Introduction by the Supervisor of Banks

The Annual Survey of Israel's Banking System provides the public with insight into how the Supervision of Banks views the developments in the banking system, its activities and its risks, as well as the Supervision of Banks' policy, its actions to benefit the general public, and supervisory points of emphasis with a forward-looking view.

The Banking System

The banking system has changed dramatically in recent years. It has improved its stability following numerous supervisory requirements, reduced its exposure to large financial risks, and made significant changes in its business-operational model in order to adjust it to "the banking of tomorrow"—which is expected to be more competitive and technology-oriented. Thus, the banks' capital increased by about 50 percent and the capital ratio increased by about 3 percentage points since 2008, in view of the Supervision of Banks' requirements and lessons from the Global Financial Crisis. The banks have applied the lessons from past events—greatly reducing exposure to large borrowers, while increasing the diversification of the banking credit portfolio, and have greatly reduced exposure to nonresidents, where involvement with some of them led to investigations by US law enforcement authorities against some of the banks, and to fines (against Bank Leumi and Mizrahi Bank, and an expected fine against Bank Hapoalim). In view of the incentives provided by the Supervision of Banks, the banks have undergone significant streamlining, which was reflected in a large reduction in staff and in real estate, adjustments of organizational structures, and changes in work processes. Regulatory barriers were removed, and large investments were made, in technological and digital innovation to adapt banking services to the "fourth industrial revolution". These measures were reflected in the banks' financial results and in the confidence of the capital market, as seen in the continuing upward trend of bank share prices beyond the general stock index. In recent years, bank shares have gradually been sold by controlling owners to the general public, and today, **the public holds about 83 percent of the banks' shares.** As such, the public is benefiting from increased dividends being distributed by the banks, and from higher share value.

In recent years, the financial risks in banking activity declined, led by credit risks and liquidity risks, while operational risks rose in relative terms, led by cyber and technological risks derived from the "technological revolution" that is sweeping all areas of our lives. As an additional tool for estimating banking risks and how they are changing, this year for the first time, the Supervision of Banks carried out a broad survey among the senior officials of all the banks and credit card companies to examine their perception of the main risks. Roughly 80 officials—chairpersons, external directors, CEOs, risk officers, and internal auditors—answered the survey. The survey clearly showed that cyber risk is the risk that most worries the banking system. Ninety percent of officials are concerned about this risk—an extremely high rate compared with all the other risks they noted in the survey (Figure 1.15). This is also currently the most worrisome risk for the Supervision of Banks, and we are working to make sure that this risk is managed adequately. The survey also shows that in order to manage the risk, and in view of the Supervision of Banks' demands, the banks have appointed cyber risk management experts, created programs to deal with cyber incidents, greatly increased the resources invested in information security, and installed monitoring and protection technologies.

Supervision of Banks policy and main activities

The Supervision of Banks is working to achieve a number of goals to benefit the public and the economy. These include protecting depositors' money in the banking system (maintaining the stability of the banks), protecting the banking customer, and promoting competition. Alongside these, the Supervision of Banks has been advancing two secondary goals in recent years—implementing technological innovation, and improving the efficiency of the banking system.

Promoting competition: In the past year, a number of significant projects came to fruition that were promoted by the Bank of Israel and the Ministry of Finance with the aim of enhancing competition in banking services to households and small businesses. (a) Two credit card companies were separated from the largest banks, creating two independent and competitive financial entities. (b) The Credit Data System was established by the Bank of Israel and began functioning, and will increase competition from nonbank entities over the provision of credit to households. In addition to all the banks and credit card companies reporting to the credit data system, 18 nonbank financial entities offering credit to the public have so far joined, and the number continues to increase. (c) The winning bid was chosen in the tender to set up a computer services center, a project that is expected to make things easier for new banks and financial institutions to get started and to support the operations of existing small banks. (d) Ownership of the Shva (Automated Banking Services) company (the economy's main acquirer switch) changed with the entrance of two leading international entities (Visa and Mastercard) as shareholders of the company in place of bank holdings. These entities will be able to contribute from their global experience to advance the payments field in Israel. (e) For the first time in many years, requests to establish a new bank were submitted to the Supervision of Banks, as a result of the Supervision of Banks' removing many barriers (lowering the capital requirements for a new bank, creating regulatory certainty in the process of granting a bank license, and more).

Each of these competition-enhancing projects is large and complex to implement, and together they provide a new infrastructure for enhancing competition in banking and in the payment field as a whole. These projects require broad regulatory preparations—adjusting Proper Conduct of Banking Business directives, revising legislation, coordinating between a number of regulators—alongside large-scale and expensive operational preparations on the part of the banks and financial institutions in the economy.

The results of these measures to increase competition have already begun to take shape, and this process is expected to continue gradually over the coming years. We already see **an increase in the availability of credit** to households and small businesses via nonbank entities. In recent years, acquirer **fees** for businesses have declined, mainly for small and medium businesses. Bank and credit card company customers are benefiting from **digital-financial innovation**—easy-to-use payment applications, applications for performing a wide variety of banking activities remotely (such as managing a securities portfolio), the possibility of opening a bank account online without coming to a branch, and more. This innovation is a direct result of the efforts being made by the banks to compete over customers, and the removal of regulatory barriers. In the framework of competition, there are banks that are promoting remote technological-digital service, while others are actually strengthening their personal service in the branches.

Alongside these changes, additional ones in the structure of the banking-finance market were established this year. Concentration within the banking system continued to decline: The market share of the two large banks shrank to about 55 percent, as the share of the medium-sized banks increased. **The number of nonbank entities** offering credit to households and small businesses increased, and the credit data system that recently began operating is expected to strengthen these entities. We can expect these trends to continue in the coming years, and for the banking market to continue to change. A change to the Banking (Licensing) Law may be required since, as of now, it limits the operating field permitted for banks in Israel. This would enable the market to continue adapting itself to the changing technological-competitive environment.

Promoting technological innovation: In order to promote the incorporation of innovation in banking, the Supervision of Banks worked to remove regulatory barriers. For this purpose, it removed barriers to the transition to cloud technology, revised supervisory directives so that customers would be able to execute transactions via direct and remote means (by email, facial recognition technology, and more), and encouraged cooperation between the banks and fintech companies which help with incorporating innovation to benefit customers and streamline work processes at the banks. It is necessary to adapt the banks' business models, even while taking certain risks in the field of technology and innovation, in order to offer customers better service that is innovative and adapted to their needs, and in order to ensure the existence of a sustainable banking business model and manage a greater risk—the strategic risk of the banks. One of the indices showing the digital change taking place in the banking system is the percentage of banking transactions that households execute via digital and direct means. Since the Supervision of Banks began collecting this data, transactions executed by direct means have risen from 45 percent of all banking transactions in 2016 to 60 percent in 2018. In parallel, the Supervision of Banks worked to ensure that all digital customer transactions will be cheaper than transactions executed via a teller.

Protecting the banking customer: In order to stimulate the banks to compete over improving the quality of banking service to households, the Supervision of Banks conducted a satisfaction survey among households for the first time this year, and published the results. The Supervision of Banks intends to conduct and publish such a survey annually. The results of the survey indicate a tremendous variance between the banks in terms of customer satisfaction. In general, satisfaction with the small banks and those that specialize in specific population groups (teachers, public employees, and so forth) is higher than it is with the large banks. A large variance was also found in the satisfaction with the banks' various communication channels. Satisfaction with waiting time at the branch and with the call center is low, while satisfaction with the digital channels is very high. As a result of the survey, the Supervision of Banks required all the banks to present plans to strengthen those areas where customer satisfaction was low, and the banks that had to do so, developed significant plans to improve the service.

In parallel, the Supervision of Banks worked during the course of the year to increase enforcement in consumer areas. It conducted examinations in the banks in consumer credit areas, wherein it clarified its requirements concerning fairness in the marketing of credit to households, and published the main points of its findings and requirements to the general public. It also carried out consumer examinations at banks and credit card companies in the areas of consumer credit advertising, sending checks to the customer's home, and ATM service, and imposed financial sanctions on entities that were found to have committed significant violations. The emphasis on consumer enforcement will continue during the coming year as well.

Strengthening risk management and protecting the public's money: Supervision of Banks teams worked this year as well to monitor the developing risks at the level of the system and that of the individual bank, and to require banks to strengthen risk management where necessary. This year, we included a box in this Survey that for the first time explains the methodical risk assessment process carried out by the Supervision of Banks (Box 3.2, "The Supervisory Methodology for Assessing Risks in the Banks"), in order to show the public how the Supervision of Banks conducts the Supervisory Review and Evaluation Process (SREP). In view of the Supervision of Banks' assessments of banks that cyber risk is high and increasing, it worked to strengthen and build the work interfaces with the National Cyber Directorate in order to create a kind of "National Iron Dome" to serve as an additional layer of cyber protection for the banking system. The Supervision of Banks' goal is to ensure that in the event of a large-scale cyber incident in the banking system, the banks and the Supervision of Banks, with the help of the cyber system, will be able to manage it, in a way that will minimize the negative impact on customers, on their confidence in the banking system, and in the stability of the banks, so that the recovery will be rapid.

The Supervision of Banks' main points of emphasis with a forward looking view: The main goals and operations that the Supervision of Banks will deal with in the coming year are to continue promoting measures and projects to increase competition and protection of the banking customer, and in particular to continue checking and guiding groups interested in establishing a new bank; promoting switching from bank to bank online, with the aim of creating a technological and procedural platform that will facilitate customers' mobility between banks; and the Open Banking project, designed to enable customers to easily transfer their financial information, and to thereby receive competing offers from various entities and to benefit from a wide range of innovative financial services (including via fintech companies). The Supervision of Banks will also continue working to promote the payments market in Israel, and to make it more innovative; increase enforcement in consumer areas; and continue to protect weaker populations (the elderly, women who have suffered physical and financial abuse, and more).

On the risk management side, we will continue to act to strengthen technology- and cyber-risk management in the banks and within Supervision of Banks itself, while preparing for a significant incident; to strengthen risk management in the household credit area; and continue ongoing monitoring of additional risks that are developing in banking, while conducting onsite examinations and adjusting regulatory requirements.

Alongside all this, the Supervision of Banks will continue working to increase transparency regarding its activity, toward the Knesset and the general public, including publishing surveys, analyses, and enforcement measures, as part of its response to public expectation of increased transparency on the part of the Supervision of Banks. This expectation was also raised in the report of the parliamentary committee on large borrowers, regarding which the Bank of Israel will publish an in-depth response.

Hedva Ber

Dr. Hedva Ber
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CHAPTER 1

DEVELOPMENTS AND RISKS IN THE BANKING SYStEM

In 2018, the banking system continued the process of aligning and improving its ability to adapt to the evolving business environment and in particular to technological innovations and the increasing level of competition and reforms in that area, while it continued to maintain its resilience and stability, strengthened its ability to manage the intensifying risks—and in particular cyber risk—and increased the quantity of business and housing credit, which supported business sector activity and economic growth.

The banking system continues its process of adjusting to the changing business environment, while maintaining its resilience and stability.

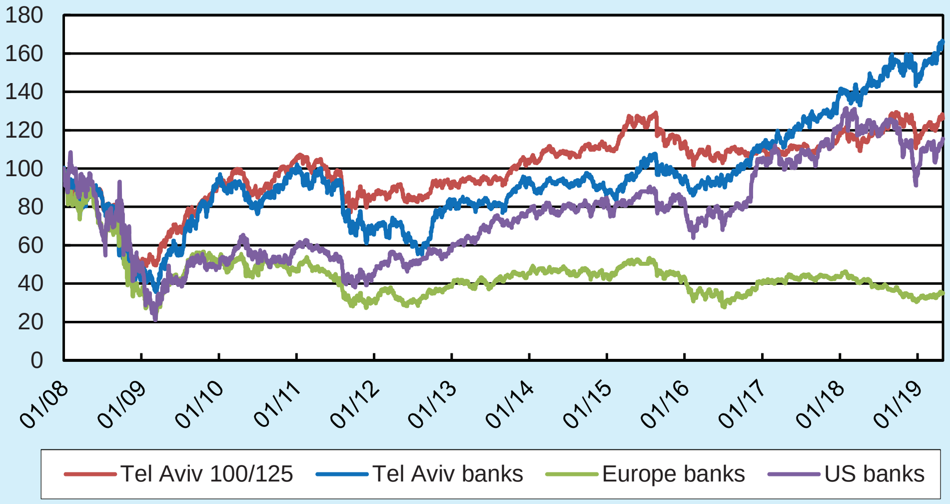
The main changes in the system led to an increase in the supply and diversity of banking products and services delivered by innovative technological channels to customers alongside the change in consumer preferences for banking services and the manner of their consumption, continuing efforts to increase efficiency, and growing competition, together with a reduction in concentration. In recent years, the Bank of Israel and the Ministry of Finance have implemented a number of structural regulatory measures to increase competition in the household and small business segments, including the spectrum of financial services they consume, as well as measures in credit, payments and settlement, innovation and services. In order to increase competition among the banks over households and small businesses, in coming years there will also be an effort to remove the many barriers to competition in the retail segments—a process that is already in progress—and to bring about structural change, and in particular the separation of two credit card companies from the banks, the establishment of a central computer services bureau, the launch of the credit database system and a number of projects that are already in process, such as online switching between banks and open banking. (For further details, see Chapter 2, Main Changes in the Banking System.) The data indicate that concentration in the banking system is already declining and competition from nonbank entities is increasing, including in the household credit segment.

The provision of services to private banking customers abroad has in recent years led to investigations and fines by US authorities for some of the banks as a result of activity they were involved in the past (primarily from 2000 to 2012) and for tax evasion by their US customers. This had an adverse effect on the results of two of the banks this year. However, the return on equity for the banking system as a whole remained adequate and the banks maintained the high capital and liquidity ratios they reached in recent years, in compliance with the directives of the Bank of Israel and while continuing to support economic growth and increasing the supply of credit by about 6.2 percent. The attainment of regulatory capital targets and a solid level of profitability supported the banks' ability to increase the dividends they distribute to shareholders (80 percent of their shares are held by the general public). Further evidence of the banking system's strength and the public's confidence in it can be seen in the rate of increase in the bank shares index this year of about 4.8 percent—which was a continuation of the trend in 2016 and 2017—relative to the much lower performance of the Tel Aviv 125 Index and of the banking systems in the US and Europe (Figure 1.1). The good performance of the shares and public confidence in the banks are also reflected in the MV/BV (market value to book value) ratio which is close to 1, and is higher than in Europe, although lower than in the US (Figure 1.2).

The good state of the Israeli economy was reflected this year in the raising of Israel's credit rating in August by Standard and Poor's to AA-, which is Israel's highest rating to date.[1] The good state of the economy was also reflected in the business results of the banking groups, which showed an improvement in revenue from structural profit channels and in the balance sheet. This was also due to the effect of the depreciation of the shekel against the dollar and the high levels of demand for housing credit and for business credit by the construction and real estate industry.

The good performance of bank shares reflect their robustness and stability, as well as the strong return on equity and the public's trust.

Figure 1.1
Tel Aviv 100/125 Index, and Bank Shares Indices in Israel, Europe and the US, January 1, 2008 to April 20, 2019[a] (index: Jan. 1/08=100)

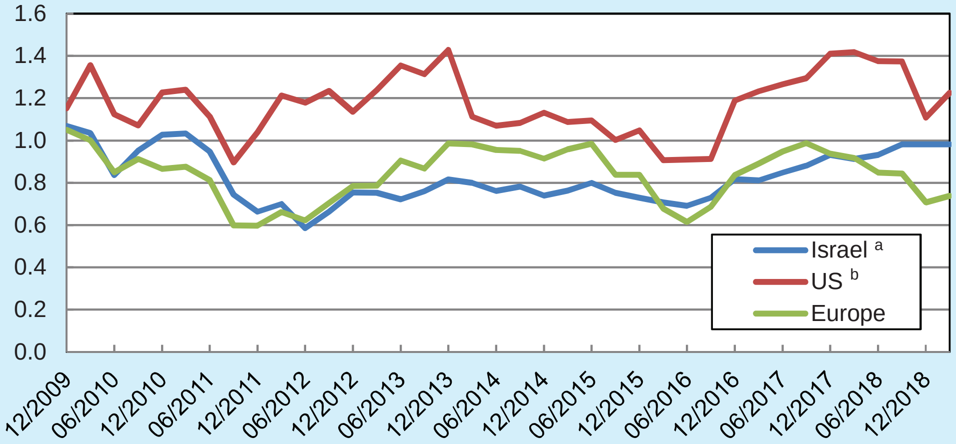


[a] For days on which there was no trading, the previous figure is used.
SOURCE: Tel Aviv Stock Exchange.

[1] There was also an improvement in the risk evaluation of Israel's debt and a positive outlook with respect to Israel's credit risk, as published by Moody's rating agency in July of this year.

The public's trust is also reflected in the MV/BV ratio of the Israel banks, which is close to 1—higher than the ratio in Europe but lower than in the US.

Figure 1.2
Market Value to Book Value (MV/BV), Israel compared to the US and Europe, Dec. 2009 to March 2019



[a] Based on the MSCI Europe Bank Index, which includes 33 banks in 15 advanced economies in Europe.
[b] Based on the MSCI US Bank Index, which includes 84 banks.
SOURCE: Israel–Based on Tel Aviv Stock Exchange and reports to the Banking Supervision Department; Other countries–Bloomberg.

Following a number of years in which the banks focused on credit to households, in the year surveyed they altered their credit mix by increasing credit to the business sector and primarily to large businesses. This change, which translates into a large increase in credit that is weighted by relatively large risk weights, was made possible by, among other things, the arrival of the banks at the regulatory capital requirements and the continuing accumulation of profit.

The banking system is, by its nature, exposed to a variety of risks, including the familiar financial risks and in particular credit risk, market risk and liquidity risk. Again this year, the Bank Supervision Department carried out a macroeconomic stress test for the banking system, according to international conventions, which was based on a uniform scenario for all the banks. The goal of the test was to verify that even in an extreme macroeconomic scenario, the banks will be able to absorb the resulting losses without endangering the deposits of the public or their stability. **The results of the test also point to the resilience and stability of the banking system** (for further details on the stress test and its results, see Box 1.1: A Macroeconomic Stress Test for the Banking System, 2018).

In recent years, there have been changes in the banks' business environment, accompanied by the development and intensification of additional risks, which originate in technological progress, regulation and an increased pace of new legislation both in Israel and abroad, changes in global banking and changes in consumer preferences and behavior. This year, the Banking Supervision Department for the first time carried out a survey of risk among senior officeholders in the Israeli banking system, with the goal of carrying out such a survey on an annual basis and creating an additional tool for the identification of emerging risks and the improvement of their management. The survey indicated that the type of risk that is of most concern to officials in the banks at the present time is cyber risk (for further details on this risk and examples of its realization in other countries, see Box 1.3: "Cyber events – trends and responses").

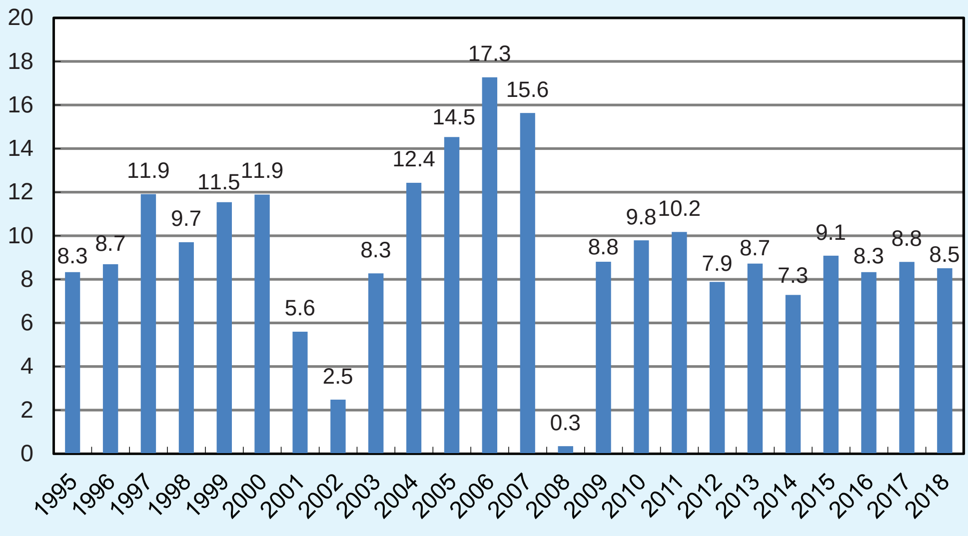
1. BUSINESS RESULTS

The five banking groups had a ROE of 8.5 percent in the year surveyed, similar to the average in recent years.

The net profit of the five large banking groups grew by about 2 percent in 2018 relative to the previous year and stood at about NIS 9.3 billion (Table 1.3). The return on equity declined somewhat to approximately 8.5 percent, compared to about 8.8 percent in 2017 (Figure 1.3), and was similar to the average in recent years. The business results of the five banking groups were positively affected by the increase in revenue from core activities and primarily the growth in net interest income[2] (by 9.4 percent). This occurred against the background of an increase in credit extended by the banks, an increase in the CPI and a change in the composition of assets in favor of assets characterized by relatively high yields. The growth in noninterest income was more moderate (5.5 percent). The increased efficiency of the banking system in

The banks showed adequate profitability, similar to previous years.

Figure 1.3
Return on Equity (ROE) After Tax, the Five Banking Groups, 1995–2018
(percent)



SOURCE: Based on published financial statements.

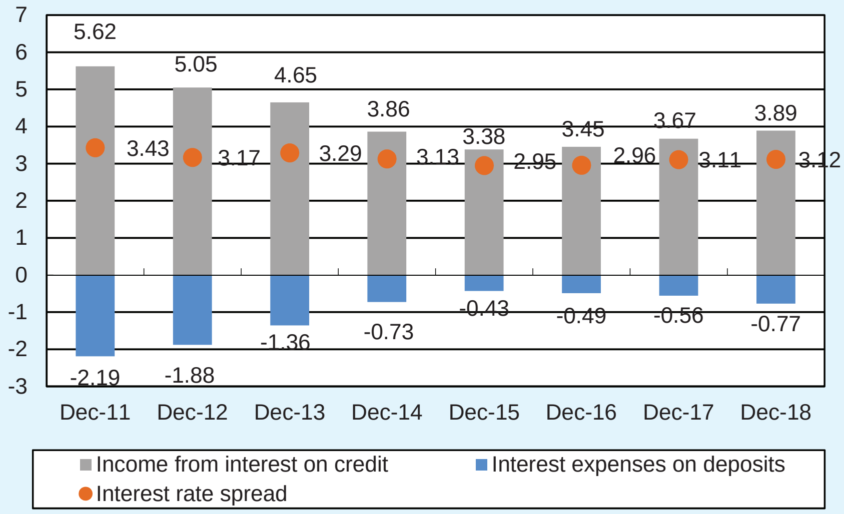
2 Interest income less interest expenses.

recent years also worked to increase profits (Figure 1.7) (for further details see the section on "Operational efficiency and processes to increase efficiency"). The results were adversely affected by a decline in the collection of debts written off in previous years, which led to an increase in loan loss provisions and by an increase in operating expenses (of 7.7 percent) as a result of the investigation of some of the banks by authorities in the US (as described below).

Net interest income increased by 9.4 percent this year and its growth encompassed all of the banks. The quantity effect positively affected interest income this year, as a result of, among other things, the shift of liquid assets in order to expand bank credit to the public. The price effect was also positive (Figure 1.4). Nonetheless, the average interest rates on new credit extended to the public this year were stable relative to 2017, and there was a decline in interest rates on new housing credit (for further details, see the section "The credit portfolio and credit risk"; Figure 1.26), such that the main effect of price was the result of changes in the prices of other interest-bearing assets and liabilities (such as bonds). The interest rate spread[3] remained unchanged relative to 2017 (Table 1.5, Figure 1.4) while the net interest margin,[4] which reflects the ability of the bank to produce a yield from interest-bearing activity rose to a level of 2.25 percent, compared to 2.12 percent in 2017 (Figure 1.5).

The interest rate spread remained unchanged in 2018.

Figure 1.4
Income from Interest on Credit to the Public, Interest Expenses on the Public's Deposits, and the Interest Rate Spread, the Five Banking Groups, 2011–18 (percent)

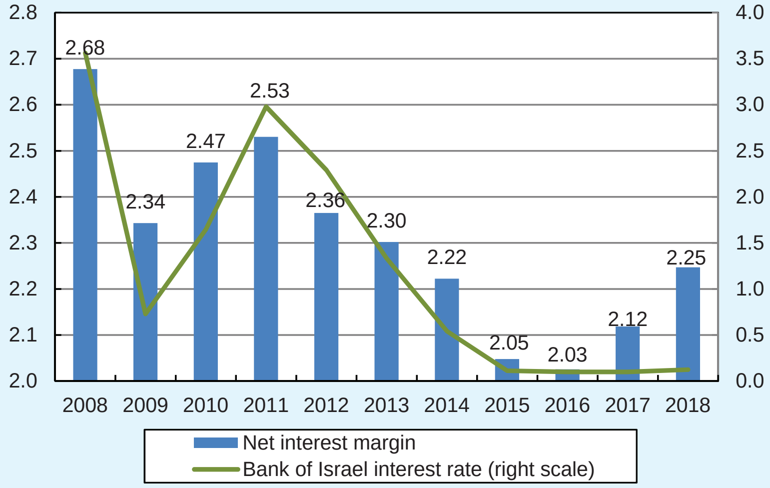


SOURCE: Based on published financial statements.

[3] The difference between the rate of interest income from credit to the public and the rate of expenses due to interest paid on the public's deposits.
[4] The ratio of net interest income to total monetary assets that generate financing income.

The return on income-generating assets increased due to an increase in the CPI and a change in the mix of assets, and despite stability of the interest rate spread.

Figure 1.5
Net Interest Margin[a] and the Bank of Israel Interest Rate[b], the Five Banking Groups, 2008–18 (percent)



[a] The ratio between net interest income and total monetary assets that generate financing income.
[b] Yearly average.
SOURCE: Based on published financial statements.

The increase in the net interest margin, despite the stability in the interest rate spread, was the result of a number of factors: a change in the composition of assets and a shift of interest-yielding assets to investment channels with high yields (for further details, see the chapter "Main developments in balance-sheet and off-balance sheet activity"); an increase in the CPI[5] (inflation) by 1.2 percent,[6] following five years of low inflation, which increased the margin due to the banks' positive position in the CPI-indexed segment;[7] an increase in the rate of return from bonds held by the banking groups while in contrast a contraction in the total quantity of their own bonds (Table 1.5). The banks' net interest income was affected only slightly[8] this year by the increase of the Bank of Israel interest rate from 0.1 percent to 0.25 percent, following close to four years in which the interest rate remained unchanged; however, if the interest rate continues to rise in coming years, it is likely to have a significant effect on their revenues in the long term. The growth of interest income was partly offset by the large increase in loan loss provisions (of about 70 percent), which was the result of the increase in the individually assessed allowance following a decline in the recovery

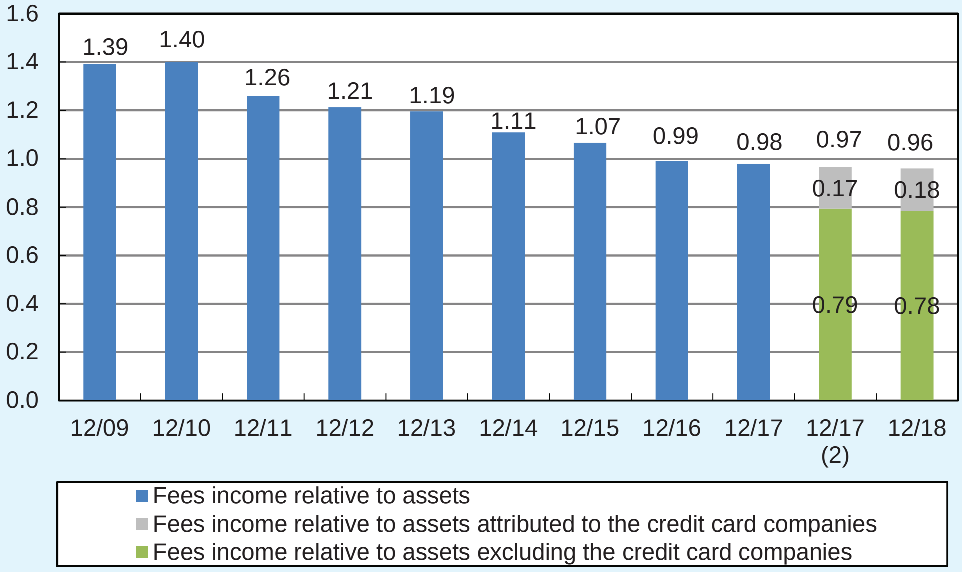
5 The known index.
6 Compared to an increase of about 0.3 percent in 2017.
7 The effect among the four largest banks was estimated to be more than NIS 600 million, compared to about NIS 140 million in 2017. The First International Bank did not publish this figure.
8 The effect of the interest rate this year was limited since it was raised only in November.

of debts written off in previous years, which involved credit extended to large and mid-sized businesses. Nonetheless, the allowances for credit losses are still low from a long-term perspective (0.21 percent; for further details, see the section "The credit portfolio and credit risk", Figure 1.29).

The revenues from bank fees grew during the year being surveyed by about 2.3 percent relative to the previous year while the share of revenue from bank fees relative to the total level of activity—which has declined for several years—remained unchanged during the past two years (Figure 1.6; Table 1.6). The main part of the increase in revenue from bank fees originated from fees due to credit card activity, which grew by about 9 percent, primarily due to the increase in the number of credit cards and the total value of credit card transactions carried out by the public. This increase was partly offset by the continued decline in fees in respect of securities activity. The fees for bank account management remained unchanged, following a decline for a number of years. **The separation of the two credit card companies**

The rate of fees income remained unchanged this year, but the separation of the credit card companies will have a significant effect on the rate in the coming years.

Figure 1.6
Fees Income as a Share of Assets between 2009 and 2017, and Estimates With and Without the Separated Credit Card Companies for 2017 and 2018[a,b] (percent)



[a] In the 2017-18 data, the estimates are calculated plus and minus the separated credit card companies, "Leumi Card" and "Isracard", in accordance with the provisions of the Increasing Competition and Reducing Concentration in the Banking Sector in Israel Law, 5777–2017, which required the banking groups to sell their holdings of the companies by February 2020. Accordingly, "Leumi Card" was sold in February 2019 to the Warburg Pincus Group, and Hapoalim sold most of its holdings of Isracard in April 2019.
[b] In yearly terms. The sharp decline in 2014 was due to an accounting reclassification of income from credit activity, pursuant to a Banking Supervision Department directive.
SOURCE: Based on published financial statements.

from the banks is expected to produce a marked reduction in the proportion of revenue from fees within total activity to a level of 0.79 percent, compared to about 0.98 percent currently. This is because revenue from fees accounts for the lion's share of the credit card companies' revenue and about 30 percent of the revenue from fees for the five largest banking groups.[9]

Non-interest financing income increased this year at a high rate of about 42 percent, primarily as a result of the increase in income from activity in derivatives, as part of asset and liability management (ALM), and to a lesser extent from the sale of shares. Operating expenses—which include salaries, which rose by 1.7 percent this year—rose by 7.7 percent this year. Most of the increase in operating costs was recorded by the Hapoalim and Mizrahi Tefahot banking groups due to the expenses related to the investigations by US authorities.[10]

2. OPERATIONAL EFFICIENCY AND PROCESSES TO INCREASE EFFICIENCY

This year the Israeli banking system continued its recent years' trend of increasing efficiency.

The trend of growth in efficiency that has characterized the banking system in recent years was maintained this year. The improvement in the banks' operational efficiency to levels common among similar banks in the advanced economies is one of the main targets set by the Banking Supervision Department for domestic banks. (For further discussion, see the Banking Supervision Department's Targets in Chapter 3.) The improvement in efficiency among the banks can be seen in the reduction of manpower, the number of branches and real estate expenses; however, it was not evident in the operational efficiency ratio,[11] as the business results of some of the groups were adversely affected this year by various anomalous events, and in particular the expenses due to the investigation by US authorities of two banks (Hapoalim and Mizrahi-Tefahot), which significantly raised their operating expenses. The operating efficiency ratio of the five banking groups was about 64.4 percent this year, lower than its average for the last five years (about 67.8 percent; Figure 1.7). The operating efficiency ratio without the influence of the provisions for the aforementioned investigations stood at 61.1 percent,[12] an improvement relative to 2017. An analysis of the components of the ratio shows that the reduction in the ratio

[9] Nonetheless, we estimate that as a result of the operating agreement signed between the banks and the credit card companies, this decline will be more moderate.

[10] In March 2019, Mizrahi-Tefahot Bank signed a Deferred Prosecution Agreement (DPA) with the US Department of Justice in order to end the investigation of the bank's business with its US customers. The bank was required to pay a fine of $195 million. Therefore, Mizrahi-Tefahot updated its expenses due to the investigation by US authorities to NIS 546 million. Bank Hapoalim, which is still under investigation, increased its expense by about NIS 1 billion, to NIS 2.3 billion. In addition to these amounts, the banks also recorded expenses for professional services related to these and other investigations.

[11] The ratio of total operating and other expenses to total net interest income and non-interest income (known as the cost to income ratio).

[12] Net of the provision for the investigations in 2017, the ratio stood at 63.1 percent.

was partially offset by the increase in the operating expenses due to the investigations in the US. Nonetheless, operating expenses rose this year even net of the provisions for the investigations, which was due to, among other things, the increase in salary expenses and expenditures on professional services, including those related to the investigations (Figure 1.8).

The average cost of a unit of output[13] was also adversely affected by the high level of one-off expenses and grew slightly this year to 2.01 percent, compared to 1.92 percent last year. Nonetheless, its value is still lower than the average for the last five years (about 2.14 percent; Table 1.7). After netting out the influence of the provisions for the US investigations, the average cost per unit of output stood at 1.9 percent.[14] The source of the increase in the cost of a unit of output is the sharp rise in operating costs this year relative to a more moderate rise in average total assets (about 3 percent).

Salary and related expenses grew this year at a moderate rate (1.7 percent),[15] but this was concentrated in the three mid-sized banks while in the two largest banks these expenses declined. The increase in salary and related expenses reflects a rise in both salaries (about 2 percent) and related expenses (about 1.1 percent). Thus, total expenses per employee post rose by 4.2 percent (Table 1.8), which is similar to the trend in average salary per employee in the overall business sector, and in particular in the finance and insurance industry (Figure 1.9).

During the course of the year being surveyed, the banks continued to reduce their number of employees and to close branches. The number of employee posts in the banking system decreased by about 2.5 percent (about 1000 positions), which was a continuation of the trend in recent years; thus, from a peak in 2011 until today their number has declined by about 15 percent (Figure 1.10).[16] The decline in the number of employee posts in 2018, like the decline in preceding years, was the result of the reduction in number of employee posts at lower salary levels (up to NIS 360,000 per year) and the continuing decline in the number of positions in their branches abroad (Table 1.9), which was partly offset by the growth in the number of positions at the mid to high salary levels (over NIS 360,000 per year). This trend reflects a change in the mix of workers in the banking system where newly hired workers tend to have

[13] The ratio of total operating expenses and other expenses to the average value of total assets (known as the average cost ratio).

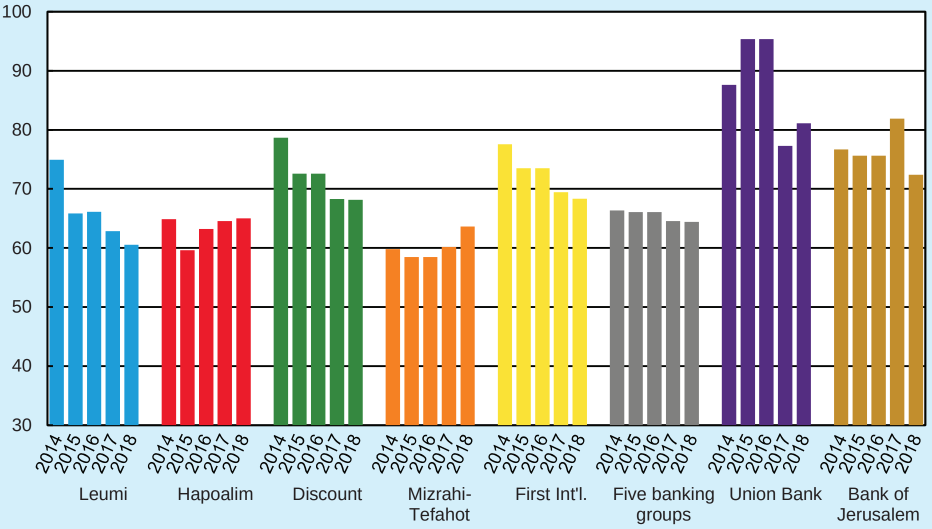
[14] Net of the provision for the investigations in 2017, the ratio stood at 1.87 percent.

[15] The analysis of the salary data is based on Table 1.8: "Expenses of the five banking groups in respect of employees, 2000 to 2018", which presents information from the banks' financial reports. Starting from 2016, the figures do not include the Isracard group but do include a reclassification of comparison figures for related expenses in accordance with the January 2018 circular of the Banking Supervision Department on this issue. Table 1.9: "Number of employee posts and expenses by annual wage level, the five banking groups, 2017 and 2018" presents the data from the reports submitted to the Banking Supervision Department and includes the figures for the Isracard group. Nonetheless, with respect to 2017 there are no comparison figures of the reclassification of related expenses and this accounts for the difference between the two tables.

[16] Including the Isracard group.

The streamlining of the past few years in the banking system continued this year, but was negatively affected by exceptional expenses (mainly in respect of investigations of two banks).

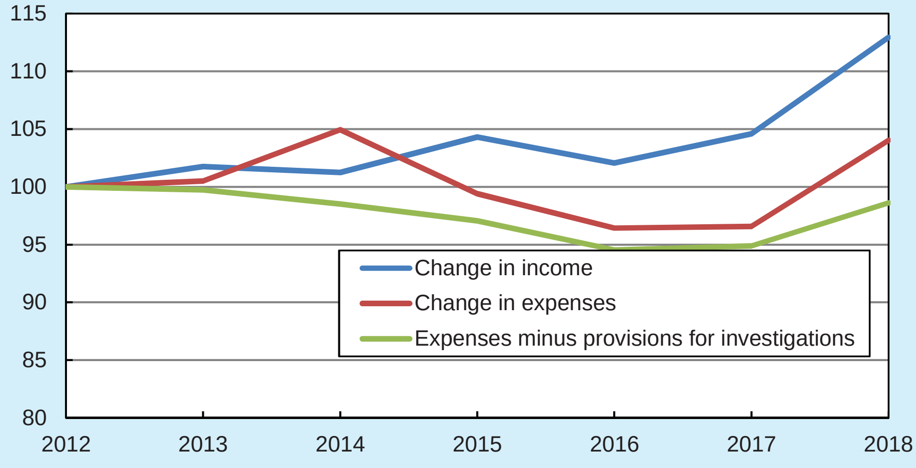
Figure 1.7
Efficiency Ratio[a] in the Banking System, 2014–18 (percent)



[a] The ratio between total operating and other expenses and total net interest and noninterest income (cost to income).
SOURCE: Based on published financial statements and reports to the Banking Supervision Department.

The one-off increase in operating expenses prevented a decline in the operating efficiency ratio this year.

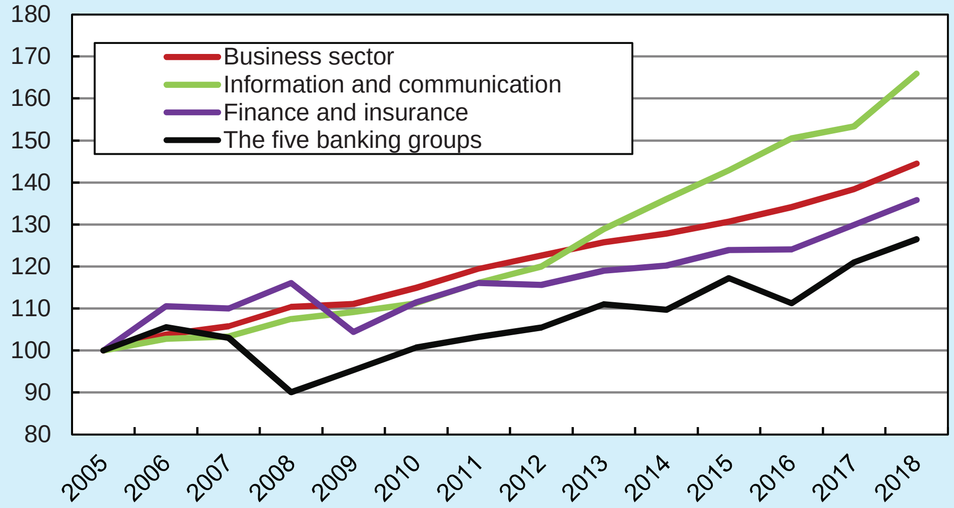
Figure 1.8
Development of Income and Operating and Other Expenses[a], and Development of Operating and Other Expenses Minus the Effect of Provisions in Respect of Investigations by the US Authorities, the Five Banking Groups, 2012–18 (index: 2012=100)



[a] The income side includes net interest income and noninterest income. The expenses side includes total operating and other expenses.
SOURCE: Based on published financial statements.

The development of the wage per employee in the five banking groups this year was similar to its development in the business sector in general.

Figure 1.9
Average Wage per Employee Post in Various Industries and Wage Expenses per Position in the Five Banking Groups[a], 2005–18
(index: 2005=100)



[a] 2017 and 2018 data exclude "Isracard" employees.
SOURCE: Based on Central Bureau of Statistics and published financial statements.

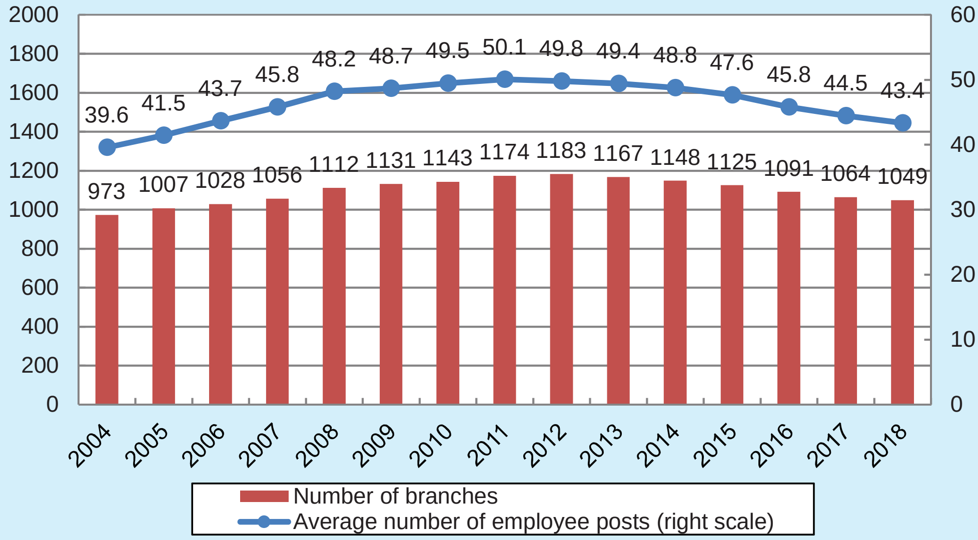
a high tech background and thus are characterized by mid to high-level salaries. The number of branches decreased this year by about 1.4 percent (15 branches; Figure 1.10). Since 2011, the total number of branches has dropped by only about 8 percent, less than the average decline of about 20 percent for EU countries and the US (Figure 1.11). However, the closing of branches in recent years has been a hardship for some populations, particularly seniors who find it difficult to adopt the direct channels of communication with the bank. This problem is also evident in the public's relatively low level of satisfaction with regard to waiting time at the branches relative to the very high satisfaction with other communication channels (Figure 1.14). As a result of the survey of customer satisfaction carried out this year for the first time among the general public and published in January 2019, the Banking Supervision Department instructed the banks to take steps to improve customer services.

The year 2018 saw a continuation of the upward trend in customer use of direct banking channels.[17] Banking Supervision Department data indicate that the proportion of banking transactions carried out using direct channels rose during the year being surveyed to about 60 percent of total transactions, compared to 55 percent in 2017 and 45 percent in 2016 (Figure 1.12). Similar growth could also be seen in the business sector, where the proportion of banking transactions through direct

[17] Direct channels include Internet sites, mobile device apps, automated teller machines and telephone help desks (not including phone services by tellers in the branches).

The banks continued lowering their manpower contingents and number of branches this year.

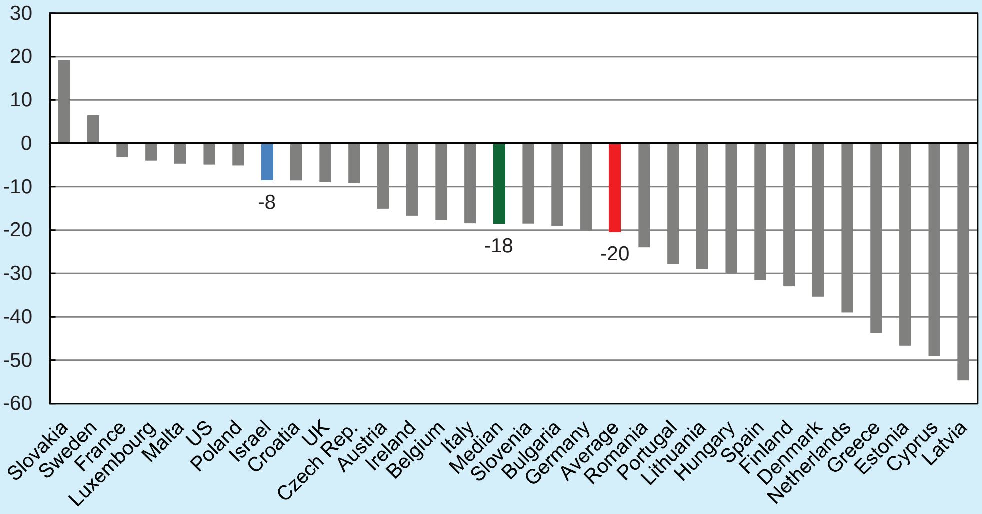
Figure 1.10
Average Number of Employee Posts, and Number of Branches, Total Banking System, 2004–18



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

Branches are closing in Israel at a slower pace than in the EU or the US.

Figure 1.11
Rate of Change in the Number of Bank Branches[a], Israel, EU and US, 2011–17[b]
(percent)



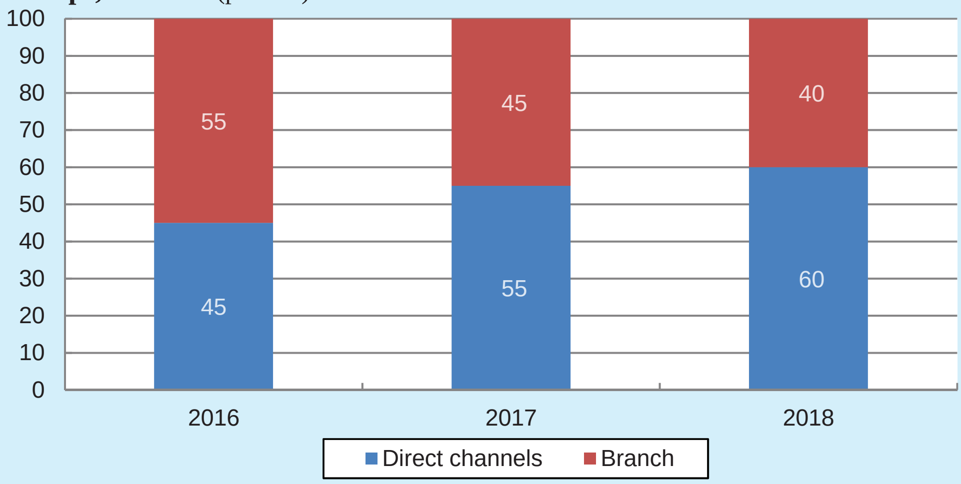
[a] Excluding activity abroad.
[b] In the UK, calculated as the rate of change between 2011 and 2014.

SOURCE: Europe—European Central Bank; US—FDIC; Israel—Based on reports to the Banking Supervision Department.

channels was somewhat lower than among households. This was because the banks offer businesses comprehensive and designated baskets of services in the branches. In 2018, the banks also devoted effort to shifting the activity of business customers to direct channels[18] (Figure 1.12 and 1.13) and results are expected to be seen in the near future. **Based on a survey of customer satisfaction carried out by the Banking Supervision Department, it appears that households that use banking apps or bank websites are very satisfied with banking services** (Figure 1.14), while those who use banking services at the branches were much less so. The publication of the survey results accelerated the process of improving customer service in the branches. The introduction of innovative technological devices in the banking industry and the adaptation of the banks to the new reality, alongside changes in consumer preferences, have made it possible for the banking system to advance the processes to increase efficiency, with the goal of becoming more competitive and better adapted to the technological era. In 2016–18, the Banking Supervision Department sent out a number of letters on issues of efficiency, in which the banks were directed to work to improve efficiency by means of both cutting workforces and reducing real estate meterage. These instructions incentivized the banking system to increase efficiency in recent years and also allowed it to in a manner respectful of the employees departing prior to retirement age, by means of early and voluntary retirement.

The public is moving to digital banking: Households increased their rate of activity through direct channels.

Figure 1.12
Households' Transactions Through Direct Channels[a] Compared with Transactions at Branches, as a Share of Total Transactions, the Five Banking Groups, 2016–18 (percent)

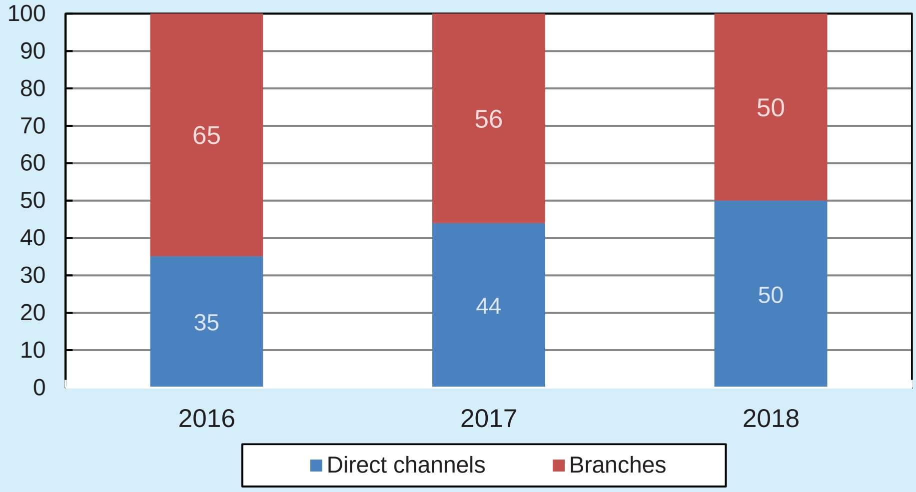


[a] Websites, mobile applications, automatic service stations, and telephone call centers (does not include telephone response by a teller at the branch).
SOURCE: Reports to the Banking Supervision Department.

[18] For further details, see the Bank of Israel press release on the reports on e-banking– Household and Small-Business Consumption of Banking Services by Direct Channels, 2018 Summary.

Small businesses are also increasing their rate of transactions through direct banking channels.

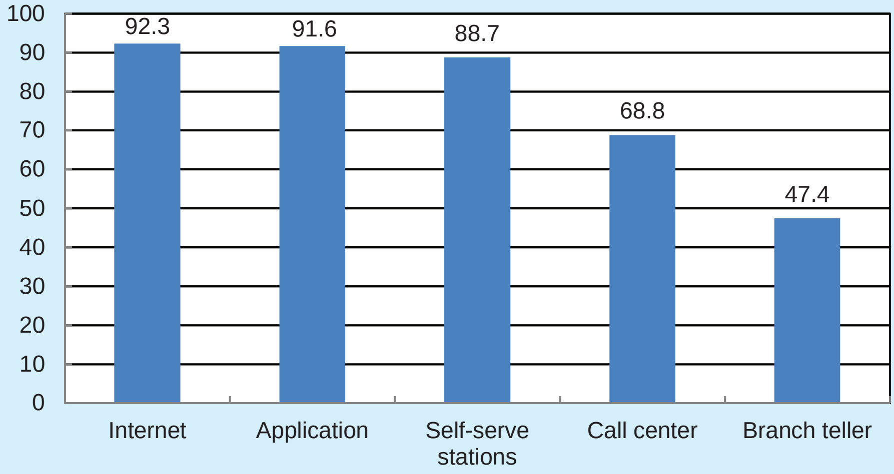
Figure 1.13
Rate of Small Business Transactions Through Direct Channels[a] and at the Branches, the Five Banking Groups, 2016–18 (percent)



[a] Websites, mobile applications, automatic service stations, and telephone call centers (does not include telephone response by a teller at the branch).
SOURCE: Reports to the Banking Supervision Department.

Households expressed a high level of satisfaction with the services provided through the direct channels, and a low level of satisfaction with the functioning of the branches.

Figure 1.14
Satisfaction with Banking Services in the Different Channels, Total Banking System, 2018 (percent)



SOURCE: Survey conducted by the Banking Supervision Department in July–August 2018.

3. RISKS

The main risks to the banking system have changed in recent years, such that financial risks are declining while operational risks—and in particular cyber and technology risk—are growing. The banking system is exposed to a variety of risks, including the familiar financial risks, and in particular credit risk, market risk and liquidity risk, as well as other risks such as cross-border risk and compliance risk, geopolitical risk, legal risk and operational risk. Over the years, the Banking Supervision Department has devoted a great deal of attention to these risks, including analyses and numerous directives issued to the banks which are meant to strengthen their risk management and ensure the banks' stability and resilience if the risks are realized.

Due to the unique characteristics of the intensifying risks, it is difficult to identify them fully, and in particular—to quantify and assess the adverse impact expected from them and the probability of their being realized.

Credit risk is based on the possibility of a borrower or a borrower group not meeting their commitments to the bank. The realization of credit risk involves a default on the payment of principal or interest and as a result, the erosion of the bank's expected profit. Credit risk is generally divided into three components: quantity, quality and concentration of the portfolio.[19] In recent years, the Banking Supervision Department has worked diligently, and utilized numerous tools, to improve the management of credit among the banks and has taken important measures to reduce the concentration of credit. In addition, a number of macroprudential policy measures have been adopted that are meant to reduce the risk inherent in housing credit. (For further details, see the section on credit risk in this chapter.)

Market risk is based on the possibility that unexpected changes in market prices—in the interest rate, in price indices, in exchange rates, in stock prices, etc.—will adversely affect the bank's revenue, profitability or market value.[20] Market risk originates from both the trading book and the banking portfolio. The Banking Supervision Department has required the allocation of capital to cover these risks and has carried out examinations of the quality of their management, including in the trading rooms.

Liquidity risk is the risk deriving form uncertainty regarding unexpected withdrawals of deposits and unexpected demand for credit that the bank has to provide immediately.[21] In recent years, the Banking Supervision Department has required that liquidity ratios and the quality of the banks' liquid assets be improved. (For further details, see the section on liquidity risk in this chapter.)

Apart from the demands to improve the management of the various risks, the Banking Supervision Department has required the improvement of capital adequacy ratios, as a buffer against potential losses. (For further details, see the section "Capital Adequacy and Leverage" in this chapter.)

[19] From David Ruthenberg, *Bank Management in Israel, Asset Management, Liabilities and Risks,"* (Jerusalem: Keter, 2002). [Hebrew]

[20] Ibid.

[21] Ibid.

One of the ways to assess the financial risks facing the banks is stress testing, which is done each year for the banking system. (For further details, see Boxes 1.1 and 1.2.)

In recent years, there have been changes in the business environment, along with the emergence and increasing scope of other risks that stem from technological progress, regulation and accelerated legislation in Israel and abroad, changes in global banking and changes in consumer preferences and behavior. These risks include cyber risk, technological risk, business model risk and also conduct risk, which is illustrated in Box 3.3 on Responsible Lending.

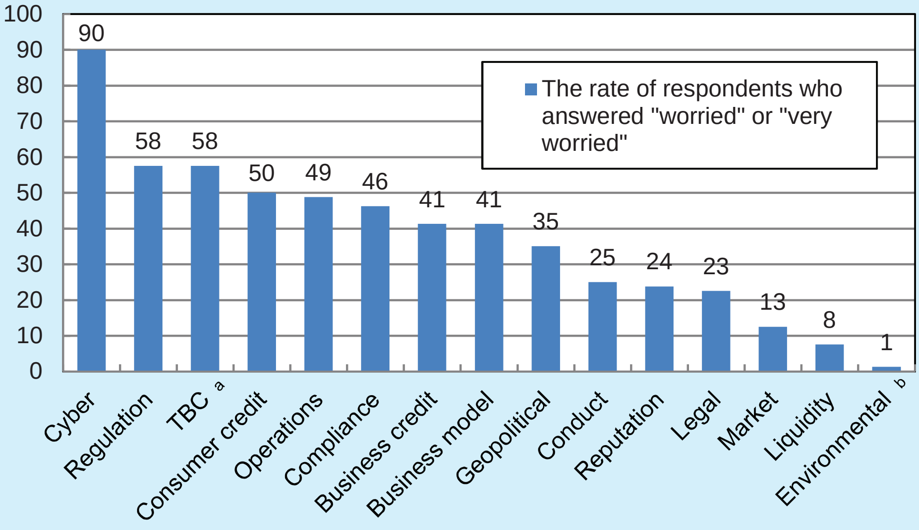
In view of the unique characteristics of the growing risks implicit in the new business environment, it is difficult to fully characterize these risks and in particular to quantify and estimate the expected damage they might cause and the probability of their realization. Nonetheless, the scope of the risk and the implications of its realization can be understood based on cyber events and information leakage that have occurred among banks in other countries. (For further details, see Box 1.3: Cyber Events – Trends and Responses). Thus, they present the banks with a major challenge that requires the modification of their management techniques and tools and even changes in their operating methods and their business models. In addition to the activities of the banks themselves, the Banking Supervision Department is working to achieve the optimal management of these risks, with the goal of minimizing the various risks and improving the banks' ability to deal with their realization, drawing conclusions from previous realizations of these risks and preparing for future realizations. This is accomplished through regulation and enforcement, the removal of barriers, and compliance with accepted international standards. The Banking Supervision Department is also investing effort to update its supervisory abilities by, among other things, the establishment of a Technology and Innovation Division[22] within it, which provides a response to the technological changes that are occurring in the system and those that are expected to emerge in coming years and assists in the execution of supervisory policy in these domains.

As another tool used to assess risk, the Banking Supervision Department conducted a new survey among senior executives in the banking system in Israel (board chairpersons, CEOs, risk officers, internal auditors and external directors) with the goal of understanding how they view the development of the various risks in the banking system. They were asked, among other things, to name the risks that are of most concern to them, among those that threaten their bank (Figure 1.15). It was found that **the risk of most concern is cyber risk.** This type of risk is difficult to manage and is also defined as one of the major risks to banking in risk surveys of financial systems in other countries, in view of the increasing cyber attacks on a global level. The answers to the survey's questions regarding the response of the bank to the increase in this risk indicate that in order to manage this type of risk the banks

[22] Which was established in 2016.

Cyber risk is more worrisome to the banking system than all others.

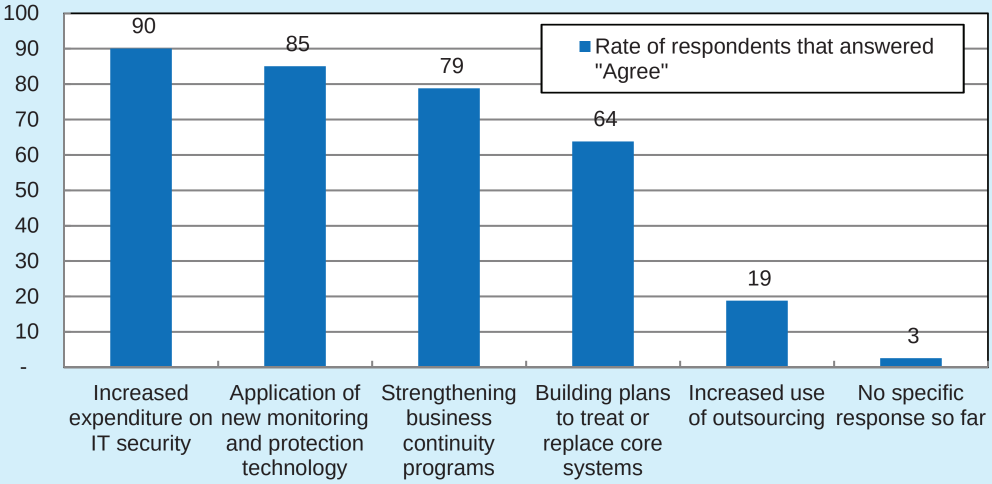
Figure 1.15
Risks that are Worrisome to the Banking System, 2019 (percent)



[a] Technological and business continuity.
[b] Threats derived from extreme changes in climate, the physical environment in which the bank/company or its borrowers operate.
SOURCE: Survey conducted by the Banking Supervision Department.

The banking system is managing the intensifying cyber risk by taking a variety of actions.

Figure 1.16
The Banking System's Response to an Increase in Cyber Risk and Technological Risk, 2019 (percent)



SOURCE: Survey conducted by the Banking Supervision Department.

are spending more on IT security, they are installing new technologies for monitoring and protection and they are upgrading their business continuity plans (Figure 1.16).

In recent years, the Banking Supervision Department has invested significant efforts in assessing and improving the response of the banking system to this risk. This has been accomplished by, among other things, designated regulation with regard to cyber; cyber simulations in order to improve the preparedness of the banking corporations in the face of the various risks and their ability to deal with them; the definition of stress scenarios in order to set risk appetite in this domain; examinations, surveys and guidance of the banking system in order to identify and close gaps; a system of reporting to the Banking Supervision Department; sharing of information and the reinforcement and formalization of cooperation with the National Cyber Directorate and the Banking Cyber Center, so that they will serve as an "additional layer" in the protection of depositors' funds and in the stability of the banks in the face of cyber events. (For further details, see Box 1.3: Cyber Events—Trends and Responses).

According to the results of the survey, senior office holders in the banking system are also concerned about technological risk and business continuity risk. Technological progress and the growth of digital banking in Israel, as in other countries, incorporates numerous opportunities for both the banks and their customers, but also structural risks that are the result of relying on new technologies and infrastructures, sometimes including the use of outsourcing services, which is liable to reinforce the potential for fraud and leaking of information. Regulatory risk was also mentioned as a significant risk, against the background of the large number of legislative initiatives in banking and finance in recent years. The activity of a number of regulators in this domain, the numerous measures they are introducing within a short time period, and their complexity, make it difficult for the banks to absorb these initiatives, thus creating risks for the banks and their customers by changing the business environment, and they are liable to even undermine the ability to achieve new targets that have been set in legislation and regulation. The main regulatory measures that have been promoted are the separation of the credit card companies from the large banks, the requirement for a change in the ownership of Shva (Automated Banking Services), the creation of a credit data system, the online switching between banks project and the open banking project (API) which are still in progress. These projects, as a well as the numerous legislative initiatives, impose major costs on the system by requiring the implementation of complex changes in, among other things, their computer and operational systems. Therefore, the Banking Supervision Department is emphasizing the importance of moderating the pace of imposing new requirements until those already in the process of implementation are completed.

Due to the recommendation of the IMF a few years ago, the Knesset this year approved the establishment of the Financial Stability Committee. This Committee should increase coordination between the various regulators. This has become increasingly important in view of the growing number of players in the financial markets, including the credit market, that are supervised by the

various regulators. This is also a result of the lessons learned from the global financial crisis, in which financial risk was realized in certain financial entities and then spread to the entire system in the US and other markets.

The first of the financial risks, which was ranked only in fourth place in the survey, was **consumer credit risk.** This type of credit has expanded at a rapid pace in recent years and as a result the accompanying risk has as well, as can be seen in the various measures of credit quality. (For further details, see the section on credit.) The survey findings also indicate that most of the respondents expect that the share of problematic debt within total consumer debt will grow in coming years. However, against the background of increasing risk and the institution of numerous measures by the Banking Supervision Department in the area of consumer credit (Box 3.3: Measures to Ensure Responsible Lending—from Principle to Implementation), the rate of increase in such credit has slowed considerably. Thus, in 2018, it grew by only 1.2 percent for the banking system as a whole and in some of the banks it even declined. Similarly, loan loss provisions also declined somewhat this year in this segment.

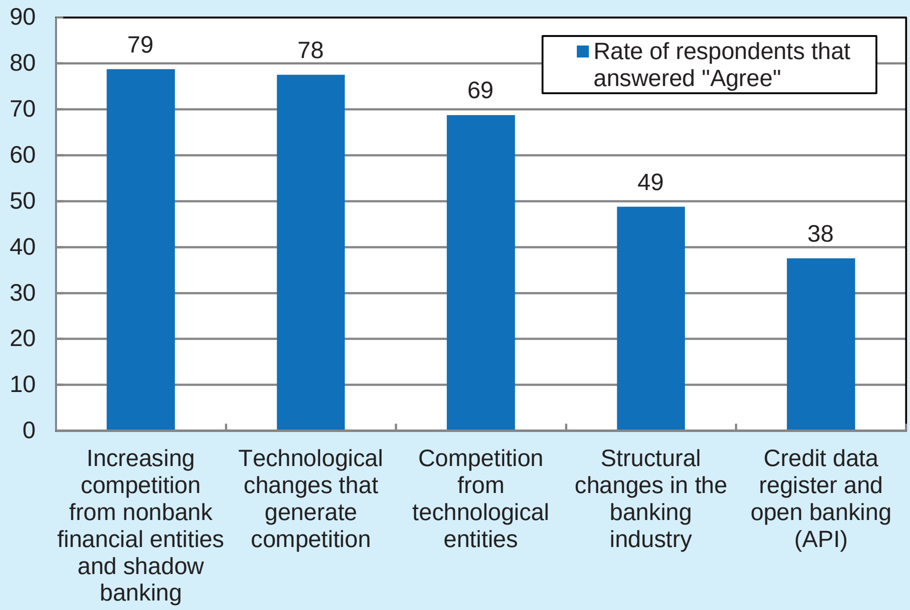
A number of other types of risk were ranked by the survey, including the following:

Compliance risk, which was realized in some of the banks in recent years, was also ranked high on the list. This is to be viewed against the background of investigations of Israeli banks by authorities in the US for their activities in the past (primarily prior to 2012), which included tax evasion by foreign customers who deposited money in their accounts at banks either in Israel or at their branches abroad, and the issuing of clear guidelines by the Banking Supervision Department in this domain and its adoption of a strict approach to the management of cross-border risks. These actions led to changes in the banking system, first among them t**he reduction in deposits from nonresidents in banks in Israel—by about NIS 60 billion over the last decade**—and the withdrawal of about NIS 50 billion from deposits in branches of Israeli banks abroad. Due to the tightening of supervisory regulation in the management of these accounts, some of the customers decided to withdraw their money from Israeli banks.

Business model risk – Banks all over the world have in recent years been dealing with an erosion in sources of profit, due to among other things the increasing competition due to the entry of nonbank entities into the banking market and the reduced dominance and competitive advantage of the commercial banks. The banks have therefore had to search for new sources of growth and to make difficult decisions as to whether and how to change their model of activity, so that it will provide a response to the new developments. In particular, they must rethink the way in which they produce value and provide benefit to their customers, including an increase in efficiency and the adaptation of their operational models to a more technological world. As in other countries, the banking system in Israel faces both increased competition from nonbank entities and risk-creating technological change, which require a reexamination of the business model (Figure 1.17). The main way in which banks worldwide are dealing with this issue is the implementation of efficiency measures in various domains (human resources, processes, real estate, the focus of

The largest threats to business operations as identified by the banks are from increasing competition from nonbank financial entities and due to technological changes.

Figure 1.17
Significant Factors Affecting Business Model Risk in the Banking System, 2019 (percent)



SOURCE: Survey conducted by the Banking Supervision Department.

the business model, cuts in non-profitable activities, etc.) in order to improve the structure of their expenses. Various banks worldwide are adjusting their activity to a model that focuses on the core activities that produce value and in which they have a competitive advantage. Another way in which the banks are dealing with the changes in the business environment is the development of innovation and collaboration with third parties, primarily in order to build a strong base in the digital world.

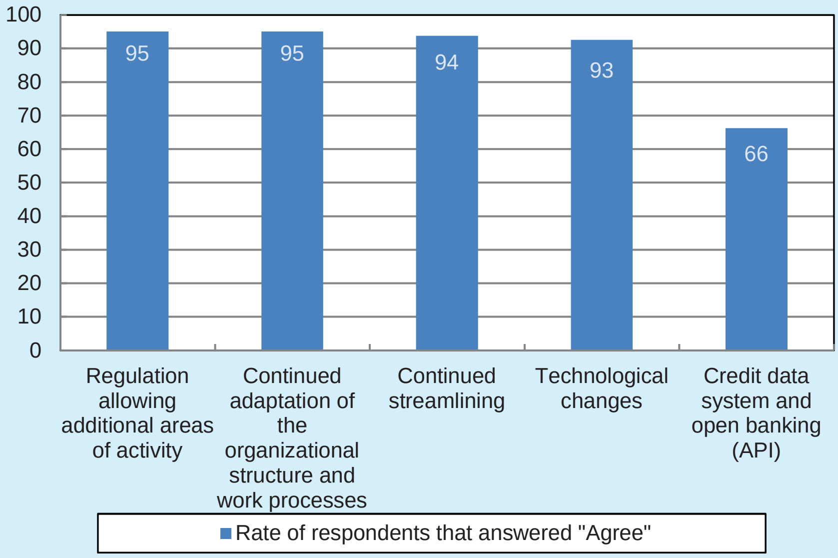
As in other countries, the Banking Supervision Department required the banks already in 2016 to formulate a multiyear plan for increasing efficiency, in order to ensure that they adjust their business-operational models to the changing business environment, that they reexamine their business model and that they adjust it to these changes, with emphasis on adopting technological innovations.

Apart from the aforementioned changes in the business models, which are in fact being implemented in Israel's banking system, senior office holders in the system are of the view that the adjustment of regulations to allow banks to enter additional markets (such as insurance, as well as the removal of barriers to their activity in pension consulting) will reduce the business model risk and will also allow them to offer better and more comprehensive service to customers (Figure 1.18).

We note that the banks' areas of activity in Israel are based on the Banking (Licensing) Law, 5741–1981. Section 10 of the law limits the permitted areas of activity for a bank to a list that appears there and this constraint significantly limits banking activity relative to many other countries. Thus, for example, banks in other countries can be active in insurance (marketing and even underwriting), in market making for assets and even real estate development. In view of the changes in banking and in particular technological innovations, which are changing the face of banking and of the financial world as a whole, it would be worthwhile considering the possibility of amending the law and expanding the areas of activity permitted to the banks. At this stage, and subject to the existing law, the banks are attempting to expand the services provided to their clients—both households and businesses—based on the "basket" in Section 10(13) of the Banking (Licensing) Law, according to which the bank can provide additional services that supplement those that are permitted by the law.

In order to deal with the changes in the business environment, the banking system will need to undergo regulatory adjustments, adapt organizational structures and work processes, and continue streamlining.

Figure 1.18
Measures Required to Reduce Business Model Risk, 2019 (percent)



SOURCE: Survey conducted by the Banking Supervision Department.

3.1 The credit portfolio and credit risk

In 2018, the balance-sheet credit portfolio of the five banking groups[23] grew by about 6.5 percent, to NIS 1,017 billion (Figure 1.19). Following several years in

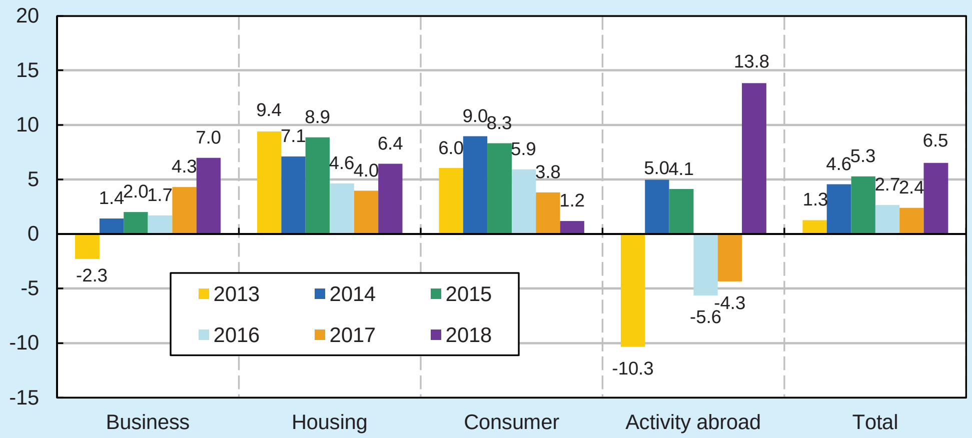
[23] The figures for the Leumi group in this analysis includes the Leumi Card company while those of the Hapoalim group do not include Isracard.

This year the banks changed the composition of credit—they focused on business sector credit, mainly to large firms, and mortgages.

which the rates of growth in household credit were higher than those in business credit, the banks changed their composition of credit during the year being surveyed by increasing credit to the business sector and primarily large businesses. The change in composition in favor of business credit, which implies a significant increase in credit that is weighted by higher risk weights, was made possible by, among other things, the banks having achieved regulatory capital requirements and continuing to accumulate profit, as described in detail in the section "Capital Ratios and Leverage" in this chapter.

The growth in business credit accelerated, while the growth of consumer credit slowed.

Figure 1.19
Annual Change in Outstanding Balance-Sheet Credit to Principal Sectors, the Five Banking Groups, 2013–18 (percent)



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

Mortgages grew this year more rapidly than in the previous two years.

The rate of growth in total household credit—consumer credit and housing credit—grew somewhat during 2018 relative to the previous year (4.8 percent vs. 3.9 percent), but remained low relative to the average rate of growth during the period 2012–16 (about 7.4 percent).

This year, the rate of growth in consumer credit slowed to about 1.2 percent (compared to 3.8 percent in the previous year and an average of about 6.4 percent during 2012–16). In particular, there was a large decline of about 7.8 percent in car loans in 2018, which was the result of, among other things, the decline of about 5 percent in the number of new vehicles delivered relative to 2017.[24] In contrast, credit in the mortgage segment grew faster in 2018 than during the previous two years (although still at a lower rate than the average for 2012–16 of about 7.9 percent) and it was the main component in the growth of household credit this year. These trends

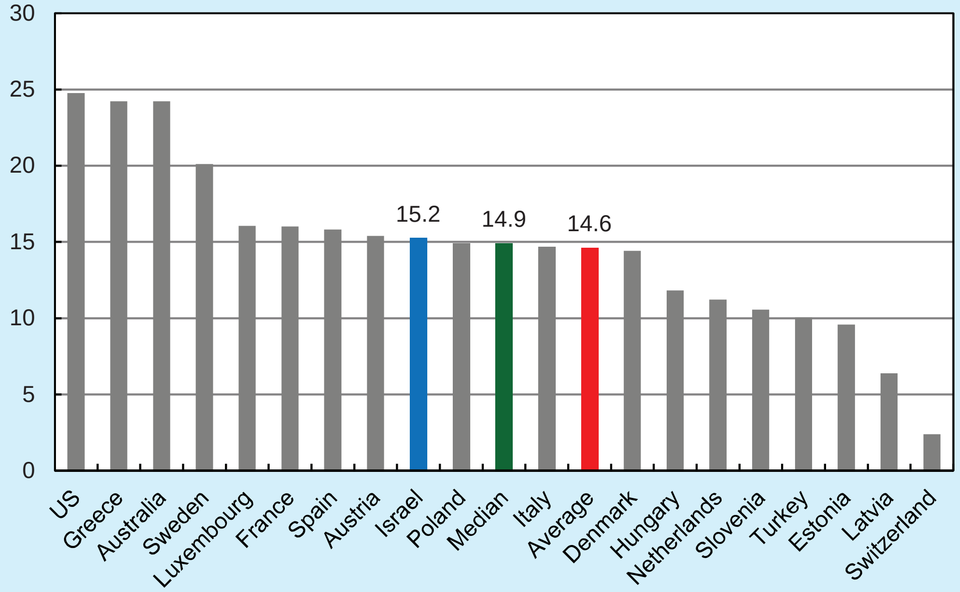
[24] According to the report of the Vehicle Importers Association, which is based on the figures of the Ministry of Transportation.

were influenced by, among other things, the easing of restrictions at the beginning of 2018 on the weighting of risk assets due to mortgages with financing rates of 60 to 75 percent.[25] The easing of this restriction allows borrowers with repayment ability to take out mortgages that will fully exploit their potential to purchase a home by means of their own equity, and in particular eliminates the incentive for borrowers to take out supplementary consumer loans in order to purchase a home, which are more expensive than mortgages and are not suited to the purchase of a home. To this was added steps taken by the Banking Supervision Department in the area of consumer credit, with the goal of ensuring measured growth in this type of credit according to the repayment ability of the customer. (For further details, see Box 3.3 on "The steps taken by the Banking Supervision Department in order to ensure responsible lending".) The banks also identified an increase in consumer credit risk in recent years. This growth was manifested in, among other things, the indices for quality of credit in this segment and the actions taken by the banks in response.

However, it is important to mention that despite the rapid growth in household credit in recent years, their level of leverage in Israel is not high relative to other countries.

Household leverage in Israel is similar to the global average.

Figure 1.20
The Ratio of Households' Nonhousing Debt to GDP, International Comparison, 2017[a] (percent)

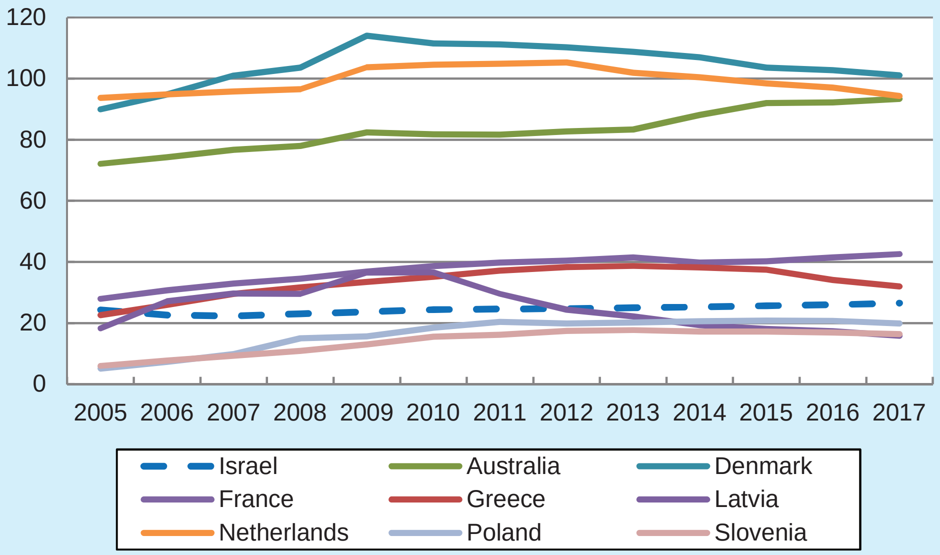


[a] Data on the US and Hungary are for 2016.
SOURCE: Israel—Bank of Israel calculations; Other countries—OECD.

[25] For further details, see circular C-06-2556 – "Capital Adequacy and Measurement—the Standardized Approach—Credit Risk" dated March 15, 2018.

The ratio of households' housing credit to GDP in Israel is low by international comparison.

Figure 1.21
The Ratio of Households' Housing Debt to GDP, International Comparison[a], 2005–17 (percent)



[a] In Israel, the debt includes only housing debt (excluding debt for other purposes backed by a dwelling).
SOURCE: Israel—Bank of Israel calculations; Other countries—OECD.

In particular, the ratio of housing debt to GDP is low and the ratio of consumer debt to GDP is similar to the average of the OECD countries (Figures 1.20 and 1.21).

The increased share of medium sized banks continued, reaching 45 percent at the end of 2018, compared with 38 percent in the beginning of 2015.

The slower growth in consumer credit was not uniform across the banks. Thus, the two largest banking groups (Leumi and Hapoalim) reduced their credit of this type by about 2.6 percent, while the mid-sized banks (Discount, Mizrahi-Tefahot and First International) expanded it, such that the average growth in these three banking groups was about 6.0 percent.[26] This trend is one of the factors behind the growth of the mid-sized banks' share in total credit to about 45 percent at the end of 2018, compared to about 38 percent at the beginning of 2015 (Figure 2.1).

The credit card companies increased their share of consumer credit, which reached 10.1 percent at the end of 2018, in contrast to 7.6 percent at the end of 2015. This occurred in parallel to the decline in the market share of the banks during that same period from about 86.6 percent to 79.5 percent (Figure 2.3). The change in the structure of the market was also manifested in the HHI index,[27] which declined from

[26] Led by Discount and Mizrahi, for whom consumer credit grew by about 7.0 percent.
[27] The HHI (Herfindahl-Hirschman Index) is the sum of squares of the banks' market shares. The higher the index, the greater is concentration in the market.

0.22 in June 2015 to 0.205 at the end of 2018. A significant portion of this decline was the result of the separation of the credit card companies from the two largest banks (Figure 2.2).[28] The decline in the market shares of the largest banks and the stronger position of the mid-sized banks in recent years has not had any major effect on the HHI during the last two years. There are two reasons, among others, for this outcome: (1) the credit card companies were part of the largest banking groups during these years, such that the growth in the credit provided by the credit card companies offset the decline in credit provided by the largest banks themselves; and (2) during the last two years, the market share of the small banks declined slightly, and the influence of these banks is significant in calculating the indices. Nonetheless, in comparison to other countries, the Index is still higher than average and is similar to that in the Netherlands (Figure 1.22). The causes of the high concentration in the banking system in Israel relative to other countries include the following: (1) the small size of the Israeli economy, which limits the number of banks that can reach the scope of activity sufficient to ensure the full exploitation of economies of scale and achieve the advantages of diversification, operational efficiency and optimal dispersion of risk;[29] (2) Israel's sensitive geopolitical situation in the past[30] has deterred foreign banks from entering the domestic market; (3) the existence of a developed banking market in Israel in which there are no major lags behind modern banking trends in the advanced economies; and (4) high barriers to entry in the banking system. These barriers have been identified and systematically dealt with by the Bank of Israel in recent years. First and foremost, the initial **equity** needed to start a new bank has been reduced (from NIS 400 million to NIS 50 million); the process for receiving a banking license has been defined, which has created **certainty for the entrepreneur** at an early stage; the Bank of Israel has created a credit database, which removes **the information barrier;** and this year the Ministry of Finance continued to work on the creation of a Computer Services Bureau which will make things easier for the entry of a new bank by lowering the barrier of **technological infrastructure.** The fact that the development of digital banking in both Israel and worldwide has made it easier to create a bank without branches has lowered another major barrier, namely the high cost to set a up a branch network. As a result of the lowering of these barriers, business groups that might be interested in establishing a bank have begun contacting the Banking Supervision Department, which is examining their proposals.

The credit card companies increased their market share in consumer credit, and at the end of 2018 it reached 10.1 percent.

The accelerated growth of business credit that began in 2017 continued this year. Total business credit grew by 7.0 percent in 2018 (compared to about 4.7 percent in 2017 and negligible rates of growth during the period 2012–16). The rapid increase in business credit is a result of the growth of credit in the business sector overall, but primarily credit to large businesses which grew by about 9.6 percent and credit to mid-sized businesses, which grew by about 7.2 percent; in contrast, credit to small

Similar to consumer credit, the variance among the large banking groups in credit to small and micro businesses grew.

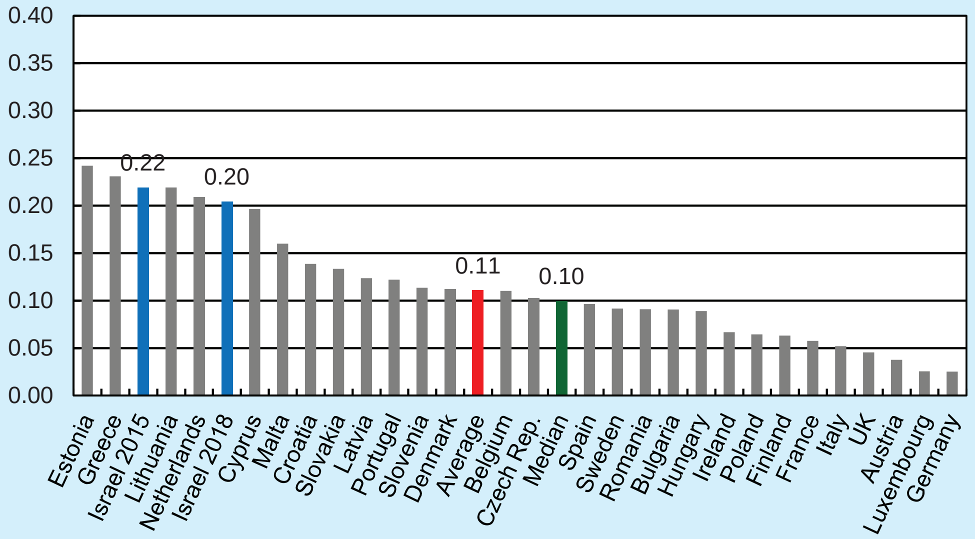
[28] In actuality, the separation was carried out in 2019.

[29] This constraint has in recent decades led to a large number of bankruptcies, particularly among credit unions.

[30] Barnea, A., Y. Parush and H. Conforti, "The issue of the optimal structure of the banking system in Israel," *Issues in Banking* 15, June 2001. [Hebrew]

The Herfindahl-Hirschman Index in Israel declined in recent years, but remained higher than the European average and similar to the index in the Netherlands.

Figure 1.22
The Herfindahl-Hirschman Index (HHI)[a] in Israel and EU Countries, 2017
(percent)



[a] Calculated on total assets at the bank level.
SOURCE: Foreign countries—European Central Bank; Israel—Based on published financial statements.

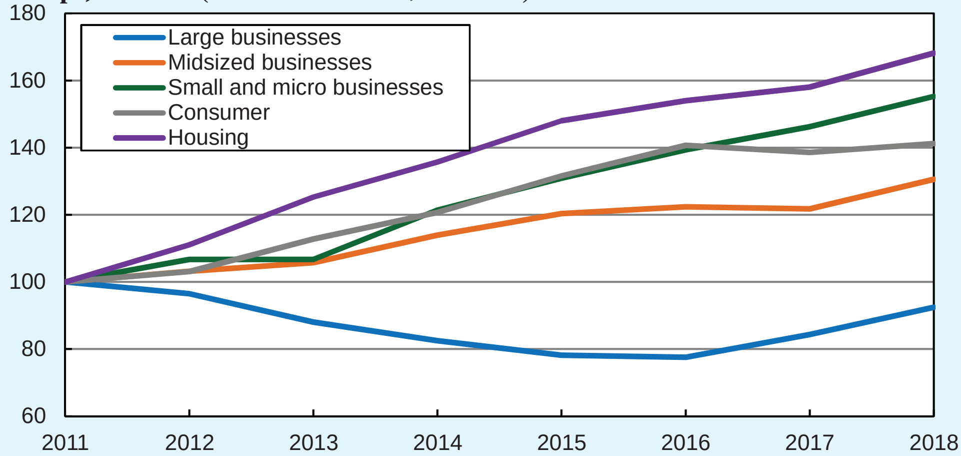
and micro businesses grew by about 6.2 percent (compared to 6.6 percent last year; Figure 1.23). As in the case of consumer credit, among small and micro businesses there is considerable variation between the large and mid-sized banking groups. Among the mid-sized banks this type of credit increased by an average of about 10.2 percent in 2018, while among the large banking groups it grew by an average of about 4 percent. This constitutes an additional factor in the growth of the share of the mid-sized banks within total balance-sheet credit at the expense of the share of the largest banks (Figure 2.1).

The growth rate of bank business-sector credit is higher than that of GDP, in contrast to the trend that prevailed over the preceding five years.

The high rates of growth in business credit provided by the banks and other sources in 2018 could also be seen in the increase—for the first time in many years—in the ratio of business credit (from bank and non-bank sources) to GDP in Israel. In particular, the rate of increase in business credit provided by the banks was higher than that of GDP this year, in contrast to the trend that has prevailed during the five previous years (Figure 1.24). It is important to note that all of the business sector's major sources of financing have grown by relatively similar rates this year and that the growth in credit to the business sector characterized the entire financial system. In view of the relatively low volatility in bond spreads by industry in 2018, it is possible to conclude that there was no substitution between the various sources of credit in the financial system. (For further details on the downward trend in the ratio of business credit to GDP in recent years and its low level relative to other countries, see also Chapter 4 in the Bank of Israel Annual Report for 2018; Figure 1.25).

Following years of decline in credit to large businesses, this segment became the main component of growth in credit to the business sector in 2018.

Figure 1.23
Development of Credit[a,b,c] in the Various Activity Segments, the Five Banking Groups, 2011–18 (Index: December 31, 2011=100)



[a] The development of credit between 2011 and 2015 is calculated on the basis of activity segment definitions by each of the banking groups. The rate of change since 2016 is calculated on the basis of the supervisory activity segment definition.
[b] In the first quarter of 2013, the Discount Group reclassified credit to the various activity segments, and in the fourth quarter of 2014, the First International Group reclassified credit to the activity segments. During 2016, the Leumi Group reclassified customers from the small and micro business sectors to the large and midsized business sectors. As such, the data were standardized.
[c] Beginning with the financial statements for the first quarter of 2018, Discount Bank reclassified the business segments, which led to an increase in the number of borrowers in the large businesses segment.
SOURCE: Based on published financial statements and reports to the Banking Supervision Department.

The credit provided for activity abroad grew in shekel terms by about 13.8 percent, primarily due to the effect of the exchange rate, namely the depreciation of the shekel relative to the dollar and other currencies (Table 1.10); however, even when this effect is neutralized, the rate of growth in total credit to abroad was significant (about 6.1 percent).

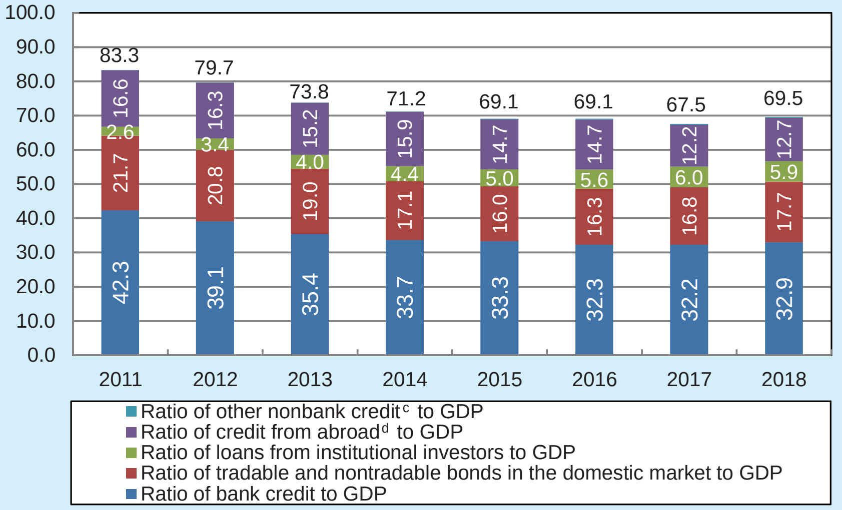
There were three industries that had particularly high rates of growth in business credit: construction, trade[31] and financial services (Table 1.10). In the construction industry, the growth rate since the beginning of the year was 15.4 percent (NIS 10.6 billion), which was a continuation of the high growth in 2017 (21.6 percent); in the trade industry, credit grew by 6.5 percent (NIS 5 billion); and in the financial services industry it grew by 10.9 percent (NIS 4.8 billion).

Three industries were notable this year in their growth rate of business sector credit: construction, trade, and financial services.

[31] Retail and wholesale trade, including trade in vehicles.

Following years of decline, the ratio of business credit to GDP increased in 2018, led by increases in bank credit and bond issuances in the domestic capital market. The decline in the ratio of bank credit to GDP was also halted.

Figure 1.24
Ratio of Business Credit[a,b] to GDP, 2011–18

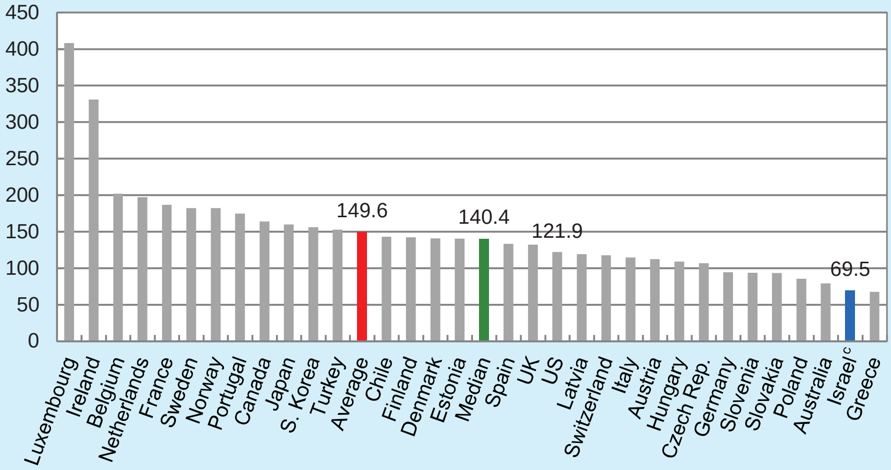


[a] Estimated credit from the borrowers' standpoint: The debt that the borrowers must repay is equal to bank credit before credit loss provisions, and bonds (tradable and nontradable) are equal to the adjusted par value.
[b] Total banking system.
[c] Including the companies: Nawi, Peninsula SR, Accord, Opal Balance, Shoham Business, PLT, and Orshay.
[d] Credit from abroad includes suppliers' credit.

SOURCE: Based on published financial statements.

The ratio of total business credit to GDP is low by international comparison.

Figure 1.25
Ratio of Business Credit[a,b] to GDP, International Comparison, 2017



[a] Estimated credit from the borrowers' standpoint: The debt that the borrowers must repay is equal to bank credit before credit loss provisions, and bonds (tradable and nontradable) are equal to the adjusted par value.
[b] Total banking system.
[c] Data on Israel relate to 2018.

SOURCE: Foreign countries—OECD; Israel—Based on published financial statements.

Credit to the construction and real estate industry

Credit to the construction and real estate industry grew during the year being surveyed by about NIS 14.1 billion (11 percent relative to the previous year), reaching about NIS 142 billion. This increase originated in the significant growth of credit in the construction industry, where credit is mainly used for residential construction and the purchase of land for that purpose. Credit to the construction industry, which constitutes 56 percent of the total credit to the construction and real estate industry, grew in 2018 by about 15 percent, following average growth of 3.5 percent during the period 2012–16. This growth encompassed most of the banking groups—those that were close to the industry indebtedness limits and those that were not.

Credit to the construction industry grew markedly this year as well—by about 15 percent.

In parallel with the growth in credit during the last two years, the Banking Supervision Department revised both the restriction on indebtedness to the construction and real estate industry (in September 2016) and in the method of calculating the coefficient of conversion for credit risk in credit guarantees to home buyers, according to the Sale (Homes) Law in December 2018. As part of these revisions, the coefficient of conversion was lowered from 50 percent to 30 percent and thus it better reflected the relatively low risk in residential construction. The change in the measurement of the indebtedness limit makes it possible for the banks to increase the supply of credit to this industry. The increase in credit to the construction industry can be divided between credit for housing under construction and credit for land that is designated for residential construction. The increase in credit for land was apparently the result of the increase in demand, which is explained by the significant expansion in the release of land for residential construction by the Israel Land Authority during 2017–18.[32] To this was added the decline in building starts during these years,[33] sometimes in parallel to the delays in the granting of building permits on land that was purchased, which increases the quantity of land available for construction. The growth in credit for housing under construction cannot be explained by the change in the stock of housing under construction, which is derived from building starts and completions; it may perhaps reflect the longer time to sell a home. In contrast, in the real estate industry (which primarily involves trade and intermediation in real estate assets, rental, management and maintenance, collection of rent and related activities), total credit has not changed relative to the previous year, which is evidence of the growing reliance of this industry on non-bank sources, including the issuing of stocks and bonds. (For further details, see the Financial Stability Report for the first half of 2018 – “Commercial Real Estate in Israel”.) Again this year, there was an upward trend in the quality of credit to the construction and real estate industry according to the various indices (Table 1.12) and primarily a decline in the share of impaired credit within total credit to about 1.6 percent (compared to 2.1 percent last year) and an increase in the

The risk attributed to banks from the exposure to the construction industry remains notable, and is derived mainly from the scope and high share of credit to this industry out of the credit portfolio, and from the high correlation between it and housing credit.

32 Semiannual report on the activity of the Israel Land Authority, 2018.
33 Bank of Israel Annual Report for 2018, Chapter 9.

ratio of the allowance for credit losses to total impaired credit (the coverage ratio) for this industry to 105.6 (compared to 91.6 for the same period last year). **Nonetheless, the risk to the banks from the exposure to the industry remains significant and is derived first and foremost from the quantity of credit to the industry, its large weight in the total credit portfolio and the high correlation between it and housing credit, since together they constitute close to 47 percent of the portfolio of the five largest banking groups.**

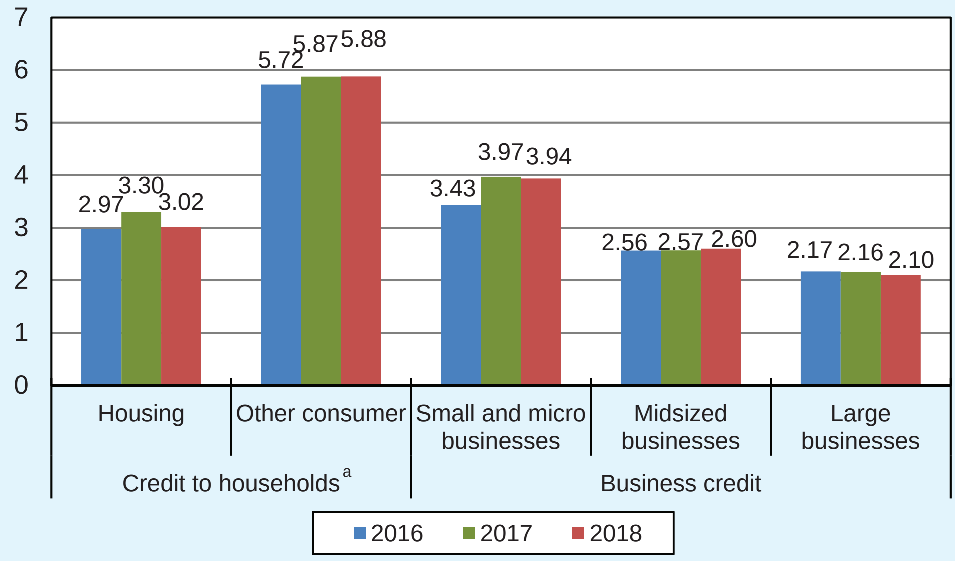
The interest rate on credit

Average interest rates of new credit extended this year in the various activity segments remained unchanged compared to 2017, except for a slight decline in those rates in housing credit.

The average interest rates on new credit provided to the various activity segments remained unchanged relative to 2017, except for some drop in the average rates of interest on housing credit (Figure 1.26). As in the past and as in other countries, the average rates of interest in the retail segments[34] (excluding housing credit) is higher than in the mid-sized and large businesses segment. This difference was the result of several factors, including operating costs, which are higher in the consumer segment and in the small and micro business segment than in the large and mid-sized business

The average interest rate on new credit issued this year remained unchanged, while the rate on new housing credit declined slightly.

Figure 1.26
The Average Interest Rate on Credit Issued to the Public in the Various Activity Segments, the Five Banking Groups, 2016–2018 (percent)

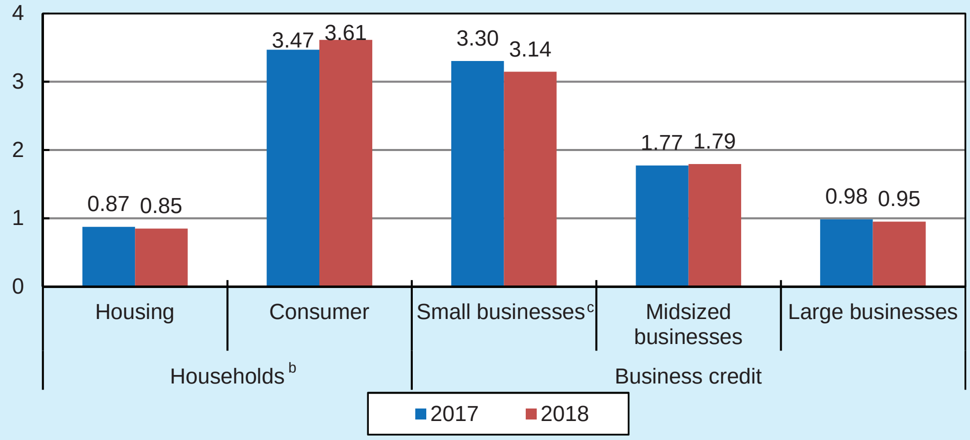


[a] "Households" includes private banking.
SOURCE: Based on published financial statements.

[34] Consumer credit and credit to small and micro businesses.

The cost of service to households and small businesses is higher than to the other segments. The operating cost in the consumer segment and in the small business segment are higher than in the midsized and large business segements.

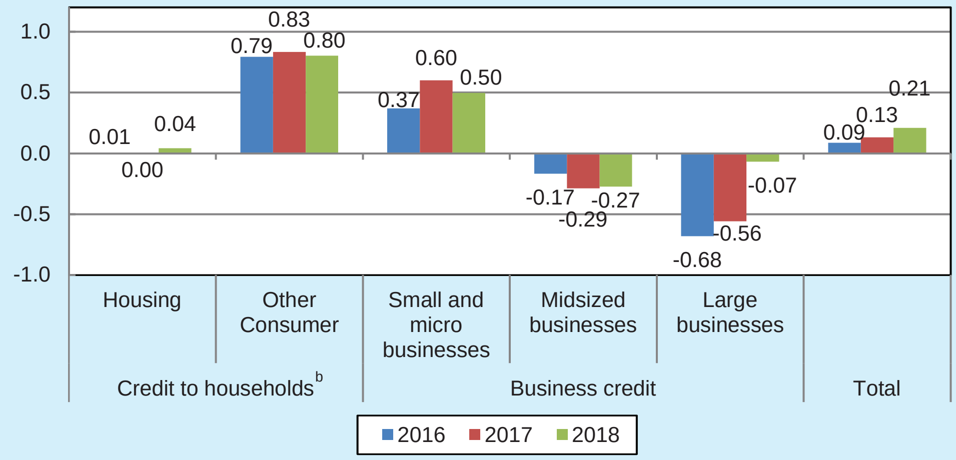
Figure 1.27
The Average Cost (Operating Costs at the Average Balance of Assets and Liabilities) in the Various Activity Segments[a], the Five Banking Groups, 2017 and 2018 (percent)



[a] The data relate to activity in Israel, and do not include the financial management segments, others, or adjustments.
[b] "Households" does not include private banking.
[c] The small business segment includes micro businesses.
SOURCE: Based on published financial statements.

The banks' credit losses remained low. Credit losses in the consumer and small business segments are higher than in the midsized and large business segments.

Figure 1.28
Loan Loss Provisions on Credit in the Various Activity Segments[a], the Five Banking Groups, 2016–2018 (end-of-period balance, percent)



[a] The data relate to activity in Israel, and do not include the financial management segment, others, or adjustments.
[b] "Households" includes private banking.
SOURCE: Based on published financial statements.

segment, since providing credit to the former involves the maintenance of a network of branches, including their considerable physical and human resource infrastructures (Figure 1.27). The cost of providing credit to the large and mid-sized business segment is lower since their activity is usually concentrated in a relatively small number of locations, and the quantity of transactions and credit provided at each one is larger. In parallel, the risk, which is measured by, for example, the rate of loan loss provisions, is higher for consumer credit than for business credit. The risk that the banks identify in providing retail credit has also been growing in recent years relative to the large and mid-sized business segment, due to some increase in the leverage of households and changes in legislation. In 2018, these rates of loss fell somewhat (Figure 1.28). The risk from the household and small business segments is not unique to Israel. It is the result of, among other things, the asymmetry of information between the banking corporation and the business owner, which is the result of the lack of accurate and accessible information on the financial situation of the borrower. The credit database, which became available in 2019, is meant to help deal with this challenge (for further details, see Box 2.5: The Credit Data System).

Operating expenses inherent in the service provided by banks to households and small businesses are high relative to the other segments.

The quality of the credit portfolio

The share of loan loss provisions out of total balance sheet credit to the public increased slightly, but remained low from a long-term perspective.

Most credit-quality indices continue to reflect the healthy state of the banks' portfolio. The proportion of loan loss provisions out of total balance-sheet credit to the public remained low (Figure 1.29), despite the increase to 0.21 percent (as compared to 0.13 percent in 2017). Most of the increase was the result of the individual allowance for credit losses, which this year was affected by the reduction in total recovery of debts written off in the past in the mid-size and large business segment.[35] The ratio of net write-offs to total balance-sheet credit to the public declined to 0.15 percent (compared to 0.19 percent in 2017). The share of problematic debt within total balance-sheet credit and the share of impaired credit and non-impaired credit in arrears of more than 90 days within total balance-sheet credit to the public fell to 2.15 percent and 1.24 percent, respectively (compared to 2.30 percent and 1.36 percent in 2017). The coverage ratio[36] continued to climb again in 2018 and reached 95.4 percent (compared to 86.7 percent in 2017; Table 1.13).

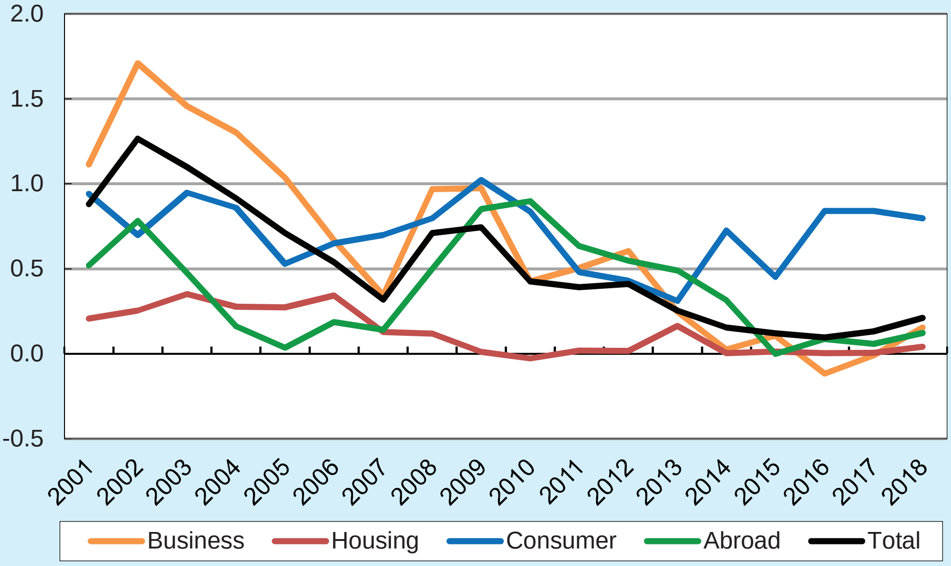
There was an improvement in the share of loan-loss provisions both in consumer credit (0.85 percent compared to 0.94 percent at the end of 2017) and in credit to small and micro businesses (0.5 percent compared to 0.6 percent at the end of 2017). In the large business segment there was a noticeable downward trend in total collection, which led to an increase in the provision for loan losses from a negative rate of –0.56 percent at the end of 2017 to a negative rate of –0.07 percent at the end of 2018 (Table 1.11). An examination of the share of loan-loss provisions by industry shows an increase in the share of loan-loss provisions in business credit

[35] This collection of debt reflects a situation in which the banks wrote off debts that were thought not to be redeemable but in the end were recovered.

[36] The ratio of the total allowance for credit losses to total impaired credit and non-impaired credit that is in arrears of more than 90 days.

Loan loss provisions as a share of total balance sheet credit increased slightly relative to the previous year, but remained lower than in the past.

Figure 1.29
Loan Loss Provisions as a Share of Total Balance-Sheet Credit to the Industry, the Five Banking Groups, 2001–2018 (percent)



SOURCE: Based on published financial statements.

(to about 0.15 percent as compared to –0.01 percent during the corresponding period of last year) which is explained by, among other things, the significant growth in this type of credit during the last two years. However, the share of credit losses is still low, due to, among other things, the healthy situation of the economy.

After years of increase in loan loss provisions in consumer credit and in credit to small and micro companies, these provisions declined this year.

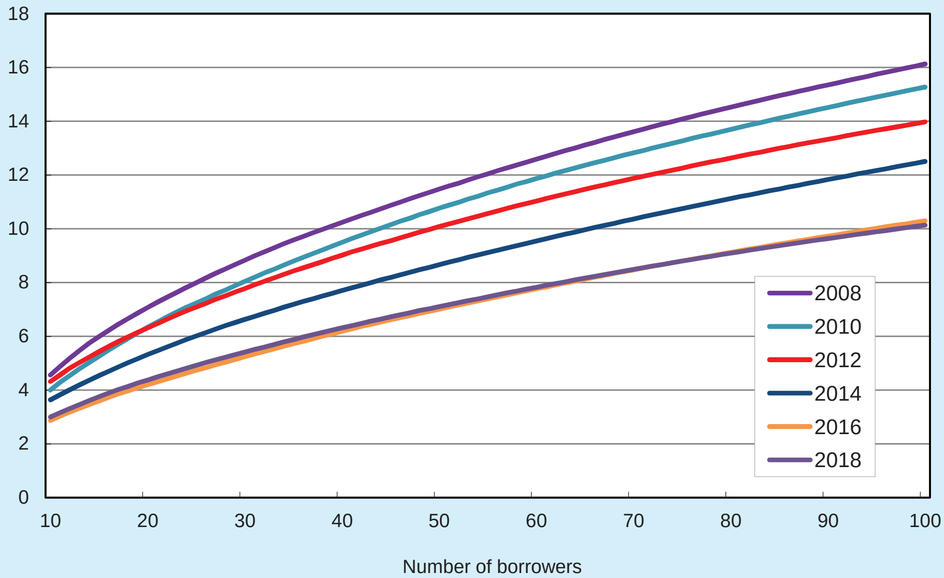
After years of growth in loan loss provisions in consumer credit and in credit to small and micro businesses due to the marked growth of this type of credit in recent years and the changes in bankruptcy regulation, this year there was a slight drop in the rate of such provisions. In addition, the banks have made efforts in recent years to encourage debt restructuring and "soft collection" among consumer customers, in order to provide borrowers in financial difficulty with more convenient terms to pay off their debts, and as a result the proportion of debt restructuring for consumer customers is rising. The starting point is that debts need to be paid and the bank has the right to take legal steps in order to collect them; however, it is expected that the bank will find "gentler" ways to collect a debt before resorting to these measures. The legislation and reforms carried out in recent years in the collection of debts and bankruptcy processes are also meant to make it easier for borrowers in financial straits to repay their debts and to rehabilitate themselves. Nonetheless, concern is being raised that making things easier for debtors will lead customers to choose default proceedings in order to dispose of their debts. This situation is liable to motivate the banks to tighten underwriting rules and to raise the interest rate for borrowers.

Concentration in the credit portfolio by borrower size

There was no change this year in the proportion of balance-sheet credit to large borrowers within total balance-sheet credit and in proportion to total equity, after a decade of decline in concentration within the banks' credit portfolio, during which the banks significantly reduced their exposure to large borrowers, and in particular to large and leveraged borrower groups (for further details, see Box 3.3 of Israel's Banking System – Annual Survey for 2017). This includes large borrower groups whose credit exceeds 10 percent of the bank's equity (Figure 1.30).

Following more than a decade of significant reductions in the banks' exposure to large borrowers, the proportions of borrowers remained unchanged this year.

Figure 1.30
Total Credit Risk Balance of the 100 Largest Borrowers[a] as a Share of Total Credit Risk Balance, the Five Banking Groups, 2008, 2010, 2012, 2014, 2016 and 2018 (percent)



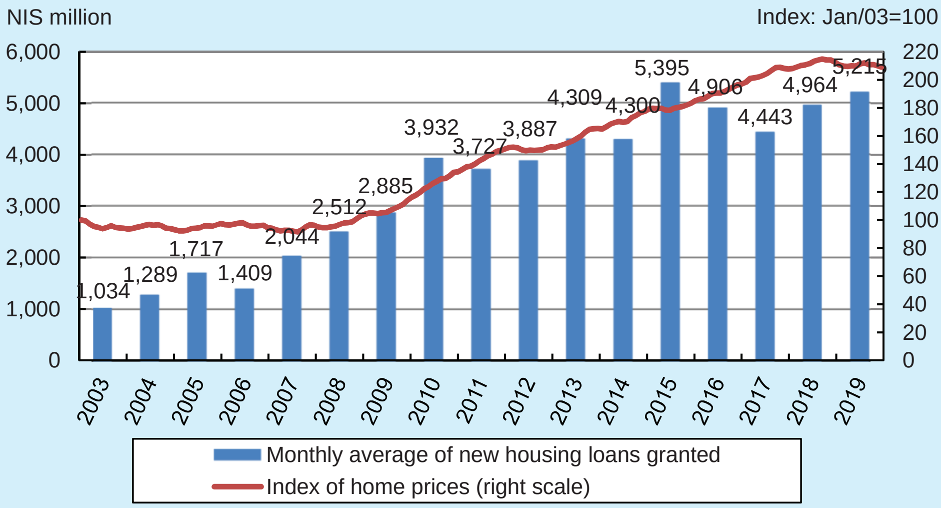
[a] "Large borrowers" does not include banking corporations.
SOURCE: Based on published financial statements and reports to tbe Banking Supervision Department.

Housing credit

In 2018, there was an increase in the granting of new mortgages and stabilization in all of the interest rate tracks on mortgages. This is in contrast to the trend from 2016 until late 2017, in which the rate of growth in new loans slowed, in parallel with the decline in interest rates. Housing credit grew during the year being surveyed by 6.4 percent, which is high relative to the average for the last two years (about 4.3 percent), although moderate relative to the annual average for the years 2014–15 (about 8 percent). The monthly average of housing loans provided in 2018 stood at NIS 4.9 billion, as compared to NIS 4.4 billion[37] in 2017 (Figure 1.31).

In 2018, there was an increase in new housing credit granted.

Figure 1.31
Monthly Average of New Housing Loans Granted[a], Total Banking System, and Index of Home Prices, January 2003 to January 2019[b]



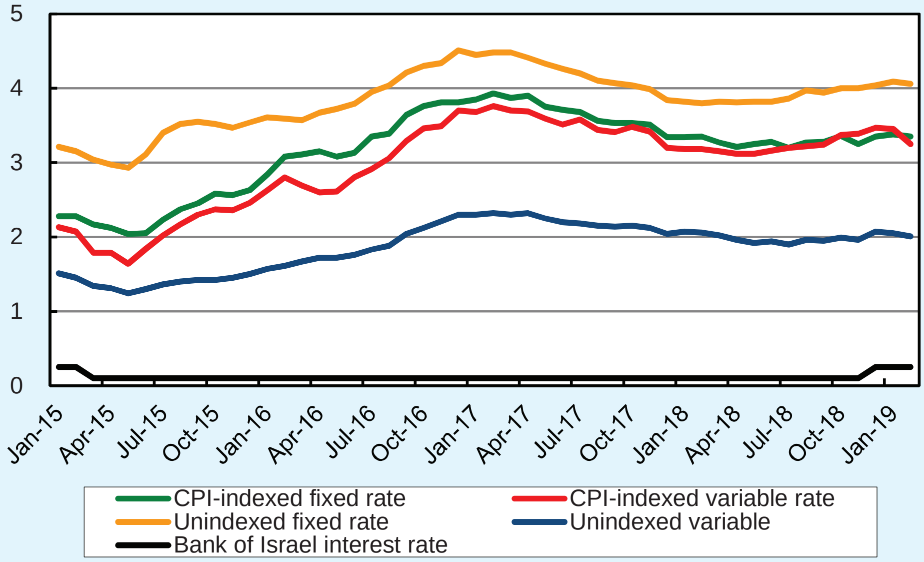
[a] Including loans that are not from bank funds but are administered through the banks.
[b] The index of home prices is up to date as of November 2018.
SOURCE: Based on reports to the Banking Supervision Department.

The increase in new mortgage volume in 2018 was partly the result of the Buyer's Price program. At the end of 2015, with the announcement of the soon to start program, the number of home purchases declined, as did the demand for mortgages. In general, mortgage funds are transferred by the bank to purchasers only after they have paid their own equity part of the price of the home and with the progress of construction. Since the time period between the purchase of a home in the Buyer's Price program and the beginning of construction is longer than in the housing free market, the large number of Buyer's Price transactions in 2016 and the beginning of 2017 created lower than expected volume in mortgages (which was manifested in a lower than expected number of mortgage transactions, in accordance with the number of home purchase transactions). During 2018, as the construction of these homes progressed, there was an increase in the number of mortgage transactions, beyond the mortgage needs derived from the number of home purchase transactions. At the same time, the interest rate stabilized during 2018 in all of the indexation tracks, in contrast to the downward trend during 2017 (Figure 1.32).

[37] This figure includes transactions not provided from the funds of the bank and the operating bank, such as transactions to provide joint mortgages together with financial institutions and mortgage portfolios that were sold, some of them to the financial institutions. The total without these transactions stood at NIS 4.2 billion in 2017.

All mortgage interest rate tracks were stable in 2018, following declines in 2017.

Figure 1.32
Interest Rates on Housing Loans by Interest Rate and Indexation Tracks, Total Banking System, January 2015 to February 2019 (percent)



SOURCE: Based on reports to the Banking Supervision Department.

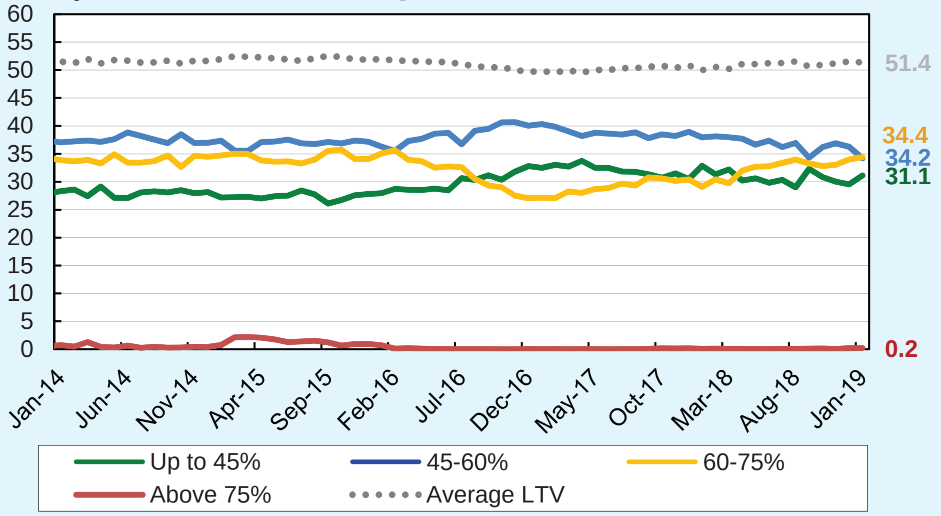
There were no major changes in the risk indices for the mortgage portfolio. The average LTV in 2018 rose to about 50.9 percent (compared to 50.2 percent in 2017), the payment to income ratio remained at about 26.1 percent and the average period to redemption lengthened somewhat to about 21.7 years, from 21.3 in 2017. With respect to the quality of the credit, although the proportion of housing loans in arrears of more than 90 days within total housing loans increased somewhat (to about 0.81 percent this year as compared to 0.77 percent in 2017; Figure 1.34), it remained low in historical terms.

Recently, there was an increase in the share of mortgages with high financing rates (LTV of 60–75 percent), in parallel with a decline in the share of mortgages at medium financing rates (LTV of 45–60 percent).

During the year being surveyed, there was an increase in mortgages with high levels of financing (LTV of between 60 and 75 percent), following a significant decline in 2016 (Figure 1.33). This followed the announcement by the Banking Supervision Department at the beginning of 2018 of an easing of the regulations regarding the weighting by the banks of risk assets in respect of mortgages with LTV of between 60 and 75 percent. This measure was intended to enable customers with repayment ability who are taking a mortgage to fully exploit their ability to purchase a home with equity of 25 percent (or 30 percent for other than home upgraders) and in particular to prevent customers from financing part of the equity payment by means of a supplementary consumer loan. Such loans are more expensive than a mortgage and less appropriate for the financing of a home purchase from the perspective of the period of the credit and the burden it creates on current income. For banks, this measure

Following the publication of the leniency in the directive for calculating risk assets, the proportion of loans with an LTV of 60-75% increased at the expense of loans with an LTV of 45-60%, which declined.

Figure 1.33
Distribution of New Mortgages by LTV Ratio, Total Banking System, January 2014 to December 2018 (percent)

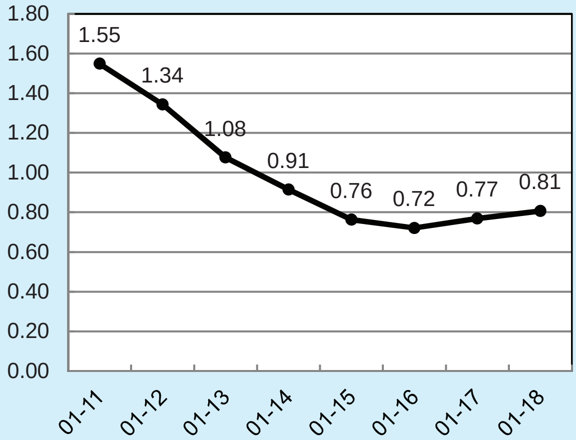


SOURCE: Reports to the Banking Supervision Department.

reduced their costs of capital to some extent in the provision of credit at this LTV level and therefore raised their supply of credit to customers who are seeking credit at LTV levels of 60–75 percent. Indeed, since the announcement of the measure, there has been an increase in the share of credit for mortgages with high LTV rates (from about 30 percent in March 2018 to about 34 percent in January 2019), in parallel to the decrease in the share of mortgages at LTV rates of 45–60 percent (from about 38 to 34 percent). It may be that the change has also contributed to the slowdown in demand for consumer credit. The monthly

Outstanding housing loan debt in arrears as a share of outstanding housing loans increased slightly in 2018, but remains lower than in the past.

Figure 1.34
Outstanding Housing Loan Debt More than 90 Days in Arrears as a Share of Total Outstanding Housing Loans, Total Banking System, 2011 to December 2018 (percent)



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

figures on the share of credit provided as part of the Buyer's Price program, which have been available to the Banking Supervision Department since September 2018, indicate that about 10 percent of mortgages provided up to the end of 2018 were part of this program and that the program accounted for about 15 percent of total mortgage loans. In other words, on average, this involves smaller mortgages.

The exposure to the housing market is a significant focal point of risk to the banking system; however, the steps taken by the Banking Supervision Department have tightened the restrictions in this area in several dimensions and as a result, the risk has declined significantly in recent years.

3.2 Liquidity risk

The Liquidity Coverage Ratio increased slightly during the period reviewed, a result of regulatory steps taken by the Banking Supervision Department to strengthen Israeli banks' robustness and resilience.

The banks' liquidity coverage ratio (LCR)[38] rose somewhat during the period being surveyed and its aggregate level stood at about 128 percent, compared to about 125 percent in December 2017 and about 103 percent in June 2015 (Figure 1.35). This long-term improvement reflects a decline in liquidity risk and is a result of the regulatory measures implemented by the Banking Supervision Department in order to strengthen the resilience of Israeli banks in the face of various types of shocks. One of the measures is the adoption of the Basel Committee recommendations regarding the LCR (as part of Basel III) and their gradual phase-in during 2015–17.

The increase in the value of the LCR encompassed most of the large banking groups. This followed years of uninterrupted growth in which the banks improved their liquidity and converged to above the minimal regulatory levels, which were gradually raised over the years. In all of the banks, the ratio (calculated on the basis of total activity on a consolidated basis) rose to above 100 percent, the minimum requirement as part of the full implementation of the Banking Supervision Department's directive, which was set for January 2017 (Figure 1.36).

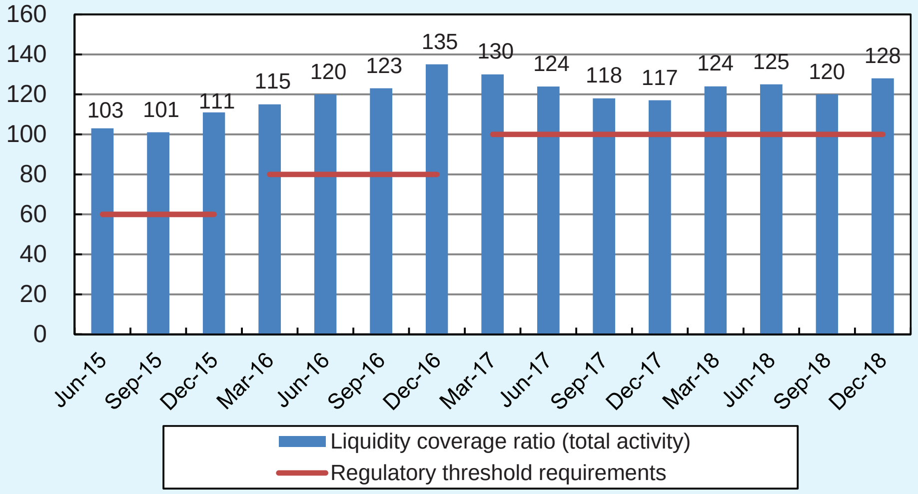
The LCR was positively affected this year by Amendment 28 to the Joint Investment Trust Law that went into effect in October.[39] The amendment, which imposed restrictions on ETFs with regard to investment asset composition, worked to reduce

[38] 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 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), which is comprised of two levels of assets. Level 1 includes high quality assets that may be held in unlimited amounts while Level 2 is composed of assets that 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.

[39] Joint Investment Trust Law, 5754–1994.

The liquitidy coverage ratio increased slightly during the year.

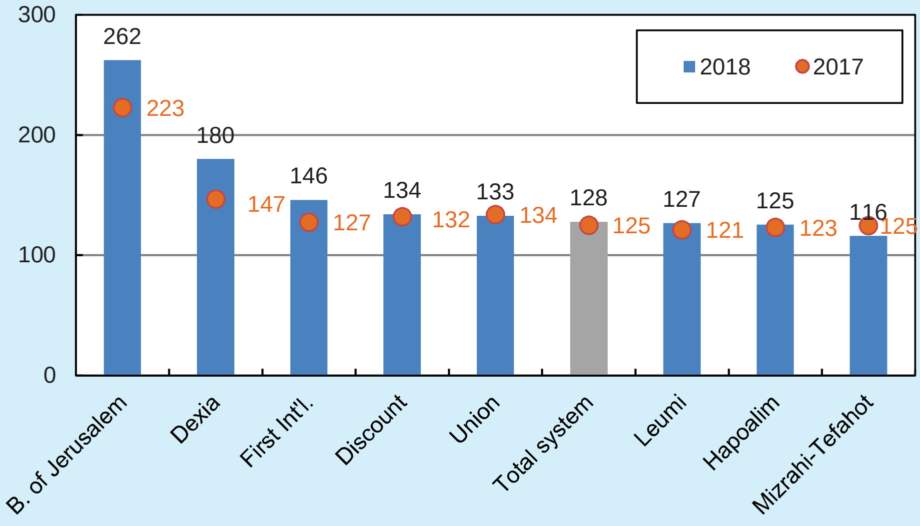
Figure 1.35
Liquidity Coverage Ratio (LCR), Total Banking System[a], June 2015 to December 2018 (percent)



[a] Calculated on a consolidated basis.
SOURCE: Based on published financial statements.

The banks' liquidity is adequate, as reflected in the value of the liquidity coverage ratio, which exceeds the minimum regulatory requirements.

Figure 1.36
Liquidity Coverage Ratio (Total Activity)[a], Total Banking System, December 2017 and December 2018 (percent)



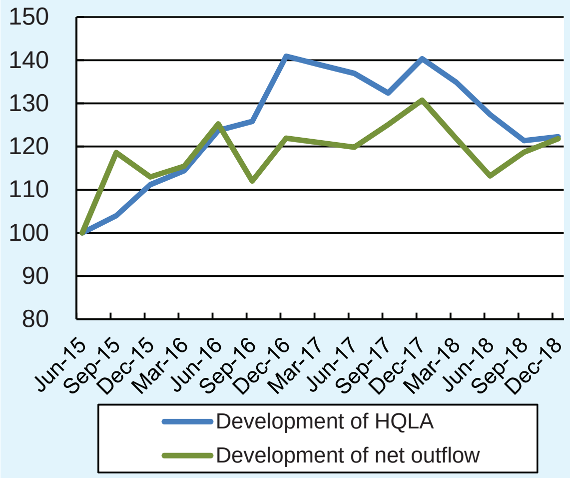
[a] Calculated on a consolidated basis.
SOURCE: Based on reports to the Banking Supervision Department.

The Liquidity Coverage Ratio was impacted positively this year from the entry into effect of Amendment 28 of the Joint Investment Trust Law, which worked to decrease outflows.

the deposits of those funds with the banks, which in turn reduced outflow (Figure 1.37), and led to an increase in the LCR. The effect of the decline in outflows on the ratio was somewhat offset by the reduction in inflow and the erosion in level 1 high quality liquid assets (HQLA), primarily cash and deposits with the Bank of Israel, which were reduced in order to expand credit to the public.

The improvement in the liquidity coverage ratio was influenced by the change in the Joint Investment Trust Law, which worked to lower net outflow.

Figure 1.37
High-Quality Liquid Assets (HQLA)[a] and Net Outflow, Total Banking System, June 2015 to December 2018 (Index: June 30, 2015=100)



[a] As defined in Proper Conduct of Banking Business Directive 221.

SOURCE: Based on reports to the Banking Supervision Department.

4. CAPITAL ADEQUACY AND LEVERAGE

The process of convergence to the minimum capital targets was accompanied by a long series of supervisory steps that worked to improve the quality and scope of the capital base.

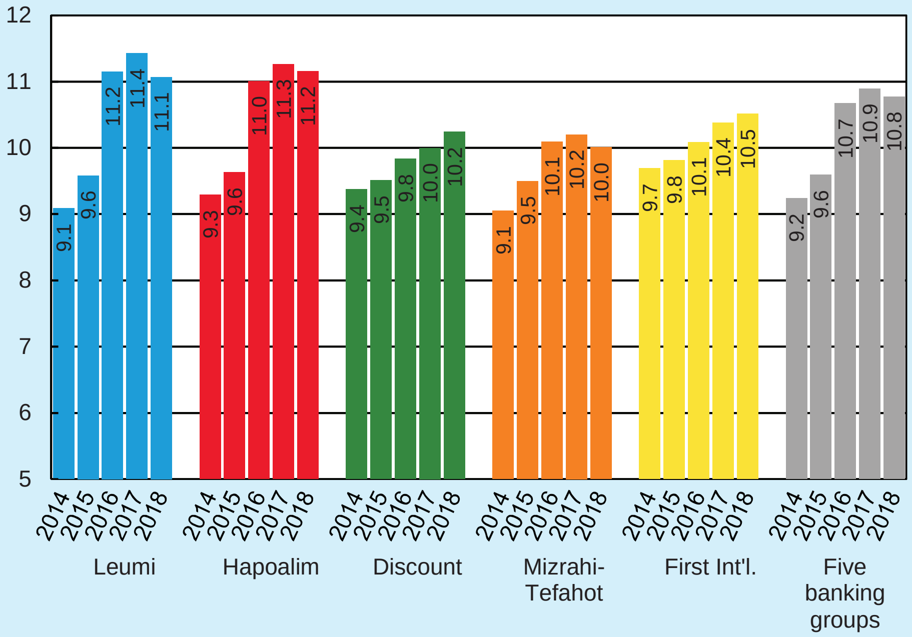
All of the Israeli banks met the minimum capital requirements set by the Banking Supervision Department (Figure 1.38, Table 1.14). The improvement in capital ratios and the convergence to the supervisory targets was a gradual process that began already in 2012 with the Banking Supervision Department's directives in this area. The process was accompanied by a long series of supervisory measures,[40] which worked to improve the quality and quantity of the capital base. The gradual convergence to the capital targets was intended to enable the domestic banks to continue their intermediation activity by expanding the supply of bank credit to the public, and to make it easier for the banks to make adjustments to the credit portfolio and reduce the risk weighted assets. This was accomplished by increasing the exposure to the retail segments and reducing that to the business sector, which is weighted by

[40] These include a tightening of the minimum capital requirements, more stringent conditions for the recognition of capital components, the setting of a capital conservation buffer that cannot be eroded, the introduction of more stringent requirements for systemically important domestic banks, tighter risk weights and the establishment of an additional buffer against exposure due to housing credit and the imposition of restrictions on the distribution of dividends.

a higher risk weight (Figure 1.39). During this period, there was a decline in the share of risk-weighted assets in total exposure to its lowest level in the last seven years (about 57 percent; Table 1.15). The gradual implementation (together with the supervisory restriction on the distribution of dividends) contributed to building up the

All Israeli banks meet the regulatory capital targets set by the Banking Supervision Department.

Figure 1.38
Common Equity Tier 1 Capital Ratios[a], the Five Banking Groups, 2014–2018 (percent)



[a] In Basel III terms (Common Equity Tier 1 capital ratio) in accordance with the transition directives.
SOURCE: Based on published financial statements and reports to the Banking Supervision Department.

Capital ratios were impacted positively this year by the continued trend of growth in Common Equity Tier 1 Capital (despite a decline in the rate of accumulating profits), and negatively by the increase in scope of risk assets.

banks' capital base by a process of earnings retention, in spite of the low interest rate environment, the structural reforms and the increasing competition from within the banking industry and from outside it.

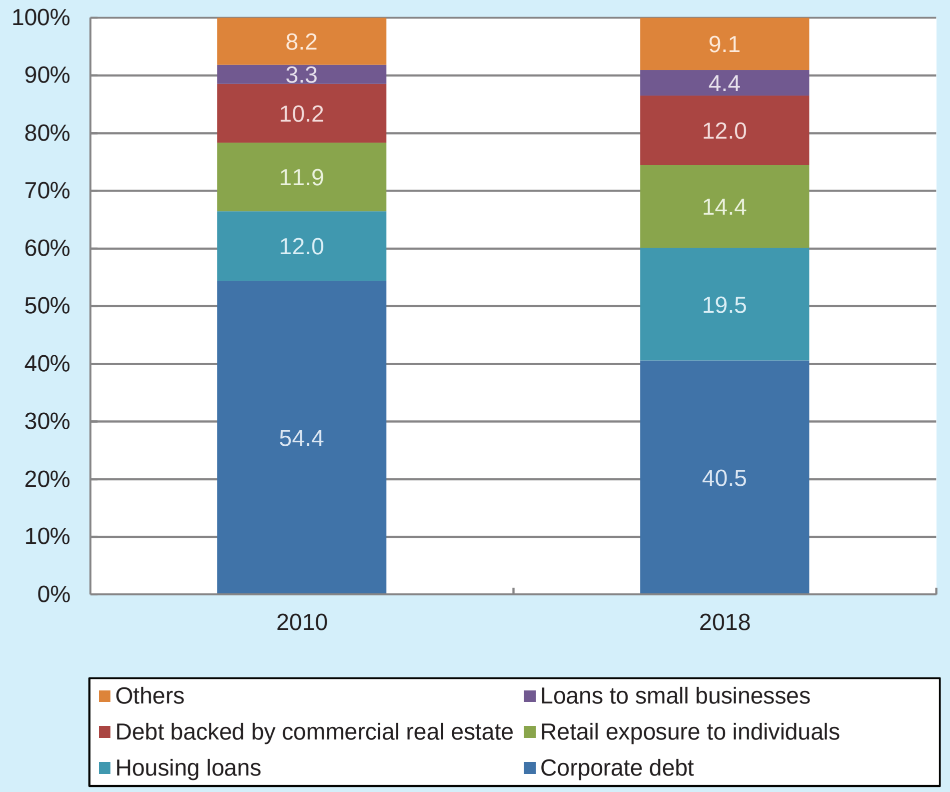
The convergence of the banking groups to the regulatory capital requirements resulted in stability in the value of the Common Equity Tier 1 Capital[41] ratio of the five large banking groups at a level of 10.8 percent (compared to 10.9 percent in the previous year). This is to be viewed against the background of the erosion in

[41] Common Equity Tier 1 Capital is a component of the highest quality capital and has a high ability for the absorption of losses. Its main components are common share capital, share premiums and retained earnings.

the value of this ratio for the three largest banking groups (Leumi, Hapoalim and Mizrahi-Tefahot), which was offset by the continuing increase in the ratio of the other two banking groups (Discount and First International). The total capital ratio continued to erode this year (to about 14.2 percent, compared to about 14.5 percent in 2017)[42] and like the Common Equity Tier 1 Capital ratio, it was positively affected by the continuing upward trend in Common Equity Tier 1 Capital (despite the slower

The banks' credit portfolio changed. Over the years, credit to the large business segment has declined, and exposure to retail sectors has increased.

Figure 1.39
Composition of Credit Risk by Main Category[a], the Five Banking Groups, 2010 Compared With 2018 (percent)



[a] "Others" includes the debt of sovereigns, public sector entities and securities firms, and other assets.
SOURCE: Based on reports to the Banking Supervision Department.

[42] Total capital includes, in addition to Common Equity Tier 1 Capital, two additional capital components: Additional Tier 1 Capital – debt instruments with equity characteristics (perpetuals), which have lower seniority, and have a built-in mechanism for absorbing losses (conversion to shares or a reduction in interest payments, whether full or partial); and Tier 2 Capital – senior debt instruments which have a built-in mechanism for absorbing losses.

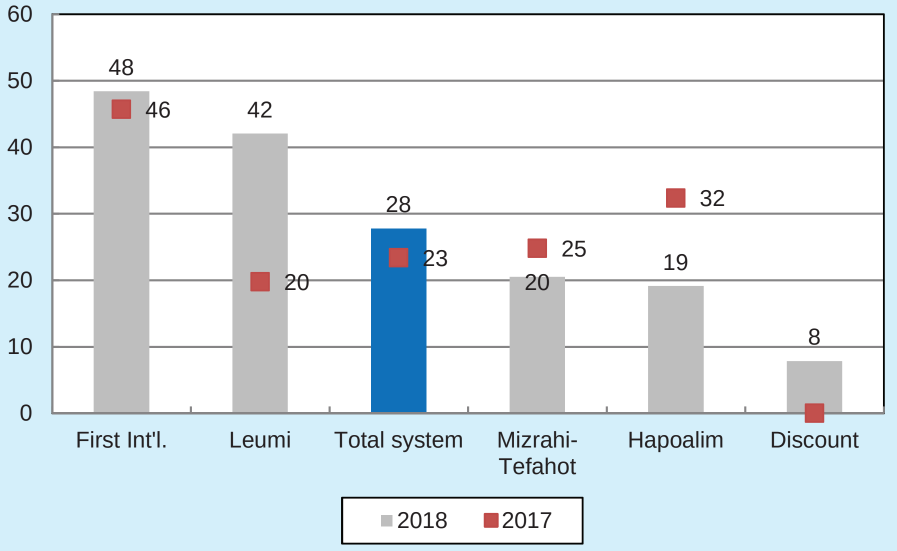
pace of earnings retention) and negatively affected by the increase in business credit, which was manifested in the growth of risk weighted assets.

The improvement in the quality and quantity of capital and the convergence of the banks to the stringent regulatory capital requirements in Israel already at the end of 2016 facilitated the Banking Supervision Department's easing during the past three years of the restriction it had imposed on the distribution of dividends, which enabled the banks to increase their payout ratio (also by means of share buybacks).[43] The goal was to provide the banks with greater flexibility in the management of capital by regulating the rate of accumulation (as is the practice in other countries) in order to prevent an increase in risk appetite and taking on excessive risk. The easing of restrictions was followed by banks revising their dividend distribution policy and therefore the average payout ratio of the banking system rose to 28 percent of net profit (Table 1.16; Figure 1.40).[44] As a result, the rate of growth in Common Equity Tier 1 Capital of the largest banking groups (4 percent) was lower

The improvement in quality and quantity of capital and the banks' convergence to strict regulatory capital targets in Israel drove the Banking Supervision Department to ease over the past three years the limitations it had set regarding dividend distributions.

The banks' convergence to the regulatory capital targets made it possible to ease the supervisory constraint on dividend distributions and led to an increase in the aggregate distribution rate.

Figure 1.40
Dividend Distribution[a] as a Share of Total Net Profit, the Five Banking Groups, 2017 Compared with 2018 (percent)



[a] Excluding share buy-back.
SOURCE: Based on published financial statements.

[43] For further details, see "Share buybacks by the banking corporations", press release, Bank of Israel, March 2019.
[44] The dispersion of controlling shares this year for the Hapoalim banking group raised the proportion of shares held by the public among the seven largest banks to more than 80 percent. Thus, the public became the main beneficiary of the change in dividend and share buyback policy adopted by the banks.

than the average for the last three years (about 5.8 percent). The growth in Common Equity Tier 1 Capital was also positively affected by the adjustment of liabilities for workers' rights (primarily in the Leumi banking group) and negatively affected by net unrealized losses on available-for-sale securities. Following a downward trend over a number of years, Tier 2 Capital grew this year and its level was positively affected by the issue, by the three largest banks, of hybrid securities (CoCo's) with a contractual mechanism for absorption of losses (Table 1.14).

With respect to the denominator, there was a noticeable increase this year in the quantity of credit risk weighted assets (of about 5 percent) which was higher than the average rate of growth during the last three years (of about 1 percent). This increase was the result of a reversed trend in the credit portfolio that occurred in recent years and which involved the increased exposure to corporations (large businesses) and companies in the construction and real estate industry, due to the easing of supervisory regulations that limited indebtedness to individual industries[45] and the continuing developments in the housing market. (For further details, see the Bank of Israel Annual Report for 2018 and Chapter 1: "Credit" in this Annual Survey.) The growth in risk weighted assets was somewhat offset by the decline in retail exposure to private individuals and the raising of Israel's credit rating in August of this year[46] by Standard and Poor's, which reduced the banks' credit risk weighted assets and those of some public sector entities .

The increase in the quantity of risk weighted assets this year would have been greater if not for two easing measures implemented by the Banking Supervision Department: the reduction in the conversion coefficient for credit on guarantees to ensure the investment of home buyers,[47] which contributed to a decrease of about one percent in the quantity of credit risk weighted assets, and a measure that was intended to assist first-time home buyers to fully exploit their ability to purchase a home using less equity,[48] which contributed to a decrease of about one-half of a percent in total risk assets.

The growth in risk assets this year derived from the growth in exposure to corporations and firms in the construction and real estate area, in view of the supervisory leniencies in the industry indebtedness limitation, but also from the continued developments in the housing market.

The leverage ratio remained stable this year and its value for the five largest banking groups was about 6.8 percent (Table 1.5). This is higher than the minimum capital requirement set by the Banking Supervision Department

[45] For further details, see the section "Risks" in the Annual Survey for 2017 and the same chapter in the current one.

[46] In August 2018, the Standard and Poor's rating agency announced that it was raising Israel's credit rating from A+ to AA–. For further details, see Box 1: The effect of raising Israel's credit rating in the Financial Stability Report, Bank of Israel, December 2018.

[47] In November 2018, the Banking Supervision Department published a revision to Proper Banking Management Directive 203 ("The standardized approach – credit risk"), according to which the conversion coefficient for credit on guarantees to ensure the investment of home purchasers, which are provided according to the Sales Law, would be reduced to 30 percent, if the home has not yet been handed over to the purchaser.

[48] In March 2018, the Banking Supervision Department announced a change in its directives concerning mortgages, whereby housing loans with an LTV ratio of between 60 and 75 percent will be weighted by a reduced risk weight of 60 percent (compared to 75 percent prior to the change).

(5 percent for all the banks and 6 percent for the two largest banking groups). The leverage ratio was introduced as a supplementary tool to the risk-based regulatory ratios and it requires the banks to retain a minimum capital level as a function of their on- and off balance sheet activity, regardless of their risk characteristics. The ratio is not intended to assess the ability of the banks' equity to absorb losses but rather to serve as a "backstop" that will constrain the excessive growth of debt during periods of economic boom and will reduce the likelihood of overly aggressive deleveraging during recessions. The use of the Standardized Approach to the allocation of capital in Israel requires that the domestic banks retain higher levels of capital relative to their levels of activity compared to banks in other countries that apply the IRB (internal rating based) approaches. Therefore, the value of the leverage ratio among the Israeli banks is usually higher than among the leading banks in advanced economies and is similar to banks in which the share of risk-weighted assets is similar to those of banks in Israel. The leverage ratio makes it possible to assess the capital levels of banks in Israel relative to those of banks in other countries without the bias that results from differences in the approach to the allocation of capital against risk (which acts to erode the value of the capital ratio in Israel).[49]

The leverage ratio remained stable this year, and its value at the five large groups was about 6.8 percent, above the ratio required by the Banking Supervision Department.

The leverage ratio at Israeli banks is generally higher than at leading banks in advanced economies.

5. MAIN DEVELOPMENTS IN BALANCE-SHEET AND OFF-BALANCE SHEET ACTIVITY

The aggregate balance sheet of the banking system grew in 2018 by a rate of about 3.1 percent and totaled about NIS 1,614 billion (Table 1.17). This is to be viewed against the background of continuing growth in GDP at its potential growth rate. The balance sheet was influenced to a great extent during this period by the sharp depreciation in the shekel's exchange rate and particularly against the dollar (about 8.1 percent). Net of the exchange rate effect, the balance sheet grew by only about 1.9 percent.

On the asset side, the upward trend in net credit to the public in recent years continued (at a rate of about 6.2 percent, and about 5.4 percent net of the effect of the shekel depreciation) and this led to an overall increase in the balance sheet. The growth in credit this year was primarily the result of the growth in business credit, which increased at a faster rate than in previous years (about 7 percent) and housing credit, whose rate of growth (about 6.4 percent) was somewhat higher than during the past two years. Also contributing to this growth were credit provided to borrowers abroad, due to, among other things, the sharp depreciation of the shekel, and retail credit whose growth rate this year (about 1.2 percent) was lower than in previous

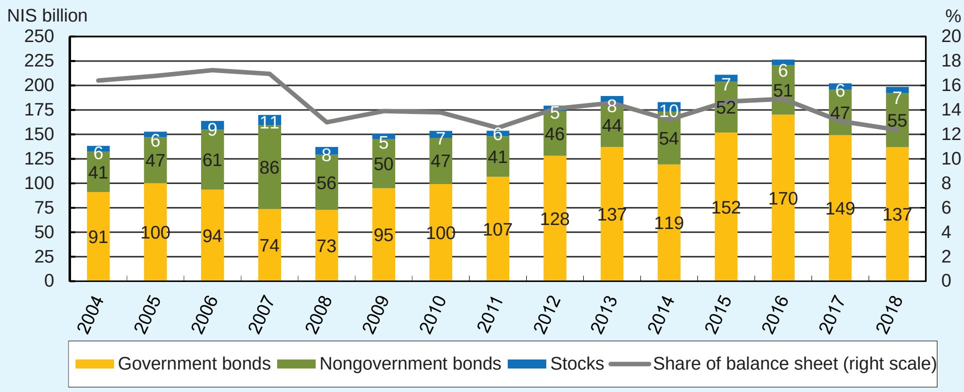
The banking system's balance sheet increased this year by about 3.1 percent and was notably impacted by the sharp depreciation in the shekel vs. foreign currencies, and mainly against the dollar.

On the assets side, the upward trend in credit to the public continued, mainly as a result of growth of business-sector credit and housing credit.

[49] Although the leverage ratio is not affected by the approach to capital allocation, it is influenced by other accounting and regulatory differences, including the treatment of derivatives, the calculation of total exposure and the way in which the ratio is presented in the financial reports. However, an analysis carried out by the Banking Supervision Department showed that the leverage ratio in Israel is comparable to its value in European and American banks (which are not necessarily comparable to one another).

The banks' securities portfolio continued to shrink this year in view of the decline in holdings of government bonds.

Figure 1.41
The Total Securities Portfolio[a] of the Israeli Banking System[b]—Size and Composition, 2004–18



[a] Excluding consolidated companies.
[b] Including the five banking groups (Leumi, Hapoalim, Discount, First International, and Mizrahi-Tefahot), as well as Union Bank, Bank of Jerusalem, and Dexia Bank.
SOURCE: Based on published financial statements.

years. This occurred in spite of the continued expansion of private consumption (about 3.9 percent) and the low interest rate and unemployment rate. (For further details, see the section on "Credit Risk".)

In contrast, the banks this year reduced their total cash and deposits with the Bank of Israel (by about 5.4 percent) and their securities portfolio (by about 2.6 percent, and about 5.8 percent without the effect of the exchange rate) and primarily their holdings of government bonds (Table 1.18). Therefore, the share of the securities portfolio in the total balance sheet declined somewhat this year to about 12 percent (compared to about 13 percent last year; Figure 1.41). The decline in total cash was made possible due to the positive effect of Amendment 28 to the Joint Investment Trust Law on the liquidity coverage ratio. (For further details, see the section on "Liquidity".) This change in the mix of assets, namely the shift of liquid assets to credit provided to the public (which is characterized by higher rates of return), contributed to the increased profitability of the banks during the year being surveyed. (For further details, see the section on "Business Results".)

On the sources side, the upward trend in the public's deposits continued this year (about 2.8 percent and about 1 percent without the effect of the exchange rate), despite the low interest rate environment in the economy. The main part of the increase was due to the increase in the deposits of private individuals and business entities (particularly deposits of up to NIS 10 million). The increase was partly offset by the drop in total deposits of financial institutions.[50] An examination of the composition of deposits (activity in Israel) indicates a continuing upward trend in total current accounts and short-term demand deposits. In addition, the trend of accumulation of capital in the

[50] The decrease in the deposits of financial institutions was the result of, among other things, Amendment 28 of the Joint Investment Trust Law which into effect this year.

banking system continued this year (about 6.5 percent and about 12.2 percent without the effect of the exchange rate), despite the bank's dividend distribution policy[51] (for further details, see the section "Capital Adequacy and Leverage"), and the increase in total bonds and subordinated debt notes (about 5.3 percent).

Despite the low interest-rate environment in the economy, the trend of growth in the public's deposits continued, but at a lower rate than in recent years.

With respect to the banks' off-balance-sheet activity, total guarantees and liabilities for the provision of credit grew this year by about 7 percent and totaled about NIS 490 billion (Table 1.19). This increase was manifested in, among other things, the growth in unused credit card credit lines (about 9 percent) and in liabilities for the provision of credit (about 12 percent). In contrast, there were signs of weakness in the residential real estate market[52] that could be seen in the drop in total guarantees for home purchasers (about –2.3 percent). The activity of the banks in derivative instruments—in terms of par values—continued to grow this year (about 15.3 percent) and totaled NIS 2,781 billion (Table 1.20). The increase was the result of the growth in interest rate contracts (about 25 percent) and currency contracts (about 14 percent).

[51] Except for the Hapoalim and the Mizrahi-Tefahot groups, in which dividend distributions were frozen beginning in the second quarter of the year, against the background of US authorities' investigations.

[52] See Chapter 9 of the Bank of Israel Annual Report for 2018, which deals with housing market developments.

Box 1.1
Macroeconomic Stress Tests for the Banking System, 2018

- **The Banking Supervision Department carried out a macroeconomic stress test for the banking system again this year, as is the practice in other countries. The test is based on a uniform scenario and its goal is to determine whether the banks can absorb the losses in an extreme macroeconomic event without endangering their stability and the deposits of the public.**
- **As part of the stress test, each bank estimates the results of the scenario using a variety of models and methods that are commonly used in the industry, and in parallel the Banking Supervision Department carries out the test for each one of the banks using a uniform method.**
- **The stress test is carried out under several assumptions that affect the results of the scenario, including: static balance sheet, no additional raising of capital; and no account taken of actions that the banks' management is likely to take in response to the crisis in order to minimize damage.**
- **Each year, the Banking Supervision Department builds a different macroeconomic scenario, with the goal of examining the resilience of the banks and of the banking system as a whole to various economic developments. This year, the Banking Supervision Department chose to test the resilience to a severe domestic macroeconomic scenario resulting from geopolitical events that lead to an increase in the interest rate in the economy, together with a major crisis in the housing market and the collapse of a large business group of borrowers. The scenario is based on estimates and models and is not a forecast.**
- **The results of the test show that the scenario will have a considerable impact on the banking system and although some of the banks will suffer losses, the scenario does not threaten the banking system's stability and resilience. The Common Equity Tier 1 Capital ratio of the banks is not expected to decline below the minimum required by the Banking Supervision Department in a stress scenario. Similarly, it is found that the banks' capital ratios in the scenario are higher than those in previous stress tests, which were used by the Banking Supervision Department to estimate their resilience.**
- **This result, which is evidence of the banks' stability even in a stress situation, reflects the efficacy of the requirements imposed by the Banking Supervision Department in recent years to strengthen the banks' stability and in particular to reinforce their capital. This is in addition to steps that resulted in more conservative risk management, including a significant reduction in the exposure of the banks to large and leveraged groups of borrowers, an improvement in the characteristics of the housing loan portfolio and the improvement in the profitability of the banks due to increased efficiency.**
- **The main losses in the stress test this year were in the credit portfolio, which is the main domain of activity of the banks in Israel. Another source of losses in the stress scenario this year was the securities portfolio, primarily due to the sharp rise in interest rates.**
- **Although this stress test indicates that the system maintains its stability, this has not led to complacency. The system is exposed as well to a variety of risks that have intensified in recent**

years, including operational risks, and in particular cyber and technology risk, which call for an examination of the system's stability in facing risks of that type.

General

This year again the Banking Supervision Department carried out a macroeconomic stress test on the banking system. The test, which has been carried out since 2012, is based on a uniform scenario. In this context, the banks estimate the results of a scenario provided by the Bank of Israel using a variety of commonly used models and methods.[1] In parallel, the Banking Supervision Department tests the banks and the banking system as a whole using a uniform method. The process is meant to contribute to the understanding of the focal points of risk to which the banking system and each of the individual banks are exposed, and thus it assists in evaluating the strength and resilience of the system and ensuring that capital levels are sufficient. Based on the results of the scenario, the Banking Supervision Department can direct a bank to take steps that will reinforce its capital and may even restrict its distribution of dividends, if it concludes that the bank does not have a sufficient capital buffer to absorb losses. Similarly, the test makes it possible to evaluate the banks' processes of risk management and their ability to estimate the risks that threaten them in a stress situation.

The results of the test carried out by the Banking Supervision Department this year indicate that the realization of a domestic macroeconomic scenario against the background of geopolitical events, together with a serious crisis in the housing market and an increase of the local interest rate will have a significant effect on the banking system. **Nonetheless, even under this scenario it is expected that the banking system will maintain its resilience and stability and the capital adequacy ratio of the banks is not expected to decline to below the minimum required by the Banking Supervision Department in a stress scenario, namely a Common Equity Tier 1 Capital ratio of 6.5 percent.** The results reflect a negative impact to the system due to credit and market risk and to some extent also operational risk. **The scenario is hypothetical and is not meant to include all of the possible economic shocks.** Moreover, the results do not take into account other effects, such as a drop in liquidity, which is possible in an extreme event and that may harm the reputation of the bank and lead to additional negative feedback effects. Yet at the same time, the results do not take into account the actions that the management of the banks is likely to take in response to the crisis, which may reduce the damage.[2]

The stress test carried out in 2018 was based on two scenarios: a base scenario and a stress scenario (Figure 1). The **base scenario** reflects the expected path of the economy and is based on the macro predictions of the Research Department of the Bank of Israel and the macro forecasts of global developments by the international organizations, as well as additional forecasts regarding the local and global economies.

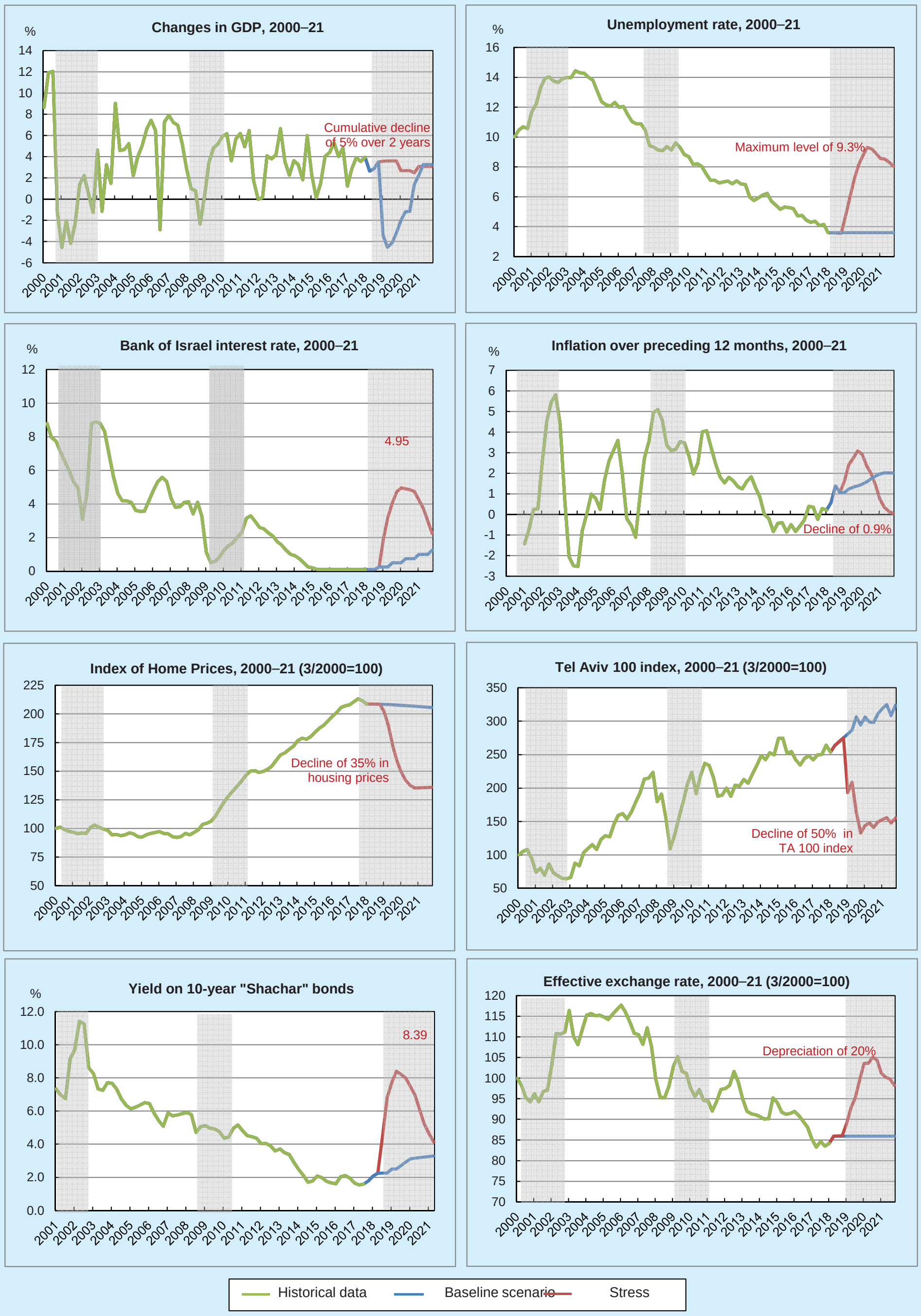
The **stress scenario** is characterized by a high level of severity and reflects the focal points of risk to which the Israeli economy and the banking system are exposed. It is worthwhile emphasizing again that this scenario is not a forecast but an extreme hypothetical situation and it is being used to test the resilience of the banks in a macroeconomic environment that differs from the prevailing one. The starting

[1] The banks included in the stress testing were Leumi, Hapoalim, Discount, Mizrahi-Tefahot, First International, Union and Bank of Jerusalem.

[2] Though not necessarily. It may be that the action taken by the management of one of the banks will intensify the expected harm to a different bank.

A serious macroeconomic stress scenario, including high unemployment, an increase in the Bank of Israel interest rate, and a decline in home prices.

Figure 1
Macroeconomic Data: Historical and According to the Scenarios, 2000–21[a]



[a] Shaded areas represent crisis periods.

SOURCE: Historical data—Based on Central Bureau of Statistics and Tel Aviv Stock Exchange; data on baseline and stress scenarios—Bank of Israel.

point of the test is based on the figures for the banks as on June 2018. The scenario starts in January 2019 and ends in December 2021, for a total of three years (12 quarters).
The stress scenario, which is characterized by a domestic shock against the background of major geopolitical events in Israel combined with a crisis in the housing market, leads to a contraction in all components of GDP and an increase in unemployment, while the global economy continues to grow. As a result, the Bank of Israel raises the interest rate significantly. The shock has serious ramifications for both the real and financial sides of the Israeli economy.

Assumptions

The Banking Supervision Department carried out the stress test based on various assumptions, with the goal of assessing the effect of the scenario on each of the banks and understanding the focal points of risk faced by each bank. Among the assumptions: static balance sheet; there is no raising of capital; and no account is taken of actions that the managements of the banks might take in response to the crisis in order to minimize the damage.[3] The results of the test reflect the direct effect of the scenario on the banks' capital, profitability, credit portfolio and securities portfolio. This test does not consider the possibility of a reduction in the banks' liquidity or a feedback effect, such as reduced confidence of investors.

Findings

A domestic macroeconomic shock combined with a crisis in the housing market and an increase in the interest rate in the economy is expected to have a major impact on the banking system, though it will not endanger its stability. In the scenario, the Bank of Israel raises the interest rate sharply, which means that together with the increased burden of debt repayment on borrowers the economic crisis makes it difficult for the public as a whole to meet their obligations. All this leads to major losses in the banks' credit portfolio. The increase in the interest rate causes losses in the banks' securities portfolio as well. However, the increase in the interest rate also has a moderating effect on the damage to the banks in that it increases their net interest income.
It was found that despite the significant damage to the banks, the banking system is resilient to a stress scenario of this type, since all of the banks maintained a Common Equity Tier 1 Capital ratio that is above the threshold required by the Banking Supervision Department in a stress scenario (i.e., 6.5 percent) for the duration of the scenario.[4] This result emphasizes the **importance of the process to strengthen capital** (an increase of about 3 percentage points in the Common Equity Tier 1 Capital ratio during the past decade) **that has taken place in recent years at the initiative of the Banking Supervision Department.** This is in addition to a series of other measures taken by the Banking Supervision Department which led to more conservative risk management by the banks, including a major reduction in the exposure of the banks to large and leveraged groups of borrowers (for further details, see Box 3.3 "Tightening of restrictions on credit to large borrowers and its implications for credit concentration" in Israel's Banking System—Annual Survey, 2017), an improvement in the characteristics of the housing credit portfolio (for further

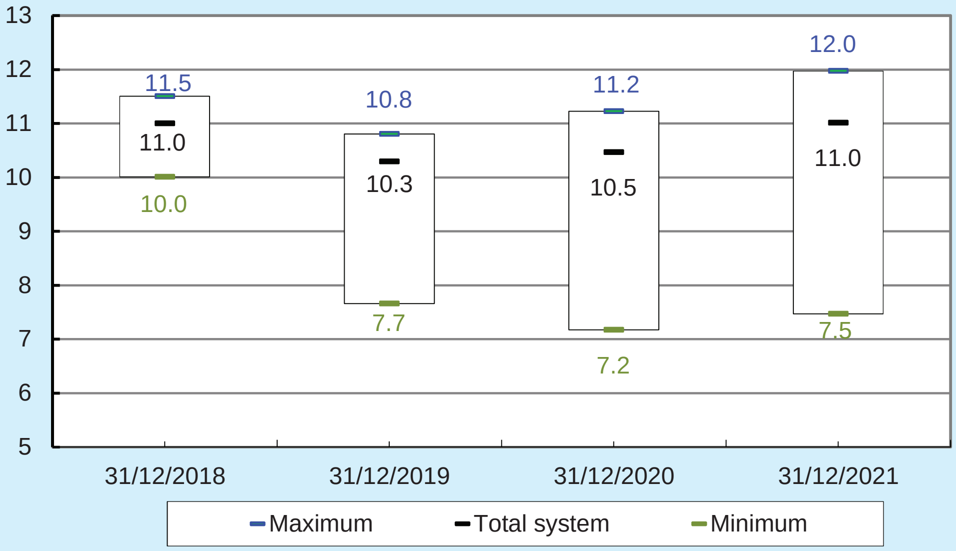
[3] It may be that the action taken by the management of one of the banks will intensify the expected harm to a different bank.
[4] The leverage ratio also reflects the resilience of the system to the stress scenario. During the scenario, the system reached an average leverage ratio of 6.5 percent and the bank that suffered the most serious damage reached a leverage ratio of 4.3 percent.

details, see Box 1.2 on "Effects of the macroeconomic stress scenario on the housing credit portfolio") and the improvement in the banks' profitability, as a result of efficiency measures and cuts in expenses. The average Common Equity Tier 1 Capital ratio in the system is liable to decline in the stress scenario from about 11 percent in 2018 to about 10.3 percent in 2019 (Figure 2).[5] Although the capital ratio in the entire system was not seriously affected during the scenario, the size of the effect varied widely among the banks. Thus, in the bank that suffered the most damage the capital ratio declined to 7.2 percent, while in the other banks the negative impact was much less. (Figure 2). This variation was the result of, among other things, the differences in profitability, in the mix of the asset portfolio and in the quality of the credit portfolio at the starting point.

The profitability of the banking system in this scenario is expected to drop significantly but the increase in the interest rate is expected to moderate the damage due to its effect on net interest income. Nonetheless, it was found that **approximately half of the banks experienced losses in at least one of the years of the scenario.** The average return on equity (ROE) in the system is expected to drop from a level of about 7.2 percent at the start of the scenario to about 2.3 percent at its conclusion. Here as well there is a high

The entire banking system maintained the minimum required capital ratios throughout the stress scenario.

Figure 2
Development of Common Equity Tier 1 Capital Ratio, Total Banking System, December 2018–December 2021[a] (percent)



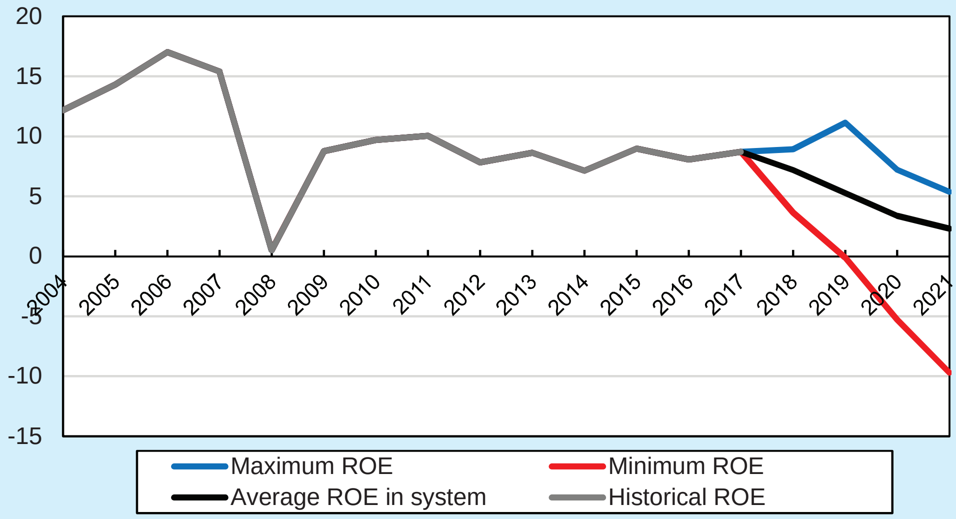
[a] Based on models and assessments—not a forecast.
SOURCE: Based on reports to Banking Supervision Department.

[5] The year in which the average capital ratio in the system reached its lowest level ever in a scenario.

degree of variation between the banks: the ROE of the bank that suffers the most damage drops to a level of about –9.7 percent while that of a different bank drops to about 5 percent (Figure 3).
The main expected losses in the stress scenario are in the credit portfolio and amount to about NIS 12.2 billion on average per year, which is about 1.2 percent of the portfolio. Rising unemployment, the decrease in GDP and the housing crisis make it difficult for households and the business sector to meet their obligations, which causes serious losses in the banks' credit portfolio and damage to their equity. In this year's stress scenario, the effect of a collapse of a business group of borrowers was examined.

There was a significant negative impact to the return on equity during the stress scenario.

Figure 3
Development of Return on Equity According to the Banking Supervision Department's Stress Scenario, Total System, 2004–21 (percent)



[a] Based on models and assessments—not a forecast.
SOURCE: Based on reports to Banking Supervision Department.

This intensifies the losses in the business credit portfolio but the damage is less than in past years, which is the result of the major downward trend in the exposure of the banks to the large groups of borrowers (Figure 4; for further details see Box 3.3 "Tightening of restrictions on credit to large borrowers and its implications for credit concentration" in Israel's Banking System—Annual Survey, 2017). The models predict that the average annual loss in the business credit portfolio (without credit to construction and real estate) will be about 1.5 percent.[6] With respect to equity, this is the largest loss among the industries

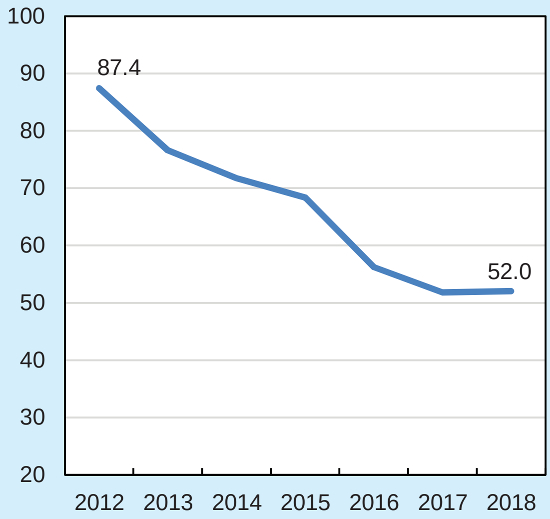
[6] Based on models and estimates and it is not a forecast.

(about 4 percent annually,[7] Figure 5) which is due to the significant exposure of the portfolio to this type of credit.

With respect to the construction and real estate industry, the crisis in the housing market, which is reflected in the scenario by, among other things, the major decline in housing prices, is expected to cause major losses in the stress scenario. Together with the losses in the housing credit portfolio as a result of unemployment and the rise in the interest rate, these are major focal points of risk for the banking system. This is due to both the high correlation between these two industries, which is expected to intensify their losses by way of feedback and their large weight in the total credit portfolio. Nonetheless, it is important to mention that in these two industries the risk has been declining in recent years, a trend that is reflected in their lower rates of loss. (For further details, see the chapter on credit risk. With regard to housing credit in particular, see the box, "Effects of the macroeconomic stress scenario on the housing credit portfolio".)

Over the years, the banking system has significantly lowered its exposure to large borrower groups.

Figure 4
25 Largest Borrowers in the Banking System as a Share of Total Capital, 2012–18 (percent)



SOURCE: Based on reports to Banking Supervision Department.

Consumer credit shows the highest rates of loss in the scenario (an average annual rate of loss of about 2 percent;[8] Figure 5). The high rates of loss in this portfolio are primarily the result of the sharp rise in the unemployment rate, but they are also adversely affected by the increase in the interest rate. This is particularly so in the case of low-income borrowers who are more vulnerable[9] and borrowers with a large amount of debt relative to their income (some of whom have taken out a housing loan in parallel; for further details on the participation of households in the loan market and their financial vulnerability, see Box 1.2 in Israel's Banking System—Annual Survey, 2016). In view of the risk implicit in consumer credit, most of the banks have limited its rate of growth (for further details, see the chapter on credit risk).

Another source of expected losses in the stress scenario this year is losses in the securities portfolio, against the background of the sharp increase in interest rates. Currently, the banks are managing a conservative securities portfolio, which is composed primarily of low-risk securities in the form of government bonds (about 61 percent of the portfolio) which drop in value when interest rates rise. The rest of the portfolio

[7] Based on models and estimates and it is not a forecast.
[8] Based on models and estimates and it is not a forecast.
[9] In addition, there is the assumption that the households in the lower deciles are those most threatened by rising unemployment.

Ong, M. L. L. (2014). *A guide to IMF stress testing: methods and models*. International Monetary Fund.

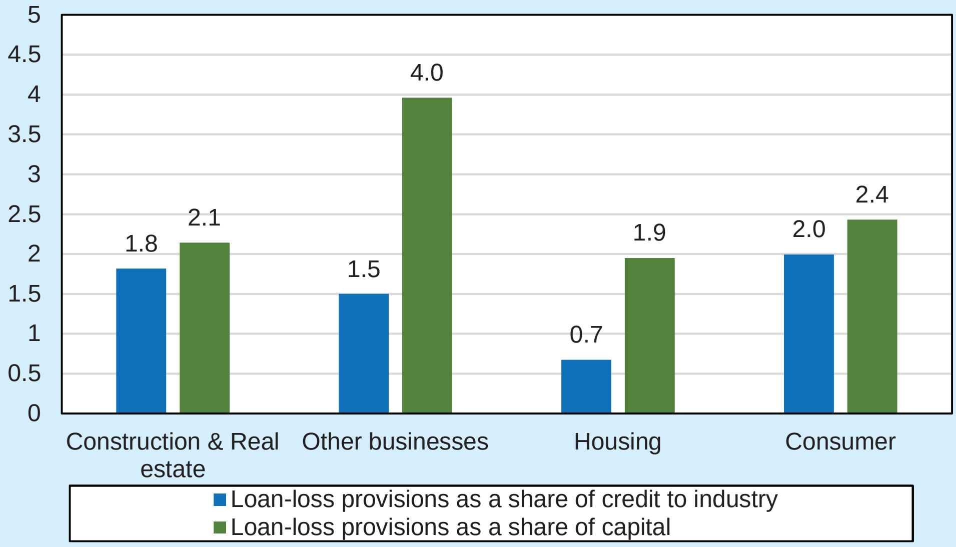
is made up of highly rated foreign bonds whose vulnerability in the scenario is low, since the scenario is a domestic one.

This year's scenario relative to past scenarios

The stress tests examine the banking system in severe macroeconomic scenarios and the source of the crisis changes from one test to the next. There are stress tests, such as the current one, in which the source of the scenario is a domestic crisis while in others it is a global one. Nonetheless, all of the scenarios include a large drop in GDP, a sharp increase in unemployment, declining prices in the financial markets and a drop in housing prices. Alongside the variables that are adversely affected in each scenario, there

Most of the loan loss rate relative to capital was recorded in the business credit portfolio.

Figure 5
Loan-Loss Provisions Expected During Course of the Stress Scenario, Selected Industries, Total System, Average 2019–21 (percent)



[a] Based on models and assessments—not a forecast.

SOURCE: Based on reports to Banking Supervision Department.

are variables that characterize the specific scenario being tested, such as the domestic interest rate, the yields on government bonds, the exchange rate of the shekel against various currencies and indices that reflect global economic activity.

In an examination of the results of the current stress test relative to past ones, it is important to differentiate between the differences that are the result of the nature of the scenario itself and those that are the result of the changes in the risk characteristics of the bank. Thus, the stress test carried out in 2016 was based on a shock in Europe alongside a shock in the local housing market, with the interest rate remaining low.

(For further details on the macroeconomic stress test in 2016, see Box 1.2 in Israel's Banking System—Annual Survey, 2016.) Therefore, the differences between the results of the previous scenario and those of the current one are primarily related to the high interest rate and the lack of an event in the global market in the current scenario. However, there are also differences that are the result of changes in the banking system, which have strengthened its stability and profitability. The increase in the interest rate has opposing effects on the damage to the banking system. The increase in net interest income alongside the reduction in pension commitments moderates the effect of the scenario; however, at the same time, it intensifies the credit losses in local industries. In contrast, there were no losses in credit provided to foreign borrowers in this year's scenario. Therefore, overall the total credit losses were similar between the two scenarios. The source of the losses in the securities portfolio differs between the scenarios.

This year's test therefore demonstrates that the banking system can withstand the type of stress scenario that was tested. Its resilience is the product of the range of measures that the Banking Supervision Department has implemented in the effort to maintain the stability of the banking system during times of crisis as well. Experience has shown that economic crises are difficult to predict, with respect to both their timing and their severity, and therefore it is necessary to continue efforts to strengthen the banking system and to maintain its stability. The banking system is also exposed to a variety of risks that have intensified in recent years, including operational risks and primarily cyber and technology risks, a situation that calls for an examination of the system's stability in the face of these threats as well.

Box 1.2
Effects of Macroeconomic Stress Scenario on the Housing Credit Portfolio: The expected impact of a sharp increase in the interest rate and in unemployment on mortgages borrowers and on banks

- **This year, as well, the Banking Supervision Department conducted a macroeconomic stress test for the banking system, as commonly done around the world. The test is based on a uniform scenario applied to all banks, with the goal of contributing to understanding the focal points of risks to which the system is exposed. It is based on assessments and models, and does not constitute a forecast. (For more information, see Box 1.1, "Macroeconomic stress tests for the banking system, 2018".)**
- **As part of this test, we extensively reviewed risk in the housing credit portfolio, based on granular data (at the individual loan level). Housing credit is a significant focal point when examining the risk faced by the banking system. This is due to the strong correlation with the construction and real estate industry, which may exacerbate loss due to feedback effects, and due to the significant share of this portfolio out of the entire banking credit portfolio, due to the rapid expansion of housing loans in the past decade.**
- **The share of the housing credit portfolio out of total credit extended by banks has gradually increased in recent years, but from a global perspective, the ratio of household housing debt to GDP in Israel is lower than in other advanced economies.**
- **This year's stress scenario reflects two key influences on borrower repayment capacity—a marked increase in interest rates (by 5 percentage points) and rising unemployment (to 9.3 percent).**
- **The test outcome, similar to those of previous stress tests, indicates that risk in the housing credit portfolio remains low compared to other credit segments and that the portfolio's quality has even improved in recent years.**
- **The improved quality and lower risk in the mortgage portfolio are due to stricter criteria applied to mortgage origination (underwriting), based on directives issued by the Banking Supervision Department over the years (with regard to the loan to value ratio (LTV), payment to income ratio (PTI), restrictions on adjustable interest and so forth).**
- **The test further indicates that the higher interest rates in the scenario have a significant impact on all mortgage borrowers in the market, due to the more onerous debt to income ratio—higher by 20 percent on average. However, only a small share of borrowers reach default due to the higher monthly payment associated with the higher interest rates. This is the outcome of a range of macroprudential measures applied over the years with regard to housing credit, and in particular—measures designed to reduce borrower exposure to higher interest rates.**
- **The increase in unemployment (by a considerable rate, in the scenario) is the key cause of borrower default: this increase would result in 5 percent of mortgage borrowers having difficulty making their debt payments, and those with lower income[1] are the most vulnerable.**

[1] [1] Bottom two quintiles in net income: Households with net monthly income of up to NIS 10,612.

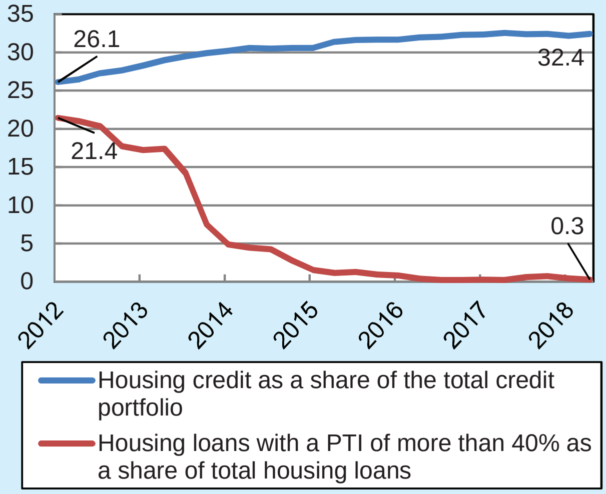
Background

This year, too, the Banking Supervision Department carried out a macroeconomic stress test for the banking system, as commonly done worldwide. This test is based on a uniform scenario applied to all banks being tested. (For more information, see Box 1.1, "Macroeconomic stress tests for the banking system, 2018".) As part of this test, we extensively tested the risk in the banking system's housing credit portfolio. **The housing credit portfolio is a significant focal point when reviewing the risk faced by the banking system,** for the following reasons:

(a) Strong correlation with the construction and real estate industry, which may exacerbate loss due to feedback effects. (b) Strong correlation with consumer credit, which is expected to increase loss in this portfolio as well. (c) The significant share of this portfolio out of the bank credit portfolio: Housing loans grew rapidly over the past decade, primarily due to higher home prices and to the low interest rate environment. (However, this growth rate has somewhat moderated in recent years). At the end of 2018, housing credit amounted to NIS 322 billion, or 32 percent of the banking credit portfolio, compared to only 20 percent in 2008. However, the increase in the ratio of household housing debt to GDP was moderate in recent years, and is lower than in other advanced economies (Figure 2).

Housing credit risk is low, but its share of the credit portfolio increased.

Figure 1
Housing Credit as a Share of the Credit Portfolio and Housing Loans with a PTI of More than 40% as a Share of Total Housing Loans, 2012–June 2018 (percent)

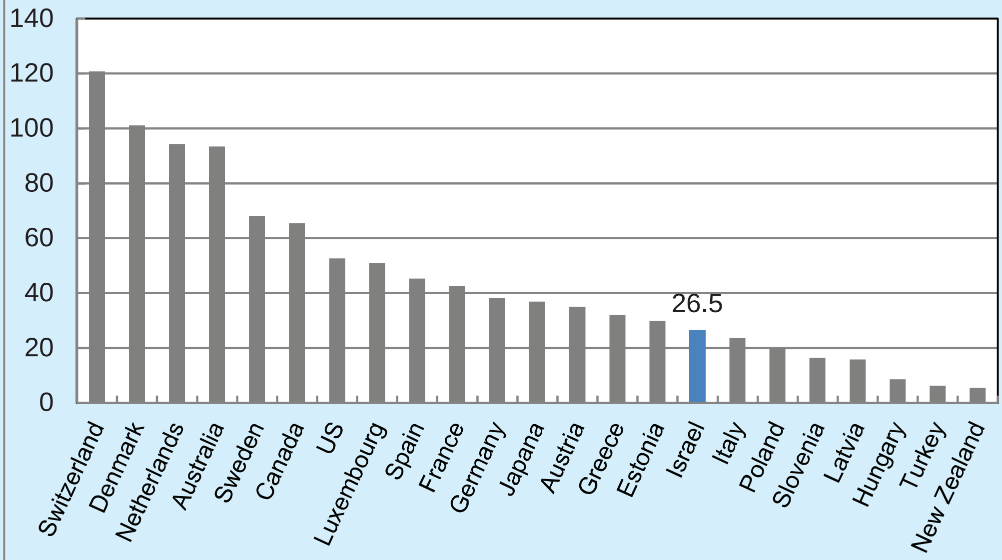


SOURCE: Based on reports to Banking Supervision Department.

Given the growth in the housing credit portfolio, the Banking Supervision Department took several steps in recent years in this area, designed to reduce borrower and bank exposure to risk associated with developments in the housing market. (For more information about some of these steps, see Box 1.1: "The Banking Supervision Department's measures with respect to housing credit, and their implications" in the 2013 Banking Supervision Department—Annual Survey). **The range of steps taken by the Banking Supervision Department resulted, from the stability aspect—in improved quality of the housing credit portfolio, and from the consumer aspect—in reduced borrower sensitivity to potential changes in the economic environment** (such as higher interest rates). Thus, for example, the decision to restrict the share of mortgages bearing variable-rate interest (2011) moderates the impact of higher interest rates on the monthly payment and reduces borrower exposure to this risk.

The housing debt to GDP ratio in Israel is low by international comparison.

Figure 2
The Ratio of Housing Debt to GDP in Israel and Other OECD Countries, 2017[a] (percent)



[a] Data for the US and Hungary are 2016 data.
SOURCE: Israel—Bank of Israel; other countries—OECD.

Other steps taken by the Banking Supervision Department[2] resulted in a decrease in the monthly payment to income ratio (PTI), and in particular: The share of borrowers taking out loans with PTI over 40 percent[3] declined dramatically, from 21 percent in 2012 to only 7 percent in 2013, and as from 2015, the share of such borrowers is negligible (Figure 1). This is a notable step toward reducing borrower vulnerability and reduced risk in the housing credit portfolio, since this borrower group is most sensitive to changes in interest rates and to reduced income.

In order to identify the main focal points of risk and to assess the vulnerability of banks and borrowers to changes in the economic environment, we conducted a bottom-up stress test[4]. **This test was based on a specific database, containing all housing loans extended by the banking system in 2015–17[5].** The database contains 247,000 loans with a balance of NIS 161 billion, approximately 40 percent of the outstanding balance of housing credit. Use of this database has allowed us to classify those loans and households that may face difficulties in case of materialization of the stress scenario and to identify the

2 Such as the prohibition on extending loans with payment to income ratio over 50 percent and the required further capital allocation with respect to loans with LTV ratio over 40 percent (as from August 2013).

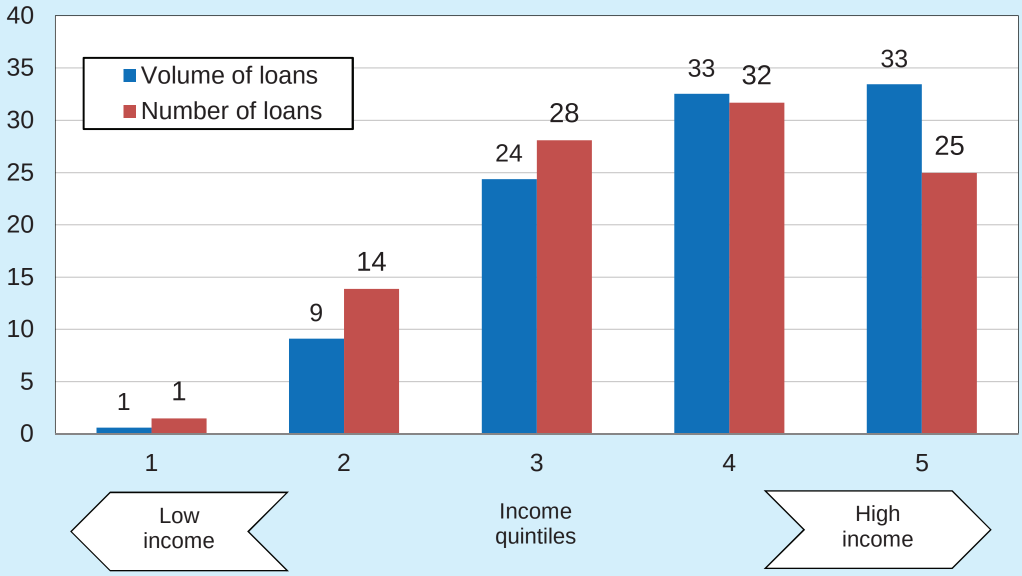
3 PTI is a key variable in assessing the probability of borrower default, since it reflects the household capacity to make the mortgage payment. It was found that financially vulnerable households are those with PTI ratio over 40 percent. Ong, M. L. L. (2014). "A guide to IMF stress testing: methods and models", International Monetary Fund.

4 Test based on loan-level data, used to estimate the potential impact of a stress scenario on the banking system.

5 For mortgages originated in prior years and in 2018, the analysis was also based on aggregate housing loan data.

Most housing loans are taken out by high-income households.

Figure 3
Distribution of the Number and Volume of New Loans by Income Quintiles, Total Banking System, 2015–2017[a] (percent)



[a] Based on total housing loans granted between 2015 and 2017.
SOURCE: Based on reports to the Banking Supervision Department.

main focal points of risk in the banking system resulting from exposure to housing loans.

Features of housing loans by income level

The distribution of loans extended in the reviewed period (2015–17) by income quintiles[6] shows that the top two income quintiles in Israel (those with higher income—households with net monthly income higher than NIS 15,500) took out 57 percent of the loans originated in that period and 66 percent of the amount thereof. The bottom two income quintiles (those with lower income—households with net monthly income lower than NIS 10,500) took out 15 percent of the loans originated in that period and 10 percent of the amount thereof (Figure 3). This is due, *inter alia*, to the fact that a significant share of lower income households do not own a home[7], and therefore do not take out housing loans—similar to findings in other countries.

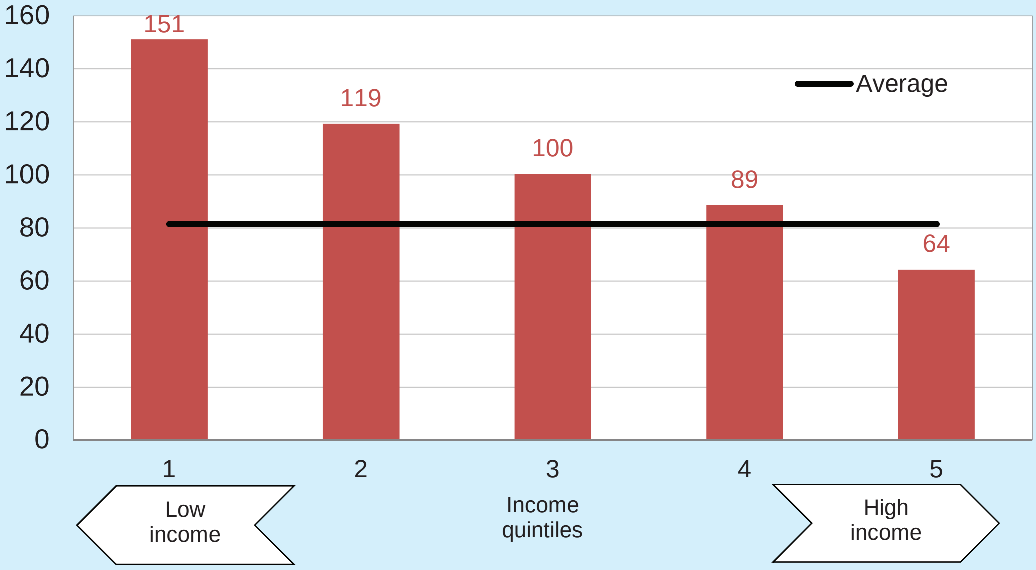
The data further show that the burden of household housing debt significantly decreases with higher income. This is reflected both by the average number of monthly salaries needed for the household to

6 Income quintiles were determined by net monthly household income, based on the income survey conducted by the Central Bureau of Statistics in 2017 in households headed by a salary earner. This classification resulted in the following income quintiles: Bottom quintile – up to NIS 6,053; second quintile – NIS 6,053-10,612; third quintile – NIS 10,612-15,456; fourth quintile – NIS 15,456-22,644; top quintile – over NIS 22,644.

7 Central Bureau of Statistics, Housing in Israel – Findings from Household Expense Survey, 2017.

The debt burden relative to income is higher among low-income households.

Figure 4
Number of Income Months Required for a Household to Purchase a Dwelling, by Income Quintile, Total Banking System, 2015–2017[a] (months)



[a] Based on total housing loans granted between 2015 and 2017.
SOURCE: Based on reports to the Banking Supervision Department.

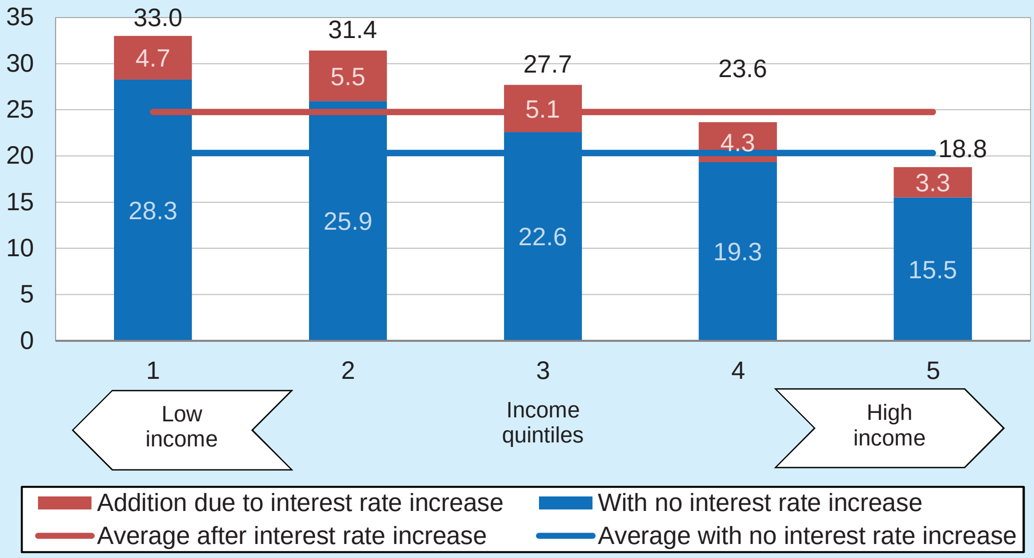
pay for the home bought using the mortgage—120 months in the second income quintile, compared to approximately half that period—60 months—in the top quintile (Figure 4)—and by the average PTI ratio, which is 26 percent in the second quintile, compared to 15 percent in the top income quintile (Figure 5). In order to identify the financially vulnerable households, it is important to examine the PTI distribution of all borrowers (not only the average payment), and in particular to focus on loans associated with a high debt burden—because at the edge of this distribution (higher PTI ratios) we can discern those borrowers who may face difficulties or even go into default. **One of the benchmarks for financial vulnerability commonly used worldwide is a PTI ratio higher than 40 percent.** As noted above, due to supervisory restrictions and directives, loans originated with such PTI ratios have been negligible since 2015; therefore, we estimated the share of financially vulnerable households based on the share of borrowers with PTI ratio higher than 35 percent (rather than 40 percent). We found that households with lower income are typically more vulnerable: About one-quarter of households in the bottom two quintiles took out loans with PTI ratio higher than 35 percent, compared to only 9 percent in the top two quintiles

Methodology

The objectives of the macroeconomic scenario are to contribute to understanding of the focal points of risk to which the banking system and each of the banks are exposed, and to serve as a tool to help

The debt burden relative to income increased in the stress scenario for all borrowers, but the increase was greater among low-income households.

Figure 5
PTI and its Increase Due to an Interest Rate Increase in the Stress Scenario, by Income Quintile, Total Banking System, 2015–2017[a] (percent)



[a] Based on total housing loans granted between 2015 and 2017.
SOURCE: Based on reports to the Banking Supervision Department.

assess the resilience of the banking system, a tool for setting requirements for the banking system and to banks, and to secure a sufficient level of capital. Therefore, the scenario reviewed the debt repayment capacity of households under extreme changes to the macroeconomic environment——an increase by 5 percentage points in interest rates, an increase in the unemployment rate to 9.3 percent, higher inflation and lower household income (Figure 1 in Box 1.1, "Macroeconomic stress test for the banking system, 2018"). These results are based on models and estimates, and are not a forecast.

In this review, the probability of default (PD[8]) for each loan is based on the financial margin[9] of the household, which considers **the disposable income available after debt payment and current living expenses.**[10] The assumption is that if disposable income is negative, the household would find it difficult to make the debt payment, and therefore was recorded as a borrower in default—a borrower who finds it

8 Probability of Default – a condition where the borrower is unable to repay the loan.

9 The borrower's financial margin is calculated as follows:

$$FM_i = I_i - DP_i - BLC_i$$

where – net household income; – housing debt payments; – basic cost of living for the household.

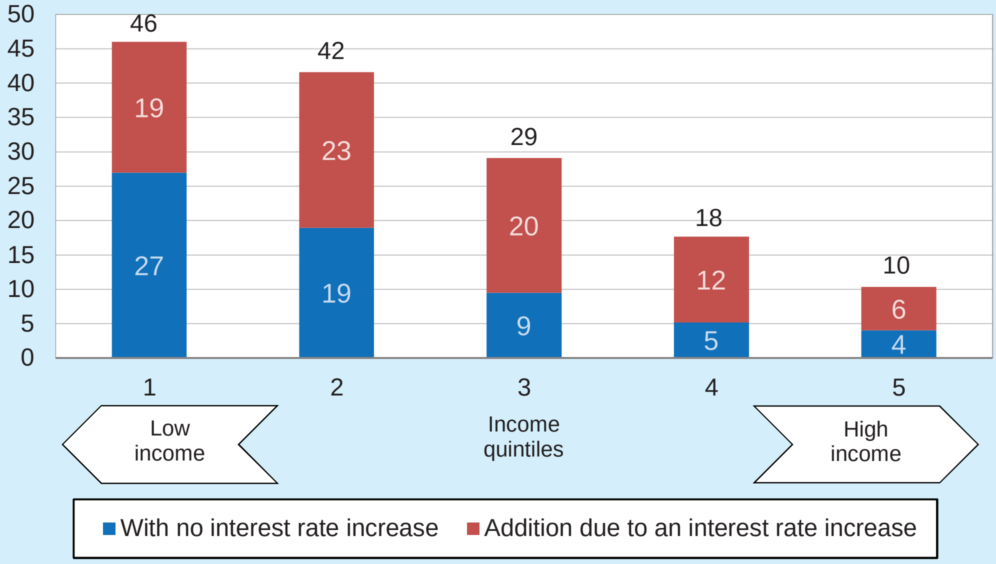
10 Based on the Central Bureau of Statistics' expense and income survey, and on the assumption that the household would reduce their current consumption to make their debt payments.

difficult to make their monthly mortgage payment.

The probability of default[11] for each loan is calculated both at the outset (origination) and after the effect of the scenario. The higher interest rates and inflation impact the monthly mortgage payment, according to the mortgage tracks actually obtained, while the higher unemployment and lower real income impact household income. As in times of crisis it may be difficult to realize the properties of borrowers in difficulties, we assumed (by a stricter approach) that banks would be unable to realize these for loan repayment during the scenario period (3 years). That is, loss given default[12] is 100 percent for all borrowers, regardless of the value of collateral securing the loan. We should emphasize that in reality, we expect that the bank would find it difficult to realize the collateral within a specified time frame, but should be able to realize it later on.

There is more of a negative impact to low-income households, particularly in the scenario of an increase in the interest rate.

Figure 6
Percentage of Loans with a PTI Above 35%, and its Increase Due to an Interest Rate Increase in the Stress Scenario, by Income Quintile, Total Banking System, 2015–2017[a] (percent)

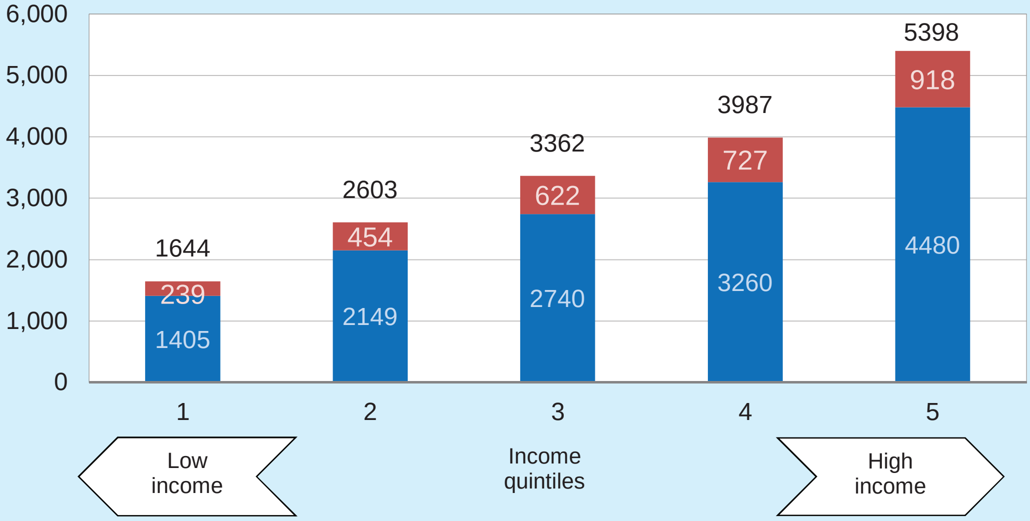


[a] Based on total housing loans granted between 2015 and 2017.
SOURCE: Based on reports to the Banking Supervision Department.

11 Probability of Default.
12 Loss Given Default.

In the stress scenario, monthly repayments for all borrowers are expected to increase due an interest rate increase.

Figure 7
Monthly Repayment, and its Increase Due to an Interest Rate Increase in the Stress Scenario, by Income Quintile, Total Banking System, 2015–2017[a] (NIS)



[a] Based on total housing loans granted between 2015 and 2017.
SOURCE: Based on reports to the Banking Supervision Department.

Findings

The test outcome, similar to those of previous stress tests, shows that risk in the banking system's housing credit portfolio remains low compared to other credit segments and that the portfolio quality has even improved in recent years. The scenario resulted in an average annual loss rate of 0.7 percent of the housing credit (mortgage) portfolio.

This scenario reflects two major effects on borrowers' repayment capacity: The effect of higher interest and inflation, and the effect of rising unemployment. **Our analysis[13] shows that unemployment is the key factor in borrower default.** Thus, 5 percent of mortgage borrowers may find it difficult to repay their debt should a stress event materialize, and those with lower income[14] are the most vulnerable: Some 15 percent of mortgage borrowers in the lower income quintiles may be in default.

It also emerged that higher interest rates had a significant impact on all mortgage borrowers, due to the higher debt burden. However, only a small share of borrowers may be in default due to the increase in

13 The test is based on certain working assumptions, which impact the quantitative outcome of the test. Results are based on a comprehensive database at the individual loan level, including all housing loans originated in 2015–17, along with aggregate data for housing loans in previous years and in 2018.

14 Bottom two quintiles in net income: Households with net monthly income of up to NIS 10,612.

monthly payment; this is the result of the range of macroprudential measures applied over the years with regard to housing loans, which also resulted in improved portfolio quality.

Due to an increase by 5 percentage points in the Bank of Israel interest rate, as examined in the stress scenario, the average monthly payment for a household in the second income quintile would increase by NIS 450, to NIS 2,600, whereby the average PTI ratio for such households would increase from 26 percent to 31 percent. However, the average payment for a household in the top quintile would increase by NIS 920, to NIS 5,400[15], whereby the average PTI ratio would increase from 16 percent to 19 percent. Across all households, the average monthly payment would increase by 20 percent (Figures 5,7). The increase in monthly payment would result in a significant increase in the share of vulnerable households (with PTI ratio over 35 percent) – up to 56 percent of households in the bottom two income quintiles, compared to one-quarter of households in the top two income quintiles (Figure 6).

In addition to the effects of unemployment and interest rates on the housing loan portfolio, we should note that a significant share (40 percent) of households have also taken out a consumer loan, in addition to the housing loan, and would therefore face not only the higher payment rate of their mortgage, but also repayment of this other loan. This state of affairs increases the vulnerability of such borrowers and the likelihood of their facing difficulties in making their monthly payments.[16] This means that such borrowers would cause banks to incur losses both for housing credit and for consumer credit. (For more details see Box 1.2: “Households’ participation in the loans market and their financial vulnerability: an analysis based on the household survey for 2016”, in the 2017 Banking Supervision Department—Annual Survey).

15 An increase in interest rates by one percentage point increases the average monthly payment for a household in the second quintile by NIS 100, and for a household in the top quintile—by NIS 200.

16 It is likely that in case of difficulties in debt repayment, they would try to continue their mortgage payment, hence repayment of the consumer loan would be impacted first.

Box 1.3
Cyber incidents—trends and responses

- **Technological developments have changed everyday life in significant ways, including the consumption of banking services. Banking services are now accessible to customers through direct and digital channels at any time and from any location by means of a computer or mobile phone, and at low cost to the customer. However, this positive development is accompanied by cyber risk. The banking system is investing significant resources to reduce this risk but it is important that the public also be alert and plan its financial behavior accordingly.**
- **During the last two years, an increasing number of cyber incidents have been seen in Israel and worldwide, in numerous areas, including banking. The increase manifests in the types of events that are occurring, in their number and their complexity, in the victims of the attacks, in the scope of the damage caused, and its types (data leakage, financial theft, fraud and embezzlement, damage to the supply chain, disruption of business continuity, etc.).**
- **The Banking Supervision Department, by means of its Cyber Unit, is working to regulate the cyber domain on a broad scale, which includes the following aspects: specific cyber regulation; implementation of cyber exercises, in order to improve the banks' resilience and their ability to respond to the various threats; defining cyber stress tests, in order to determine risk appetite in this domain; carrying out examinations; reporting to the Banking Supervision Department; sharing of information; enhancement of cooperation with the National Cyber Directorate and the Cyber Banking Center, etc.**
- **The banks in Israel are preparing on an ongoing basis for a cyber incident such as those that occur worldwide and to respond to the risks they represent. They are investing significant financial and managerial resources to this end.**
- **Despite the steps taken to raise the level of cyber defense in the banks and to increase the awareness of the public, it is important to note that significant cyber incidents are likely to occur in Israel as well. Therefore, alongside the emphasis on prevention, emphasis is being placed on the ability to identify an incident and to respond quickly and efficiently when it occurs.**
- **The public's awareness and alertness regarding cyber risks is another important factor in reducing this risk.**

In recent years, an increasing number of cyber attacks have been seen worldwide. Some of them can be described as cross-border from a geographical perspective (and in most cases they are carried out with the help of a state advisory). Cyber risk, both worldwide and in Israel, is considered to be among the highest risks to the financial system, as can be seen from the results of the survey carried out by the Banking Supervision Department this year among senior banking office holders. (For further details, see the section on "Risks" in Chapter 1 of this Annual Survey.) Cyber attack attempts are occurring in Israel, most of which are attempts to steal money or sensitive information that can be sold, attempts at blackmail in order to collect a ransom, etc. In addition, there is a risk of cyber attack aimed at harming the State and its essential infrastructures. As a result, there is a need for readiness on the national level (in the form of, for example, the National Cyber Directorate).

An examination of the cyber incidents worldwide during the past two years reveals **a substantial increase in cyber incident types, quantities, scope and complexity.**

- The **damage** caused by cyber incidents primarily consists of the theft of money, leakage of sensitive information, harm to reputation and disruption of customer service (damage to business continuity).
- The **goals of the attacks** have become more diverse, including commerce in sensitive information, fraud and embezzlement, theft of money (for example from payment systems and ATMs), etc.
- The attackers' **level of sophistication** has risen in recent years and is expressed by the impersonating of various web sites and breach attempts to targeted servers of large organizations and companies.

To date, only a small number of cyber attacks on the Israeli banking system have managed to cause any significant damage. Nonetheless, due to the unique characteristics, such as the geopolitical situation, the evolution of the attacks and their complexity, the exploitation of the supply chain and the human factor, the risk is estimated to be high and therefore it is essential that the banks be prepared. Similarly, increased awareness and alertness among the public can contribute significantly in reducing cyber risk in general and in the banking system in particular.

The Banking Supervision Department's activity in the domain of cyber risk

The banks and credit card companies in Israel prepare on an ongoing basis for cyber incidents similar to those occurring around the world and the risks inherent in such incidents. Among other things, they are integrating day-to-day risk management within their defense platforms (procedural, human and technological). This is in accordance with, among other things, regulatory requirements. The Banking Supervision Department, via the Cyber Unit, is working to organize this domain on an industry-wide basis, which includes the following components, among others:

1. **Specific cyber regulations** that emphasize the stance of the Banking Supervision Department on this issue and which take the form of Proper Conduct of Banking Business Directives:

   Cyber defense management (Directive 361[1]): This directive defines the principles and requirements for the management of defenses against cyber risk, with emphasis on defining the roles and responsibilities and active involvement of senior banking management, the creation of guidelines for the management of cyber defenses and the creation of a framework for cyber risk management, mapping of the cyber risk domain, defense in depth, etc. The directive emphasizes that cyber defense must be managed with an overall view of the corporation, in all its aspects. Thus, for example, the management of IT risks requires modifications in order to meet cyber risk, along with the development of defensive controls against said risks.

   Cloud computing (Directive 362): Regulating the bank's activities within the cloud computing environment, highlighting proper risk management inherent from this new technological environment.

[1] This directive is considered to be "groundbreaking" and innovative on an international scale with respect to its approach to the management of cyber defense.

Supply chain cyber risk management (Directive 363): It is the responsibility of the banks to create secure processes that involve external suppliers and to create a formal process for cyber risk management originating from those suppliers and their interfaces with the banks.

2. **Maintaining a reporting system:** The banks are required to report upon any cyber incidents and how they were managed within the banks.
3. **Sharing of information and scheduled discussions with the participation of representatives of the banks and other relevant organizations**[2] (designated cyber forums) based on the understanding that sharing information is essential in the domain of cyber defense.
4. **Formalization and reinforcement of cooperation with the National Cyber Directorate and the Cyber Banking Center** in order to create an additional cyber defense protection layer for the banking corporations in Israel. This activity includes information sharing, distribution of intelligence regarding alerts and incidents, etc. and is encouraged by the Banking Supervision Department.
5. **Cyber exercises** are carried out among the banks in order to improve their resilience to deal with threats arising from various cyber scenarios. One of the goals of the **exercises** is to verify that in response to a major cyber incident the bank can neutralize the threat in a reasonable amount of time and with minimal damage. This year, a national cyber **exercise** was carried out in the financial sector, led by the Ministry of Finance, and with the participation of the financial regulators and a few representatives from the financial sector.
6. **Routine supervisory activities**, such as: data leakage surveys, which assess the risks originating from human error; a preliminary effort to define stress tests for cyber risk; etc.

The awareness and alertness of the public to cyber risk is another major factor in risk reduction. Thus, for example, the public should be wary of any activity that appears legitimate but has some aspect that raises suspicion, such as a request made to a bank customer to input their bank password or the password of their credit card at a site that does not appear to be exactly like the bank's site (a masquerading site). The public should adopt all possible precautionary measures.

A review of cyber incidents that illustrate the cyber risk

The following represent a number of examples of cyber incidents that occurred in the **financial sector** in various countries **during 2016–18**. These incidents can lead to conclusions regarding the types of risks, their characteristics and ramifications.

Data leakage incidents

- **(September 2017):** Hackers breached the Equifax company (one of the largest credit rating agencies in the world) and caused the data **leakage of personal and financial information belonging to more than 143 million customers** in the US, UK, and Canada. The attack was allegedly carried out by a foreign nation state. The leaked information included: names, driver

[2] This includes technical information with "security value", including information on threats, early warning signs, weaknesses, and malware. Sharing of information does not however relate to the business activities of corporations but only the information required for cyber defense and in accordance with the position of the Director of the Antitrust Authority as stated in bulletin 3/17: "Sharing of information in order to deal with cyber threats".

license numbers, social security numbers, credit card information of 209,000 customers in the US and personal identifying information (PII) of customers from approximately 182,000 leaked documents. As a result of the incident, the Chief Information Security Officer (CISO) and the Chief Information Officer (CIO) were laid off immediately and the Chairman and CEO of Equifax resigned.

Money theft

- **(February 2016):** Attempts to steal money from banks abroad by means of the SWIFT system: As part of this incident, attackers (who allegedly were financed by a foreign nation state) attempted to move close to **$1 billion** from the account of the Central Bank of Bangladesh at the Federal Reserve Bank of New York to various bank accounts in Sri Lanka and the Philippines. The incident ended with **damage of only $81 million to the Central Bank of Bangladesh**, which was thankfully discovered by chance by an employee of Deutsche Bank, who identified a typo (made by the attacker) on a request to transfer funds in the name of the organization, after only 4 successful transfers. According to one of the news stories published in August 2016, a Philippine bank was involved in the incident and the Central Bank of the Philippines imposed a record fine on the bank in the amount of $21 million.
- **(During 2016–17):** A group financed allegedly by a foreign nation state carried out a campaign of cyber attacks against 20 banks and financial institutions around the world over a 18 month period and **successfully transferred about $10 million to its accounts**. This was accomplished by penetrating the organizations' network and obtaining access to the systems for transfer of funds and processing of credit card data.
- **(February 2017):** Attacks were discovered on approximately 20 banks in Poland and other countries. The suspicion is that the attackers were allegedly financed by a foreign nation state. Subsequently, similar patterns of attack were discovered at additional bank websites around the world. It appears that the source of the infecting file was the **Polish Financial Supervision Authority (KNF)** whose systems were breached. In March 2018, new findings were made including a list of IP addresses of targets for attack at dozens of banks around the world. No Israeli banks were included in this list.
- **(January to May 2018):** Theft of money from various banks in Mexico during various periods:
  - **Attempted theft of NIS 110,000,000:** The systems at the Bancomext bank began to operate abnormally. Its employees did not manage to turn on their computers, the Internet worked very slowly and routine operational activities took much longer. An operator who was monitoring incoming SWIFT messages noticed that the number of transfers was larger than usual and the SWIFT messages were in the bank account that was used for international transfers. Suspicion fell upon a financially motivated threat group allegedly financed by a foreign nation state. The bank temporarily suspended activity of the payment system. Subsequently, over a period of about a month, there were about five additional cyber-attacks.
  - **Three banks in Mexico reported** that they had experienced "unusual events" involving attempted cyber-attacks on Mexico's Interbank Electronic Payment System (SPEI) and that

they had implemented "contingency plans" to minimize damage.

The **Central Bank of Mexico** declared that **as a result of the aforementioned incidents there may be delays in transferring funds;** however, it was made clear that the architecture of the system and the bank customer's funds had not been threatened.

- Consequentiality, it was revealed that **hackers had stolen millions of dollars from other Mexican banks**. This was accomplished by sending hundreds of requests to transfer funds to fictitious accounts under the hackers' control. It was announced that about 400 million pesos ($20.4 million) were stolen during April 2018.
- **(May 2018):** The governor of the Central Bank of Mexico announced that hackers had stolen more than $15.3 million from the SPEI Interbank Electronic Payment System (which is the Mexican equivalent of the RTGS system in Israel that is operated by the Bank of Israel). The attackers focused on targets with access to the SPEI. In this case, the damage was not to software but to the system users, which was accomplished by malware that exploited existing weaknesses.

Fraud and embezzlement incidents and obtaining information via phishing

- **(November 2016):** Tesco Bank in the UK fell victim to **fraud on a significant scale, which involved thousands of customers whose funds were withdrawn without their consent.** As a result, transactions were brought to a standstill and credit and debit cards were disabled. Money was stolen from approximately 20,000 customer accounts, and in about 40,000 accounts suspicious activities were discovered. As a result of the fraud, the bank decided to stop all online transactions. The bank paid compensation in the amount of $2,500,000 to approximately 9,000 customers.
- **(January 2017):** A **broad phishing attack** was carried out on Bank of Ireland customers: Customers received notices asking them to connect to their online bank account, which involved redirecting the customers to a fraudulent site (masquerading site) whose purpose was to obtain their personal details.

Disruption of service incidents

- **(January 2017):** The online banking Internet sites of banks from Lloyd's group in Britain suffered cyber attacks that attempted to cripple services on a broad scale. As a result, **their customers did not have online access to their bank accounts**. The attack was allegedly carried out by a foreign nation state.

Incidents involving Money theft via ATMs

- **(May 2016):** In Japan, a cyber-attack occurred on ATMs located in stores. In this attack, counterfeit South African credit cards were used by means of data stolen from the Standard Bank in South Africa. This incident involved about **1,400 ATMs** and about $1 million was stolen.
- **(August 2016):** The Alfa Bank in Belarus announced that it fell victim to a cyber attack on August 9^{th}, 2016. An attempt was made to breach all of the bank's **110 ATMs** in order to steal

their cash. The rest of the bank's services were not affected.

- **(April 2018):** Cyber researchers discovered new malware (called ATM Jackpotting) that can be used to steal money from ATMs (at a rate up to about $2,500 per minute) by exploiting weaknesses in their systems. At this stage, it is unclear whether in order to operate the malware in an ATM the cyber criminals must have physical access or if remote access is sufficient. It appears that the new malware is still in the early stages of development. Furthermore, the European Association for Secure Transactions (EASt) published a summary of the ATM attacks in its annual report, which contains information on about 367,000 ATMs in 21 European countries. According to the findings in the report, ATM Jackpotting attacks increased by 231 percent from 2016 to 2017.
- **(August to October 2018):** The Cosmos Bank in India experienced **a loss of approximately $13.5 million** (Rs 94 Crore) due to a cyber-attack that occurred on August 11–13. On August 11^{th}, unknown attackers (who were allegedly financed by a foreign nation state) inserted malware into the bank's ATM server and successfully stole money from it. At the same time, transactions were reported in which funds were stolen via SWIFT and the Interbank Electronic Payment System. Some months later, additional attacks with a similar pattern were discovered at banks around the world.

Ransomware incidents

- **(May 2017):** A cyber attack was carried out using malware called WannaCry (which is allegedly believed to have been financed by a foreign nation state) which caused the encryption of files. A demand for ransom was made in the amount of $300–600 for the release of each computer. **Within 24 hours, about 230,000 endpoints in approximately 150 countries had been affected**. Among others, banks and other organization in Europe were affected. (There is no report of damage to financial corporations in Israel.)

Insider Threat/ Supply Chain incidents

- **(August 2017):** This incident involved the theft of personal information from about 400,000 customers of UniCredit, a large Italian bank. According to reports in the media, representatives of the bank emphasized that the source of the breach is a third party entity and that passwords were not exposed and no unauthorized transfers of funds were made.

Cyber incidents outside the financial sector

Cyber incidents also occur outside the financial sectors. There are many examples of cyber attacks in other sectors, both in Israel and abroad, in which the damage may have been significant. Following are a number of examples of cyber attacks on **non-financial organizations in other countries:**

- **Data Leakage:** approximately 87 million Facebook accounts were affected by the sharing of information in an unsecure configuration with Cambridge Analytics, a political consulting company.
- **Data Exposure** of **personal information of about 48 million users of Facebook, Twitter and LinkedIn** which was stored on a server (outsourced) that was not password-protected made it

possible for attackers to gain access to a "a pool of personal information" and to extract data from it in order to carry out "social engineering" attacks, breach of accounts and masquerading.

- **(December 2018): Data leakage incident at the Marriott Starwood international chain of hotels** apparently affected **about half a billion customers**. What is known up to this point is that a number of companies investigating the incident have stated that the tactics, techniques and procedures (TTPs) apparently point to a **threat group allegedly from a foreign nation state**. It is believed, at this stage, that the purpose of the attack was espionage (rather than financial gain). The exposure of data included personal information, such as first and last names, email addresses and residential addresses, dates of birth, passport numbers, credit card numbers, credit card expiry dates and more. At this point, it is known that data on about 327 million customers was exposed. The databases of the Marriot hotel chain include details of customers who are European citizens and therefore there is concern that the GDPR will impose a fine on the chain in the amount of about €20,000,000 or 4 percent of its annual turnover. A number of law firms in the US are preparing a class action suit in the amount of $12.5 billion. The hotel chain is still checking if the data leakage can be used to decipher the encryption of secret credit card fields and also whether credit card numbers typed in other fields were saved in clear text (nonencrypted).

Based on the diversity of the incidents, the following can be concluded:

1. **The motivation for the attack varies from one attack to another –** From criminal activity and money theft to chaos for its own sake and harming national security. In many cases, the identity of the attackers and their abilities **(a lone hacker, group of hackers, countries/superpowers/nation states, hacktivists, crime organizations, etc.)** are an indication to the attack incentive and can affect the **type of damage and its scale** (data leakage, money theft, fraud, obtaining information, disruption of services, etc.).
2. **Cyber attacks differ from one another and are characterized by diversity and sophistication.** Among the methods used are masquerading, the increasing use of phishing for various purposes (such as obtaining information, attempts to exploit known weaknesses in systems, attempts to alter IP addresses from reliable information sources to addresses of "masqueraders", etc.). **Cyber attacks can be either persistent or very specific**. There are situations in which a specific incident may serve as a "trigger" in the future **for consecutive sophisticated attacks**.
3. **It is not always possible to "quantify" the future ramifications** of a cyber incident. Thus, for example, it is doubtful whether an organization can quantify in real time the actual damage caused **as the result of exposure/publication of customer's sensitive personal information (such as credit card information and other financial information).**

Box 1.4

Allowance for expected credit losses as part of a forward-looking approach: The CECL method – its implications and expected adoption in Israel

- **As part of the lessons learned from the global financial crisis, it became clear that banks worldwide did not have sufficient buffers against the credit losses that were realized, since their allowances were primarily based on past events and did not sufficiently reflect expected risks. Therefore, it was decided to change accepted accounting standards for banks worldwide in order to ensure that allowances would sufficiently reflect the expected losses in the credit portfolio, using a forward-looking approach.**
- **In view of the importance attributed by the Banking Supervision Department to revising the financial reporting directives to match those used in the US, and the importance of applying lessons learned from crises in other countries, the Banking Supervision Department has instructed the banking corporations to prepare for the adoption of new guidance adopted in the US regarding current expected credit losses (CECL). The new rules are expected to come into effect in January 2022.**
- **The adoption of the new guidance is intended to strengthen the resilience of the Israeli banking corporations in times of financial crisis and also to improve the quality of information on their financial position, and thus to strengthen the ability of the banking system to continue to provide credit to the public even in a crisis and to reinforce the confidence of the public in the banking system. It is expected that the allowance for credit losses will increase to some extent on the date of initial implementation.**

Background

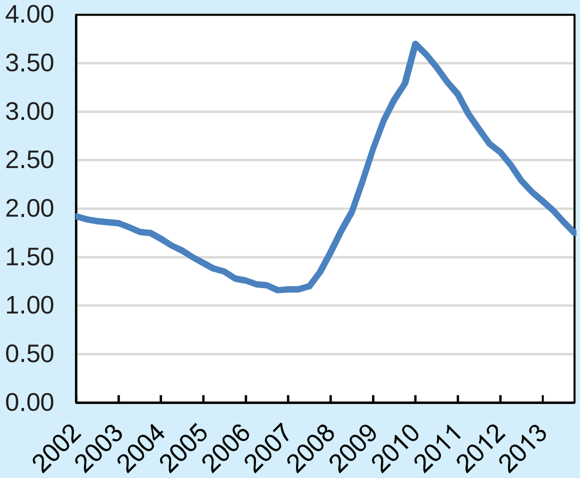
The allowance for credit losses is intended to serve as a buffer to absorb expected losses from credit to the public and thus to maintain the stability of the banks and their ability to continue to provide credit, even in times of crisis, during which credit losses will be realized, and also to better reflect their financial position.

During the global financial crisis in 2008–09, it was demonstrated that following a prolonged period of healthy economic conditions, and as a result of insufficient attention being given to expectations of risk, the allowances for credit losses of many of the banks had declined significantly and had reached a low point soon before the onset of the crisis. Figure 1 describes the development of the share of credit loss allowances within total credit in the US during 2002–07, the period prior to the global financial crisis, and the implication of the realized losses during the crisis. Thus, although during this period there were major signs pointing to a sharp rise in credit risk, they were not sufficiently taken into account in determining the size of the allowances.

As a result, the allowance for credit loss of many banks worldwide were not sufficient to absorb the credit losses that were realized in the financial crisis, and many of them failed or remained without any ability to continue providing credit, during a period in which the public was in particular need of it.

Against this background, and as part of the lessons learned from the financial crisis, it was decided that new reporting guidance would be established with the goal of strengthening the resilience of the banking system worldwide in the face of financial crises and improving the quality of information reported on their financial position. In this way, the ability of the banking system to continue providing credit to the public during a crisis would be strengthened, as would the public's confidence in the banking system.

Figure 1
Credit Loss Allowance as a Share of Total Credit, All US Banks, 2002 to October 2013 (percent)



SOURCE: Based on economic data from the FRED

The main goals of the new guidance

The new guidance[1] is intended to strengthen the resilience of the banking corporations and to improve the quality of banks' financial statements, by earlier recognition, forward-looking and conservative allowance for credit loss. This will decrease the pro-cyclical characteristics of loan-loss provisions and will support a more rapid response by the banks to a deterioration of borrowers' credit quality, as well as strengthening the connection between the manner in which credit risk is managed and the manner in which this risk is reflected in the banking corporations' financial reports.

The main changes expected in the banking corporations' financial reports

- The allowance for credit loss will be determined according to the bank's estimation of expected loss over the lifetime of the credit.
- In the calculation of this expected loss, account will be taken of historical losses that were realized during a full business cycle (that is, they will include a period of prosperity and a period of recession); the uncertainty implicit in the realization of these losses will be taken into account; and greater use will made of forward-looking information, through the use of, among other things, reasonable forecasts.
- The disclosure of credit in the financial reports will be expanded, such that the impact of the credit origination date on the credit quality of the loan portfolio will be clear.

[1] The rules include: (a) rules that were published in the US in June 2016 by the Financial Accounting Standards Board (ASU 2016-13); (b) clarifications by the banking supervisory authorities in the US with respect to the manner of implementing the new guidance; and (c) directives of the Basel Committee on Banking Supervision that deal with these guidance.

- The method of measurement of housing loans, which is currently based on a supervisory formula in view of its unique characteristics, will be adjusted according to the methods of measuring other types of credit and thus there will be an improvement in consistency between the measurement methods of credit losses across the various types of credit, and there will be less complexity in their accounting treatment in the financial reports.
- There will be improved consistency between the measurement of credit losses in debt securities and the measurement of these losses in the credit portfolios.

The principle underlying the new guidance is more conservative, in particular during "good" economic periods. Therefore, the following outcomes can be expected as a result of the implementation of the new guidance:

- The allowance for credit losses will increase to some extent when the guidance first goes into effect. However, initial surveys carried out in the US indicate that the average increase in the allowance is expected to be moderate. It can be expected that the adoption of the new guidance in Israel will also lead to a relatively moderate rate of increase, in light of, among other things, the consistent policy of the Banking Supervision Department for many years to require a conservative and cautious implementation of directives in the existing allowance method.
- The allowance will better reflect the level of risk that exists in the credit portfolio, such that in general and in contrast to the existing method, the allowances will react at an earlier stage to deterioration in the quality of credit and the quality of underwriting. In this way, weakness in the underwriting of credit that has been provided in prosperous economic periods will be manifested in the recording of higher loan loss provisions at the time of the underwriting, while in times of recession and realization of credit losses, lower loan loss provisions will be recorded. In other words, the behavior of the provision will be less procyclical.

The Banking Supervision Department's approach

One of the basic principles underlying the activity of the Banking Supervision Department is that a high degree of transparency in the banking corporations' financial reports is essential in order to ensure the stability of the banking system and to maintain a high level of confidence in the banking system among the public. Therefore, the Banking Supervision Department has for many years imposed a stringent system of accounting and reporting directives on the banking system, which is based on the reporting principles prevailing in the US. The Banking Supervision Department strives to achieve a situation in which the banking corporations' financial reports conservatively reflect their financial position, and that recent relevant developments will have appropriate disclosure in the financial statements.

The Banking Supervision Department considers it important that the banking corporations maintain appropriate and conservative allowances for credit losses. As a result, the Banking Supervision Department seeks to provide guidance to the banking corporations and to monitor their activity in order to assist them in dealing with the major challenges they face and to ensure that the goals of the new guidance are achieved.

In this context, the Banking Supervision Department began preliminary discussions with the banking corporations and their accountants in 2016 with respect to the main components and challenges in the implementation of the new guidance. In February 2017, an announcement was made regarding the intention to adopt the new guidance and later, in March 2018, a directive was published requiring the banking corporations to initiate the project of implementing the new guidance and to report on a periodic basis to their boards of directors and the Banking Supervision Department on the project's progress. In May 2018, a full translation of the new guidance was published on the Bank of Israel site and in July of that same year joint working groups of the Bank of Israel, the banking corporations and their auditors were established in order to advance the process of implementing the new guidance.

As part of its activity, the Banking Supervision Department has made it clear that:

- The Banking Supervision Department will allow the various banking corporations—that are differentiated from another in size, style of management and level of complexity—to exercise a considerable amount of discretion in order for them to implement the new guidance in a way that is most appropriate to their circumstances, abilities and method of risk management. This will make it possible to significantly strengthen the connection between the allowance and risk management while at the same time carry out the implementation in a practical manner that will eliminate the need to incur excessive costs and develop complex measurement methods, which are not used by the banking corporations for risk management.
- The Banking Supervision Department will make it possible to improve the measurement methods over time, even after the initial implementation, based on conservative estimations. In this way, a more gradual and controlled implementation of the new guidance will be possible.

The initial implementation of the new guidance

The Banking Supervision Department intends to set January 2022 as the date of initial implementation. This will allow enough time for the banking corporations to prepare themselves properly and to learn from the experience accumulated in the US,[2] and will facilitate an organized and well-monitored parallel run of the new measurements methods of the allowance for credit losses and their internal controls.

In view of this effective date and the low rate of loan loss provisions recorded in recent years relative to the historical average, which is the result of the positive economic conditions, and in view of the characteristics of the banking corporations' credit portfolio, the Banking Supervision Department has carried out a review of the banking system, as follows:

- Clarified to the banking corporations the importance of maintaining an organized and well-monitored process of overall examination to determine the appropriateness of the allowance for credit losses, with an emphasis on estimating qualitative adjustments of environmental factors.
- Provided to each banking corporation specific comments as to weaknesses in their allowance for credit losses methods and how to strengthen the manner in which changes in risk are reflected in the allowances.

[2] In general, the initial implementation of the new guidance in the US is expected to be starting from January 1st, 2020.

Other sources

FASB, ASU 2016-13 - Financial Instruments – Credit Losses (Topic 326).

OCC, John C. Dugan - "Loan Loss Provisioning and Pro-cyclicality", March 2009

FED, FDIC, NCUA, OCC – "Frequently Asked Questions on the New Accounting Standard on Financial Instruments – Credit Losses", September 2017.

Table 1.1
Principle banking system indices, December 2001 to December 2018

	Ratio of market value to book value[a] (MV/BV)	Average yield spread between bonds of the banks and government bonds[b] (percentage points)	Ratio of credit to GDP[c,d] (percent)	Rate of change in balance-sheet credit to the public[d,e] (percent)	Annual loan loss provision to total credit to the public (percent)[e,f]	Liquidity coverage ratio[d,g] (percent)	Ratio of credit[f,h] to deposits	Common Equity Tier 1 capital ratio[f,i] (percent)	Equity to total balance-sheet assets[f] (percent)	Leverage ratio[f,j] (percent)	ROE[f] (percent)
2001	0.91	0.7	106.5	-	0.84		0.81		4.9		5.6
2002	0.56	0.8	102.3	-0.7	1.32		0.83		4.9		2.5
2003	0.85	0.7	101.1	-1.2	1.12		0.82		5.3		8.3
2004	1.06	0.7	97.5	0.8	0.92		0.80		5.5		12.4
2005	1.45	0.7	98.9	6.9	0.69		0.82		5.4		14.5
2006	1.33	0.6	93.7	1.8	0.52		0.80		5.9		17.3
2007	1.21	0.9	94.7	8.9	0.28		0.85		6.1		15.6
2008	0.56	2.0	98.9	10.4	0.72		0.90		5.7		0.3
2009	1.11	1.6	93.0	-1.4	0.75		0.86	7.9[k]	6.3		8.8
2010	1.06	1.0	92.7	7.2	0.41		0.91	8.2	6.7		9.8
2011	0.69	1.3	89.6	3.7	0.39		0.89	8.0	6.2		10.2
2012	0.78	1.0	86.3	2.1	0.41		0.87	8.7	6.6		7.9
2013	0.84	0.9	81.9	1.1	0.25		1.73	9.3	6.8		8.8
2014	0.72	0.9	80.6	3.2	0.16		1.69	9.2[l]	6.7		7.3
2015	0.74	0.9	80.4	5.1	0.12	111[l]	1.66	9.6	6.9	6.4[l]	9.1
2016	0.83	0.7	78.5	2.6	0.09	135	0.80	10.7	7.0	6.6	8.3
2017	0.95	0.6	78.5	3.6	0.14	125	0.80	10.9	7.2	6.7	8.8
2018	0.90	0.9	79.9	6.3	0.22	128	0.83	10.8	7.4	6.8	8.5

[a] In calculating the MV/BV ratio, the book value (BV) of the five major banks is calculated with a delay of one quarter after the market value (MV). As of December 2014, the book value includes the effect of employee rights and software expenses.
[b] Average for December of that year.
[c] Measured in relation to gross credit.
[d] Measured in relation to the entire banking system.
[e] Until December 2010—net credit to the public; from December 2011—gross credit to the public.
[f] Measured in relation to the five banking groups.
[g] Calculated on a consolidated basis, and based on end-of-period balances.
[h] Calculated in relation to net credit.
[i] Until December 31, 2013, the banking corporations presented the Core Tier 1 capital ratio, in accordance with Basel II principles. From January 1, 2014, they present the Common Equity Tier 1 capita ratio, in accordance with Basel III principles.
[j] Calculated as the ratio between Tier 1 capital and total exposures, in accordance with Basel III principles.
[k] Calculated in accordance with Basel II principles.
[l] Calculated in accordance with Basel III principles in accordance with the transition directives.
SOURCE: Banking Supervision Department based on Central Bureau of Statistics, Tel Aviv Stock Exchange, Bank of Israel, published financial statements, and reports to the Banking Supervision Department.

Table 1.2

Structure of the banking system, December 2018[a]

Bank	Balance-sheet data						Direct holdings			Size data	
	Share of total banking system assets	Share of total bank credit	Total assets	Credit to the public	Total deposits	Equity	Holdings by parties at interest[b]	Institutional holdings	Public holdings	Number of branches[c]	Number of employee posts[d]
	(Percent)		(NIS million)				(Percent)				
Leumi[e]	28.2	26.7	460,657	282,735	364,662	36,161	0.1	5.3	94.7	208	11,208
Hapoalim	28.2	27.0	460,926	286,265	352,260	37,656	15.8	5.2	79.0	229	11,023
Discount	14.6	15.8	239,176	167,078	188,916	17,669	0.0	16.6	83.4	189	8,668
Mizrahi-Tefahot	15.8	18.5	257,873	195,956	199,492	15,390	44.1	0.0	55.9	196	6,285
First International	8.2	8.0	134,120	85,160	111,697	8,413	48.3	5.6	46.1	158	4,361
Total for the five banking groups	**95.0**	**96.0**	**1,552,752**	**1,017,194**	**1,217,027**	**115,289**				**980**	**41,545**
Union Bank of Israel	2.5	2.3	41,316	24,408	31,905	2,498	74.8	0.2	25.0	36	1,193
Bank of Jerusalem	0.8	0.9	13,293	10,009	10,513	895	86.6	0.0	13.4	20	572
Dexia Israel Bank	0.4	0.4	7,122	4,679	4,078	608	6.5	12.6	80.9	1	42
Total for the independent banks	**3.8**	**3.7**	**61,731**	**39,096**	**46,496**	**4,001**				**57**	**1,807**
Total for foreign bank branches[f]	**1.3**	**0.3**	**20,656**	**3,698**	**18,400**					**6**	
Total for banking system	**100**	**100**	**1,635,139**	**1,059,987**	**1,281,923**	**119,290**				**1,043**	**43,352**

[a] Financial data for the five banking groups are presented on a consolidated basis, and the numbers of branches and of employee posts include all banks belonging to the group.

[b] A "party at interest" is defined as someone holding five percent or more of the issued share capital of a corporation or of voting rights in the corporation. In addition, the reporting on holdings of parties at interest includes the holdings of the CEO and of Directors.

[c] The number of branches includes activities abroad, performance units and extensions of parent branches.

[d] On a monthly average basis.

[e] Bank Leumi is the only banking group in the system where there is still a government holding (about 6 percent of the bank's capital).

[f] The balance-sheet data for Barclays Bank are not included in the calculation of aggregate values due to the nature of its activity.

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

Table 1.3
Main items in consolidated profit and loss statements of the five banking groups, 2016–18
(NIS millon, at current prices)

	Leumi				Hapoalim[a]				Discount			
	2016	2017	2018	% change in 2018 compared with 2017	2016	2017	2018	% change in 2018 compared with 2017	2016	2017	2018	% change in 2018 compared with 2017
Interest income	9,552	10,069	11,346	12.7	9,962	10,613	11,672	10.0	5,659	6,213	7,053	13.5
Interest expenses	2,026	2,023	2,456	21.4	2,004	2,189	2,766	26.4	1,102	1,238	1,527	23.3
Net interest income	**7,526**	**8,046**	**8,890**	**10.5**	**7,958**	**8,424**	**8,906**	**5.7**	**4,557**	**4,975**	**5,526**	**11.1**
Loan loss provisions	-125	172	519	201.7	179	202	613	203.5	469	574	540	-5.9
Net interest income after loan loss provisions	**7,651**	**7,874**	**8,371**	**6.3**	**7,779**	**8,222**	**8,293**	**0.9**	**4,088**	**4,401**	**4,986**	**13.3**
Noninterest income	**5,328**	**5,342**	**4,871**	**-8.8**	**4,917**	**4,153**	**4,868**	**17.2**	**3,410**	**3,358**	**3,494**	**4.1**
of which: Noninterest financing income	1,282	919	682	-25.8	1,163	652	1,445	121.6	754	595	586	-1.5
of which: Stocks[a]	478	90	479	432.2	329	185	403	117.8	444	233	107	-54.1
Bonds[b]	273	41	-35	-185.4	204	126	180	42.9	138	139	108	-22.3
Activity in derivative instruments[c]	-213	-1,722	2,484	-244.3	555	-951	2,324	-344.4	-291	-904	1,265	-239.9
Exchange rate differentials	700	2,501	-2,246	-189.8	-18	1,288	-1,518	-217.9	449	1,107	-900	-181.3
of which: Fees	3,887	4,052	4,121	1.7	3,617	3,338	3,318	-0.6	2,556	2,676	2,851	6.5
Total operating and other expenses	**8,500**	**8,415**	**8,337**	**-0.9**	**8,142**	**8,121**	**8,960**	**10.3**	**5,785**	**5,694**	**6,148**	**8.0**
of which: salaries and related expenses	4,778	4,591	4,544	-1.0	4,239	4,209	4,097	-2.7	3,169	3,204	3,385	5.6
Pre-tax profit	**4,479**	**4,801**	**4,905**	**2.2**	**4,554**	**4,254**	**4,201**	**-1.2**	**1,713**	**2,065**	**2,332**	**12.9**
Provision for tax on profits	1,717	1,692	1,619	-4.3	2,229	1,959	2,009	2.6	741	747	789	5.6
After tax profit	**2,762**	**3,109**	**3,286**	**5.7**	**2,325**	**2,295**	**2,192**	**-4.5**	**972**	**1,318**	**1,543**	**17.1**
Net profit attributed to shareholders	**2,791**	**3,172**	**3,257**	**2.7**	**2,628**	**2,660**	**2,595**	**-2.4**	**905**	**1,259**	**1,505**	**19.5**
Total pre-tax ROE (percent)	**14.94**	**14.79**	**14.31**		**13.38**	**11.99**	**11.44**		**12.49**	**13.78**	**14.41**	
Total after-tax ROE (percent)	**9.31**	**9.77**	**9.50**		**7.72**	**7.50**	**7.06**		**6.60**	**8.40**	**9.30**	
Total ROA (percent)	**0.69**	**0.71**	**0.71**		**0.60**	**0.59**	**0.57**		**0.43**	**0.57**	**0.65**	

Table 1.3 (cont'd.)
Main items in consolidated profit and loss statements of the five banking groups, 2016–18
(NIS millon, at current prices)

	Mizrahi-Tefahot				First International				Total for the five groups			
	2016	2017	2018	% change in 2018 compared with 2017	2016	2017	2018	% change in 2018 compared with 2017	2016	2017	2018	% change in 2018 compared with 2017
Interest income	5,311	6,222	7,359	18.3	2,526	2,704	3,001	11.0	33,010	35,821	40,431	12.9
Interest expenses	1,533	1,875	2,437	30.0	357	402	515	28.1	7,022	7,727	9,701	25.5
Net interest income	**3,778**	**4,347**	**4,922**	**13.2**	**2,169**	**2,302**	**2,486**	**8.0**	**25,988**	**28,094**	**30,730**	**9.4**
Loan loss provisions	200	192	310	61.5	80	121	166	37.2	803	1,261	2,148	70.3
Net interest income after loan loss provisions	**3,578**	**4,155**	**4,612**	**11.0**	**2,089**	**2,181**	**2,320**	**6.4**	**25,185**	**26,833**	**28,582**	**6.5**
Noninterest income	**1,862**	**1,653**	**1,967**	**19.0**	**1,480**	**1,450**	**1,637**	**12.9**	**16,997**	**15,956**	**16,837**	**5.5**
of which: Noninterest financing income	295	136	445	227.2	115	83	231	178.3	3,609	2,385	3,389	42.1
of which: Stocks[a]	6	12	17	41.7	25	11	79	618.2	1,282	531	1,085	104.3
Bonds[b]	72	43	7	-83.7	41	19	9	-52.6	728	368	269	-26.9
Activity in derivative instruments[c]	-192	-1,119	1,502	-234.2	-193	-520	582	-211.9	-334	-5,216	8,157	-
Exchange rate differentials	364	1,196	-1,081	-190.4	242	573	-439	-176.6	1,737	6,665	-6,184	-
of which: Fees	1,433	1,423	1,475	3.7	1,300	1,305	1,325	1.5	12,793	12,794	13,090	2.3
Total operating and other expenses	**3,299**	**3,611**	**4,384**	**21.4**	**2,683**	**2,607**	**2,819**	**8.1**	**28,409**	**28,448**	**30,648**	**7.7**
of which: salaries and related expenses	2,035	2,271	2,407	6.0	1,581	1,579	1,696	7.4	15,802	15,854	16,129	1.7
Pre-tax profit	**2,141**	**2,197**	**2,195**	**-0.1**	**886**	**1,024**	**1,138**	**11.1**	**13,773**	**14,341**	**14,771**	**3.0**
Income tax provision	833	806	922	14.4	398	358	408	14.0	5,918	5,562	5,747	3.3
After tax profit	**1,308**	**1,391**	**1,273**	**-8.5**	**488**	**666**	**730**	**9.6**	**7,855**	**8,779**	**9,024**	**2.8**
Net income attributed to shareholders	**1,266**	**1,347**	**1,206**	**-10.5**	**521**	**678**	**733**	**8.1**	**8,111**	**9,116**	**9,296**	**2.0**
Total pre-tax ROE (percent)	**17.25**	**16.64**	**15.47**		**12.24**	**13.74**	**14.44**		**14.14**	**13.84**	**13.52**	
Total after-tax ROE (percent)	**10.20**	**10.20**	**8.50**		**7.20**	**9.10**	**9.30**		**8.33**	**8.80**	**8.51**	
Total ROA (percent)	**0.58**	**0.57**	**0.48**		**0.41**	**0.51**	**0.54**		**0.57**	**0.61**	**0.61**	

[a] Data on the Hapoalim group do not include the Isracard group.

[b] Includes the profits/losses from investments in shares available for sale, profits from the sales of shares of affiliated companies, dividends and profits/losses from adjustments to fair value of tradable shares.

[c] Includes the profits/losses from investments in bonds held to maturity and available for sale and income/expenses realized and not yet realized from adjustments to fair value of tradable bonds.

[d] Includes derivative instruments not intended for hedging purposes (ALM instruments) and other derivative instruments.

SOURCE: Based on published financial statements.

Table 1.4

The effect of quantity[a] and price[b] on interest income and expenses, the five banking groups, 2018 compared with 2017

2018

	Quantity effect				Price effect				Net change		
	Assets side	Liabilities side	Net	Share of contribution to net interest income	Assets side	Liabilities side	Net	Share of contribution to net interest income	Assets side	Liabilities side	Contribution to net interest income
	(NIS million)			(percent)	(NIS million)			(percent)	(NIS million)		(percent)
Credit to the public / deposits of the public in Israel	1,842	120	1,722	90.6	1,469	1,290	179	9.4	3,311	1,410	1,901
Credit to the public / deposits of the public abroad	65	-38	103	56.0	509	428	81	44.0	574	390	184
Total credit to the public / deposits of the public	**1,907**	**82**	**1,825**	87.5	**1,978**	**1,718**	**260**	12.5	**3,885**	**1,800**	**2,085**
Other interest-bearing assets / liabilities in Israel	16	-101	117	27.9	647	345	302	72.1	663	244	419
Other interest-bearing assets / liabilities abroad	-221	-70	-151	-88.3	324	2	322	188.3	103	-68	171
Total other interest-bearing assets / liabilities	**-205**	**-171**	**-34**	-5.8	**971**	**347**	**624**	105.8	**766**	**176**	**590**
Total interest income / expenses	**1,702**	**-89**	**1,791**	67.0	**2,949**	**2,065**	**884**	33.0	**4,651**	**1,976**	**2,675**

2017

	Quantity effect				Price effect				Net change		
	Assets side	Liabilities side	Net	Share of contribution to net interest income	Assets side	Liabilities side	Net	Share of contribution to net interest income	Assets side	Liabilities side	Contribution to net interest income
	(NIS million)			(percent)	(NIS million)			(percent)	(NIS million)		(percent)
Credit to the public / deposits of the public in Israel	788	140	648	35.1	1,685	486	1,199	64.9	2,473	626	1,847
Credit to the public / deposits of the public abroad	-251	-80	-171	183.9	245	207	38	-40.9	-6	87	-93
Total credit to the public / deposits of the public	**537**	**65**	**472**	26.9	**1,930**	**648**	**1,282**	73.1	**2,467**	**713**	**1,754**
Other interest-bearing assets / liabilities in Israel	204	-160	364	138.9	42	144	-102	-38.9	246	-16	262
Other interest-bearing assets / liabilities abroad	-107	-55	-52	-40.6	243	63	180	140.6	136	8	128
Total other interest-bearing assets / liabilities	**97**	**-215**	**312**	80.0	**285**	**207**	**78**	20.0	**382**	**-8**	**390**
Total interest income / expenses	**634**	**-150**	**784**	36.6	**2,215**	**855**	**1,360**	63.4	**2,849**	**705**	**2,144**

[a] The quantity effect is calculated as the change in the balance-sheet balance (current year versus previous year) multiplied by the price during the current period, divided by 1000.

[b] The price effect is calculated as the change in price (current year versus previous year) multiplied by the balance-sheet balance for the same period in the previous year, divided by 1000.

SOURCE: Banking Supervision Department based on published financial statements.

Table 1.5

Average balances, interest income and expense rates, and interest rate gap in respect of assets and liabilities, the five banking groups, 2018 and 2017 (NIS million, percent)

2017								
Assets				Liabilities				
	Average yearly balance (NIS million)	Interest income	Income rate (%)		Average yearly balance (NIS million)	Interest expenses	Expense rate (%)	Interest rate gap
Credit to the public	953,103	37,063	3.89	Deposits of the public	823,885	-6,372	-0.77	3.12
Deposits at banks	20,830	277	1.33	Deposits from banks	16,826	-119	-	1.33
Deposits at central banks	192,091	465	0.24	Deposits from central banks	423	-10	-2.36	-2.12
Bonds	190,430	2,724	1.43	Bonds	87,931	-3,069	-3.49	-2.06
Other assets[a]	11,244	219	1.95	Other liabilities[a]	4,965	-136	-2.74	-0.79
Total interest-bearing assets	1,367,698	40,748	2.98	Total interest-bearing liabilities	934,030	-9,706	-1.04	1.94
Net yield on interest-bearing assets (net interest margin)[b]	1,367,698	31,042	2.27					

2016								
Assets				Liabilities				
	Average yearly balance (NIS million)	Interest income	Income rate (%)		Average yearly balance (NIS million)	Interest expenses	Expense rate (%)	Interest rate gap
Credit to the public	904,094	33,178	3.67	Deposits of the public	808,195	-4,572	-0.57	3.10
Deposits at banks	20,817	262	1.26	Deposits from banks	14,657	-79	-	1.26
Deposits at central banks	189,456	391	0.21	Deposits from central banks	93	-	-	0.21
Bonds	202,631	2,121	1.05	Bonds	93,945	-2,915	-3.10	-2.06
Other assets[a]	9,132	145	1.59	Other liabilities[a]	6,630	-164	-2.47	-0.89
Total interest-bearing assets	1,326,130	36,097	2.72	Total interest-bearing liabilities	923,520	-7,730	-0.84	1.88
Net yield on interest-bearing assets (net interest margin)[b]	1,326,130	28,367	2.14					

[a] Other liabilities and assets also include credit to the government and government deposits, and securities loaned or borrowed in repurchase agreements, among other things.

[b] The net interest margin is the ratio between net interest income and total interest-bearing assets. The margin is shown in percent.

SOURCE: Banking Supervision Department based on published financial statements.

Table 1.6

Fees and other income, and operating expenses[a], the five banking groups, 2016–18

	Amounts			Distribution			Changes compared with previous year	
	2016	2017	2018	2016	2017	2018	2017	2018
	(NIS million, at current prices)			(Percent)				
1. Fees and other income								
Income from banking services								
Account management fees	2,739	2,702	2,704	20.5	19.9	20.1	-1.4	0.1
Credit cards	2,612	2,738	2,975	19.5	20.2	22.1	4.8	8.7
Credit services and contracts	633	619	636	4.7	4.6	4.7	-2.2	2.7
Foreign trade activity and special services	387	359	353	2.9	2.6	2.6	-7.2	-1.7
Conversion differentials	1,075	1,079	1,144	8.0	8.0	8.5	0.4	6.0
Net income from credit portfolio services	108	102	96	0.8	0.8	0.7	-5.6	-5.9
Other fees[b]	387	366	358	2.9	2.7	2.7	-5.4	-2.2
Income from capital market activity								
From securities activity	2,394	2,402	2,334	17.9	17.7	17.4	0.3	-2.8
Financial products[c] distribution fees	845	879	928	6.3	6.5	6.9	4.0	5.6
Management, operational and trust fees for institutional investors	216	223	241	1.6	1.6	1.8	3.2	8.1
Total income from capital market activity	3,455	3,504	3,503	25.8	25.8	26.0	1.4	0.0
Fees from financing transactions	1,397	1,325	1,321	10.4	9.8	9.8	-5.2	-0.3
Other income[d]	595	777	358	4.4	5.7	2.7	30.6	-53.9
Total fees and other income	**13,388**	**13,571**	**13,448**	100.0	100.0	100.0	1.4	-0.9
2. Operating expenses								
Salaries and related expenses[e]	15,802	15,854	16,129	55.6	55.7	52.6	0.3	1.7
Of which: Salaries	10,793	10,711	10,930	38.0	37.7	35.7	-0.8	2.0
Maintenance and depreciation of premises and equipment	5,270	5,177	5,107	18.6	18.2	16.7	-1.8	-1.4
Amortization and write-down of intangible assets and goodwill	116	94	91	0.4	0.3	0.3	-19.0	-3.2
Other expenses	7,221	7,323	9,321	25.4	25.7	30.4	1.4	27.3
Of which: Marketing and advertising	765	715	829	2.7	2.5	2.7	-6.5	15.9
Computer expenses	878	902	1,000	3.1	3.2	3.3	2.7	10.9
Communications	622	612	587	2.2	2.2	1.9	-1.6	-4.1
Insurance	82	90	73	0.3	0.3	0.2	9.8	-18.9
Office expenses	188	181	169	0.7	0.6	0.6	-3.7	-6.6
Professional services	1,016	949	1,447	3.6	3.3	4.7	-6.6	52.5
Total operating expenses	**28,409**	**28,448**	**30,648**	100.0	100.0	100.0	0.1	7.7

a Excluding Isracard data.

b Includes mainly margin and collection fees on credit from the Finance Ministry, conversion and other differentials.

c Within the framework of the Bachar reform, the banks began to charge a distribution fee. The distribution fee ceiling with regard to mutual funds is currently 0.2 percent of the assets in funds that focus on investments in government or low-risk bonds (Type 1 fund), 0.1 percent of assets in money market funds (Type 4 fund), and 0.35 percent of assets in other funds (Type 3 funds). The fee ceiling for provident funds and pension funds is 0.25 percent of assets in the fund.

d Includes profit from the realization of assets received in respect of the discharge of credit, management fees from related companies and other income.

e Includes payroll tax, severance pay, benfits, pension and national insurance.

SOURCE: Based on published financial statements.

Table 1.7

Unit output cost[a] and efficiency ratio[b] of the banking corporations in Israel, 2014–18

(percent)

	Year	Leumi	Hapoalim	Discount	Mizrahi-Tefahot	First International	**Five banking groups**	Union	Jerusalem	**Total banking system**
Unit output cost	2014	2.43	2.05	3.15	1.61	2.55	**2.31**	2.09	2.56	**2.30**
	2015	2.17	1.81	2.78	1.58	2.23	**2.07**	2.05	2.58	**2.06**
	2016	1.99	1.85	2.72	1.50	2.12	**1.99**	2.46	2.72	**2.00**
	2017	1.89	1.80	2.58	1.54	1.98	**1.92**	2.15	2.91	**1.92**
	2018	1.83	1.96	2.67	1.76	2.09	**2.01**	2.25	3.01	**2.02**
Efficiency ratio	2014	74.9	64.9	87.1	60.9	77.3	**72.6**	87.9	75.8	**72.8**
	2015	65.9	59.6	78.7	59.8	77.6	**66.4**	87.6	76.7	**66.9**
	2016	66.1	63.2	72.6	58.5	73.5	**66.1**	95.4	75.7	**66.8**
	2017	62.9	64.6	68.3	60.2	69.5	**64.6**	77.3	81.9	**65.1**
	2018	60.6	65.1	68.2	63.6	68.4	**64.4**	81.1	72.4	**64.9**

[a] The ratio between total operating and other expenses and the average balance of assets (average cost).

[b] The ratio between total operating and other expenses and total net interest and noninterest income (cost-to-income)

SOURCE: Based on published financial statements.

Table 1.8

Expenses of the five banking groups in respect of employees[a], 2000–18

(Reported amounts[b], in current prices)

Year	Average number of employee posts[c]	Salaries		Related expenses in respect of employees[d]		Salaries and related expenses	
		Total	Per employee post	Total	Per employee post	Total	Per employee post
		(NIS million)	(NIS thousand)	(NIS million)	(NIS thousand)	(NIS million)	(NIS thousand)
2000	39,251	7,220	184	3,557	91	10,777	275
2001	39,753	7,231	182	3,560	90	10,791	271
2002	39,531	6,819	172	3,976	101	10,795	273
2003	38,427	7,260	189	3,566	93	10,826	282
2004	38,170	7,898	207	3,681	96	11,579	303
2005	40,029	8,595	215	4,283	107	12,878	322
2006	42,200	9,561	227	5,354	127	14,915	353
2007	44,286	9,798	221	4,718	107	14,516	328
2008	46,628	9,015	193	5,705	122	14,720	316
2009	47,097	9,640	205	4,378	93	14,018	298
2010	47,818	10,336	216	5,280	110	15,616	327
2011	48,344	10,717	222	5,814	120	16,531	342
2012	48,010	10,872	226	6,389	133	17,261	360
2013	47,577	11,336	238	6,363	134	17,699	372
2014	46,889	11,042	235	7,286	155	18,328	391
2015	45,714	11,506	252	5,941	130	17,447	382
2016	42,496	10,793	254	5,009	118	15,802	372
2017	41,219	10,711	269	5,143	125	15,854	385
2018	40,245	10,930	281	5,199	129	16,129	401

[a] Beginning in 2016, the data do not include the Isracard group, and include a reclassification of expenses in respect of pension and

Table 1.9

Number of employee posts and expenses by annual wage level[a], the five banking groups, 2017 and 2018

	2017		2018		Annual rate of change (percent)	
	Number of employee posts	Salaries and related expenses (NIS million)	Number of employee posts	Salaries and related expenses (NIS million)	Number of posts	Salary expenses
Active employees in Israel, Annual wage levels (NIS thousand)						
Up to 60	89	3	15	1	-83.1	-81.3
60–120	4,186	419	3,495	361	-16.5	-13.8
120–240	15,093	2,909	14,856	2,648	-1.6	-9.0
240–360	11,471	3,335	11,194	3,295	-2.4	-1.2
360–600	8,541	3,830	8,898	4,049	4.2	5.7
600–1,000	1,924	1,496	2,057	1,463	6.9	-2.2
More than 1,000	265	409	313	473	18.1	15.5
Total salary and related expenses attributed to active employees in Israel	**41,569**	**12,400**	**40,828**	**12,289**	**-1.8**	**-0.9**
of which: Expenses for manpower employees, annual wage levels (NIS thousand)	2,164	867	2,160	816	-0.2	-5.8
Up to 120	543	60	471	51	-13.3	-14.6
More than 120	1,621	807	1,689	765	4.2	-5.2
Salary and related expenses not attributed to active employees in Israel						
of which: Expenses for pension and benefits		552		234		-57.7
Payroll tax		1,894		1,929		1.8
Other related expenses		808		1,036		28.3
Expenses in respect of updating actuarial reserves		981		137		-86.0
Expenses derived from payments based on nonattributable shares		95		67		-29.2
Total Salary and related expenses not attributed to active employees in Israel		**4,330**		**3,402**		**-21.4**
Bank employees at offices abroad	1,983	1,266	1,901	1,281	-4.1	1.2
Wage expenses capitalized to assets	-1,014	-564	-1,189	-522	17.3	-7.3
Total	**42,538**	**17,434**	**41,540**	**16,450**	**-2.3**	**-5.6**

a The data concerning salaries and related expenses for 2018 include a reclassification of expenses in respect of pension and benefits after the end of employment in accordance with the circular published by the Banking Supervision Department in January 2018 on "Improvement of the presentation of expenses in respect of pension and other benefits upon completion of employment."

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

Table 1.10

Outstanding credit to the public, by principal industries[a], the five banking groups, 2017 and 2018

	Total balance of credit risk[b]					Balance-sheet credit[c] (debts)				
	Balance[d]		Distribution of credit to the public		Change in credit	Balance[d]		Distribution of credit to the public		Change in credit
	2017	2018	2017	2018	2018	2017	2018	2017	2018	2018
	(NIS million)		(percent)		(percent)	(NIS million)		(percent)		(percent)
Borrower activity in Israel	**1,249,428**	**1,324,091**	**89.9**	**89.4**	**6.0**	**878,141**	**929,292**	**91.9**	**91.4**	**5.8**
Business sector	**676,709**	**716,607**	**48.7**	**48.4**	**5.9**	**417,103**	**446,222**	**43.7**	**43.9**	**7.0**
Agriculture	7,420	7,541	0.5	0.5	1.6	5,997	6,038	0.6	0.6	0.7
Manufacturing	88,382	92,927	6.4	6.3	5.1	51,081	52,463	5.3	5.2	2.7
Mining and quarrying	5,565	6,327	0.4	0.4	13.7	3,582	3,772	0.4	0.4	5.3
Construction and real estate	242,514	248,032	17.5	16.8	2.3	127,924	142,039	13.4	14.0	11.0
Of which: Construction	173,832	174,862	12.5	11.8	0.6	68,682	79,293	7.2	7.8	15.4
Real estate	68,682	73,170	4.9	4.9	6.5	59,242	62,746	6.2	6.2	5.9
Electricity and water	19,303	20,852	1.4	1.4	8.0	10,451	11,389	1.1	1.1	9.0
Commerce	100,996	105,548	7.3	7.1	4.5	77,297	82,330	8.1	8.1	6.5
Tourism	18,662	18,577	1.3	1.3	-0.5	16,149	15,953	1.7	1.6	-1.2
Transport and storage	25,754	28,174	1.9	1.9	9.4	20,937	20,922	2.2	2.1	-0.1
Communications and computer services	17,204	17,757	1.2	1.2	3.2	11,432	11,483	1.2	1.1	0.4
Financial services	87,378	102,739	6.3	6.9	17.6	44,290	49,106	4.6	4.8	10.9
Other business services	37,908	41,222	2.7	2.8	8.7	27,631	29,323	2.9	2.9	6.1
Public and community services	25,623	26,911	1.8	1.8	5.0	20,332	21,404	2.1	2.1	5.3
Private individuals	**572,719**	**607,484**	**41.2**	**41.0**	**6.1**	**461,038**	**483,070**	**48.3**	**47.5**	**4.8**
Of which: Housing loans	327,511	354,240	23.6	23.9	8.2	313,875	334,075	32.9	32.8	6.4
Nonhousing loans[e]	245,208	253,244	17.7	17.1	3.3	147,163	148,995	15.4	14.6	1.2
Borrowers' activity abroad	**139,686**	**156,278**	**10.1**	**10.6**	**11.9**	**77,215**	**87,902**	**8.1**	**8.6**	**13.8**
Total	**1,389,114**	**1,480,369**	**100.0**	**100.0**	**6.6**	**955,356**	**1,017,194**	**100.0**	**100.0**	**6.5**

[a] The industries are classified differently than the supervisory activity segments.
[b] Includes balance-sheet and non-balance-sheet credit risk.
[c] Includes credit to the public, excludes bonds and securities borrowed or purchased under reverse repurchase agreements.
[d] The data are net of Isracard activity.
[e] During 2018, Leumi reclassified and recalibrated its credit data. These changes led to a decline in nonhousing credit to private individuals.
SOURCE: Banking Supervision Department based on published financial statements.

Table 1.11

Supervisory Activity Segments[a] - Balance-Sheet Balances and Performance Indices, the Five Banking Groups, Activity in Israel, 2018 and 2017[b]

	Household[c]					Business[d]				
	Housing	Credit cards	Other consumer	Total consumer	Total household	Small and micro businesses	Medium businesses	Large businesses	Total business	Total activity in Israel[e]
2018										
(NIS million)										
Outstanding credit to the end of the reporting period	324,431	38,851	112,485	151,336	475,767	194,117	79,725	191,606	465,448	961,083
Balance of deposits to the end of the reporting period	-	94	548,781	548,875	548,875	189,612	79,284	146,183	415,079	1,140,384
Balance of risk assets to the end of the reporting period	189,714	33,969	108,054	142,023	331,737	190,059	97,726	233,379	521,164	973,217
Net profit	1,507	494	-961	-467	1,040	2,256	1,244	2,575	6,075	9,817
(percent)										
Outstanding impaired debt and debt more than 90 days past due divided by outstanding credit	0.99	0.23	1.42	1.12	1.03	1.73	0.81	1.09	1.31	1.20
Return on assets (net profit divided by the average balance of assets)	0.48	1.36	-0.86	-0.32	0.23	1.21	1.65	1.41	1.37	0.70
Net interest margin (net interest income divided by the average balance of assets and liabilities)	2.25	4.15	2.41	2.51	2.43	3.99	2.94	2.37	3.18	2.06
Loan loss provisions divided by the credit balance to the end of the period	0.04	0.66	0.85	0.80	0.28	0.50	-0.27	-0.07	0.13	0.20
2017										
(NIS million)										
Outstanding credit to the end of the reporting period	304,847	37,649	111,379	149,028	453,875	182,864	74,348	174,837	432,049	905,837
Balance of deposits to the end of the reporting period	-	87	511,847	511,934	511,934	166,332	74,454	146,430	387,216	1,106,033
Balance of risk assets to the end of the reporting period	177,122	33,310	107,396	140,706	317,828	181,452	92,996	217,658	492,106	929,257
Net profit	1,200	424	-825	-401	799	1,884	1,082	2,899	5,865	9,014
(percent)										
Outstanding impaired debt and debt more than 90 days past due divided by outstanding credit	0.94	0.14	1.42	1.10	0.99	1.76	1.43	1.61	1.64	1.32
Return on assets (net profit divided by the average balance of assets)	0.40	1.18	-0.75	-0.28	0.18	1.07	1.51	1.75	1.42	0.67
Net interest margin (net interest income divided by the average balance of assets and liabilities)	1.98	3.57	2.26	2.35	2.23	4.05	2.70	2.33	3.14	1.95
Loan loss provisions divided by the credit balance to the end of the period	0.00	0.51	0.94	0.83	0.28	0.60	-0.29	-0.56	-0.02	0.12

[a] Beginning with the financial statement for the first quarter of 2016, the banks are required to prepare disclosures for the supervisory activity segments according to the new rules adapted to the new, uniform and comparable definitions set out by the Banking Supervision Department, which are mainly based on the classification of customers by their volume of activity. There are also additional requirements for separate disclosure for the institutional investors segment and for the financial management segment, as well as for disclosures of balance-sheet balances to the end of the reporting period (credit and deposits) and balances of impaired credit and nonimpaired credit 90 days past due. The implementation of the Directive had no material effect on the banks' financial statements, other than the manner of presentation and disclosure.

[b] Beginning with the financial statements for the first quarter of 2018, Discount Bank reclassified the business segments, which led to an increase in the number of borrowers in the large business segment.

[c] Activity in Israel only.

[d] Micro business - Volume of activity totaling less than NIS 10 million; Small business - Volume of activity totaling between NIS 10 million and NIS 50 million; Medium business - Volume of activity totaling between NIS 50 and NIS 250 million; Large business - Volume of activity totaling over NIS 250 million.

[e] Including institutional entities, the financial management segment, and the "others" segment.

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

Table 1.12

Indices of balance-sheet credit quality, by principal industry, the five banking groups, 2017 and 2018

(percent)

	Impaired loans as a share of total balance-sheet credit to the industry		Loan loss provisions as a share of total balance-sheet credit to the industry		Net write-offs as a share of total balance-sheet credit to the industry		Allowance for credit losses as a share of total balance-sheet credit to the industry		Coverage ratio: Allowance for credit losses as a share of impaired loans to the industry	
	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
Borrowers' activity in Israel	**1.1**	**0.9**	**0.14**	**0.22**	**0.19**	**0.16**	**1.35**	**1.33**	**127.9**	**144.9**
Business Sector	**1.9**	**1.6**	**-0.01**	**0.15**	**0.16**	**0.10**	**1.78**	**1.72**	**94.5**	**108.9**
Agriculture	1.6	1.1	0.03	-0.45	-0.03	-0.26	1.80	1.39	112.5	121.7
Manufacturing	2.3	2.5	2.49	2.67	0.07	-0.12	2.49	2.67		104.9
Mining and quarrying	0.7	0.3	0.84	0.82	-1.26	0.03	0.84	0.82		
Construction and real estate	2.1	1.9	-0.58	-0.24	-0.41	-0.25	1.68	1.52	78.69	90.46
Of which : Construction	2.1	1.6	-0.23	-0.08	-0.17	-0.16	1.88	1.67	91.6	105.6
Real estate	2.2	1.8	-0.98	-0.43	-0.68	-0.36	1.45	1.32	65.0	73.7
Electricity and water	2.7	2.0	0.48	0.16	0.11	0.09	1.60	1.57	58.4	77.8
Commerce	1.7	1.3	0.73	0.32	1.10	0.47	2.44	2.15	142.5	161.6
Tourism	3.0	2.4	0.49	0.65	0.41	0.28	1.10	1.49	36.9	61.7
Transportation and storage	1.6	1.1	0.45	0.44	0.28	0.31	0.95	1.07	58.5	93.7
Communications and computer services	6.2	3.5	2.55	2.13	3.16	1.69	3.37	3.76	54.5	108.3
Financial services	0.9	1.0	-0.94	-0.05	-0.75	-0.01	1.14	1.07	127.0	104.0
Other business services	0.8	1.0	0.61	0.75	0.51	0.56	1.51	1.61	195.3	161.4
Public and community services	0.5	0.5	0.18	0.18	0.13	0.08	0.75	0.80	161.1	156.4
Private individuals	**0.3**	**0.3**	**0.27**	**0.28**	**0.22**	**0.22**	**0.95**	**0.97**		
Of which: Housing loans	0.0	0.0	0.00	0.04	0.01	0.01	0.54	0.53		
Nonhousing loans	0.9	0.9	0.84	0.81	0.66	0.69	1.84	1.93		
Borrowers' activity abroad	**1.81**	**1.40**	**0.06**	**0.12**	**0.25**	**0.03**	**0.25**	**0.03**		

SOURCE: Based on published financial statements.

Table 1.13
Indices of credit portfolio quality of the five banking groups, 2013–18
(percent)

	Year	Leumi	Hapoalim	Discount	Mizrahi-Tefahot	First International	The five groups
Loan loss provision as a share of total balance-sheet credit to the public	2013	0.05	0.17	0.25	0.10	0.07	0.13
	2014	0.09	0.08	0.07	0.06	0.06	0.08
	2015	0.04	0.09	0.07	0.07	0.01	0.06
	2016	-0.05	0.07	0.33	0.12	0.10	0.09
	2017	0.06	0.07	0.38	0.11	0.15	0.13
	2018	0.18	0.21	0.32	0.16	0.19	0.21
Net write-offs as a share of total balance-sheet credit to the public	2014	0.06	0.03	0.12	0.05	0.03	0.05
	2015	0.10	0.04	0.06	0.05	0.07	0.06
	2016	0.03	0.19	0.27	0.09	0.09	0.13
	2017	0.15	0.21	0.39	0.09	0.17	0.19
	2018	0.09	0.19	0.25	0.11	0.16	0.15
Allowance for credit losses as a share of total balance-sheet credit to the public	2013	0.79	0.77	0.90	0.47	0.59	0.73
	2014	0.78	0.79	0.84	0.45	0.63	0.72
	2015	0.69	0.80	0.79	0.44	0.56	0.68
	2016	1.32	1.56	1.50	0.83	1.08	1.31
	2017	1.18	1.36	1.40	0.81	1.03	1.18
	2018	1.24	1.31	1.36	0.80	1.02	1.18
Problematic loans as a share of total balance-sheet credit to the public	2015	1.57	1.75	1.77	0.69	1.19	1.47
	2016	2.90	2.89	3.55	1.44	2.29	2.67
	2017	2.72	2.37	2.80	1.39	1.78	2.30
	2018	2.46	2.30	2.23	1.52	1.89	2.15
Impaired loans and non-impaired loans 90 days or more past due as a share of total balance-sheet credit to the public	2013	1.41	1.77	1.86	0.85	0.92	1.45
	2014	1.12	1.37	1.34	0.60	0.75	1.11
	2015	0.92	1.12	1.30	0.57	0.68	0.95
	2016	1.75	1.84	2.37	0.95	1.02	1.66
	2017	1.60	1.31	1.68	1.02	0.92	1.36
	2018	1.36	1.23	1.24	1.23	0.83	1.24
Allowance for credit losses as a share of impaired loans and non-impaired loans more than 90 days past due	2013	56.4	43.6	48.7	55.4	65.0	50.5
	2014	69.6	57.8	62.4	75.4	83.7	65.2
	2015	75.5	71.3	61.1	76.5	82.6	71.7
	2016	75.0	84.9	63.4	87.7	106.1	78.6
	2017	74.0	103.2	83.2	79.8	112.2	86.7
	2018	91.4	106.5	110.0	65.2	122.3	95.4

SOURCE: Banking Supervision Department based on published financial statements.

Table 1.14

Distribution of capital and capital ratios at the five banking groups[a], December 2017 and December 2018

	Leumi		Hapoalim		Discount		Mizrahi-Tefahot		First International		The five groups	
	Dec 2017	Dec 2018	Dec 2017	Dec 2018	Dec 2017	Dec 2018	Dec 2017	Dec 2018	Dec 2017	Dec 2018	Dec 2017	Dec 2018
	(NIS million)											
Equity[b]	33,553	36,161	36,004	37,656	16,068	17,669	14,327	15,390	8,046	8,413	107,998	115,289
Common Equity Tier 1 capital[c]	34,653	35,190	36,582	38,004	16,003	17,504	14,333	15,172	8,033	8,321	109,604	114,191
Tier 1 capital[c]	34,653	35,190	37,803	38,981	16,893	18,216	14,333	15,172	8,033	8,321	111,715	115,880
Tier 2 capital[c]	10,811	11,033	9,728	10,042	5,395	5,140	5,251	5,515	2,749	2,713	33,934	34,443
Total capital base	45,464	46,223	47,531	49,023	22,288	23,356	19,584	20,687	10,782	11,034	145,649	150,323
Total balance sheet	450,838	460,657	454,424	460,926	221,221	239,176	239,572	257,873	135,717	134,120	1,501,772	1,552,752
Credit risk	277,344	288,837	295,986	312,900	144,292	154,522	130,525	140,572	70,445	71,847	918,592	968,678
Market risks	4,464	6,295	5,114	3,429	3,443	3,412	1,605	1,494	725	889	15,351	15,519
Operational risk	21,484	22,713	23,672	24,268	12,335	12,987	8,394	9,561	6,201	6,401	72,086	75,930
Total risk-weighted assets	303,292	317,845	324,772	340,597	160,070	170,921	140,524	151,627	77,371	79,137	1,006,029	1,060,127
	(Percent)											
Common Equity Tier 1 capital ratio	**11.4**	**11.1**	**11.3**	**11.2**	**10.0**	**10.2**	**10.2**	**10.0**	**10.4**	**10.5**	**10.9**	**10.8**
Tier 1 capital ratio	11.4	11.1	11.6	11.4	10.6	10.7	10.2	10.0	10.4	10.5	11.1	10.9
Tier 2 capital ratio	3.6	3.5	3.0	2.9	3.4	3.0	3.7	3.6	3.6	3.4	3.4	3.2
Total capital adequacy ratio	**15.0**	**14.5**	**14.6**	**14.4**	**13.9**	**13.7**	**13.9**	**13.6**	**13.9**	**13.9**	**14.5**	**14.2**

[a] The banking corporations allocate capital in accordance with Basel III rules, as per the transition directives.

[b] Including minority interest in accordance with the groups' balance sheets.

[c] After deductions.

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

Table 1.15
Main capital indices of the five banking groups, December 2014 to December 2018
(percent)

	Year	Leumi	Hapoalim	Discount	Mizrahi-Tefahot	First Int'l	Five Groups
Common Equity Tier 1 capital ratio[a]	2014	9.1	9.3	9.4	9.1	9.7	9.2
	2015	9.6	9.6	9.5	9.5	9.8	9.6
	2016	11.2	11.0	9.8	10.1	10.1	10.7
	2017	11.4	11.3	10.0	10.2	10.4	10.9
	2018	11.1	11.2	10.2	10.0	10.5	10.8
The ratio between credit risk assets and total exposure to credit[b]	2014	66	68	60	56	56	63
	2015	63	66	60	55	54	61
	2016	57	59	60	51	53	57
	2017	57	58	61	52	51	57
	2018	59	61	61	52	52	58
Leverage ratio[c]	2015	6.3	7.1	6.5	5.3	5.4	6.4
	2016	6.8	7.2	6.6	5.3	5.5	6.6
	2017	6.9	7.4	6.8	5.5	5.5	6.7
	2018	7.1	7.5	6.9	5.4	5.8	6.8
Equity to total balance-sheet assets	2014	6.6	7.7	6.3	5.7	6.0	6.7
	2015	7.0	7.7	6.6	5.9	5.8	6.9
	2016	7.2	7.6	6.8	5.8	5.9	7.0
	2017	7.4	7.9	7.3	6.0	5.9	7.2
	2018	7.8	8.2	7.4	6.0	6.3	7.4

[a] In Basel III terms, as per the transition directives.
[b] Calculated as the ratio between credit risk assets and the value of exposure after conversion to credit.
[c] Calculated as the ratio between Common Equity Tier 1 capital and total exposures, in accordance with the Basel III rules.
SOURCE: Based on published financial statements and reports to the Banking Supervision Department.

Table 1.16

Distribution of the holdings of bank shares and dividends distributed, Israeli banks[a], 2018–19

	Rate of holdings by parties at interest, March 31, 2019	Rate of holdings by the public[b], March 31, 2019	Dividends distributed in 2018	Dividends distributed net of holdings by parties at interest	Dividends as a share of net profit
	(percent)		(NIS million)		(percent)
Hapoalim	16	84	496	418	19
Leumi	0	100	1369	1368	42
Mizrahi-Tefahot	44	56	247	138	20
Discount	0	100	118	118	8
First International	48	52	355	183	48
Union	75	25	0	0	0
Jerusalem	87	13	30	4	34
Total banking system	**17**	**83**	**2615**	**2229**	**28**

[a] By bank.

[b] Including holdings through institutional investors.

SOURCE: Based on the "Maya" system and reports to the Banking Supervision Department.

Table 1.17

Balance sheet of the total Israeli banking system[a], 2016–18

	In current prices			Rate of change during 20117	Rate of change during 2018	Distribution		
	2016	2017	2018			2016	2017	2018
	(NIS million)			(Percent)		(Percent)		
Assets								
Cash and deposits at banks	263,963	290,351	277,653	10.0	-4.4	17.3	18.5	17.2
Of which:								
Cash[b]	243,540	267,200	252,856	9.7	-5.4	92.3	92.0	91.1
Deposits at commercial banks	20,434	23,147	24,797	13.3	7.1	7.7	8.0	8.9
Securities	227,361	204,830	199,412	-9.9	-2.6	14.9	13.1	12.4
Of which:								
Securities provided as collateral to lenders	17,165	17,007	12,814	-0.9	-24.7	7.5	8.3	6.4
At fair value	200,622	118,844	117,700	-40.8	-1.0	88.2	58.0	59.0
Securities borrowed or bought under reverse repurchase agreements	3,058	4,504	4,196	47.3	-6.8	0.2	0.3	0.3
Credit to the public	**963,370**	**994,621**	**1,056,290**	**3.2**	**6.2**	**63.0**	**63.5**	**65.4**
Allowance for credit losses	12,344	11,745	12,441	-4.9	5.9	0.8	0.8	0.8
Net credit to the public	951,026	982,877	1,043,849	3.3	6.2	62.2	62.8	64.7
Of which:								
Unindexed local currency	669,220	701,272	742,087	4.8	5.8	70.4	71.3	71.1
Local currency indexed to the CPI	174,734	171,096	176,743	-2.1	3.3	18.4	17.4	16.9
Foreign-currency indexed and denominated	117,720	108,758	123,149	-7.6	13.2	12.4	11.1	11.8
Of which: In dollars	93,466	87,099	96,597	-6.8	10.9	79.4	80.1	78.4
Nonmonetary items	1,432	1,750	1,871	22.2	6.9	0.2	0.2	0.2
Credit to governments	4,925	5,631	7,876	14.3	39.9	0.3	0.4	0.5
Investments in subsidiary and affiliated companies	14,411	15,184	16,616	5.4	9.4	0.9	1.0	1.0
Premises and equipment	11,772	11,430	11,552	-2.9	1.1	0.8	0.7	0.7
Intangible assets	508	498	503	-1.9	0.9	0.0	0.0	0.0
Assets in respect of derivative instruments	31,262	29,691	32,300	-5.0	8.8	2.0	1.9	2.0
Other assets	21,038	20,918	20,527	-0.6	-1.9	1.4	1.3	1.3
Total assets	**1,529,324**	**1,565,913**	**1,614,483**	**2.4**	**3.1**	**100**	**100**	**100**
Liabilities and equity								
Deposits of the public	**1,190,538**	**1,229,250**	**1,263,523**	**3.3**	**2.8**	**77.8**	**78.5**	**78.3**
Of which:								
Unindexed local currency	786,137	850,041	867,907	8.1	2.1	66.0	69.2	68.7
Local currency indexed to the CPI	64,552	61,658	56,561	-4.5	-8.3	5.4	5.0	4.5
Foreign-currency indexed and denominated	338,083	315,540	337,077	-6.7	6.8	28.4	25.7	26.7
Of which: In dollars	270,817	260,775	285,350	-3.7	9.4	80.1	82.6	84.7
Deposits from banks	15,626	17,407	20,305	11.4	16.6	1.0	1.1	1.3
Deposits from governments	2,169	2,086	2,248	-3.8	7.8	0.1	0.1	0.1
Securities lent or sold under repurchase agreements	5,156	2,868	1,667	-44.4	-41.9	0.3	0.2	0.1
Bonds and subordinated notes	105,542	95,341	100,436	-9.7	5.3	6.9	6.1	6.2
Liabilities in respect of derivative instruments	32,296	29,949	30,466	-7.3	1.7	2.1	1.9	1.9
Other liabilities	72,112	77,002	76,548	6.8	-0.6	4.7	4.9	4.7
Of which: Allowance for credit losses in respect of off-balance-sheet credit instruments	1,543	1,439	1,386	-6.7	-3.7	2.1	1.9	1.8
Total liabilities	**1,423,439**	**1,453,903**	**1,495,193**	**2.1**	**2.8**	**93.1**	**92.8**	**92.6**
Minority interest	1,862	1,933	2,515	3.8	30.1	0.1	0.1	0.2
Shareholders equity	104,023	110,077	116,775	5.8	6.1	6.8	7.0	7.2
Total equity	105,885	112,010	119,290	5.8	6.5	6.9	7.2	7.4
Total liabilities and equity	**1,529,324**	**1,565,913**	**1,614,483**	**2.4**	**3.1**	**100**	**100**	**100**

[a] On a consolidated basis. Includes the five banking groups (Leumi, Hapoalim, Discount, First International and Mizrahi-Tefahot), and the three independent banks (Union Bank, Bank of Jerusalem and Dexia Bank).

[b] Including deposits at the Bank of Israel.

SOURCE: Based on published financial statements.

Table 1.18

Securities portfolio of the total banking system, December 2017 and December 2018

		Bank Leumi				Bank Hapoalim				Bank Discount			
		December 2017		December 2018		December 2017		December 2018		December 2017		December 2018	
		Book value	Distribution	Book value	Distribution	Book value	Distribution	Book value	Distribution	Book value	Distribution	Book value	Distribution
		(NIS million)	(Percent)	(NIS million)	(Percent)	(NIS million)	(Percent)	(NIS million)	(Percent)	(NIS million)	(Percent)	(NIS million)	(Percent)
Securities	Of Israeli government	39,872	51.6	38,584	51.7	40,597	62.1	32,639	58.2	20,736	63.4	23,989	63.3
	Of foreign governments	10,837	14.0	5,956	8.0	13,168	20.1	10,489	18.7	588	1.8	768	2.0
	Of Israeli financial institutions	101	0.1	119	0.2	496	0.8	512	0.9	98	0.3	107	0.3
	Of foreign financial institutions	9,795	12.7	9,839	13.2	6,327	9.7	8,273	14.7	615	1.9	1,356	3.6
	Asset-backed or mortgage-backed securities[a]	9,150	11.8	11,300	15.2	-	-	-	-	6,845	20.9	7,383	19.5
	Other - Israeli	181	0.2	532	0.7	402	0.6	141	0.3	232	0.7	210	0.6
	Other - foreign	3,129	4.0	4,683	6.3	2,226	3.4	2,541	4.5	2,701	8.3	3,046	8.0
	Stocks	4,234	5.5	3,558	4.8	2,200	3.4	1,521	2.7	888	2.7	1,039	2.7
	Total securities, all types	**77,299**	**100**	**74,571**	**100**	**65,416**	**100**	**56,116**	**100**	**32,703**	**100**	**37,898**	**100**

		Mizrahi-Tefahot				First International				Total system[b]			
		December 2017		December 2018		December 2017		December 2018		December 2017		December 2018	
		Book value	Distribution	Book value	Distribution	Book value	Distribution	Book value	Distribution	Book value	Distribution	Book value	Distribution
		(NIS million)	(Percent)	(NIS million)	(Percent)	(NIS million)	(Percent)	(NIS million)	(Percent)	(NIS million)	(Percent)	(NIS million)	(Percent)
Securities	Of Israeli government	7,612	75.1	8,625	77.8	5,603	54.7	7,692	61.1	120,463	58.8	116,182	58.3
	Of foreign governments	2,233	22.0	1,862	16.8	1,932	18.9	2,050	16.3	29,977	14.6	21,462	10.8
	Of Israeli financial institutions	-	-	-	-	138	1.3	159	1.3	1,172	0.6	1,455	0.7
	Of foreign financial institutions	173	1.7	484	4.4	539	5.3	630	5.0	17,595	8.6	20,806	10.4
	Asset-backed or mortgage-backed securities[a]	-	-	-	-	300	2.9	436	3.5	16,360	8.0	19,182	9.6
	Other - Israeli	-	-	-	-	656	6.4	602	4.8	2,310	1.1	2,359	1.2
	Other - foreign	16	0.2	18	0.2	874	8.5	799	6.3	9,127	4.5	11,306	5.7
	Stocks	99	1.0	92	0.8	196	1.9	227	1.8	7,827	3.8	6,661	3.3
	Total securities, all types	**10,133**	**100**	**11,081**	**100**	**10,238**	**100**	**12,595**	**100**	**204,830**	**100**	**199,412**	**100**

[a] Mortgage-backed securities (MBS) issued by US government agencies (FNMA, FHLMC and GNMA) are included in the "Asset-backed or mortgage-backed" item whether there is a government guarantee for them or not.

[b] Including the five banking groups as well as Union Bank, Bank of Jerusalem, and Dexia Israeli Bank.

SOURCE: Based on published financial statements.

Table 1.19

Transactions in off-balance-sheet financial instruments where the par value reflects credit risk, total banking system[a], 2017 and 2018

	End of year balance		Rate of	Distribution	
	2017	2018	change	2017	2018
	(NIS million)			(percent)	
Documentary credit	4,656	4,683	0.6	1.0	1.0
Credit guarantees	16,662	16,623	-0.2	3.6	3.4
Guarantees for home purchases	67,137	65,621	-2.3	14.6	13.4
Other guarantees and liabilities	63,216	70,054	10.8	13.8	14.3
Unutilized credit card facilities	78,542	85,595	9.0	17.1	17.5
Unutilized credit facilities to the public	86,053	91,863	6.8	18.8	18.7
Irrevocable commitments to provide credit that has not yet been extended	91,262	102,495	12.3	19.9	20.9
Commitments to issue guarantees	50,976	53,430	4.8	11.1	10.9
Total	**458,503**	**490,365**	**6.9**	**100**	**100**

[a] The five banking groups, Union Bank, Bank of Jerusalem and Dexia Israel Bank.

SOURCE: Based on published financial statements.

Table 1.20
Distribution of the balance of derivative instruments, total banking system[a], 2017 and 2018
(NIS million)[b]

	By type of instrument		Rate of change compared with 2017	By type of transaction			Rate of change compared with 2017
	2017	2018			2017	2018	
Interest rate contracts	1,165,690	1,461,151	25.3	Hedging derivatives[d]	20,942	27,597	31.8
Exchange rate contracts	821,570	937,781	14.1	ALM derivatives[d,e]	1,965,737	2,294,512	16.7
Other contracts[c]	425,232	381,740	-10.2	Other derivatives[f]	425,813	458,564	7.7
Total	**2,412,492**	**2,780,673**	**15.3**	**Total**	**2,412,492**	**2,780,673**	**15.3**

[a] Includes the five banking groups and the independent banks (Union, Jerusalem and Dexia).
[b] In notional amounts, at current prices.
[c] Contracts in respect of shares, commodity contracts and other contracts.
[d] Excluding credit derivatives.
[e] Derivatives constituting part of the bank's assets and liabilities, which were not designated for hedging purposes.
[f] Including credit derivatives and currency swaps.
SOURCE: Based on published financial statements.

CHAPTER 2

MAIN CHANGES IN THE BANKING SYStEM

Israel's financial service system, and its banking system in particular, have been going through multiple structural and regulatory changes in recent years, all meant to enhance competition for customers—especially households and small businesses. Concurrent with the changes are advanced technological developments in financial services that benefit consumers. These, too, are expected to amplify the competitiveness and allow nonbanking players to enter the financial world and compete with banks. Amid these developments, the Bank of Israel is continuing to spearhead a series of regulatory measures, projects, and structural changes in the banking system. Foremost among them is the separation of credit card companies from the banks and providing infant industry protection for these firms so that they may cement their status as competitive entities; the establishment of a credit data system in order to eliminate information barriers (launched in April 2019); the elimination of entrance barriers for new banks and stewarding of prospective founders of banks in view of the regulatory and technological changes; advancement of a project that will allow consumers to switch banks easily online; and the promotion of an open-banking project. These are lengthy and complex endeavors and some of them have been included in the competition enhancement reform jointly run with the Ministry of Finance and additional entities. The goal of this series of measures is to lower barriers that are slowing the development of competition in the retail fields, step up the competitive threat, and promote the development of advanced technology in order to position the banks as effective competitive players in the financial services market.

In June 2018, as part of its efforts to lower entrance barriers to the banking market, the Banking Supervision Department published a final outline for the establishment of a new bank, including, among other things, lowering capital requirements to only NIS 50 million and creating regulatory certainty in the process of obtaining a banking license, including stewarding those interested and guidance in regulatory matters. This measure is expected to help promote the opening of a new bank in Israel and, indeed, the Banking Supervision Department has already received official applications for new banking licenses and is carefully reviewing them at the present writing.

In accordance with the Increasing Competition and Reducing Concentration in the Banking Sector Law (Legislative Amendments), 5777-2017 and to solve the computerization barrier problem,[1] the Ministry of Finance, in consultation with and with the assistance of the Banking Supervision Department at the Bank of Israel, published a document that lays down rules by which grants may be obtained for the

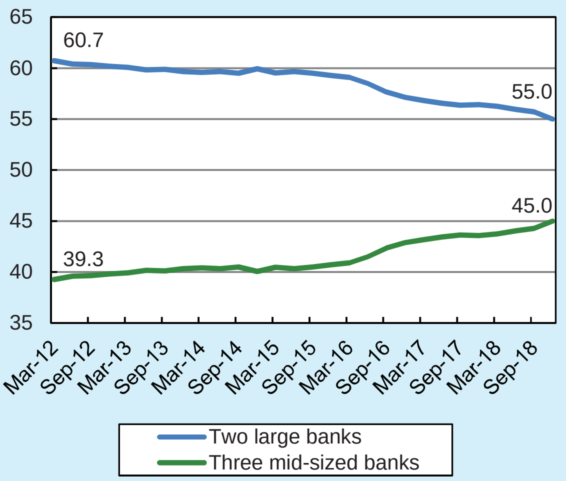
[1] The computer networks and technological infrastructure of the banks are complicated and expensive to establish and maintain, and must meet the requirements of many regulatory rules. This high cost poses one of the entry barriers to new banks.

establishment of a joint computer center that will serve several banks and additional financial service providers, making it easier for new and small players to enter the banking and financial service markets. In March 2018, TCS Israel, Ltd. a member of the multinational Tata group, won a grant and is progressing toward establishing the center.

After the Banking Supervision Department stewarded the two largest banks in separating the credit card companies that they had owned—a process that was completed in the course of 2019—the credit-card company Leumi Card (today, MAX) became totally and permanently separate from Bank Leumi, and under the ownership of the Warburg Pincus private equity fund. Isracard, in turn, was issued on the stock exchange, placing 67 percent of equity in the Israeli public's hands. Bank Hapoalim retained the remaining 33 percent and must by law sell this stake by January 2021. Both credit card companies began to develop new competitive strategies for the years to come. The banks' separation of these firms helped to reduce concentration in the Israeli credit market. Concentration in the credit industry was also reduced by an upturn in the strength of medium-sized banks at the expense of large ones.

There is less concentration in banking: The midsized banks' share is increasing at the expense of the two larger banks.

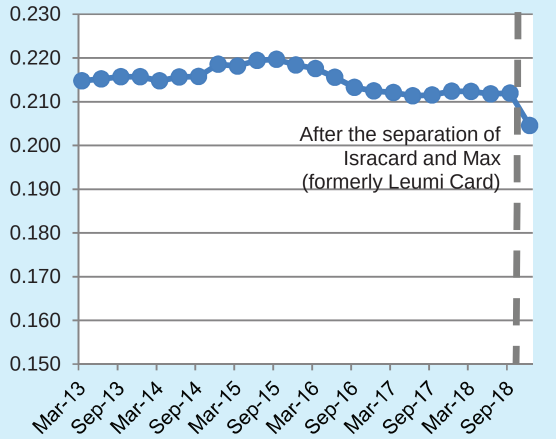
Figure 2.1
Distribution of Credit to the Public[a] between the Large and Midsized Banks[b], March 2012 to December 2018 (percent)



[a] Balance-sheet credit to the public (activity in Israel), minus balances that are the responsibility of the credit card companies.
[b] The large banks–Hapoalim and Leumi; the midsized banks–Mizrahi-Tefahot, Discount and First International.
SOURCE: Based on published financial statements.

Concentration in the banking industry is declining: In recent years, the HHI has shown a marked downward trend in the concentration rate of the banking system.

Figure 2.2
Herfindahl-Hirschman Index (HHI)[a], Total Banking System, March 2013–December 2018



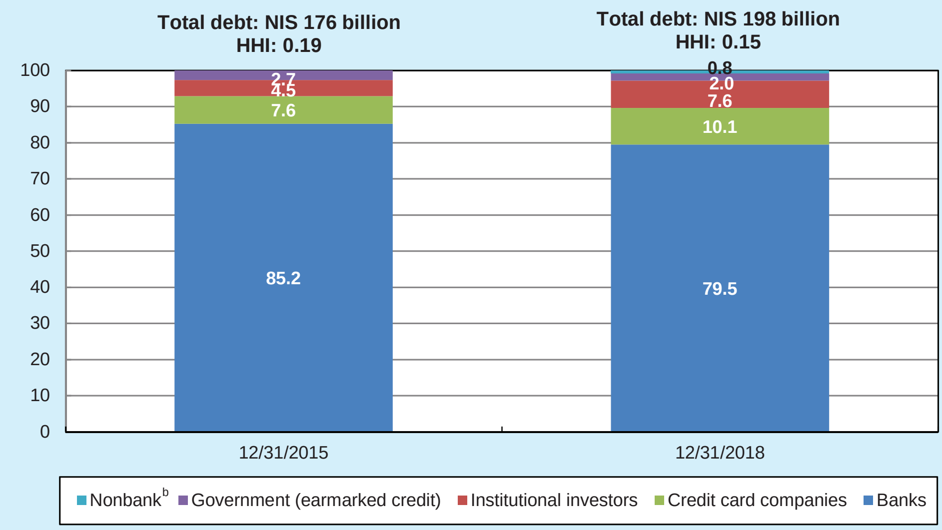
[a] $HHI = \sum_{i=1}^{n} \left(\frac{y_i}{y}\right)^2$ = The Herfindahl-Hirschman Index of industry concentration, where y_i = output of bank i (total credit balance) and y = the industry's output.

SOURCE: Based on reports to the Banking Supervision Department.

This market restructuring lowered the HHI[2] index from 0.22 in June 2015 to 0.205 of the end of 2018, much of the decrease tracing to the separation of the credit-card companies (Figures 2.1, 2.2; for an expanded discussion, see the section on Credit Risk). Competition by nonbank entities in the consumer credit market is also on the rise, as reflected in a decline in the banks' share of such credit, from 85.2 percent in 2015 to 79.5 percent in 2018 (Figure 2.3; for an expanded discussion, see the section on Credit Risk). This trend is expected to continue in view of the activation of the Credit Data System, which will help to narrow information gaps among credit providers and allow additional players to compete effectively in this market. Thus far, thirty-two financial service entities have joined, including eighteen nonbank firms, some of them large institutional players. The system is expected to amplify customers' bargaining power and, in turn, lower their credit costs. Concurrently, the Banking Supervision Department is working on several important measures that are expected to step up the competitive threat and strengthen customers' ability to bargain with their banks. Among these measures, it is continuing to promote the establishment of open banking (based on the API Open Banking Standard), allowing customers to share their banks' information about them with third parties for the purpose of obtaining and lowering the cost of banking services. Thus, new players, not necessarily banks, will be able to access customers' bank accounts, with their consent, and to offer banking services tailored to their needs.

The nonbank credit market's share of household credit increased. Credit cards and institutional investors increased their shares, while the share of the banks declined.

Figure 2.3
Distribution of Household Debt (Nonhousing), by Sources[a], 2015 and 2018 (percent)



[a] Excluding credit from abroad.
[b] Including "Direct Finance" only. June 2018 data.
SOURCE: Bank of Israel and Tel Aviv Stock Exchange.

2 The HHI (Herfindahl-Hirschman) Index is the sum of the squares of the banks' market shares. The higher the index, the more concentrated the market is.

The Banking Supervision Department, in conjunction with the Ministry of Finance, is moving ahead on a project that aims to simplify online switching of banks by customers. Thus, by 2021 an online system for portability of bank accounts will be established, making it easier for customers to switch banks by assuring a safe, convenient, rapid, and no-cost transition. Improving customers' ability to switch banks will intensify competitive pressure and boost customers' bargaining power even though we do not expect it to trigger a large increase in bank switching. Most likely, instead, the system will cause packages of financial products to be split, making it easier for customers to keep current accounts at one bank and go to other banks and nonbank entities for various financial products.

Apart from meaningful changes in the credit market, Israel's payment and settlement system is changing and evolving against the background of innovations and advanced technologies pursuant to parallel rapid changes worldwide. The process is also typified by the entry of new players in payment and settlement services and an upturn in competition in this industry. Today, customers can make payments by using applications (tested and approved by the Banking Supervision Department) and digital wallets, use their bank's applications to transfer funds, and so on. Some of the new payment instruments are offered to the public by banks and credit card companies; others are made available by nonbank entities. The upturn in competition in the settlement market is evidenced, among other things, in falling settlement fees—good news for businesses, particularly small ones (Figure 2.4). In view of the entry of new players and advanced means of payment, it has become necessary to strengthen the public's confidence in them so that these new resources can be put to greater use. Therefore, in January 2019, the Payment Services Law was promulgated, establishing a single standard for relations between payment service providers and their customers in order to protect consumers and businesses in the advanced payment world. The law is expected to go into effect in January 2020.

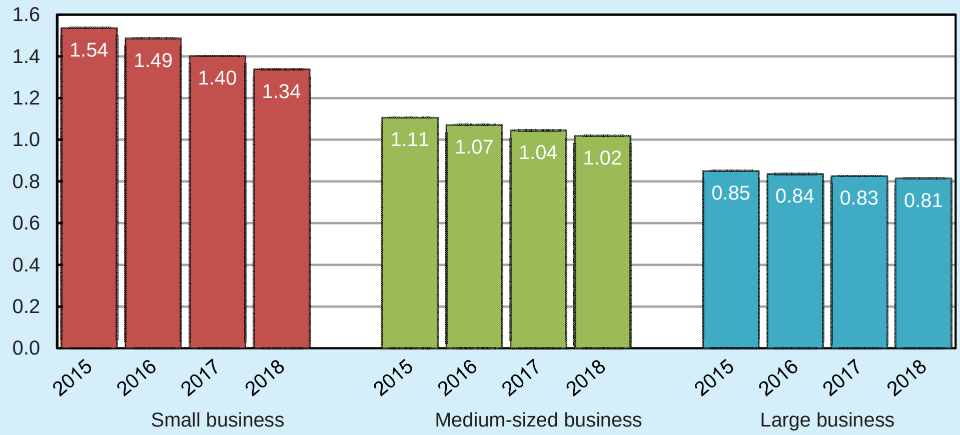
Another step taken by the Banking Supervision Department to enable the banks to compete effectively in the changing financial service arena and to offer their customers innovative products is the lowering of barriers in the transition to cloud technology. By going over to cloud computing, banks will be able to move rapidly in the development of innovative products, improve their flexibility, shorten the time to market of new products, and reduce development and operating expenses, thereby improving their efficiency. (For an expanded discussion, see Box 2.4, "Cloud Banking.")

The technological improvements and developments are affecting the banks in many auspicious ways by abetting greater efficiency and are affecting customers by enhancing their convenience and lowering service prices. There is a population group, however—including senior citizens—that is struggling to adjust to this set of changes. Therefore, the Banking Supervision Department, in conjunction with the Ministry of Social Equality and via the banking system, is initiating activity at the national level to empower senior citizens in digital banking in order to help them make the adjustment, by giving them personal structured assistance in acquainting themselves with basic digital banking services.

To enhance the financial awareness of various population groups in Israeli society and among other activities of the Banking Supervision Department on this topic, the Department, in conjunction with Project Havatzalot of the Israel Defense Forces Intelligence Corps, has created courseware on banking financial education for soldiers who enlist in the corps. The courseware imparts, among other things, knowledge in banking financial behavior, tracking income and expenses, managing a bank account, and basic concepts. The better consumers understand the financial costs of the range of services that various financial service providers are offering, and the more they can compare the costs, quality, and diversity of the services offered, the more competition there will be among financial service institutions for these consumers.

In sum, the financial system, and the banking world generally, are in the midst of processes and changes that are expected to gather momentum in Israel and abroad in coming years, reshaping the features of the banking system and making the system more competitive.

Figure 2.4
Development of Credit Card Companies'[a] Merchant Fees by Size of Business[b], 2015–18
(percent)



[a] CAL, Leumi Card, Isracard, and Poalim Express.
[b] The fee is according to the size of the business - calculated based on all transactions cleared in Israel.
SOURCE: Based on reports to the Banking Supervision Department.

Box 2.1
Switching banks and spreading banking services

- **The Banking Supervision Department is working to enhance competition in the banking system, by promoting several projects and major restructuring of the market. (See chapters 2 and 3.) This is done, inter alia, through a joint project with the Ministry of Finance to simplify online customer switching from one bank to another.**
- **In this context and as part of implementation of Amendment 27 to the Banking (Service to Customer) Law, 5741-1981[1] (hereinafter: "the amendment"), it was determined that each bank should establish an online system for switching bank accounts (hereinafter: "the online system") by 2021. This is a complex project from an operational perspective and a high-cost one, estimated at hundreds of millions of shekels.**
- **The objective of the online system is to facilitate customers switching their accounts between banks in an online, secure and convenient manner, rapidly and at no cost to the customer. Another objective is to increase competitive pressure on all banks. The system may also motivate customers to distribute their financial products across banks—i.e., have a checking account with one bank and use diverse financial products from other banks and non-bank entities.**
- **Currently, prior to the system being launched, there are on average 285,000 customers per year who switch from one bank to another, making up 2.5 percent of all current accounts in the banking system in 2016–18. This rate is similar to estimated rates around the world, and in particular in the UK, which already has such a system in place.**
- **An examination of the customers switching between banks indicates that among those aged 30–40, the percentage is slightly higher than the average, and that in 70 percent of the switches at least one banking product other than a current account is used during the transition period. In 9 percent of the cases, the switch is made in conjunction with obtaining a housing loan (37 percent of new housing loan borrowers switched banks in 2016–18), 30 percent of transitions are made in conjunction with obtaining a non-housing loan or going into overdraft, and 28 percent are in conjunction with opening a deposit account at the new bank.**
- **In the UK, where a system for online checking account switching has already been deployed, it was found that the rate of current-account switching did not change after the system was launched. Therefore, we estimate that launching such a system in Israel would not significantly increase the number of transitions. However, the UK system did result in an increase in the average number and variety of financial products and services offered to customers. We therefore expect that in Israel, too, the banks would become more sophisticated through the system being implemented, with competition increasing not only for traditional aspects of the banking services, but also for specific services.**

1 As part of legislation of the Economic Plan Law, 5778-2018.

Background

The current account is the key financial product used by the public, and many customers in Israel and overseas keep this account with the same bank for many years. One of the reasons for customer loyalty to their bank is the bureaucratic hassle associated with moving a current account. This challenge forms an effective barrier to competition among banks, because customers are "captive" at the bank where they have their account and therefore also use other services from the same bank, such as loans or deposits. This challenge is faced by many economies around the world. In the UK, a solution for this problem was developed by creating an online system for account switching, called CASS (Current Account Switch Service), which allows customers to simply switch their accounts within seven days, without being involved in the bureaucracy involved in it.

The Banking Supervision Department, together with the Ministry of Finance, is currently promoting a project whereby banks in Israel would create an online system for switching bank accounts, similar to the one in operation in the UK. Creating such a system is complex and costly, but once it is in place, it should improve customer contracting terms, whether at the new bank to which the customer is considering moving their financial activity, or at the bank where it is currently, due to the increased competition and stronger bargaining position of the customer. Nevertheless, the system may not necessarily increase the switching rate, as seen from experience in the UK, where this rate did not increase once the system was launched, even after an intensive advertising effort designed to increase public awareness of its existence. However, it is important to note that in the UK, it was found that the account switching system had an extensive impact on competition: The average number and range of financial products for customers grew, cooperation between major banks and fintech companies increased, the quality of service to customers improved, and barriers to entry for new banks were lowered. Therefore, it may be that in Israel, too, launching the account switching system would contribute to more competition—an improvement that may not be necessarily reflected in a higher switching rate. This, of course, is in addition to the significant easing for customers who do choose to switch banks.

Through a new database, in which the Banking Supervision Department collected data for 2016–18, it is possible to review new account opening in the banking system by different activity types: checking accounts, deposits, savings, consumer loans, housing loans and securities. This allows us to study the switching of bank accounts in Israel by type. This database also allows us to study the distribution of customers' banking services across different banks, so as to better study the behavior of bank customers in Israel.

Bank account switching—trends in Israel and abroad

The number of current accounts switched in Israel is 285,000 per year on average, representing 2.5 percent of all current accounts in the banking system in 2016–18[2], similar to the estimated rate world-wide, and in particular in the UK (2–3 percent, see Table 1). In the US, too, customers hold the same bank

[2] The switching rate for bank accounts in Israel was calculated using a custom database collected by the Banking Supervision Department. This database allows us to review new account opening in the banking system by different activity types: current account, deposits, savings, consumer loans, housing loans and securities.

account for 16 years on average, and more than one quarter of customers hold it for longer than 20 years.

The low rate of checking account switching is naturally to be expected, given the trust placed by customers in their bank, where they deposit their money. A survey conducted by BankRate[3] shows that the key reasons for switching banks in the US are: change of residence, change in work location and change in personal status (e.g., marriage or divorce). These are followed by reasons related to product pricing, including commissions, for checking accounts as well as for other products. In the UK, the Competition & Markets Authority (CMA) explains that customers would not tend to switch banks—unless they encounter a specific issue with their current bank—for as long as they do not see a financial benefit from such a move, especially since the current account is not regarded by consumers as associated with high cost.

Table 1
Switching rate of current accounts between banks

Country	Switching rate of checking accounts between banks
UK	2–3%
US	4%
Israel	2.5%

SOURCE: For the UK – CMA; for the US – JD Power; for Israel – based on reports to the Banking Supervision Department.

In Israel, the average monthly cost to manage a single current account with a bank is NIS 25. Compared to other financial products, this cost is not high, and the potential cost savings due to switching banks may not motivate customers to action. Moreover, if a customer is dissatisfied with service at their bank and with how their account is managed and threatens to leave—the bank would typically offer them various incentives in order to preserve the customer.

Young people switch more

In Israel, for customers aged 30–40 the switching rate for checking accounts (3 percent) is slightly higher than for all checking account holders, similar to global trends[4]: Surveys in the US show that Generation Y customers (born in the 1980s and 1990s) are 2.5 times more likely to switch banks than those aged 50–70 and 1.5 times more likely than Generation X customers (born in the 1960s and 1970s).[5]

Among possible reasons for this is less personal contact with the bank among the younger generation, which disrupts the longstanding loyalty of customers to their banks. For years, customers have worked with their bank through a personal banker, thus creating a personal relationship between the customer and their banker. As digital channels develop and allow customers to view financial information and conduct more and more banking transactions online (as described extensively in Chapter 1)—there is hardly any need to transact business with a bank teller, and those consumers who use apps have no personal banker. Consequently, the bank no longer has "a face" as it used to in years past. Therefore, as more customers move to digital channels, the customer-bank relationship will weaken. Another possible reason for the

3 BankRate is a US company engaged in financial consumer issues, providing financial education content and price comparison for diverse financial products.
4 Based on a survey by BankRate.
5 Based on a survey by Gallup, a leading consulting firm in the US.

relatively high transition rate in this demographic segment is higher price awareness. That is due to the fact that people of this age take out more loans and therefore are more strict about managing their money.

Current account switches—indications for reasons for switching

A current account is, as noted above, a service of reasonable cost, unlike other services offered by the banking system to customers, most notably loans, and in particular housing loans, as well as deposits, savings and securities portfolios. Due to the high cost of these services, the choice of bank where they would be managed is of higher economic importance than the choice of bank where the current account is managed. Indeed, when studying the reason for switching from one bank to another, **we find that in most cases (approximately 70 percent of switches), at least one other product (other than current account) was used during the switching period** (Figure 1). Therefore, it may be that the financial product offered by the competitor is the reason behind the customer moving from the bank to its competitor. Thus, 9 percent of current account switches in 2016–18 took place along with obtaining a housing loan (meaning that in the first year after opening the account, the customer also took out a housing loan). Thirty-seven percent of new housing loan borrowers switched banks in 2016–18. Of customers who switched their current account, thirty percent took out a non-housing loan or utilized an overdraft, 28 percent opened a deposit account (compared to an average of 3 percent per year who opened new deposit accounts), and 10 percent opened a securities portfolio (compared to fewer than 1 percent who opened new securities portfolios in that period) (Table 2).

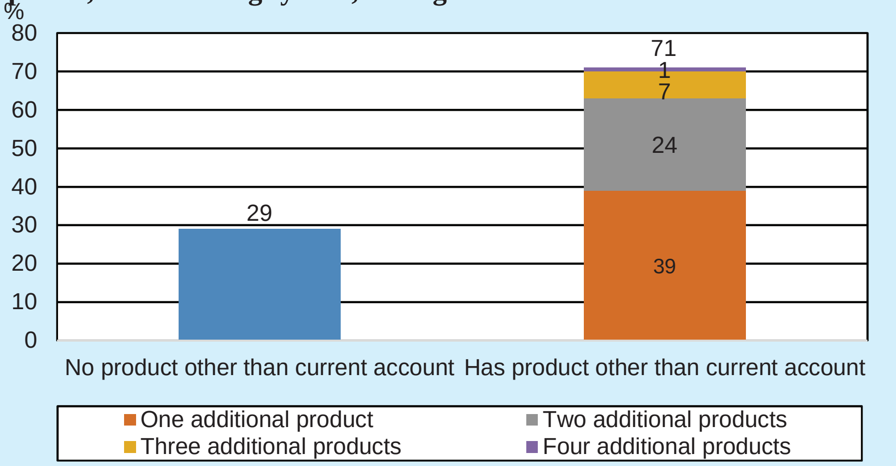
Table 2
Distribution[1] of switching customers, by type of additional products used[2] other than current account in the account-opening period, total banking system, average 2016–18

Product	Percentage of switching customers
Non-housing loan or utilization of current account credit facilities	30%
Deposit	28%
Securities portfolio	10%
Housing loan	9%
No other product (current account only)	29%

1 There may be some overlap in use of different products, hence the percentages do not add up to 100%.
2 The other products reviewed in this analysis are: Housing loan, nonhousing loan, deposit and securities portfolio.
SOURCE: Based on reports to the Banking Supervision Department.

About 70 percent of customers who move their current accounts to another bank consume additional financial products.

Figure 1
Distribution of customers switching current account, by number of other products[a] they begin to use at the new bank in the account-opening period, total banking system, average 2016–18



[a] The products examined in this analysis are: housing loan, nonhousing loan, deposit, and securities portfolio.

SOURCE: Based on reports to the Banking Supervision Department.

Spreading banking services among banks

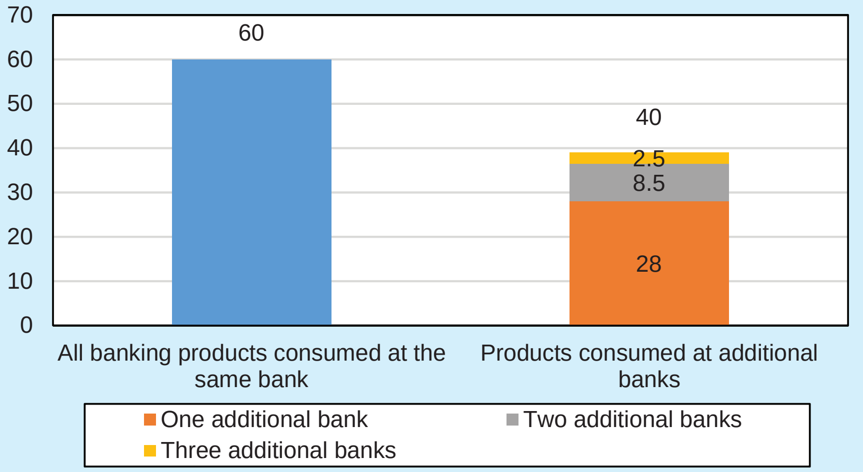
The banking system offers customers various services other than a current account, including deposit accounts (and savings plans), loans (both consumer and housing), and securities portfolio management. This range of services is indeed currently offered to customers as a single bundle, but even today, there are customers who choose to use different products from different banks, so as to enjoy the benefits and terms offered by those banks for the various products, based on the understanding that they do not have to move their account in order to benefit from those services. This unbundling increasingly allows banks to compete not only for customers who switch their entire business to the new bank, but also for provision of specific services.

One outstanding example of this is the loan market. Many customers manage their current account with one bank and obtain a housing loan from another bank. There are also banks that offer loans directly to those other than their own customers. Sometimes, the bank where the securities portfolio is managed is determined by the investment house that provides service to the consumer (and that has signed an agreement with a particular bank), rather than by the customer's own decision to manage the securities portfolio at that bank. In general, customers often use different products from different banks.

As of June 2018, nearly 40 percent of bank customers use at least one product other than through their primary account at their primary bank, 28 percent of bank customers use different services from two banks and 8.5 percent use services from three banks (Figure 2). It is important to emphasize that these data are for the banking system only, rather than for the entire financial system. Because credit from non-banking entities has expanded significantly (Figure 2.3), the share of customers who take out a loan from an entity other than their primary bank is naturally higher than the aforementioned percentages. There are also numerous customers who manage their securities portfolio at investment houses, rather than at banks.

Close to 40 percent of bank customers consume at least one product at another bank.

Figure 2
Distribution of Current Account Holders by Number of Banks at Which They Cosume Banking Products[a],Total Banking System, June 2018 (percent)



[a] The products examined in this analysis are: current account, housing loan, nonhousing loan, deposit, and securities portfolio.

SOURCE: Based on reports to the Banking Supervision Department.

Online system for account switching in Israel

The objective of setting up the online system for switching bank accounts is to increase competition and to bolster the bargaining power of the banking customer. Although today most of those switching are customers who are financially active, in the future this system would make it easier for all customers to switch between banks. In the UK, it was found that after the system was launched, the average number of financial services offered to customers grew, co-operation between major banks and fintech companies increased, the quality of service to customers improved, and entry barriers for new banks were lowered. Therefore, it may be that the banking system in Israel would also become more sophisticated, and competition would increase not only for traditional aspects of the bundled banking services, but also for individual services. This is supported by the fact that the account transition system would only handle transition of current accounts, which would de-emphasize the connection between such accounts and other financial activities.

However, the task of setting up this project is highly complex and poses many challenges, primarily due to the complexity of current accounts and the needs of customers in Israel (which differ from those in the UK), as well as the technological complexity, which calls for synergy between diverse entities and financial systems. Due to the significant investment required to implement this system, the project is only expected to begin operation in 2021.

Basic principles for switching activity by the customer

Creation of the online system for account transition is an outcome of Amendment 27 to the Banking (Service to Customer) Law, 5741-1981[6] (hereinafter: "the amendment"), which was spearheaded by the Ministry of Finance and by the Bank of Israel. The objective is to enable banking system customers to more easily realize their choice to shift from one bank to another, and thus to improve their terms and conditions, whether by transfer of their financial activity to a new bank, or due to preservation efforts by their current bank, as competition increases and their bargaining power is bolstered. This step is one of a long list of measures taken by the Banking Supervision Department in order to increase competition in the financial system, primarily for households and small businesses. (See Box 2.1: "Competition and the changes in competition in the Israeli banking system" in the 2017 Annual Survey by the Banking Supervision Department).

The law stipulates that banks should put a system for switching bank accounts in place, which would make it easier for customers to switch from one bank to another, because this would be done online, in a secure and convenient way, within seven business days after completion of the customer request to switch their activity, at no cost. The online system should start operating in 2021 and is based on principles of the CASS[7] system for switching checking accounts operating in the UK, including:

1. All activities required for switching of activity in the account would be taken exclusively with the new bank and online. This means that customers would not be required to contact their previous bank or any third party with which they have any payment or credit arrangements. This principle would ensure minimum bureaucratic burden on customers with regard to switching their checking account.
2. The activity in the account would mostly be switched within seven business days after completion of the customer request to transition their activity, at no cost.
3. The switching of activity in the account, including the "follow me" mechanism described below, would be at no cost to the customer.
4. Activity in the account would be transitioned in such a way as to guarantee that for two years after the transition date, any debits/credits sent to the customer's old account after it has been closed, would be automatically routed to their new bank account without any intervention

6 As part of legislation of the Economic Plan Law, 5778-2018.
7 Current Account Switch Service.

required by the customer. Thus, the customer would enjoy a "safety net" and this would alleviate any concerns about being adversely impacted by the account switch to the new bank.

5. The new bank would compensate the customer for any direct damage incurred in case of any deficiency in the transition process.

The solution to be implemented would include a switching process and a routing process, as follows:

The switching process would include handling customers' request to switch their financial activity from the old bank to the new bank—after verification that the account complies with switching conditions—and closing the current account in the old bank. **The routing process** (or "follow me") would then take place, including automatic transfer of financial transactions from the old account to the new account, for a two-year period beginning from the account switching date. This process assures the customer that any debit or credit posted to the old account would be automatically routed to their new account. Thus, the customer can maintain continuous operation of his or her account, without the need to directly contact all of the entities that debit the old account (such as electricity or telecom companies) or that credit their account (such as the employer crediting salary to the account, or the National Insurance Institute crediting various allowances), informing them of their new account details during the routing period.

The switching and routing processes would be carried out by the banks, and the project would be coordinated by Masav (automated clearing house).

The complexity of the project

In October 2018, the Banking Supervision Department held a professional seminar with the people who set up the CASS system, to better study the features of this system in the UK and the lessons learned from it, for development and implementation of a system aligned with the needs of the Israeli banking system. One of the insights arising from this seminar was that deployment of a solution for switching banks in Israel is highly complex, both in general and in comparison to the solution implemented in the UK. This is because in Israel, current accounts are the hub not only for customers' day to day financial activity (current account transactions) but also for their entire financial activity—securities portfolio, loans, deposits and so forth. This is reflected by the fact that 60 percent of the public use all of their banking services from a single bank (Figure 2). To enable customers to switch their current account from one bank to another would require comprehensive handling of all their financial activities, within a set time frame.

Another complexity of the project in Israel is due to the way customers conduct their business and to customer needs in Israel, which differ from those in the UK. The key difference lies in the use of checks—with numerous post-dated checks, a phenomenon that does not exist in the UK. Therefore, in order to facilitate customer transition between banks, checks written on the old account must be able to be paid from the new account—a highly complex issue. Moreover, the proportion of household accounts in Israel that are overdrawn also poses a challenge for automatic balance transfer from the old account to the new one, because although banks are required to open current accounts, they are not required to extend credit to their customers.

Once the various project stages have been completed—such as definition in legislation of activity types and accounts to be switched, completion of the technological design by the banks and Masav, synchronized technology development by all banks and by each bank for their own systems, additional legislative amendments, conducting all required testing and so forth—there would have to be increased public awareness of the simplified switching.

Types of accounts and activities to be switched and routed

In November 2018, the Governor issued rules as to the types of accounts that banks are required to allow to be switched using the online system. About 80 percent of household accounts will be able to be switched using this system. The accounts not included in this mandatory transition are accounts with legal complexity or legal hindrance—accounts subject to foreclosure or injunction, accounts of deceased persons and so forth.

In 2019, the Bank of Israel will issue the Governor's rules with regard to activity types that may be switched and routed using the online system, as well as Proper Conduct of Banking Business directives on this matter, to be issued by the Supervisor of Banks.

The Governor's rules and performance directives will elaborate the types of bank accounts, products and services that must be allowed to be switched and would present the switching process and all its stages, with the required interfaces.

Box 2.2

Consumer and Business Protection in the Advanced Payment Sphere Pursuant to the Payment Services Law, 5779-2019

- **Israel's payments market is changing and evolving in view of the introduction of innovations and advanced technologies due to parallel rapid changes worldwide. The process is also typified by the entry of new players and growing competition in the payment-services sphere.**
- **Currently, customers can make payments by means of applications and digital wallets, use their bank's applications to transfer funds, and more. Some of these innovative means of payment are offered to the public by the banks and the credit-card companies; others are offered by nonbanking entities.**
- **To enhance public confidence in the new players and the advanced means of payment, thereby allowing them to be put to greater use, legislation was needed to regulate the matter and create a uniform standard for the relations between payment service providers and their customers. The Payment Services Law was legislated in 2019 and is expected to go into effect in January 2020.**
- **This review analyzes the implications of the new statute for households and businesses that use advanced means of payment and the protections that they will receive.**
- **The law establishes consumer protections that will apply to all accounts and means of payment, including protections that have pertained only to payment cards (credit and debit) thus far. It also applies to all payment service providers including banks, issuers, and acquirers.**
- **The law acknowledges the need to protect both parties to a payment transaction—payer and payee—and to strike a balance among all players involved.**
- **The statute states that a payment transaction must be executed in accordance with the customer's instructions. It also lays down clear arrangements for the responsibilities of payment service providers toward payers and payees, in recognition of the possibility that the act of payment will involve several payment service providers.**
- **The law strengthens consumer protections relating to the use of authorizations to debit an account or to charge a means of payment (popularly known as "authorized debits") for such authorizations are common in the payment market.**
- **Once the law goes into effect, customers will be protected against fraud and abuse of means of payment, including digital ones such as payment applications. In effect, the protections that will apply to payments made by any instrument will resemble those available to the public today when credit or debit cards are used to make payment.**
- **The arrangement of liability for abuse under the law is an insurance arrangement, in which most of the liability is assigned to the payment service provider and the customer is liable to a deductible at a level and under conditions set forth in the law.**

- **It should be noted that as Israel's payments market evolves in the direction of its US, European, and even Chinese counterparts, changes alongside the law discussed here will be needed, particularly in order to implement advanced technology (EMV) at businesses, which will make it possible to pay by means of digital wallets and contactless methods. This box does not deal with these aspects.**

The Payment Services Law, 5779-2019, was legislated on January 9, 2019, and is projected to go into effect a year after it was gazetted (that is, January 9, 2020). It is the product of the Payment Services Regulation Committee, headed by the Bank of Israel with the participation of the Ministry of Justice, the Ministry of Finance (and the Capital Market, Insurance, and Savings Authority, once it was established), and the Competition Authority. This Committee was established pursuant to recommendations of the joint committee tasked with promoting the use of advanced means of payment, and its purpose was to draft across-the-board standard regulation of all payment services in such a way that would correspond to technological development, provide consumer protection and facilitate competition.[1]

The need for this legislation stems from innovations that Israel's payment market are assimilating pursuant to similar developments abroad, reflected in a diminished use of cash, growth in the volume of electronic payments, and the transition to payment via diverse platforms such as cellular telephones, payment applications, and platforms that will be developed in years to come. These platforms allow the delivery of diverse payment services in a convenient and efficient way for customers—payers and payees. These changes have allowed new players to enter the payment services field and stimulate competition in the industry.

To ensure fairness and to strengthen the public's trust in the advanced means of payment and in the new players in the Israeli market and, as a consequence, to stimulate greater use of these means, legislation was necessary that would regulate the matter and establish a uniform standard in the relations between the various payment service providers and their customers.

This statute was written in accordance with the current state of technological development in the field of instruments of payment. However, it is also prospective because it is as technologically neutral as possible. Those provisions will also apply to payment platforms that will be developed in coming years.

The law mandates several main innovations:

—It extends consumer protections that applied thus far to payment (credit and debit) cards to all instruments of payment (excluding cash and checks). The main importance of the law is that it applies consumer protections against abuse via all means of payment and not solely to credit and debit cards. Thus, customers are protected whenever a means of payment is abused. For example, if a customer's mobile phone is stolen and later it is used to make a payment transaction without the customer's authorization, he or she will not be liable for the abuse of the instrument after advising his payment service provider that the instrument of payment was stolen. For the time that lapses until they serve notice, customers will

[1] The law is based on several sources that concerning with contractual relations between payment service providers and their customers and with consumer protections that apply to the giving of payment services: the European Payment Services Directive, Israel's Payment Cards Law, 5746-1986, (hereinafter: the Payment Cards Law), and the relevant Proper Conduct of Banking Business Directives.

be held liable to a limited extent, in order to encourage them to inform their payment service providers shortly after they discover the theft or abuse. Another example is the theft of funds from a customer after a cyber event in which the customer's identifying particulars and passwords were stolen (e.g., transfer of funds from the customer's account to another account by an attacker). In these cases, too, once customers advise their payment service providers that they did not carry out the transaction at issue, they will enjoy the protection that the law provides, including restitution of funds in the event of abuse.

Notably, the liability established under the new statute is based on the existing liability under the present Payment Cards Law. It differs from that set forth in the European directive and is more beneficial to the Israeli consumer. It is an insurance arrangement that imposes most of the liability on the payment service provider, leaving the customer with a deductible of a size and under the terms that the law specifies.

Additional consumer protections are established in cases of failure to deliver the goods to the other party (non-delivery of goods or services) and insolvency of the beneficiary, resembling the current situation in respect of credit cards. These protections will apply to payment activities that incorporate an assurance of payment (usually transactions that the payer cannot revoke once he or she gives the payment order, thus allowing the good or service to be delivered before payment is received), irrespective of the means of payment used. For example, if a customer who buys a good or service at a given merchant advises the credit-card company that delivery was not made even though the agreed deadline for delivery has passed, and that he or she has canceled the transaction, the company shall stop charging the customer for future payments not yet made. As well, if a customer buys a good or service, and the credit-card company finds that the merchant is insolvent, so that the customer is unlikely to receive the good or service that he or she purchased—the company shall stop remitting to the merchant the funds that it is owed under the terms of the transaction until the court rules on the proceedings.

—The provisions of the law are applied to all payment service providers (banks, credit card companies, payment-application service providers, acquirers, etc.) and not only to companies that issue credit cards, as is the situation today under the Payment Cards Law. Thus, the provisions of the law shall apply to firms that provide customers with payment services by managing payment accounts, issuing means of payment, or acquiring payments. This rule sets high standards of disclosure to customers, provisions concerning form of contract, access to contract, termination of contract, and other matters.

—The law recognizes the need to protect both parties to the transaction—payer and payee. Unlike the Payment Cards Law, which concerns itself mainly with the customer (the payer) and sets provisions that protect him or her, the Payment Services Law strikes a balance between the parties and protects the payee as well. The payee may be a business or an individual (e.g., when funds are transferred to a private individual by means of a payment application). The law protects payees in various cases when they cannot prevent abuse of an instrument of payment. An example is the liability of a business for abuse when a payment order is issued by its means, under circumstances in which it acted to verify the payer's identity at a high level of certainty, thus limiting the possibility of forgery and fraud. Liability in this case will belong to the payment service provider (bank, credit-card company, etc.).

—Setting responsibility for the execution of payment. In view of cases in which several payment service providers are involved in carrying out a payment transaction, it became necessary to establish clear arrangements for the responsibility of payment service providers to payers and payees. This is because while payment infrastructures are hybrid entities that involve a range of players, the customer who makes the payment and the customer who receives payment (the payee) know only the payment service provider with whom they contracted. The law entitles customers to approach their payment service provider (e.g., their bank) and avoid dealings with the rest of the payment service providers, whom they do not know. For example, if a mishap occurs in making a bank transaction—the sum was transferred to an account other than the one intended by the customer, or the wrong sum was transferred—the customer may approach his or her payment service provider, who will look into the matter and advise the customer of the outcome of the inquiry within a period of time that is reasonable, under the circumstances.

Box 2.3
Open Banking: Its Significance, the Global Situation, and the Project Led by the Bank of Israel

- **Open Banking enables bank customers to share information about them held by the banks with third parties in order to obtain banking services. New participants, not necessarily banks, can access the customer's bank account, with the customer's consent, and offer banking services in line with the customer's needs.**
- **Examples of services that customers can receive from the world of Open Banking:**
    - **Banking data aggregation**
    - **Consultation on financial conduct**
    - **Cost comparison of banking products**
    - **Value propositions concerning banking products (such as deposits and loans)**
    - **New payments methods, and more**
- **The entry of new participants, due to the Open Banking platform, will enhance competition in the field of banking services; allow the development of innovative and digital services, including in the area of payments; expand value propositions to customers; and increase the customers' control of their banking data. Opening banking in this way also creates challenges, particularly concerning data privacy and liability in case of leaks.**
- **The regulation that is leading Open Banking globally is the European Payment Services Directive (PSD2). This directive requires banks to provide supervised entities, not necessarily banks, with access to the customer's bank account if he agrees. This approach has been implemented in the UK since January 2018, and implementation across Europe will begin in September 2019.**
- **Since there are many banks in Europe, and there is interest in providing new participants with a uniform infrastructure, a number of Open Banking standards have been developed there. These standards are based on API (Application Programming Interface) infrastructure, and establish the rules of the game and of data security for all participants in the Open Banking market: banks, other service providers, and customers.**
- **The Banking Supervision Department ascribes great importance to promoting innovation and encouraging competition in the financial services area in Israel, and thus is working to define an open banking API standard for the economy. This standard is based on an international standard (NextGenPSD2), and the banks will be required to implement it. To that end, the Bank of Israel is leading a project in which it and the banks are investing considerable resources, in which there is a conversation among all the relevant entities—parallel regulators, banks, fintech companies, and others—and goals and timetables have been set. The Banking Supervision Department's goal is that by 2020 banks will enable authorized third parties to access customer's accounts, with their consent.**
- **Open Banking presents challenges to the banks, and offers new opportunities to customers, but also to banks. While the number of customers conducting banking transactions through nonbank entities will increase, once the banks adjust their business models to Open Banking, they will be able to develop new sources of income.**

What is Open Banking?

In a market where there is Open Banking, banking and financial services can be obtained not only from banks, but also from other service providers—nonbank credit providers, nonbank financial entities, high tech companies that develop financial technology (fintech), large technology companies (bigtech), and more.

In order to allow and encourage Open Banking, service providers must be able to obtain online access to the customer's bank account, with his consent. This will allow and encourage the development of new products and services in the areas of payments, analysis of the customer's banking data, and more, and will increase potential competition—which will be reflected in lower prices and in offers of innovative products and services.

To illustrate: In the field of financial data, data aggregation services have developed, providing customers with a single aggregate view of banking data from all bank accounts they manage (account aggregation). Based on this aggregate data, the customer can be offered consulting services regarding his financial behavior, and financial products, including credit, can be marketed to him. In the area of payments, for example, some merchants offer customers the ability to pay directly from the bank account through a dedicated mobile application, without a payment card, and without providing account details. These examples are just a small sampling of the possibilities and the participants that are developing and will develop in the world of Open Banking. The Marketforce company conducted a survey[1] among senior banking industry officials in the UK, and showed that many of them expect that an increasing number of customers will consume banking services from nonbank entities. Those surveyed believe that the level will reach 37 percent in two years, and 70 percent in ten years (Figure 1).

Various experts have described the wealth of opportunities offered by Open Banking infrastructure by comparing it to international electricity infrastructures: the variety of new services in the world of Open Banking compared with the variety of electrical devices developed over the years that can be connected to the infrastructure.

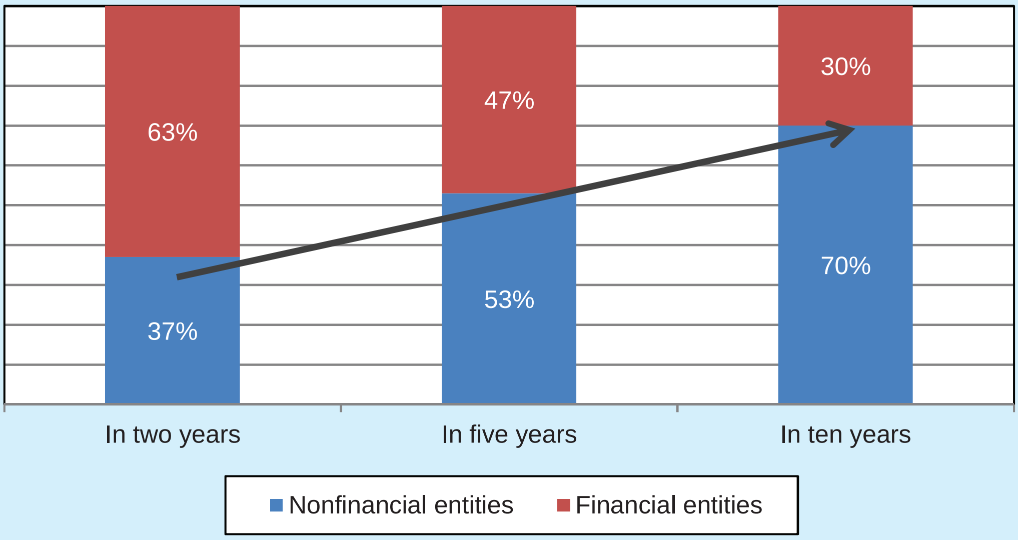
The development of Open Banking in the world

In recent years, customers worldwide have gained increasing control of the financial data on them and on how transactions are conducted in their accounts. This trend is also reflected in regulation: new rules require the banks to share banking data about the customer, with his consent, with authorized service providers, and to enable them to initiate payments in his account. These regulations, which regulate open banking, will apply to banks in Europe from September 2019. These include PSD2—the European directive regarding payment services, and RTS[2]—a regulatory standard published by the EBA regarding the rules for Strong Customer Authentication (SCA) and Common Secure Communication (CSC).

These regulations set out clear rules regarding the licensing requirements for service providers, liability arrangements between them and the banks, data security, the obligation to provide access to service

1 The survey is presented in a report the company published for 2018/19 entitled "The Future of Retail Banking".
2 Regulatory Technical Standard.

Figure 1
From Whom will Customers Get Financial Services in the Future?



SOURCE: Survey from the report by Marketforce for 2018/19 on "The Future of Retail Banking".

providers, and more. It also maintains a space of activity for the market to develop at a pace that is consistent with technological developments and new services provided to the customers. These regulations allow, and even encourage, the entry of new participants into the fields of payments, data, marketing, and financial intermediation.

Another necessary element in the success of Open Banking is the customers' trust in the service provider. Customers want to know that the data security is sufficient, and that there are privacy protection aspects that are protecting their information. Therefore, the conclusion was reached in Europe that a uniform Open Banking standard should be created and implemented based on API infrastructure. This infrastructure will set the business and technical rules of the game for all participants in the Open Banking market: banks, other financial entities, fintech companies, bigtech companies, and so forth. Various groups in Europe and other countries have formulated a uniform standard and are at various stages of implementation (UK, the Berlin Group, StET, Australia, Hong Kong, and others). Experts have described the importance and strength of a uniform standard by comparing it to Lego blocks: The blocks are modular and are built according to a uniform standard, and can therefore be attached very well to each other to build many structures and models. Similarly, a uniform Open Banking standard will make it possible to connect and build various services for the customer in a tight, orderly and scalable manner, and will enable the creation of a variety of new financial services.

The Open Banking standard sets out rules for the main aspects of bank-customer-third party relations: (1) identification of a third party that approaches the bank for data or to initiate a payment; (2) identification of the customer, obtaining his consent to transfer the data or to initiate the payment, and management of those permissions; (3) uniform language for requesting data from the bank and transferring it to a third party; (4) data security and data transfer; (5) the services and data that can be obtained within the Standard. The rules for these main aspects are intended to set out the requirements of all Open Banking participants, and to make sure that they are sufficient in terms of data security and privacy protection, and that the customer is given dependable service.

The development of Open Banking in Israel

In January 2017, the Increasing Competition and Reducing Concentration in the Banking Sector in Israel Law, 5777-2017, was passed. Section 5 of the Law sets out that a bank will enable a service provider to view a customer's financial data, with the customer's consent, and that the Minister of Finance, with the consent of the Minister of Justice and in consultation with the Bank of Israel Governor and the Supervisor of Competition (formerly the Antitrust Commissioner), will set out directives in the matter of viewing financial data online and its use. This law has not yet come into effect, because in order to regulate and implement Open Banking in Israel similar to what is operating globally, the relevant government ministries and regulators believe that additional legislative amendments are necessary. The legislation required in Israel is complex—among other things in view of the structure of regulation and supervision of the financial entities. All of the relevant regulators are currently cooperating in order to formulate such legislation, and they are constantly following regulatory developments in Europe and around the world.

In parallel with the formulation of the legislation, the Bank of Israel has begun to define the API standard for Open Banking, as it assigns great importance to the promotion of innovation and the encouragement of competition in financial services in Israel. As such, the Bank of Israel has examined the standards being developed in Europe, Australia and the US, and has studied two of the leading standards in depth: the UK standard (set out by the OBIE) and the NextGenPSD2 XS2A Framework (established by the Berlin Group). Following the in-depth study and consultations with experts in Israel and abroad with various participants in Europe (banks and fintech companies) and in Israel (banks, credit card companies, and fintech companies), the Bank of Israel has chosen to adopt the NextGenPSD2 standard, and will make the adjustments and specifications necessary in order to implement it in the Israeli market. For that purpose, the Bank of Israel has formulated on-going work processes vis-à-vis the banks, credit card companies and fintech and technology companies. In addition, the Bank of Israel maintains ongoing contact with relevant regulators in Israel[3] and abroad. The Bank of Israel has set main milestones for implementation of the standard in the Israeli banking system. As early as 2020, the banks are supposed to provide authorized third parties with access to customers' accounts, with the customer's consent.

[3] The Ministry of Justice, the Ministry of Finance, the Capital Market Authority, the Competition Authority, the National Cyber Directorate, and "Digital Israel".

API technology has been common for some time in Israel, but its use for Open Banking is a new and broader development. This means that the testing and trial stages are still before us, which is true globally as well. Moreover, **Open Banking is not immune to the constant increase in cyber threats and cyber crimes in the financial world, which is intensifying the issue of maintaining customer privacy and the concern over fraud on the part of criminal elements.** While Open Banking presents challenges, if customers are given control over their data, a significant step is taken into the new world, where data and information have tremendous value. Therefore, the regulations and standards that have been developed in the field in Europe have found solutions to these challenges, with the aim of enabling Open Banking to grow. The Bank of Israel is, and will continue to, monitor the development of the regulations, standards, and risks in the field of Open Banking, and will make sure that the infrastructure being established and developed in Israel includes sufficient solutions to the challenges and risks in the field. It will also derive conclusions if risks are realized in the markets that precede the Israeli market.

The Banking Supervision Department is of the opinion that the implementation of Open Banking in Israel holds the potential to have a major positive impact on the provision and consumption of financial services. It is working, in discussion with the banking system and with other relevant participants, to implement Open Banking with the recognition of its importance to both customers and the banks. Open Banking presents challenges to the banks and new opportunities for customers, but also for the banks. In addition to the benefits that they will derive from a variety of services and products, customers will benefit from the lower prices and the personal adaptability. The banks will also enjoy many benefits, despite the threat inherent in opening the world of banking to new participants.[4] The banks can take advantage of their investment in establishing API infrastructure, and operate in the Open Banking market as data service and advanced payment service providers as well; expand the variety of banking services currently provided (including through cooperation with fintech companies); attract new customers who are not necessarily their banking customers; and more.

4 The Marketforce survey noted above shows that 63 percent of banks that were asked believe that Open Banking can create a positive effect on their profits, and just 37 percent believe that it will have a negative impact. However, there are other international surveys that show an assessment that Open Banking will create downward pressure on the banks' income in a variety of areas.

Box 2.4
Cloud Banking

- **Cloud computing is an operational module that allows software, platforms, and technological infrastructures to be outsourced to a provider and used on demand as an external service, such that users may remotely access the provider's systems.**
- **In recent years, organizations in Israel and abroad, including banks, have begun to implement cloud-computing modules in their services. This allows organizations to become efficient, among others things, by extensively cutting costs on: purchases of hardware and software, maintenance, human resources, time to market, environmentally sustainable computing, etc. They also gain flexibility by choosing to expand or reduce service demand (in terms of consumption period, extent, type, etc.). Furthermore, it makes it possible to improve customer service significantly by enabling products to be integrated quickly and, in turn, to be made accessible faster to customers. Moreover, since many fintech companies operate solely in cloud computing environments, banks that switch to this working environment can collaborate with them with greater ease by integrating innovation.**
- **However, cloud computing is accompanied by risks and challenges, some of them new, which are derived *inter alia* from dependency on a small number of external cloud computing providers, the method of protecting information within the cloud environment, and the implementation of adequate controls. In contrast, the cloud may contribute to reducing risks and challenges because of economies of scale of the technology and the protection capabilities of those environments. To illustrate this, cloud-computing providers invest extensively in their data centers and in numerous protection capabilities. These investments are considerably larger than those made by any individual entity, especially a small one.**
- **Banks around the world implemented cloud services gradually. The years 2011–15 were characterized primarily by implementation of specific cloud services in a private cloud. In 2016–18, there was some expansion in the use of public cloud services (in Software as a Service / Infrastructure as a Service) and the progress of advanced cloud-based banking services. Furthermore, some new digital banks were established abroad solely on cloud-only platforms.**
- **The Banking Supervision Department first regulated cloud use in 2015. Since then, the regulation has been updated and expanded based on the potential use by banks in accordance with the knowledge and experience that has been accumulated around the world and the trends relevant to the technological developments. In order to operate in a cloud, the banks had to undergo a risk management process of the cloud-computing environment. Currently, they are able to use cloud computing in various forms —software, applications, and so forth. However, at present, banks are not permitted to migrate core systems to the cloud.**
- **In the next few years, the Banking Supervision Department will continue to follow changes in cloud computing abroad—with regard to core systems, among other things—and will update its directives in order to reflect practices abroad and experience accrued.**

What is cloud computing?

Cloud computing is an operational module that offers various implementations including software, infrastructure, and platforms, which can be outsourced so users can remotely access the cloud computing services within the provider's systems.

The types of services that are available in a cloud-computing module conventionally fall into several main categories:

- *Software as a Service (SaaS)*—Software provided to a user as a service on demand, enhancing the user's flexibility. For example, an organization may use a specific service within a software package and not additional functions that the package offers, and may gradually expand the use of the package commensurate with its needs. To emphasize, the cloud-computing service is operated from the cloud-computing provider's site and not from the organization's site.
- *Infrastructure as a Service (IaaS)*—In this case, the organization may refrain from changes to the topology of its infrastructure because it can rent computer resources—storage, servers, communication components, etc.—on demand. This allows the organization to focus on ongoing aspects (backups, software updates, and so forth) without having to allocate infrastructure and hardware.
- *Platform as a Service (PaaS)*—In this case, the organization can receive a dedicated platform for application development environments by utilizing computer resources, software, infrastructure, etc. – on demand.

In addition to choosing the type of service, cloud services users choose the type of cloud computing that is relevant to their organization.

- *Public cloud*—provides services to several organizations by utilizing a data center of the cloud-computing provider.
- *Private cloud*—provides services to one organization only, sometimes located on-premise (within the organization's site) and at other times on within the external cloud-computing provider.
- *Hybrid cloud*—combines features of private and public cloud.
- *Community cloud*—provides services to several organizations that have common characteristics and is located on the premises of one of them or within an external cloud-computing provider.

The choice of type of cloud and type of service is guided by the user's needs, including those pertaining to information security and cyber defense, the extent of the user's interest in managing the systems, operating them, and defining their requirements, etc. As a rule, a private cloud gives an organization the most control over the management and operation of its systems in the cloud.

In recent years, the number of organizations in Israel and abroad using cloud computing for diverse services has increased. This trend originates in technological advancements and the realization that cloud computing may benefit organizations. Due to cloud computing, organizations can:

- *Resource saving* — the organization can save on equipment, storage space, and routine maintenance. Furthermore, it gains flexibility because it can expand or reduce the service (how long to receive it, extent, type, etc.) on demand. For example, an organization can devise its own self-tailored service suite and decide whether to integrate it into their own systems.

- *Improving flexibility and time to market of computer systems*—For example, an organization may use existing cloud computing services that other organizations may have previously uploaded, thereby saving on development time.
- *Encouraging ecological sustainability (Green Information Technology)* — For example, an organization can reduce its energy consumption by saving electricity, using virtual end stations, and placing physical servers at the cloud-computing provider.
- *Massively improving customer experience* — for example, the use of cloud-based customer relationship management (CRM) services, may help to improve customers' experience by delivering services in real time and retrieving up-to-date information. Such use may also enhance the organization's own experience.

In this context, it is worth noting that certain services, mainly those provided by fintech companies, are solely produced on cloud computing environments.

However, the use of cloud computing also creates risks and challenges, some new, and these are integral to the use of cloud computing and are derived, among others, from dependency on a small number of external cloud computing providers, use of a small number of specific technologies; tools that have not yet matured such as: management tools, security measures, command and control tools; reliance on external cloud computing providers to protect data and apply adequate controls; the method for defending data and the interface between the cloud computing environment and on-premise systems, etc. For example, data leakage incidents from cloud computing services have been observed around the world in recent years as the result of misconfiguration of storage servers and not due to security breaches. On the other hand, these risks and challenges also exist in on-premise systems. Therefore, it is important to manage the risks that originate in cloud computing activities—information security risks, cyber defense risks, data leakage risks, business continuity risks, customer privacy risks, integration of systems risks, etc.

Cloud computing in banking systems abroad[1]

Banks around the world are migrating to cloud computing gradually and cautiously because they are supervised entities. The years 2011–15 were characterized by implementation of private cloud services, mainly because organizations generally, and banks particularly, had not yet accumulated enough knowledge and experience in the inherent risks of this form of activity. In 2016–18, there was some expansion in the use of public cloud in specific projects (for Saas and/or Iaas), progress of advanced banking services on cloud platforms, and initial use of cloud computing by digital banks. This expansion took place, among other reasons, because banking entities now had a better understanding of the risks that came with cloud use and how to manage them in order to reduce them (to the extent possible) to a level that would meet their risk-appetite standards. However, traditional banks around the world still refrain from placing core systems on the cloud.

[1] Banking in the Cloud, Part 1—Banks' Use of Cloud Services, https://www.sciencedirect.com/science/article/pii/S0267364917303722

Cloud computing in the Israeli banking system

Israel's banking system has also come a long way in cloud computing. Aware that the technology has developed and matured markedly in recent years, it has revised its attitude toward cloud computing and has adopted cloud-computing modules with their various resources. Banks in Israel have begun to use cloud computing mainly for specific services that streamline organizational processes (mostly relating to SaaS).

Proper Conduct of Banking Business Directive no. 362 of the Banking Supervision Department regulates banks' activities using cloud computing. The directive sets forth provisions for corporate governance, risk management, and minimum requirements for contracting with a cloud-computing provider. Like cloud computing itself, the Department's directive also evolved and changed in accordance with technological developments, the banks' maturity for the implementation of cloud computing, changes in global regulation, and the Department's wish to promote innovation in banking. The first reference to the matter was published in 2015, when the Supervisor of Banks sent a letter instructing the banks to carry out a process of risk management in a cloud-computing environment. In 2017, Proper Conduct of Banking Business Directive 362 was published. The directive required banks to request a permit to use cloud computing services from the Department under four conditions: services with sensitive information, exposure that might cause harm to the bank's customers, use of a cloud application that would impair the bank's ability to deliver customer service, and cases where only the cloud would provide information security and defense against cyber threats (as the only level of protection).

In November 2018, the Directive was updated. As of present, banking organizations in Israel do not need to approach the Department regarding permission to use cloud computing but still have to adequately manage the risks attending to cloud use. The Department took this step, among other reasons, after comparing its directive with corresponding requirements abroad. Furthermore, as part of the lenient regulation pertaining to a new bank, the Department is weighing the possibility of permitting an entity that applies to the Bank of Israel for a license to establish a new bank to use cloud computing for core services as well, per approval of the Banking Supervision Department. Such a bank will probably have little activity in its first years and the Department will employ a risk-adaptive regulation. In the next few years, the Department will continue to follow global developments in cloud computing concerning core systems, among other things, and will update its directives based on practices abroad and the experience accumulated.

Box 2.5
The Credit Data System

- **The goal of the credit data system, which became operative in April 2019, is to enhance competition in household credit. The system gathers information from financial institutions and other information sources and shares it with credit providers through private credit bureaus. The information collected is accessible to the public through the bureaus and directly by contacting the system.**
- **The system gives credit providers, with customers' consent, comprehensive information about customers' liabilities and credit payback behavior in the past and thereby helps them to make evidence-based lending decisions. The broad information infrastructure supports the activities of existing financial institutions as well as of new ones.**
- **The system enables customers to accept credit offers even from financial entities with which they do not regularly do business. It also allows them to receive economic and financial advice that will enable them to consume credit responsibly, commensurate with their needs and their payback ability.**
- **The information in the system also forms the basis of a database of nonidentifying information that the Bank of Israel accesses for the performance of its duties, including in the area of financial stability and in its role as the government's economic adviser.**
- **To realize the advantages of the arrangement for sharing credit data, households must conduct themselves in a proactive manner, and, in particular, should approach several credit providers for credit offers on the basis of information in the system. They should then negotiate with the providers over the terms of the credit, borrow responsibly, occasionally review the accuracy of the information in the system because this information projects onto their credit ratings, examine the credit rating that the credit bureaus give them, and act to improve it where necessary.**
- **Supervision and control of the activity and uses of the system are entrusted to Bank of Israel officials whom the Governor appointed under the Credit Data Law, 5776-2016: the Supervisor of the Credit Data Sharing System, the Register Manager, and the Supervisor of Privacy Protection. They operate independently and are not part of the Banking Supervision Department. The Supervisor of the Credit Data Sharing System has a public enquiries unit that investigates complaints from the public about the credit data system.**
- **The system contains information about over six million individuals, including their transaction activity. Today, more than 30 financial entities that grant credit to households are authorized to obtain information from the system: ten banking corporations, four credit card companies, and the rest are nonbanking entities. The number of credit providers who use the system is expected to increase, helping to stimulate competition in the household-credit market.**

General notes

On April 12, 2019, the Bank of Israel activated a central credit data sharing system (hereinafter: the system) under the provisions of the Credit Data Law, 5776-2016, (hereinafter: the Law). To put the system to work, the Bank of Israel has been gathering credit data from various sources of information, retaining it in a central database, and sharing it both with citizens (the system's customers) and with credit bureaus and, through them, with credit providers. Under the Law, the information in the system is intended for the following purposes:

1. Enhancing competition in the retail credit market;
2. Expanding access to credit;
3. Reducing lending discrimination and economic disparities;
4. Creating a nonidentifying information pool that will serve the Bank of Israel in carrying out its functions.

The information in the system allows potential lenders to obtain from a credit bureau, with the customer's consent, a **"credit report"** that contains the credit data reported to the system, along with a **credit rating.** Thus, a customer who needs credit can approach several financial-service entities for credit offers, negotiate with them, and choose the offer best suited to him or her. The system also allows such entities to obtain a **"credit opinion"** (a creditworthiness assessment)—a recommendation on whether to lend to the customer, and **"alerts"** about changes in the customer's data or rating.

Customers may receive directly from the system a **"consolidated data report"** that presents the information that has been collected about them. The information in this report may help them to make credit decisions and allows them to obtain counseling services from a **"paid authorized representative,"** i.e., a credit consultant. Customers may also purchase consulting services from a credit bureau in regard to their financial comportment generally and their credit rating particularly.

By activating the system, Israel joined the group of Western countries—including Ireland, Belgium, Portugal, and France—that have central systems for the sharing of credit information, run by the central bank or another state-level entity. Studies indicate that credit-data sharing systems create various benefits including greater access to credit for disadvantaged population groups, lower borrowing cost[1], improving the public's payment ethics, and, consequently, mitigating financial entities' credit risk[2]—effects of immense importance for credit providers, customers, and the financial stability of the system at large.

Structure of the credit-data sharing system[3]

Israel's credit data system is based on information gathered and stored in a central register for which the Bank of Israel is responsible. The system is not run by the Banking Supervision Department; it is handled by dedicated officials at the Bank of Israel who are appointed by Law. Accordingly, **the**

1 Liran Einav, Mark Jenkins, and Jonathan Lenin (2013). The impact of credit scoring in consumer lending, *The RAND Journal of Economics, 44*(2), summer.

2 Tullio Jappelli and Marco Pagano (2002). Information sharing, lending & defaults: Cross country evidence. *Journal of Banking & Finance 26.*

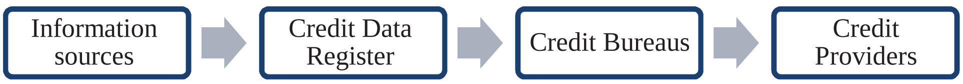
3 For additional detailed information about the credit data system, visit the system's web site: www.creditdata.org.il.

Supervisor of the Credit Data Sharing System is responsible for supervising and regulating the players in the system, whereas ongoing operation of the database is entrusted to the **Register Manager.** The Supervisor of the Credit Data Sharing System is also in charge of investigating complaints from the public about the data sharing arrangement. Parallel to them is the **Supervisor of Privacy Protection** at the Bank of Israel, who plays an advisory role and also is responsible for informing the Governor and the Registrar of Databases of any concern about infringement of customers' privacy.

The information in the system is reported by banking and nonbanking financial entities and by state authorities and public bodies, all of which are defined by law as **information sources.** This information is forwarded to **credit providers,** both by private **credit bureaus** that the Supervisor licenses and by **customers,** who are also entitled to receive information directly from the system. The credit bureaus share the information with the credit providers by means of a range of services intended for credit providers. The credit bureaus are also allowed to give customers counseling services concerning their financial conduct and credit ratings. In addition to them are **"paid authorized representatives"** who function as credit advisors for customers only.

The figure below maps the process by which information is gathered and shared with credit providers:

Figure 1
The Process of Gathering Information and Sending it to Credit Providers



Credit information reported to the system

Most credit data in the system are reported to the system by financial entities—banks, credit card companies, nonbank lenders, and providers of credit when selling goods or services (e.g., automobile financing). These entities give the system information about each and every customer separately (parsed by ID or passport numbers), including details of loans given to the customer, the customer's current-account facilities and their use, the customer's credit-card facilities and their use, credit that the customer has guaranteed, and more. Also shared is information about delinquent credit,[4] checks and authorized debit instructions not honored due to lack of funds, and court proceedings instigated by any of the information sources in order to collect a debt larger than NIS 10,000. The system contains information from banks and credit-card companies relating to the period beginning at the end of May 2016. Collection of information from other financial entities is expected to begin in May 2019.

[4] Delinquent credit is reported to the system if the delinquency is at least thirty days long and in a sum that exceeds NIS 200. Delinquency in payback to an entity that provides credit incidental to the purchase of a good or service is reported to the system in cases of at least sixty days' delinquency and a sum exceeding NIS 500.

The system also receives information from state authorities and public entities—usually information that is defined by law as indicative of a customer's failure to honor his or her financial obligations. The information arrives from the Official Receiver, the Execution Office, and the Restricted Accounts Section at the Bank of Israel. These entities began to report information in August 2018. Against the background of the enactment of the Insolvency and Economic Recovery Law, 5778-2018, the system will be receiving information from the Supervisor of Insolvency and Economic Recovery, who was appointed under the provisions of this statute.

The system also retains data on credit for which the customer applies: the amount of credit requested, its timing and purpose, the credit provider's name, etc.

The system gathers only the information that is specified in the Law and is not allowed to collect any other data, even if they may be relevant to credit providers for lending decisions or for the pursuit of remedies for unpaid credit. Thus, information on customers' wages and other income, assets other than those serving as collateral for credits, place of work, longevity on the job, number of dependents, and so on, are not in the system. Also excluded from the system are credit ratings produced by credit bureaus or by credit providers themselves.

Credit information shared with credit providers

Information is shared with credit providers through private credit bureaus. The credit provider submits a request to the credit bureau, which examines it and hands it on to the credit data system. The system presents the bureau with appropriate credit data. The bureau sends it on to the credit provider by means of the following services:

1. **Issuance of a credit report**—a report based on data from the credit data system only, for a period not exceeding three years. To receive such a report, the credit provider needs **the customer's consent.** If the credit provider acquires this service from the bureau, the report may also include a credit rating in the format that the credit bureau has developed.
   A credit rating, generated by a statistical model that the bureau developed, estimates the likelihood of a customer's paying back the credit given to him or her. The model is based on nonidentifying information from the credit data system only. Importantly, under Section 51 of the Law, the credit applicant's age, gender, religion, place of residence, marital status, and state of health are not used in the credit models, and thereby are not taken into account in the credit rating.
2. **Issuance of a credit opinion—**a recommendation to the credit provider as to whether to lend to the customer or not. The bureau's recommendation does not include detailed presentation of the information on which it is based, with the exception of information about legal proceedings under way, if any. In addition, a credit opinion does not require the customer's consent; the customer need only to be **informed of the intention** of obtaining an opinion about him or her. The opinion is used to examine new credit applications only, including applications for the renewal of credit facilities, and applications for credit incidental to deferred payment as part of a transaction for the purchase of goods and services.

3. **Alerts about changes in the customer's credit data (for monitoring purposes)**—a credit provider is entitled to receive immediate alerts about changes in the credit data of customers who give their consent to be monitored. The alerts are forwarded to the credit provider by means of the credit bureaus as soon as information is received about the event for which the credit provider asked to receive the alert. For example, a credit provider may receive immediate alerts about the opening or closing of a file with the official receiver or the imposition or lifting of a restriction under the Checks without Cover Law.

Customers' rights and their implementation

The Credit Data Law strikes a delicate balance between individuals' right to privacy and the attainment of the goals for which the information is collected. This balance is achieved, among other things, by giving the customer various rights regarding the information gathered about him or her, specifically:

- **The right to obtain the information**—The customer is entitled to receive, upon request, a report that contains all existing information that the credit data system possesses about him or her, and once per calendar year he or she is entitled to this at no charge. The report includes information both about credit not yet paid back (active transactions) and closed transactions, i.e., those that are no longer active but remain part of the customer's "credit history," which may shed light on his or her payback conduct in the past.
- **The right not to share information**—Customers may restrict the sharing of the system's information about them with credit providers. Credit providers to whom the customer has restricted the sharing of information may not obtain from the credit bureaus a credit report about them. Customer may revise an instruction concerning the non-sharing of information collected about them at any time. For example, if they wish to borrow from a certain lender, they may rescind a non-sharing instruction that they had given in the past.
- **The right to opt out of the database**—Customers are entitled not to be included in the credit data system. If they exercise this right, all data gathered about them up to the date of the request are deleted and the collection of data about them is halted. However, customers whose data attest significantly that they do not meet their obligations are not allowed to opt out. Such data, which constitute "negative information" about the customer, are specified in Sections 3 and 4 of the Credit Data Regulations, 5778-2017.
- **The right to submit a complaint and to request the correction of information**—Customers who believe their rights have been infringed by those involved in the credit data sharing arrangement, or who believe information about them is being used in contravention of the law, may present a complaint to **the credit data system's Public Enquiries Unit** for investigation**.** In addition, if they believe that the system has received incorrect or deficient information about them, they may request corrections.

Customers may exercise these rights and obtain general information about the system by following any of the channels of public inquiry and complaint that have been established, including a dedicated web site (www.creditdata.org.il) and a telephone hotline (*6194). To assure the safety of the customer's information from infringement, a caller verification process is applied at these channels.

Expected changes in the market due to the credit data system

The credit data system is expected to bring about major changes in the consumer credit market. Accordingly, financial-service entities and the public will have to adjust their conduct in this area of activity.

The banking and non-banking system will have to adjust its lending policies, underwriting models, and methods of issuing credit to the public in view of the innovations that the new system has introduced, including:

- Comprehensive information about customers' liabilities, i.e., their total debt burden (leverage), the way they repay their debts, and their repayment history. Lenders will have to adjust their underwriting practices to the new information that the credit bureaus will give them.
- Objective and reliable credit ratings from the credit bureaus, based on a statistical model developed in regard to information about the entire population of private borrowers countrywide, and not only those of the bank itself. This rating may replace existing models or complement them.
- A Credit Data Sharing System that makes it possible to expand the number of entities that lend to consumers—expanding the public's access to credit and, accordingly, necessitating more strenuous efforts to retain customers.
- Consulting for customers on the basis of a detailed report about them, that will be given by credit bureaus or paid authorized representatives. By using financial consultants when looking for credit, the new regime will enhance competition over the consumers and force banking and non-banking entities to shorten their response time in dealing with customers' credit applications.
- Detailed information for customers in one consolidated report, allowing them to track the terms of the credit that they received and use these data when they receive credit offers from financial institutions. This will strengthen their bargaining power when they examine credit offers and choose the one that is best for them.

The banking and non-banking system will have to adjust to a new legal and regulatory environment. It will have to deploy, *inter alia:*

- To investigate complaints from the public regarding the information reported to the Bank of Israel and, where necessary, to correct it.
- To make sure that applications for credit reports about customers or alerts about changes in customer data will be answered only with the customer's consent, and that requests for credit opinions will be answered after bringing them to the customer's attention.
- To allow customers, if they are entitled to this, to receive a credit report that a bank obtains from a credit bureau within a period of time that the Supervisor determined.

Another change in the activities of banks and non-banking institutions may be derived from the contribution that the credit data system will make to loan-selling transactions and also, in the future, to securitization.

- Recent years have seen the development of a market for the sale of retail loan portfolios. Since this process is accompanied by a credit-risk assessment of the portfolio being acquired, utilizing the credit data system will improve the quality of risk assessment in this field. It will also allow relatively small financial-service entities to make credit available because such entities, after issuing the credit, will be able to sell it to a large financial entity and use the proceeds to create additional loans. This will help to increase the supply of credit, improve competition, and bring credit costs down.

The public will have to adjust its financial behavior to the new information environment and be proactive in using the system for them. Customers will have to do the following, among other things:

- Be scrupulously responsible when borrowing and paying back credit so that their credit ratings will let them borrow under convenient terms.
- Check credit offers from several financial-service entities, compare them, and bargain for the best terms.
- Familiarize themselves with the information that the credit data system contains about them in order to check it for accuracy and have it corrected where necessary. The information has implications for their credit rating and, in turn, for their ability to borrow and under what terms.
- Be mindful of the credit ratings that the credit bureaus have set for them and take requisite measures to improve them.

In addition, the system will give the Bank of Israel a copious and comprehensive database of household credit, its characteristics, and financial-service entities' exposure to it. This information is immensely important for research, policymaking, and consulting in a range of fields in the Bank of Israel's purview, including financial stability and advice to the government on social and economic issues.

CHAPTER 3

ACTIVITIES OF THE BANKING SUPERVISION DEPARTMENT

Summary of the Banking Supervision Department's main activity during the course of 2018 and the first half of 2019

Promoting financial system innovation	Promoting competition and increased competition at banks, for customers' benefit	Protecting the bank customer	Stability – protecting depositors' money
Removing barriers to shifting to digital activity	Implementing the reform to enhance competition	Handling thousands of public enquiries each year and deciding in disagreements	Conducting a comprehensive risk assessment at banks
Continuing to provide leniencies in digitally opening a new bank account	Removing regulatory barriers to setting up a new bank	Enhancing enforcement activity in consumer issues	Strengthening cyber and technology risk management
Creating an infrastructure for digitally providing guarantees	Separating credit card companies	Improving proactive marketing processes for consumer credit	Carrying out examinations and enforcement to maintain stability and corporate governance
Removing barriers to shift to cloud technology	Removing computerization barriers to a new bank	Reducing fees for small businesses	Strengthening consumer credit risk management
Promoting open banking project—easing the shift of information to third parties at the customer's request	Conducting and publicizing a customer satisfaction survey on banking service	Increasing the public's financial awareness and assisting seniors with the switch to digital	Strengthening AML/CFT risk management
Promoting the implementation of advanced and innovative technology in payments	Promoting a project to ease the digital transfer from one bank to another	Simplifying credit arrangements	Tightening control over bank management at subsidiaries abroad
	Promoting competition in the acquiring area	Assisting specific population groups (elderly, new immigrants, abused women)	

1. THE VISION AND StRATEGIC TARGETS OF THE BANKING SUPERVISION DEPARTMENT

The Banking Supervision Department (BSD) works for the benefit of the public on the basis of the powers granted to it by law. The goals of the BSD are: to preserve the stability of the banking system in order to protect the deposits of the public; to protect the banks' customers; to encourage competition; and to ensure the support of the banking system for the activity of companies and individuals in the economy. These roles are interconnected and are essential to maintain public confidence in the banking system and to facilitate economic growth. In order to achieve these goals, the BSD set for itself two secondary goals in 2015: promoting technology and innovation in the banking system, and encouraging the increased efficiency of the banks.

The BSD, in 2015, examined its strategic goals and formulated its vision for coming years, namely to serve as a professional and proactive supervisory body working for the benefit of the public and the economy. As part of its vision, three main goals were defined: maintaining the stability of the banks in order to protect the money of their depositors, increasing fairness in the relations between the bank and its customers, and encouraging competition vis-a-vis households and small businesses. Similarly, two secondary goals were defined: the encouragement of technological innovation, and promoting greater efficiency in the banking system. In order to achieve each of these goals, a defined plan was formulated which included a large number of initiatives. About four years after the adoption of the plan, the progress is evident in both the implementation of the initiatives—some of which bore fruit this year—and in the quantitative indices that were used to define the goals, including indices of efficiency, concentration in banking, the proportion of activities carried out digitally, and others. These strategic goals were chosen following an examination of the significant changes taking place in the economic, technological and social environments, both in Israel and worldwide. These changes require a new way of thinking about the structure of the system, the identity and number of the various players and their business models. Among the initial changes are the technological innovations, which have a major impact on the financial world, and the reforms being promoted by the Bank of Israel and the Ministry of Finance in order to increase competition in the banking sector for households and small businesses.

Below, we will review the main activities advanced by the BSD in 2018 and early 2019. The BSD has 160 employees and managers, and it prioritizes its allocation of resources and focuses its attention on tasks on the basis of the aforementioned goals and an overall analysis of risks, on a risk-based approach.

1.1 The main activities to strengthen stability

In order to bolster stability further, the BSD acted in the following areas:

- **Comprehensive risk evaluation in each of the banks:** This is a comprehensive and structured process to evaluate the risks facing the banks, which is known as the Supervisory Review and Evaluation Process (SREP). The process is carried out according to a formal procedure, which was updated in 2017 based on the experience of leading regulators worldwide. As part of this process, the economists of the BSD evaluated the inherent risk in each of the bank's various activities and the quality of its management. The functions of corporate governance were also evaluated, and the appropriateness and quality of capital were examined. The SREP has three main goals: (a) to update, if necessary, the capital requirements from the individual banking corporation; (b) to require the banking corporation to adopt measures to reduce risk and to repair processes; and (c) to update the supervisory work plan, which is risk-based. (For further details, see Box 3.2, "The Supervisory methodology for assessing risks in the banks").
- **Strengthening the management of cyber risk:** The BSD, together with the National Cyber Directorate, worked to strengthen the abilities of the banks to manage cyber risk by means of sharing of information on attempts to attack, phishing incidents and emerging risks. Furthermore, the BSD issued a directive on "Supply Chain Cyber Risk Management" which clarified for the banks their responsibility to maintain secure working relations with their major external suppliers and their obligation to manage risks appropriately. The banking corporation is required to determine the actions necessary to ensure that external suppliers adopt the means necessary to reduce the exposure of the banking corporation to cyber risk, and to include in its agreement with the supplier the necessary conditions as per the risk evaluation.
- **Strengthening the management of technology risks:** The Technology and Innovation Division, which was established in the BSD about three years ago in order to adapt it to the changing technological environment, formulated a method of on-site examination and off-site evaluation in the domain of information technology and cyber risk. In this context, the necessary organizational changes were made in order to tighten the supervision of these increasing risks, and a plan for auditing and evaluating banking activity in this domain was presented.
- **Carrying out stress test on the banking system:** According to international standards, the BSD carried out again this year a macroeconomic stress test on the banking system. The goal of this test is to examine whether in an extreme macroeconomic event, the banks will be able to absorb the resulting losses, without endangering the deposits of the public and their stability. The results of the test are presented in Box 1.1, "Macroeconomic stress tests for the banking system, 2018".

- **Conducting examinations on various topics:** The BSD assessed the banks' quality of the controls, risk management and corporate governance in practice, by means of examinations and surveys. The assessments—conducted in 2018—emphasized the following: the management of credit risk; fair practice in the marketing of consumer credit; management of credit risk to business borrowers, including the appropriateness of classification and the allowance for credit losses and examining the effectiveness of the collection process and debt arrangements for these borrowers; the management of interest-rate risk and the exposure to changes in the interest rate; the management of conduct risks; the management of the risks of fraud and embezzlement, including the activity of the trading rooms, and in AML/CFT. These assessments led to concrete demands and recommendations for improvement in places where weaknesses in the management of the banks were found.
- **Reinforcing corporate governance in the banks with emphasis on the technological domains:** In order for the board of directors to adapt to a changing technological environment, the BSD amended the Proper Conduct of Banking Business Directive that defines the roles of the board of directors and its working methods, and required the appointment of a committee for information technology and technological innovation, while defining the areas that this committee is required to discuss, and the appointment of at least one board member with technological expertise. Furthermore, the BSD demanded that the tenure of the chairpersons of the various board committees be limited in order to ensure rotation and re-energizing of positions, which contribute to effective risk management.
- **Strengthening risk management in consumer credit:** In light of continuing growth in credit to households in recent years, the BSD continued to monitor the development of risks in the portfolio of consumer credit, by means of examinations and measures to reduce these risks. The findings of the specific examinations were shared with the banks and they included demands to correct the deficiencies found. The cross-sectional findings of the examination were shared with the public by means of surveys published on the Bank of Israel website.
- **Reinforcing risk management of business credit:** The BSD continued to monitor the development of risks in the portfolio of business credit and the implementation of directives in this area, and it required the banks to correct the weaknesses and deficiencies found, emphasizing the need for a formal and meticulous process to examine the adequacy of allowances for credit losses, in order to ensure that the allowances will be found sufficient when needed.
- **Allowances for credit risk:** The BSD promoted the preparations of the banking corporations to implement new rules for the calculation of the allowance for current expected credit losses (CECL). It instructed the banks to prepare to adopt the new rules set forth in this area and is monitoring these preparations. The implementation of the new rules is expected to improve the resilience of the banks during financial crises and to improve the quality of reporting on their financial situation, *inter alia*, by strengthening the connection between actual credit risk and its reflection in the financial statements.

- **Strengthening the management of compliance risk:** The BSD cooperated, together with other regulators and national organizations, with the audit of the Financial Action Task Force (FATF), the world's leading organization in the fight against money laundering and the financing of terror. The FATF examined the country's compliance with international standards in this area and the efficacy of its enforcement regime. In its report, the FATF states that in general Israel applies an effective regime to fight money laundering and the financing of terror. The report was approved in December 2018, and upon its release, **the State of Israel became a member of the FATF.**
- **Supporting the restructuring of ownership in banking:** The BSD oversaw the process to transform Bank Hapoalim into a bank without a controlling core, while defining a layout for decentralizing the controlling core. Since the end of the process at this bank, most of the Israeli banking corporations have been operating without a controlling core, i.e., they are directly owned by the public and the financial institutions. The Proper Conduct of Banking Business Directives provide the BSD with a solution needed for banks with this type of ownership structure.
- **Managing risk in the operations of foreign offices and in dealing with foreign residents:** The BSD issued a specific directive on the supervision of foreign offices, which included new requirements for focusing activity overseas and the strengthening of risk management in the foreign offices, alongside tightening and strengthening control over their operations by means of internal and external mechanisms for risk management and auditing, such as the use of local external auditors (in the country of the bank's activity). Some of the points emphasized in the directive are a result of the lessons learned from the investigations of Israeli and other banks by US authorities.
- **Strengthening and expanding relations with supervisory authorities abroad and with other foreign organizations:** The BSD signed a memorandum of understanding for cooperation and sharing of information with the New York State Department of Financial Services (NYSDFS), and another MoU for cooperation in fintech with the Swiss Financial Market Supervisory Authority (FINMA). It also expanded its professional dialogue with organizations in various countries (the US, UK, Singapore and others).
- **Preparations of the banks for business continuity:** The BSD continued to strengthen the preparedness of the banking system to deal with risks to business continuity. This it accomplished, *inter alia*, (a) by monitoring the banks' fulfillment of Directive 355 requirements regarding the protection of critical sites (the computer room, the situation room, the telephone exchange, the dealing room, etc.) and major suppliers to the banking system; (b) performing an analysis, together with the banks, that will establish the order of priorities regarding national infrastructure services. As part of its role as the designated banking financial authority and its membership in the Emergency Economic Committee, the BSD took part in the staff work and the national discussions to develop knowledge and the level of service in an emergency.

- **The Parliamentary Committee of Inquiry into the Financial System's Conduct in Credit Agreements with Large Business Borrowers:** In the framework of the discussion, the BSD presented the Committee with a large amount of information, which was also made available to the public via the Bank of Israel's website. The information presented the effectiveness of numerous steps taken over the years to reduce credit concentration in the banking system; steps that helped maintain the stability of the system, even during the global financial crisis in 2007 that adversely affected numerous banks worldwide. In addition, the BSD presented a list of steps taken in order to improve corporate governance in the banking system. With regard to the facts and conclusions in the Committee's report, the BSD intends to publish a broad response to it.

1.2 The main activities to increase fairness and the confidence of the public and to protect the banking customer

In order to increase fairness in relations between the banks and their customers and strengthen the position of the customer, the BSD took the following steps:

- The BSD responded to enquiries by the public and their questions on banking and consumer affairs and also investigated and decided on complaints from the public with regard to their business with the banks. In 2018, 8,394 complaints by the public were dealt with. In this framework, the BSD decided on relief for customers whose complaints were found to be justified and instructed the banks to correct any thematic problems that were identified in the accumulated information of the public's enquiries, including reimbursements to the relevant groups of customers. In 2018, a total of about NIS 3.4 million was returned to customers in individual cases.
- The BSD supervised and audited the work of the Ombudsman for Public Enquiries in all the banks, concerning their handling and responding to customers' enquiries.
- **The BSD intensified its enforcement activity in consumer affairs:** In the course of 2018–19, the BSD imposed six financial sanctions on various banks, in the amount of NIS 5 million with respect to a breach of the duty to warn the public via publications, in the conduct of a bank in the event of a continuing failure of events in ATMs and failure to correct a shortcoming in accordance with the BSD's directives. In addition, the BSD conducted a number of examinations of various banks on the subject of initiating consumer credit, and as a result it presented some of them with specific requirements, and emphasized the requirements in this area to the banking system as a whole. The BSD is also advancing a directive on consumer credit together with the Capital Market Authority.
- **The BSD represented the Bank of Israel's position in Knesset committees and ministerial committees on banking consumerism issues.** It provided

professional opinions on numerous bills and, together with the Legal Department of the Bank of Israel, formulated positions on class-action suits against the banks and credit-card companies. Following are the main legislative amendments that the BSD took an active part in formulating, and which will assist the customers of the banking system:

The Fair Credit Law and the regulations based on it.

The Payment Services Law (for further details, see box 2.2, "Consumer and business protection in the advanced payment sphere pursuant to the Payment Services Law, 5779-2019").

Rules that enable individuals with life-shortening disabilities to obtain mortgages.

A legislative amendment, intended to improve the response times to customers at call centers, determined **that a customer-service representative must answer within six minutes in cases of terminating a contract, handling a malfunction and clarifying an account.**

A legislative amendment, intended to facilitate matters for mortgage holders who are experiencing difficulties, established a mechanism for **postponing the monthly repayment date of a housing loan under special circumstances.**

A legislative amendment intended to facilitate matters in the case of the death of a borrower, and establish a mechanism for postponing **the monthly repayment date of a housing loan in such a case.**

- **The BSD acted to increase transparency vis-s-vis the public** in order to strengthen its confidence and to inform it—subject to the obligation of confidentiality—of the BSD's numerous activities and their efficacy. In this context, the BSD published a large amount of material that was submitted to the Parliamentary Committee of Inquiry into the Financial System's Conduct in Credit Agreements with Large Borrowers. In the last two years, it published insights and cross-sectional findings from its audit reports on various subjects, including the following:
    - **The BSD acted to reduce fees** by bringing together small companies and authorized businesses for the special fee tracks, with the goal of reducing their fees for the management of their current account. This effort is a continuation of the previous one, in which the elderly and the disabled were informed of the special fee tracks.
    - **The BSD acted to improve the access of customers to personal information in the area of credit cards:** This was accomplished by implementing the requirements of the Increasing Competition and Reducing Concentration in the Israeli Banking Sector Law (the "Strum Law") regarding the presentation of information on payment card transactions on the banks' sites. The goal is to facilitate

customers' access to information concerning them. In this context, the BSD amended Proper Conduct of Banking Business Directive 470 on payment cards, and assisted the Ministry of Finance to formulate the necessary regulations.

Table 3.1: Materials relating to credit arrangements for large borrowers that the BSD published in the framework of the Parliamentary Inquiry Committee

Date	Subject
Feb. 19, 2017	Credit to large borrowers – Lessons learned from the credit failures, activities of the BSD and the current situation [Hebrew] https://www.boi.org.il/he/NewsAndPublications/PressReleases/Pages/19-2-2017.aspx
May 16, 2018	The BSD's activity regarding corporate governance in the banking system https://www.boi.org.il/en/NewsAndPublications/PressReleases/Pages/16-5-2018.aspx
July 15, 2018	Main findings and requirements from the BSD's audit reports on the activity of the dealing rooms in derivatives traded over the counter https://www.boi.org.il/he/NewsAndPublications/PressReleases/Pages/15-7-18.aspx
July 2018	Findings from audit reports carried out by the BSD over the years in the area of large borrowers and actions taken to correct deficiencies and reduce risk https://www.boi.org.il/he/BankingSupervision/InvestigationCommittee/Documents/review/review5.pdf
December 12, 2018	Proactive marketing of consumer credit https://www.boi.org.il/en/NewsAndPublications/PressReleases/Pages/12-12-18.aspx

- **The BSD led activities to increase financial awareness of the general public.** This was accomplished, *inter alia*, by activities on a nationwide scale, carried out jointly with the Ministry of Social Equality, to empower elderly citizens to use digital banking. The goal of the activity was to help elderly citizens get used to digital banking and to accompany them in a personal and structured manner in becoming familiar with basic digital banking services. During the course of the activity, lectures were given in the framework of "Tuesdays in Suspenders", a project of the Ministry of Social Equality that provided extensive information on digital banking, following which the elderly citizens were invited for personal tutoring on the existing digital banking services available at the bank branch where their account is, including hands-on experience. For the young, it prepared, in cooperation with the Intelligence Corps "*Havatzalot*" program, an educational software program on financial-banking education, which provides knowledge on proper financial banking management to include tracking income and expenses, affording basic concepts and information on managing a bank account, etc. The program will be used by soldiers joining the Intelligence Corps and in the context of various courses and seminars.

- **The BSD made credit agreements accessible to the general public in simple language and in a way that will facilitate comparison and competition.** The BSD issued a Proper Conduct of Banking Business Directive that simplifies the credit agreements in the banking system and determines a standard and concise format that will be presented to the customer on the first page of the agreement.
- **The BSD supported the promotion of an innovative payments market** by participating in the process of enacting the Payment Services Law that provides a solution for the current and future development of payment services in Israel. This law regulates the contractual relations between a provider of payment services and the customer, and regulates the consumer protection in the provision of payment services.
- **The BSD supervised the process of closing bank branches:** In this context, the BSD continued to consider requests from the banking corporations to close branches and reduce teller positions, subject to the relevant BSD directives and the law. The process of closing branches is a result of the change in customer preferences regarding the consumption of banking services (a shift to direct channels) and the need for banks to increase efficiency (in order to be competitive and invest more in innovation, goals that also benefit the customer). Based on the request for data defined in the aforementioned directive, the BSD examines each request to close a branch with the goal of ensuring that an appropriate solution will be provided to customers. In this context, the BSD examines the availability of alternative banking services near the branch, the composition of the branch's customers, the characteristics of the customers' activity in the branch, etc. Based on the circumstances of each case, the BSD decides whether or not to approve the closing of the branch and, if necessary, sets various conditions in order to ensure the quality of services provided to customers.
- **The BSD introduced an amendment to the directive for opening and managing a current account with no credit facility.** The amendment obliged the bank to allow customers to obtain information and carry out activities in these channels independently and conveniently, from any place, at any time and regardless of the branch's opening hours, and even to lower the cost of managing the account. The intention, among other things, is to make it easier for customers who experienced financial difficulties in the past or in the present to manage an account with a positive balance using a variety

of services. The amendment is based on the idea that the use of computerized banking channels is an increasingly fundamental need among the banking corporations' customers.

- **The BSD amended the procedures for providing housing loans** in order to improve various processes in this domain. The amendment included improving the assessment process for assets in order to ameliorate the customer's ability to obtain competing offers and to reduce the customer's exposure to the risk that, prior to the date on which he will need the funds, the bank will refuse to grant a loan because the actuarial assessment was lower than expected. The amendment also included the following: the establishment of an obligation to present updated information on the Internet or on an app in order to enable the customer to consider whether early redemption is worthwhile with greater convenience and based on updated information; and the granting of specific approval addressed to the insurance company after early redemption, with the goal of facilitating and improving the process of informing the insurance companies, and as a result to reduce the monthly insurance premium paid by the customer.
- **The BSD helped protect the following challenged populations:**
    - **The elderly:** The BSD acted to amend the directive on acquirers and the settlement of payment card transactions. The amendment was meant to deal with a distressing phenomenon in which customers, in particular elderly ones, fall victim to fraud, deception and unfair coercion by a business, and the money collected from the elderly is transferred to businesses by means of the acquirer, which simply serves as a channel for conveying the money. The amendment allows the acquirer to refuse to provide a business with acquiring services or to carry out a particular transaction for it if there is a real concern that the activity of the business involves deception of customers, misleading them or coercing them unfairly.
    - **New immigrants:** In order to facilitate opening an account for new immigrants, the BSD published a clarifying circular that regulates the matter. It emphasized that for purposes of identification and recording a customer's personal details an immigration card will be viewed as equivalent to an identity card for the first 30 days after it is issued.
    - **Battered women:** Together with the Association of Banks in Israel, the BSD continued to develop the charter to assist battered women in shelters and halfway houses (a charter that went into effect in 2016). The implementation of the

charter leads representatives of the banks and the credit-card companies to provide personal and individual assistance to every woman entering a shelter for battered women, in order to facilitate her achieving financial independence after leaving her abusive husband. This year, the charter was expanded in three directions: a financial questionnaire, as well as an accompanying guide to fully enlighten her of her rights upon entering a shelter, was added; the charter was extended for a period of one year from the time a women leaves a shelter in order to continue the assistance and to facilitate her financial integration during this stage; and an element of financial education in the shelters was added by creating a direct interface between the bank and one or more shelters.

- **Enforcement in the area of ATM malfunctions:** The BSD demanded that customers be reimbursed retroactively when there was a discrepancy in amounts due to a malfunction in the ATM

1.3 The main activities to promote competition and efficiency in the banks

The BSD initiated numerous changes, including structural ones, which will support increased competitive pressure as well as competition in the household and small businesses sectors in the coming years:

- **Implementing the reform to enhance competition:** The BSD, in cooperation with the Ministry of Finance and other entities, worked to implement the “Increasing Competition Law”. This was done first and foremost by promoting all the projects described below, that were defined as being part of the reform, as well as supporting the work of the monitoring committee.
- **Removing barriers to establishing a new bank by creating regulatory certainty in the process to obtain a bank license:** The BSD continued to introduce the necessary changes in the regulatory environment in order to remove entry barriers and enable the establishment of new banks. Among other things, a regulatory process was defined that enables the receipt of a temporary license until the completion of the necessary processes to establish the bank, and a process has begun to create regulations that are suited to a new bank.
- **Removing the computerization barrier for new and small banks:** The BSD, together with the Ministry of Finance, promoted the establishment of a joint computer center to serve a number of banks and financial players, based on the understanding that computer infrastructure constitutes a significant barrier to the entry of new and small players into the banking market. In March 2019, the Ministry of

Finance announced that the Indian company TCS won the tender. This company will provide computer services to a group of entrepreneurs working to establish a digital bank.

- **Accompanying the separation of the credit-card companies from the two largest banks:** The BSD published amendments to its directives that apply to credit-card companies in order to facilitate their activities after they separate from the banks. The amendments are meant to make it easier for the credit-card companies to meet their everyday financing needs (liquidity) and to allow them to diversify their sources of financing. Similarly, the BSD examined all the groups that were interested in acquiring the credit-card companies, considered and approved the plan to purchase Leumi Card , and accompanied the issuance of Isracard to the public, including examining and giving the required approvals.
- **Promoting competition in banking services by means of a new survey:** The BSD published for the public, the results of a survey on the level of service provided to households by the various banks. The survey included a number of topics that refer to the quality of service provided by the banks: the various channels of communication with the households, the sense of fairness, etc. The goal of publishing the survey is to encourage the banks to take the required steps to improve service and speed up processes. This survey will be conducted annually and will monitor the improvement in service. It is the intention of the BSD to conduct a similar survey in the next year among small businesses in order to examine their satisfaction with the service provided to them by the various banks.
- **Facilitating matters for small and new players:** The BSD published a directive on outsourcing that is meant to contribute to the removal of barriers for new and digital players to enter, and to enable the banks to implement strategic goals, to increase accessibility for customers, and to continue the process of increasing operational efficiency. The directive determines the principles according to which the banking corporations are required to operate when outsourcing various activities, with the goal of reducing their exposure to the risks inherent in outsourcing.
- **The BSD promoted competition in the area of acquirers by the following means:**
    - **Granting a license to an additional acquirer** (after granting a license to a new acquirer in 2017).
    - **Facilitating matters for new acquirers:** The BSD published rules to accommodate acquirers, which was designed to remove technological barriers for new competitors to enter the acquiring market—barriers that stem from both the

connection limitations to the payments system and the fact that building an infrastructure for acquiring is a complex and lengthy task.

- **Promoting open banking:** The BSD is promoting the writing of a standard for open banking (Open Banking API) that will enable the transfer of information from the banks to financial institutions and other entities, and will increase the transparency of information to the customer, which will enable these entities to offer value propositions to the customer.
- **Facilitating switching banks:** The BSD, together with the Ministry of Finance, is promoting the reform to facilitate switching banks. The reform, which is a complex infrastructure process, will enable customers to switch banks online in a convenient and secure process, within seven business days and without incurring any costs. The solution that will be incorporated will enable improvement in the contractual relations between the customer and the bank to which he is moving his financial activity, or the bank in which his account is currently managed, thanks to the increased threat of competition and his increased bargaining power.

1.4 The main activities to promote innovation in the banks

In order to support the achievement of its main goals, the BSD worked to encourage and promote innovation and technology in banking, *inter alia*, by amending its directives, removing barriers and motivating bankers to incorporate innovation.

- **The BSD continued to remove barriers to digital banking**: For example, it permitted the appointment of remote portfolio managers, and enabled them to operate in an online account including changing the ownership of an account and appointing partners online, without having to go to the branch.
- Promoting innovation by removing barriers to the transition to cloud technology: The BSD carried out changes in its directives on "cloud computing", in accordance with the developments in this area and in light of accumulated experience, and similarly to the directives issued by corresponding supervisory authorities in other countries. The changes make things easier for the banking corporations by eliminating the need to apply to the BSD to obtain a permit ahead of time in order to implement cloud technology. The directive includes additional instructions to the banking corporations, *inter alia*, in the area of responsibility and involvement of the board of directors and the management in managing risk, with emphasis on significant cloud computing. The updated directive still does not allow the use of cloud

computerization in core activities and/or core systems, but enables the Supervisor of Banks to authorize this in exceptional cases, such as establishing a new digital bank. The advantages inherent in using cloud computing will enable banking corporations, *inter alia*, to promote the rapid development of innovative products, to improve flexibility and response time in the development of new products (time-to-market) and to reduce development and operating costs, thus contributing to efficiency.

- **The BSD updated its directives regarding the opening of an online account so that they enable the opening of an online account by means of technologies for visual identification and verification.** Based on these updates, the BSD provided a number of banks with permits to make use of the aforementioned technologies for opening an account, and thus **enabled the opening of bank accounts digitally**. Eliminating the need to come to a branch to open an account will increase competition between the banks, and will also enable the existence of a totally digital bank, without branches.
- The BSD, in cooperation with the Accountant General in the Ministry of Finance, is promoting the **Digital Guarantees** Project, which will enable the digital submitting of guarantees in government tenders.
- The BSD is working on formulating directives that will encourage customers **to transfer to receiving notification by digital means** instead of by regular mail, while establishing various consumer protections, including obtaining the informed consent of the customer to the change and installing rapid updating mechanisms in the event of major events in the account.
- **Promoting the adoption of advanced and innovative payments technology:** The BSD promoted the adoption of the advanced EMV standard in the acquirer's market for payment cards. Applying this advanced standard will contribute to promoting innovation in payments and, *inter alia*, will enable "contactless" payments by means of a mobile phone; it will strengthen competition in issuing and acquiring by removing a barrier to the entry of new players from abroad; and it will reduce the risks of forgery and fraud. In 2019, a mechanism went into effect for shifting responsibility, according to which a large business that won't adjust its POS (point of settlement) to new technology, will bear responsibility in cases where a card is used illegally. This issue will continue to be the focus of the Bank of Israel until the full implementation of the standard throughout the economy.

Box 3.1
Class Actions against Banking Corporations

- A class action is a proceeding in which an individual or entity files a claim in court, on their own behalf and on behalf of others who have similar or identical claims, without obtaining consent to act on the behalf of those individuals in advance.
- In 2018, 181 class actions against banking corporations were pending; 60 percent of these lawsuits concerned bank fees. In 2018, of a total of 1,200 new certification motions filed in Israel, 53 were filed to certify class actions against banking corporations.
- In a considerable number of class actions involving banking corporations, the Banking Supervision Department was required to express its opinion, by reviewing and expressing an opinion on motions to certify settlements, or by presenting its position to the court.
- On occasion, in a move that is welcomed by the Bank of Israel, a class action raises significant issues of public import on the public agenda. Nonetheless, some class actions are frivolous, some concern extremely specific issues that, in the view of the Bank of Israel, do not concern many customers, or do not concern core aspects of the banks' relationships with their customers. The Bank of Israel's resources are limited and therefore it gives preference to consumer-related issues that are significant and substantive for a large group of customers. Handling such class actions requires extensive resources and frequently comes at the cost of handling other consumer-related issues with which it has to deal, issue that are more significant and substantive for banking customers.
- Of the class actions concluded in 2018, 50 percent were dismissed (at the initiative of the plaintiff or the court), and settlements were obtained and certified by the court in the remaining 50 percent. In these settlements, customers are awarded monetary and other relief, and the issues that arise in class actions are settled from a forward-looking perspective.
- Involvement in class actions is one of a range of administrative enforcement instruments available to the Banking Supervision Department, and as such constitutes a supplemental supervisory measure for enforcement that enhances the deterrence capabilities of the Supervisor of Banks. For this reason, the Banking Supervision Department encourages the use of this tool when a claim raises an important, substantive issue that concerns a large group of customers.
- In recent years, the proper balance between frivolous claims and claims that produce significant benefits for the public seems to have been upset. We therefore hope that the regulations regarding court fees, which have recently come into effect, will achieve their purpose and reduce the number of frivolous claims so that the majority of claims filed in all fields, including banking, will be worthy and well grounded, and as a result the benefits realized through this tool will exceed its potential shortcomings.
- A representative of the Banking Supervision Department is a member of the Class Action Financing Fund. This fund, which operates under the Class Action Law, aids in financing class action certification motions that have public and social significance.

1. Background

A class action is a legal proceeding in which an individual or entity file a claim on their own behalf and on behalf of other individuals with similar or identical claims without obtaining the consent to act on the behalf of those individuals in advance.[1] The purpose of the law, according to its Section 1, is "to prescribe uniform rules on the submission and conduct of class actions, in order to allow the public or groups of individuals to exercise their right of access to the court, also for categories of the population that find it difficult to go to Court as individuals, and in this manner to ensure enforcement of the Law and deterrence against its violation, to provide appropriate relief to persons injured by Law violations, and to handle actions efficiently, fairly and comprehensively."

The Class Actions Law, 5766-2006 (hereinafter, "the Law") was published in the Code of Laws (Sefer Hahukim) on March 12, 2006. Previously, class actions in Israel were covered under several specific laws including the Banking (Service to the Customer) Law, 5741-1981 (hereinafter, "the Banking (Service to the Customer) Law" or "the Law"), to which Chapter C 1 on class actions was introduced in an amendment in 1996.[2] The arrangement in the Law is much more comprehensive and inclusive than the specific arrangements that appeared in various legislative acts. For our purpose it is important to note that one of the most significant differences between the situation in this field in the period 1996–2006 and the situation from 2006 to the present concerns the causes of action: In the past, causes of action in the area of banking were limited to causes under the Banking (Service to the Customer) Law, but today, according to the Second Addendum to the Law, the causes of action have been extended to include "all claims against a banking corporation in connection with a matter between it and the customer, whether or not they entered into a transaction."[3]

Class actions are considered an efficient tool for enforcing customers' rights in situations in which an individual claim is either inefficient or unpractical. These are typically situations in which the amount of an individual claim is negligible and therefore, presumably, no individual will bother to file a claim to exercise their rights to compensation.

Class actions are also considered a very significant tool of deterrence, because the very knowledge of banking corporations—and of other entities—that each and every customer may use this tool to exercise their rights improves the entities' compliance with the directives and laws, if only to avoid having a class action filed against them.

In many cases, there is an enormous difference between the amounts claimed and the amount awarded by the courts at the conclusion of the proceedings. Class actions either end in settlement agreements that receive validity as a judicial ruling; withdrawal of the claim by the plaintiff, leading to its termination; or, the denial of the certification motion. The banking corporations are obligated to include in their financial statements information on the class actions pending against them.

This box concerns the Banking Supervision Department's involvement, through and with the close cooperation of the Bank of Israel's Legal Department, in class actions that are filed against banking corporations, and describes the role of the Banking Supervision Department and its operating procedures on this issue.

[1] The Class Action Bill, 5766-2006 was published in the Official Gazette [Reshumot] on January 26, 2006.
[2] Amendment No. 6 to the Banking (Service to the Customer) Law, 5741-1981.
[3] Section 3 to the Second Addendum to the Class Actions Law, 5766-2006.

2. **Analysis of data for the year 2018 in comparison to 2017**[4]

Table 1
Analysis of data–2018 compared with 2017

Legal actions filed prior to the year and still conducted during the year		New legal actions during the year		
2017				
Against an individual banking corporation	Against a number of banking corporations	Against an individual banking corporation	Against a number of banking corporations	Total class actions being conducted during the year
98	40	22	6	166
2018				
Against an individual banking corporation	Against a number of banking corporations	Against an individual banking corporation	Against a number of banking corporations	Total class actions being conducted during the year
104	24	43	10	181

SOURCE: Based on reports to the Banking Supervision Department.

- In 2018, there were 181 class actions panding against banking corporations, compared with 166 class actions in 2017 (an increase of about 9 percent).
- In 2018, the number of new class actions filed against banking corporations increased significantly: 53 new class actions were filed, compared with 28 in the preceding year, reflecting an increase of 90 percent (for the sake of comparison, a total of 1,200 class action certification motions were filed in 2018 in all areas). On May 8, 2018, new regulations came into effect, requiring class action certification applicants to pay a fee between NIS 8,000 and NIS 16,000, based on the court before which the action is brought. The purpose of the amendment is to minimize frivolous actions and reserve resources for addressing class actions that are meritorious and well grounded. An analysis of the number of new class actions filed in 2018 indicates that the number of new class actions filed in the second half of 2018 is smaller than in the first half of the year (23 vs. 30), but it is too early to know whether this decline is related to the new regulations.
- The data also show that the number of class actions pending in the courts is on the rise, and exceeds the number of new class actions filed every year. This is because class action proceedings are complex and therefore protracted, and in many cases extend over several years. Due to the large number of class actions filed, the number of new class actions exceeds the number of class actions that are concluded in each year. The Banking Supervision and Legal Departments of the Bank of Israel, which are actively involved in almost all of these class actions, invest extensive resources, due to the

[4] The data are based on information that the Banking Supervision Department received from the banking corporations' semiannual reports.

complexity of the issues raised by these class actions evoke, and due to the potential implications of the courts' rulings for many customers.

3. The issues involved in class actions against banking corporations

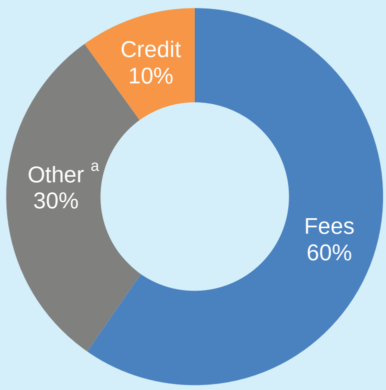
Most class actions concern issues related to banking fees.

A review of the class actions over the years indicates that a considerable share of these cases involve issues related to banking fees, and a minority focus on other issues. Of the 181 class actions pending in 2018, 108 (60 percent) concerned banking fees, 18 (10 percent) concerned credit-related issues, and the remaining 55 class actions concerned other issues. We estimate that the reasons for this are: (1) The Banking Rules (Service to Customer)(Fees) 5768-2008 (hereinafter, "the Fees Rules") that apply to the banking corporations are highly detailed and occasionally are open to multiple interpretations, which opens the door to a broad range of class actions on this issue; (2) Banking fees are an issue that is at the center of public discourse, even though banking fees have declined in recent years. As this issue is the focus of extensive public attention, it is only natural that there will be related class actions.

It can also be stated that some of the class actions are frivolous claims, others concern very specific issues that, in the Banking Supervision Department' view, do not concern many people or do not concern a core aspect of the relations between banks and their customers. As the resources of the Banking Supervision Department are limited, it prioritizes the consumer-related issues that have the most importance and are most material for the large public of bank customers. Because attention to these class actions requires extensive resources, this work comes at the expense of work on other consumer-related issues that are more material to banking consumers and on the public agenda. Nonetheless, class actions occasionally

Most of the class-action suits deal with issues concerning fees.

Figure 1
Breakdown of Class-Action Suits by Issue, 2018



[a] "Other": Discrimination, proper disclosure to customers, management of Execution and Collections files, finding dormant accounts, means of payment, harming customer privacy, tax deductions, and more.

SOURCE: Based on reports to the Banking Supevision Department.

direct awareness to important issues of significant public value, and this is a welcome situation.
Data for the year 2018 indicate that of the 37 class actions concluded that year, 14 were ended in the plaintiff's withdrawal of the claim, which led to an abatement of the class action, and in an additional 4 cases the motion was dismissed. That is, the proceeding was cancelled in 50 percent of the cases, at the initiative of either the plaintiff or the court. An additional 19 cases, including several that did not concern core issues, ended in settlements that were approved by the court.

Examples of significant class actions over the years

Class actions occasionally raise issues that have high public value and significance. A class action may be important because a significant amount is awarded as compensation for the relevant class, it provides a clarification of supervisory expectations, or serves as a catalyst to legislative reform or improvement of procedural efficiency. Below are several examples of such class actions:

Aran[1] (2016): Six class actions were filed against six banking corporations concerning banking corporations' obligation (under Article 9A to the Banking (Service to the Customer Law) to remove charges on properties from various official records after the corresponding debt has been discharged. These class actions prompted the Banking Supervision Department's intervention in this issue, as a result of which hundreds of thousands of liens, which should have been deleted by law when their corresponding debts were discharged, were expunged from all banking system databases. Moreover, following the Banking Supervision Department's intervention and based on its position, the banks were required to apply the above Article also to caveat notes and undertakings to register mortgages, and the banks' transition to online registration and cancellation of charges was accelerated.

Troim[2] (2003): A class action concerning fees imposed on bank customers for Leumiphone services despite the absence of any record of the customers' consent to receive such service. In this case the Banking Supervision Department intervened after the motion to certify the class action was dismissed. As a result of its intervention, the bank refunded NIS 54 million of fees to customers, who did not use said service, and for whom the bank had no record of consent to join the service.

Reshef[3] (2018): This class action concerning the bank's obligation to locate holders of dormant deposits (which are not subject to the investment obligation according to the Banking Order) and pay out the funds in these deposits. According to a settlement between the parties that was approved by the court, the bank was required to operate a wide-ranging set-up to locate and inform deposit holders of the existence of their deposits and funds, in order to pay these funds to their owners. The total amount recovered was NIS 20 million.

Diamant[4] (pending): This class action concerns the fee charged for "production or printing of documents found in the computerized database, at the customer's request." In the position submitted by the Banking Supervision Department at the court's request, the Banking Supervision Department

[1] Class Action 30919-01-10 Rachel Aran et al. vs. Bank Hapoalim Ltd. and others.

[2] Civil Action (Tel Aviv Yafo) 2162/01 Gil (bar) Troim vs. Bank Leumi L'Yisrael Ltd.

[3] Class Action 34724-04-15 Guy Reshef et al. vs. Bank Leumi L'Yisrael Ltd. and others.

[4] Class Action 920-09-15 Ilan Diamant vs. Isracard Ltd.

clarified that the price of the service should reflect the operating costs incurred by the banking corporation, and banking corporations should take into account the changing reality and technological developments that reduce these costs.

Maimon[5] (pending): This class action concerns a claim of excessive and unlawful operating fee of NIS 60 charged to bank customers when making early repayment of a mortgage loan that includes several loan tracks. The Banking Supervision Department's position, which was submitted to the court, clarified that when a customer requests to make early repayment of a loan, the banking corporation may charge only one early repayment operating fee even if the loan amount comprises multiple loan tracks.

Lapiner[6] (pending): This class action concerns banking fees charged to student accounts. In the opinion it submitted to the Supreme Court, at the court's request, the Banking Supervision Department addressed the fees charged to customers on the basis of the banks' fee schedules and accompanying schedules of benefits, and also addressed the banks' publication obligation, which also applies to their schedules of benefits. According to the Banking Supervision Department 's position, if a bank fails to publish the schedules of benefits over the entire period in which they are in effect and apply to its customers, that bank is in violation of its publication obligations. The Banking Supervision Department left it to the court to determine the significance of such violations.

Astoria[7] (2010): This class action concerned a claim about a failure to make due disclosure of a minimum index clause in the loans that the bank granted to its customers. The meaning of this clause is that if the CPI drops below the base index defined in the loan agreement, the customer does not benefit from that decline. Although the bank did not technically violate the language of law, the Banking Supervision Department was of the opinion that steps should be taken to improve the disclosure [of this clause] and therefore it sent a letter to the banking corporations, demanding that they explicitly indicate the existence of a minimum index clause both in the loan framework agreement and in the supplemental document, rather than merely refer to the framework agreement.

[5] Class Action 11593-10-13 Ayala Malka Maimon et al. vs. Bank Leumi L'Yisrael Ltd. and others.

[6] Class Action 39507-07-14 Maya (Mugrabi) Lapiner vs. Israel Discount Bank Ltd.

[7] Civil Action 2205/04 Astoria Investments Limited vs. Bank Leumi L'Yisrael Ltd

4. **Handling class actions – one of the many instruments available to the Banking Supervision Department to increase fairness**

The Banking Supervision Department uses the broad range of available administrative enforcement measures to protect banking customers.[5] Class actions are a supplemental measure that enhances the administrative enforcement actions that the Banking Supervision Department conducts through all the other available tools. In effect, this tool is available to any customer who feels harmed by a banking corporation's conduct that is not in line with statutory requirements, and who believes that they have a good cause of action. The result is that class action proceedings have a dramatic deterrence effect.

[5] For more on this topic see the box in Section 2 to this chapter: "The Banking Supervision Department's consumer-related activities."

5. The Banking Supervision Department's Involvement in Class Actions

The Banking Supervision Department expresses an opinion in many of the class actions that involve a banking corporation. The Banking Supervision Department may submit its position to the court or play a role in the settlement phase. In recent years, the courts have increasingly demanded that the Banking Supervision Department become involved in class actions by expressing its regulatory position on the issues. The Banking Supervision Department is also involved in class actions through its membership in the fund for financing class actions.[6]

Comments on settlement arrangements: According to Section 18 of the Law, the court transfers to the Attorney General every motion to approve a settlement that is not dismissed in limine by the courts, and the Attorney General effectively transfers all motions to approve settlements in class actions involving a banking corporation to the Banking Supervision Department. Furthermore, Regulation 12(D) to the Class Action Regulations 5770-2010 determines that motions to approve settlements should also be transferred directly to the Banking Supervision Department. The Banking Supervision Department's comments on settlements touch on a wide range of issues[7], and its involvement in these settlements makes it possible to review the settlement from the perspective of the represented class. One of the main problems is that the class representative and the class counsel have different interests from the members of the represented class. As a result of these differences, class representatives may agree to settlements with amounts that are lower than the amounts to which the class would have agreed had its members been consulted. It is at this point that the Banking Supervision Department enters the picture and reviews the settlement from the perspective of the class. If the agreement is unsatisfactory from their perspective, the Banking Supervision Department will not consent to it and will, instead, suggest improvements to ensure that the interests of the class members are fully taken into consideration. If the Banking Supervision Department believes that the cause of action justifies full compensation for the members of the class, it will tend to oppose a settlement that grants them partial compensation. In some cases, the Banking Supervision Department may oppose a settlement and the court has not approved the settlements in such cases to date.

Submitting a position to the court at the court's request: According to the rule developed in the Zeligman Case[8], the court gives significant weight to the regulator's opinion. In the decision dated September 20, 2018 in the matter of *Yuval Lapiner vs. Bank Hapoalim et al.*[9], which concerned fees charged to walk-in customers, Judge Daphna Baltman affirmed the Zeligman rule that was determined by the Supreme Court, and dismissed the action on the basis of the opinion of the Banking Supervision Department

6 For more on this topic see Section 7 below.

7 For example – defining the members of a class: The goal is for the banking corporation to make its best efforts to locate the members of the group even if, for example, they are no longer the bank's customers. We will prefer full compensation to customers over a contribution; We will ensure that the issue is settled in a manner that is most beneficial from a forward-looking perspective; who will be subject to the ruling; preference of a reasonable and fair settlement over a protracted proceeding; we will generally prefer to reduce to a minimum the amount under which no efforts to locate class members will be taken; and the better grounded the cause of action, the greater is our preference for full compensation of the members of the group.

8 The Supreme Court ruling in Civil Appeal 7448/16 Seligman vs. Phoenix Insurance Company Ltd (published in Nevo, May 31, 2018).

9 Class Action (Center) 44727-05-16 Yuval Lapiner vs. Bank Hapoalim et al., September 20, 2018.

regarding the correct interpretation of its circular, which was the focus of the dispute.[10]

It is our impression that the courts have recently shown an increasing tendency to request the position of the Banking Supervision Department on the issues brought before them. The advantage of having the regulator's position is that these positions are submitted at a relatively early stage of the proceeding[11] and assist the court in developing its ruling. Presenting an opinion to the court is also an opportunity for the Banking Supervision Department, in its capacity as regulator, to influence the proceeding and promote balanced, uniform, and broad interpretations of regulations that the Banking Supervision Department itself determined or is enforcing with the tools available to it. The drawback in presenting positions to the court is the extensive resources that the Bank of Israel invests in this task, and as noted above, some topics are not a top priority for the Bank of Israel in terms of consumer protection.

It frequently occurs that after the regulator's position is given, the movants accede to the court's recommendation to withdraw their motion to certify. An example is the ruling in the matter of Oppenheim vs. Bank Hapoalim[12], in which the court (the Honorable Judge Grosskopf) advised the class action representatives to withdraw their claim, among other things in view of the Banking Supervision Department's position. This class action concerns the application of tiered minimum fees charged for foreign currency transfers to and from overseas accounts. The plaintiffs claimed that the full fee schedule had been violated. The Banking Supervision Department believed that defining a tiered schedule of fees in this case was generally beneficial for customers and therefore, as long as the basic structure of minimum and maximum fees was retained, a tiered schedule of fees does not constitute a violation of the rules anchored in the complete fee schedule, and also does not undermine customers' ability to compare service costs in different banks.

6. The connection between class actions and consumer regulation

Occasionally a class action on a specific issue triggers regulatory action by the Banking Supervision Department or prompts a legislative amendment related to that issue. For example, the 2012 Interim Report of the Team to Examine Enhanced Competition in the Banking System[13] recommended to cancel the minimum banking fees charged for management of securities deposits, noting that the manner in which these fees are collected, occasionally gives rise to customers' complaints, which are handled by the Banking Supervision Department and addressed in class actions against banks.[14] This issue arose

[10] "Where the regulator's position in a civil proceeding was requested and received concerning the interpretation to be given to its directives, the court should first examine whether this position is consistent with the language of the directives and whether the interpretation that the regulator offers is reasonable—taking into account that the boundaries of reasonableness regarding the regulator's actions in its field of expertise are, as noted above, extremely broad. If the court finds that the regulator's position is reasonable and is consistent with the language of its directives, the default option will be to adopt this position. Any deviation from this default option is possible where the court finds that there are weighty considerations for rejecting the regulator's position and adopting another interpretation instead. For example, where the court is convinced that the regulator's position stems from irrelevant considerations or a conflict of interest to which the regulator is subject, this would be a weighty consideration for rejecting the regulator's position."

[11] In contrast to situations that occurred multiple times, in which there are objections to a settlement after the case had been heard by a court or mediator court for a period of several years already.

[12] Class Action 17390-12-16 *Daniel Oppenheim et al. vs. Bank Hapoalim Ltd., March 13, 2018*.

[13] Interim report published on July 15, 2012.

[14] See Interim report, p. 110.

in three class actions: *Yerachmiel Agarat vs. Bank Hapoalim*[15] (hereinafter, "Agarat"), *Zimmerman vs. Mizrahi-Tefahot*,[16] and *Finklestein vs. Bank Hapoalim*.[17] The Agarat claim was filed in 2010 and the position of the Banking Supervision Department—that the bank operated lawfully by charging the fee—was submitted to the court in October 2011. The parties reached a settlement that was approved by the court in June 2018. Under the settlement, the members of the class received compensation in the amount of almost one-half of the excess charge over the maximum fee calculated by a monitor appointed by the court (over NIS 5.5 million). Between those years, the Banking Supervision Department addressed this issue and on March 1, 2013, the fee was cancelled through an amendment to the Fees Rules. In the above 2018 ruling, the court mentioned the amendment, and in its reasoning for its decision it noted: On the one hand, in the position that it submitted to the court, the Bank of Israel affirmed the manner of said fee (before the class action was certified), while on the other hand – the Bank of Israel found it fit to cancel minimum management fees, when it concluded that the wording of the fee schedule caused customers' confusion about how calculations were made.

On occasion, an amendment to a Banking Supervision Department regulation will lead to class actions on that issue. We in the Banking Supervision Department are well aware of this and therefore, when introducing any regulatory amendment, we invest efforts to clarify whether the amendment is forward-looking (not intended to affect past interpretations of the law or directives) or whether it is intended to clarify the current situation. When class actions are filed in response to regulatory amendments, the Banking Supervision Department clarifies the situation that prevailed at the time relevant to the class action; this situation may have changed since.

7. The Fund for Financing Class Actions

Another way in which the Banking Supervision Department is involved in class actions is through the Fund for Financing Class Actions, which commenced operations in May 2011. The Fund operates under Section 27 of the Class Actions Law, which defines its duties as follows: "to assist representative plaintiffs to finance the submission and hearing of motions for certification of class actions of public and social importance." The Fund is managed by a board of nine members appointed by the Minister of Justice, who represent the various areas in which class actions are filed, and one of these is a representative of the Banking Supervision Department.[18] The Fund's annual budget is NIS 1.25 million, and this budget is earmarked primarily to finance expert opinions, reimbursement of court costs and guarantees. Once a year, the Ministry of Justice publishes a summary report of the Fund's activities for the year on its website. The report lists the topic of each class action whose request for aid was granted, the amount granted, and the purpose of the grant, and the dates of the meetings in which the Fund made these decisions. According to the Fund's report for 2018, of the 127 requests it received, 3 percent were in the banking field, and of the 64 requests that were granted, 2 percent were in the banking field.

[15] Class Action (Tel Aviv) 3179-09-10 *Yerachmiel Agarat vs. Bank Hapoalim Ltd., ruling dated June 26, 2018*.
[16] Class Action 1939/06 *Zimmerman Eliraz vs. Mizrahi-Tefahot Bank Ltd*.
[17] Class Action 30263-11-10 *Yitzhak Finklestein vs. Bank Hapoalim*.
[18] The other members of the Fund are: Fund chairperson, a representative of the Consumer Protection and Fair Trade Authority, a representative of the Israel Antitrust Authority Director General, a representative of the Israel Securities Authority, a representative of the Ministry of Environmental Protection, a representative of the Commission for Equal Rights of Persons with Disabilities, a representative of the Attorney General, and a representative of the public.

Box 3.2
The Supervisory Methodology for Assessing Risks in the Banks

- **The Banking Supervision Department ("the BSD") regularly performs a long series of activities to examine, control, monitor, and assess risks in the banks. These activities are performed by all the BSD's divisions throughout the year.**
- **The BSD additionally conducts a structured, comprehensive Supervisory Review and Evaluation Process (SREP), according to the guidelines of the Basel Committee on Banking Supervision (BCBS), and which is in line with similar processes conducted by leading supervisory agencies worldwide.**
- **In the SREP, BSD economists assess the risks inherent in the banks' activities and the quality of the banks' risk management; their main corporate governance functions; and adequacy and quality of their capital. This process conforms to an orderly methodology based on specific risk/score cards.**
- **The SREP has several primary aims: (1) Where necessary, to determine revised capital requirements for a bank, i.e. capital requirements in addition to the general regulatory capital requirements, to function as a cushion designed to absorb unexpected losses and improve the bank's stability; (2) To define the actions that a bank should take to reduce its risks and correct its processes; (3) To update the risk-based supervisory work plan.**
- **As a result of the large number of monitoring and supervisory processes, including the SREP and other actions described in this box, the banks improve their risk management, strengthen their corporate governance, and are better prepared for loss events or periods of crisis. These improvements are achieved against the backdrop of, among other things, the BSD's requirements and its early intervention when a need is identified by its monitoring and examination activities.**

Background

The BSD strives first and foremost to protect bank depositors' money and to ensure the proper functioning of the banking system and the orderly provision of banking services to the public and the economy. To this end, the BSD determines and enforces practices and standards designed to maintain the banks' stability and promote their prudent conduct.

Banks naturally assume risks in the normal course of their business. Supervision is based on the premise that a bank's stability, its risk management, its fair practices and treatment of its customers, and its compliance with laws and regulations, is the responsibility of, first and foremost, its board of directors and senior management. The role of the BSD is to promote the banks' prudent conduct, and reduce and limit excessive risk taking as far as possible, through the use of its regulatory toolbox. Its tools include, but are not limited to, legislation; the Proper Conduct of Banking Business Directives that the BSD issues and that the banks are required to comply with; review and examination processes and demands to rectify defects; in-depth reviews prior to issuance of licenses and permits (such as permits for control and holdings, or permits to serve as an officer); establishment of capital requirements that function as a safety cushion and absorb unexpected losses; independent risk assessment; assessment of the banks' resilience in stress scenarios; meetings with board members and senior management; and financial sanctions.

This box focuses on the BSD's ongoing monitoring processes and specifically the SREP – the structured periodic process conducted by the BSD to assess the banks' risk profiles and the banking system in general.

Risk assessment and ongoing monitoring

The BSD regularly monitors the risks inherent in the operations of the banks and the credit card companies, and the developments of these risks.

In view of the BSD's relatively limited resources in comparison to the scale of the banking system, the BSD follows a risk-based approach. Specifically, all the regulated entities[1] were divided into "supervisory categories", mainly according to considerations related to the materiality of each entity (market share, and size of assets and deposits), the complexity of its activities, and its corporate structure (independent corporation, or subsidiary member of a banking group). A bank's supervision group classification determines the frequency and intensity of the BSD's examination and monitoring actions. To illustrate, an independent bank with sizeable operations will be subject to supervisory monitoring that is both frequent and intense, while a small bank that is a member of a banking group and whose operations are simple will be reviewed by the BSD less often and less intensely (obviously, its parent bank is required to conduct ongoing oversight of its own). The banks' classifications are reviewed from time to time, according to changes in the mix of the banking corporations' activities and their scope. On this point it is important to clarify that the division into supervision categories is not the BSD's sole lens through which a bank is assessed: The BSD also addresses significant risks that it identifies in banks that are neither large nor independent. This risk-based approach allows the BSD to make efficient use of its resources by aligning such use with the degree of risk in each case. This approach also takes into account expectations of international supervisory entities such as the IMF or the FATF, which assess the operations of the BSD.

Ongoing monitoring and supervisory activities are conducted throughout the year, and these entail a long list of actions. The main activities are:

1. On-site examinations and off-sight reviews (system-wide and specific);
2. Conduct of uniform forward-looking supervisory stress scenarios (see expanded discussion in Box 1.1, "Macroeconomic Stress Tests for the Banking System, 2018" and in Box 1.2, "Effects of Macroeconomic Stress Scenario on the Housing Credit Portfolio");
3. Ongoing meetings with bank boards of directors, individual board members, board committees, senior management, and internal gatekeepers (such as the internal auditor, the chief risk officer, and the compliance officer);
4. Analysis of a bank's business strategy and annual work plans;
5. A study of a bank's conduct and treatment of its customers based on how the bank handles public consumer complaints and its controls in the area of consumer banking;
6. Ongoing review of the risks inherent in a bank's activities and their development, including a study based on accepted quantitative indicators and compliance with supervisory limitations and requirements (including capital adequacy ratios, liquidity ratios, efficiency and profitability ratios, market shares, credit quality measures, credit and deposit concentration measures, measures of market risk and interest, etc.)

[1] Independent banks, banking subsidiaries, credit card companies, overseas branches of Israeli banks, branches of foreign banks, non-bank subsidiaries, etc.

7. Analysis of the banks' financial statements on a quarterly basis;
8. Regular meetings with the auditing accountants;
9. Review of minutes of board meetings and (some) board committee meetings;
10. Review of a long list of the most important internal documents produced by a bank, including policy documents, ICAAP report[2], quarterly risk documents, periodic reports prepared by the internal audit and the credit control function; internal audit reports, etc.;
11. Monitoring of cyber-security incidents and how they are addressed;
12. Monitoring of embezzlements and how they are addressed.

SREP - Supervisory Review and Evaluation Process

As noted, in addition to the actions described above, the BSD conducts a structured, comprehensive periodic assessment (SREP - Supervisory Review and Evaluation Process). The SREP encompasses all the information collected in this process as well as the information collected in the BSD's ongoing supervisor actions described above. The SREP is conducted according to BCBS guidelines and corresponds to similar processes conducted by leading supervisory agencies around the world. The SREP is the BSD's key work process in which all BSD divisions participate.

The SREP is conducted at the banking group (i.e., consolidated) level, with emphasis on the parent company's work processes. The process typically involves the five major banking groups (Hapoalim, Leumi, Discount, Mizrahi-Tefahot, and FIBI) and the independent banks (Union Bank and Bank of Jerusalem). The structured nature of the SREP makes it possible to assess and understand the risks in each bank separately as well as to compare the banks, identify irregular risks and areas in specific banks, and identify systemic risk trends.

The SREP has several main aims and outcomes:

1. If necessary, to revise a bank's capital adequacy requirements – increasing the capital that is used as a cushion to absorb unexpected losses and improve the bank's stability;
2. Define requirements designed to reduce risks and correct processes;
3. Update the BSD's risk-based supervisory work plan.

The SREP can be divided into three main stages: First, BSD economists assess the inherent risk in the bank's various activities (credit risk, liquidity risk, market risks, operating risks, compliance risks, strategy risks, and risks pertaining to the bank's business model), and the quality of risk management of each risk. They also assess the key corporate governance functions (the board of directors, the management, risk management, and internal auditing), and the bank's capital adequacy and quality.

In the next stage, all BSD divisions challenge and validate the findings. The results of the process are discussed by BSD management and then presented to the Governor of the Bank of Israel.

Finally, major findings and demands for improvement or rectification are presented in meetings with the bank's board and its senior management. The bank is also sent a detailed letter describing the findings and the supervisory expectations and requirements stemming from them.

[2] Internal Capital Adequacy and Assessment Process. In brief, this is an internal document produced by the bank, in which it assesses the adequacy of its capital relative to its risk level. The requirement to develop an internal capital adequacy process is defined in the Supervision's directives and is based on the Basel Committee guidelines on capital adequacy.

Structured methodology based on score/risk cards

The BSD's risk assessment and its evaluations of corporate governance functions - the core element of the SREP - is carried out using a systematic methodology that it developed based on score/risk cards. The BSD recently revised this methodology in 2017 after a comprehensive survey of similar processes in leading supervisory agencies around the world, based on Basel Committee publications and with reference to the recommendations that the IMF issued following a technical assistance mission that focused on this issue in 2016.

A score/risk card is a decision support tool. A card contains a summary of quantitative and qualitative risk measures, guiding questions, and other considerations that might influence the risk evaluation. Each card is divided into multiple evaluation elements, which represent distinct dimensions of assessment (e.g., sub-categories of a specific risk). This format makes it possible to perform system-wide comparisons and track trends involving specific evaluation elements.

The list of cards and their contents are reviewed and revised from time to time, as necessary. The following table presents the risk cards used to evaluate risks in the most recent SREP process (in 2018):

Table 1
Risk cards used during the last SREP conducted in 2018

	Structured risk in the bank's activity	Quality of risk management
Risks		
Credit risk	✓	✓
Market risks[a]	✓	✓
Liquidity risk	✓	✓
Operational risks[b]	✓	✓
Compliance risks[c]	✓	✓
Strategy and business model	✓	
Corporate governance function		
Board of Directors	✓	
Management	✓	
Risk management	✓	
Internal Audit	✓	
Capital adequacy	✓	

[a] Among other things, the Banking Supervision Department examines the bank's exposure to changes in the Consumer Price Index, the exchange rates, and the interest rates, as well as the composition and volume of the nostro.

[b] The Banking Supervision Department examines the nature and complexity of the bank's business activity and assesses a long series of risks: information technology (IT) risks, cyber and information security risks, business continuity risks, fraud and embezzelment risks, legal risks, outsourcing risks, human resources risks, and more.

[c] Among other things, the Banking Supervision Department examines the following: Prohibition of Money Laundering and Financing of Terrorism, Cross-border banking, Conduct risk, and compliance risk on the consumer (bank-customer) level.

SOURCE: Banking Supervision Department.

As this table shows, each risk is assessed on two cards: one assesses the inherent risk and the second assesses the quality of risk management. The BSD expects to see an increase in risk management quality as inherent risk increases.
The inherent risk cards typically include characteristics and quantitative indicators relevant to each risk, independent of the quality of its risk management or potential managerial actions. The risk management cards concern processes that the bank conducts to support risk management, including a determination of the bank's risk appetite, strategy and policy; risk monitoring and supervision by the board of directors; an organizational framework that supports risk management (organizational structure, mandate, separation of powers, procedures, hierarchy of authority, supporting IT systems, etc.); actions taken to identity and assess the risk (in particular, model development and validation processes); monitoring and reporting; and the quality of the internal control environment. These processes are examined in each of the bank's three lines of defense, as relevant (the business function, the risk management function, and the internal auditing function).
As noted, the BSD also uses scorecards to evaluate the main corporate governance functions: the board of directors, the senior management, the risk management function, and the internal audit. The BSD evaluates the features of each function (such as its independence, its status, and the adequacy of the resources allocated to it) and the effectiveness of its work.
The BSD also evaluates the bank's capital adequacy. Capital is a risk-mitigating factor because it cushions unexpected losses. Using the capital scorecard, the BSD evaluates the level of capital and its quality and assesses capital management and the bank's access to additional capital if necessary.

At the conclusion of the process, an overall score is calculated as a weighted sum of the scores in all cards. Each card's weight is a function of the risk's significance and additional factors, and the cards' relative weights are reviewed from time to time and modified as necessary. The overall score is examined both before and after capital effects, because the capital is a risk-mitigating factor.
As a result of the multiple monitoring and supervisory processes, including the SREP and other procedures described above, the banks improve their risk management, strengthen their corporate governance, and are better prepared for loss events or periods of crisis. These improvements are achieved, among other things, against the backdrop of the BSD's requirements and early intervention actions when a need is identified by its monitoring and supervisory control activities. The following is a (partial) list of such interventions performed in recent years:

- Demands to increase the banks' capital ratios.
- Demands to desist from dividend distribution.
- Demands to restrict overseas business operations.
- Intervention in the appointment of officers.
- Demand to reduce concentration of borrowers and borrower groups.
- Demand to reduce exposure to holding companies.
- Demands to improve the board's functioning.

- Demands to strengthen gatekeepers’ effectiveness
- Demands to address emerging risks (compliance risks, technology risks, cyber risks, etc.)
- Promote re-organization programs in banks to increase efficiency

Box 3.3

Responsible Lending—From Principle to Implementation

The Banking Supervision Department's Actions to Promote Responsible Lending in Consumer Credit

- The Banking Supervision Department works to instill the principle of responsible lending in the banking system (banks and credit card companies), corresponding to a similar trend in international regulation.
- Beyond satisfying the specific requirements of the law and regulation, the banking corporations are required to refrain from granting credit that might deteriorate the economic situation of their customers or adversely impact their welfare—and to refrain from inappropriate marketing practices, including the marketing of products that do not match clients' needs, which might cause harm to their clients.
- To protect the consumers of financial services and prevent regulatory arbitrage, the responsible lending principle should apply not only to banking corporations but also to professional non-bank lenders.
- The Banking Supervision Department enforces banks' compliance with the law and regulation and their responsible practices by monitoring, auditing and, where necessary, by imposing financial sanctions. The lessons learned from these actions help the Banking Supervision Department promote new regulation in the field of consumer credit.
- The Banking Supervision Department concurrently works to increase the public's financial literacy in the field of credit.
- Although households' leverage is relatively low in Israel compared to other developed countries, the Banking Supervision Department has put measures into place to prevent serious risks to customers and to banks from materializing.
- The Banking Supervision Department's actions are designed to achieve a proper balance between protecting the customers of the banking system, and the need to ensure that the banking system continues to provide the consumer credit that the economy needs.

The global financial crisis that erupted in 2008 triggered great attention to the significance of consumer protection, especially in the field of credit; not only its moral implications, but also its material role in maintaining financial stability, especially against the backdrop of climbing household leverage in certain countries.[1] The principle of responsible lending requires banking corporations to take the customer's financial situation in account, both with respect to their ability to repay their debt using reasonable efforts, and with respect to a financial product's suitability to the customer's needs. This principle has become increasingly important in international regulation in recent years.

In 2011 the joint task force of the OECD and G20 determined that responsible business conduct is one of the key principles for protecting financial service consumers; These principles are

[1] FinCoNet (The International Financial Consumer Protection Organisation) Report on Responsible Lending, Review of Supervisory Tools for Suitable Consumer Lending Practices, July 2014.

considered accepted standards for developed countries.[2] According to an international survey by FinCoNet, an international organization whose members are leading regulatory authorities with powers in financial consumer protection, member countries are reinforcing the available legal and regulatory measures by transitioning to more strict supervision in the field of consumer credit. Regulation on consumer credit is no longer is limited to due disclosure and transparency of credit terms, but focuses on assisting customers to make informed decisions as borrowers and on matching credit products and their terms to customers' needs and ability to meet their financial expenses using reasonable efforts.[3] In some cases, such as Australia[4], these requirements have been anchored in legislation. Financial regulators supplement their work to promote these principles by encouraging consumer responsibility and prudence through financial education.

Israeli legislation regulates various consumer-related aspects of the banking system's credit services: Banks are prohibited from misleading customers or exploiting their hardship, inexperience or other special circumstances, and are prohibited from imposing undue influence on customers[5] or using discriminatory practices,[6] for example.

In addition to these specific obligations and prohibitions, banking corporations are subject to a broad, general duty of trust toward their customers. Under this duty, they must act fairly, honestly, professionally, prudently, and provide disclosures, while taking the situation and needs of their customers, especially their retail customers, into consideration. The banks' duty of trust is designed to dynamically and flexibly bridge the asymmetry in knowledge and power between banks and their customers.

In recent years, the Banking Supervision Department in Israel firmly placed consumer credit as one of the foci of its activities and has worked to effectively instill the principle of responsible lending into the banking system, through a wide range of activities, including involvement in legislative processes, regulation, audits, enforcement, and financial education. Below is a

[2] G20 High Level Principles on Financial Consumer Protection, October 2011. See Principle 6: "Financial services providers and authorised agents should have as an objective, to work in the best interest of their customers and be responsible for upholding financial consumer protection. Financial services providers should also be responsible and accountable for the actions of their authorised agents. Depending on the nature of the transaction and based on information primarily provided by customers financial services providers should assess the related financial capabilities, situation and needs of their customers before agreeing to provide them with a product, advice or service. Staff (especially those who interact directly with customers) should be properly trained and qualified. Where the potential for conflicts of interest arise, financial services providers and authorised agents should endeavour to avoid such conflicts. When such conflicts cannot be avoided, financial services providers and authorised agents should ensure proper disclosure, have in place internal mechanisms to manage such conflicts,. or decline to provide the product, advice or service."

[3] See footnote 1.

[4] The National Consumer Credit Protection Act, sec. 133; ASIC, Regulatory Guide 209: Credit licensing: Responsible lending conduct: A credit contract or consumer lease will be, and must be assessed as, unsuitable where, at the time of the assessment, it is likely that: (a) the contract does not meet the consumer's requirements and objectives; (b) the consumer will be unable to meet their payment obligations, either at all or only with substantial hardship

[5] The Banking (Service to the Customer) Law, 574-1981,

[6] The Prohibition of Discrimination in Products, Services, and Access to Venues and Public Places Law, 5761-2000.

description of the Banking Supervision Department's activities in the field of consumer credit. These activities are consistent with the best practices emerging in major economies.

The Banking Supervision Department was a key partner in introducing recent significant legislative changes and issued several directives and guidelines for the banking system with the aim of regulating various consumer-related aspects of credit services: In mid-2015, in a letter sent to all the banking corporations, the Banking Supervision Department defined stringent restrictions on proactively marketing consumer credit. Among other requirements, the banks were required not only to study the customer's repayment ability (based on a conservative definition of the target groups of the bank's marketing efforts) but also to assess whether the credit fits the customer's needs. In 2017, the Banking Supervision Department issued rules on collecting debts following a customer credit default.[7] In 2019, following the clarifications in the credit term disclosure and transparency requirements that was introduced in the Fair Credit Law in 2018,[8] the Banking Supervision Department issued a directive determining that all loan agreements include a brief summary of the agreement using uniform, easily understood language that allows consumers to compare lenders and promotes competition.

To reduce the risk of consumers' economic deterioration and reduced welfare to the greatest possible extent, the Banking Supervision Department conducts audits of credit underwriting processes to confirm that credit is granted only after banks verify that the customer can repay the debt using reasonable efforts. In these audits, the Banking Supervision Department checks the extent to which the banks' inquire into customers' financial situation and total debt, and take into account customers' disposable income.

Additional audits were conducted to verify compliance with the responsible lending principle, specifically banks' efforts to match services to their customers' needs and refrain from adversely affecting their welfare. Special emphasis was placed on the banking system's proactive offering of credit to households—situations in which banks solicit specific customers and offer credit—in bank branches, on digital channels, by telephone, including when a bank offers credit to the customer while it is handling an unrelated request. Although proactive marketing of credit is conventional practice in Israel and worldwide, it incorporates risks for customers. For example, when a customer is contacted by a bank, the customer typically does not have sufficient time to examine all the terms of the credit that is being offered, compare its price to other available offers on the market, assess their total burden of indebtedness, or properly plan repayment.

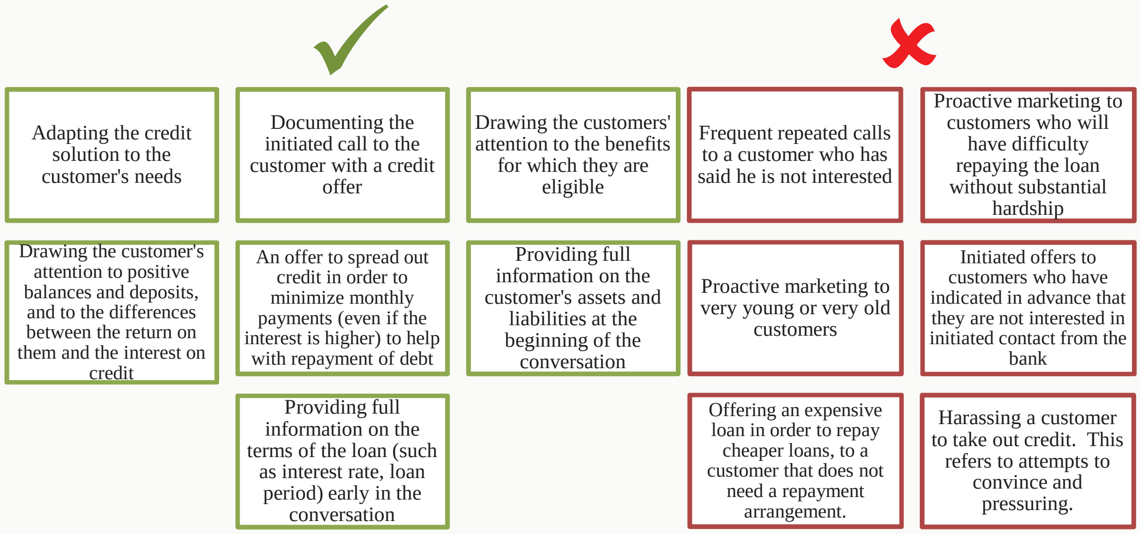
These audits generated findings concerning proactive marketing methods and efforts to match services to customers. The Banking Supervision Department published a separate review of this matter on December 12, 2018,[9] which contained a list of "Do's and Don'ts" pertaining to proactive marketing of credit.

7 Proper Conduct of Banking Business Directive 450 on Debt Collecting Procedures.

8 Fair Credit Law, 5778-2018, Banking Rules (Service to Customer)(Due Disclosure and Documents) 5752-1992; Proper Conduct of Banking Business Directive 449 on "Simplification of agreements with customers."

9 https//:www.boi.org.il/he/NewsAndPublications/PressReleases/Pages.12-12-18/aspx.

Figure 1
Summary of Banking Supervision Department Requirements: The "Do's" and "Don'ts" of Proactive Marketing of Consumer Credit



SOURCE: "Proactive marketing of consumer credit: Examination report findings and Banking Supervision Department requirements", Bank of Israel press release, December 28, 2018.

Following these audits, the Banking Supervision Department demanded that the banks verify that they have a reasonable process in place of understanding and matching services (loans or credit facilities) and the terms of these services (such as the amount and repayment period) to their customers' needs. The Banking Supervision Department found that bankers' variable remuneration as a function of individual target achievement increases the risk of inappropriate proactive marketing. For example, in the case of such remuneration policies, bankers might direct customers to a specific type of service that does not necessarily meet the customers' needs. Banking corporations were required to ensure that the variable compensation of employees working in proactive marketing of credit is not based on individual targets for each banker or on other targets that might increase consumer-related and other risks.

The Banking Supervision Department also demanded that the banking corporations refrain from aggressive marketing, including harassment of consumers by repeating credit offers after customers stated that they were not interested in the service, and also instructed banking corporations to take steps to prepare for the assimilation of a mechanism that would allow consumers to opt-out of banks' proactive marketing in advance (a Do Not Call mechanism).

The Banking Supervision Department examined banking corporations' compliance with the statutory requirements concerning due disclosure to customers in the proactive marketing of credit process regarding the possibility that their debts could accumulate interest arrears and trigger court execution proceedings if they fail to repay their debts. Based on the findings of these studies, the Banking Supervision Department imposed financial sanctions on three banking corporations, and issued a public statement of this fact.

The Banking Supervision Department is currently preparing new regulation on consumer credit that reflects the responsible lending principles. The new regulation will supplement the Banking Supervision Department's requirements in the regulatory letter of 2015 and the audits that it performed by anchoring these requirements in the Rules. The draft directive takes into account the insights that emerged from the audits, as well as the understanding gained from advanced regulation worldwide. The Banking Supervision Department collaborates with the Capital Market Authority on this issue to ensure that the banks and the institutional investors are subject to consistent standards. These efforts will improve the protection of customers of financial services by reducing regulatory differences between the banking system and other significant credit providers.[10]

Since the operation of the credit data sharing system, one of the most important projects led by the Banking Supervision Department, banks and non-bank organizations can now better assess customers' ability to repay their debt, and avoid granting credit to customers who are incapable of doing so. At the same time, meeting one's indebtedness now has added significance: failure to repay a debt may lead to a downgrading of one's credit score, which increases the price of credit for that customer or even denies access to credit altogether.

One of the insights that emerged from the Banking Supervision Department's activities in general, and specifically from listening to the marketing conversations between banks and their customers during the audits, is the need to increase its own efforts to improve the public's financial literacy on the topic of credit. The Banking Supervision Department will soon publish a comprehensive guide on consumer credit (in addition to the extensive consumer information that is already available on the Bank of Israel website). Due to the adverse consequences of failure to pay one's debts, it is important that the general public increase its awareness of credit terms, and especially interest rates, and carefully plan credit repayment.

In summary, this box describes the actions that the Banking Supervision Department is taking to instill the principle of responsible lending, which are part of its actions to minimize consumer risks where the potential of harm to customers' interests exists. The Banking Supervision Department concurrently continues to engage in regulatory action, and to monitor and audit credit risks in the consumer credit portfolio. Complete adoption of the responsible lending principle by the banking system will reduce both consumer risks and credit risks. The Banking Supervision Department is working to create the proper balance between the need to protect the customers of the banking system and the need to ensure that the banking system continues to provide the economy with sufficient consumer credit.

[10] The need to reduce the regulatory gap in protecting consumers and imposing uniform standards to protect consumers are also well known in international organizations. For example, see the FinCoNet mentioned above:

"In some jurisdictions, key types of non-bank credit providers and credit intermediaries, including those that deal with the most vulnerable consumers, may operate outside the regulatory scope. This coverage gap may pose a number of policy complexities for countries and jurisdictions including the risk of 'bad apples' operating in the unregulated part of the market (and consequent consumer detriment) and unfair competition due to regulatory arbitrage. However, a growing number of jurisdictions have, or are in the process of, addressing this gap."

2. Handling public enquiries and complaints[1]

- **In the year under review, the Public Enquiries Unit of the Banking Supervision Department handled 8,394 complaints and enquiries.**
- **The number of enquiries that the Banking Supervision Department receives is on the rise and increased by 60 percent since 2016, reaching 8,435.**
- **As a result of the work of the Public Enquiries Unit, the banking corporations paid their customers NIS 3.4 million,[2] and customers were reimbursed for a total of NIS 15 million over the past five years.[3]**
- **In 2018–19, the Banking Supervision Department imposed six financial sanctions on banking corporations for various consumer-related issues, in the total amount of NIS 5 million.**
- **The Public Enquiries Unit[4] at the Banking Supervision Department handles the enquiries that the public addresses to the Banking Supervision Department regarding its business with the banking corporations (the banks and the credit card companies). In addition to addressing these enquiries directly, the Unit supervises the ombudspersons in all the banks and credit card companies that serve as the first point of contact for their customers' enquiries. Customers have the right to appeal against the answers they receive from their bank or credit card company by applying to the Banking Supervision Department.**

The Public Enquiries Unit also serves as the channel through which information flows from the public (in the form of enquiries and complaints) to the functions in the Banking Supervision Department and other relevant divisions in the Bank of Israel. The Banking Supervision Department uses this information to identify widespread consumer-related grievances, both in the specific banking corporation that is the topic of the enquiry and across the entire banking system. The Banking Supervision Department addresses these flaws, regulates consumer-related issues, performs enforcement reviews, and conducts educational activities. Every year, the Banking Supervision Department publishes a specific review of the Unit's activities; therefore, the review below is in brief.

1 The information in this review was correct at the time of its publication. The final information will be published in the detailed review of the activities of the Public Enquiries Unit.

2 This amount include a forgiveness of NIS 1.87 million in debt to a single customer.

3 Including forgiveness of debt or waiver of collateral.

4 The Public Enquiries Unit operates under Article 16 of the Banking (Service to the Customer) Law, 5741-1981, which authorizes the Supervisor of the Banks to examine the public's enquiries on their business with the banking corporations.

A. Statistics on the Public Enquiries Unit's work to address public enquiries and grievances

The Public Enquiries Unit addresses three main types of written enquiries:

(1) Complaints – Complaints concern disputes between customers and banking corporations, and typically include a demand for compensation or demand for action of the banking corporation.

(2) Clarification of banking issues – These are requests for information on a wide range of banking issues, such as the Banking Supervision Department's policy and directives, banking legislation, consumer rights, and the activities of the Public Enquiries Unit. The Unit also receives tips for improvement and suggestions for instructions to banking corporations; These suggestions reflect the public's social involvement and motivation to improve the banking system in the interests of the public.

(3) Requests for assistance beyond the letter of the law – These are requests on various topics such as requests to write-off or reschedule a debt or approve credit. The Unit refers them to the banking corporation in question, which has the authority to accede to such applications.

In 2018, the Public Enquiries Unit received 8,435 written enquiries and handled 8,394 written enquiries through two main types of action:

- Direct resolution – The Unit handled 5,071 enquiries, of which 1,970 were complaints, 2,946 were enquiries, and 155 were applications for assistance.
- Exhaustion of proceedings – The Unit referred 3,323 grievances and requests for assistance to be addressed directly by the ombudspersons in banking corporations, based on the principles defined in the Proper Conduct of Banking Business Directive 308A, "Handling of Public Complaints."

Of the 1,970 written complaints that the Unit dealt with directly during the reviewed year, decisions were made as to whether they were justified or not in 743 cases.

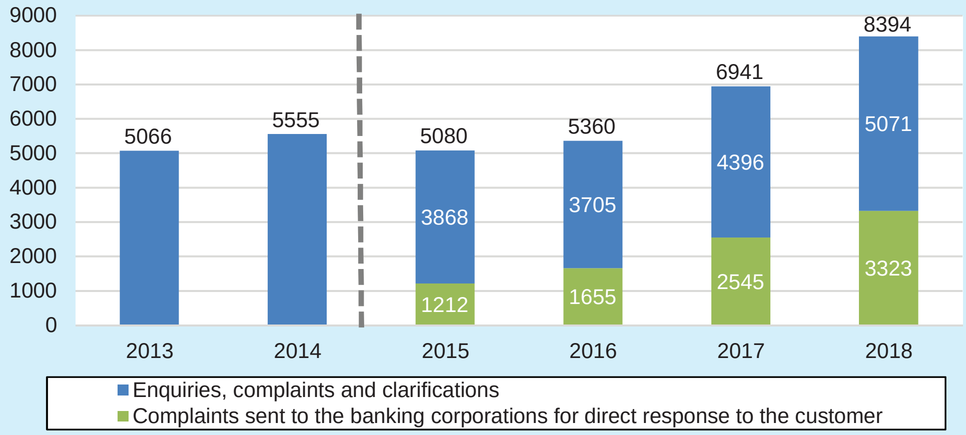
Table 3.2 indicates a rising trend in the number of enquiries that the Public Enquiries

Table 3.2
Written enquiries received by the Public Enquiries Unit, 2016–18

Enquiries	2016	2017	2018
Request	267	303	348
Clarification	1,512	2,158	2,712
Complaint	3,385	4,535	5,375
Total	**5,164**	**6,996**	**8,435**

SOURCE: Banking Supervision Department.

Figure 3.1
Number of Enquiries for which Handling was Completed by the Banking Supervision Department, 2013–18



SOURCE: Banking Supervision Department.

Unit received in recent years. Between 2016 and 2018, the number of enquiries rose by 60 percent.[5] This increase is attributed to growing public awareness of consumer rights and the Banking Supervision Department's efforts to inform the public of its right to apply to the Unit for redress of their grievances.

As Figure 3.1 shows, the number of enquiries that the Public Enquiries Unit handled—either directly or by referring them to the relevant banking corporation—increased from 2015 to end 2018.

The Public Enquiries Unit also administers a call center that offers information on banking issues and consumers' rights as well as information on how to submit a complaint, the status of submitted complaints, and other topics.

Within the work performed by the Public Enquiries Unit in the year under review, banking corporations paid their customers NIS 3.4 million, and in the past five years banking corporations refunded NIS 15 million to customers as a result of the work of the Public Enquiries Unit.[6]

B. Topics of the Complaints

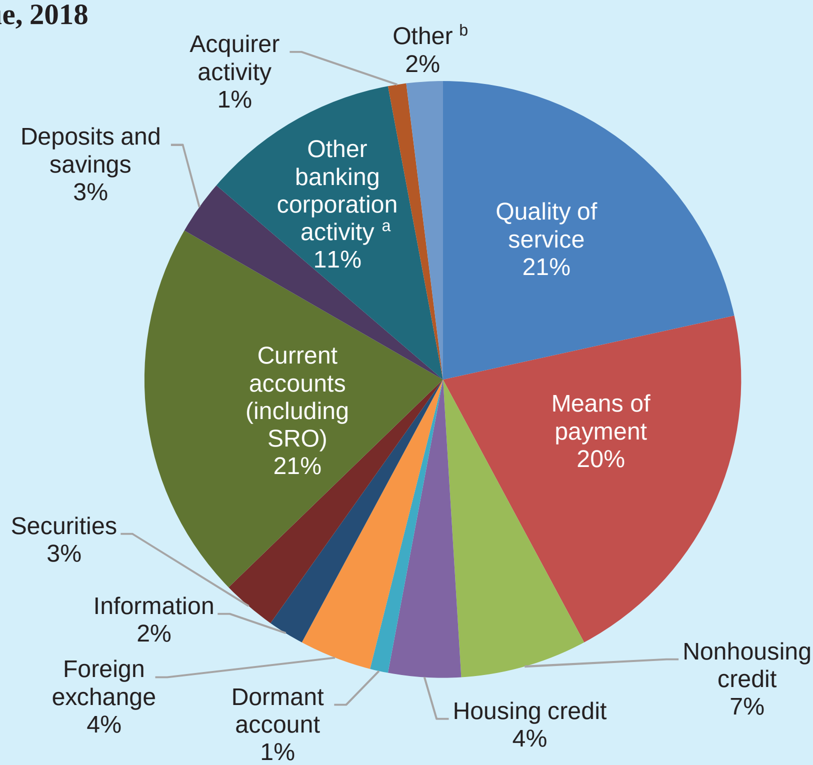
In 2018, the grievances handled by the Public Enquiries Unit touched upon the entire range of banking services, and specifically service quality (22 percent), means of payment – mainly checks and payment cards (21 percent), checking accounts (21 percent) and credit (11 percent).

The Banking Supervision Department places special emphasis on the quality of

[5] Beginning from 2015, the number of grievances includes grievances that were referred to the ombudspersons in the banking corporations. These grievances were counted again if the applicant appealed against the ombudsperson's decision.

[6] Including forgiveness of debt or waiver of collateral.

Figure 3.2
Distribution of Complaints for which Handling was Completed, by Issue, 2018



[a] Other banking activity: Debt collection, estate distribution, executing lawful orders, reporting to credit data companies, and more.
[b] Other: Enquiries regarding activities or entities that are not under the authority of the Public Enquiries Unit, such as regarding Postal Bank activities, insurance companies, provident and pension funds, or enquiries that do not concern bank-customer relations.
SOURCE: Banking Supevision Department.

the service that banks provide to their customers, and employs diverse methods to incentivize the banking system to improve the quality of its services. To obtain a current, comprehensive, in-depth description of private customers' satisfaction with the quality of the banking service they receive, the BSD conducted a survey among banking customers. In the future, this survey will be conducted annually and its main findings will be presented to the public.

The general picture that emerges from the survey is a reasonable level of satisfaction from the overall operations of banks in Israel, with varying levels of satisfaction by bank. In general, satisfaction from service in bank branches is relatively low and satisfaction from digital banking services is relatively high.

Survey findings also indicate that 74 percent of customers choose to contact their banks through digital and direct channels (such as a website, app, call center, or email), while 23 percent of customers contact their banks mainly by visiting the bank branch.

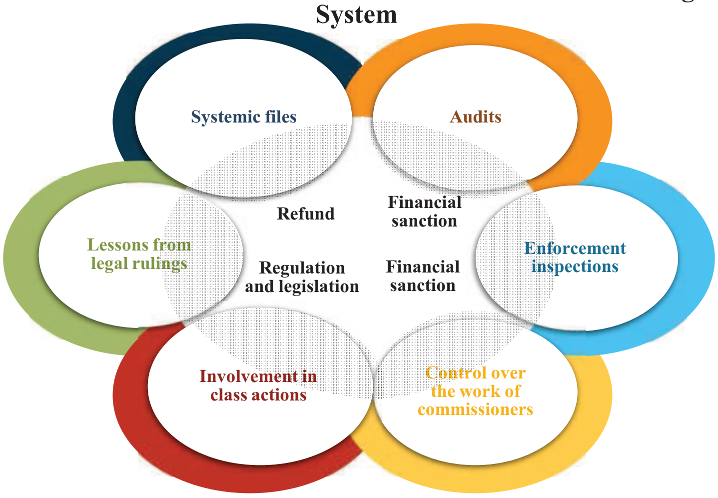
The findings of the survey were presented to the relevant decision makers in the banking system, to apprise them of their customers' feelings and attitudes, so that these executives might draw the required conclusions. Spurred by the publication of survey, the banks accelerated service-quality improvement programs that were already in advanced stages of implementation, and initiated development on new processes to improve banking services.

The Banking Supervision Department's Consumer-Related Activities

The Banking Supervision Department reviews public grievances and requests for information under the power vested in the Supervisor of Banks by Article 16 of the Banking (Service to Customers) Law, 5741-1981. Where complaints are found to be justified, the Banking Supervision Department instructs the relevant banking corporation on methods for redressing the grievance, which may include restitution or compensation to customers.

In addition to expressing positions on individual enquiries, the Banking Supervision Department is also involvement in enforcement of consumer-related banking in order to promote fairness and protect the rights of all customers of the banking system. The Banking Supervision Department employs a range of tools that

Enforcement Measures to Advance Fairness in the Banking System



include:

Audits

The Banking Supervision Department performs in-depth audits in banking corporations to identify and assess consumer-related risks, with emphasis on compliance with legislation and regulation and with each bank's policy and procedures. In the past two years, the Banking Supervision Department has focused on audits in the area of consumer credit.

Enforcement reviews

The Banking Supervision Department initiates action on specific focused topics, typically involving the entire banking system, designed to examine the banking corporation's compliance with its statutory consumer-related obligations. Last year, the Banking Supervision Department focused on enforcement in the field of advertising that promotes consumer credit.

Inspections of banking corporations' ombudsmen

The Banking Supervision Department oversees the work of the banking corporations' ombudspersons and examines the procedures and the quality of their efforts to handle public enquiries. Last year, the Banking Supervision Department focused on the quality of work of the ombudspersons on grievances related to the quality of service provided to banking customers.

System-wide issues[1]

Occasionally, addressing an individual enquiry indicates that a grievance may apply to a group of customers. In such cases, the Banking Supervision Department conducts a comprehensive review of the issue and, if necessary, issues directives to redress the grievance. Such directives may include monetary relief to the relevant customer group.

Drawing conclusions from judicial rulings

Whenever an unusual grievance to a customer or group of customer arises in judicial rulings, the Banking Supervision Department instructs the relevant bank to draw the necessary conclusions and amend its procedures.

Involvement in class actions lawsuits

The Banking Supervision Department monitors class action lawsuits and presents its professional position in response to court requests or in settlement conferences between the parties. The Banking Supervision Department also examines the need for regulatory change that emerges in class actions. See Box 3.1, "Class actions against banking corporations."

If, in the course of its work, the Banking Supervision Department discovers a material flaw in the conduct of a banking corporation or a violation of the law, the Banking Supervision Department determines the methods to be used to correct the flaw. According to the circumstances of each case, the Banking Supervision Department may instruct the banking corporation to make refunds to a group of customers, discontinue a certain business practice, amend its agreements or work procedures, modify the operations of its computer systems, or modify

[1] Over the years, customers received refunds of NIS 185 million through the Banking Supervision Department's work on system-wide cases.

its operating procedures. In the year under review, Banking Supervision Department instructions included demands to remove misleading advertising, amend discriminatory terms in uniform contracts, and modify consumer credit marketing practices.

Furthermore, the extensive information that accumulates in the Banking Supervision Department through its reviews of public enquiries and other actions, serves as the foundation for promoting system-wide consumer-related regulatory and legislative amendments. An example of such initiatives is the reduction to account management costs for small businesses.

Another significant means of enforcement available to the Banking Supervision Department is the power to impose financial sanctions on banking corporations in cases such as violations of legislation or Proper Conduct of Banking Business directives, or failure to correct flaws as ordered.[2]

In 2018–19, the Banking Supervision Department imposed six financial sanctions concerning various consumer-related issues on various banking corporations in the total amount of NIS 5 million.

[2] Imposing a financial sanctions under Article 11A to the Banking (Service to Customers) Law, 5741-1981 and Article 14H to the Banking Ordinance 1941.

3. Handling Restricted Customers and Restricted Accounts

- **The website for customers with restricted bank accounts has become the leading channel of enquiries on this topic, significantly reducing the number of telephone enquiries.**
- **In 2018, the number of banking restrictions imposed on customers remained stable.**
- **In 2018, the number of bank accounts on which restrictions were inposed rose moderately.**

A. Restricted Customers and Restricted Accounts

Banking restrictions imposed on customers

As of end 2018, there were a total of 260,700 restricted customers were subject to banking restrictions, according to the following distribution:

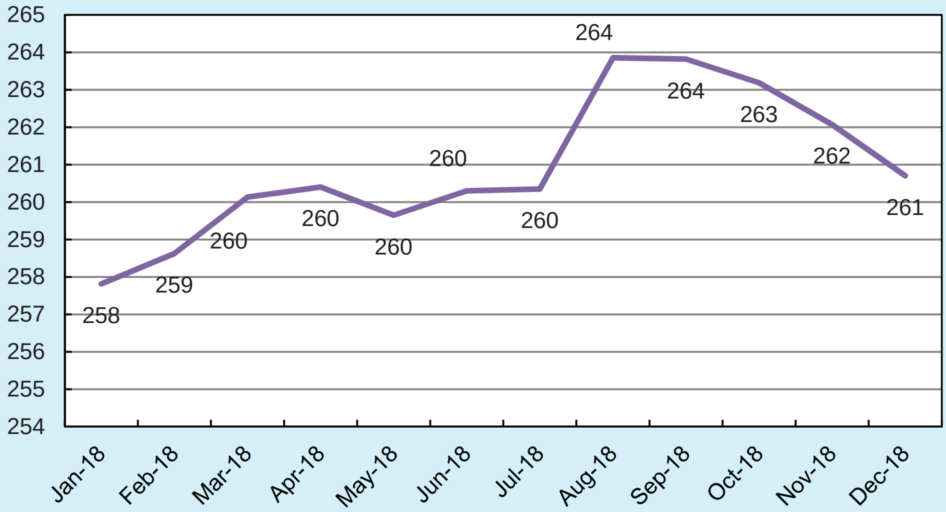
Table 3.3
Number of restricted customers, December 31, 2018

Type of restriction		Number of customers		Percentage of restricted customers
Banking restriction	Restriction under normal circumstances[a]	20,920	31,897	12%
	Restricted under aggravated circumstances[b]	10,977		
Restricted under special circumstances[c]	Execution Office	212,071	228,803	88%
	Official Receiver	16,115		
	Center for Collecting Fines	606		
	Rabbinic Courts	11		
Total		260,700		100%

[a] An account is restricted under normal circumstances if over a period of 12 months, ten (or more) checks drawn on the account were refused due to insufficient funds.
[b] A customer is restricted under aggravated circumstances if one of the following conditions exists: (1) A restricted customer with another account that is restricted; (b) A customer who was previously restricted and whose account is restricted again within three years from the end of the previous restriction.
[c] A customer is restricted under special circumstances if one of the following conditions exists: (1) A debtor for whom the Execution Office has imposed a restriction pursuant to Sections 66a(3) or 69d(a)(2) of the Execution and Collections Law, 5727–1967; (2) A debtor for whom the Registrar of the Center, as defined in Section 6a9a) of the Center for Collection of Fines, Imposts, and Expenses Law, 5755–1995, has imposed a restriction pursuant to Section 7a(c)(3) of the Law; (3) A debtor who has been declared bankrupt by the Court pursuant to the Bankruptcy Ordinance [New Version], 5740–1980; 94) A person against whom the Rabbinic Court has issed a Restriction Order pursuant to Section 2(6) of the Rabbinic Courts Law (Fulfillment of Divorce Rulings) (Temporary Order), 5755–1995.
SOURCE: Banking Supervision Department data.

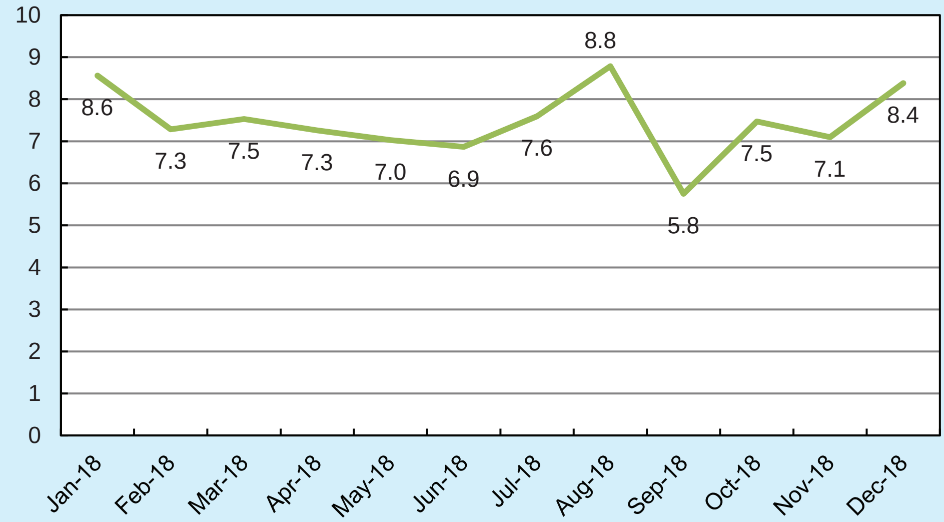
The total number of restricted customers remained relatively stable over the year under review, increasing from 257,814 in January to 263,819 in August (the peak month), and then declining moderately toward the end of the year. In December 2018, there were 260,700 restricted customers (Figure 3.3).
In 2018, banking restrictions were imposed on 7,468 each month, on average, with a peak of 8,786 new restrictions imposed in August (Figure 3.4).

Figure 3.3
Number of Restricted Customers During 2018 (thousand)



SOURCE: Banking Supervision Department.

Figure 3.4
Number of New Restricted Customers During 2018 (thousand)



SOURCE: Banking Supervision Department.

Restricted Bank Accounts

As of end 2018, there were 488,282 restricted bank accounts, and they were divided as follows:

Table 3.4
Number of restricted accounts, December 31, 2018

Type of restriction		Number of accounts		Percentage of restricted accounts
Banking restriction	Restriction under normal circumstances[a]	27,126	63,257	13%
	Restricted under aggravated circumstances[b]	36,131		
Restricted under special circumstances[c]	Execution Office	378,168	425,025	87%
	Official Receiver	46,082		
	Center for Collecting Fines	740		
	Rabbinic Courts	35		
Total		488,282		100%

[a] An account is restricted under normal circumstances if over a period of 12 months, ten (or more) checks drawn on the account were refused due to insufficient funds.

[b] A customer is restricted under aggravated circumstances if one of the following conditions exists: (1) A restricted customer with another account that is restricted; (b) A customer who was previously restricted and whose account is restricted again within three years from the end of the previous restriction.

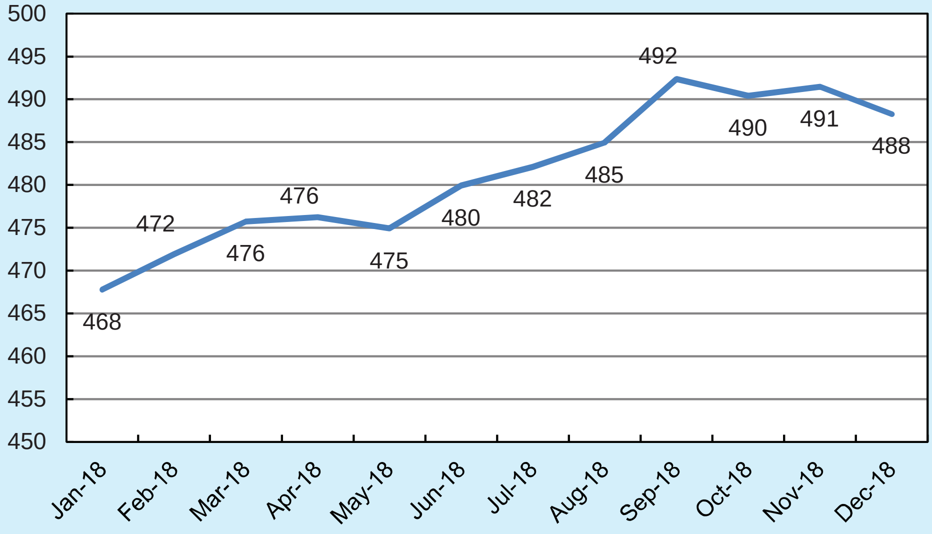
[c] A customer is restricted under special circumstances if one of the following conditions exists: (1) A debtor for whom the Execution Office has imposed a restriction pursuant to Sections 66a(3) or 69d(a)(2) of the Execution and Collections Law, 5727–1967; (2) A debtor for whom the Registrar of the Center, as defined in Section 6a9a) of the Center for Collection of Fines, Imposts, and Expenses Law, 5755–1995, has imposed a restriction pursuant to Section 7a(c)(3) of the Law; (3) A debtor who has been declared bankrupt by the Court pursuant to the Bankruptcy Ordinance [New Version], 5740–1980; 94) A person against whom the Rabbinic Court has issed a Restriction Order pursuant to Section 2(6) of the Rabbinic Courts Law (Fulfillment of Divorce Rulings) (Temporary Order), 5755–1995.

SOURCE: Banking Supervision Department data.

Notably, the number of restricted bank accounts is greater than the number of restricted customers because all the bank accounts of the customer in question are affected when restrictions under aggravated circumstances and restrictions under special circumstances are imposed.

The number of restricted bank accounts rose moderately by 4.3 percent in 2018, from 467,773 in January to 488,282 at the end of the year (Figure 3.5).

Figure 3.5
Number of Restricted Accounts During 2018 (thousand)



SOURCE: Banking Supervision Department.

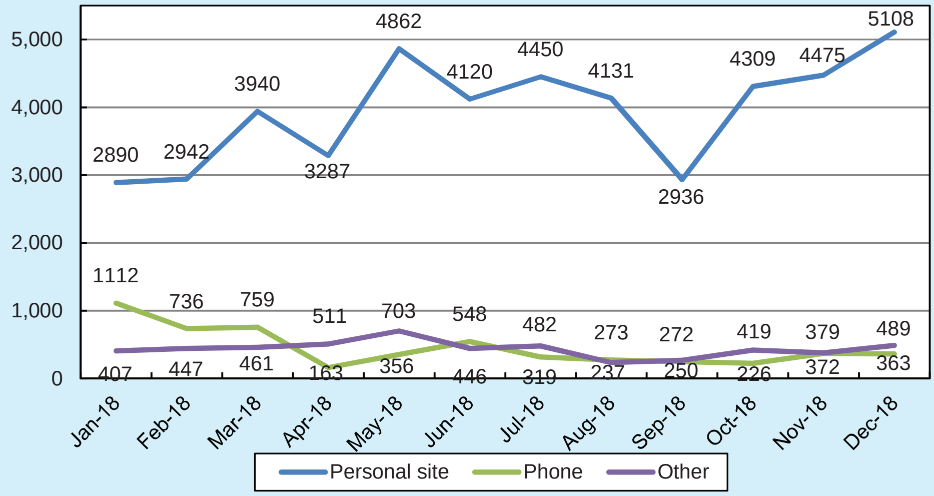
B. Channels used by the public to contact the Restricted Bank Accounts Department

In December 2017, the Bank of Israel launched its website for bank customers subject to banking restrictions. The website allows all Israeli citizens, using any digital device, to (a) access current information on their status; (b) access important information and contact information that is specifically relevant to their individual status; (c) produce a certificate of restricted status, which can be presented to third parties; and (d) access FAQs, legislation, relevant directives, and other information.

In addition to the website, the Restricted Accounts Section at the Bank of Israel offers the public the following communication channels: email, call center, digital form, digital fax, and regular mail.

The website, which provides quick, efficient service to the public and saves time and other resources, has significantly increased the number of public enquiries received by the Department. Immediately upon its launch, it became the main channel of communications to the Department, with an average of 3,954 enquiries per month in 2018. Previously, the main channel of communication was the telephone, but after the launch of the website the number of telephone enquiries dropped from 1,112 in January 2018 to 363 enquiries in December 2018.

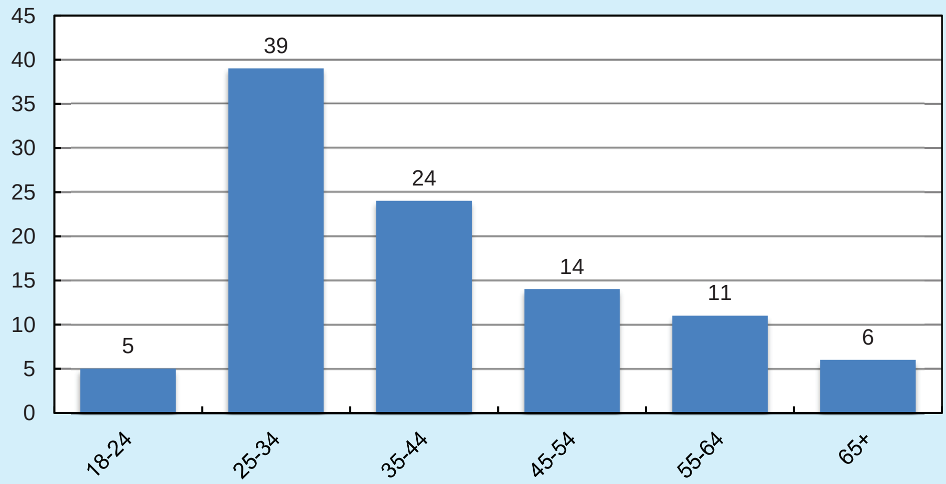
Figure 3.6
Enquiries to the Unit by Channel, 2018



[a] The category "Other" includes electronic mail, online form, fax, and regular post.
SOURCE: Banking Supevision Department.

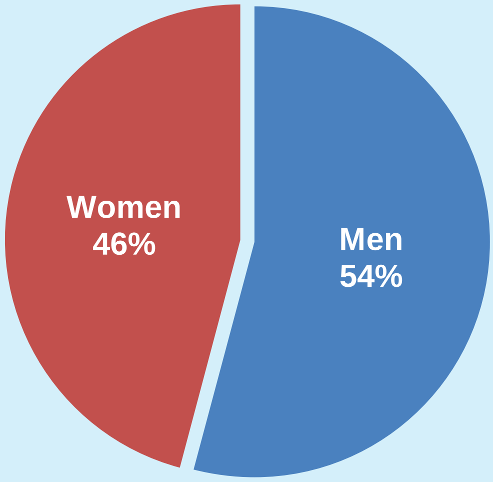
Figures 3.7 through 3.11 present additional statistics about the users of the Restricted Customers website.

Figure 3.7
Distribution of Website Visitors by Age, 2018 (percent)



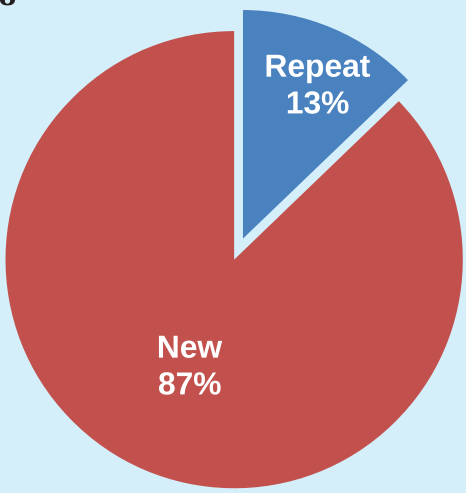
SOURCE: Banking Supervision Department.

Figure 3.8
Distribution of Website Visitors by Gender, 2018



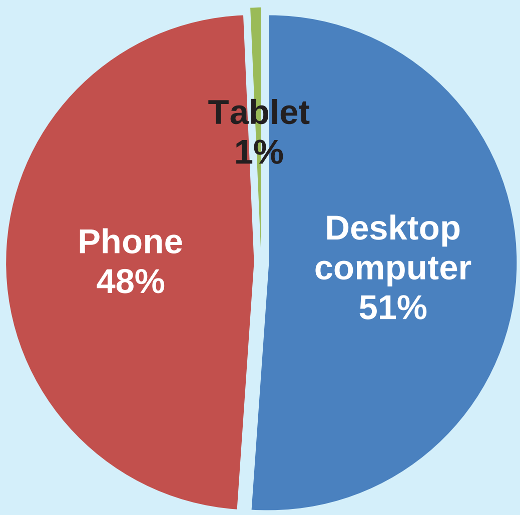
SOURCE: Banking Supervision Department.

Figure 3.9
Distribution of Website Visitors by Previous Visits to the Site, 2018



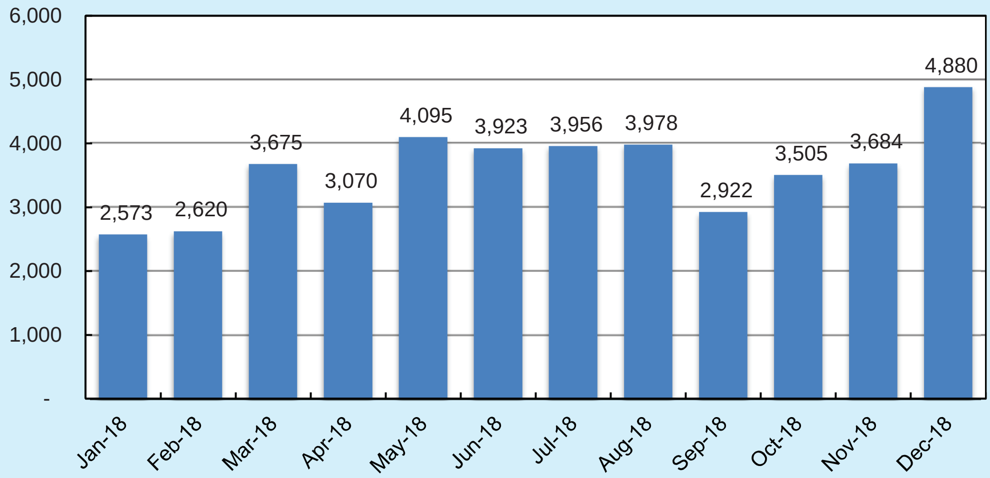
SOURCE: Banking Supervision Department.

Figure 3.10
Distribution of Website Visitors by Type of Device Used to Visit the Site, 2018



SOURCE: Banking Supervision Department.

Figure 3.11
Number of Website Users Per Month, 2018



SOURCE: Banking Supervision Department.

Appendix A: The Directives that the Banking Supervision Department Issued in 2018[1]

January 1	**Circular adopting Amendment 2017-07 of the FASB codification on improving presentation of pension costs and other benefits after conclusion of employment** This circular adopts Amendment 2017-07 of the codification. The Amendment calls for the separation of the benefit cost components included in salary expenses that appear in the employer's income statement, and clarifies that only the cost of the service may be capitalized when salary expenses are capitalized.
January 2	**Circular permitting changes that improve the usability of the public reports published by the banking corporations for the years 2017 and 2018** To enhance the usability and transparency of the financial statements that the banking corporations publish, and to reduce the regulatory burden, the Banking Supervision Department decided to modify the financial statements. The Banking Supervision Department issued a circular listing the modifications that may already be made to the financial statements for 2017 and 2018—significantly reducing the frequency of disclosure, emphasizing information that is more important and comparable, better defining the distinction between the aims of the Board of Directors and Management Report and that of the risk report, and determining a disclosure format that is mandatory in certain situations and is designed to improve usability of the information and users' ability to conduct comparisons.
January 8	**Amendment to Proper Conduct of Banking Business Directive 450—"Debt Collection Procedures"** Amendment of the Directive was required following the Regulation of Nonbank Loans (Amendment 5) Law, 5777-2017 (Fair Credit Law), which regulates the maximum rate of interest on arrears applicable to loans. The Amendment went into effect on the day that the Directive went into effect (February 1, 2018).
January 11	**Amendment to Proper Conduct of Banking Business Directive 420—"Sending Notices via Means of Communication"** This Amendment was designed to improve the efficiency of sending notifications and to add information to special notifications that may be beneficial for customers. Part of the Amendment went into effect on the day of publication and part on April 1, 2018.

[1] The complete binding version of regulatory action appears on the Bank of Israel website.

January 21	**Amendment to Proper Conduct of Banking Business Directive 470—"Debit Cards"** This Amendment to the Directive became necessary as part of the Supervisor of Banks' power to issue directives under the Law to Increasing Competition and Reducing Concentration in the Banking Sector in Israel Law (Legislative Amendments), 5777-2017. In addition, the mechanism for the issuing of payment cards was revised to adapt the Directive to the current technological reality. Part of the Amendment went into effect on the day of its publication and part—three months later.
January 24	**Proper Conduct of Banking Business Directive 363—"Supply Chain Cyber Risk Management"** This Directive was essential in view of the rise of cyber risks caused by exploiting weaknesses in the supply chains. The Directive clarifies to the banking corporations that they are responsible for maintaining a secure work environment with their material external suppliers, and it is their duty to manage properly the risks entailed in working with these suppliers, including within the suppliers' sites, the sites of the banking corporations, and the inter-organizational interfaces. The banking corporations are required to define the measures necessary to reduce the banking corporations' exposure to cyber risks, and incorporate various elements into their agreements with their suppliers based on risk assessments. The Banking Supervision Department expects the managements of the banking corporations to terminate agreements with significant suppliers that expose the banking corporation to material cyber risks.
February 26	**Amendment to Proper Conduct of Banking Business Directive 202—"Measurement and Capital Adequacy—Regulatory Capital"** To streamline the process of issuing capital instruments and to emphasize that the banks have the responsibility to verify that these instruments meet the criteria defined for them, it was decided to abolish the requirement of obtaining prior approval of an issue from the Banking Supervision Department. Instead, the banking corporations are required to notify the Banking Supervision Department immediately after an issue, using a pre-defined format.

March 15	**Revision to Proper Conduct of Banking Business Directive 203—"Measurement and Capital Adequacy—the Standardized Approach—Credit Risk"** To aid young couples and move-up homebuyers whose purchases are highly leveraged, the rates of weighting of loans that are wholly secured by a mortgage on a residential property were revised. This update determined that in loans in which financing comprises more than 60 percent, the risk weighting will be 60 percent.
March 22	**Amendment to Proper Conduct of Banking Business Directive 420—"Sending Notices via Means of Communication"** Directive 420 was amended as a complementary measure to the amendment to Directive 367 on the subject of email. From now on, there is no longer any distinction between legal and other notifications with regard to level of security, including encryption, that is to be applied when sending email notifications. **Letter on opening new accounts for new immigrants** In response to the claim that new immigrants are required to present an identity card in order to open a bank account, this letter clarifies, based on Prohibition on Money Laundering (The Banking Corporations' Requirements regarding Identification, Reporting and Record–Keeping for the Prevention of Money Laundering and the Financing of Terrorism) Order, 5761-2001, that a New Immigrant Certificate ("Te'udat Oleh") can also serve as an identity card, provided that no more than 30 days elapsed since its date of issue.
March 27	**Amendment to Proper Conduct of Banking Business Directive 422—"Opening and Managing a Current Account with No Credit Facility"** Amendments were introduced to this Directive, including amendments related to customers who were in the past or are now in a state of financial distress. These amendments are designed to facilitate the management of current bank accounts with no credit facility using various service channels. The Amendment went into effect on October 1, 2018.
April 24	**Proper Conduct of Banking Business Directive 306—"Supervision of Overseas Branches"** This Directive was issued after risks, especially money laundering and terror financing risks, materialized as a result of the overseas operations of banking corporations through controlled corporations, branches, and representative offices. The Directive emphasizes the importance of supervising overseas branches and ensuring that they maintain high-quality corporate governance, auditing, and control mechanisms of their own.

July 1	**Circular on mandatory reporting according to US GAAP** Financial reporting is transitioning to the full adoption of the generally accepted accounting principles for banks in the US, within which the banks will be required to implement the revisions in these principles with respect to leases.
July 2	**Amendment to Proper Conduct of Banking Business Directive 203—"Measurement and Capital Adequacy—the Standardized Approach—Credit Risk"** This Directive was revised following the Increasing Competition and Reducing Concentration in the Banking Sector in Israel Law (Legislative Amendments), 5777-2017, and the changes that it is expected to create with respect to credit card companies. The main amendments are: A definition of "credit card company" was added. The Amendment provides that when a credit card company receives a risk weight for the purpose of calculating capital adequacy, it will continue to be considered a banking corporation even after it separates.
	Update to Proper Conduct of Banking Business Directive 221—"Liquidity Coverage Ratio" This Directive was revised following the Increasing Competition and Reducing Concentration in the Banking Sector in Israel Law (Legislative Amendments), 5777-2017, and the changes that it is expected to create with respect to credit card companies. The update determines that when a credit card company meets the required conditions, it is not required to meet a liquidity coverage ratio, yet is required to hold liquid assets based on an internal model that fits the nature of its operations.

	Update to Proper Conduct of Banking Business Directive 470—"Payment Cards" This Directive was amended following the Increasing Competition and Reducing Concentration in the Banking Sector in Israel Law (Legislative Amendments), 5777-2017, and the changes that it is expected to create with respect to credit card companies. The main amendments are: The proceeds in respect of all transactions carried out via an issuing bank's payment card, shall be transferred from the issuing bank to the issuing processor, in line with the date or dates set in the interchange acquiring agreement four-party acquiring model, independent of the date the customer is debited and independent of the identity of the acquirer, to whom the issuing processor sends the proceeds.. A transition provision determines that any new operating agreements signed by bank-issuers and issue-operators no later than January 31, 2022 will be furnished to the Supervisor of Banks. If the bank issuer has large-scale operations, agreements are subject to the Supervisor of Banks' approval.
July 10	**Proper Conduct of Banking Business Directive 449—"Simplification of Customer Agreements"** This Directive is designed to help customers read and understand credit agreements. The Directive defines a brief, uniform format for presenting the details and the varying and material terms of a credit agreement. The format will appear on the first page of credit agreements.

August 1	**Update to Proper Conduct of Banking Business Directive 313—"Limitations on the Indebtedness of a Borrowers and a Group of Borrowers"** The Directive was amended following the Increasing Competition and Reducing Concentration in the Banking Sector in Israel Law (Legislative Amendments), 5777-2017, and the changes that it is expected to create with respect to credit card companies. The main amendments are: Definitions of a "credit card company" and "credit card group of borrowers" were added. The Directive determines that a banking corporation's exposure to a credit card group of borrowers, less the amounts permitted by the Directive, will not exceed 15% of the banking corporation's capital, similarly to the restriction that applies to exposure to a bank group of borrowers. The restriction was adapted to credit card companies' new status, with the aim of including them in the aggregate restriction on large borrowers. Furthermore, the liabilities of a bank group of borrowers to a credit card company will be included in the aggregate restriction on large borrowers. A transition directive determines that a bank group of borrowers' indebtedness to a credit card company will not be subject to the restriction on a bank group of borrowers and will not be included in the aggregate restriction on large borrowers for a period of five years from the publication date of the Directive.
August 30	**Circular on mandatory reporting according to US GAAP** Financial reporting is transitioning to the full adoption of US GAAP for banks and therefore the banks are required to implement the recent revisions to these principles concerning derivative and hedging instruments, and the classification and measurement of financial instruments. Revisions were also made to the disclosure format of the statement of cash flows, the additional disclosure of credit risks in respect of significant exposure to a group of borrowers, and the disclosure of movements in impaired debts in respect of credit to the public.

September 4	**Update to Proper Conduct of Banking Business Directive 367—"E-Banking," Proper Conduct of Banking Business Directive 462—"Customers' Investments in Financial Assets via Portfolio Managers"** **The main amendments are:** It is now possible to grant an online POA to someone who holds a portfolio management license under the Regulation of the Investment Consulting, Investment Marketing, and Investment Portfolio Management Occupation Law, 5755-1995 (hereinafter, "the Consulting Law") online, without the customer having to go to the branch, subject to the terms established in Proper Conduct of Banking Business Directive no. 462 on Customers' Investments in Financial Assets via Portfolio Managers (hereinafter, "Directive 462"). A holder of power of attorney who holds a portfolio management license under the Consulting Law, may also act in an account that was opened online. A leniency was provided, according to which similar to a qualified customer, a customer that is a corporation can waive the receipt of explanations regarding issues regulated in the power of attorney to the portfolio manager, provided that the customer signed an appropriate waiver document in front of a lawyer chosen by the customer. The requirement to transfer a random amount to an account in a banking corporation in Israel under the acquiring account applicant's name was cancelled, when the annual acquiring volume in it, does not exceed NIS 50,000.
October 8	**Proper Conduct of Banking Business Directive 359A—"Outsourcing"** This Directive was made following changes in banking corporations' operating environment caused by, among other things, the accelerated pace of technological developments and adoption of policies designed to increase competition in the banking and payment systems. Use of outsourcing makes it possible to define strategic goals, increase accessibility and availability to customers, pursue measures to increase operating efficiencies, and remove entry barriers for new digital players. The Directive determines the principles with which banking corporations must comply when they outsource various activities. These principles are designed to reduce the potential risks entailed in outsourcing, and are existing regulations in this field in many countries.

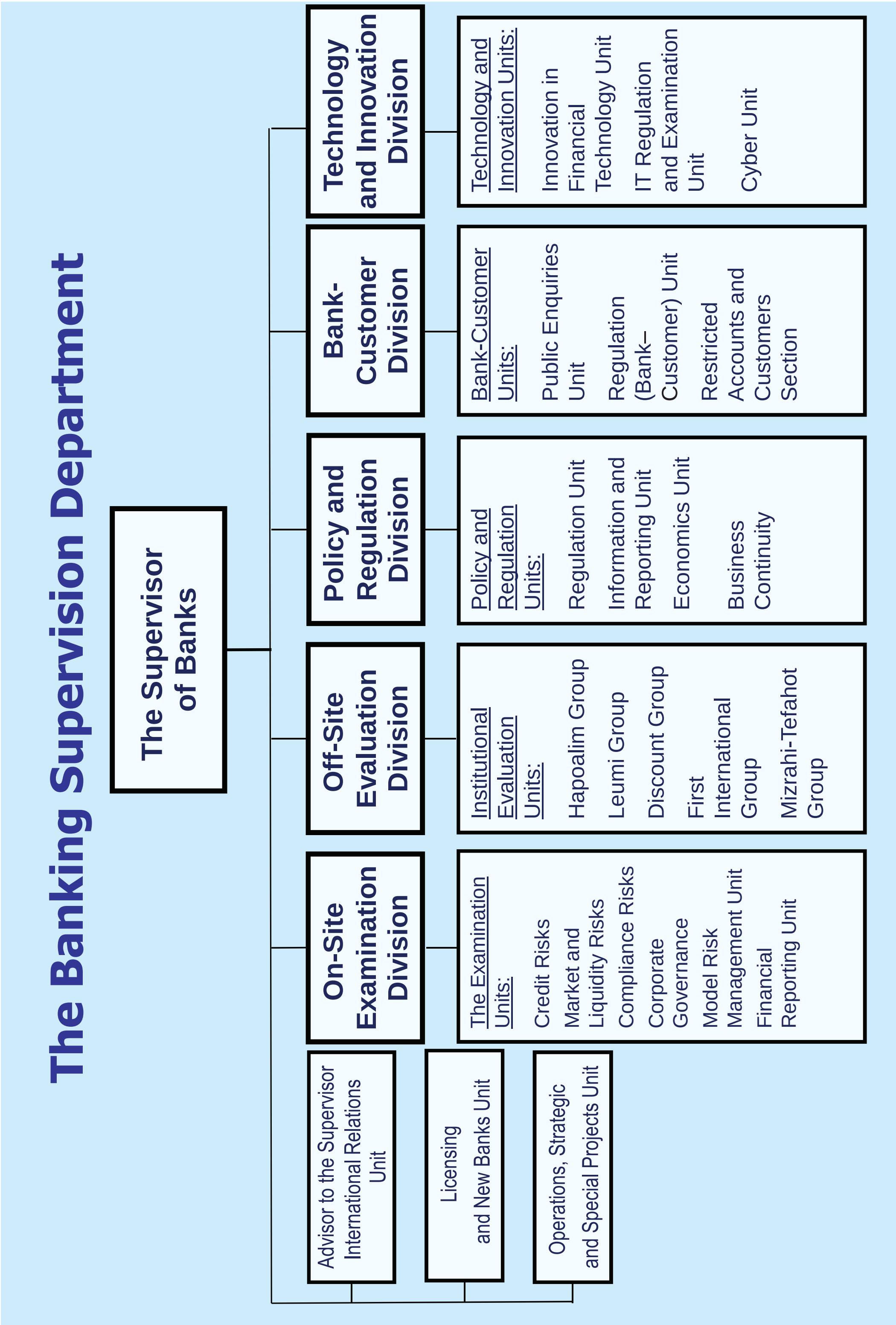
November 13	**Update to Proper Conduct of Banking Business Directive 203—"Measurement and Capital Adequacy—the Standardized Approach—Credit Risk" and Proper Conduct of Banking Business Directive 313—"Limitations on the Indebtedness of a Borrower and a Group of Borrowers"** In view of the low default rates in residential construction and in view of guarantees that can be forfeited, it was determined that the conversion coefficient of these guarantees will be reduced to 30% where the apartment has not yet been delivered to the buyer.
	Amendment to Proper Conduct of Banking Business Directive 301A—"Compensation Policy in Banking Corporations" In view of the importance of recruiting and retaining key employees, especially in the field of technology, the Directive was amended to allow retention grants to be awarded to key non-executive employees.
	Update to the Proper Conduct of Banking Business Directive 367—"E-Banking" This update makes it possible to remotely add or remove account holders or authorized signatories to an account, and thus serves as an additional stage in promoting digital channels and expanding the number of services that can be provided via digital means without physically arriving at the branch. Moreover, the amendment cancels the restrictions that had been in place until now on an account that was opened online, regarding changing an account holder after the account was opened and regarding account activity of an authorized signatory. It thus takes an additional step toward fully equating terms of an online account with the terms of an account opened at a branch.
	Amendment to Proper Conduct of Banking Business Directive 301—"Board of Directors" The Directive was amended to accelerate the banking corporations' adjustment to business innovations based on technology, management infrastructure, and information use. To achieve these goals, a requirement was established to assign a specific Board committee for technology and technological innovation. Moreover, following the definition of targets to improve the efficiency of the Board's work and increase its professional qualifications, the Directive now includes a requirement to define a policy on the maximal length of service of Board committee chairpersons.

November 18	**Update to Proper Conduct of Banking Business Directive 362—"Cloud Computing** Cloud computing technologies offer benefits for banking corporations: These technologies make it possible to develop innovative products quicker, improve flexibility and time to market for new products, improve customer service, and reduce development and operating costs. In view of the experience accumulated worldwide, and in line with corresponding regulatory authorities, the Banking Supervision Department eased restrictions on cloud computing, including cancellation of the requirement to apply for a Banking Supervision Department permit in advance regarding implementation of a specific cloud computing technology. This Directive shifts the responsibility for managing cloud-related risks to the banking corporations. The Directive also includes relevant guidelines concerning, among other things, the Board of Directors and the management's responsibility for and involvement in risk management, especially concerning material cloud computing. The updated Directive does not yet permit the transfer of core systems to cloud computing or use cloud computing for performing core activities. However, in special cases, such as in the case of the establishment of a new digital bank, the Directive allows the Supervisor to approve implementation of core systems through cloud computing.
November 20	**Amendment to Proper Conduct of Banking Business Directive 470—"Payment Cards"** This Amendment was required to implement the Law to Increase Competition and Reduce Concentration in the Banking Market in Israel (Legislative Amendments), 5777-2017, which authorizes the Supervisor of Banks to determine directives on the manner in which banking corporations present information on customers' payment card transactions.
November 28	**Amendment to Proper Conduct of Banking Business Directive 422—" Opening and Managing a Current Account with No Credit Facility"** Following the Amendment to this Directive published on March 27, 2018, several additional clarifications were necessary. This Amendment will come into effect six months after its publication date.
	Amendment to Proper Conduct of Banking Business Directive 432—" Transferring Activity and Closing a Customer's Account" The Amendment was designed to facilitate customers' efforts to transfer their activity or close their bank account. The Amendment will come into effect one month after its publication date.

	Amendment to Proper Conduct of Banking Business Directive 451—"Procedures for Granting Housing Loans" The Amendment was designed to improve the procedures related to housing loans. It improves the property appraisal process, determines that banking corporations must present current information on their website or app that allows customers to assess whether it is cost-beneficial to make early repayment of their loan, and determines that after early repayment the banking corporations must furnish a specific certificate for the insurance company confirming that they agree to reduce the insurance amount or remove the charge, as the case may be. The Amendment will come into effect three months after its publication date.
December 23	**Amendment to Proper Conduct of Banking Business Directive 472—"Merchant Acquirers and Acquiring Payment Card Transactions"** This Amendment is designed to allow merchant acquirers to refuse to render acquiring services to a business or perform specific actions for it if the merchant acquirer has a genuine concern that the business's operations involve fraud or the business misleads or imposes undue influence on customers. The Amendment will come into effect three months after its publication date.
	Directives issued in 2019
February 28	**Amendment to Proper Conduct of Banking Business Directive 332—"Share buyback by Banking Corporations"** This Directive was revised to abolish the prohibition on banking corporations' buyback of shares, subject to specific conditions, in line with conventional practice in many regulatory authorities worldwide. The conditions for share buyback include but are not limited to: - The conditions for a distribution according to the Companies Law, and the conditions of Proper Conduct of Banking Business Directive 331 "Distribution of Dividends by Banking Corporations" - Share buyback is limited to 3% of the banking corporation's issued and paid-in share capital - Share buyback is conducted according to the safe harbor defense mechanism that the ISA published, to ensure that the corporation has legal defense against insider information allegations. - The banking corporation's board of directors approves the share buyback program - The Supervisor of Banks approves the share buyback program

March 11	**Amendment to Proper Conduct of Banking Business Directive 449—"Simplification of Customer Agreements"** This Directive concerns simplification of credit agreements. The need to simplify credit agreements is also in line with Article 3(d) of the Law on Regulation of Non-Bank Loans (Amendment No. 5) 5777-2017, which among other things determines the details that lenders must include in their loan contracts. As the effect of this Amendment to the Law was deferred, the effect of the Directive was also deferred and will come into effect when the Amendment to the Law comes in effect.
April 3	**Banking Order (Services to Customers)(Supervision of Postdated Check Deposit Service)(Temporary Directive) 5779-2019** This Order sets a maximal fee of NIS 2 for depositing an endorsed post-dated check by individuals and small businesses to be retained by the bank until the date of the check. This Order was determined in view of the Law for Reducing the Use of Cash, which determines that a bank may not pay a check in respect of which one or more of the restrictions in the Law obtains. These restrictions come into effect on September 1, 2019 and will not apply to post-dated checks that were deposited before that date. Due to the concern that endorsed checks that were issued before the restrictions come into effect and are subject to the restrictions listed in the Law will not be honored when they are presented for payment after the Law comes into effect, this fee was reduced to encourage customers to deposit such checks in banks for a small fee before the restrictions come into effect. The Order is in effect from April 15, 2019 until June 30, 2019.
April 16	**Amendment to Proper Conduct of Banking Business Directive 353—" Control over Issuing of Guarantees by a Banking Corporation"** The Directive was revised to remove barriers to technological innovation. It was determined that the procedure of issuing guarantees on digital media should include, among other things, an emphasis on risks of fraud by reproduction of files, multiple printing of a single guarantee, and the possibility of modification by unauthorized parties.

May 1	**Banking Rules (Service to the Customer)(Fees)(Amendment) 5779-2019** Several amendments were made to the rules of banking fees. The main amendments are noted here: - Banking corporations will be required to scan the accounts of all their customer accounts that are small businesses or registered Dealers, identify accounts for which transfer to the basic or extended fee-service track is cost beneficial, and to transfer them accordingly, giving notice to those customers and informing them of the option to cancel the transfer. - Information on the cost of cash withdrawals from ATMs, by ATM type, will be available not only on the homepage of the ATM or a notice on the physical ATM. - Access to the fee schedules has been extended and in addition to the banking corporations' branches and website homepages, customers can access fee schedules on additional channels of communications that the relevant banking corporation offers. - The channels through which banking corporations inform their customers that they were assigned to a fee-track service or such assignment was cancelled were modified, and notifications will be made on the communication channels offered by the relevant banking corporation, according to the customer's preference. - The service "banking guarantee secured by a specific monetary deposit" was defined as a separate service, and the fee for this service will be lower than the fee for "bank guarantees."
May 5	**Proper Conduct of Banking Business Draft Directive on Professional Human Telephone Responses** The purpose of this directive is to establish principles that ensure that customers receive adequate professional telephone responses, in line with the banking system's characteristic operations, according to Amendment no. 29 to the Banking (Service to the Customer) Law, 5741-1981. The directive further determines that senior citizens should be given priority in receiving a professional human telephone response through call centers, and defines requirements for monitoring and overseeing call center response patterns.


The Banking Supervision Department
The Supervisor of Banks
Advisor to the Supervisor International Relations Unit
Licensing and New Banks Unit
Operations, Strategic and Special Projects Unit
On-Site Examination Division
The Examination Units:
Credit Risks
Market and Liquidity Risks
Compliance Risks
Corporate Governance
Model Risk Management Unit
Financial Reporting Unit
Off-Site Evaluation Division
Institutional Evaluation Units:
Hapoalim Group
Leumi Group
Discount Group
First International Group
Mizrahi-Tefahot Group
Policy and Regulation Division
Policy and Regulation Units:
Regulation Unit
Information and Reporting Unit
Economics Unit
Business Continuity
Bank-Customer Division
Bank-Customer Units:
Public Enquiries Unit
Regulation (Bank–Customer) Unit
Restricted Accounts and Customers Section
Technology and Innovation Division
Technology and Innovation Units:
Innovation in Financial Technology Unit
IT Regulation and Examination Unit
Cyber Unit