for home purchases.

An examination of the long-term pace of construction shows that the supply of homes is not managing to meet the increase in demand in the long term, taking population increase into account. The ratio of active residential construction area to population³⁵ began to decline at the beginning of 2017, with the decline increasing during the COVID-19 crisis, to very low levels (Figure 23). These developments show that demand pressure, which beyond the short term is influenced by developments in the health crisis, will remain the dominant factor in the housing market, and may even increase.

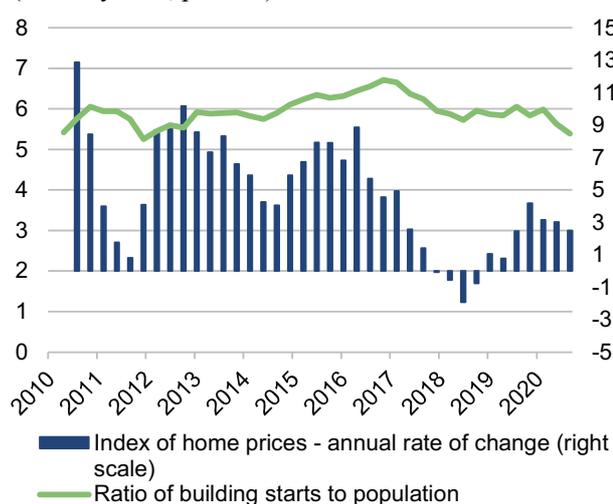
³⁵ This ratio measures building starts by area and not by housing units. In view of the increase in area of the homes being built in recent years, measuring by unit is expected to generate an even lower result than what is presented in the Figure.

Figure 22
Index of Home Prices, Index of Housing Prices (new and renewing rental contracts) and the Ratio between Them, 2010–November 2020
(seasonally adjusted monthly data)



* Survey data, owner-occupied dwellings, revised to September.
** The housing component of the Consumer Price Index.
SOURCE: Based on Central Bureau of Statistics.

Figure 23
Ratio of Building Starts (sq.m) (sum over four quarters) to the Israeli Population (thousands), and Rate of Change in the Index of Home Prices, December 2010–2020:Q3
(monthly data, percent)



SOURCE: Based on Central Bureau of Statistics.

The commercial real estate market

Since there are no proper statistics in Israel on commercial property prices, which mainly include offices, commerce, and manufacturing facilities—contrary to other advanced economies, which include hotels in this category—it is difficult to track and analyze developments in this market on a current basis. Due to the crisis, which hit most industries in the business sector, it is very important to monitor the changes in this market, particularly in rental fees.

The main risk factors to the resilience of the financial system come from the combination of ownership of these assets, which is characterized by high leverage rates, and the sharp volatility of commercial real estate prices, which are directly affected by economic activity. Box 2 examines the developments in this market on the basis of the prices of commercial real estate companies' financial assets and the financial statements they publish. The box shows that the rate of losses from the revaluation of commercial real estate companies' assets in the first three quarters is just one percent, and some differences can be identified according to type of property (offices, commerce, or manufacturing).³⁶ If the profitability and cash flow declines being absorbed by the companies during the crisis³⁷ continue beyond expectations, or if tenants' tastes change, or if their bargaining power increases (as tenants leave real estate areas), our assessment is that the losses from the revaluation of commercial real estate companies' assets will increase.

2.3 Credit to the private sector

	H1:2020	H2:2020
The business sector		
The household sector		

The development of credit in view of the COVID-19 crisis was not uniform across the various sectors. Government assistance, particularly the establishment of State-backed credit funds and the Banking Supervision Department's loan payment deferral outline, had a very significant impact on it.

From the start of the year, and particularly since the start of the crisis in mid-March 2020, until the end of October, private credit increased by a negligible amount (0.2 percent), but the trends in the various sectors were not similar. In the business sector, bank credit increased while nonbank credit declined to the point that it offset the growth of debt to the banks. In the household sector, credit increased due to the marked increase in housing credit and in view of a contraction in nonhousing credit.

The various indicators point to an increase in borrower risk. The most prominent such indicator is the volume of deferrals of loan repayments to the banks. The balance of credit in respect of which payments were deferred was about NIS 161 billion, accounting for about 16 percent of outstanding bank credit, and 41 percent of this amount remained in deferral as of November 30, 2020. Deferral data in the business sector

³⁶ It should be noted that commercial assets are generally revalued according to an approach that discounts future cash flow (DCF). This approach takes into account that the assets generate cash flow for an infinite range of periods.

³⁷ Partly as a result of the leniencies issued to tenants. For more information, see Box 2.

indicate that the crisis's impact is greater the smaller the business is, a finding that joins other indicators that point to the vulnerability of small businesses. In the household sector, borrowers of more than half of mortgages and consumer loans that were in deferral have resumed payments, but the volume of mortgages still in deferral remains high.

Despite the increase in risk and the impact to the resilience of some borrowers, the crisis has so far not led to the realization of many credit risks. Government and Bank of Israel support made it easier for businesses and households, but it cannot continue for an unlimited time. If the crisis worsens and continues beyond what is expected, many more credit risks are likely to be realized.

2.3.1 Credit to the nonfinancial business sector

Credit trends

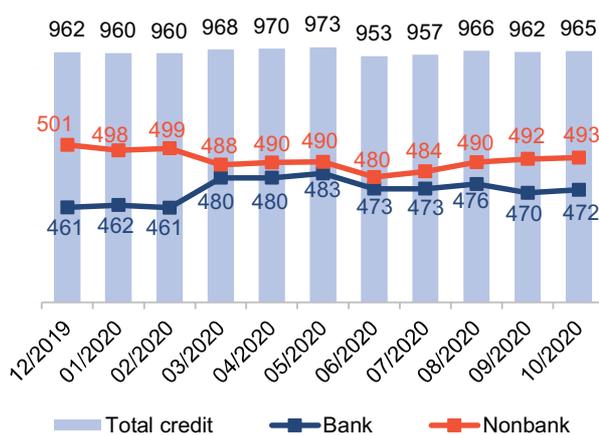
In first ten months of the year, credit to the business sector increased slightly (about 0.3 percent), and between March and October, there was a marked difference in trends between bank credit and nonbank credit (Figure 24). **Bank debt** increased since the start of the year by 2.5 percent, despite a cumulative decline of about NIS 10 billion in the second and third quarters. Most of the increase was in March, at the start of the crisis. In contrast, there was negative growth in **nonbank debt**, which continued through most of the period until June. This was mainly due to a decline in loans from nonresidents³⁸, and partly due to a decline in loans from institutional investors. From the end of June until the end of October, the trend of nonbank debt changed, due to an increase in tradable bonds in Israel and abroad. With the exit from the first lockdown, the ratio of business debt to business sector output increased by about 2.3 percentage points to 94.5 percent, due to the decline in business activity during the lockdown, with the attendance increase in debt. Later on, with the decline in debt in June, the ratio declined slightly, but at the end of October it stabilized at 95 percent, higher than it was prior to the crisis.

In terms of the cost of debt, at banks, the average interest rate on credit³⁹ to large and medium businesses between April and September (2 percent and 2.7 percent respectively) remained similar to the average level in the 12 months prior to the crisis. The lack of significant change can be explained by the fact that large businesses have other options to raise debt, which did not decrease with the decline in yields in the market. In contrast, the interest rate in the small and micro business sectors declined by about 40 basis points,

³⁸ Nonresidents' share of total business credit was about 14 percent at the end of September, down from its precrisis level of about 16 percent. The decline was due both to loans from foreign financial institutes and credit from suppliers, at similar rates.

³⁹ The unindexed segments.

Figure 24
Business Sector Bank and Nonbank Debt* and Total Credit, December 2019–October 2020
(monthly data, NIS million)



* Bond balances (under nonbank credit) in terms of registered capital. Nonbank credit includes credit provided by the credit card companies (that is not backed by the banks), and indirectly includes credit provided by other nonbank credit corporations (through their financing sources).

SOURCE: Based on reports by financial institutions and businesses to the Bank of Israel, financial statements, and the Tel Aviv Stock Exchange.

to about 3.5 percent. This decline does not indicate a decline in risk, but is explained by government and Bank of Israel programs that encourages the provision of credit at low interest rates (up to about 3 percent). There was also a downward trend in nonbank credit providers (credit card companies and publicly traded companies)⁴⁰, which provide credit mainly to small and micro businesses, mainly in the second quarter, even though most of them are not participating in government programs, but this decline was offset in the third quarter.

Bank credit

There was a marked difference in trends between large businesses and small and medium businesses during the crisis.⁴¹ Credit to the large business segment increased by about 6.4 percent over the first three quarters of 2020. At the end of the first quarter, with the start of the crisis, credit to the large business segment increased by about 11 percent and was the main source of the growth in bank credit, while toward the end of the second quarter, it declined by about 6 percent. One possible explanation of this development is that at the beginning of the crisis, when debt prices in the capital market were high (as detailed in the financial assets section), large businesses utilized their credit facilities⁴² out of concern that the price of bank debt would increase and the supply of credit would decline, and during the second quarter, as certainty increased and yields on the capital market declined, they paid off that debt. In the third quarter, the balance of credit again increased in accordance with the average quarterly growth rate (about 2 percent).⁴³

Credit to the small and medium business segments grew, mainly in the second quarter, to a large extent thanks to the establishment of State-backed credit funds⁴⁴, but at the end of the third quarter, the volume of credit declined. Thus, the rate of increase from the start of the year totaled about 1.4 percent. As outlined below, credit totaling about NIS 21 billion was provided to small and medium businesses through these funds, while the balance of credit increased by only one-fifth of this amount (NIS 4 billion), which may indicate that a considerable part of the loans issued through the funds enabled small and medium businesses to recycle their debt.⁴⁵

The construction and real estate industry was most prominent industry in this regard, accounting for a

⁴⁰ This may be a result of a decline in demand from credit from these institutions, because the terms of credit in funds are easier, but also because of the provision of credit to less risky businesses, as a result of credit rationing, as reported by several of the companies.

⁴¹ Based on credit to the business sector from the five large banking groups, excluding Union Bank.

⁴² An analysis of industries shows that this phenomenon—expanding credit in the first quarter followed by declining credit in the second quarter—is particularly prominent in the manufacturing, information and communications, and electricity supply industries, and to a certain extent in the trade industry. The outstanding credit of these industries increased by NIS 12 billion at the beginning of the crisis, but declined thereafter to NIS 7.5 billion. It should be noted that small and medium businesses were much less able than large firms to utilize credit facilities. We therefore see this phenomenon mainly among large companies.

⁴³ The quarterly growth rate of credit to large companies was about 2 percent in the past two years, while the quarterly growth rate of credit to small business was about 1 percent.

⁴⁴ At the beginning of the crisis, small and medium businesses reported an increase in the severity of credit constraints (financing difficulties), which moderated thereafter with the establishment of the funds. Credit issued to small businesses as part of these funds accounts for about half of new credit (for a term of more than one year) issued by the banks to small businesses during this period.

⁴⁵ Under the likely assumption that loans in the funds will not be redeemed because they were issued for a period of more than one year.

major portion (about 90 percent) of the increase in business credit during the first three quarters of the year. The balance of credit to this industry was about one-third of the banks' balance-sheet business credit (see Table 5 below). Credit to the **construction** industry increased by about 8 percent, and credit to the **real estate activity** industry (which mostly involves commercial real estate) grew by about 7 percent. In annual terms, these rates are somewhat anomalous⁴⁶ (9 percent and 11 percent, respectively). As described in Box 2, the companies in the commercial real estate industry absorbed a decline in their profitability and their cash flow.⁴⁷ The increase in financing sources and in leverage may therefore have been intended to make it easier for them by reducing cash flow difficulties.

Another industry that was impacted by the crisis is the hospitality and food industry.⁴⁸ Its outstanding credit increased by about 17 percent (about NIS 2.5 billion)—a particularly anomalous increase, since the average rate of change in credit to this industry has been negligible since 2016. It is likely that during the crisis, credit to the industry was issued in order to moderate the impact to the companies in the industry, an impact which led to liquidity difficulties among these companies. If so, it is possible to conclude that the growth in business credit to some of the industries during the crisis was directed to dealing with liquidity difficulties and less so to sustainable growth. As such, if the crisis worsens, the relative growth rate of credit may turn into losses.

The opposite trend was observed in the **financial services** industry (excluding credit to institutional investors and to holding companies). Outstanding credit in this industry declined by about 8 percent (about NIS 4 billion), because of the slowdown in activity of credit card companies and nonbank credit providers. (A resilience analysis later in this Report shows that the financing sources of these credit providers—mainly the banking sources—declined due to the crisis.) It is also possible that leasing companies, which are classified in this industry, took out less banking credit in view of the decline in their activity.

State-backed credit funds

Due to the COVID-19 crisis, the State established guaranteed loan funds totaling about NIS 46 billion (Table 3)⁴⁹, which total about 5 percent of total credit to the business sector. The main credit suppliers in these funds are the seven large banks. The largest fund in this respect—the **fund for small and medium businesses on the ordinary track**—reached full utilization (NIS 18 billion) at the end of September, and was therefore expanded by an identical amount at the beginning of October. But since the end of August, the number of credit requests submitted to the fund has declined—perhaps because most of the businesses with the potential to obtain a loan (according to the terms of the fund) had already utilized their right to do so by that

⁴⁶ In the construction industry, the average annual growth in 2018-19 was about 11 percent (although most of the growth in 2018 is explained by regulatory changes, so this average is also somewhat anomalous), while the average growth in the real estate activity industry during those years was about 7 percent.

⁴⁷ Due to leniencies issued to tenants in their properties as a result of the crisis.

⁴⁸ The banking system's exposure to this industry is not high—about 3.5 percent.

⁴⁹ During December 2020, the Accountant General decided upon a series of changes to the funds' activity in order to expand assistance to businesses. Among these changes, the minimum conditions required as part of the increase risk track were changed, the loan size to businesses was expanded.

point.⁵⁰ At the end of June, **the fund for small businesses at increased risk** was established, totaling about NIS 4 billion. Its utilization rate is lower—perhaps due to more stringent criteria than the ordinary track fund (new businesses and businesses that were significantly impacted by the crisis). In addition, a **fund for large companies** was established, in which the utilization rates are even lower, the number of requests for the provision of credit is low, and the growth rate is negligible. This is apparently explained by the fact that the large companies benefit from better financing sources, since yield declines in the capital market enabled them to raise debt from nonbank sources as well. (See the analysis of bond issuances later in this chapter.)

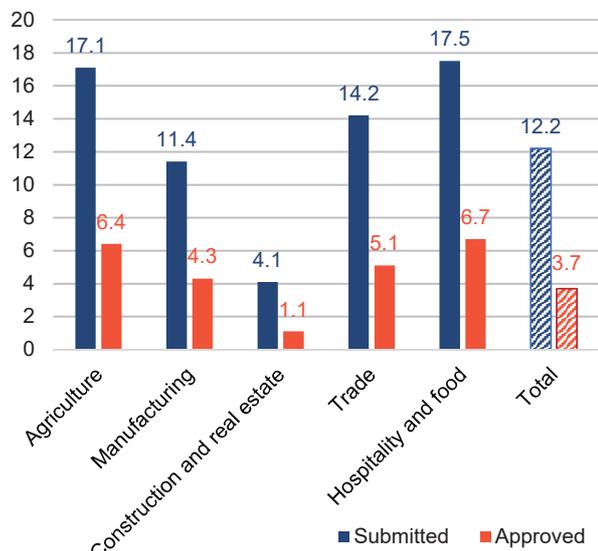
Table 3
Total activity of State-guaranteed credit funds, as of November 22, 2020

Fund track type (number of requests submitted)	Level of guarantee in the fund	Total facility in the fund (NIS billion)	Approved so far (NIS billion)	Utilization rate	Percentage of requests approved		
					In terms of quantity	In terms of amount	
Fund for small and medium businesses	Regular track (97,123)	15%	36	19.3	54%	58%	32%
	At-risk track (3,922)	60%	4	1.7	43%	82%	48%
Fund for large businesses (73)	12%	6	1.4	23%	51%	48%	
Total		46	22.4	49%	58.60%	33%	

SOURCE: Based on reports to the Banking Supervision Department.

In the fund for small and medium businesses on the ordinary track, the ratio between requests submitted (in amount terms) and the balance of bank debt is higher than 12 percent, but less than one-third of the requests (in amount terms) has been approved, accounting for 3.7 percent of outstanding bank debt (Figure 25). In the hospitality and food industry and in the agriculture industry, the ratio between request amounts submitted and approved and bank debt to these industries is higher than in the rest of the industries. This means that they obtained credit beyond their share of the distribution of bank debt. This shows that the increase in credit in those industries was mainly intended to deal with the worsening in activity and not for recycling debt. The same is true in the trade industry, but at lower rates. In contrast, in the construction and real estate industries, loans in the fund account for a lower share of the

Figure 25
Industry Distribution of Submitted and Approved Loan Requests from the Small and Medium Business Fund, Compared with the Industry Distribution of Bank Credit to Businesses, 2020:Q3
(totals, percent)



SOURCE: Based on published financial statements and reports to the Banking Supervision Department.

⁵⁰ In general, once the request is approved, an additional request cannot be submitted. However, if the business received only part of the amount to which it was entitled (according to the terms of the fund), it can submit a request for a complementary loan such that, as part of the fund, the business can obtain a loan from up to two financing institutions. The request for a complementary loan can be submitted immediately upon receipt of the original loan. Likewise, if the request is rejected, an additional request can be submitted to a different financing entity (including the fund for businesses at increased risk).

industry's total debt. This may be due to the fact that a main part of bank debt to these industries is to large companies, so the comparison to the industry distribution of total debt is biased.

The Bank of Israel's monetary loan program

With the aim of encouraging the supply of bank credit to small and micro businesses, the Bank of Israel began in April to issue 3-year loans to the banking system at a fixed interest rate of 0.1 percent. As part of the program, the Bank allocated NIS 19.6 billion until the end of December, 2020. Against these loans, the banks reported the provision of credit to small and micro businesses totaling NIS 34 billion. The credit issued as part of this program is not a replacement for credit from the State-backed loan funds (and it may be issued in parallel). This is in order to encourage the supply of credit and to support the accommodative monetary policy. However, since credit to small and medium businesses increased by only NIS 4 billion in the first three quarters of 2020, our conclusion is that a major part of this program and of credit from the funds enabled the recycling of debt. Toward the end of October 2020, the Monetary Committee decided to launch a new component of the program to make credit to small and micro businesses easier, totaling up to NIS 10 billion. This component will be operated until the end of June 2021. As part of this component, the Bank of Israel will provide the banking system with 4-year loans at a fixed interest rate of -0.1 percent.

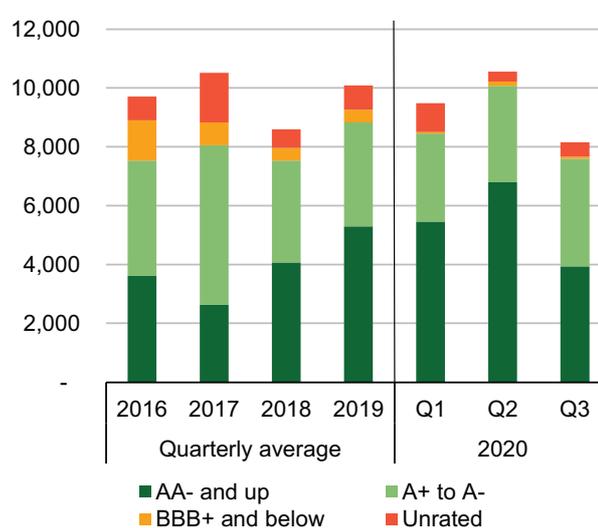
In addition, as part of the expansion of the set of monetary tools, the Bank of Israel announced in December 2020 that it would begin making repo transactions with nonbank credit providers under its supervision (credit card companies) or under supervision of the Capital Market Authority, subject to the provision of credit to small and micro businesses.⁵¹

Nonbank credit

Nonbank business credit totaled about NIS 493 billion in October 2020. This sum is divided into a number of segments, the main ones (other than nonresidents) being corporate bonds and loans from institutional investors. In the years prior to the crisis, another channel of nonbank credit providers began to develop, which increased access to credit for small and medium businesses.

The credit provided by the **institutional investors** totaled about NIS 82 billion in October—a decline of about 5 percent compared with the start of the year. In the months preceding the crisis, this channel of credit, which is mainly provided to large businesses, increased by high rates—an average annual rate of about 6 percent in the previous 2 years.

Figure 26
Real Sector Bond Issuances by Ratings Group,
First Three Quarters of 2020 Compared with
the 2016–2019 Quarterly Average (NIS million)



The quarterly average is calculated by dividing total issuances in each of the years 2016 to 2020 by 4.

SOURCE: Based on Tel Aviv Stock Exchange data.

⁵¹ For more information, see <https://www.boi.org.il/en/NewsAndPublications/PressReleases/Pages/13-12-20.aspx>

Corporate bonds⁵² of the nonfinancial sector: In the first quarter of the year, there was an apparent decline in bond issuances on the Stock Exchange relative to the quarterly average of previous years, a result of the almost complete halt to such issuances in March with the start of the crisis. However, during April, there was an increase back to the monthly average level of issuances, which continued in the following months and was prominent in the second quarter of the year (Figure 26). In contrast, there was some slowdown in issuances during the third quarter, despite the launch of the Bank of Israel's corporate bond purchasing program⁵³, with the total volume of issuances being lower than the quarterly average of the previous years. Data from the beginning of the fourth quarter (October) indicate an increase, again, to the monthly average of issuances (slightly more than NIS 3 billion).

In the two quarters following the outbreak of the crisis (the second and third quarters of the year), most issuances (about 94 percent) were rated A- and above, which is higher than the average between 2015 and 2019 (about 84 percent). This is because the yield spreads of the high ratings groups returned to their precrisis levels, while those of the lower ratings groups did not. The construction and real estate industry (and particularly commercial real estate companies) were prominent in this, being responsible for about two-thirds of issuances during the first nine months of the year. This is both a result of the high expectations of redemptions in 2021, and due to the decline in activity, which led to some increase in corporate leverage (see Box 2). The background for the maintenance of a relatively high average level of issuances in general (about NIS 29 billion) during this period is the expectation of high redemptions (about NIS 34 billion) in the nonfinancial sector in 2021, compared with NIS 31 billion in 2020 and NIS 29 billion in 2019.

Nonbank credit providers to small and medium businesses⁵⁴: In contrast with the rapid positive growth that was typical of the precrisis years, there was a decline of more than one-fifth (about NIS 1.8 billion) in the balance of credit provided by these institutions in the first three quarters of 2020. Figure 27 shows that the main part of the decline during this period was in one publicly traded company (the largest of them, in which the balance of credit declined by more than one-third relative to 2019—about NIS 1 billion), while there was a decline of roughly NIS 500 million (about 20 percent) among the credit card companies. The other publicly traded companies showed a decline of about 9 percent in their balance (a decline that was mainly due to a company that held the second-largest credit portfolio). This result can be explained by the parallel processes of a decline in demand for nonbank credit and the limitation of credit (“credit rationing”) to relatively risky customers.⁵⁵

The risk profiles of the borrowers in credit card companies and the largest publicly traded company are similar, and are considered less risky than the borrowers from other nonbank credit providers. (The indication of this that we have is the interest rates that the companies charge.) Some of the less-risky borrowers may have received a response as part of the State-backed credit funds and the Bank of Israel's program, which

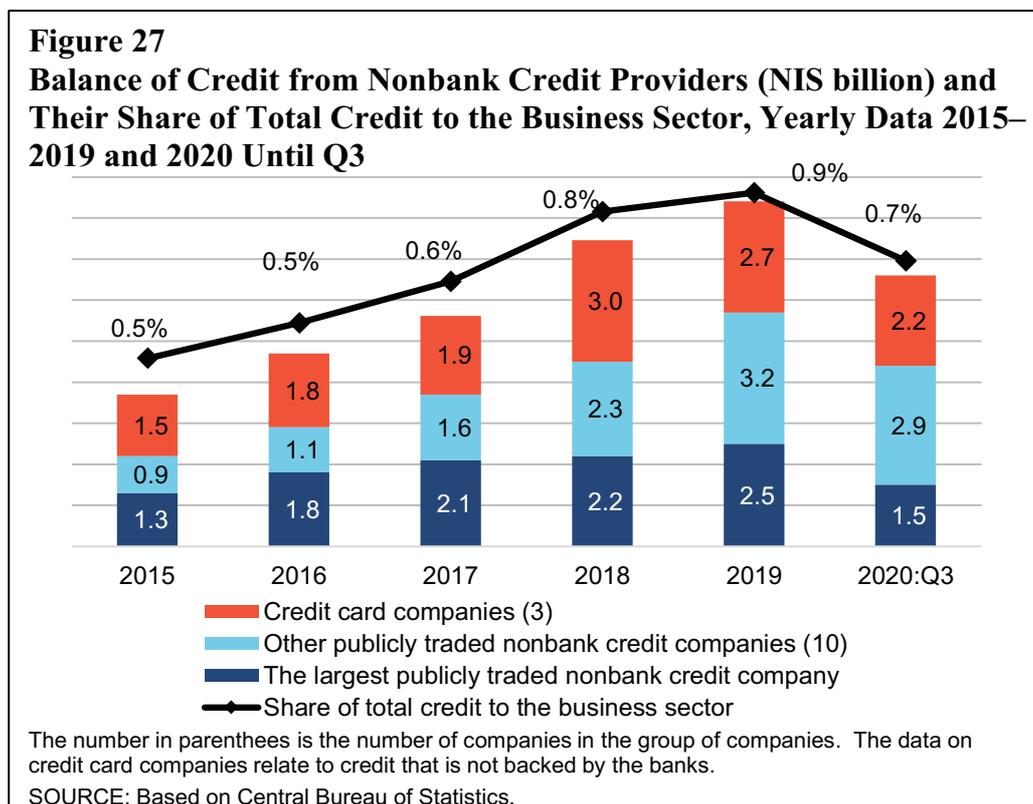
⁵² The analysis of bond issuances did not include structured, foreign, bank, insurance company, or government company bonds.

⁵³ The program launched at the beginning of July 2020, totaling about NIS 15 billion. Thus far, the Bank of Israel's intervention in the secondary market has totaled about NIS 2.5 billion. Its intervention in corporate bonds was negligible compared with its intervention in government bonds. Therefore, the intervention in government bonds at the beginning of the crisis contributed more to the decline in yields and the increase in issuances.

⁵⁴ There are two main credit providers that provide the public with available information—credit card companies and companies traded on the Stock Exchange that operate mainly in check discounting.

⁵⁵ The financing sources constraint for nonbank credit providers, in view of the short duration of their liabilities and the difficulty in recycling them during the crisis, may also have caused a decline in the supply of credit that they provide, at least at the outset of the crisis, when bond yields were high and reached double digits. (For an analysis of financing sources, see the chapter on the resiliency of nonbank credit companies later in this Report.)

encouraged the provision of credit to small and medium businesses under conditions that should be better than those offered by the nonbank credit providers. More risk borrowers, or those whose risk increased due to the crisis, likely did not receive a response as part of those programs or from the credit card companies or the larger publicly traded companies, due to credit rationing, and therefore approached the other nonbank companies that typically serve more risky customers.



The indicators of business sector activity and credit quality

In the first six months of the crisis, from March through August, about half of all businesses in Israel experienced some adverse impact relative to the same period in the previous year (Figure 28). The impact was stronger for smaller businesses and for those belonging to industries in which more stringent restrictions were imposed.⁵⁶ Among the businesses that were adversely affected, about 10.7 percent of them suffered significant declines in turnover (more than 50 percent) between March and August, and a further 4.2 percent experienced increasing declines in activity. It is important to also mention businesses that suffered from a sharp downward trend in activity only in July and August (about 10 percent of all businesses), even though government restrictions during those months were minor and activity in Israel was high compared with the previous months of the crisis.

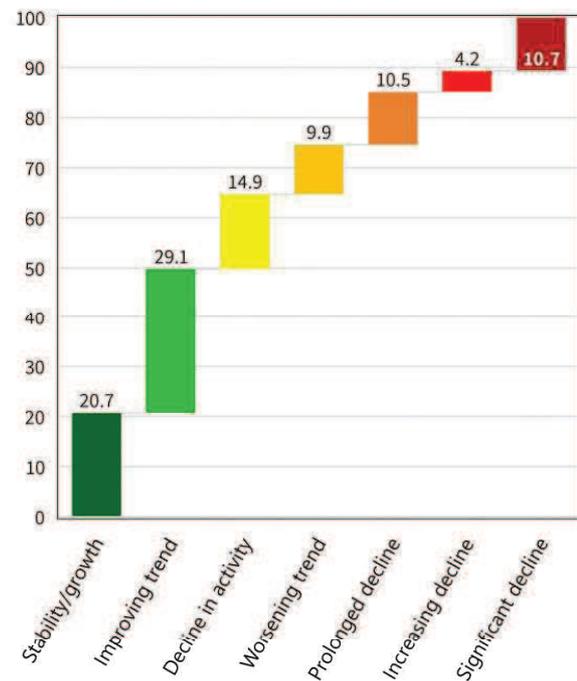
⁵⁶ By way of illustration, during these six months, an average of 43 percent of businesses with a turnover of up to NIS 300,000 recorded a decline in turnover of more than 40 percent. About 32 percent of businesses with a turnover of NIS 300,000–NIS 20 million recorded such a decline, and only 18 percent of businesses with turnover of more than NIS 20 million recorded a decline of more than 40 percent. The prominent industries in this regard are art and entertainment, hospitality and food, and transportation and storage.

Focusing only on July and August shows that there was a significant decline (more than 50 percent) in about 22 percent of businesses, including a decline reflecting a lack of activity (80 percent or more) in about 12 percent of businesses.⁵⁷ This amounts to about 65,000 active businesses among those that submitted reports to the Israel Tax Authority⁵⁸ for July and August, regarding which there is a high likelihood that the business will close, although they have not yet submitted a closure request.⁵⁹

The volume of payment deferrals⁶⁰: The volume of repayment deferrals in the banking system may indicate an increase in borrower risk in the business sector, and the vulnerability of small businesses is particularly prominent. The number of loans for which payment is deferred as of the end of November 2020 is about 49,000, most of which (about 46,000) are loans by microbusinesses.⁶¹ It is important to note that as of that date, the deferral period has ended on about 104,000 additional loans, and a small share (0.9 percent) of the deferred debt for which payment has resumed is still in arrears.

The balance of deferred credit to the business sector as of November 30, 2020 is about NIS 14 billion. This amount is about 3 percent of the total bank debt of the business sector, and it is clear that the smaller the business is, the greater the share of deferred credit is and the longer the deferral is. These two aspects are particularly prominent among microbusinesses (Figure 29 and Figure 45 in Section 3.1). It is important to clarify that the deferrals are not fully reflected in the banking system's credit

Figure 28
Rate of Businesses that Suffered a Decline in Transaction Turnover between March and August
(percent)



This figure is based on an Israel Tax Authority analysis of VAT data (published on November 18, 2020) relying on reports by businesses for three bimonthly periods: March–April, May–June, and July–August. The businesses were divided into **4 categories** (strong decline, moderate decline, stability, and strong increase) in each of the four periods, according to the rate of change of transaction turnover relative to the same period last year. We compiled the categories presented in the figure accordingly, as follows:

Significant decline relates to a strong decline in activity (more than 50 percent) over the three periods. **Increasing decline** relates to a moderate or strong decline in activity in March–April and May–June followed by a strong decline (more than 50 percent) in July–August. **Prolonged decline** relates to a moderate or strong decline in activity in March–April and May–June followed by a moderate decline in July–August. **Worsening decline** relates to a strong decline in activity (more than 50 percent) in July–August or two consecutive periods of decline in activity following a period of stability/growth. **Decline in activity** refers to businesses that experienced a moderate or strong decline that was not consecutive or in a clear trend. **Improving trend** refers to stability/growth in turnover following one or two periods of decline in activity. **Stability/growth** refers to a small decline in turnover (up to 15 percent) or growth in turnover.

SOURCE: Based on Israel Tax Authority.

⁵⁷ This means that in about 10 percent of surveyed businesses, the decline in activity was greater than 50 percent but less than 80 percent, and in 12 percent of businesses, the decline was greater than 80 percent. Combined, this amounts to 22 percent of all businesses.

⁵⁸ This analysis is based on an Israel Tax Authority survey for July and August. Among 635,000 authorized businesses, about 541,000 submitted reports for those months. The survey and the analysis were based on about 447,000 businesses (regarding which the data are comparable).

⁵⁹ According to Israel Tax Authority data, there were only about 14,000 businesses that closed between January and September, a decline of 33 percent compared with the same period in 2019. Together with the aforementioned 65,000 businesses the total is about 80,000 businesses, compared with an average of about 43,000 business that close each year.

⁶⁰ On May 7, 2020, the Banking Supervision Department announced a comprehensive outline for the deferral of loan repayments for a six-month period in order to assist bank customers in dealing with the ramifications of the COVID-19 crisis, and the banking system adopted the outline. The final date for submitting a request to defer loan repayments was December 31, 2020.

⁶¹ A business is defined as a microbusinesses if its operating turnover is less than NIS 10 million.

quality indices. (By way of illustration: the weight of deferred credit in small and micro businesses is about 5 percent of outstanding credit, while the loan loss provision as a share of outstanding credit for this segment in the first three quarters of 2020 was just 1 percent).

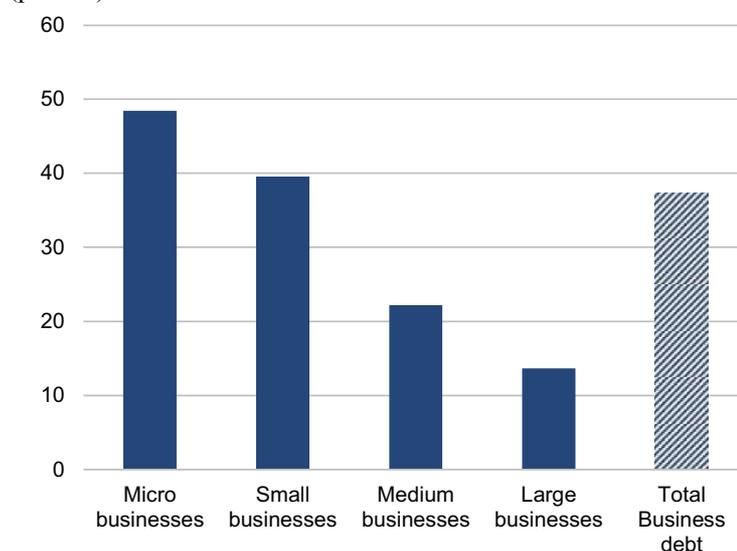
Returned checks⁶² data also show an increase in risk and a decline in activity in the business sector, particularly among small businesses. During the first seven months of the crisis, the number of checks presented for payment declined by about 25 percent compared with a period of the same duration in 2019, evidence of a decline in activity.⁶³

Returned checks accounted for 3.54 percent of checks presented for payment between mid-March and mid-October 2020, compared with 2.63 percent in the whole of 2019. At the beginning of the crisis, with the Banking Supervision Department's announcement at the end of March that the commercial banks and the Postal Bank would suspend restrictions on customers and on their bank accounts due to checks that were returned due to insufficient funds, the rate was high (more than 5 percent on average). But later on, the Banking Supervision Department published clarifications regarding the sanctions and the economic price of not covering checks. When the first lockdown ended, the number of returned checks declined, and stabilized at a rate only slightly higher than the rate in 2019 (an average of about 3 percent between May and October).

An examination of the reason for returned checks compared with the same number of months in 2019 shows that more than twice as many checks were cancelled (Table 4), which may indicate both a decline in business activity (for instance, the cancellation of checks to suppliers due to an expected decline in demand for goods) and a concern on the part of individuals and businesses of noncoverage of checks. There was a prominent increase in checks that were returned due to insufficient cover by small and large businesses, and a decline among individuals and sole proprietors, which indicates an increased risk among businesses.

Credit quality indices: The decline in business activity and the increase in vulnerability led to a certain increase in the likelihood of credit failures, as shown by the credit quality indices. In all activity segments, loan loss provisions increased compared with the same period in the previous year⁶⁴ (Figure 30). The rate of impaired debts and the rate of loan loss provisions were highest among small businesses, but the gap

Figure 29
Debt Deferred More than 6 Months as a Share of Total Deferred Debt, by Business Size, as of November 30, 2020
(percent)



* Divided into supervisory activity segments.

SOURCE: Based on reports to the Banking Supervision Department.

⁶² This analysis appears in the section on credit to the business sector because most checks—even those written by individuals—are payable to businesses. Out of all checks presented to the banks for payment, there are those that are returned to their writers, due to cancellation by the check writer, insufficient cover, improprieties on the check, and other reasons.

⁶³ However, some of the decline may be due to an increase in the use of cash and the shadow economy.

⁶⁴ In this section, quarterly data from previous years are analyzed, as opposed to the analysis presented in the section on the banking system.

Table 4
Number of returned checks (thousand), by reason for return

	Cancelled checks				Checks without cover			
	Individual and self-employed	Small businesses	Large businesses	Total	Individual and self-employed	Small businesses	Large businesses	Total
7-month relative portion of 2019 ^a	96	17	32	145	428	28	52	508
March–October 2020	173	48	89	310	394	43	74	511
Rate of increase compared with the relative portion of 2019	81%	187%	175%	114%	-8%	55%	42%	1%

^a Assuming that returned checks are distributed uniformly across the entire year.

SOURCE: Reports to the Banking Supervision Department.

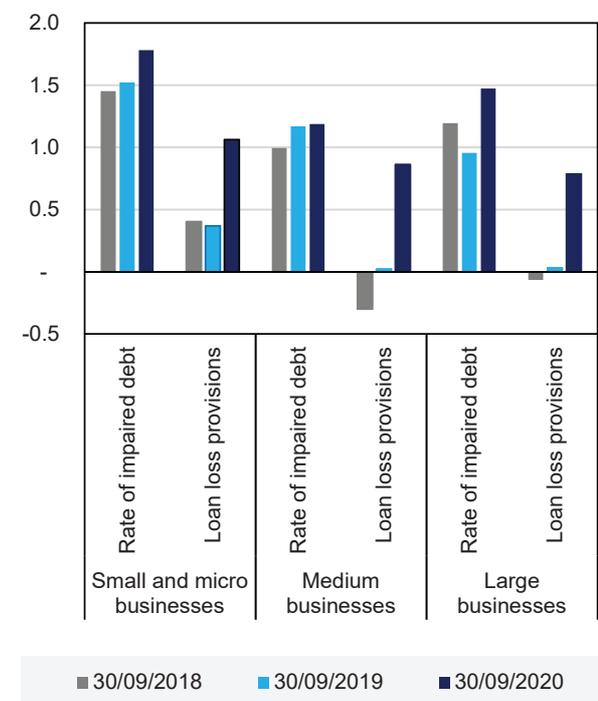
relative to the other business segments was small even though the small business segment recorded many more deferrals and the rate of credit in respect of which payments were deferred as a share of the credit portfolio was higher than in the other business segments. The decline in the credit quality indices among large businesses can be attributed to an increase in the risk of the mining and quarrying industry.

It should further be noted that among **nonbank credit providers** as well, the loan loss provision rate doubled, and it is similar to the rate among banks in respect of the small and micro business segment. This is even though the borrowers from nonbank credit providers are considered more risky (as seen by the difference in interest rates⁶⁵). These companies may have deferred payments to businesses that encountered difficulties, such that the deferrals were partly reflected in the credit quality indices.

An examination by industry shows that all of the business sector credit quality indices in the banking system, in almost all industries, declined in the first three quarters of 2020 relative to the same period in the previous year (Table 5). The most prominent

industry in this regard is mining and quarrying. It should be noted that in respect of most industries, the loan loss allowance is a group allowance. A possible explanation for this is that for the banks, the realization of risks of specific borrowers remains unclear, partly in view of the leniencies provided for businesses regarding the deferral of loan repayments. This can also be seen by examining the rate of write-offs (which, at this stage, has not increased excessively), and by analyzing the various credit quality indices. Thus, in

Figure 30
Credit Quality Indices, by Business Size*,
Third Quarter Data, 2018–2020 (percent)



* Divided into supervisory activity segments.

SOURCE: Based on published financial statements and reports to the Banking Supervision Department.

⁶⁵ Estimated as a two-digit number among nonbank credit companies and an average lower than 4 percent among the banks.

certain industries, the loan loss allowance increased, while there was no similar increase in problematic or impaired debt. (In this regard, the construction and real estate industry and the manufacturing industry are prominent. Together they account for about 44 percent of business credit from banks.)

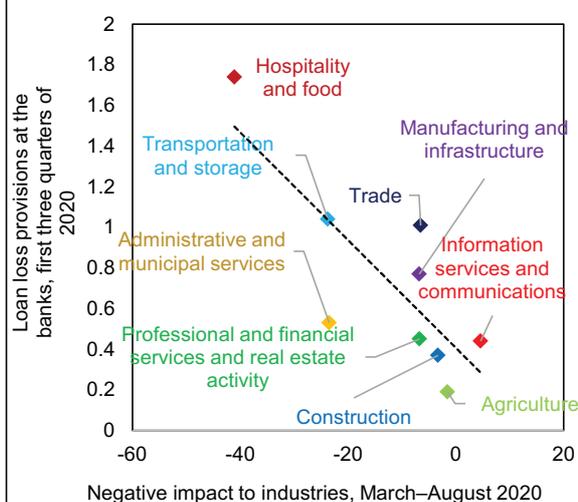
Industries in which there was a particular worsening of all credit quality indices include the trade, transportation and storage, and hospitality and food industries, which were heavily impacted during the crisis. The industry with the most significant share of total bank credit to the business sector is the trade industry (about 17 percent). Figure 31 shows that the impact to real activity is reflected in credit losses in the banking system (a high negative correlation of -0.8), but since most of the provision is, as stated, a group provision, it cannot be attributed to the realization of risks, and obviously not to the suitability of the provision.

Indicators of the resilience of public companies

An industry analysis⁶⁶ shows that the construction and development industry and the tourism and airlines industry are the most prominent industries in which profitability and repayment capacity declined. In contrast, neither the profitability nor the repayment capacity declined in companies in the trade industry (including the clothing and footwear industry), despite the restrictions imposed on the industry. In most companies, the aggregate leverage and liquidity were not impacted, and in some of them they even improved. The exception is the tourism and airline companies, which were the strongest hit by the crisis.

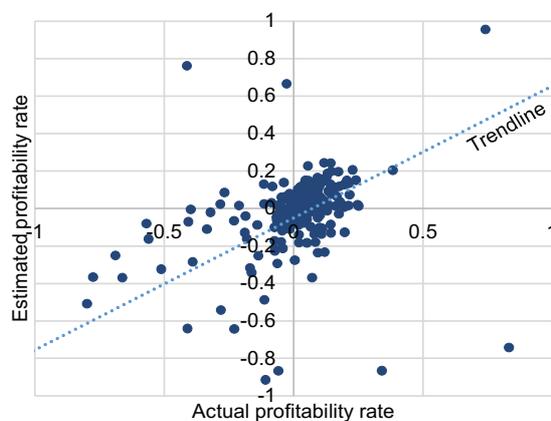
Box 4 of the Financial Stability Report for the first half of 2020⁶⁷ provided a forecast of the financial strength and liquidity of nonfinancial companies traded on the Tel Aviv Stock Market for 2020. That forecast has a high and positive correlation (correlation coefficient of 0.54) with the results of the first half of the year (Figure 32).

Figure 31
Loan Loss Provisions Relative to the Adverse Impact to Industries (percent)



SOURCE: Based on Israel Tax Authority and reports to the Banking Supervision Department.

Figure 32
Profitability Estimated as Part of the Model Analyzing Public Companies' Resilience Relative to their Profitability (actual N=280)



This figure shows the correlation between the results of nonfinancial public corporations in the first half of the year and their results of the model that estimated their robustness (Box 4, Financial Stability Report for the first half of 2020), under a scenario without an increase in financing expenses (since bond spreads returned to their precrisis levels) and without the government imposing additional restrictions (since the actual results reflect only the results of the first lockdown). The horizontal axis relates to the companies' ROE (net profit relative to equity to the start of 2020) normalized to the year. The vertical axis relates to the rate of impact to capital in 2020 as measured by the scenario.

SOURCE: Based on published financial statements.

⁶⁶ In this analysis, we omitted the commercial real estate industry, which is analyzed separately in Box 2, and the financial services industry, because we analyzed the nonbank credit companies separately in the section dealing with resilience.

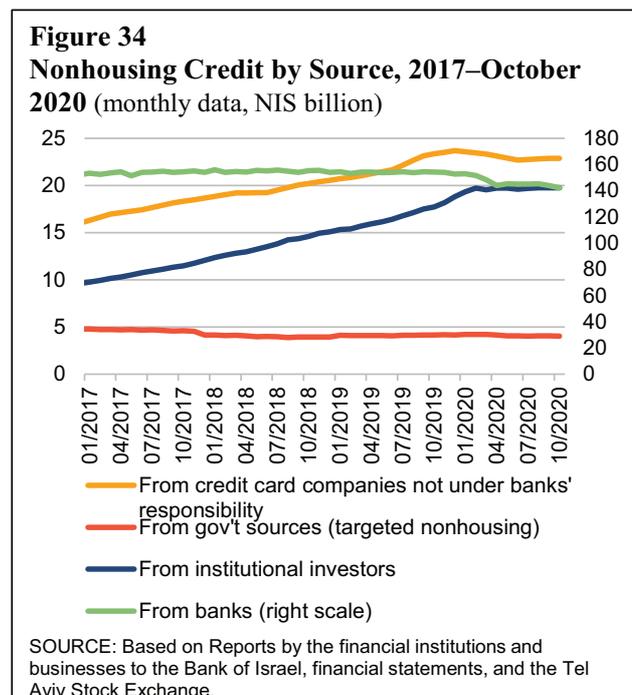
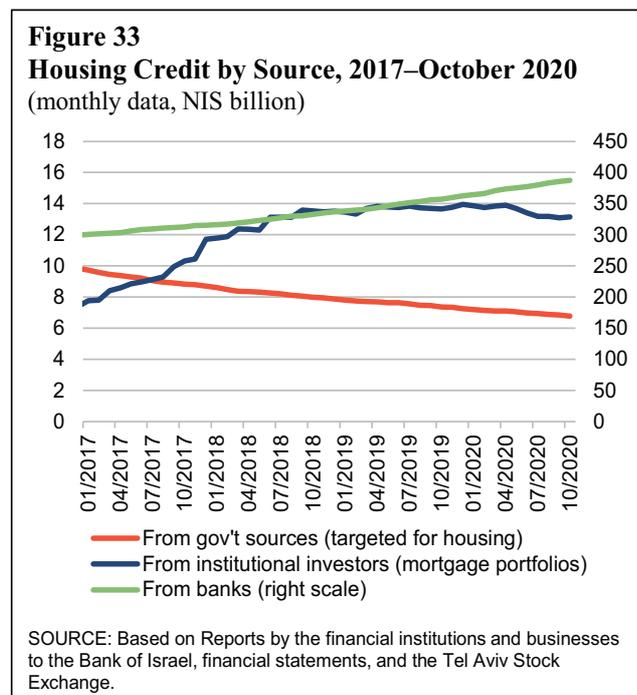
⁶⁷ See <https://www.boi.org.il/en/NewsAndPublications/PressReleases/Pages/11-8-20.aspx>

This means that the actual company results are in line with the results we obtained from the analysis in the box (from an industry standpoint as well⁶⁸), and they therefore allow us to rely on the same forecast in assessing the resilience of the publicly traded companies under various scenarios. It should be noted that in the more pessimistic scenario presented in the box, we saw that 70 percent of the companies are not expected to encounter difficulties in capital or liquidity distress. Against that, 8 percent of the companies, holding 3 percent of the total financial debt of the companies analyzed in the box, can be expected to suffer a significant impact to capital and liquidity.

2.3.2 Credit to the household segment

From the start of the COVID-19 crisis in Israel in March until October, credit to the household segment increased by 1.95 percent. Housing credit increased by 5.4 percent, while nonhousing credit declined by 4.8 percent (Figures 33 and 34). The number and volume of new mortgages from the banks increased sharply in March, out of concern of an increase in interest rates due to the crisis. The interest rate did increase on all tracks (Figure 35). Bringing new mortgage-taking forward and the decline in the number of housing transactions between March and May led to a temporary decline in new mortgage-taking, but already in June, with the marked decline in morbidity and the return of home buyers to the market, the volume of new mortgages taken from the banks exceeded NIS 6 billion. The interest rates on mortgages resumed their decline, in accordance with the decline in yields on bank bonds and thanks to the lowering of the Bank of Israel interest rate. On the unindexed tracks, rates even fell lower than the rates that prevailed prior to the crisis. Nonhousing credit declined among all types of lenders—banks, credit card companies, and institutional lenders.

Housing credit



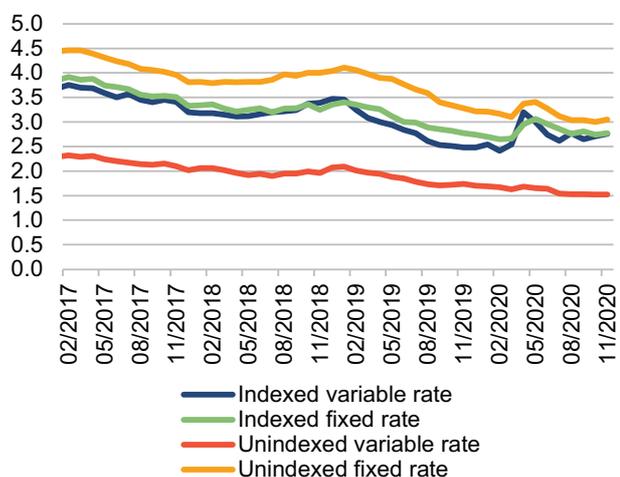
⁶⁸ Looking at industries, the model showed that companies from the construction and real estate industries can expect liquidity difficulties but no significant impact to capital. In contrast, companies in the tourism and airline industry can expect capital and liquidity difficulties. This finding is in line with the actual results described above.

The decline in morbidity, and the opening of the economy that began in May, generated optimism even though the number of unemployed and work absentees remained high. The rapid awakening of the housing market following the first lockdown may hint that buyers took advantage of the opportunities created during the crisis, but the stability of the Index of Home Prices throughout the period since the start of the crisis (despite monthly volatility) weakens this hypothesis. Another explanation is that the potential home buyers are people who were not impacted during the first lockdown. The crisis's effect on the various industries was not uniform, and weaker employees, who are concentrated in industries with relatively low wages, absorbed most of the impact, while the financial state of stronger employees did not deteriorate. This is apparently what explains the high demand for dwellings and for mortgages. An examination of new mortgage volumes by the prices of the dwellings for which they were taken supports this. While the mix did not significantly change, there was an increase in the rate of properties valued at more than NIS 2 million, and a decline in the rate of assets priced at less than NIS 2 million, between March and November 2020 relative to the pre-crisis period.⁶⁹

The total volume of new mortgages taken out between March and November, 2020, was about 14.6 percent higher than in the same period of the previous year, compared with an increase of just 2.8 percent in the number of mortgage transactions. This indicates some of the increase in the total volume of new mortgages since the start of the crisis is explained by an increase in the average mortgage size. This is partly due to the increase in mortgages with an LTV rate between 60 and 75 percent as a share of total mortgages during those months. The increase in new mortgage volume took place in view of the marked decline in the number of transactions in the housing market (a decline of about 7.4 percent between January and October compared with the same months in the previous year). Some of the conflict is explained by the fact that about 35 percent of the additional mortgage volume was due to mortgages intended to finance the purchase of dwellings as part of the Buyer's Price program. While home buyers in the program (similar to other buyers of homes currently under construction) can pay the developers according to progress in construction, and even among housing upgraders, and particularly upgraders in waiting (those who have not yet sold their existing home), it is common to defer payments, many may have recently brought forward their mortgage-taking after interest rates declined and stabilized at low levels.

Examining new mortgage volumes by purpose—purchase of an investment dwelling, purchase as part of the Buyer's Price program, mortgage refinancing from another bank, and other—a uniform trend can be identified: overshooting in March, reflected in a sharp increase in the volume of mortgages issued in

Figure 35
Interest on New Mortgages Issued During the Month, by Indexation Type and Interest Type, 2017–November 2020 (monthly data, percent)



SOURCE: Reports to the Banking Supervision Department.

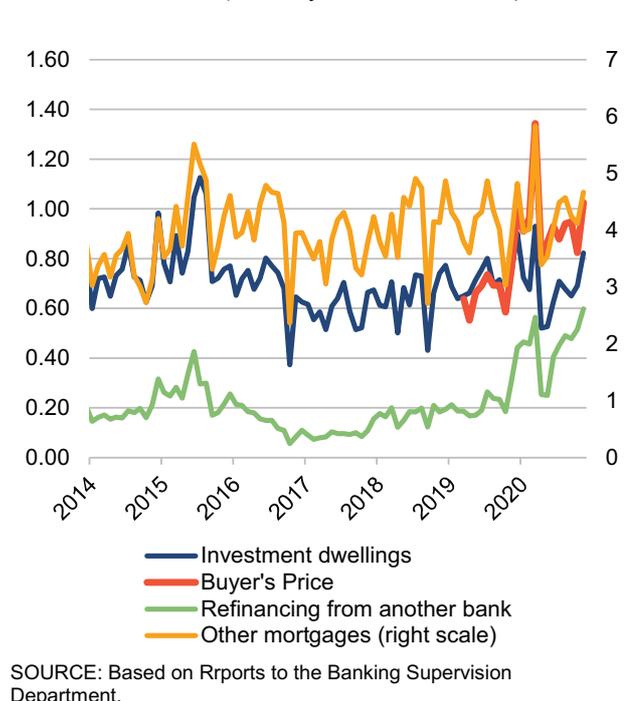
⁶⁹ Restrictions on movement in the public space and the transition to working from home apparently increased demand for dwellings that are larger, more spacious, and have special characteristics (such as garden apartments). It is reasonable to assume that the proportion of more expensive dwellings will also increase because, as stated, the purchasing power of stronger workers was impacted much less than that of workers with lower wages.

that month, and a sharp decline in April and May (Figure 36). Between March and November, the total volume of new mortgages increased by about 13.2 percent compared with the same period in the previous year. This growth was due to an increase of about 33 percent in new mortgage-taking as part of the Buyer's Price program (an expected phenomenon as the program advanced toward fruition), an increase of 7 percent in other mortgages, and an increase of about 108 percent in mortgage refinancing from different banks⁷⁰ (apparently due to the decline in interest rates following the decline in the Bank of Israel rate and its effect on the cost of raising long-term financing sources), combined with the 2.7 percent decline in new mortgage-taking for investment dwellings.

Housing market transaction data show that the second lockdown, which began in mid-September, did not have a similar effect to that

of the first lockdown. The number of dwellings sold in September 2020 was similar to that of September 2019. It is likely that optimism following the success of the vaccinations may lead to a rapid recovery of the economy, an increase in the number of housing transactions, and continued expansion of housing credit. The sale of dwellings that were auctioned as part of the Buyer's Price program will continue as building permits are issued. Even though the program has officially ended, there is a considerable accumulation of projects that were marketed in previous years and will continue to be built and sold. The purchase rights of those who won lotteries on dwellings and have lost their ability to finance the purchase will move to households that were registered for the lotteries but did not win. The demand for lower-cost dwellings increased as a result of the end of the program and uncertainty regarding the feasibility of alternative programs in the absence of a budget to finance the land.⁷¹ In addition, in recent months, many homes were sold out of the stock of homes available for sale without lotteries for those eligible under the program. Apparently, most of the buyers of these homes were housing upgraders.⁷² The reduction of the tax rate on the purchase of an investment dwelling, the low interest rate environment, and the expectation of continued demand for housing services on the part of households impacted by the COVID-19 crisis may lead to an upward push in demand for investment dwellings, and therefore for housing credit.

Figure 36
New Mortgages Taken Out, by Purpose, 2014–November 2020 (monthly data, NIS billion)



⁷⁰ The volume of mortgage refinancing at the same bank (which is not included in new mortgage-taking) between June and November 2020 was only about 43 percent higher than during the same period in the previous year. The preference for refinancing mortgages from a different bank is probably due to the activity of the Credit Data Register, the aim of which is to improve access to credit and lower its cost by sharing information between credit providers.

⁷¹ For instance, in mid-August, about 17,000 households registered for a follow-on lottery for 790 dwellings since there was no demand for them in previous lotteries.

⁷² These are dwellings whose developers had difficulty selling them to the winners of the lotteries due to their location in the periphery or due to their high prices as large or special dwellings. This stock declined to 1,404 in May 2020, and to 601 as of December 24, 2020 (a decline of 803 dwellings). At the same time, the number of housing upgraders defined as winners of a lower cost dwelling increased from about 2,200 to 2,749 (an increase of 549 dwellings).

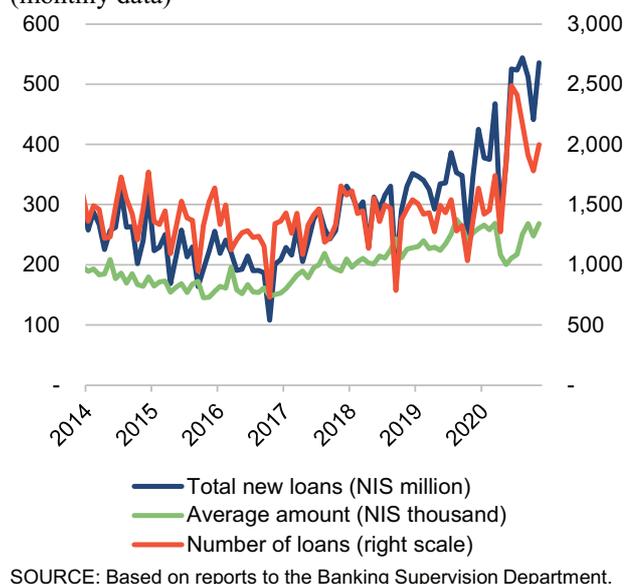
Nonhousing credit

Contrary to housing credit, the balance of nonhousing credit from all types of lenders, with the exception of institutional lenders, declined since the start of the crisis (Figure 36). This is apparently due to the decline in demand for consumer credit. The crisis's impact on employment and on the wages of many self-employed and of salaried employees forced them to lower their current expenses and to put off large purchases. The "closed skies" led many to forego vacations abroad, and the prohibition against operating event halls and the restriction on the number of participants in public events led to a deferral or cancellation of large family gatherings. In the first half of the year, private consumption declined by 22.5 percent in annual terms compared with the first half of 2019. The decline in the balance of nonhousing credit was not due to it becoming more expensive. While the interest rates at banks and credit card companies did increase at the beginning of the crisis, they declined thereafter and stabilized at a level that was lower than what it had been during the precrisis period, as did the spread from credit activity relative to the average balance of bank credit. Unlike credit from the banks and the credit card companies, credit from nonbank institutions declined in tandem with the increase in interest rates compared with the precrisis period. The increase in interest rates at nonbank institutions may have been due to their increased financing costs.

The argument that the decline in the balance of nonhousing credit was motivated by the decline in total demand for consumer credit is also supported by the fact that there was no increase in the relatively inexpensive loans, such as loans from institutional lenders (advanced training funds, pension funds, provident funds, and insurance companies). There was an increase in another type of relatively inexpensive loans—all-purpose loans backed by a dwelling—since the start of the crisis, particularly since June (Figure 37). In mid-March, the Banking Supervision Department permitted the public take out such loans with an LTV rate of up to 70 percent (on condition that the loans would not be used to purchase an investment dwelling), instead of the 50 percent restriction that was in place prior to the crisis. As a result, the rate of loans with a relatively high LTV rate increased, but this did not have a marked effect on the average size of the loan, which remained similar to what it was before the crisis.

The total volume of new loans increased due to the increase in the number of loans, but the amounts are relatively small. The average monthly volume of new loans between March and November is just NIS 126 million higher than it was during the same period in the previous year. These loans therefore make a small contribution to total credit, which is not comparable to the sharp decline in total nonhousing bank credit. In addition, we cannot rule out the possibility that some of the mortgages for which payments were deferred were used as a low-interest alternative to consumer loans. Therefore, the freeze was not necessarily due to an inability of households to continue servicing their housing debt, but we cannot assess the dimensions of this phenomenon. The only data that can help is that for more than half of mortgages for which payments

Figure 37
All-Purpose Loans Secured by a Residential Property: Total New Loans, Number of Loans, and Average Loan Size, 2014–November 2020
 (monthly data)



were deferred, the borrowers resumed normal monthly payments even though the crisis is still ongoing.

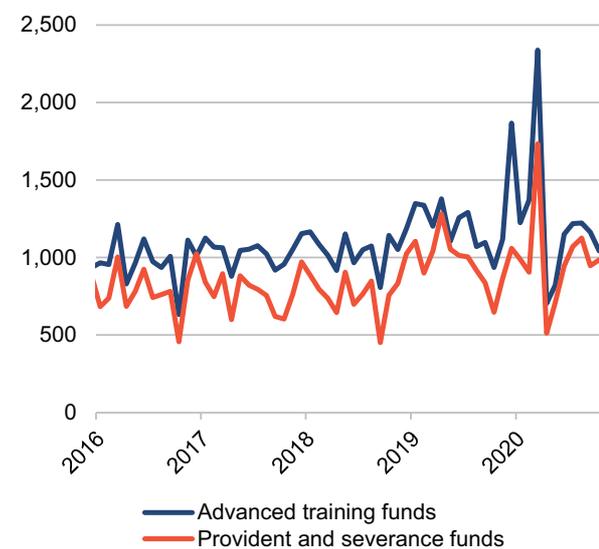
It is reasonable to assume that the decline in households' income will cause them to avoid taking out new credit and using previous savings—liquid funds in advanced training funds, provident funds, deposits, and so forth. In order to make it easier for the public, the Ministry of Finance even permitted the withdrawals of illiquid funds from the advanced training funds without paying capital gains taxes, but limited the withdrawal amount to NIS 7,500 for six months. Figure 38 shows that at the beginning of the crisis, withdrawal amounts from the advanced training funds and the provident and severance funds jumped, but that in the following months they declined sharply and then stabilized at the levels that were prevalent prior to the crisis. The withdrawals at the beginning of the crisis may have been mainly due to the public's concerns over losses due to stock market declines.

The average monthly withdrawal amounts in the two savings channels in 2020 are similar to the monthly average in 2019. This finding is not surprising, since these savings instruments are typical of households that belong to the high income deciles, meaning employees who were not adversely affected by the crisis or were affected only slightly, and therefore did not need to find additional sources of income. The only savings channel in which there were net withdrawals since the start of the crisis and that have still not recovered is mutual funds. However, this is apparently a result of the increased risk in the capital market. These funds may also have flowed to the housing market or to current account balances and deposits at the banks, as the increases in these channels indicate. All of these data support the assessment that the decline in nonhousing credit is led by the decline in demand.

A joint survey by the Bank of Israel and the Brookdale Institute⁷³ showed that about half of respondents changed their financial behavior. One-third of respondents reduced their deposits to savings, and one-fifth of respondents withdrew money from their savings (at higher rates among those dismissed or placed on unpaid leave, but also among the rest of the population). About one-tenth of respondents took out a loan from a financial entity, and a similar rate went into overdraft. Fourteen percent of respondents received monetary assistance from family members or friends. One-quarter of those who borrowed from a financial entity also required assistance from family members or friends.

Most employees who were dismissed or put on unpaid leave are apparently less in need of credit to finance their current expenses because they are receiving unemployment benefits, which are promised until June 2021.⁷⁴ This is in view of

Figure 38
Withdrawals from Advanced Training Funds and Provident and Severance Funds, 2016–October 2020 (monthly data, NIS million)



SOURCE: Based on reports from the institutional investors.

⁷³ S. Laufer, M. Haran Rozen, and S. Somekh (2021). "Israeli Households' Use of Financial Resources and Government Assistance During the COVID-19 Crisis", Myers-JDC-Brookdale Institute (forthcoming).

⁷⁴ In contrast to what is normally practiced—a gradual cut as the unemployment period continues—the government decided to cancel this cut.

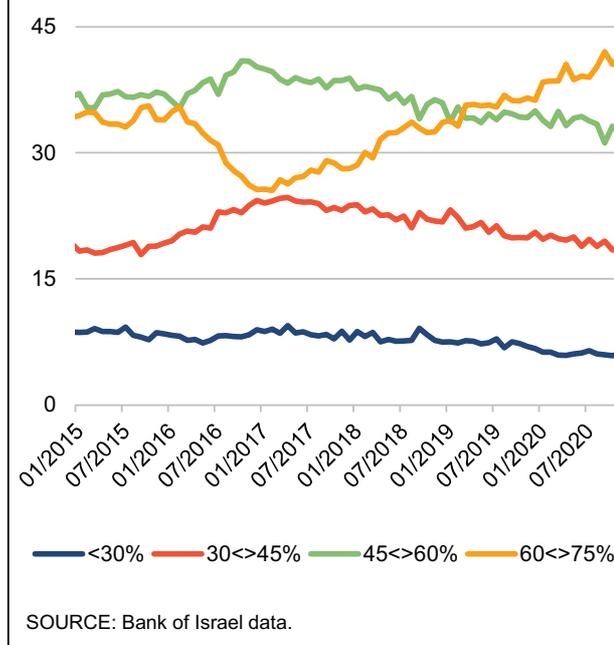
the reduced expenses, including in the areas of education, culture and leisure, tourism and recreation, restaurants, and so forth. The self-employed and business owners are supported by grants (even though the compensation given to them for the for their loss of income is only partial), and can obtain loans from the assistance funds for small and medium businesses backed by the State at easy interest rates. However, some population groups may be required to pay high interest on the credit, and it may be that some of those requesting credit are not receiving it. As a result, the Ministry of Finance recently issued a tender to banks to establish a dedicated fund for the provision of loans to those “excluded from credit” (individuals with low credit ratings due to past debts).

The risks in household credit

An examination of the risk indices in new mortgages shows that most of the risk indices (averages) did not increase, except for the estimated average mortgage size, which jumped from about NIS 700,000 at the end of 2019 to about NIS 800,000 in mid-2020. This was apparently due to the increase in the share of mortgages intended to finance the purchase of a first dwelling. A look at the distribution (rather than the averages) shows a worsening over time in other risk indices as well. The rate of mortgages with an LTV rate of between 60 and 75 percent increased consistently from about one-quarter of all mortgages at the end of 2016 and the beginning of 2017 to about 40 percent in 2020, at the expense of the rate of mortgages with an LTV rate of less than 60 percent (Figure 39), which declined. This is also a result of the increase in first-time home buyers as a share of mortgage borrowers. The distribution of the PTI rate also shows a marked increase in the rate of households with mortgages that have a PTI rate of between 30 and 40 percent of their income. This rate increased following the start of the crisis, following a decline in 2019 (Figure 40), and its increase in recent months reflects a decline in household income due to the crisis.

With new mortgages, the situation has, apparently, returned to routine, but the volume of mortgages in respect of which payment was deferred remains high. At the peak of the crisis in April and May, the volume of housing debt under deferral reached about one-quarter of all housing debt, but thereafter, payments began to thaw, and in July, the rate of outstanding housing debt under deferral (“grace”) declined to about 11.5 percent (compared with 3.4 percent before the crisis). The start of the second wave led to a renewal of deferrals, but at a lower volume, and in November, the rate of mortgages under deferral was 13.3 percent. According to data revised to the end of November, payments were renewed in about 56 percent of housing loans under deferral and in about 52 percent of nonhousing loans under deferral. The balance of housing

Figure 39
Distribution of Total New Mortgages Issued During the Month, by LTV, 2015–November 2020 (monthly data, percent)

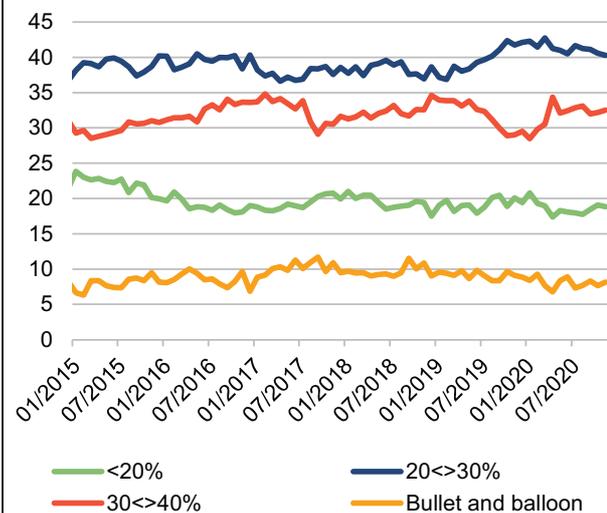


credit under deferral due to the crisis is about 10.8 percent, while for nonhousing credit the balance under deferral is about 4.1 percent. Due to the second lockdown, the Banking Supervision Department announced a continuation of the deferral outline. The period in which a request for deferral could be made was extended to the end of 2020, and the deferral period for new requests is half a year. Anyone who froze payments at the start of the crisis could continue the deferral period until the end of the year (up to nine months in total).⁷⁵

Debt deferral arrangements prevented many customers from falling into arrears on their payments, and prevents the banks from classifying such loans as problematic debt or debt in arrears. However, at the beginning of the crisis, the banks markedly increased their loan loss provisions due to the increase in the risk level in the economy and due to expectations of the realization of losses following the end of the deferral period. Figure 41 shows a sharp increase in loan loss provisions relative to the balance of credit, both housing and nonhousing, already in the first quarter of the year, an even sharper increase in the second quarter relative to the same periods in previous years, and moderation in the third quarter.⁷⁶

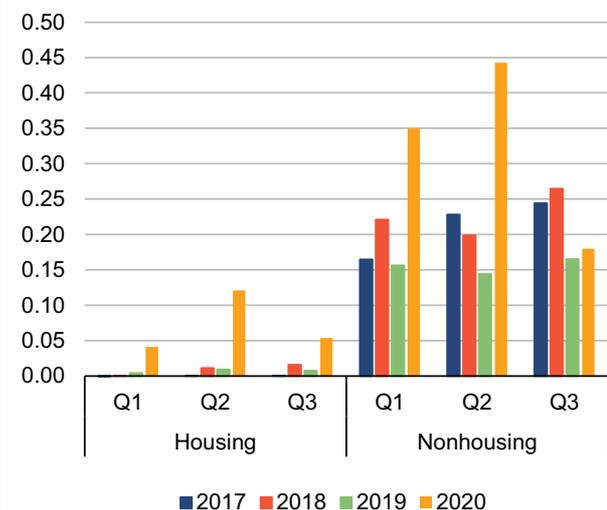
There was a similar phenomenon in the behavior of the credit card companies regarding loans to households and their credit card debts (Figure 42). However, as opposed to the banks, the intensity of the response of these companies was strong in the first quarter and more moderate thereafter, particularly regarding credit loss allowances for loans. The credit card companies were not subject to the Banking Supervision Department's loan repayment deferral arrangement, and adopted a similar outline only in mid-October regarding consumer loans of up to NIS 100,000 that were not in arrears. These loan payments could be deferred for a period of three months without the company's discretion, and for another three months with their

Figure 40
Distribution of Total New Mortgages Issued During the Month, by PTI, 2015–November 2020 (monthly data, percent)



SOURCE: Bank of Israel data.

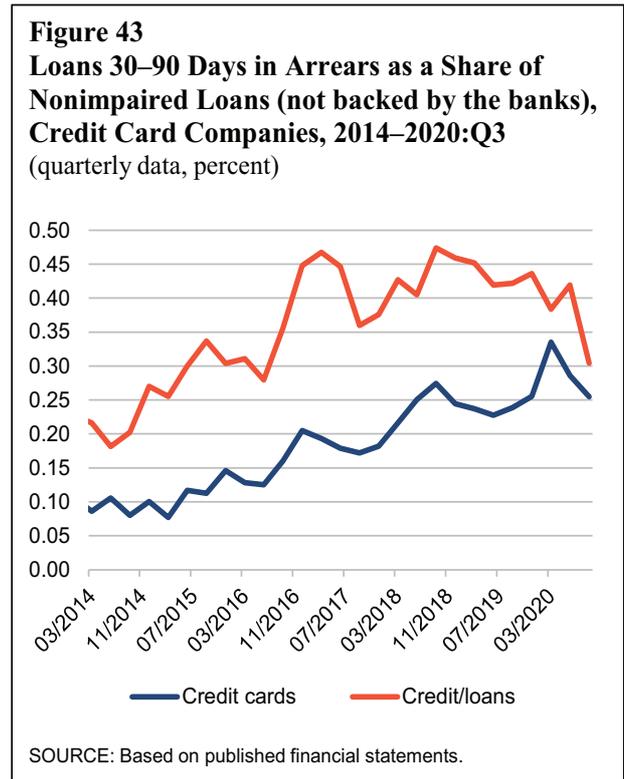
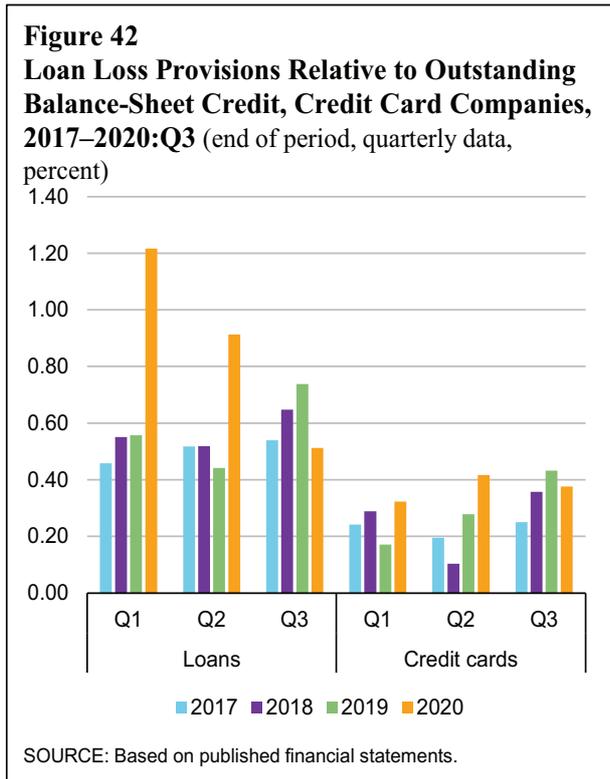
Figure 41
Loan Loss Provisions Relative to Outstanding Balance-Sheet Housing and Nonhousing Credit, Total Banking System, 2017–2020:Q3 (end of period, quarterly data, percent)



SOURCE: Based on reports to the Banking Supervision Department.

⁷⁵ For housing loans, the banks are required to freeze both the principal and the interest payments. For nonhousing loans, freezing the principal is not at the bank's discretion, but freezing interest payments is voluntary.

⁷⁶ This section analyzes quarterly data for various years, as opposed to the analysis in the section on the banking system.



agreement, as far as the principal was concerned. Regarding the deferral of interest payments, the company was given discretion in the first three months as well. Since the credit card companies had not deferred payments thus far, the data on the rate of debt in arrears can show the extent of borrowers' difficulties in repaying their loans. As Figure 43 shows, the rate of debts in arrears on consumer loan repayments in the first half of 2020 was similar to the average between 2017 and 2019. In contrast, credit card payments show some increase in arrears since the beginning of the crisis. Later in the year, the rate of arrears declined, which apparently explains the decline in loan loss allowances.

3. RESILIENCE OF THE FINANCIAL INSTITUTIONS

	H1:2020	H2:2020
The banks, insurance companies, and nonbank credit companies		

The COVID-19 crisis led to the realization of some credit risks among financial system participants, and the loan loss provisions at the banks and nonbank credit companies also increased relative to the same period in the previous year. (For more information see Sections 3.1 and 3.3 respectively.) The ability of financial system participants to absorb this increase in credit losses and maintain their stability is derived from their capital adequacy ratios. The Common Equity Tier 1 capital ratio of the entire banking system recovered partially in the third quarter, to 11.02 percent, compared with 10.6 percent in March and 11.2 percent at the

end of 2019. All of the banks in the system held capital levels that were higher than the original regulatory capital requirements, despite the reduction in capital requirements at the beginning of the crisis. (For more information, see the section on capital adequacy and leverage.) Among the insurance companies, the media repayment capacity was 103 percent at the end of 2019. An analysis of bond spread data shows that according to assessments by investors in the market, the prudential risk of the insurance companies did not increase due to the crisis. Among the nonbank credit companies, the aggregate leverage is 0.65—lower than it was prior to the crisis, when it was 0.8.⁷⁷

3.1 The banking system

This section outlines the resilience of the Israeli banking system on the basis of financial statement results for the first nine months of 2020.

The intensity of the crisis has thus far been reflected in a number of different channels. These include a relatively sharp decline in the prices of bank shares, which reflects the public's expectations of the banks' profits in view of the crisis—although the spreads on bank bonds, which serve as an indicator of risks that the market attributes to the banking system, remained low throughout the period relative to other industries (see the section on the prices of financial assets), such that bond spreads in December were close to the precrisis levels. Furthermore, in view of the volatility in the markets at the outset of the crisis, unprecedented volumes of money were diverted from the capital market to savings in the banking system (see the section on balance-sheet activity)—another indicator of the public's trust of stability in the banking system.

The Israeli banking system was in a good opening position at the start of the crisis, as characterized by adequate capital and liquidity ratios and a high-quality and diversified credit portfolio. These conditions made it possible for the Bank of Israel to adopt many important measures to try and minimize the impact to the public, assist Israeli banks through various regulatory tools, continue supporting economic activity, expand the supply of bank credit to households and businesses, and minimize as far as possible the impact to customers of the banking system. (For more information on the measures adopted in the first months of the crisis, see Box 3.1 in the Annual Review of Israel's Banking System for 2019. For more information on Banking Supervision Department measures later in the crisis, see Box 1 in the Banking Supervision Department's Semi-Annual Review for 2020.)

At this stage, the macroeconomic situation's impact on the banks' balance sheets and financial statements is reflected in two main channels. The banks markedly increased their loan loss allowances (mainly group allowances), which reflects expected credit losses in the future; and the loan repayment deferral outline is having an effect on the structure of bank assets and on their cash flow.

Looking to the future, there is tremendous uncertainty regarding the effect of the spread of the virus on the economy, which depends on how the virus is handled. There are many potential scenarios, which differ in terms of the intensity and duration of the restraints on the economy. In order to prepare the banking system for eventualities, the Banking Supervision Department has in recent months examined the effects of a stress scenario on the system. The test was based on a uniform scenario that included a worsening of morbidity in Israel together with a tightening of restrictions on economic activity. The results of the test show that as

⁷⁷ The capital adequacy ratios in the various groups are calculated according to various directives: at the banks according to Basel 3 provisions; at the insurance companies according to Solvency provisions; and at the nonbank credit companies as the ratio between total liabilities and total assets as per the financial statements prepared according to Generally Accepted Accounting Principles.

the crisis intensifies, the banking system is expected to absorb significant losses, mainly in respect of the consumer credit and business credit portfolios, but these losses are not expected to harm the system's ability to continue supporting economic activity during and after the crisis. These results illustrate the strength and stability of the Israeli banking system in general, and of each of the banks in the system on its own. (For more information, see Box 2 of the Banking Supervision Department's Semi-Annual Report for 2020, and Box 5 of the Financial Stability Report for the first half of 2020.)

Business results

The net profit of the five large banking groups declined significantly in the first nine months of 2020 relative to the same period in the previous year (about 61 percent) to about NIS 4,708 million, due to the effects of the COVID-19 crisis. Return on equity was about 5.5 percent (in annual terms⁷⁸)—the lowest figure since 2008—compared with about 9.6 percent in the same period of the previous year and about 7.8 percent for 2019 as a whole. A main component of the impact to net profit during the reviewed period was the significant increase in loan loss provisions (about 466 percent relative to the same period in the previous year). Likewise, net interest income declined by about 3 percent, and noninterest financing income declined by about 4 percent, while income from fees remained unchanged. The impact to net profit was slightly offset by a decline of about 5 percent in operating expenses as a result of a decline in wage and associated expenses (about 11 percent), partly due to the reduction in grants in view of the decline in monetary expenses in the system.

Operating efficiency

During the first three quarters of 2020, a trend of improvement developed in the banking system's efficiency indices. The operating efficiency ratio⁷⁹ declined slightly during the period (58 percent) compared with the same period in the previous year (59 percent), and the output unit cost (1.61 percent) declined by a relatively significant amount compared to the same period in the previous year (1.82 percent), both due to a decline in the total operating and other expenses and due to an increase in average total assets. The partial improvement in the efficiency ratio was achieved as a result of the decline in operating costs.

Credit risk

During the first three quarters of 2020, the balance of credit from the five banking groups increased by 3.6 percent (in annual terms). Housing credit (an increase of 8.9 percent) remained the main source of growth in the credit portfolio, while consumer credit declined by about 9.4 percent during the year, and the growth rate of the business credit portfolio slowed (to about 2.9 percent in annual terms). The COVID-19 crisis, which impacted economic activity and both household and business income, led to a worsening of the credit quality indices. This is partly reflected in the rate of credit in respect of which payments were deferred (about 7 percent of the total credit portfolio)—a main risk focus in the bank credit portfolio. (For more information on commercial credit and consumer credit, see the sections on credit to the business sector and credit to households, respectively.)

Loan loss allowances

The worsening of the macroeconomic situation and of the state of households and businesses led to a sharp increase in loan loss provision rate during the first half of the year (to 1.07 percent of the balance of credit), while the rate in the third quarter of 2020 was about 0.89 percent—lower than in the first half of the year but

⁷⁸ All rates of change in this section are in annual terms.

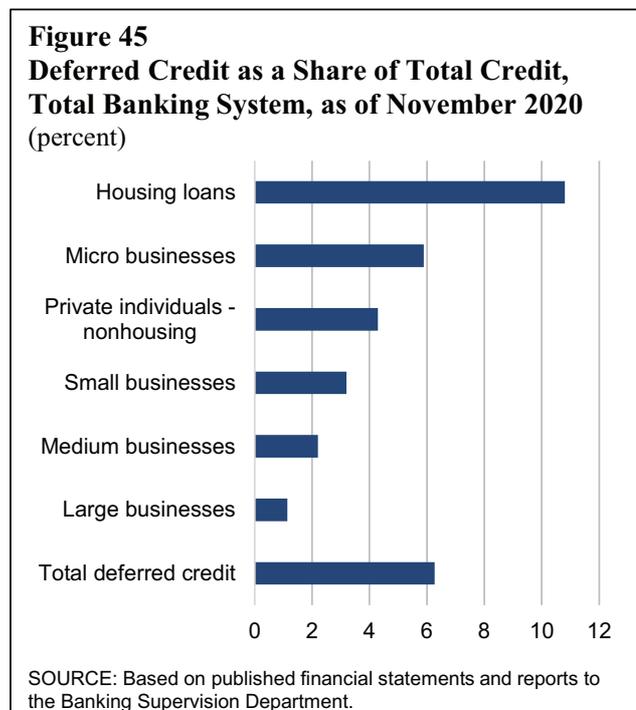
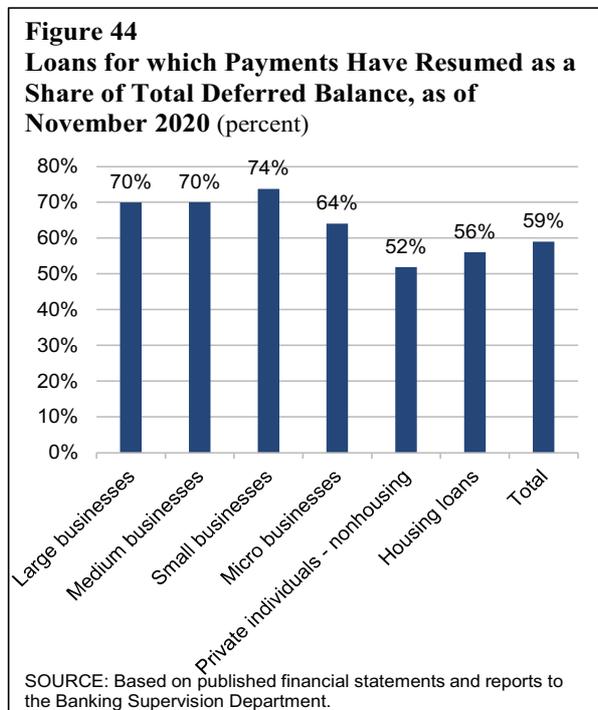
⁷⁹ The ratio between total operating and other expenses and total net interest and noninterest income (cost-to-income).

still higher than during the two years prior to the crisis (an average of 0.25 percent). In the first three quarters of the year, the five banking groups made loan loss allowances of about NIS 7.2 billion, about 86 percent of which were in the group allowance in view of the uncertainty in the economy and the impact to borrowers' repayment capacity. The worsening of the credit portfolio's quality was also noticeable in the write-off ratio (0.19 percent at the end of the third quarter, compared with 0.16 percent in 2019) and in the weight of problematic credit (2.79 percent at the end of the third quarter, compared with 2.33 percent in 2019).

The effects of the spread of the COVID-19 virus have not yet been fully reflected, in view of the measures that allowed borrowers to defer their loan payments and the measures taken by the government to support the unemployed and businesses whose revenue was impacted due to the crisis. As the crisis lengthens beyond the duration of the assistance programs, its effects may lead to a further worsening of the credit quality indices.

Loan payment deferrals

In May, the banking system adopted a comprehensive outline for the deferral of loan payments as a form of assistance to bank customers in dealing with the ramifications of the COVID-19 crisis.⁸⁰ According to November data, since the start of the crisis, loans totaling about NIS 175 billion had their payments deferred in all segments, and about 41 percent of this credit is still under deferral. The balance of credit under deferral in the household segment accounts for about 71 percent of all credit under deferral (most of which is housing credit—about 61 percent of all credit under deferral). As of December 11, 2020, payments totaling about NIS 10.8 billion were deferred, accounting for about 1 percent of the credit portfolio and about 38 percent of the total growth of credit during the first three quarters of 2020. Likewise, about 87 percent of the balance of credit under deferral is expected to reach the end of the deferral period between December and March.



⁸⁰ "The Banking Supervision Department announces a comprehensive framework that has been adopted by the banking system for deferring loan payments as assistance to bank customers in dealing with the ramifications of the coronavirus crisis": <https://www.boi.org.il/en/NewsAndPublications/PressReleases/Pages/7-5-2020b.aspx>; "The Banking System Will Further Extend and Expand the Comprehensive Framework for Deferring Loan Payments": <https://www.boi.org.il/en/NewsAndPublications/PressReleases/Pages/29-9-20.aspx>

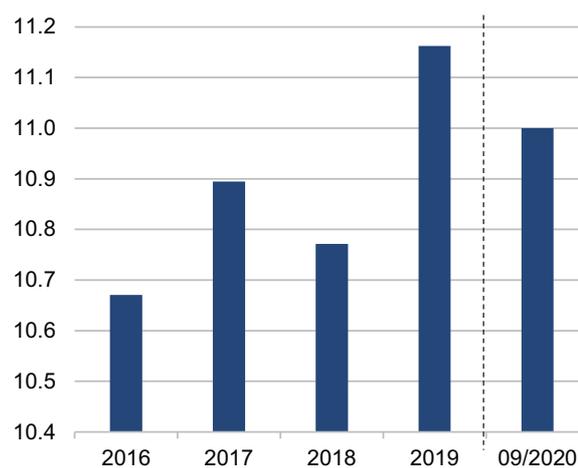
Capital adequacy and leverage

Due to the lessons of the 2008 Global Financial Crisis, the Bank of Israel has acted during the last decade to strengthen the stability of the banks by improving the quality and volume of their capital. The objectives of this were to minimize as much as possible the likelihood that a realization of unexpected risks would endanger the public's deposits and to ensure that the banking system would be sufficiently resilient to continue supporting the economy even during a crisis. Prior to the COVID-19 crisis, the volume and quality of the banks' capital put the banks in a good position to deal with crises in general, and with the COVID-19 crisis in particular.

At the beginning of the crisis, there were shocks in the markets, which were reflected partly in a sharp increase of bond yields and a decline in equity prices. These shocks led to a rapid deterioration in the banks' overall capital, mainly through a decline in the value of bonds available for sale. At the same time, business credit increased rapidly due to the high utilization of credit facilities, mainly among large businesses, which led to a rapid increase in risk assets in the banking system. (For more information, see the section on business credit.)

Due to the increase of business credit and of risk assets, the banks' capital ratios deteriorated rapidly. In response to these shocks, and with a long-term view of the development of the economic crisis and the credit needs of the economy, the Banking Supervision Department called on the banking system early in the crisis to use capital buffers, and later on it decided to reduce the supervisory capital requirements.⁸¹ The implementation of this tool was made possible partly due to the allocation of capital in the banking system, together with the increased rigidity of the minimum requirements and the requirement to sequester additional capital against the unique characteristics of the banking industry and the domestic economy in the decade following the Global Financial Crisis. These measures were taken in order to ensure that the banking system would be able to continue providing credit to the public and supporting economic activity. The Common Equity Tier 1 capital ratio in the entire banking system, which declined relatively sharply in the first quarter of the year, recovered slightly in the following two quarters, to about 11 percent, compared with 10.6 percent in March and about 11.2 percent at the end of 2019. The improvement in the capital adequacy ratio during the second and third quarters of 2020 is due to both a slight increase in Common Equity Tier 1 capital and moderation of the increases in risk assets relative to the marked growth of credit to the public in the first quarter of the year.

Figure 46
Common Equity Tier 1 Capital Ratio, the Five Banking Groups, 2016–2019 and 2020:Q3 (in Basel III terms, annual data, percent)



SOURCE: Based on published financial statements and reports to the Banking Supervision Department.

⁸¹ For more information, see the press releases regarding the reduction of capital requirements in the banking system: (1) "The Banking Supervision Department announces a reduction in the banks' capital requirements, and instructs them to examine the distribution of dividends in order to increase the supply of credit in the economy" March 29, 2020: <https://www.boi.org.il/en/NewsAndPublications/PressReleases/Pages/29-3-2020a12.aspx>; and (2) "Leniencies in the provision of housing loans in view of the Corona crisis", April 21, 2020: <https://www.boi.org.il/en/NewsAndPublications/PressReleases/Pages/21-4-20.aspx>

The leverage ratio deteriorated in the first nine months of 2020, to 6.3 percent compared with 6.9 percent in December 2019, due to a sharp increase in total exposure in the system. At the beginning of the crisis, there was a sharp increase in the public's deposits, which led on the uses side to an increase in the volume of cash and deposits at the Bank of Israel. While this exposure did not lead to an increase in risk assets (because it was not accompanied by risk to the banking system and is therefore risk weighted at 0 percent), it did increase the total exposure of the banks. As the decline in the leverage ratio continued, the Banking Supervision Department announced a reduction in the requirements regarding the ratio from the banking system. As a temporary order, the requirement was reduced to a minimum rate of 5.5 percent at the large banks (compared with 6 percent currently), and to 4.5 percent at the medium and small banks (compared with 5 percent currently).⁸²

An examination of the robustness of the banking system⁸³ shows that the realization of the pessimistic scenario⁸⁴, which included a renewed outbreak of the virus in the fourth quarter of 2020 and another shutdown of the economy, would have a significant impact on the banking system. However, the banking system is expected to continue maintaining its strength and stability, and none of the banks' capital adequacy ratios are expected to decline below the minimum level required by the Banking Supervision Department in the stress scenario—a Common Equity Tier 1 Capital ratio of 6.5 percent—despite the high losses that the banking system is expected to absorb, partly in view of the increase in credit losses. This result emphasizes the importance of the processes led by the Banking Supervision Department in recent years to strengthen capital (an increase of about 3 percentage points in the Common Equity Tier 1 Capital ratio over the past decade).

Most of the expected losses in the stress scenario are in the credit portfolio. The impact to businesses and the increasing unemployment make it difficult for households and the business sector to meet their commitments, thereby causing significant losses in the credit portfolio of the banks and a material impact to capital. Consumer credit reaches the highest losses in the scenario (an average annual loss rate of about 2.1 percent), derived mainly from the sharp increase in the unemployment rate. For more details on the examination made, see the Banking Supervision Department's review for the first half of 2020.

⁸² See the press release on the subject dated November 1, 2020.

⁸³ The examination's conclusion was based on statistical tools for the analysis of stress tests that were based on the scenarios in the Research Department's macroeconomic staff forecast for May, 2020.

⁸⁴ In the forecast prepared in May 2020.

Liquidity risk

The liquidity coverage ratio (LCR)⁸⁵ of the banking corporations continued to increase over the first nine months of 2020, thereby remaining above the minimum requirements set by the Banking Supervision Department (100 percent). The ratio was estimated in October at 144 percent—higher than the level that was prevalent prior to the COVID-19 crisis (126 percent in December 2019).

The sharp increase in the ratio over the year was mainly due to a sharp increase in the stock of high-quality liquid assets (HQLA)—an increase of about 40 percent in annual terms since the beginning of the year. This reflected a sharp increase in the public's deposits with the banking system, some of which was translated into an increase in the balance of cash and deposits at the Bank of Israel, which are the main part of the banking system's liquidity buffer.

Balance-sheet activity

The aggregate balance sheet of the five large banking groups increased during the first nine months of the year by a particularly high rate of about 19 percent⁸⁶ (in annual terms) to about NIS 1,836 billion. The increase took place in view of the significant growth of the public's deposits (about 22.5 percent). The rapid growth of the public's deposits began at the start of the COVID-19 crisis in view of the sharp volatility in the capital market. This volatility spurred the public to divert assets from the capital market to the banks, which the public considers a secure investment channel. The development of the balance sheet was almost unaffected (about 0.4 percent) by the appreciation of the shekel against the dollar, such that adjusting for the exchange rate effect leads to almost no change in the increase in the balance sheet of the five groups.

3.2 Insurance companies⁸⁷

This section analyzes the stability of the insurance companies. First, we analyze the effects of the COVID-19 crisis on these companies' profitability—both from investments and from underwriting activity—and outline the effect of the crisis on the companies' market value. The negative effect on their stability should moderate the broader their capital is, and if they made sure to transfer some of the risk to stable reinsurers. Therefore, we will later survey the solvency capital requirement (SCR) ratio of the companies prior to the crisis and the robustness of the reinsurers with whom they entered into contracts. To conclude, we will try to learn about the prudential risk that the market attributes to the companies from the development of the spreads on the bonds they issued.

⁸⁵ The LCR, developed by the Basel Committee to enhance the short-term resilience of banking corporations' liquidity profiles, is a measure of the quantity of HQLA (High Quality Liquid Assets) that banking corporations should hold in order to withstand a significant stress scenario that lasts thirty calendar days. The LCR is composed of two elements. The first, on the numerator side, is the inventory of HQLA (High Quality Liquid Assets), comprised of two levels of assets: Level 1 includes high-quality assets that may be held in unlimited amounts, while Level 2 assets are limited to a maximum aggregate holding of 40 percent of the HQLA inventory. (This level is divided into two sublevels: 2A and 2B. At the latter level, the share of assets that may be held is limited to 15 percent.) The second element, on the denominator side, is the total net cash outflow, i.e., the expected total cash outflow less the expected total cash inflow in the stress scenario. The expected total cash outflow is calculated by multiplying the balances of different categories or types of balance-sheet and off-balance-sheet liabilities by their expected runoff or drawdown rates. The total expected cash inflow is calculated by multiplying outstanding contractual receivables by the rates at which they are expected to be received in the scenario, up to a cumulative 75 percent of the predicted total cash outflow.

⁸⁶ The merger of Union Bank into the Mizrahi-Tefahot group explains about 20 percent of the total growth of the aggregate balance sheet of the five large banking groups.

⁸⁷ The data and analyses in this section relate to the five largest insurance companies.

During the first half of 2020, the insurance companies recorded a total aggregate loss of NIS 600 million, in view of the recovery of the markets in the second quarter of the year and the creation of profits from investments⁸⁸, which offset about half of the losses from investments that were recorded in the first quarter⁸⁹ (Figure 47).

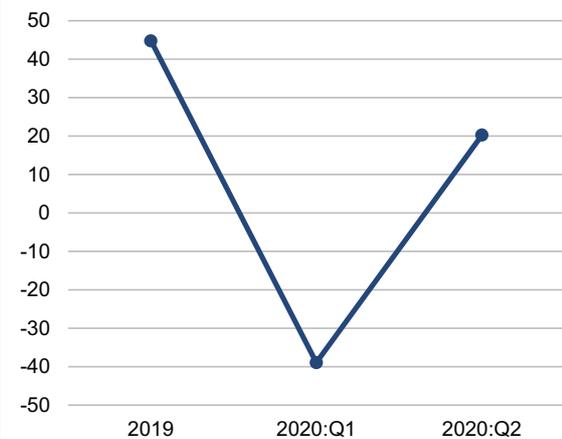
The fact that the investment losses from the first quarter were not fully covered limited the insurance companies' ability to charge variable management fees on profit-sharing policies⁹⁰, and led to a decline of about 35 percent in their income from management fees relative to the same period in the previous year.⁹¹

The volume of investment losses recorded by the companies during crisis periods, such as the current crisis, is impacted by the composition of their nostro asset portfolio: The higher the rate of risk assets in the nostro portfolio, the higher the expected losses from investments during a crisis. An analysis of the weights of the various asset types in the companies' nostro portfolio shows that most of their investments are in relatively low-risk assets (cash and government bonds).

In addition to the companies' losses from investments and management fees, the COVID-19 crisis had a negative impact on their income from underwriting activities. Thus, following a long period of growth, income from premia declined in the first half of 2020 to about NIS 54 billion (in annual terms), compared with NIS 56 billion in 2019 (Figure 48).

It is worth noting that, had the income from premia grown at its long-term growth rate of 5 percent, it would have been about NIS 59 billion (in annual terms) in June, 2020—more than NIS 5 billion higher than the actual level. The background for the decline is the decrease in employment and the placement of many workers on unpaid leave due to the crisis—phenomena that were reflected in lower premia in the long-

Figure 47
Profits from Insurance Companies' Investments, (annual data (2019) and quarterly data in annual terms (2020), NIS billion)



SOURCE: Based on the insurance companies' financial statements.

⁸⁸ Profits from investments were calculated on the basis of the “Net profits from investments and financing income” item in the companies' Profit and Loss statements. These profits include investment profits from assets held against yield-dependent liabilities, and do not include profits presented as part of Other Total Profit, such as “Securities available for sale”.

⁸⁹ According to the companies' statements, in the period from June 2020 until the publication of the report for the second quarter of 2020, there were further increases in the capital markets, which offset a significant portion of the investment losses that accumulated in the first quarter.

⁹⁰ In their various activity segments, the insurance companies deal with the management of assets for their members, in return for which they collect management fees. In respect of the management of assets in profit-sharing policies sold since 2004, the company is entitled to fixed management fees at a monthly rate of up to 0.05 percent of accumulated assets. In respect of the management of assets in profit-sharing policies soled between 1992 and 2003, the company is entitled to these fixed management fees as well as variable management fees at a rate of up to 15 percent of the real yield after deduction of the fixed management fees. In the case of a loss, the company is not entitled to the variable management fees until the cumulative loss is covered. The profits from investments in the second quarter of 2020 were not sufficient to cover the losses caused in the first quarter of the year, so during that period, the insurance companies were not allowed to collect the variable management fees, and their income declined accordingly.

⁹¹ In the period from June 2020 until the publication of the second quarter statement, increases in the capital market partly offset the management fees that could not be collected, such that the latter totaled about NIS 300 million.

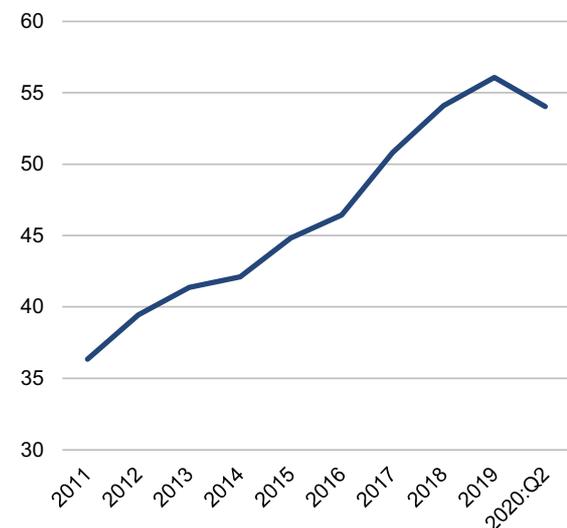
term risk segment. Beyond that, premia from travel insurance declined, due to the restrictions imposed because of the pandemic. Looking forward, some of the insurance companies believe that in view of the slowdown in the pace of opening new businesses and the increased likelihood of existing businesses encountering financial difficulties, a decline in income from merchant insurance activity can be expected.

In contrast, the decline in activity due to the crisis was also reflected in a decline in the insurance companies' expenses in respect of claims in the health and vehicle insurance fields. Accordingly, the insurance companies' average loss ratio⁹² in the vehicle and property segment in the first half of the year was 62 percent, compared with 66 percent in the first half of 2019. Moreover, the negative effects of the crisis on business results motivated the companies to take efficiency measures and to reach agreements with their workers' committees on changes to collective agreements and reducing wage expenses.

In recent years, the market value of the insurance companies has been lower than their equity.⁹³ This phenomenon has increased in view of the negative impact of the COVID-19 crisis on market values. From March 2020 (when the financial statements for 2019 were published), the ratio between the companies' market value and their equity (MV/BV) continued to decline (Figure 49). This decline may reflect investors' assessments that the negative impact of the crisis will lead to future losses for the companies, which will lead to an impact on their capital.⁹⁴

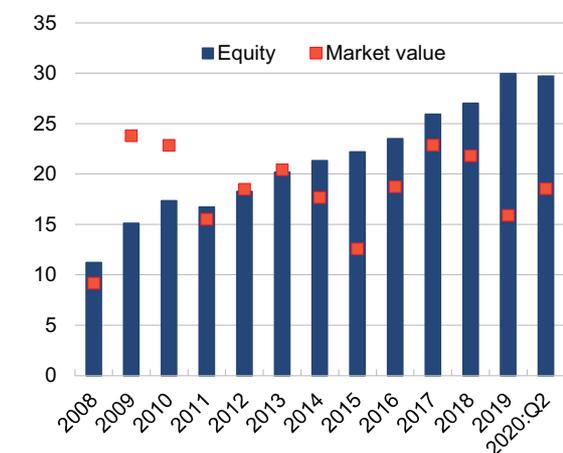
The companies' ability to withstand a negative shock such as during the current crisis is derived from the extent of their financial robustness prior to the crisis. An examination of their SCR ratio, calculated according to the Solvency II directive⁹⁵, shows that as of December 2019: the median SCR ratio in Israel was 103 percent; all of the companies meet the regulatory SCR ratio requirement after taking the transition

Figure 48
Insurance Companies' Gross Income from Premia, 2011–19 (annual data) and 2020:Q2 (in annual terms) (NIS billion)



SOURCE: Based on the insurance companies' financial statements.

Figure 49
Insurance Companies' Market Value and Equity, 2008–19 (annual data) and 2020:Q2 (in annual terms) (NIS billion)



To clarify, the data for 2018, for instance, reflect the equity that appears in the companies' annual reports for 2017, which were generally published in March 2018, and their market value in March 2018.

SOURCE: Based on the insurance companies' financial statements.

⁹² The loss ratio is equal to the ratio between payments and changes in liabilities in respect of insurance contracts and gross income from premia.

⁹³ There is a broad discussion of the matter in the Financial Stability Report for the first half of 2016.

⁹⁴ The decline in market value can also be explained by corporate governance challenges faced by some of the companies.

⁹⁵ A broad discussion of the Solvency II directive appears in the Financial Stability Reports for the first and second halves of 2015.

directives into account⁹⁶; and three of the insurance companies meet that requirement even without taking the transition directives into account. It should be noted that the SCR ratio for December 2020 is expected to be published in May 2021.

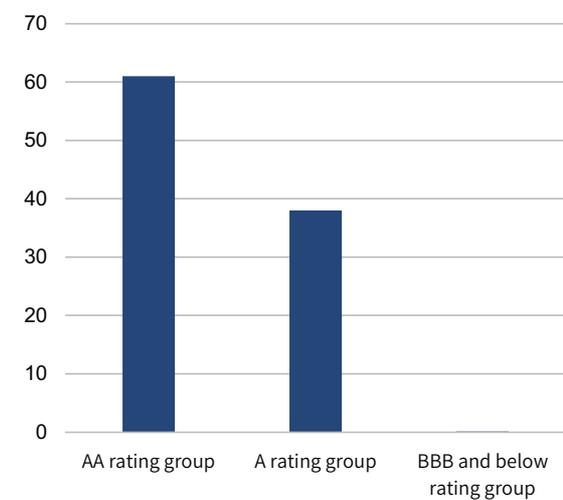
In recent months, the Supervisor of the Capital Market worked to adapt the SCR regime in Israel to the European directive. The change includes adjustments in the calculation of capital requirements in respect of various market risk components, and giving companies the option of extending the transition period at the end of which it will be required to meet the final SCR ratio until the end of 2032 (instead of the end of 2024) in accordance with the SCR regime on long-term liabilities. The update is expected to be reflected in an improvement in the insurance companies' SCR ratios.

According to reports from the companies, the option of having the insurance companies' reinsurers absorb losses due to the COVID-19 crisis led to a worsening of the ratings and of ratings forecasts of some of the reinsurers. However, as of December 2019, most of the exposure of the insurance companies in Israel—about 61 percent—is insured by reinsurers rated AA or higher (Figure 50).

The bond spreads of the companies, which increased to high levels in March, declined sharply from April, to levels that are similar to their long-term average (Figure 51).

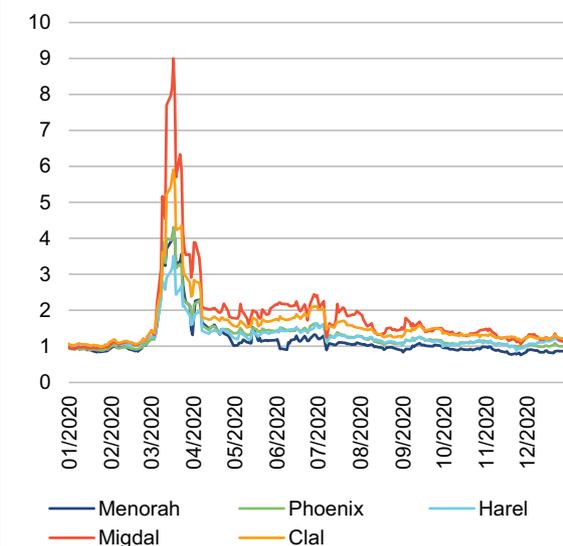
In summation, it seems that despite the crisis's effect on the insurance companies' activity, investors in the market believe that their prudential risk has not increased.

Figure 50
Insurance Companies' Exposure to Reinsurers, by Rating, end of 2019 (percent)



SOURCE: Based on the insurance companies' financial statements.

Figure 51
Spreads on Bonds Issued by the Insurance Companies, 2020 (daily data, percent)



SOURCE: Based on Tel Aviv Stock Exchange.

⁹⁶ On June 1, 2017, the Capital Market Supervisor of the time published a circular that contained directives that apply an SCR regime based on the Solvency II directive on the insurance companies. The circular included transition directives regarding the implementation of the directive's provisions, according to which the companies must gradually increase the ratio between recognized capital and required capital, according to milestones, in the coming years. According to the circular, beginning on December 31, 2024, the companies will be required to meet a recognized capital to required capital ratio of at least 100 percent. As stated below, the Capital Market Supervisor has recently been working to adapt the transition period to the rules accepted in Europe. Therefore, the manner of calculating the transition directives was changed, and companies that implement the European model will be required to have an SCR ratio of 100 percent by the end of 2032.

The third quarter of 2020

The total accumulated profit of the insurance companies was NIS 0.6 billion in the third quarter of 2020, compared with NIS 1.6 billion during the same period of the previous year. Investment profits in the third quarter, which together with those recorded in the second quarter totaled NIS 14 billion, covered most of the investment losses recorded at the beginning of the first wave of the COVID-19 pandemic, so that the cumulative investment loss as of the end of September 2020 was only about NIS 4 billion. The investment losses led to a decline in income from management fees, which was about NIS 3 billion at the end of the third quarter, compared with NIS 4.5 billion in the same period of the previous year. The volume of gross premium income was about NIS 40 billion at the end of the third quarter—about NIS 2 billion lower than in the previous year.

3.3 Resilience of nonbank credit companies in view of the COVID-19 crisis

The nonbank credit providers are not putting the stability of the financial system at risk, since their share of total credit to the business sector is negligible (as detailed in the section on credit to the business sector), and the exposure of the banking system and the corporate bond market to these companies is small—less than 1 percent. However, it is important to analyze the trends in nonbank credit and the resilience of the companies, since these credit providers do make credit more accessible for small and medium businesses, which are in particular need of such credit during the crisis. In order to assess the resilience, we will examine a number of financial ratios and the quality of the credit portfolio of the nonbank credit companies traded on the Tel Aviv Stock Exchange.⁹⁷

Financing sources and leverage – Compared with the end of 2019, the nonbank credit companies' financing sources declined by about one-third (Figure 52). The main decline was in financing provided by the banking corporations and the institutional investors (including through tradable securities). The decline in bonds and capital certificates was smaller, since most of them have not yet reached maturity, and there were almost no debt issuances. This may show that during the crisis, the companies encountered difficulties in recycling short-term debt⁹⁸ and could not raise debt on the Stock Exchange because the yields on their bonds were high (see the section on financial assets).

Since the rate of decline in financing sources was higher than the rate of decline in the credit that they provide (as described in the section on credit to the business sector), their leverage improved such that its aggregate declined from 0.8 at the end of 2019 to 0.65 as of September 2020. (An individual examination shows that the improvement in leverage encompassed all companies in the industry.) In addition, some of the companies strengthened their equity through public share offerings, including private placements, during the first three quarters of the year (although not necessarily during the crisis).

Liquidity – The publicly traded nonbank credit companies operate with a very short credit duration. (On average, most credit is repaid within 120 days.) They therefore finance their operations through short-term liabilities. On average, about 90 percent of their liabilities are current. In general, the companies maintain a current ratio (current assets to current liabilities) higher than 1, but their current assets are mainly customer

⁹⁷ Most of whose activity is in check discounting. The analysis is based on the 11 companies reporting to the Tel Aviv Stock Exchange. Two of these companies, as small companies, did not report in the third quarter, so the analysis regarding them is based on second quarter statements. For the rest, it is based on the third quarter.

⁹⁸ There may have been a decline in demand for credit from these institutions, or they may have decided to reduce the credit they provided, and therefore did not require sources of financing. However, since their activity is currently being financed from equity more than it was prior to the crisis, it is reasonable to assume that at least some of the decline in credit is due to difficulty in raising sources of financing.

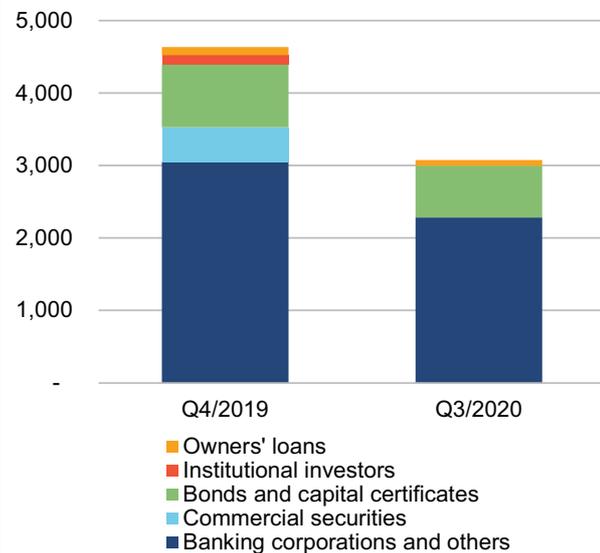
credit. Cash balances on their balance sheets are very low. Prior to the crisis, the ratio of cash to current liabilities in most companies was close to zero (4 percent aggregate among all companies). This means that the (immediate) liquidity rates of their current assets are very low, and during a crisis, when credit losses may be high, some of the companies will have difficulty covering the liabilities that are paid off in the short term (due to industry concentration or concentration of liabilities to individual institutions). In view of the crisis, most of the companies made marked improvements to their current ratios and strengthened their cash bases. The aggregate current ratio improved from 1.26 to 1.52 and the aggregate immediate liquidity ratio improved from 0.04 to 0.12.

Quality of the credit portfolio – Loan loss rates prior to the crisis were low (even compared with other nonbank credit providers such as credit card companies).⁹⁹ In the first three quarters of 2020, credit losses doubled in view of the crisis. Credit losses as a share of outstanding credit was about 0.84 percent, compared with 0.42 percent during the same period in the previous year (aggregate calculation). Doubtful debt provisions increased from 2.4 percent at the end of 2019 to 3.7 percent in September 2020.¹⁰⁰ These companies may have deferred payments for businesses that encountered difficulties, such that the deferrals were partially reflected in the credit quality indices.

Profitability – An examination of pretax profit shows that most of the companies continued to show similar profitability to that which was prevalent prior to the crisis¹⁰¹ (relative to the quarterly average in the two years prior to the crisis)—both as a share of total quarterly income on an aggregate basis (about half) and as the return on the average of assets in the quarter (yearly adjusted—about 6 percent). In contrast, the return on equity was lower than the quarterly average of the past two years (about 17 percent compared with 25 percent), mainly due to the expansion of the capital base, as described above.

Examination of resilience – An analysis of the above financial ratios shows that due to the crisis, the nonbank credit companies' liquidity and leverage ability improved. Furthermore, their profitability has not thus far been impacted, despite the increase in credit loss rates. However, a further worsening in their activity may be expected (in view of the spread of morbidity and the additional restrictions imposed by the government), and some of the problematic credit may not yet have been reported, as noted above.

Figure 52
Total Financing Sources of Nonbank Credit Companies Traded on the Tel Aviv Stock Exchange, December 2019 and September 2020
(NIS million)



SOURCE: Based on published financial statements.

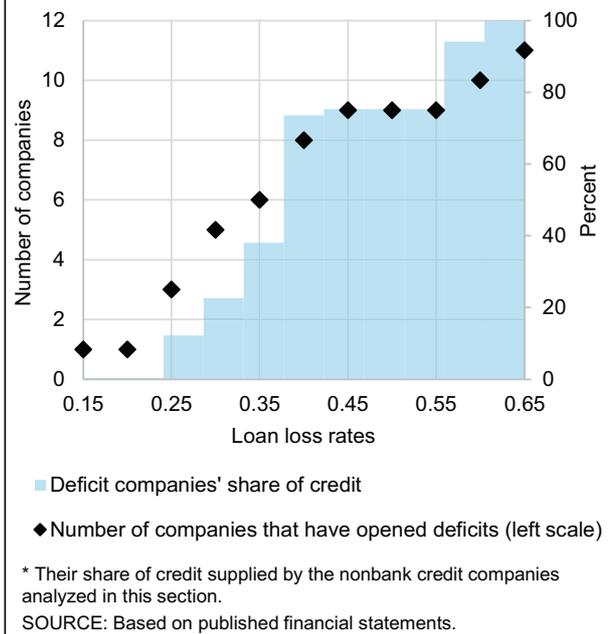
⁹⁹ The annual average of credit losses as a share of outstanding credit in the past three years was less than one percent.

¹⁰⁰ Aggregate calculation. In a calculation of the simple average, it increased from 2.3 to 3.6. This calculation is based on 7 of the 11 companies, regarding which this information is available for the second or third quarter. Their credit portfolio accounts for about 88 percent of the total credit portfolio of all companies.

¹⁰¹ The explanation for this is that while activity declined in tandem with an increase in credit losses, the sources of financing declined even more, resulting in a decline in financing expenses.

For the 11 publicly traded companies, we examined the write-off rate at which point the company opens a deficit (in other words, where the company's equity becomes negative). Figure 53 shows that at a write-off rate of 35 percent, more than half the companies (6 out of 11), accounting for a 38 percent share of outstanding credit, open a deficit. When the write-off rate is 45 percent, the number of companies opening a deficit climbs to 9 and their share of outstanding credit doubles to about 75 percent. It should be noted that at this stage, there is no indication of write-off rates on this order. The sensitivity tests we conducted show that they are much lower. We therefore conclude that at this stage, most of the companies have capital buffers that are able to absorb higher credit losses than they have, and that the companies' liquidity (excluding two of the smaller companies) is resilient to credit write-offs. The companies will begin encountering liquidity problems only if the write-off rate exceeds 20 percent.

Figure 53
Number of Companies that Opened Deficits and their Share of Credit*, Relative to Loan Loss Rates, as of 2020:Q3



4. RISK SCENARIOS IN VIEW THE COVID-19 CRISIS

The uncertainty regarding the development of the COVID-19 pandemic and its effect on economic activity remains high, and it is unclear when the health crisis will end. In one scenario, the health crisis will end with the distribution of the vaccine to many countries, and particularly to Israel, by the summer of 2021. However, in the more severe scenario in which the efficiency of the inoculation process is impaired, there will be further waves of morbidity in many countries, including Israel, which will be accompanied by the imposition of further restrictions and lockdowns in the second half of 2021 and even beyond that.

4.1 The imposition of restrictions in view of the continuation of the pandemic beyond the winter, and the effect on debt repayment abilities

From March until the end of the year, the economy went through three large waves of morbidity. As a result, the country shut down economic activity, thereby adversely impacting business sector activity, particularly that of small businesses. In parallel, it increased expenditures and the deficit climbed. The most serious impact to economic activity was during the first lockdown. GDP was also significantly impacted, with the loss being estimated at NIS 5.4 billion for each week of shutdown.¹⁰² During the second lockdown, the scope of restrictions was less than during the first lockdown, and many companies and households were infinitely

¹⁰² The cost beyond the impact to GDP in a situation of the pandemic without a lockdown.

more prepared for remote working, which led to a smaller economic impact—about NIS 3.2 billion for each week of shutdown. Toward the end of the year, a third lockdown began, with an even smaller scope of restrictions. The Bank of Israel Research Department estimates the cost of the third lockdown at between NIS 2.5 and NIS 3.5 billion per week. The combination of these developments puts a heavy burden on government debt, a phenomenon that is common around the world during the current crisis.

Based on the findings of an analysis of credit risk of both the country (Section 2.1.1 and more information in Box 1) and the private sector—households and the business sector (Section 2.3)—we can assume that bankruptcy risks did increase, but that it is difficult to identify such a trend currently, in view of the government grants that were promised until mid-2021 for companies and exempt proprietorships.¹⁰³ A main indicator reflecting the increased risk in the business sector, particularly among small businesses, is the broad scope of the impact to operating turnover during the summer, when there were no government restrictions on the opening of businesses in Israel (Section 2.3.1). Another indicator that reflects more than others the level of vulnerability of the economic environment is the volume of deferrals of bank loan repayments both by households and by the business sector, particularly small businesses. At the end of November, the balance of bank credit for which payments were deferred¹⁰⁴ for households was NIS 51.8 billion, accounting for about 8.5 percent of the total household credit portfolio, while for the business sector the total was NIS 14.3 billion, accounting for about 2.9 percent of total bank credit to the business sector. The rate among small businesses is higher than among large businesses.¹⁰⁵

If the economic shutdowns continue into additional waves in the first half of 2021, the volume of government debt will reach about 82 percent of GDP, and the deficit will remain high—about 11 percent—according to the Research Department’s forecast. If the more risky scenario plays out and the health crisis continues into the second half of the year and beyond, the volume of government debt may, according to empirical estimates, come close to 90 percent of GDP, and the deficit will remain high at about 6 percent of GDP. Due to the increase in fiscal risk factors, the cost of the debt will increase by 1.5 percentage points relative to the precrisis period.¹⁰⁶ In such a situation, the government will have difficulty in continuing its assistance policy toward the business sector and households, the high unemployment may remain in place, and there will be more bankruptcies. These bankruptcies, together with the high unemployment rates, will be translated into broad credit losses recorded by the financial institutions, and may develop into a credit crunch throughout the financial system.

4.2 A sharp correction in the equity market in view of the apparent large gaps between the real economy and the capital markets

Contrary to previous crises, in which the equity indices declined sharply, in the current crisis they declined sharply for a few days at the beginning of the crisis, but there was a low rate of cumulative declines during the crisis. In contrast, growth rates dropped more sharply during the current crisis than during previous ones. The international agencies discussed the apparent differences, and argue that equity prices are relatively

¹⁰³ In respect of the negative impact to operating turnover relative to 2019 data.

¹⁰⁴ The balance remaining in deferred status.

¹⁰⁵ More information and details appear in Section 2.3.

¹⁰⁶ An additional 0.9 percentage points to the cost of the debt in respect of a 30 percentage points increase in the debt to GDP ratio, and a further increase of 0.45 percentage points in respect of a 3 basis point decline in the rate of taxes to GDP. See Box 1.

high and corporate bond spreads are relatively low thanks to the low interest rates and the increase in risk appetite. The fiscal expansions and monetary accommodations have for years served as tools for supporting economic activity and the inflation environment. This policy, which increased greatly during the current crisis, enables the interest rates in the economy to remain low, thereby increasing consumption and investment—but not the worthwhileness of investing in products and assets that involve risk. As such, the credit currently being taken out at low cost also increases yield-seeking among investors (a decline in the price per risk unit), so that the asset portfolio tends toward more risky assets such as corporate bonds and equities. As long as this policy is maintained, the upward pressure on equity prices will continue.

If investors are disappointed by the vaccine's expected effect on morbidity rates, and government restrictions on economic activity continue, the expansionary fiscal policy will contract due to the difficulty in continuing to increase the debt. Even if the activity of large companies is not impacted, consumer's demand and the security level of companies in making new investments will be impacted, and both of these will have a negative impact on profitability and on expectations of continued growth. In such a situation, equity prices will drop sharply from their currently high levels. The sharp correction in equity prices in view of the economic situation may have implications for the stability of the financial system, particularly the insurance companies (Section 3.2), because part of their equity is invested in financial assets. Households will also be impacted by such declines, which would lead to a decline in their current consumption, and thereby further deepen the contraction of economic activity.

Box 1

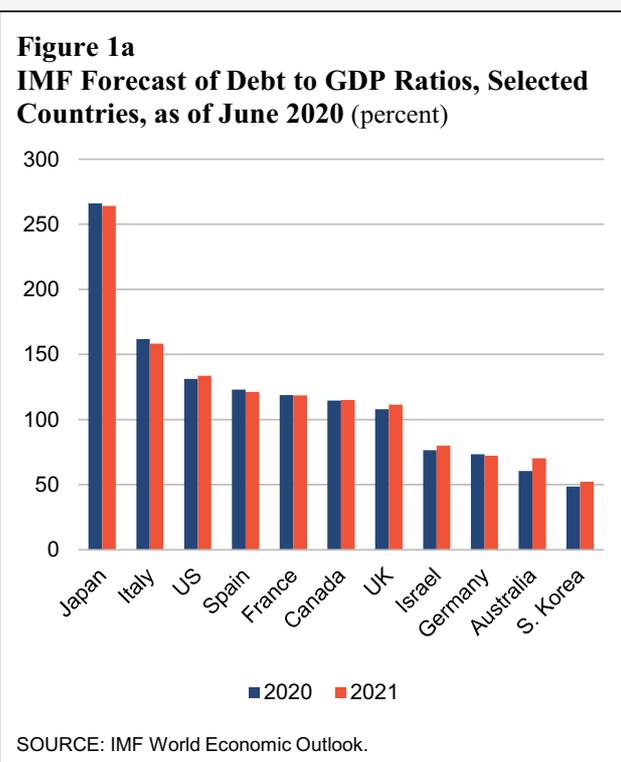
FISCAL RISK FACTORS PRICED INTO GOVERNMENT BONDS, AND ISRAEL'S CREDIT RATING IN VIEW OF THE COVID-19 CRISIS

- The level of public debt in Israel in 2020 and the forecast for 2021 are not anomalous compared with the other OECD countries, but Israel is in the higher part of the distribution in terms of the deficit rate. The ratings agencies noted in their reviews that the lack of a budget for 2021, the extent of political stability, and the way in which the government will deal with the structural deficit following the COVID-19 crisis are affecting Israel's debt risk.
- On October 27, Moody's confirmed Israel's credit rating at A1 and the country's stable forecast. On November 13, S&P also confirmed Israel's credit rating, at AA-, with a stable forecast.¹
- The link found in the research literature between changes in the debt ratio and deficit and changes in government bond yields and credit rating shows that the current rise in Israel's debt and deficit heightens the risk of an increase in yields and a decline in the credit rating. However, the changes in yields and ratings are also influenced by many other factors, some of which act in the opposite direction.

Introduction and main findings

The increase in the public debt and deficit in view of the COVID-19 crisis in many countries, including Israel (Figure 1), raises the question of to what extent it may lead to an increase in yields and a decline in Israel's credit rating as a reflection of the market's concern of an increase in the default risk.

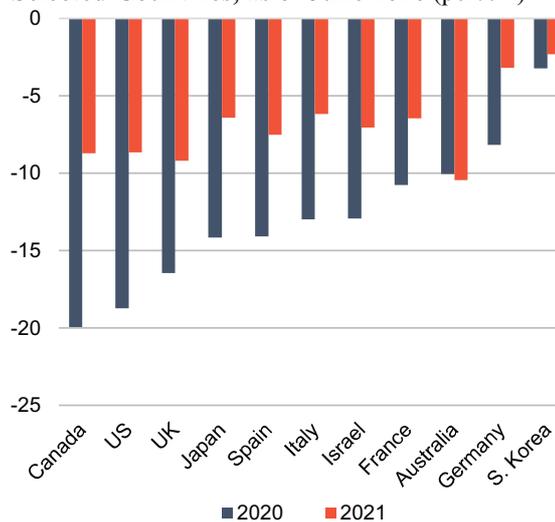
It is important to discuss both yields and ratings, since despite the great similarity between the factors influencing both of them, the changes of each mean different things. A change in a country's credit rating is a noncontinuous and relatively unusual occurrence, which happens after all the relevant information is already known and priced in by the markets. However, such a change, inasmuch as it rests at the discretion of the credit rating agencies, signifies in the eyes of many investors that a risk threshold has been crossed, and they react to such



¹ On January 13, 2021, Fitch also confirmed its rating for Israel.

a change as regulations require (certification effect).² The change in yield on government bonds, which is a continuous change that takes place upon the publication of new information, may be due not only to changes in default risk, but also to various structural and cyclical changes. It is important to separate between these other causes and the factors that impact yields through the risk channel. It turns out that the strong link between the yield to maturity on government bonds (the cost of debt) and the credit rating passes through the fiscal risk factors. These risk factors have a direct and continuous impact on the yield to maturity, while their effect on the credit rating comes with some lag and is not continuous. However, it is important to emphasize that these ratings changes also have a secondary effect on yields, which is due to the certification effect on credit ratings.

Figure 1b
IMF Forecast of Government Net Lending(+)/Borrowing(-) as a Share of GDP, Selected Countries, as of June 2020 (percent)



SOURCE: IMF World Economic Outlook (June 2020).

The findings of this box are as follows:

1. An increase in the debt to GDP ratio leads to a statistically significant increase in long-term yields.³ A number of studies have found that the debt's impact on yields or on default risk is not linear, but increases as the debt level increases. Beyond that, an increase in debt is correlated with a future decline in the economy's growth rate, particularly if the debt exceeds a threshold estimated at about 80–90 percent of GDP. Therefore, an increase in the debt to GDP ratio increases the probability of a decline in the credit rating. The probability of a change in rating due to a change in the ratio is not uniform across countries.⁴ For instance, Japan and Israel have the same rating even though the debt to GDP ratio in Japan is much higher than it is in Israel.
2. An increase in the deficit also raises long-term yields. A number of studies have examined the effect of changes in the taxes to GDP ratio on long-term yields, and have found that the effect is similar in nature to the effect of changes in the deficit.
3. Beyond fiscal policy, the main factors affecting yields are growth, unemployment, demography, the current account, inflation, and bond purchases by the central banks.

² The effect of investors' responsibility to conform to financial regulations regarding the credit ratings of companies on the cost of debt.

³ An increase in the ratio of one percentage point leads to an increase of 2–10 basis points in the long-term interest rate, and about 3 basis points according to the new study. (See Section 3 in this box.)

⁴ The composition of debt, not just the volume of debt, has an impact on the rating. An increase in the weight of short-term debt and of external debt (mainly in developing economies) increases the probability of a decline in rating.

4. Changes in credit ratings have a surplus impact (beyond the impact of basic factors) on yields. The impact is neither linear nor symmetrical, and is mainly felt when the ratings are lowered, particularly when they are lowered to below investment grade.

Even though the research findings show a strong causal connection between changes in debt and deficit and changes in yield and rating, the complexity of the picture and the limitations of the analysis in a number of aspects connected to Israel must be taken into account:

- The fact that the increase in debt and deficit in Israel is taking place in parallel with a similar phenomenon around the world may affect how the market and ratings agencies interpret the increase in Israel, but it is not clear in which direction. On one hand, an increase in debt in Israel in parallel with increases around the world may indicate to the market that this is normal behavior given the global circumstances. On the other, an increase in debt together with an increase in demand for loans worldwide may push the interest rate upward and make it more difficult to raise and refinance debt in all countries, including Israel.
- An increase in debt at a time of quantitative easing raises the question around the world of whether the central bank's actions to lower long-term yields reduces the latent risk in the public debt or just blurs it. This question may also arise in Israel regarding the Bank of Israel's large-scale purchases of government bonds in the secondary market.
- The lack of a budget for 2021 and government operations based on an interim budget also have an impact on long-term economic activity, and the extent of political stability may thereby also have an impact on Israel's sovereign debt risk.

The structure of the discussion

1. A description of the main indicators of the development of debt crises and lowering of credit ratings according to a review of the literature.
2. A survey of the effect of the COVID-19 crisis on Israel's credit profile and that of other countries, as measured by the ratings agencies.
3. The effect of fiscal risk factors on the cost of government debt, as reflected in long-term bond yields.

1. Main indicators of the development of debt crises and declines in credit rating

The past decade has been characterized by low interest rates and a broad and rapid accumulation of debt relative to the previous 50 years (Kose et al, 2020). The COVID-19 crisis exacerbated these trends, and there is increasing concern for global financial stability both due to the direct effects of the crisis and due to the financial risks caused by dealing with the crisis. In recent decades, there were a number of waves of debt accumulation, some of which led to crises in various advanced and developing economies. The waves of debt accumulation all began in low real interest rate environments and

involved unexpected changes in the financial markets, which fanned the risk in the credit market and led to financial, currency, and debt crises in many countries. The world is now dealing with a real crisis that was caused by the spread of the COVID-19 pandemic, which is intensifying the wave of debt accumulation.

The literature on debt crises and the literature estimating the sovereign default risk premium point to a number of main variables: GDP growth, the debt to GDP ratio, interest expenses as a share of total expenses, the deficit or the cyclically adjusted deficit, taxes as a share of GDP, the log of per capita GDP (indicating the standard of living in a country), the perceptions of corruption in the country, default history, and political stability. The literature reports many additional variables, including inflation, the exchange rate, and the current account deficit.

Augustin et al (2020) examined the effect of fiscal restrictions on the link between the daily change in the number of COVID-19 cases and the daily change in the CDS spread between October 2019 and April 7, 2020. They found a link between the rate of COVID-19 cases and the CDS, but when they added fiscal restrictions, they found that the link was due to the interaction between these restrictions and the change in the rate of COVID-19 cases. The changes in the CDS spreads of countries are positively and significantly correlated with the changes in the index of fiscal restrictions, given the same percentage of increase in the rate of COVID-19 cases. The index of fiscal restrictions was built for 30 advanced economies in 2018. The index ranks the countries according to 6 parameters: government expenditure, gross public debt, and interest expenses (all relative to GDP), unemployment, GDP growth, and credit rating. It should be noted that Arellano et al (2020) found that in developing economies, the higher the debt to GDP ratio is, the lower the government's ability to implement lockdowns and other measures to prevent or deal with the virus.

Public debt

One of the main issues in the literature in this field is the effect of public debt on growth. The main issues in this literature include the question of whether there is a debt to GDP level above which debt reduces economic growth, and if so, what that level is. One of the most influential articles in the field, Reinhart and Rogoff (2010), shows that growth of the debt to GDP ratio beyond a certain threshold is correlated with a future decline in GDP. This issue was examined in many articles, and their overall findings show that this threshold is between 80 and 90 percent. It was also found that an increase of one percent of GDP beyond this threshold is correlated with a significant decline in annual GDP growth.

There were also direct links found between the debt to GDP ratio and a change in credit rating. Hadzi-Vaskov (2019) examined the link between public debt and credit rating in a sample of 106 countries, and found that an increase in the debt to GDP ratio raises the probability of a ratings decrease. For instance, a 10 percentage point increase in the debt to GDP ratio is correlated with a decline of half a grade in the country's credit rating. This negative correlation is not linear, but depends on the place of the existing rating on the ratings scale.

Deficit

Since the main channel of change in the debt to GDP ratio is the deficit, changes in the deficit are also expected to have an impact on yields and on the sovereign rating. The evidence from the literature shows correlations similar to those of debt. There is a negative correlation between the deficit and growth, and a positive correlation between the deficit and yields. Baldacci and Kumar (2010) found that a one percentage point increase in the deficit increases yields by about 20 basis points. Laubach (2009) found a correlation between the expected government deficit and long-term forward interest rates, where a one percentage point increase in the expected deficit to GDP ratio increases the 5- and 10-year forward interest rates by 20 and 29 basis points, respectively.

The taxes to GDP ratio is highly correlated with the deficit, but they are not identical. The material differences between them are that the taxes to GDP ratio reflects only the public revenue side and not the expenditure side, and that it directly reflects the changes in economic activity and the State's ability to rely on its revenue more than on its sources of financing, while the deficit is impacted by both taxes and expenditures.

Politics and the lack of fiscal stability

The literature discusses the effects of fiscal, institutional, and political stability, which are defined as qualitative variables, on changes in credit rating. The main variables in this area are: the perceptions of corruption in the country (the Transparency International index); whether it has a history of defaults; and political stability (the World Bank index). Amstad and Packer (2015) found that a high perception of corruption and a history of defaults have a negative impact on a country's credit rating. Teixeira et al (2018) obtained similar findings regarding these two variables, and also found that a high level of political stability has a positive impact on the credit rating. Andreasen et al (2019) showed a theoretical model in which political constraints (public support or a representative parliament) can force a government to default (at a given debt level) even in cases when it would have been prepared to cut expenditures and pay off its debts. These constraints have a greater impact the higher inequality is and the more regressive the tax system is.

Current account deficit and reserves

The literature also examined the effect of economic reliance on the flow of foreign capital to finance current activity in the current account, and the size of foreign exchange reserves, as variables that impact the probability of countries to fall into recession. Lane and Milesi-Ferretti (2011) found that the countries that were harder hit by the Global Financial Crisis in 2008 were those that had a larger current account deficit, those that were more open to international trade, and those that were characterized by greater growth of the ratio of private credit to GDP prior to the crisis. Dominguez et al (2011) examined the variation in foreign exchange reserves between countries prior to the 2008 crisis and the exchange rate policies and reserves during the crisis, and identified a positive correlation between a relatively large quantity of foreign reserves and a relatively rapid pace of GDP growth following the crisis. Similarly, Llaudes et al (2011) found a nonlinear correlation between the quantity of reserves prior to the crisis and the reduction in GDP during the crisis.

External debt

A country's dependence on foreign loans, common among developing economies, is also correlated with a slowdown in growth. This is due in part to lenders' ability to demand interest and principal payments from the issuing country and to sue borrowers in the courts of other countries. The ratio of external debt to GDP is one of the main variables explaining sovereign defaults, particularly among developing economies. Regarding developing economies, Reinhart and Rogoff (2010) found that when the ratio of external debt (public and private) to GDP crosses 60 percent of GDP, GDP growth declines by an average of 2 percentage points, and that when external debt crosses the 90 percent of GDP threshold, growth is cut by half. Other articles find similar correlations between the ratio of external debt to GDP and GDP growth and the decline in credit ratings: Manasse et al (2009); Franekl and Saravelo (2012); and Karadam (2018).

2. Survey of the effect of the COVID-19 virus on the credit profiles of Israel and other countries⁵ as measured by the ratings agencies

2.1 The ratings agencies' view of the credit quality of various countries

The economic contraction resulting from the COVID-19 crisis impacted government revenues and raised their expenditures, due to the broad support countries are providing to businesses and the public. Budgetary deficits and debts therefore expanded significantly during the year, and further expansion is expected. The expansion of deficits combined with low growth are causing a high debt burden and an increase in debt to GDP ratios around the world. However, the three main ratings agencies (Moody's, S&P, and Fitch) view the changes in these variables differently.⁶

Due to the pandemic, Moody's changed its ratings and forecasts for a number of developing economies, but not for advanced economies (except for Italy and the UK). According to the company, despite the expectation of increased debt to GDP ratios in all countries, the credit rating assessment, being forward-looking, is less sensitive to a one-off increase in debt due to the crisis. Two factors are expected to affect countries' credit profiles—the pace of economic recovery, and the effectiveness of the policy to lower the debt over time.

According to Moody's, in advanced economies, the greater ability to service their debts reduces the implications of high debt for the credit rating, given the low inflation environment and the low interest rates. However, debt affordability may be adversely affected if the country's revenues recover more slowly than expected.

Since the beginning of the crisis, S&P has changed its ratings for more than 20 countries, and changed its forecasts for more than 40 countries. Similar to Moody's, the negative impact on countries' ratings is, for the time being, mostly in the developing economies that rely on a single major industry. These countries generally have much less possibility of executing a noncyclical fiscal policy than the advanced economies. The longer the need for fiscal stimulants is necessary to support GDP, the more

⁵ The survey relates mainly to the advanced economies and to developing economies whose credit rating is high, as they are comparable to Israel.

⁶ Changes in credit ratings in the second half of the year appear in the appendix.

pressure will be placed on the ratings of additional countries. S&P believes that the ability to service debts depends more on monetary flexibility, external position, and economic resilience than on the debt to GDP ratio. According to the agency, it is too early to assess the crisis's ramifications on the production capacity of economies and on the government's preparedness to enact growth reforms. If the countries manage to recover from the loss of growth in the current year, we will see most of the ratings remain at their current level in 2020-21. In contrast, if the pandemic continues and growth rates remain low or decline, there will be pressure on the ratings.

Fitch lowered its ratings for more than 20 countries since the start of the crisis, and changed its forecast to negative for more than 30 countries. In contrast with S&P and Moody's, Fitch changed its ratings and forecasts for advanced economies as well. According to Fitch, the low interest rates and access to financial markets provide some support for the rating in the short term, but they are attributed to the country's liquidity management capability more than to its repayment capacity, and are not expected to affect other factors in determining the rating. The factor common to changes in the credit risk assessment of the advanced economies are a high level of debt relative to the rating group prior to the crisis.

A comparison of the sovereign ratings methodologies shows that the ratings agencies attribute a higher weight to economic and institutional robustness (growth, the stability of state institutions, and the effectiveness of policy) than to fiscal strength (debt data).

2.2 Israel in the view of the ratings agencies

The three main rating agencies have rated Israel within the range from A+ (Moody's and Fitch) to AA- (S&P) with a stable outlook. Since the start of the crisis, all three of them confirmed Israel's rating. In April, Moody's confirmed Israel's rating but changed its rating outlook from positive to stable in view of the weak fiscal outlook due to the crisis and the weakening effectiveness of fiscal policy driven by the unstable political environment. In October, Moody's again confirmed its rating for Israel and its stable outlook.

Israel's credit profile shows significant economic resilience to shocks, which is reflected in the stability of its growth rate in the medium range, thanks to the high-tech industry and the natural gas reserves. Monetary flexibility, the high level of household savings, the current account surplus, the volume of Israel's foreign exchange reserves, and the medium-term growth potential are also strong points for Israel. To these are added Israel's good debt structure and the fact that most of the country's debt is denominated in domestic currency.

In November, S&P positively noted the Bank of Israel's monetary flexibility and the actions taken in the past year to minimize the economic impact of the COVID-19 crisis.

Instability in the political system, budgetary management, demographic difficulties related to the labor market, and tension in the Middle East are the risk factors to Israel's credit rating. The outlook may be lowered if the economic recession continues longer than expected. The lack of a budget and a greater-than-expected increase in debt data may have a negative impact on the credit rating. However, the low impact on growth in Israel, in view of the high percentage of young people and the composition of exports, is moderating the increase in the debt to GDP ratio.

Israel's debt to GDP ratio is higher than in other countries in the same ratings group. However, the box shows that this is not the only significant variable in determining the country's credit rating (Table 1).

Table 1
Forecast 2020 debt to GDP ratio of investment grade countries (rating of BBB- or higher), divided by rating (heat map)

Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3
Luxembourg 27	Finland 68	United Arab Emirates 37	Hong Kong 0	Estonia 19	Botswana 21	Peru 39	Bulgaria 24	Indonesia 38	Russia 19
Denmark 35	Austria 85	South Korea 48	Czech Republic 39	Kuwait 19	Iceland 52	Latvia 44	Thailand 50	Philippines 49	Kazakhstan 23
Norway 40		France 119	Qatar 68	Saudi Arabia 33	Malta 57	Lithuania 48	Panama 55	Colombia 68	Romania 45
Sweden 42			United Kingdom 108	Chile 33	Poland 60	Malaysia 68	Mexico 66	Uruguay 69	Hungary 77
New Zealand 48			Belgium 118	China 62	Slovakia 62	Slovenia 81	Mauritius 86		India 89
Switzerland 49				Israel 77	Ireland 64		Spain 123		Portugal 137
Netherlands 59				Japan 266					Italy 162
Australia 60									
Germany 73									
Canada 115									
Singapore 131									
United States 131									

SOURCE: Debt ratio based on IMF World Economic Outlook revised to October; ratings based on Moody's global.

3. The main findings of a new research study⁷: “The factors explaining long-term government bond yields in Israel and similar countries”

A new study being conducted by the Bank of Israel Research Department estimates the impact of the fiscal risk factors and of other variables on the cost of government debt.⁸ The fiscal risk factors that affect default risk are estimated by two variables—the debt to GDP ratio and the taxes to GDP ratio. The study accounts for the impact of many economic factors that do not necessarily affect default risk but do affect the yields themselves, such as long-term structural factors and cyclical factors. The researchers thus manage to isolate the other effects and examine the impact of the fiscal risk factors on the estimated cost of government debt.

The main findings of the study are as follows:

1. The debt to GDP ratio has a statistically significant impact on the cost of debt. An increase of one percentage point in the debt to GDP ratio raises the cost of debt by 3.8 basis points.
2. A decline in the tax to GDP ratio also increases the cost of debt, with an even greater extent of

⁷ The study (by Noam Michelson and Roy Stein) is close to being completed, and will be published as part of the Research Department's Discussion Papers Series.

⁸ The estimated cost of government debt is measured by the nominal forward interest rate in the range of 5–10 years, which is calculated from the (published) yields on unindexed government bonds for those terms.

sensitivity. A decline of one percentage point in the taxes to GDP ratio raises the cost of debt by about 15 basis points.

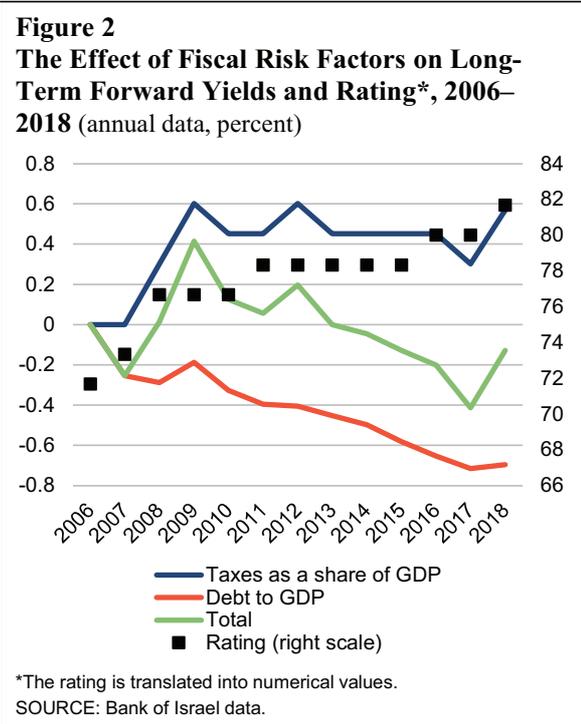
3. Credit rating changes are highly correlated with the debt to GDP ratio, but it seems that this correlation is created only after the debt to GDP ratio, which is one of the central estimations in fiscal risk, is reflected in the pricing of bonds among investors.⁹

The researchers examined the developments of the fiscal risk factors in Israel since 2006, a period during which the credit rating agencies raised Israel's rating five times. The following are the debt and tax data for Israel during those years:

1. The debt to GDP ratio declined by about 20 percentage points between 2006 and 2017.
2. Between 2007 and 2009, the taxes to GDP ratio declined by 3 percentage points (from 29 to 26 percent), and remained at the lower level with some volatility until 2017. In 2018, the ratio declined by two percentage points.

Figure 2 shows that the decline of the debt to GDP ratio lowered the interest on debt in Israel by about 80 basis points, but the decline of the taxes to GDP ratio led to an increase of about 40 basis points in the cost of debt in 2007 and 2008, offsetting half of the positive effect of the decline in the debt to the GDP ratio. The taxes to GDP ratio declined again in 2018, leading to an additional 20 basis point increase in the interest paid on the debt.

Based on the Research Department's assessment, Israel may reach a debt to GDP ratio of about 82 percent and a deficit of 11 percent of GDP at the end of 2021 (the equivalent of a taxes to GDP ratio of 0.22 percent). If both of these estimates are realized, the effect of these fiscal risk factors on the cost of debt will increase by 1.3 percentage points relative to their effect prior to the crisis (when the debt to GDP ratio was 60 percent and the taxes to GDP ratio was 0.25 percent).



⁹ The estimation equation explains the effects of the various factors on yields (and not the effects on credit ratings). In terms of the credit ratings, the study examines whether the information contained in the ratings, beyond the economic factors, has any added value, and finds that no such value exists, except in the information contained in ratings declines, particularly declines from investment-grade to speculative ratings.

Country	Date	Ratings agency	Action	Reasons
Italy	Oct. 23	S&P	Improved outlook from negative to stable, rating affirmed at BBB.	<ul style="list-style-type: none"> • The virus had a strong impact on the economy, and the country's GDP will not return to 2019 levels before 2023. • As a result, the government presented a fiscal incentive program totaling 6.1 percent of GDP. • The ECB expanded its asset purchasing program, enabling low debt financing costs. The EU launched a recovery program that is expected to provide loans and grants totaling 12.5 percent of GDP to Italy, subject to the advancement of growth-encouraging reforms. • Therefore, despite the economic uncertainty, the measures give the government an opportunity to jump start the economy.
UK	Oct. 16	Moody's	Lowered rating from Aa3 to Aa2.	<ul style="list-style-type: none"> • Growth weakened considerably since the previous rating reduction in September 2017, and it is expected to remain weak. The negative structural trend was made worse by the decision to leave the EU and the inability to reach agreements on how the departure will be done. Growth will also be impacted by the ramifications of the pandemic, which has already hit it hard. • Fiscal robustness eroded. Government debt, which was already high prior to the crisis, has risen further as a result of the pandemic. While the UK's reserve currency status provides a high capacity for carrying debt, the increase in debt poses risks to debt affordability in future years, particularly in the absence of a plan to reduce government indebtedness. Moody's believes that the government will not succeed in lowering the debt in the coming years due to the political situation and the low growth. • In recent years, public policy and institutional strength have been seen as weakening. Policy has become less predictable and less effective. <p>The combination of these three factors will make it difficult for the UK to improve its economic state in the foreseeable future.</p>

Spain	Sep. 18	S&P	Negative outlook, rating affirmed at A.	<ul style="list-style-type: none"> • The virus had a strong impact on the economy, and the country's GDP will not return to 2019 levels before 2022. • A new budget was not passed following 2018, which is having an adverse impact on economic reforms. • Against that, Spain benefited from membership in the eurozone and from the ECB's purchasing program.
US	July 31	Fitch	Negative outlook, rating affirmed at AAA.	<p>Change in outlook due to the decline in public financing and the lack of a credible fiscal consolidation program:</p> <ul style="list-style-type: none"> • The budgetary deficit and debt were in an upward trend even before the current crisis. • The risk that the government will not carry out fiscal consolidation in order to stabilize the debt following the pandemic. • A higher debt level than all other AAA-rated countries, which is expected to increase to 130 percent of GDP. The assessment is that the US will return to the precrisis debt-to-GDP level in 2023, given a low interest rate environment.
Japan	July 28	Fitch	Negative outlook, rating affirmed at A.	<ul style="list-style-type: none"> • The expansion of the budgetary deficit due to the economic support provided is contributing to an increase in the debt to GDP ratio, from its already high precrisis level—both in absolute terms and relative to the ratings group. • An increase in morbidity is increasing the risk of preventative measures, which will lead to a further contraction of GDP. • The high debt levels will make it difficult to reduce the debt. A decline in the labor force and the aging of the population will make it difficult to realize potential growth.

Canada	June 24	Fitch	Lowered rating to AA+. Stable outlook	<p>A decline in public financing due to the crisis:</p> <ul style="list-style-type: none"> • A sharp increase in the government deficit as a result of the pandemic. The government deficit is expected to increase to 16 percent of GDP, compared with a surplus of about one percent in 2019. • Significantly higher debt ratios than in 2019—the government debt to GDP ratio jumped to 115 percent this year compared with 88 percent in 2019. Government debt in Canada is among the highest in the AA ratings group. Canada has experience in fiscal adjustments from the 1990s. However, the fiscal system in Canada is decentralized, which makes it difficult to carry out such an adjustment.
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Box 2

The decline in value of commercial real estate companies in view of the COVID-19 crisis¹

Main points

- At the height of the COVID-19 crisis, the aggregate value of commercial real estate companies declined by about 40 percent relative to the end of 2019, and did not begin to recover from this sharp decline until the end of September.
- Prior to the crisis, the pricing of commercial assets in the market was higher than their book value—perhaps due to the optimistic growth forecasts prior to the crisis—and the decline in market value of the assets during the crisis mainly reflects a correction relative to the book value, but not beyond that.
- All of the indicators show that the decline in value of the commercial real estate companies is not evidence of an increase in risk to the financial system on the part of these companies.
- With the announcement of positive trial results for the COVID-19 vaccine, the trend changed in a positive direction. As of the end of December, the decline in value since the beginning of the year had moderated to 20 percent.

An industry examination of the main equity indices shows that the construction and real estate index, unlike the other real industry indices, did not recover by the end of September from the sharp declines that hit the financial markets at the height of the COVID-19 crisis in March and April. (See the chapter in this report on financial assets.) A division of the publicly traded equities in this industry into three groups—commercial real estate companies, construction and development companies, and all the others—sharpen the distinction that the commercial real estate companies are the ones that pulled the construction and real estate index downward following the initial decline (Figure 1). At the aggregate level, the figure shows that the value of these companies dropped by about 40 percent as of the end of September, relative to the end of 2019. With

Figure 1
Cumulative Change in the Value of Shares Traded on the Stock Exchange Divided Into Three Groups, 2020 (daily data, index: December 31, 2019=100)



*Real estate and construction companies were classified manually according to their main operations. All other shares traded on the Stock Exchange were classified as "other shares". The value of the companies was totaled for each day and normalized to 100 at the start of the examined period.

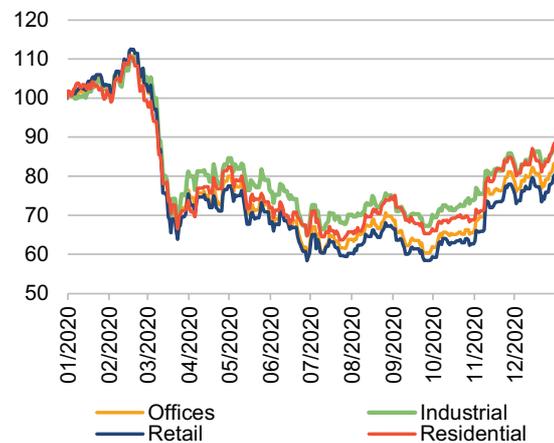
SOURCE: Based on Tel Aviv Stock Exchange data.

¹ The daily data (on share prices and yield spreads) in this box are up to date as of December 31, 2020.

the announcement of positive trial results for the COVID-19 vaccines the trend changed in a positive direction, and the decline in value as of the end of December was about 20 percent.

A more focused look at the commercial real estate companies by their type of activity (in terms of the mix of properties) shows that the market is pricing retail and office space more negatively than other real estate uses (residential and industrial)² (Figure 2). An examination of commercial real estate companies by their main investment also shows that the market's assessment of the value of companies geared toward the retail industry is lower than that of companies with a broader diversification of assets, although these results are not unequivocal, and it is clear that the lack of recovery of companies in the industry is more widespread.

Figure 2
Cumulative Change in the Value of Commercial Real Estate Shares, by Their Mix of Assets, 2020 (daily data, index: December 31, 2019=100)



*The value of commercial real estate companies is divided by the mix of their assets (for instance, if the value is 100, and 60 percent of its assets is commercial and 40 percent manufacturing, then 60 percent of the value is commercial and 40 percent is manufacturing.) We totaled the value of each of the uses each day and normalized it to 100 at the start of the examined period.
SOURCE: Based on Tel Aviv Stock Exchange data.

The publicly traded commercial real estate companies have financial debt totaling about NIS 160 million (as of the third quarter of 2020)—about 17 percent of nonfinancial business sector debt. According to the global literature, this industry is a significant factor in the acceleration of financial crises³, which leads to the question: Does a decline in the value of commercial real estate companies put the stability of the financial system at risk? The answer provided by this analysis is that it does not.

At the aggregate level, there were revaluation losses totaling about NIS 3 billion in the first three quarters of 2020, about one percent of total commercial assets recorded in the balance sheet (which are recorded at fair value, in accordance with the accounting standards).⁴ Therefore, the companies' aggregate leverage, calculated by dividing total financial debt by the fair value of commercial real estate, is about 0.64, and increased slightly relative to the precrisis leverage (0.62 as of December

² This finding may show that the market is pricing in a future structural change generated by the crisis, in which consumption patterns change to greater use of ecommerce and the labor market transitions to remote working and less use of office space.

³ As described broadly in the box "Commercial Real Estate in Israel", *Financial Stability Report*, December 2018. That box also describes the various uses of commercial properties for retail, industrial, office, and residential space.

⁴ The institutional investors that own commercial real estate also recorded a negligible decline in value of about 0.5 percent. However, it should be noted that these declines in value do not reflect the value of all aspects of commercial real estate, such as street-front stores, which are generally not owned by public companies or institutional investors, and the value of which may decline by higher rates during crisis periods. It is also possible that later on, with the development of the crisis and its expected effect on commercial real estate, higher revaluation losses may be recorded for public companies and the institutional investors.

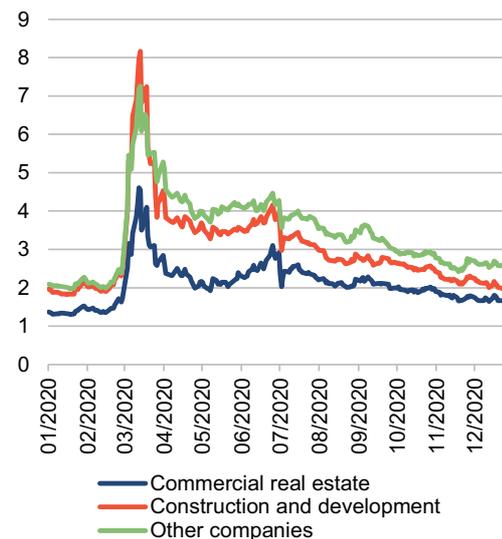
2019). Another parameter of leverage, which is calculated by dividing financial debt by CAP (financial debt and owners' equity), also shows that leverage increased slightly⁵ (0.59 in September 2020 compared with 0.57 in December 2019). In terms of pricing in the bond market, bond spreads (Figure 3) show that the market is not pricing in greater leverage or risk relative to the precrisis period.

The decline in the companies' value shows that the capital market is pricing their assets lower than it was prior to the crisis, which leads to the question of whether this trend shows an equivalent decline in the value of the assets on the companies' balance sheets that would lead to a dangerous increase in their leverage. In order to answer this question, we analyzed the companies' leverage, as priced by the capital market, for two points in time (prior to the crisis—the fourth quarter of 2019—and the third quarter of 2020), and in two different ways:

1. The leverage derived from the market, where $\frac{FV - MV}{FV}$ is the market value of the company's equity at the quarters' end (December 31, 2019 and September 30, 2020) and $\frac{D}{MV + D}$ is the fair value of the commercial assets on the balance sheet.
2. Financial debt to CAP as derived from the market: $\frac{D}{MV + D}$, where MV is the market value of the company's equity at the quarters' end (December 31, 2019 and September 30, 2020) and D is the financial debt on the balance sheet.

It should be noted that if we take into account the fact that the commercial assets are recorded on the balance sheet at their fair value (FV)⁶, and that it is customary to revalue the fair value of assets through the future cash flow (DCF) method, we would basically expect that the calculation of leverage in both of these methods would lead to equal results such that⁷: $\frac{FV - MV}{FV} = \frac{D}{MV + D}$

Figure 3
Corporate Bond Spreads Divided into Three Groups*, 2020 (daily data, percent)



*Weighted by bond value. Companies whose bonds are traded are divided according to the division in Figure 1.

SOURCE: Based on Tel Aviv Stock Exchange data.

⁵ At the aggregate level, the financial debt of commercial real estate companies increased (by about 7 percent), while the value of commercial real estate did not significantly change.

⁶ And not in historical cost terms (such as other tangible assets on the balance sheets of nonfinancial companies, such as inventory or fixed assets).

⁷ The development of this equation leads us to equivalence: $MV + D = FV$, which will later be used in examining the asset pricing in the market. It should be noted that this calculation assumes that the financial debt on the balance sheet is close to fair value (a reasonable assumption).

Table 1
Leverage ratios calculated by book value (BV) and by market value (MV), December 31, 2019 and September 30, 2020

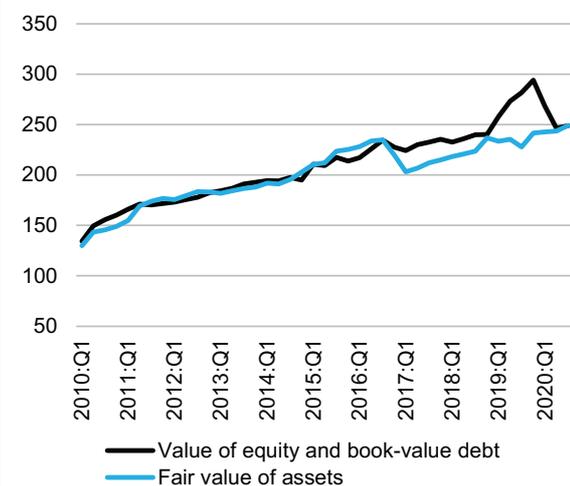
Leverage ratio		2019:Q4	2020:Q3
BV	Financial debt to fair value of assets	0.62	0.64
	Financial debt to CAP	0.57	0.59
MV	Leverage derived from the market	0.4	0.64
	Financial debt to CAP (as derived from the market)	0.5	0.64

SOURCE: Based on Tel Aviv Stock Exchange and published financial statements.

Table 1 shows the leverage ratios that were calculated through these methods at both points in time. The Table shows that in book value (BV) terms, as described above, leverage increases slightly with an increase in the financial debt of the companies in the industry, but the level does not change materially. In contrast, in market value (MV) terms, there is a marked increase in leverage derived from the pricing in the capital market. The table shows two main findings. First, in the third quarter of 2020, the leverage derived from the market is similar to the leverage calculated from the books (BV), while in the fourth quarter of 2019, there was quite a large gap between these two calculations. Second, both methods of calculating leverage from the market lead to the same result, with the equation mentioned above showing equal results.

We can therefore conclude that the market's pricing of commercial real estate companies corrected itself in view of the crisis to nearly the level at which the assets were revalued in the companies' books, such that the leverage in the books will be equal to the leverage priced in by the market. This finding shows that the value of the commercial real estate companies did not decline below the book value of their assets—a calming message from the standpoint of the financial system—and, as stated, may be only a correction of the commercial real estate companies' pricing. In order to examine this hypothesis (whether it really is a correction), we examined the ratio between the market value of the companies' equity and their book value (as an indication of the market's pricing of their assets), and the fair value of the assets:

Figure 4
Book Value of Real Estate and Aggregate Book Value of Equity and Debt of Commercial Real Estate Companies, 2010-2020:Q3 (quarterly data, NIS billion)



* This figure presents the aggregate value of commercial assets as recorded in the books at fair value (blue line) and the aggregate value of equity on the stock exchange and book-value debt (black line) of all commercial real estate companies for each of the quarters from 2010 onward, to the end of the quarter. The value of the real estate of one company (with large volumes) includes the value of the holdings of real estate companies it owns (that were not consolidated into its financial statements.)

SOURCE: Based on Tel Aviv Stock Exchange data and published financial statements.

Since the vast majority of the commercial assets⁸ is at fair value and the financial debt is also close to fair value, this ratio must be close to 1. We examined the numerator and the denominator of this portion at the aggregate level for each quarter from 2010 onward (Figure 4), and found that in general, the market pricing of the equity together with the book value were equal to the fair value of the assets (meaning that this ratio was close to 1) until the end of 2016. In 2016, the fair value of the asset declined due to the sale of assets and exit from consolidation that took place in one large company and was not immediately reflected in the numerator (in MV+D). The gap that was created between the numerator and the denominator was gradually closed until the end of 2018, and market pricing was then “disconnected” from the fair value until the end of 2019, just prior to the crisis. In the first three quarters of 2020, due to the COVID-19 crisis, there has been a marked convergence back to pricing in which $MV+D=FV$. This disconnect of market prices from asset prices in 2018 may attest to more optimistic growth forecasts (or expectations of higher profitability and dividend receipts) than according to the assumptions at the basis of the valuations in the financial statements, which were later on shown to be false.

The disconnection of financial asset prices from the fundamental data on real assets (“overpricing”) may increase the risks to the financial system. The convergence of financial asset prices back to the fundamental pricing is therefore a positive finding showing that the risk of overpricing in the market is low (near zero). This development, together with the fact that the market is also not pricing the companies at a value lower than their book value in view of the crisis, show that shareholders in the market are not evaluating the companies’ leverage as higher than the leverage that they see in the financial statements, so that the decline in value does not put the financial system at risk.

An individual analysis of the commercial real estate industry as part of a broader analysis of publicly traded companies’ resilience in view of the COVID-19 crisis⁹—in which an increase in capitalization rates leading to a 10–15 percent decline in the book value (far beyond the revaluation losses recorded in the first three quarters of 2020) was assumed—showed that the companies in the industry have strong capital with which to absorb significant losses and significant devaluations. A box published in the Financial Stability Report for December 2018 that dealt with commercial real estate in Israel¹⁰ and its financial stability also indicated the financial strength of the companies in the industry, which was reflected in a continued decline in their leverage and an increase in their liquidity and in their repayment capacity. The main conclusion from the stability analysis is that the companies in the industry accumulated sufficient capital during the boom period to deal with the ramifications of a crisis such as they are experiencing now.

In the first three quarters of the year, the profitability of the commercial real estate companies was impacted, and there was also a marked impact to their cash flow but not to their repayment capacity or liquidity (Table 2). The capital that they accumulated, which is based on commercial properties they own (which as of the end of September 2020 had a market value, as stated, similar to their book value), enables them to raise further debt and take on leverage so that they can service their current

⁸ Other than assets being constructed or land that is generally not of significant amounts.

⁹ The analysis is described in Box 4 of the Financial Stability Report for the first half of 2020, but the industry aspect was not published. For more information:

<https://www.boi.org.il/he/NewsAndPublications/PressReleases/Pages/28-7-2020.aspx> (in Hebrew).

¹⁰ For more information: <https://www.boi.org.il/en/NewsAndPublications/PressReleases/Pages/19-12-2018.aspx>

liabilities even when experiencing a lack of cash. Since the value of their commercial properties was not significantly impacted, which enables them to currently raise additional sources of financing, the commercial real estate companies should not encounter liquidity distress that would impact their stability or the stability of the financial system. This conclusion is supported by both risk pricing in the bond market, as seen in the development of bond spreads during 2020 (Figure 3), and the credit quality indices in the banking system.¹¹

Selected financial ratios of commercial real estate companies, September 30, 2019 and September 30, 2020

	NOI from assets		Current cash flow from assets		Repayment capacity		Immediate liquidity	
	Q3/2020	Q3/2019	Q3/2020	Q3/2019	Q3/2020	Q3/2019	Q3/2020	Q3/2019
Aggregate calculation	3.91 (65%)	4.32	2.46 (76%)	3.54	1.95 (48%)	3.06	0.69 (43%)	0.65
Simple average	3.63	3.95	1.31	1.75	2.59	2.52	1.62	1.38
Median	3.41	4.21	1.91	2.7	2.1	1.6	0.59	0.49

SOURCE: Based on published financial statements.

The table shows selected financial ratios of the publicly traded commercial real estate companies as of September 30, 2020 and for the same period in the previous year. The NOI (net operating income) from assets is calculated as operating profit excluding revaluation profit/loss during the period divided by the value of commercial assets as of the beginning of the period. Current cash flow for assets is calculated as cash flow from current operations during the period divided by the value of commercial assets as of the beginning of the period. Repayment capacity is calculated as cash flow from current operations divided by financing expenses during the period. Immediate liquidity is calculated as cash and short-term investments divided by current liabilities. The rate of companies with a ratio in 2020 that is lower than the 2019 ratio is noted in parentheses next to the aggregate calculation.

¹¹ As of September 30, 2020, the rates of problematic debts and impaired debts in the real estate activity segment of the five large banks were 3.5 percent and 1 percent respectively, similar to the rates as of September 30, 2019.

Box 3

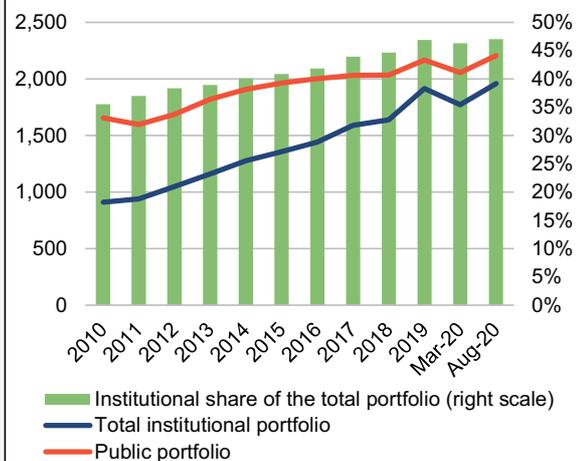
INSTITUTIONAL INVESTORS' EXPOSURE TO FUTURES CONTRACTS ON FOREIGN EQUITY INDICES

This box describes the effect of institutional investors' activity on the domestic government bond and foreign exchange markets during the COVID-19 crisis that began in March.¹ The main argument in this box is that the characteristics of the institutional investors' exposure to futures contracts on foreign equities, which mostly involves the use of domestic government bonds² as collateral for investment in such contracts, intensified the domestic reaction relative to the world. This led to a significant liquidity and currency risk: Whereas the currency exposure is dollar-denominated, its main source of financing is in shekels. As a result, the requirement to complement the collateral due to sharp declines in the global equity markets and in contracts that track those indices created a significant lack of liquidity and foreign exchange among the institutional investors, which forced them to sell off a significant volume of government bonds³ to finance significant foreign exchange purchases in the market. These actions intensified the increase in yields in the government channel, the depreciation of the shekel, and the liquidity distress in the dollar swap market.

The development of the institutional investors' asset portfolio⁴

The institutional investors' portfolio doubled over the past decade, from about NIS 900 billion in 2010 to about NIS 2 trillion currently, and its share of the public's total financial assets portfolio is close to 50 percent (Figure 1). This is a rapid pace of growth, particularly relative to the more moderate growth rate of the public portfolio. This can be explained by long-term regulations, such as compulsory pensions that applied from 2008 to the entire salaried public and from 2018 on the self-employed. These are accompanied by demographic and macroeconomic changes, chiefly population growth, an increase in the number of employed persons, and increases in nominal wages and in the rate of pension deductions.

Figure 1
General Asset Portfolio Divided into Public and Institutional Investors, 2010-2019 and 2020 (two observations) (annual data, NIS billion and percent)



SOURCE: Based on Capital Market Authority, reports by the institutional investors to the Bank of Israel, reports to the Banking Supervision Department, and Tel Aviv Stock Exchange data.

¹ The most influential factor is the global financial shock due to the COVID-19 pandemic. Withdrawals from mutual funds also had a significant effect.

² In addition to these, *makam* and existing shekel and forex liquidity were used.

³ The value of institutional holdings as a share of total stock of government debt declined by 7 percentage points between February and March, while most of the decline can be attributed to the decline in the sale of government bonds in order to finance foreign exchange purchases of significant volume.

⁴ The institutional portfolio equals all medium- and long-term savings entities. The public portfolio equals the public's direct holdings plus mutual funds. The general asset portfolio is comprised of both.

Another angle that illustrates the increase in the institutional investors' portfolio is its current ability to contain, in value terms, all tradable assets in the domestic market. This is unlike the situation in 2010, when the portfolio was about half the value of domestic assets.⁵

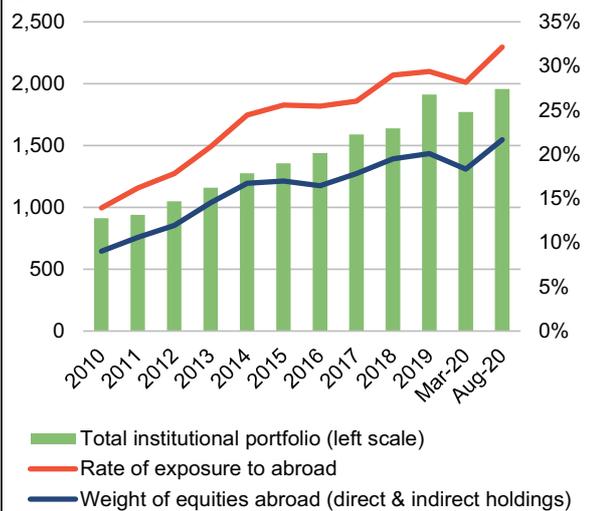
The increase in value of assets managed by the institutional investors led, among other things, to a rapid increase in the rate of exposure to foreign assets, to about 32 percent of the total portfolio. In nominal terms, this represents a change of about NIS 500 billion, about half of the total increase in the institutional portfolio over the past decade (Figure 2). Since the main asset in the foreign assets portfolio is equities, the weight of equities in the total portfolio increased. As a result, the effect of this channel on the portfolio's performance and on capital movements in the domestic market, in both shekels and foreign exchange, increased.

Institutional investors' exposure to foreign equities

Exposure to foreign equities is mainly through direct holdings of equities, ETFs, and futures contracts on equity indices. The mix of exposure to foreign equities changed, and the tendency in recent years has been to increase the weight of futures contracts at the expense of other exposures (Figure 3). The reasons for this are presented in Table 1, and are mainly connected with the greater tradability and lower cost of futures contracts than of the alternatives.

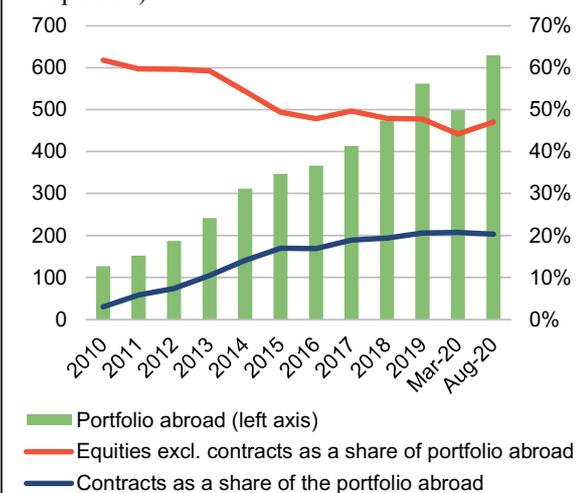
Another main difference is that investment in contracts is leveraged, which means that only a small part is invested in the contract, and only this part is exposed to changes in the exchange rate. The rest of the amount is mostly invested in tradable unindexed government bonds, which serve as collateral for the investment in the contracts. This is an advantage from the institutional investors' point of view, in that it

Figure 2
Weight of Assets Abroad, 2010-2019 and 2020
(two observations) (annual data, NIS billion and percent)



SOURCE: Based on Capital Market Authority and reports by the institutional investors to the Bank of Israel.

Figure 3
Equities and Contracts as a Share of Institutional Portfolio Abroad, 2010-2019 and 2020
(two observations) (annual data, NIS billion and percent)



SOURCE: Based on Capital Market Authority and reports by the institutional investors to the Bank of Israel.

⁵ The reference here is to tradable government debt, *makam*, equities, and corporate bonds.

enables them to be exposed to foreign assets without creating a full exposure to foreign exchange, which is sometimes not desirable for them. However, a futures contract is a volatile asset that depends on market developments, so this advantage may erode rapidly and expose the institutional investors to foreign exchange and liquidity risks as a result of the demand for collateral in the case of prolonged market declines.⁶ In such a case, due to the large exposure to futures contracts on equities and the currency mismatch, the institutional investors may face demand for significant shekel and foreign exchange liquidity, which may have a strong impact on the domestic capital and foreign exchange markets, as happened during the COVID-19 crisis in March. For ETFs and equities (assuming that the equity reacts the same way), an increase in market volatility causes a deviation from the desired exposure rates in the institutional portfolio, making adjustments necessary—foreign exchange sales and purchases, sometimes of significant volumes. However, in contrast with contracts, investments in these assets are not leveraged and do not require collateral. As such, even during periods of high volatility in the financial markets, foreign exchange purchases and sales in respect of ETF and equity holdings do not have to be immediate, so the effect of institutional investors' activity on the domestic capital and foreign exchange markets as a result of this exposure is generally relatively moderate.

Investment in a futures contract

An investment in a futures contract is made based on a notional amount. This means that when the contract is signed, only a certain percentage of the value of the investment is deposited with a broker. This is called the initial margin (IM).⁷ Most of the amount is held in another asset that serves as collateral for the investment in the contract. This asset is generally risk-free, liquid, and short-term, because of the need for it to be available and to maintain its monetary value in case the collateral is called in. This asset may be a US Treasury bond, liquid dollar or shekel deposits, or unindexed Israeli government bonds. For reasons of investment convenience and the need to avoid unwanted exposure to foreign exchange and the accompanying additional cost, institutional investors generally use tradable domestic government bonds. This tendency explains a significant portion of the increase in the rate of holding of this asset in the past decade (Figure 4). When the cumulative loss reaches a certain level, a variation margin (VM) must be paid in addition to the IM. The use of the VM is referred to as a margin call (a call to complete the collateral), and is made currently as a result of the basic volatility of the market, in both directions.⁸ The VM as a result of price declines is the main risk factor in this investment, due to the uncertainty regarding its scope, when it will take place, and its immediacy. In this case, the risk is intensified due to the lack of a natural correlation between the

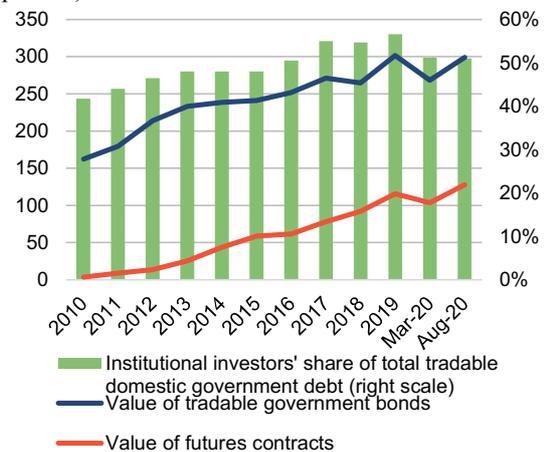
⁶ The volatility also exists in a case of price increases, but since in this case there is no margin call, the risk is mainly an exchange rate risk, which can also be material for the market and the institutional investors, since it largely has an appreciatory effect on the shekel.

⁷ In the case of an E-mini contract on the S&P 500, which is acceptable to the institutional investors. For instance, in November 2020, the initial margin was about \$13,200—about 8 percent of the notional amount of the contract. The notional amount is the underlying asset multiplied by the contract size. If the value of the index is 3,500, and we are interested in about 50 contracts (the minimum amount), then the total notional amount is $50 \times 3,500 = 175,000$.

⁸ A VM also exists when prices increase, and it may have a significant appreciatory impact on the shekel, as has happened in the past. However, in this instance, the institutional investors are not obligated to immediately sell the foreign exchange that they receive.

exposure to contracts, which is in dollar terms, and the collateral, which is in shekel terms. In addition, the IM is not fixed, and in periods of increased market risk it may increase sharply (beyond what is derived from the declines in the markets), due to the need of the counterparties in the transaction to reduce risks. This issue was raised in a BIS publication that surveyed the effects of the crisis in March in the markets, and the sharp increase in the IM rates in Europe and the US.⁹

Figure 4
Tradable Government Debt Held by Institutional Investors, 2010-2019 and 2020 (two observations) (annual data, NIS billion and percent)



SOURCE: Based on Capital Market Authority, reports by the institutional investors to the Bank of Israel, reports to the Banking Supervision Department, Ministry of Finance, and Tel Aviv Stock Exchange data.

Table 1
Main differences between investments in contracts and direct investments in equities and ETFs^a

Asset	Tradability	Liquidity	Holding costs	Risk: Exchange rate, operating, liquidity	Foreign exchange exposure
Futures contract	Throughout the day	High	Low - LIBOR interest	Medium to high	Low initial exposure but there is a daily MTM* risk
ETF	During trading hours only	High	Management fee + Spot + FX basis	Low	Full exposure
Equity	During trading hours only	High - depending on the stock	Spot + FX Basis	Low	Full exposure

* Market to Market is a daily asset revaluation mechanism that is intended to reflect the real market price. The result dictates whether the investor receives or injects collateral.

^a The comparison is to an E-mini contract on the S&P 500. An equity holding is not a complete alternative to contracts. There is also a small taxation gap in favor of the contract.

Events in the domestic market in March

The following is an outline of the ramifications of institutional investors' exposure to futures contracts on the domestic capital market during the crisis, through three channels—the government bond market, the foreign exchange market, and the dollar swap market. The analysis focuses on the period around the height of the crisis in mid-March. Prior to the crisis, institutional investors' total exposure to futures contracts was about NIS 110 billion, or about \$31 billion (Figure 5), and the main asset held against this exposure was tradable unindexed Israeli government bonds.¹⁰

⁹ See a discussion of the issue at the international level: BIS Bulletin No 13: The CCP-Bank Nexus in the Time of COVID-19.

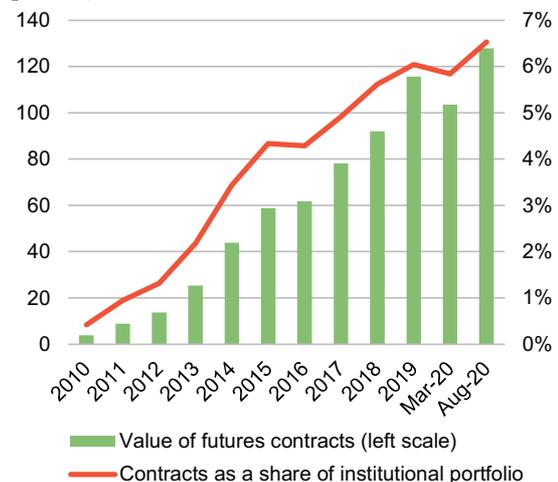
¹⁰ Contra assets were also held in other instruments, foreign exchange liquidity, and *makam*, but the main instrument was tradable domestic government bonds.

The global spread of COVID-19 during February, and its definition as a pandemic, generated a financial shock in the global markets, which was reflected in sharp declines on the equity indices and an increase in yields on government bonds. In the foreign exchange market, the main currencies depreciated against the dollar, and the domestic interest rate in the dollar swap market in nondollar markets declined sharply (due to the increase in the dollar interest rate).

The declines on the equity indices intensified during March, and at the end of the period, the S&P 500 index fell by about 30 percent.¹¹ During that period, there were days with very anomalous decline sequences that were unprecedented even during the Global Financial Crisis (GFC) in 2008. As such, the institutional investors had to increase their collateral by cumulative amounts of billions of dollars during March. As noted above, the institutional investors do not manage dollar or shekel liquidity of the volumes required, so in order to finance this, they were forced to liquidate government bonds held as collateral against their exposure to contracts.

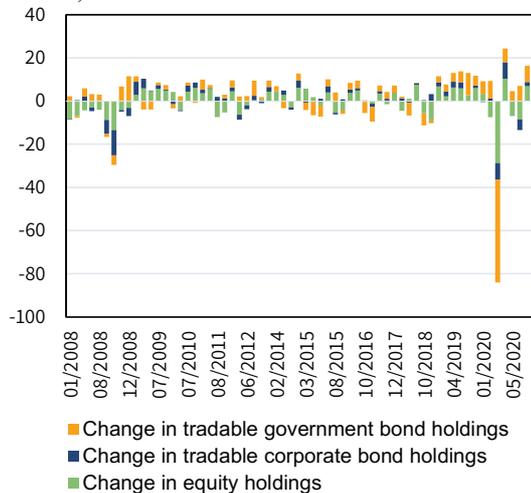
Figure 6 shows the change in value of the institutional investors' holdings of various assets and selected dates on which significant changes were recorded. The decline in government bond holdings in March is more prominent than the decline in other, riskier, assets, as well as relative to past events. During the GFC, the decline in government bond holdings was marginal, with most of the declines coming in risk assets, as expected. The main reason for this was that the near-zero exposure to futures contracts at the time. Such volumes of sales of the safest asset in the domestic market at the height of the crisis by a participant perceived as "steady hands" is a rare phenomenon, particularly when the asset should generate profits during a crisis. The explanation for this is the use of domestic government bonds as collateral against holdings of futures contracts, in the absence of sufficient foreign exchange liquidity and in view of the anomalous nature of the COVID-19 crisis. The use of another asset with that is

Figure 5
Volume of Futures Contracts Held by Institutional Investors, 2010-2019 and 2020 (two observations) (annual data, NIS billion and percent)



SOURCE: Based on Capital Market Authority and reports by the institutional investors to the Bank of Israel.

Figure 6
Monthly Change in the Value of Institutional Holdings by Type of Asset, Selected Dates (NIS billion)



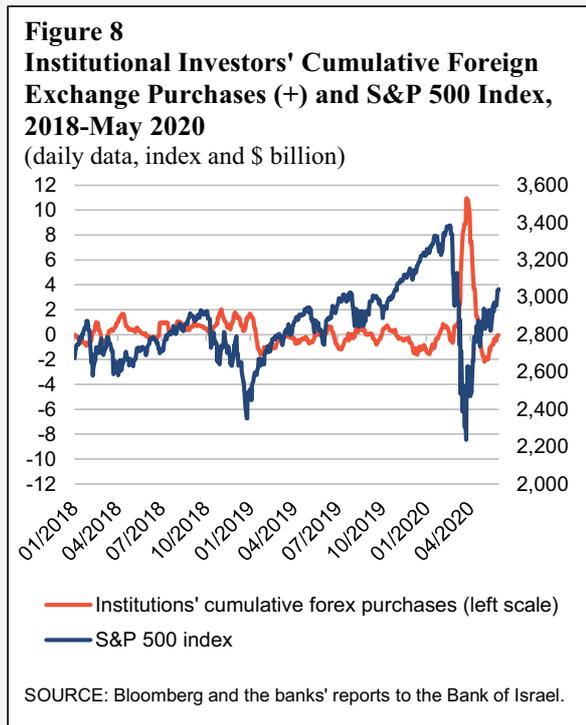
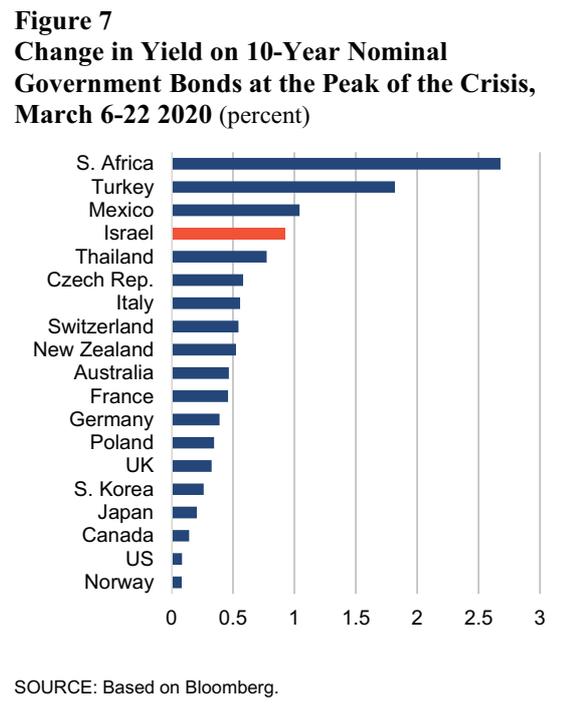
SOURCE: Based on Capital Market Authority, reports to the Banking Supervision Department, reports by the institutional investors to the Bank of Israel, and Tel Aviv Stock Exchange data.

¹¹ The comparison period chosen is from February 20 to March 20.

naturally correlated with exposure to contracts would apparently have lowered the need to sell government bonds, such that the increase in yields in Israel, which was more prominent than in other countries, would have been more moderate (Figure 7). It is important to note that the increase in yields was also supported by huge withdrawals from the mutual funds, a large portion of which was in government bonds.

The shekel return from the sale of the bonds was used to purchase more than \$10 billion in foreign exchange (Figure 8). This amount is quite in line with the VM requirements for that period—a decline of about 30 percent in the S&P 500 multiplied by close to \$31 billion in exposure to contracts.¹² Figure 8 also points to the link between changes in the S&P 500 index and the institutional investors’ cumulative foreign exchange purchases, which strengthens as the COVID-19 crisis worsens and is correlated with the marked depreciation of the shekel in that period. This phenomenon reflects a connection, that has been built up over a number of years, between changes in the US equities index and institutional investors’ activity in the foreign exchange market, in view of the increased exposure of the institutional investors’ portfolio to abroad, mainly to contracts. This link is bidirectional, and it also acts for price increases on the S&P index, which cause a positive VM and foreign exchange sales that support the strengthening of the shekel. An example is the decline in cumulative foreign exchange purchases that began in April, which indicates a transition to foreign exchange sales that is consistent with the recovery of the S&P 500 during that period.

The link described so far between exposure to contracts and developments in the bond market and foreign exchange purchases is relatively clear and direct. In the case of exchange rates and swaps, the link is more complex, because these markets have global impacts that are intensified in many countries during periods of crisis. This is generally due to the reduction of dollar sources in the global banking system, which mainly impacts the small economies that have no natural sources of dollar



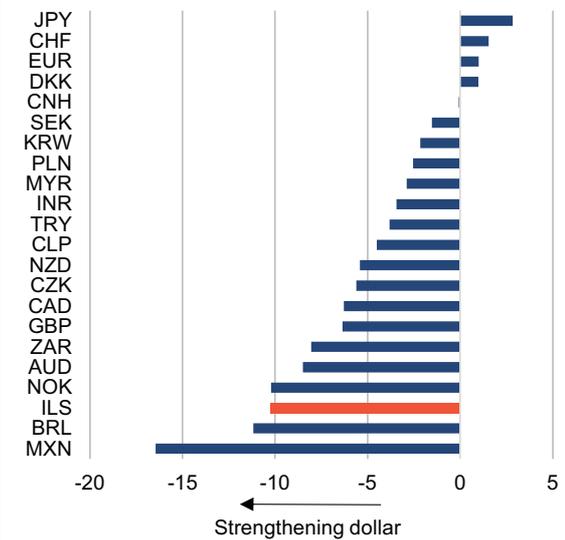
¹² This amount does not include foreign exchange liquidity that was obtained through the dollar swap market.

financing.¹³ Figure 9 presents the performances of the major currencies relative to the US dollar around the height of the crisis, and shows that most of the currencies reacted through depreciation. The intensity of the shekel's depreciation, about 10 percent, which was more prominent than others, is evidence of the large impact of the institutional investors' foreign exchange purchases on the shekel exchange rate at that time. In the dollar swap market, there were significant liquidity difficulties, and as a result, the shekel interest rate inherent in a one-week transaction declined sharply (Figure 10). This interest rate reflects the deviation from the interest rate that should be effective in a "normal situation" according to the interest rate equivalence rule, which means that during the crisis, a dollar borrower was forced to absorb a loss of about 6 percent in annual terms relative to the forward rate during the transaction period. Even though the global factor is the main explanation, the fact that the interest rate inherent in a dollar swap in Israel was quite negatively prominent, in addition to the depreciation, around the height of the crisis indicates a significant domestic factor. This can be attributed to the anomalous volume of institutional investors' activity in the market in view of their large foreign exchange liquidity needs. The operation of the Bank of Israel's swap program, which injected about \$7.5 billion of liquidity into the swap market, succeeded in returning the swap market to proper function. The shekel interest rate inherent in this market increased to close to equilibrium, and the shekel appreciated.

Conclusion

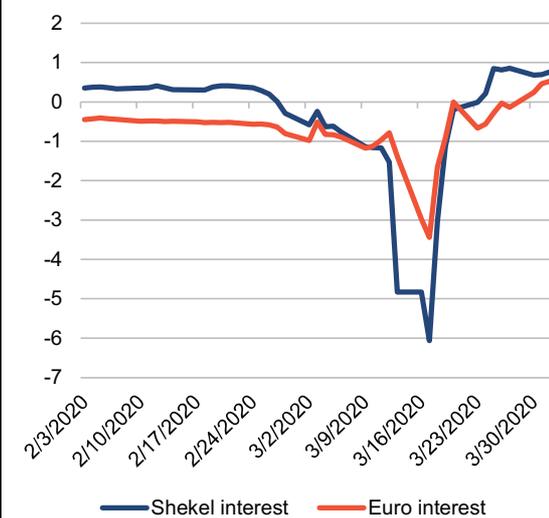
Institutional investors' exposure to futures contracts and the use of a shekel asset—domestic government bonds—as the main collateral for such transactions, created a direct and non-natural currency risk between the US equity market and the government bond and foreign exchange markets,

Figure 9
Changes in the Major Currencies Against the Dollar, February 26-March 17, 2020 (percent)



SOURCE: Bloomberg.

Figure 10
Implied Interest Rates in 1-Week Dollar Swaps, February-March 2020 (daily data in annual terms, percent)



SOURCE: Bloomberg.

¹³ US Dollar Funding Markets During COVID-19. BIS Bulletin No. 15, May 12, 2020.

which intensified the events in the domestic market at the start of the COVID-19 crisis relative to the rest of the world. The intensity of the shock and its ramifications on the domestic market were among the factors that led the Bank of Israel to take various policy steps to stabilize the markets.

More broadly, the realization of the risk with the intensity that was observed in the market apparently shows its underestimation, particularly relative to a situation of rapid decline in the markets, but also shows the increasing effect that institutional investors have on the domestic capital and foreign exchange markets. The underestimation can be explained by the fact that the COVID-19 crisis is global, and anomalous in scope and intensity. Even so, the use of a dollar asset as collateral for contracts apparently moderated the need for foreign exchange liquidity, and thereby the need to sell government bonds. As a result, it also moderated the anomalous domestic response in the foreign exchange and dollar swap markets.

From this standpoint, the decision of some institutional investors, due to the crisis, to hold dollar liquidity buffers against exposure to contracts is an important step that can be integrated into their investment policy that is based on a long-term risk-adjusted yield expectancy. This measure can help them deal with significant margin calls, and can also moderate, although no completely prevent, the institutional investors' impact on volatility in the domestic capital and foreign exchange markets, mainly during financial crises.

Box 4

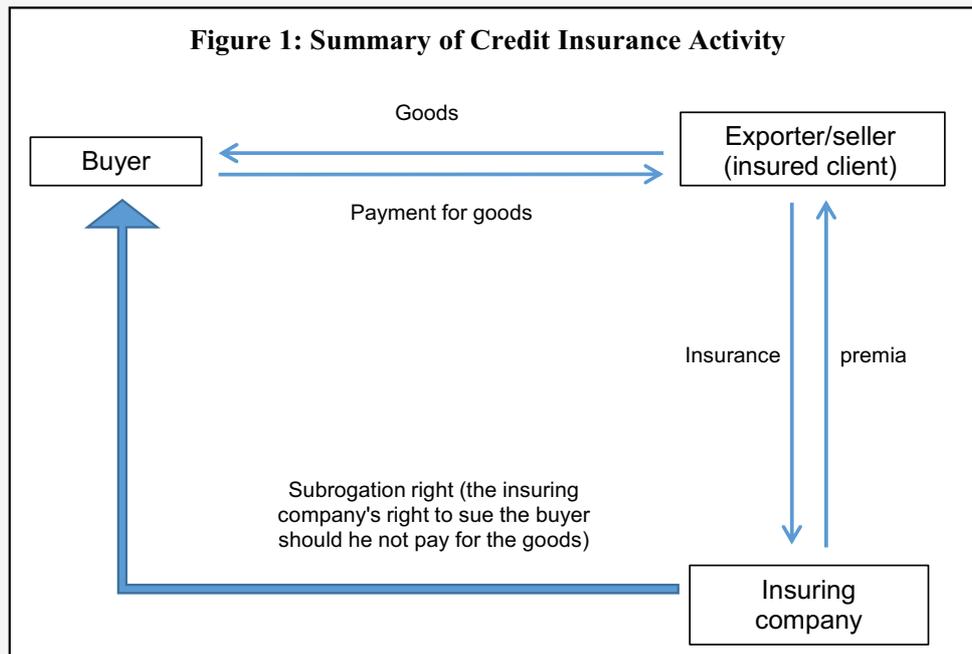
The COVID-19 Crisis's Impact on Credit Insurance Companies¹

- Credit insurance is intended to insure exporters and domestic suppliers in transactions where the customers do not pay for the goods following receipt.
- As a result of the COVID-19 crisis, and in view of the increased risk, credit insurance companies reduced the insurance coverage they provide in respect of transactions, and even stopped providing insurance coverage altogether to certain industries that were seriously affected by the crisis, such as the airline and hotel industries.
- With the aim of helping exporters and suppliers in the domestic market continue to operate, the government decided to provide guarantees totaling \$750 million in order to reinstate credit insurance.
- The guarantee will back up to 100 percent of the initial coverage that the insurance companies provide, with a deductible of 10 percent for export companies and 15 percent for companies whose operations are domestic.
- Data from “ICIC—The Israeli Credit Insurance Company” show that the decline in the acceptance rate—the rate of the insurance amount that the company provides as a share of the total insurance coverage that a client requests—as a result of the crisis, was corrected upward due to the guarantees, but the coverage has not yet returned to the pre-crisis rates. From March to June, the number of transactions in which the purchaser was in arrears on payment increased significantly, and arrears are reported even as of the end of October in about 70 percent of those transactions.
- The guarantee is an example of government assistance intended to overcome a market failure during the crisis, and it has a very significant impact on continued activity in the economy.

Credit insurance is intended to insure suppliers in transactions where the customer does not pay for the goods following receipt. Both exporters and domestic suppliers work with credit insurance companies. The first instance insures foreign trade, and clients can insure themselves against commercial and/or political risks. Studies show that this insurance encourages exports, mainly in small countries² (Auboin and Engemann, 2014; van der Veer, 2015). When the credit insurance is for domestic suppliers, the clients can insure themselves against commercial risks, and the coverage is a common way for them to finance their operations. Commercial risk is realized when a customer becomes insolvent or encounters financial difficulties and does not make payment for a predefined period following the agreed-upon payment date. Political risk is realized when a customer does not make payment due to political events in his country: revolution, prohibiting the export of foreign currency, nationalization, cancellation of import licenses, and so forth.

¹ With thanks to ICIC—The Israeli Credit Insurance Company for the database and the cooperation.

² Countries in which the population totals less than one million residents.



There are three private credit insurance companies in Israel: “ICIC—The Israeli Credit Insurance Company”, “Clal Credit Insurance”, and “Coface Israel”. ICIC was established in 1957 as a government company, and was split into two separate companies in 2000: Intermediate and long-term insurance activity remained under government ownership and is managed by “Ashra”³, and short-term insurance activity (up to one year) was privatized and is managed by ICIC. In 2019, ICIC insured transactions totaling about \$20 billion—about 40 percent of which were transactions with abroad, and the remainder (about \$12 billion) were in the domestic market. In short term export transactions (up to one year), ICIC is the largest credit insurer, insuring about 65 percent of insured goods exports (more than 50 percent of total Israeli exports) (Figure 2).⁴ In domestic transactions, Clal Credit Insurance is the largest insurer, insuring about 45 percent of the market (about 79 percent of all of its clients), ICIC holds about 35 percent of the market⁵, and Coface Israel, which entered the domestic market in 2015, insures the remainder (approximately 20 percent).

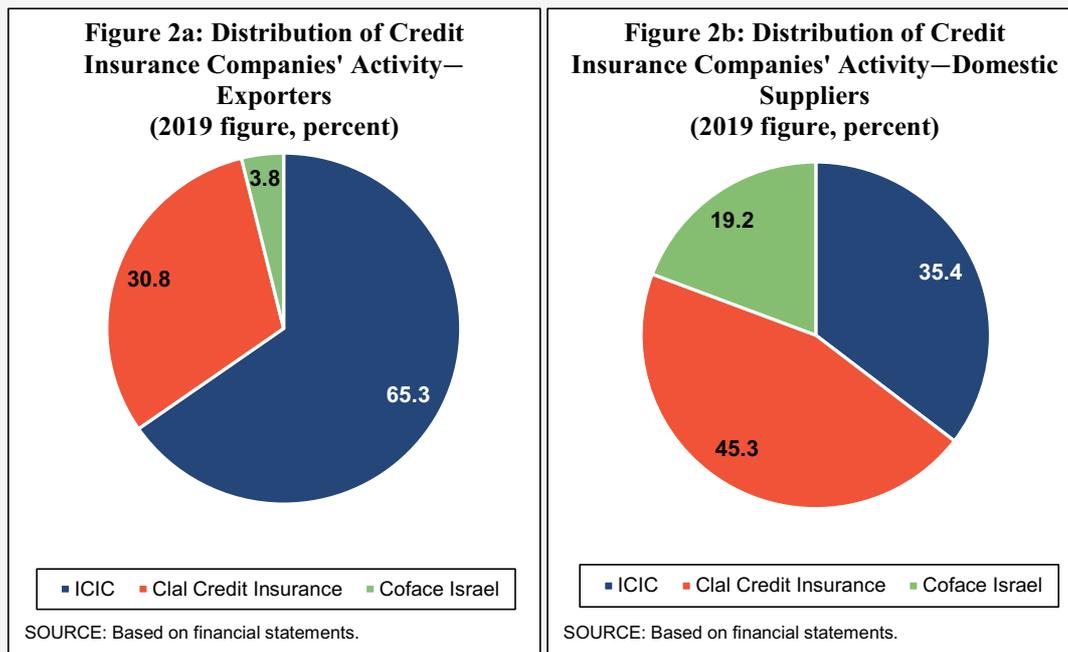
The activity of the credit insurance companies in the second half of the year can provide an indication of the economic ramifications of the COVID-19 crisis. Figure 3 shows that in the first half of 2020 there was a jump of more than 70 percent in the “payments and changes in liabilities” item⁶ (as a share of total liabilities in respect of insurance contracts)—actual claims plus the credit insurance companies’ provisions for future claims—relative to the first halves of the previous five years. This jump shows that the credit insurance companies foresee a significant increase in claim payouts to clients that did not receive payment from customers who encountered difficulties. The Figure also shows that following a number of years of increase in the ratio of firms to claims, this ration declined significantly in the first half of 2020.

³ This company insures credit and investments in intermediate- and long-term export transactions (from one to 15 years), mainly against political risks.

⁴ Clal Credit Insurance insures about 30 percent, and Coface Israel insures only about 4 percent.

⁵ As of October 2020, ICIC had hundreds of clients selling to more than 15,000 Israeli buyers, and the volume of domestic transactions it insured totaled about \$7.5 billion in the first half of the year.

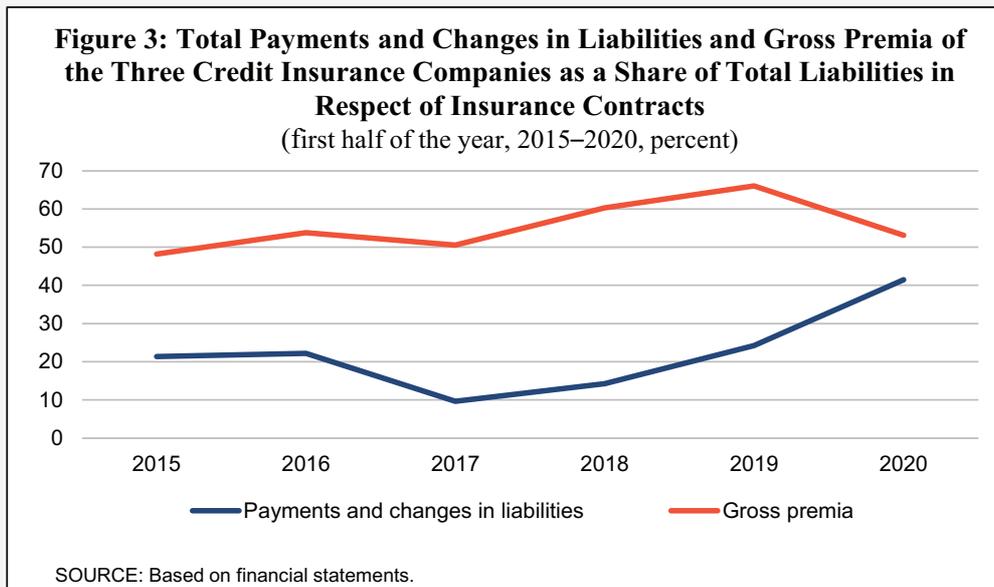
⁶ In the Profit and Loss Statement.



These assessments are reinforced by reports from international credit insurance companies. Euler Hermes, one of the leading companies in the world in this field, reported in July that in the second quarter of 2020, the number of large companies (companies with financial turnover of 50 million euros or more) that encountered insolvency increased by 99 percent relative to the second quarter of 2019 (147 companies compared with 74). Compared with the first quarter of the year, there was an increase of 91 percent. According to the Euler Hermes report, the average financial turnover of the companies that became insolvent in the second quarter increased both compared with the second quarter of the previous year (by 21 percent) and with the first quarter of 2020 (by 34 percent). The report also shows that the industries in which the increase in the number of bankruptcies in the second quarter was highest are retail trade, services, energy, and vehicles.

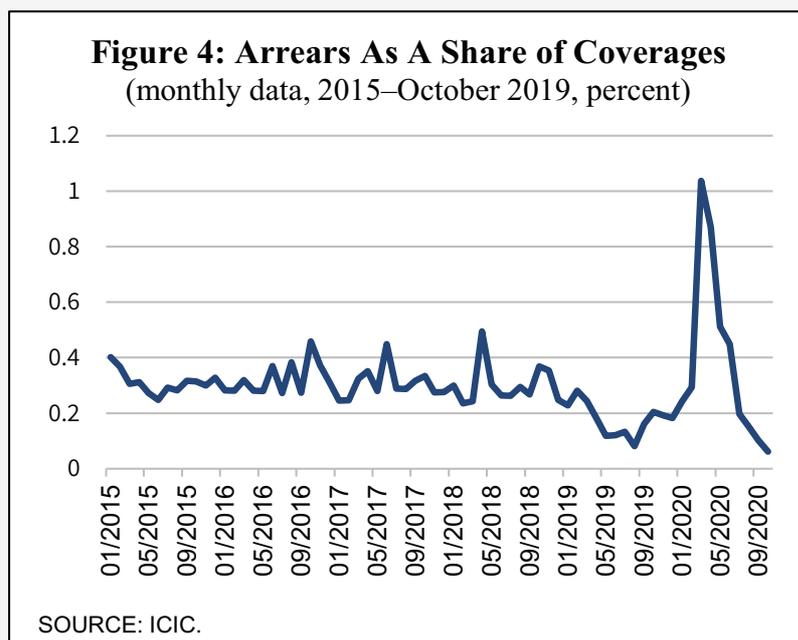
One of the three credit insurance companies—ICIC—sent us data on the insurance coverage it provides, which gave us another way of learning about the change in the activity of these companies during this period. ICIC requires its clients to report to it when a buyer is 30 days in arrears. Arrears can end either with payment by the buyer or with the submission of a claim by the insured client. Graham-Rozen and Michelson (2020)⁷ found a correlation between the accumulated periods in which there were many payments in arrears and known crisis events (the Second Lebanon War, the Global Financial Crisis, the European Debt Crisis, and so forth). Studies also show that a series of arrears is a leading indicator of companies' financing difficulties in the next quarter (a correlation coefficient of 0.62), and a leading indicator of the state of the economy two quarters hence, according to the Composite State of the Economy Index (-0.5). Figure 4 shows the rate of arrears as a share of the number of active insurance policies in the domestic market (in a given month) from the beginning of 2015. The Figure shows that from March to June, the number of arrears reported increased significantly, while in recent months, there was no significant increment to transactions in arrears as a result of the

⁷ Meital Graham-Rozen and Noam Michelson, "Credit Insurance in Israel: An Initial Overview and Analysis of Considerations Affecting the Acceptance Rate", *Israel Economic Review*, Vol. 18, No. 1.



second lockdown. However, it should be emphasized that as of October 2020, only 30 percent of the transactions reported as being in arrears from March ended in payment by the customers. In other words, 70 percent of the transactions that were defined as transactions in arrears since March were still defined as such at the end of October. In addition, the percentage of insured transactions that were in arrears reached a peak of just one percent (around mid-March).

The acceptance rate of credit insurance companies is the insurance rate that the company provides as a share of the insurance volume requested by the client. Since the insurance price is generally fixed and equal to a certain percentage of the declared amount of goods sold, the volume of risk from the insured client’s customers in the view of ICIC is mainly reflected in the acceptance rate. Graham-Rozen and Michelson (2020) found that the acceptance rate in domestic transactions is mainly affected by the size of the insured client and by the risk of the buyers with which it operates. Thus, beginning in



March, due to the COVID-19 crisis, there was a decline in the acceptance rate from an average rate of 83 percent between January 2019 and February 2020 to a rate of 77 percent between March and May 2020. From the insured client's perspective, a lower acceptance rate reduces the expected profit from a transaction with a customer, and may affect sales to that customer, thereby harming economic activity.

In view of the increase in risk, which is mainly reflected in a decrease in insurance coverage to domestic suppliers and to exporters against the risk of failure in payment on the part of buyers, and with the aim of assisting exporters and suppliers in the domestic market in their continued activity, it was decided in May to provide government guarantees in order to increase credit insurance for both export transactions and transactions in the domestic market.⁸ Thus, credit insurance companies can insert the State into transactions where they have reduced coverage due to the crisis. It should be emphasized that the decision to insert the State into a transaction is a decision made by the credit insurance company. In transactions in which it thinks the probability of default is high, it will cancel the insurance completely rather than use the State guarantee. Moreover, one of the conditions of the agreement is that the guarantee will be provided only to exporters that produce at least 30 percent of their products in Israel. Thus, the State wants to prevent assistance to companies or businesses that do not produce in Israel. The amount of the guarantee given to the three private credit insurance companies operating in Israel is \$750 million, and the amount is divided evenly among them.⁹ The guarantee is provided in the form of Top-Up Cover¹⁰, according to which for every shekel covered by the insurance company in a given policy in accordance with its accepted underwriting rules, the State provides an increment that completes the coverage up to 100 percent.¹¹ The State's commitment will apply only on short-term credit insurance policies—those where the number of credit days does not exceed 365—and only for a Top-Up cover issued from April 1, 2020 to December 31, 2021. In addition, the State can bring forward the expiry of the guarantee at its discretion.

To illustrate: If a credit insurance company issued coverage of NIS 1 million to a particular supplier prior to the crisis, and now, due to the crisis, the risk of that supplier has increased from the standpoint of the insurance company and it decides to issue only NIS 500,000 of coverage, it could lead that supplier to sell only half of the goods it customarily sold prior to the crisis. According to the agreement, in such a case, the State provides a guarantee for the remaining NIS 500,000 of coverage, so that the domestic supplier will return to almost its original status.¹² In case of an insurance failure, the insured client will first make a claim against the credit insurance company in respect of the initial coverage, and only

⁸ This type of assistance is also provided in other countries, including the UK, France, the Netherlands, Italy, Portugal, and Canada.

⁹ As of December 2020, the companies had utilized NIS 2.1 billion of the guarantee amount. The option to expand the amount is constantly being examined by the Ministry of Finance in accordance with the needs of the credit insurance companies.

¹⁰ There is another state guarantee program for credit insurance that is available. In Germany, for instance, the credit insurance companies commit not to lower their coverage rates, and the State commits to provide a full guarantee for that amount, plus a certain predetermined percentage. It should be emphasized that most credit insurance companies back their coverages through reinsurers.

¹¹ It should be noted that in the case of an insurance failure, the insured client in export transactions would generally pay a 10 percent deductible, and in domestic transactions a 15 percent deductible.

¹² Not completely to the original state, because currently, the client would pay slightly more than the premium rate for the same coverage that the State provides.

then would make a claim against the State (for the Top-up Cover). It should also be emphasized that the premium moves from the insurance company to the State, minus operating fees that remain with the company. It should be noted that such an agreement existed between 2008 and 2014 due to the Global Financial Crisis, but in that case, the State made the program applicable only for exporters.¹³

The data show that due to the assistance, the average acceptance rate at ICIC returned to high rates. Between June and October 2020, the average acceptance rate reached 80 percent, although it remains about 3 percentage points lower than during the same period in the previous year. Divided by the buyer's risk rating¹⁴, we can show that this increase was recorded regarding buyers in all ratings, except for those in the two most risk ratings (which make up about 2 percent of all buyers). Regarding those, the acceptance rate continued to decline even after the guarantee. Even the rate of transactions with an acceptance rate of zero declined slightly after the state guarantee was obtained (from 14.3 percent between March and May to 13 percent between June and October, although it did not return to its rate of the previous year (an average of 11.8 percent). This is apparently due to an increase in risk during this period, and the assumption that despite the guarantee, ICIC would not insure transactions that had become too risky, in which it believes that the chance that those customers would pay the insured client is very small.

At the beginning of April, the Moody's global credit rating agency published an examination it conducted of the ratings of credit insurance companies operating directly in Israel, in view of the COVID-19 crisis. Based on the examination, Moody's decided to leave the rating in place, but to change the ratings horizon of two of the companies (Clal Credit Insurance, rated A3, and Coface, rated A2) from positive to negative. In contrast, ICIC's A3 rating was left in place with a stable horizon. Moody's explained the change in horizon. The ratings horizon changed from positive to negative for Clal Credit Insurance and for Coface, in its assessment that these companies would be more seriously impacted than ICIC in the event of a particularly serious stress scenario connected to the COVID-19 crisis, which would include a prolonged impact to businesses and the financial markets, and a higher claims rate than in the 2008–9 crisis. While ICIC would be similarly affected by these pressures, it enjoys an advantage in that it is supported by its parent company (Euler Hermes), which would moderate the effects of the realization of its credit risk.

It should be noted that the credit insurance companies do not finance themselves through bonds, and that the ratings are for the benefit of the existing and potential insured clients of those companies. Moreover, an international rating in the A group enables financing transactions with the banks. Such cooperation between the banks and the credit insurance companies are built on the financing bank's recognition of the company's insurance policy as fair collateral for the credit that it provides, and combined with the company's high rating, this can enable a reduction of capital that the bank holds (reduction of 50 percent in capital confinement). The company's clients are thereby also able to leverage the company's credit insurance in order to obtain additional financing.¹⁵

¹³ Striving to also assist suppliers in the domestic market in obtaining higher insurance coverage, ICIC (for instance) got leading reinsurers around the world, who were prepared to take on credit risks under terms identical to those of the government, to join this program.

¹⁴ The company's internal rating.

¹⁵ And in some cases to improve the financial ratios on the balance sheet by reducing the receivables item and increasing cash in the balance sheet (deduction of receivables).