Israel Economic Review Vol. 18, No. 1 (2020), 3–22

MONETARY POLICY DURING THE CORONAVIRUS CRISIS

ADDRESS TO THE ISRAEL ECONOMIC ASSOCIATION CONFERENCE

AMIR YARON, GOVERNOR OF THE BANK OF ISRAEL

The Bank of Israel began planning for the coronavirus crisis even before anyone could assess the extent to which the crisis would develop. On February 2, in the entire world outside of China, there was one death as a result of the coronavirus, and just 146 verified cases of the disease. On that day, I gave instructions for the Bank of Israel to establish an interdepartmental team to begin analyzing the implications of the crisis for the Israeli economy. Since then, the pace of developments has been exponential. A great many things that none of us ever imagined have taken place, and the Bank of Israel found itself taking steps that, at the beginning of February, had seemed almost fanciful. Even though the Bank of Israel was very active both in its role as economic advisor to the government and in its supervisory roles, my address today will focus on the central bank's classic function—monetary policy.

The fact that the policy interest rates at many central banks have been near the lower bound for a long time has led many to wonder what the central banks would be able to do in the event of another crisis. At the Bank of Israel, we asked ourselves what role monetary policy would have in view of the fact that the interest rate was at a very low level. As I will show today, the Bank of Israel's monetary policy has had two main functions in this crisis. First and foremost, it acted to make sure that the financial markets were functioning properly—a tremendously important and necessary condition for the continuation of economic activity despite the restrictions and for the economy to be able to provide for the population's essential needs. This was in addition to the classic function of monetary policy during an economic crisis—to ease the terms of credit in the economy in order to support the financing needs of households, businesses, and the government.

At the end of February, when the Monetary Committee convened for its scheduled meeting to decide on the interest rate, as it does eight times per year, all of the macroeconomic data were still pre-crisis data. They told the story of strong growth, low unemployment, low inflation, and appreciation of the shekel that we had gotten used to seeing in recent years. However, the crisis was already just around the corner, and even though we couldn't assess its intensity, we did think it proper to note that if the crisis persisted and grew more serious, we would be able to use a range of tools to increase the extent of monetary accommodation. Some of this variety was used over the course of the following weeks, as will be shown **(Slide 3)**.

בנק ישראל **The first signs of the crisis**

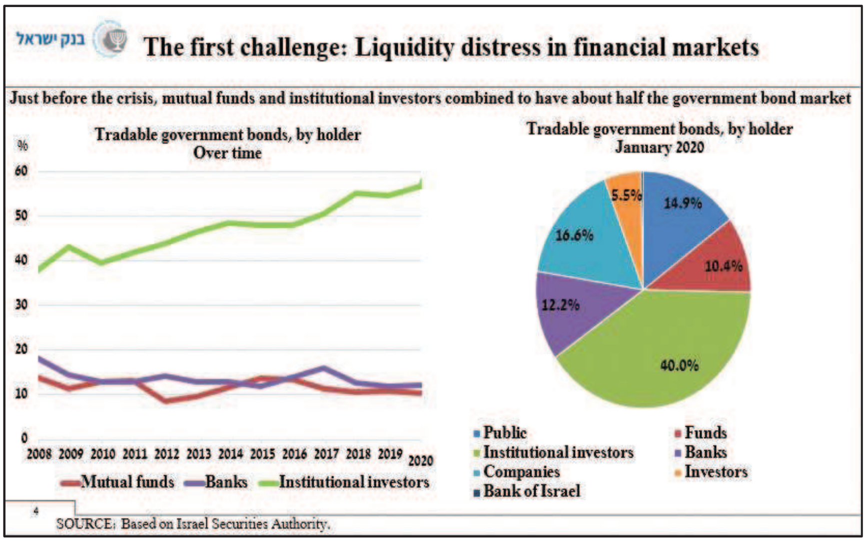
From the interest rate press release on February 24th, in which the Monetary Committee decided to keep the interest rate unchanged:

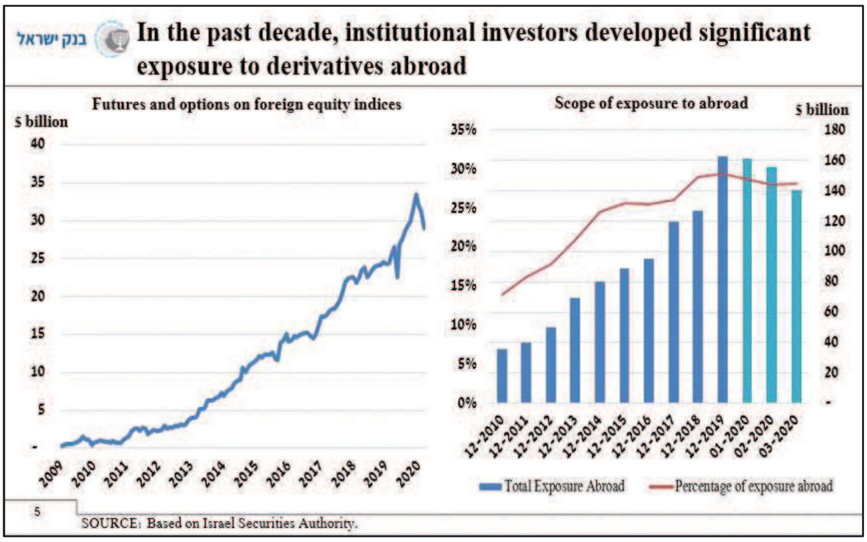
"The economy continues to grow at around its long-term growth rate…The baseline scenario…is that the spread of the virus will be halted in the coming months, and the overall impact on the global economy is expected to be limited…in this scenario no significant macroeconomic impact is expected in Israel. If the crisis persists…and particularly if strict preventative measures are required in Israel, it is expected to have a more significant impact. In such a scenario, the Monetary Committee has a range of tools to make monetary policy more accommodative."

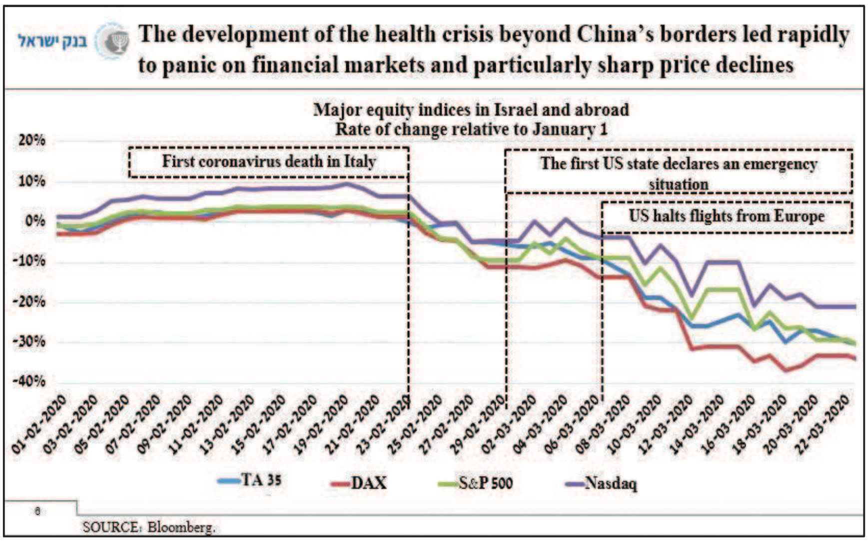
3

The first challenge—the failure in financial markets

In order to explain the causes of failure in the financial markets, we must present a number of characteristics of the structure of financial asset holdings in Israel prior to the crisis. The share of institutional investors in the government bond market increased persistently in the past decade with the growth of Israelis' pension assets, and institutional investors and mutual funds hold close to half of all tradable government bonds **(Slide 4)**. In addition, the institutional investors persistently increased the portfolio's exposure to foreign assets. It is particularly important to know that a significant share of institutional investors' investment in foreign equities is through derivatives. For various reasons, the institutional investors prefer this method over directly holding equities. This was very significant in terms of financial developments in Israel at the height of the crisis **(Slide 5)**.


בנק ישראל
The first challenge: Liquidity distress in financial markets
Just before the crisis, mutual funds and institutional investors combined to have about half the government bond market
Tradable government bonds, by holder
Over time
%
Mutual funds
Banks
Institutional investors
Tradable government bonds, by holder
January 2020
14.9%
10.4%
40.0%
12.2%
16.6%
5.5%
Public
Funds
Institutional investors
Banks
Companies
Investors
Bank of Israel
4
SOURCE: Based on Israel Securities Authority.


בנק ישראל
In the past decade, institutional investors developed significant exposure to derivatives abroad
Futures and options on foreign equity indices
$ billion
Scope of exposure to abroad
$ billion
Total Exposure Abroad
Percentage of exposure abroad
5
SOURCE: Based on Israel Securities Authority.

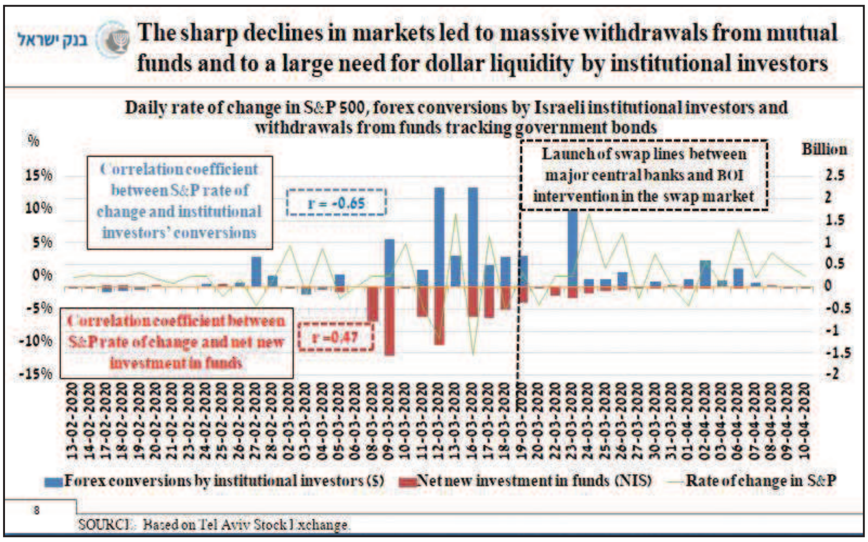


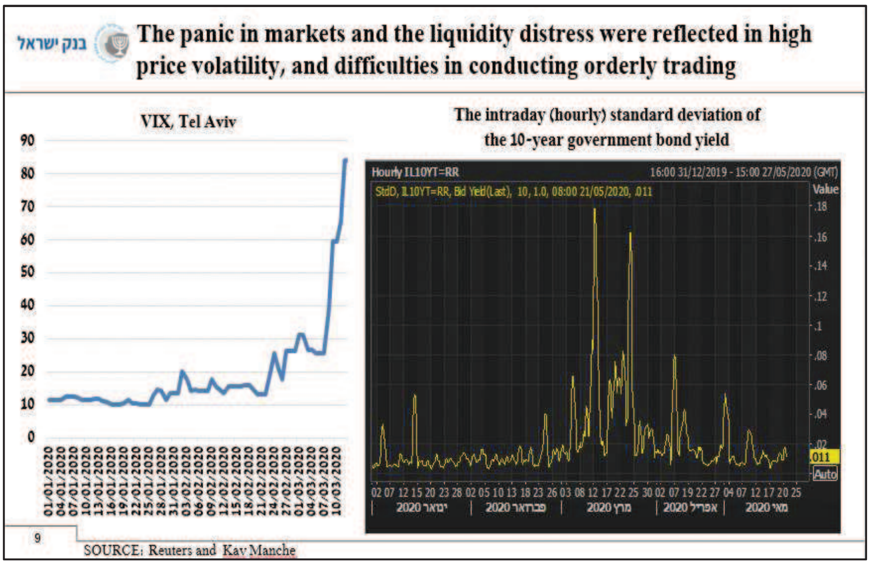
בנק ישראל **The dynamics of the financial markets' panic**

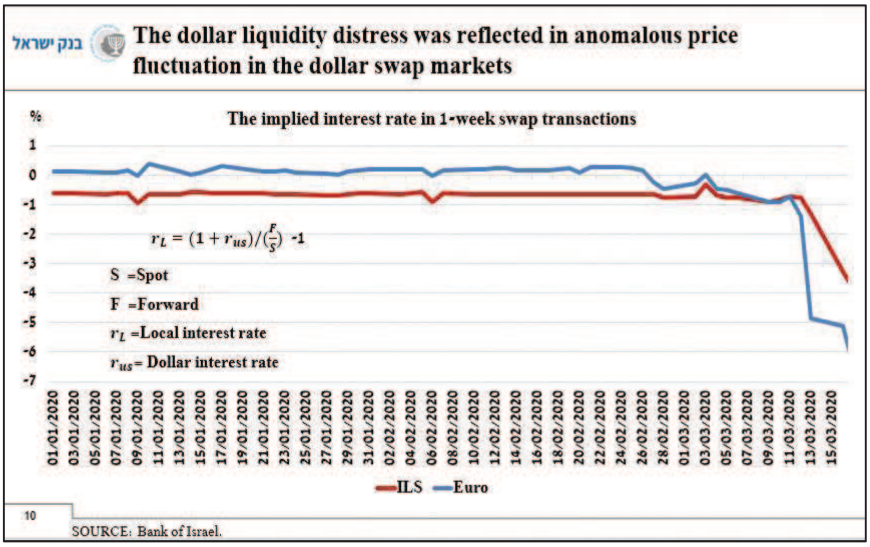
1. Price declines led to massive withdrawals from Israeli mutual funds → a shekel liquidity problem → fire sale of government bonds
2. Sharp declines in markets abroad → margin calls → dollar liquidity problem → sale of government bonds in order to convert shekel liquidity into dollar liquidity

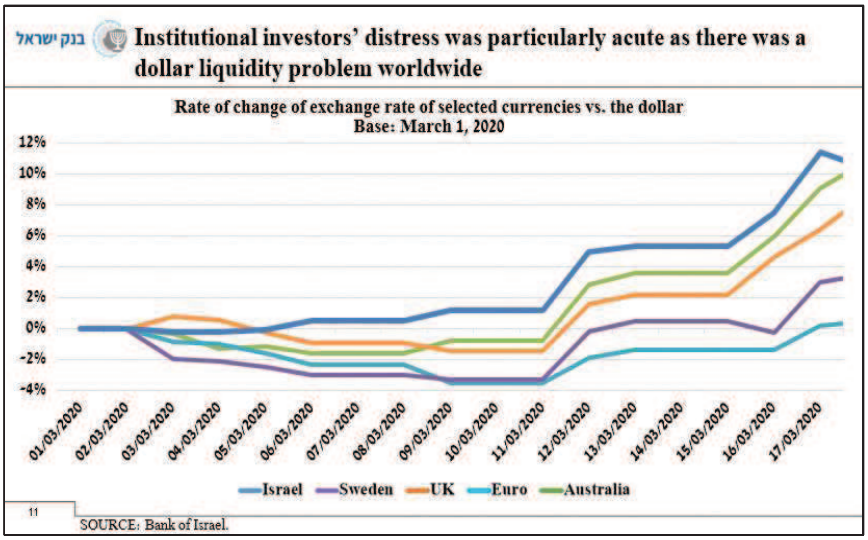
7

Toward the end of February, the health crisis began developing more rapidly outside of China—first in Italy, then in other European countries. The reaction in the global financial markets was particularly harsh **(Slide 6)**. To illustrate, during March, there were days when the daily decline in the S&P 500 index—10–11 percent per day—was sharper than on the worst days of the 2008 Global Financial Crisis. The drops in the market created a pincer effect that threatened to paralyze the financial system in Israel **(Slide 7)**. They led to a massive wave of withdrawals from mutual funds at unprecedented volumes **(Slide 8)**. The funds found themselves in liquidity distress and turned to the market that is usually the most liquid, and sold government bonds at "fire sale" prices in order to accumulate cash that would enable them to liquidate the assets of investors who were selling their holdings in the funds. The government bond market was thrown into major distress, and the pressure in the financial markets increased **(Slide 9)**. At the same time, institutional investors faced margin calls as the brokers through whom they held derivative instruments on equity markets abroad demanded that they bolster the liquid collateral in view of the declines on the equity markets. The institutional investors needed dollars—lots of them, and quickly. In order to finance the purchase of these dollars, the institutional investors also began selling off government bonds, intensifying the problem that had started with the mutual funds. The institutional investors sought a dollar liquidity solution in the swap market—where they could borrow dollars for the short term in exchange for shekels, and then return the shekels in exchange for dollars, without having to expose themselves to the exchange rate. However, the dollar liquidity distress developed simultaneously in many markets around the world, and the implied interest rate in the swap market, which, in a normal situation should reflect the interest rate gaps between currencies plus the expected change in the exchange rate over the contract period, dropped to levels that reflected a major market failure **(Slide 10)**. The investors were forced to seek a solution in the spot market as well, which led to a strong, even unprecedented, depreciation of many currencies against the dollar, including the shekel **(Slide 11)**.




בנק ישראל
The panic in markets and the liquidity distress were reflected in high price volatility, and difficulties in conducting orderly trading
VIX, Tel Aviv
The intraday (hourly) standard deviation of the 10-year government bond yield
Hourly IL10YT=RR
16:00 31/12/2019 - 15:00 27/05/2020 (GMT)
Value
2020 ינואר
2020 פברואר
2020 מרץ
2020 אפריל
2020 מאי
9
SOURCE: Reuters and Kav Manche

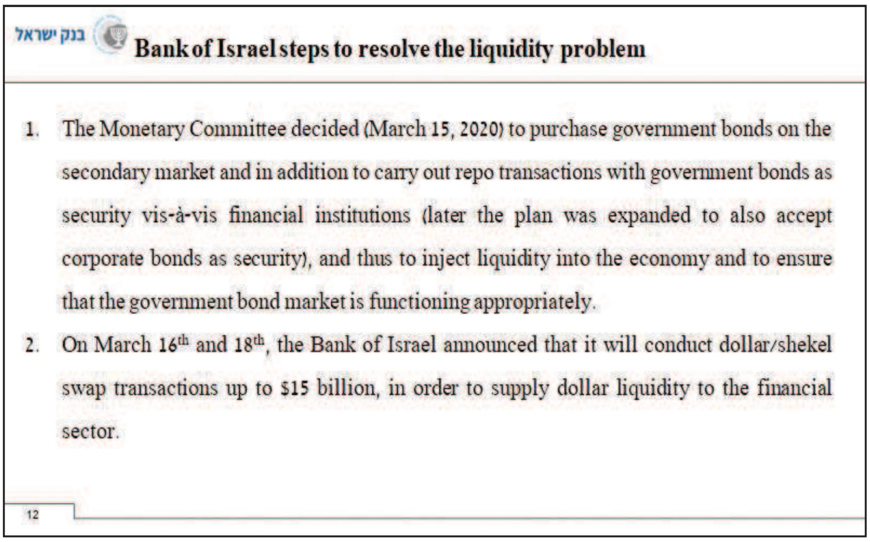

בנק ישראל
The dollar liquidity distress was reflected in anomalous price fluctuation in the dollar swap markets
The implied interest rate in 1-week swap transactions
%
$r_L = (1 + r_{us})/(\frac{F}{S})$ -1
S =Spot
F =Forward
r_L =Local interest rate
r_{us}= Dollar interest rate
ILS
Euro
10
SOURCE: Bank of Israel.

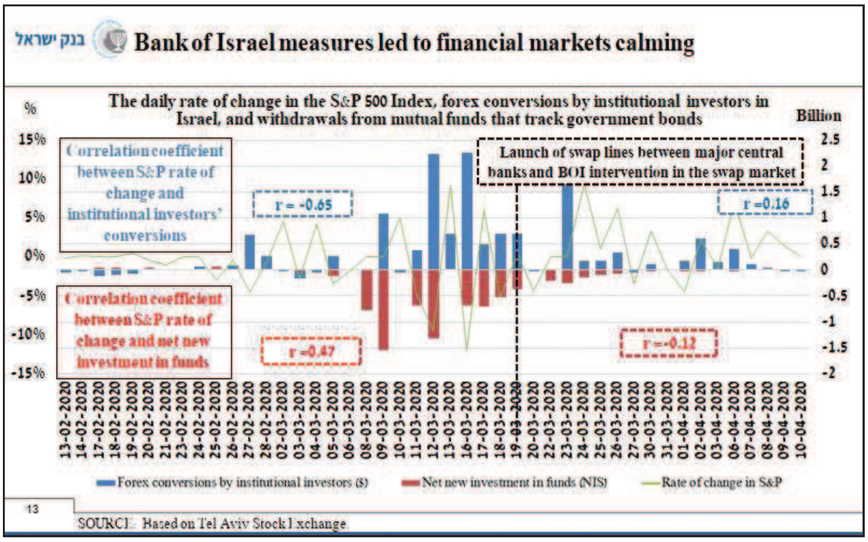


SOURCE: Bank of Israel.

In mid-March, a few days after the pressure in the financial markets began, the Bank of Israel decided to intervene in the markets in order to ensure their proper functioning. The failures in the bond market and in the foreign exchange market could have led, for example, to savers not being able to sell their bonds at the price set in trading, and exporters not being able to access the foreign exchange market and lock in the desired exchange rate at that time against future conversions. The markets were not functioning. Therefore, the Monetary Committee convened for an unscheduled conference call late on Saturday night March 14, and again early Sunday morning. Following these meetings, the Bank of Israel announced a series of measures, similar to those being taken at that time by the major central banks **(Slide 12)**:

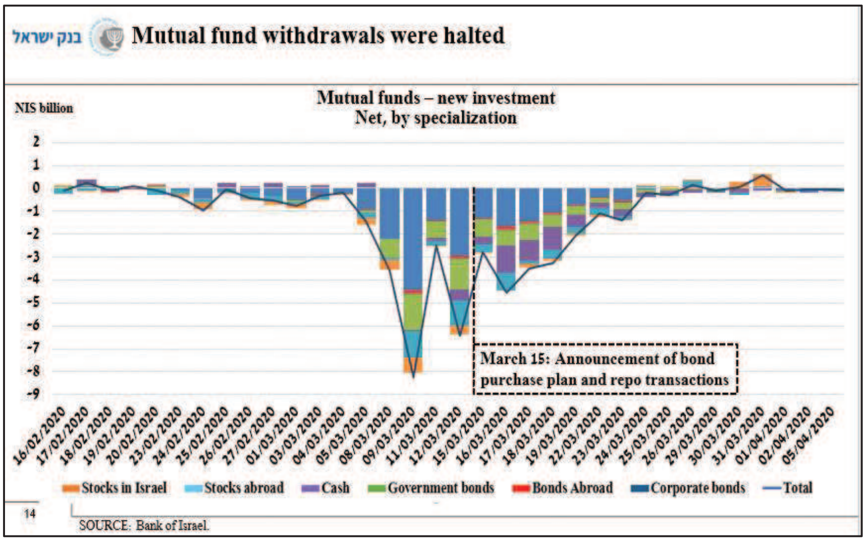
- The Monetary Committee decided (March 15, 2020) to purchase government bonds in the secondary market, and also to execute repo transactions with government bonds as collateral with financial institutions, thereby injecting liquidity into the market and ensuring that the government bond market functioned properly. (The program was later expanded to include corporate bonds as collateral, an unprecedented step on its own that increased investors' confidence in their abilities to liquefy assets later on.)
- On March 16 and March 18, the Bank of Israel announced that it would engage in dollar/shekel swaps of up to $15 billion in order to provide dollar liquidity to the financial sector. We were able to provide this dollar liquidity to the economy thanks to the foreign exchange reserves the Bank of Israel has accumulated.

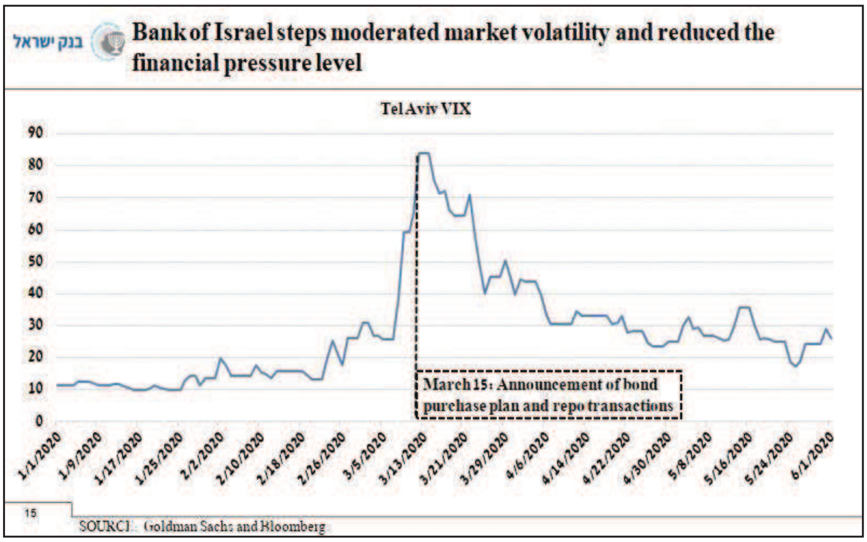


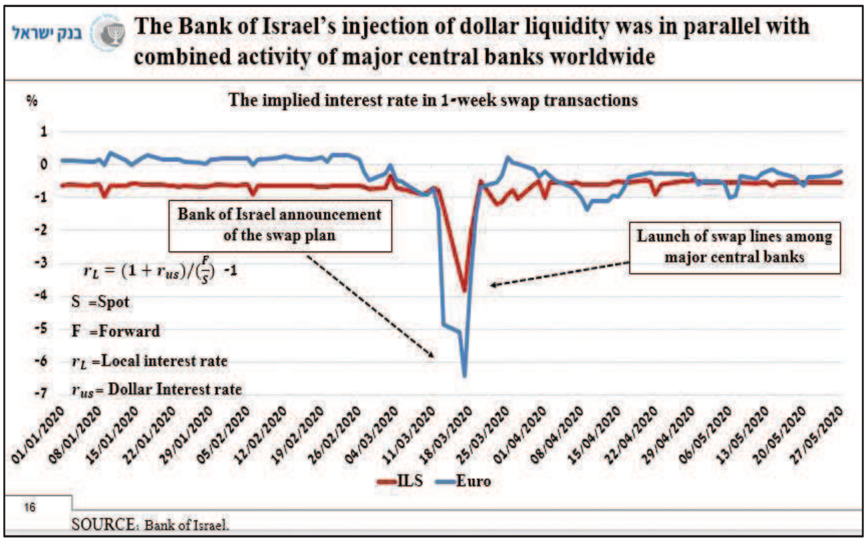


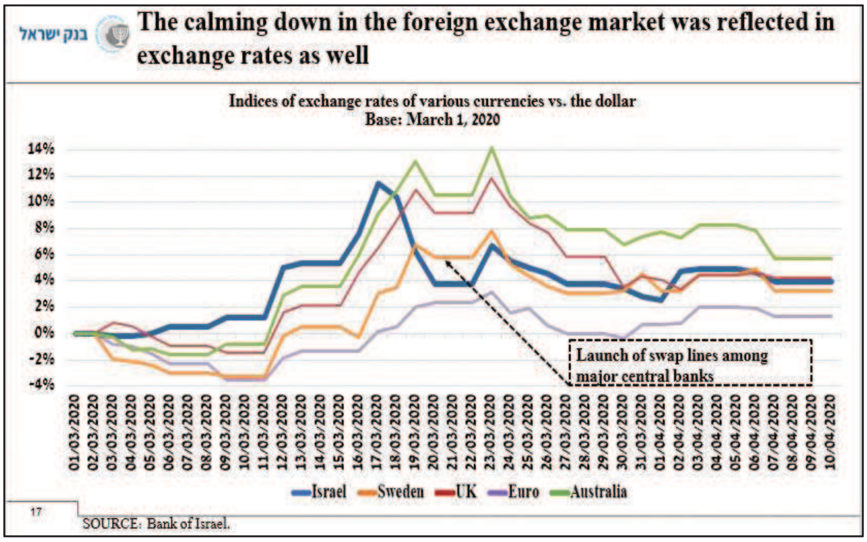
In perspective, I can say with some satisfaction that these measures were quite effective, and succeeded in calming a large part of the panic and returning the markets to proper functioning. The direct correlation between the volatility in the equity markets and the withdrawals from the mutual funds and foreign exchange conversions by the institutional investors disappeared **(Slide 13)**, and in the following days, the institutional investors stopped buying foreign exchange and the withdrawals from mutual funds dropped to near zero **(Slide**

14). The pressure in the financial markets declined **(Slide 15)**, the shekel/dollar swap market returned to normal functioning **(Slide 16)** in parallel to the Fed beginning to provide dollar liquidity to central banks around the world, and the exchange rate returned to near the environment in which it had been prior to the crisis **(Slide 17)**.





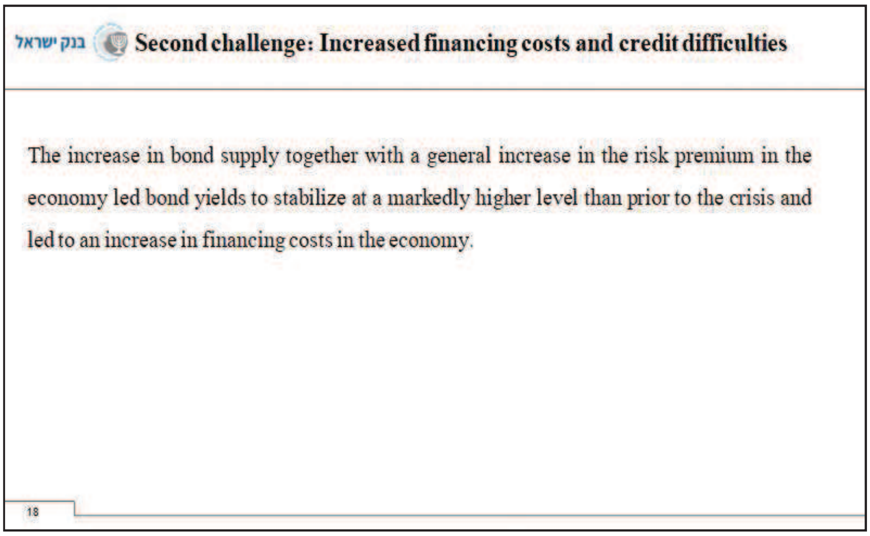




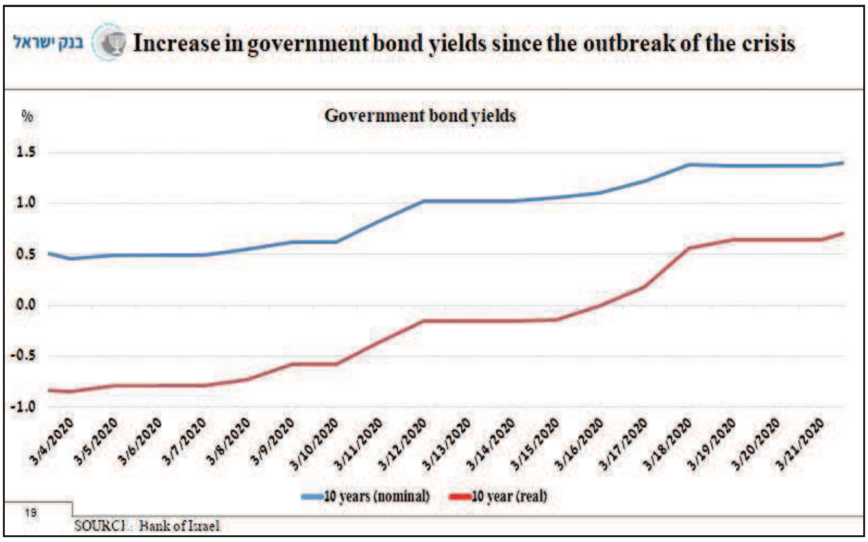
It is important to note that alongside the need to act quickly and ensure that the markets were functioning properly, it was important to us to create market discipline as well, and to ensure that those active in the markets would internalize the various risks for the future. In particular, it was important that investors understand the risks involved in activities involving derivative instruments, and that there may be sharp changes in the exchange rate in the direction of depreciation as well, and that they take all this into account in hedging their risks and managing their portfolios.

<u>The second challenge—increased financing costs and credit difficulties</u> **(Slide 18)**

The financial markets returned to functioning, and we then turned to dealing with the credit market. At the height of the crisis, when the lockdown was at its peak, we asked ourselves whether there was room for monetary accommodation at such a time. Monetary accommodation is intended to encourage demand, and in the initial days, economic activity was halted and a large part of the economy was prevented from producing, such that the crisis began essentially on the supply side.



However, the negative impact to the income of businesses and households created an urgent need for credit, which would allow them to bridge that impact, continue to consume in order to maintain households' standard of living as much as possible, and enable businesses to meet their obligations toward their suppliers. During March, we began to see evidence of an increase in the interest rate on credit in various segments, with an almost complete halt of nonbank credit. The crisis led to a sharp increase in risk, and while bond spreads stabilized **(Slide 19)**, they were at significantly higher levels than the lows that we had seen prior to the crisis. The increase in yields **(Slide 20)** had an impact on the financing cost for the government, which had to finance the expected increase in the deficit as a result of both the slowdown in economic activity and the broad assistance program announced by the government. In parallel, there was an increase in corporate bond spreads **(Slide 21)**, meaning the financing cost for broad parts of the business sector, and the spreads of bank bonds increased, having a direct effect on the cost of the banks' sources and on the prices of bank credit **(Slide 22)**.

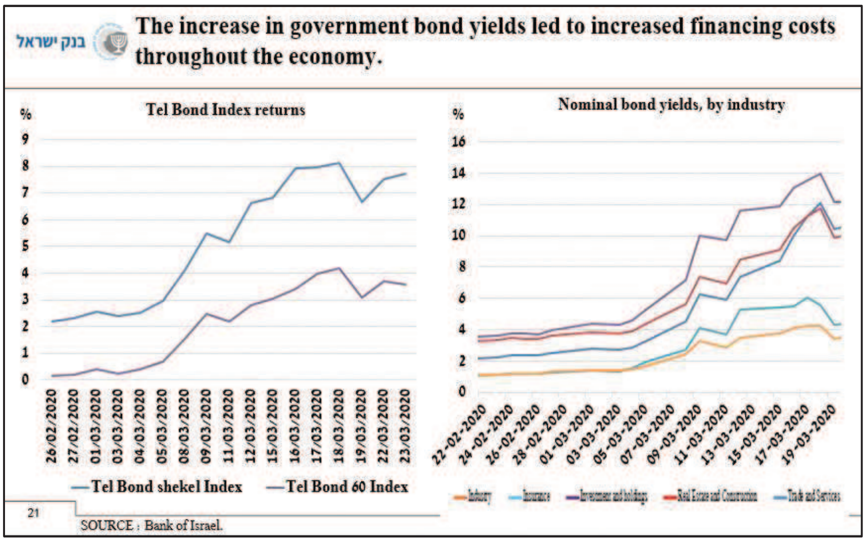


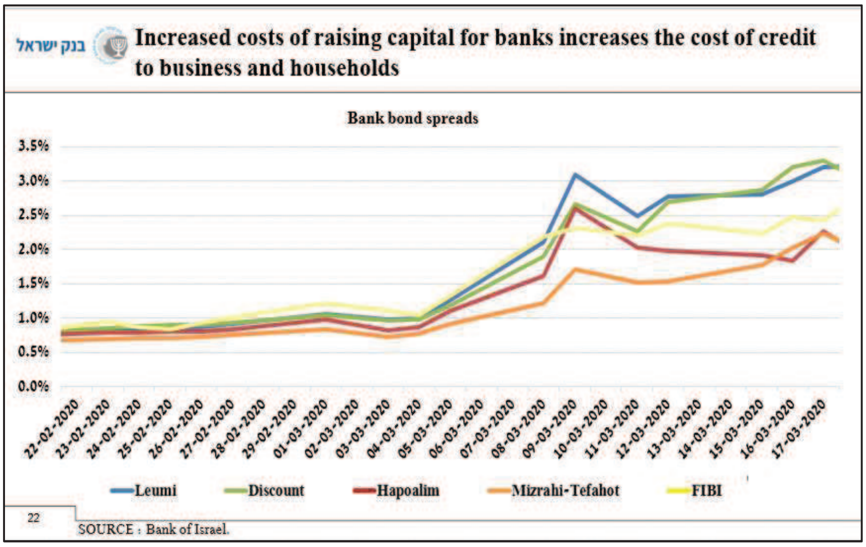
בנק ישראל

Ramifications of the increase in bond yields

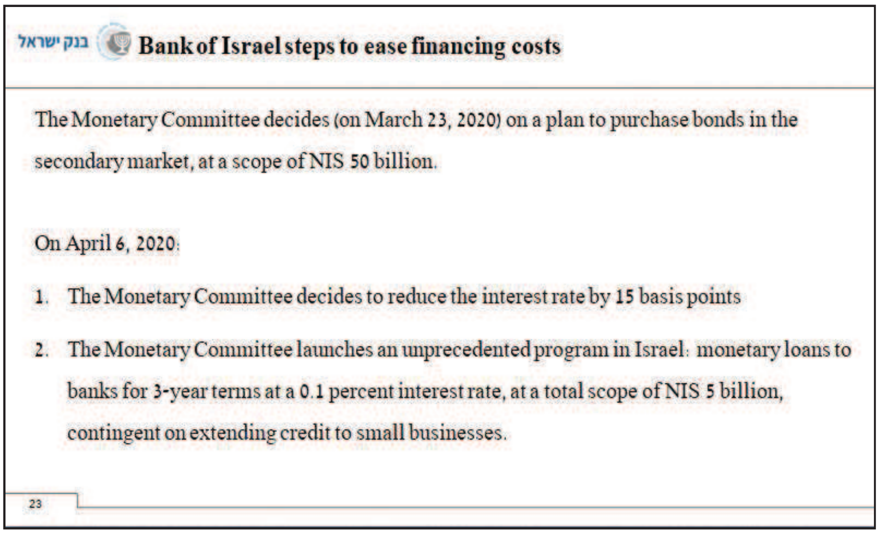
1. Increase in financing costs of the government's deficit
2. Steep increase in corporate bond yields and in the business sector's financing costs
3. Increase in bank bond yields and in financing costs of bank credit

20



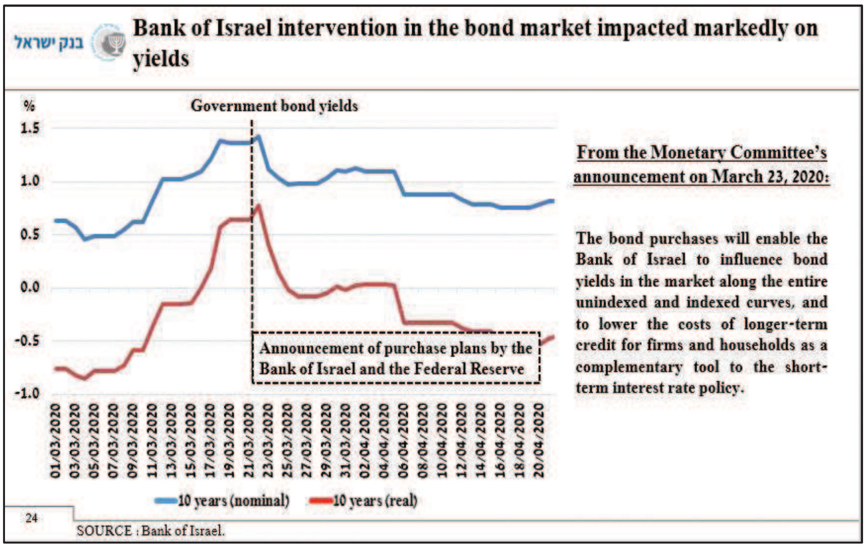


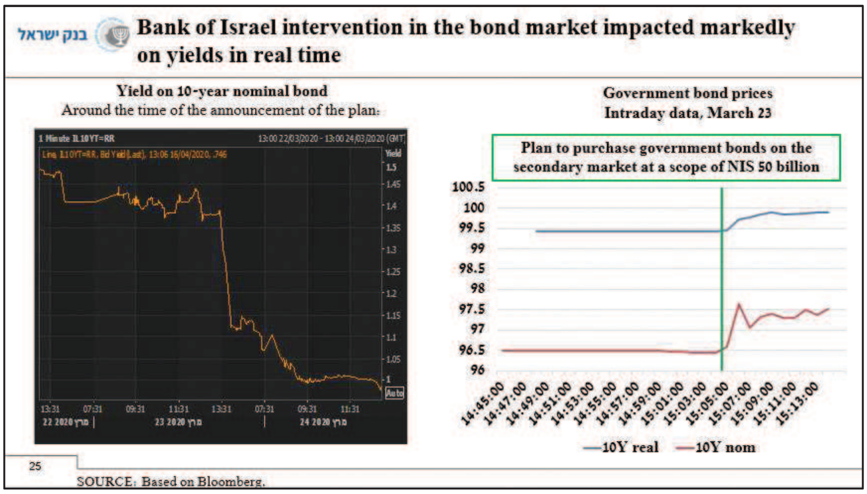
At this stage, we still believed that there was no room to reduce the interest rate before the scheduled date, because the level of the monetary interest rate was already low, and the main cause of the increase in credit costs was the developments in the bond market. Therefore, on March 23, two weeks before the scheduled date of the interest rate discussions, the Monetary Committee decided on a step of unprecedented scope, and announced that the Bank of Israel would purchase government bonds totaling NIS 50 billion—three times (or twice in terms of market value) the amount of bonds that the Bank of Israel purchased in 2008–09 **(Slide 23)**.

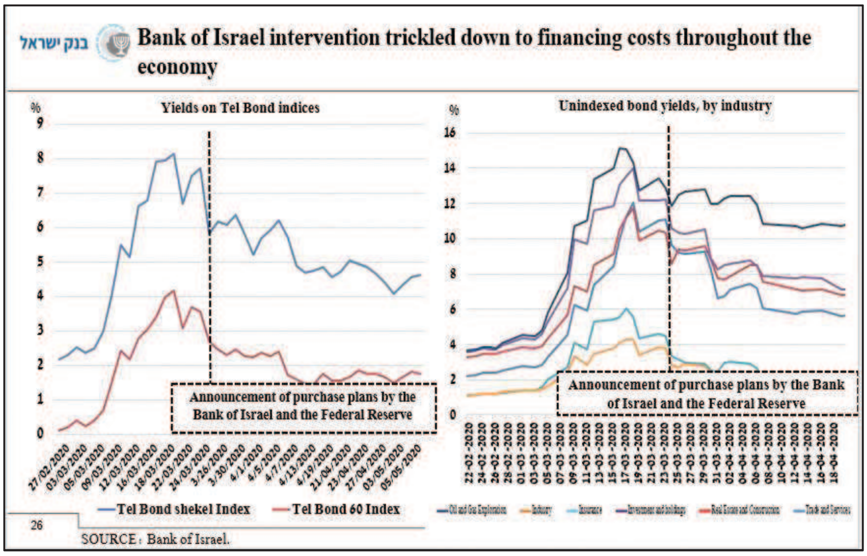


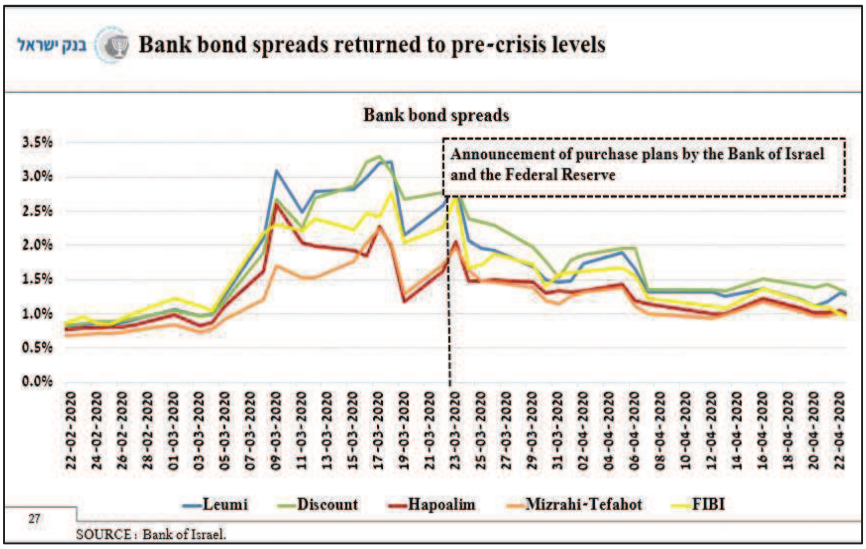
Two weeks later, we convened for our regular interest rate meeting. If in March there were still hopes that the health crisis would end quickly and that the economic crisis would subside with it, at the beginning of April it was already more clear that we were facing a prolonged crisis and that we could also expect a negative impact on demand in view of the decline in the income of many households and the drop in value of financial assets. The Monetary Committee therefore decided to lower the interest rate from 0.25 percent to 0.1 percent. While this is a small step in terms of its scope, it did make it easier for a large portion of borrowers whose loans are indexed to the prime rate, and it reflected the Monetary Committee's commitment to use every possible tool to support the economy at this time. In parallel, the rapid data that the Banking Supervision Department compiled showed that while the banks were injecting credit at unprecedented levels to the mortgage market and to large businesses—most of which were using agreements and facilities signed in advance—credit to small businesses declined, and the state-guaranteed loan fund was still in its infancy. The Monetary Committee decided to launch a special program to provide the banks with an incentive to divert credit to these businesses, and announced that the Bank of Israel would grant the banks three-year monetary loans at an interest rate of just 0.1 percent, provided that the banks would show that they were providing credit to small businesses. By the end of May, credit totaling NIS 4.6 billion had been extended to such businesses as part of this program.

The Bank of Israel's measures had an immediate impact on yields in the government bond market **(Slides 24 and 25)**, the corporate bond market **(Slide 26)**, and the banks' costs of financing **(Slide 27)**. In parallel, back at the beginning of the crisis, we told the banks that if they made their credit policies more rigid, it would be more difficult to get through the crisis. In contrast, if the banks eased their credit policies even slightly, they would help businesses and households survive the crisis. We didn't make do with just statements, as we took a variety of steps in our role as the banking regulator to incentivize the banks and enable them to increase the supply of credit **(Slide 28)**. In particular, in view of the concern that expected credit losses would bring the banks close to their minimum capital adequacy ratios, we lowered the capital adequacy ratios by one percentage point. We also created an accounting infrastructure that made it easier for the banks to defer loan repayments for customers who requested it, and we later published a framework for deferring loan repayments for all economic sectors, as part of which payments totaling more than NIS 6 billion have been deferred so far **(Slide 29)**.




בנק ישראל
Bank of Israel intervention in the bond market impacted markedly on yields in real time
Yield on 10-year nominal bond
Around the time of the announcement of the plan:
Government bond prices
Intraday data, March 23
Plan to purchase government bonds on the secondary market at a scope of NIS 50 billion
10Y real
10Y nom
25
SOURCE: Based on Bloomberg.


בנק ישראל
Bank of Israel intervention trickled down to financing costs throughout the economy
Yields on Tel Bond indices
Announcement of purchase plans by the Bank of Israel and the Federal Reserve
Tel Bond shekel Index
Tel Bond 60 Index
Unindexed bond yields, by industry
Announcement of purchase plans by the Bank of Israel and the Federal Reserve
26
SOURCE: Bank of Israel.

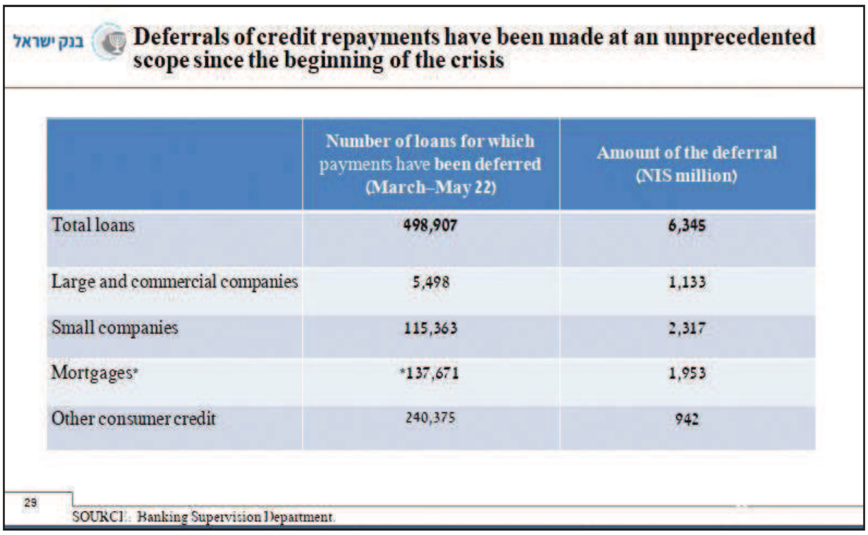


בנק ישראל

The Bank of Israel worked to increase the supply of credit in the economy under its banking supervision authority as well

- Reducing the regulatory capital requirement by 1 percentage point and halting the distribution of dividends in order to enable banks to increase the supply of credit
- A framework for deferring loan repayments and accounting clarifications that make it possible not to classify loans for which the payment has been deferred as problematic debts
- Easing in the per-industry limitation to provide credit to the construction and real estate industry
- Easing limitations on loans for any purpose, secured by a home
- Increasing credit facilities for households and businesses

28



בנק ישראל

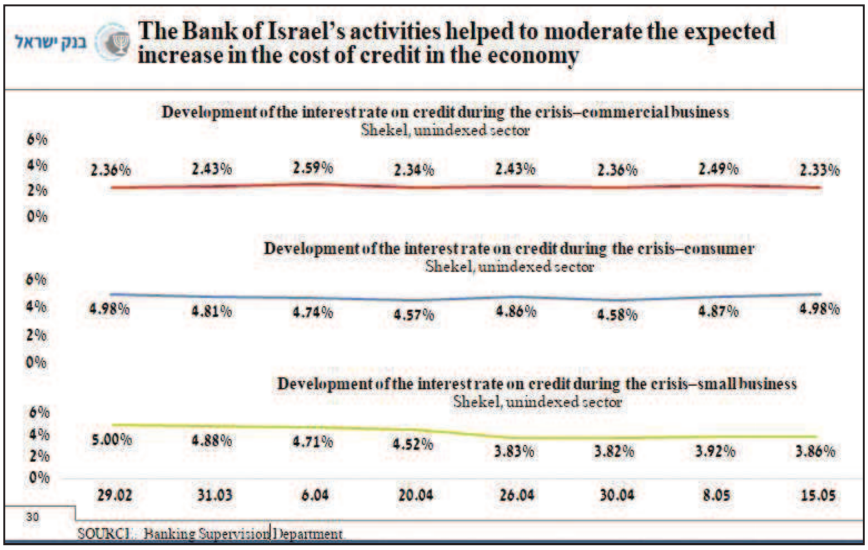
Deferrals of credit repayments have been made at an unprecedented scope since the beginning of the crisis

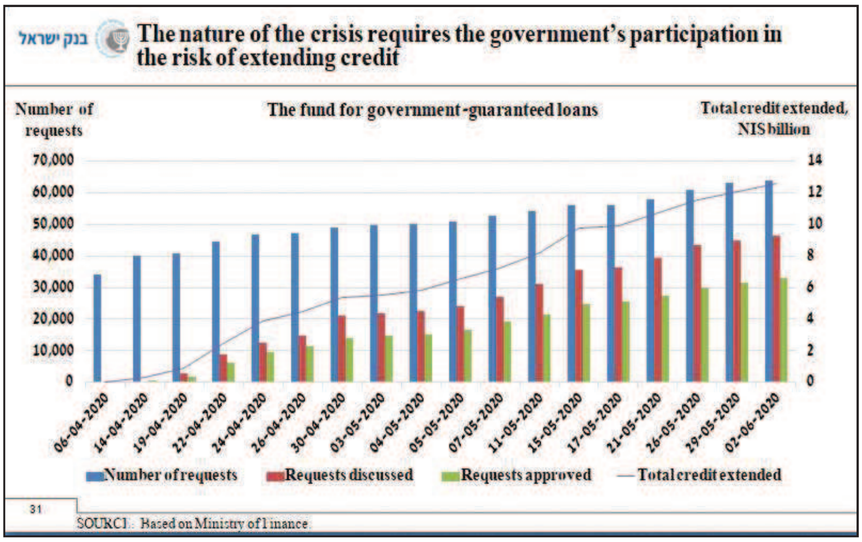
	Number of loans for which payments have been deferred (March–May 22)	Amount of the deferral (NIS million)
Total loans	498,907	6,345
Large and commercial companies	5,498	1,133
Small companies	115,363	2,317
Mortgages*	*137,671	1,953
Other consumer credit	240,375	942

29

SOURCE: Banking Supervision Department.

As a result of all these actions, the data show that at the very least there was no sweeping increase in the interest rate on credit in the economy **(Slide 30)**, and that when the government-backed loan fund finally began to operate **(Slide 31)**, it led to a decline in the interest rate on credit to small businesses.



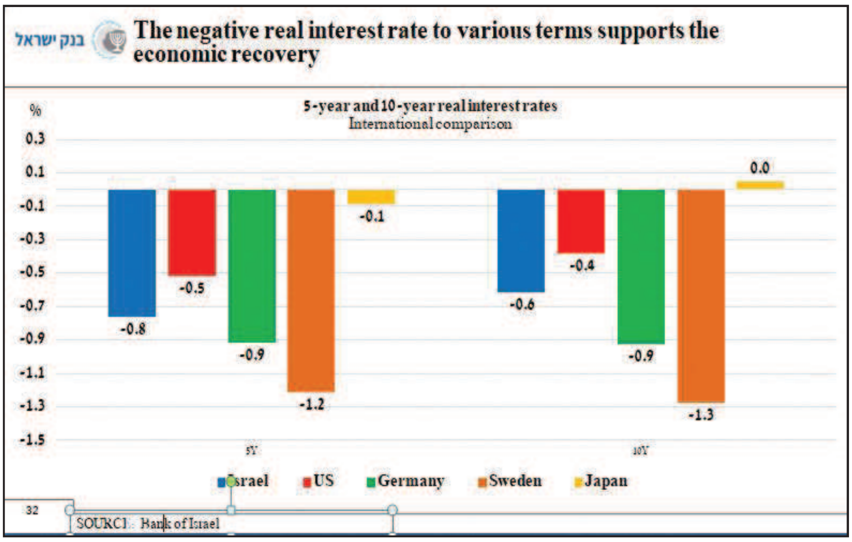


<u>In conclusion, a few words about the role of monetary policy moving forward:</u>

We must remember that the crisis is first and foremost a health crisis, which became a serious crisis in the real economy. Thanks to the determined actions of the Bank of Israel and other central banks, the crisis has not become a financial crisis, and an even more severe negative impact on people's standard of living was avoided. The real nature of the crisis puts most of the burden for handling it on fiscal policy.

During the crisis, there were voices calling on the Bank of Israel to use the foreign exchange reserves to finance the government's anomalous costs. It is important to remember that the foreign exchange reserves are not a wealth fund. The foreign currency assets are balanced by shekel liabilities, and the reserves are not a source of fiscal financing on their own. The reserves can be used as a source of foreign currency or short-term liquidity when there are extreme foreign currency shortages—as they were in this crisis.

The real interest rate in the economy is low **(Slide 32)**, which supports the ability of households and businesses to take credit and to expand investments in the economy. In addition, the interest that the government of Israel pays on its debt is very low, partly thanks to the Bank of Israel's intervention in the bond market. Therefore, at this time, the government can finance the increase in the deficit under easy conditions.



So what is the role of monetary policy in the foreseeable future?

- As long as the deficit is the direct result of the crisis, and even if it increases slightly in order to finance policy measures that encourage growth and productivity, the financial markets will allow the government to continue financing the deficit with low interest rates.
- As long as inflation does not break out, the Bank of Israel will continue to support economic recovery via a low monetary interest rate, and the real interest rate will remain low, and even negative, along a large portion of the curve. The Bank of Israel will continue to purchase government bonds, and if necessary, will take additional steps to directly support the credit market.
- The low interest rate will continue to serve as the main tool for returning the inflation rate to within the target range, and subsequently to around the midpoint of the range.
- The Bank of Israel will continue to intervene in the foreign exchange market, as long as the Monetary Committee assesses that the exchange rate is deviating from the dynamic window that is consistent with returning economic activity to a solid level and with price stability.
- As the Monetary Committee clarified, it will expand the use of the existing tools, including the interest rate tool, and will operate additional ones, to the extent that it assesses that the crisis is drawing out and that such action is necessary to achieve the objectives of monetary policy and to moderate the negative economic impact created as a result of the crisis.