Chapter 4

CREDIT MARKET DEVELOPMENTS FOR THE BUSINESS SECTOR AND HOUSEHOLDS

- In 2018, private debt (that of businesses and households) as a share of GDP increased by one percentage point, as a result of the rapid 6.8 percent increase in business sector debt.
- The growth in business sector debt was primarily the result of a major increase in bank credit to businesses in the construction industry. This occurred against the background of regulatory easing, which facilitated the expansion of bank credit to the industry, in parallel with an increase in demand by the companies.
- The growth rate of household debt (4.9 percent) was similar to last year. However, the rate of increase in nonhousing debt slowed this year, after several years of rapid growth. In contrast, housing debt grew at a high rate, due to the removal of regulatory restrictions, which led to a shift of households' debt toward it.
- Since the 2000s, the business credit market has been experiencing structural change. This includes a growing share of nonbank financing relative to bank financing. A major part of the change is due to private loans from institutional investors.
- The private loans extended by institutional investors in Israel have a high credit rating and are extended primarily to private companies connected to the large companies in the economy. This type of credit grew at the expense of their investment in bonds. The shift to loans is apparently also the result of their characteristics, namely that they are nontradable and are tailored to the financing needs of commercial real estate and infrastructure companies.
- It is important to expand credit from institutional investors to small and midsize businesses. Therefore, the authorities allowed regulated credit institutions to issue bonds, primarily to financial institutions, and established designated investment funds. It is recommended that the government also promote a regulated securitization market that will contribute to credit accessibility.
- The downward trend in the business sector debt to GDP ratio during the last decade is the result of, among other things, the change in the industry composition of the economy, namely the move toward services and high tech industries, but is also due to regulatory changes that led to a shift of bank credit toward households and limited the expansion of business sector credit.
- An analysis we carried out finds a positive and statistically significant relationship between housing debt and private consumption (excluding durables): When homebuyers have greater opportunity to use housing debt, which is the cheapest source of financing for the purchase of a home, their disposable income rises, allowing them to increase their current consumption as well.
- An analysis of the public's response to the "Money Mountain 2" regulation and the expansion of responsibility imposed on the public in financial decision making points to the importance of possessing sufficient financial literacy. Therefore, it is important that financial regulators work toward increasing this type of knowledge.

1. INTRODUCTION

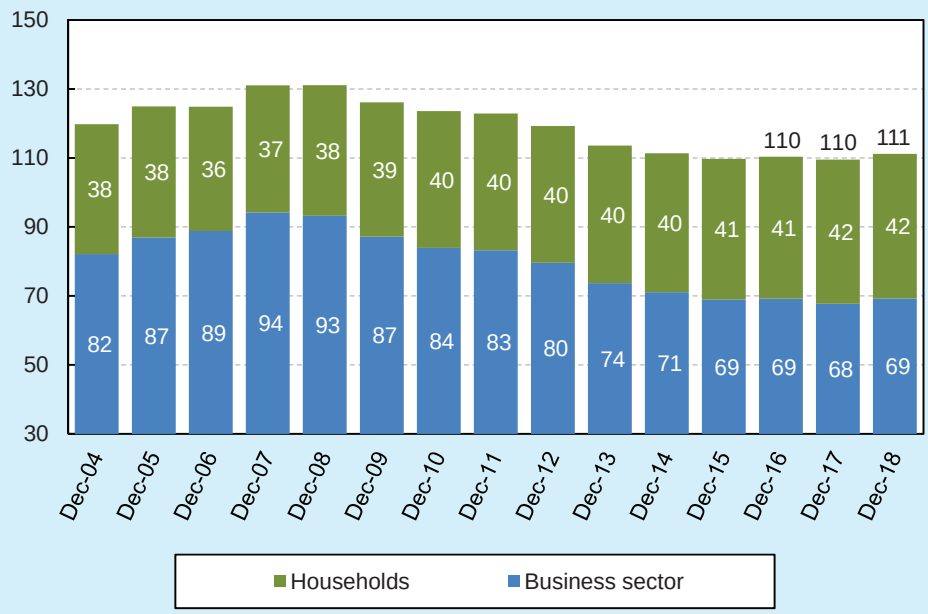
This chapter analyzes the external financing sources of the private sector (businesses and households) in Israel, including a description of its sources by financial intermediary. The financing of the private sector is used by businesses[1] and households for operations, consumption and investment, hence its considerable importance to economic growth. The more competitive the market in which financial intermediaries operate—while monitoring the spectrum of risks—the greater their contribution to economic growth will be.

In 2018, the trends of business debt and household debt changed: Business sector debt increased, and the growth rate of nonhousing household debt slowed.

In 2018, there were changes in the trends of business and household debt. After years of a declining rate of growth in business sector debt and high rates of growth in nonhousing household debt, this year there was a marked increase in business sector debt and a major decline in the rate of growth of nonhousing household debt. Total credit to the private sector (businesses and households) grew by 6 percent this year and the private credit to GDP ratio was 111 percent (Figure 4.1).

Business sector debt has grown from the beginning of the year at the high rate of 6.8 percent, primarily as a result of the notable increase in bank credit to large businesses in the construction industry. This growth followed a relatively slow upward trend in bank credit to businesses, which was provided primarily to small and midsize businesses.

Figure 4.1
Nonfinancial Private Sector Debt as a Share of GDP, 2004–18



SOURCE: Bank of Israel.

[1] Without banks and insurance companies.

The increase in bank credit to businesses this year derived from regulatory changes[2], which facilitated an increase in credit to the construction industry. This answers the growing demand for credit by companies in the construction industry due to their diminished internal sources. The growth in business debt raised by one percentage point the ratio of this debt to GDP, which had exhibited a downward trend since 2008. This chapter presents the reasons for this low rate, relative to other countries, and for its downward trend. The two phenomena are the result of the industry composition of companies in Israel, the increasing use of internal sources and limitations on the supply of credit.

Household debt grew since the beginning of 2018 by 4.9 percent, a somewhat lower rate than in previous years. Most of this growth occurred in housing debt, which grew at a high rate relative to previous years (6.7 percent from the beginning of the year). Nonhousing debt, which grew rapidly for many years, moderated markedly this year, growing by only 1.4 percent. The growth of housing debt this year was not a result of increased activity in the real estate market—indeed the number of residential housing transactions remained stable alongside a slight drop in housing prices—but rather of the easing of regulatory restrictions, which reduced the cost of large mortgages and increased the supply of housing credit. This was accompanied by steps to strengthen the requirements in the marketing of nonhousing credit. The combination of a decline in nonhousing bank debt and an increase in housing debt indicates the substitutability in their demand and the attractiveness of housing debt from a household's perspective. This finding is reinforced by a study we carried out this year that, together with the positive relationship between nonhousing debt and private consumption, points to a strong positive relationship between housing debt and private consumption, not including durable goods.

In 2018, several reforms and important policy measures intended to increase competition in the market for household and small business credit came to fruition.

In 2018, a number of reforms and policy measures intended to increase competition in the market for household and small business credit began to bear fruit. These measures contributed to increasing the number of players in the market, and their impact is expected to grow in coming years. The separation of the credit card companies from bank holdings is progressing; thus, two new players will soon join the retail credit market, and a number of entities received acquiring licenses this year from the Banking Supervision Department. The credit data system to be launched in April 2019 will reduce information asymmetry and will make it possible for various lenders to compete for households' debt better, by providing credit offers that are tailored to the customer's risk level based on the shared information. Projects that are being advanced by the Bank of Israel and the Ministry of Finance, such as "Open Banking", "Switching between Banks" and the "Computer Services Bureau" will add to and intensify competitive pressure in coming years and will support the entry of additional players into the market.

[2] The regulation reduced the value of the construction industry's credit risk and since the credit provided to that industry had previously approached industry limits, this made an expansion possible.

2. BUSINESS SECTOR DEBT[3]

a. Main developments

In 2018, business sector debt grew, primarily a result of the increase in the supply of bank credit.

In 2018, business sector debt grew markedly (Table 4.1). This is primarily a result of the increase in the credit supply from the banks, which is also evident from the responses of business companies in the Business Tendency Survey. According to their responses, it is easier for them to obtain bank credit (Figure 4.2).[4] Thus, debt from the banks grew in 2018 (through November) by 6.7 percent, which is notably high relative to previous years (Table 4.1). At the same time, the price of bank credit has not risen

Table 4.1
Breakdown of nonfinancial business sector debt[a], 2016–18

	Period-end balance (NIS billion)			Rate of change relative to previous period (percent)[b]		
	2016	2017	2018*	2016	2017	2018
Business sector debt	848	861	919	5.3	1.5	6.8
Debt to banks[c]	396	410	437	1.8	3.6	6.7
Domestic nonbank debt	273	296	314	11.1	8.7	5.9
of which: Tradable bonds in Israel	173	190	204	12.9	9.6	7.7
of which: Nontradable bonds in Israel and nonbank loans[d]	100	107	110	8.2	7.0	2.7
of which: Loans from institutional investors	69	77	79	18.6	12.0	2.6
Debt raised abroad[e]	180	155	168	5.1	-13.9	8.5
Loans from regulated credit intermediaries[f]	6.4	7.2	8.8		11.8	23.1

[a] Excluding banks and insurance companies. Loans from banks are presented before allowances for credit losses (based on solo data, only Israeli residents). Bond balances are presented by adjusted par value (capital listed for trading in addition to indexation differentials).

[b] In the current year, the change is from the beginning of the year.

[c] Bank debt is exclusively loans from banks.

[d] Nontradable bonds in Israel, loans from institutional investors, loans from credit card companies without bank guarantees and earmarked credit from the government.

[e] Includes bond holdings of Israeli companies abroad and loans from abroad. The reported balance of credit from nonresidents to the business sector is based on reports by companies in the Israeli economuy.

[f] Data from financial statements of 6 public regulated credit intermediaries together with loans from credit card companies that are not at the banks' responsibility. Raising credit by regulated credit intermediaries is included in bank loans and corporate bonds, and therefore is indirectly reflected in debt of the business sector. Additionally, the loans from credit card companies are included in domestic nonbank debt in the "nontradable bonds in Israel and nonbank loans".

SOURCE: Bank of Israel.

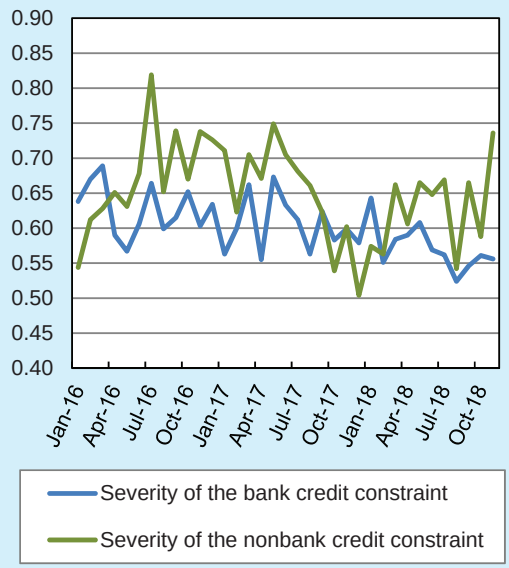
[3] The analysis in this chapter is on the business sector without banks and insurance companies. The chapter describes trends in financing in the business sector from entities for which we have access to data: the banks, the financial institutions, the credit card companies and six public regulated credit intermediaries out of 1,189 regulated credit intermediaries (both for businesses and households) that requested a license to provide credit from the Capital Market, Insurance and Saving Authority.

[4] The reduced difficulty encountered by companies in obtaining bank financing relative to nonbank financing is preserved when an annual moving average is calculated.

and there are even indications that it has declined.[5] The growth in the bank credit portfolio is accompanied by indications of a historically low level of risk in business sector credit (according to various measures of the quality of the credit portfolio),[6] which even declined during 2018. The growth in bank credit to large businesses reflects a change in the trend of the past years, namely an expansion of credit to small and midsize businesses, with an increase in the share of credit risk to large businesses out of total bank credit risk, from 41 percent at the beginning of 2017 to 42 percent at the end of 2018. The expansion of banking credit occurred as the large banks reached their regulatory capital targets.

The rate of growth in nonbank credit remains high, despite reports of a drop in its supply toward the end of the year, as can be seen from the companies' reports of increasing difficulty in obtaining non-bank credit in 2018 (Figure 4.2).[7] One of the causes of this difficulty is apparently end-of-year shocks in the market, which brought about an increase in spreads and in the cost of raising capital through bonds. Domestic non-bank credit grew this year by 5.9 percent, which is lower than in previous years. Credit through the issue of tradable bonds grew by 7.7 percent, which is somewhat lower than during the previous two years. Private loans from the institutional investors grew this year by 2.6 percent, which is significantly lower than in previous years, primarily as a result of the drop during the fourth quarter of the year. Credit from regulated credit intermediaries (credit intermediaries who are not banks or institutional investors, i.e., credit card companies and other credit intermediaries) grew by 23

Figure 4.2
Business Tendency Survey: Severity of Bank and Nonbank Credit Constraints to the Business Sector, 2016–18 (percent)



SOURCE: Central Bureau of Statistics.

[5] The flow of loans shows that this year the estimated interest spread (the difference between the interest rate and the Bank of Israel interest rate) remained constant, while the term to maturity decreased. It is not possible to identify a drop in price with certainty, even though the quantity of credit has risen significantly, since there are also indications of a decline in the portfolio's risk level.

[6] There is a clear downward trend and a historically low level of credit write-offs and of problematic and impaired credit in the business sector.

[7] The upward trend in the difficulty of obtaining nonbank credit included not only the large companies in the economy, whose financing is largely based on bond issues, but also small companies whose financing is largely based on credit from regulated credit intermediaries.

percent, from NIS 7.2 billion at the end of 2017 to NIS 8.8 billion in 2018 (as of the third quarter) (Table 4.1). The background to this expansion is the increase in the issuance of bonds by these companies by 54 percent relative to 2017, to about NIS 3 billion this year.[8]

b. The debt of the construction industry

In the first three quarters of the year, the largest increase in debt was that of the construction industry. Most of the increase was for residential construction by private companies, who increased their leverage. A marked share of the credit was given to firms for buying property.

During the first three quarters of the year, the largest increase in debt (11 percent) was that of the construction industry, whose credit is primarily provided by the banks.[9] The banks provide 80 percent of the industry's debt, which has grown since the end of 2017 by an annual rate of 14 percent. The increase in credit was made possible by an easing of restrictions on the banks' exposure to the construction industry at the end of 2016, which released about NIS 20 billion of credit to this industry,[10] and an additional easing in November 2018 that released about another NIS 5 billion.[11] Approximately NIS 9 billion of the NIS 24 billion increase in the business sector debt to the banks this year was a result of the increase in the debt of the construction industry. A perusal of the financial reports of three out of the four largest banks shows that most of the increase in debt was for the purpose of residential construction while debt for commercial construction rose by a lower rate. For these banks, the debt to the residential construction industry rose during the first three quarters of the year by NIS 7 billion, which explains most of the increase in total debt to the construction industry during this period.

Investment in residential construction declined this year, as described in Chapter 2, a development that is inconsistent with the major increase in the industry's debt. One explanation is that the increase in debt of the construction industry stems from the decline in companies' internal sources due to the stability in the number of housing transactions and the longer selling process, as described in Chapter 9. When home sales are divided between public and private companies, it can be seen that the decline in sales and in internal sources this year occurred entirely among private companies (Figure 4.3). Accordingly, the leverage and debt of public companies did not rise. We assume therefore that the growth in bank credit was directed to private companies,

[8] The capital raised by the financial services industry, which belongs to the business sector does not include banks or insurance companies. A total of NIS 2.7 billion in bonds out of a total of NIS 3 billion were issued and are held directly by institutional investors.

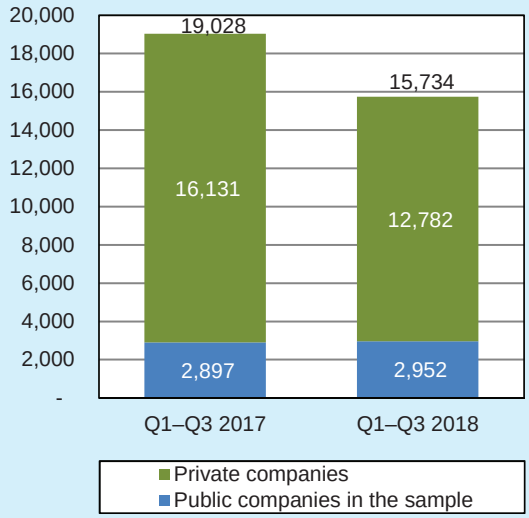
[9] Credit from banks and credit cards, although the portion of credit from credit cards is negligible.

[10] The debt of the construction companies to the banks has risen since the end of 2016 following a regulatory change in September 2016 that eased the restrictions on the banks' industry exposure and made it possible to classify the credit risk due to the Sales Law guarantees which the banks insure against by means of foreign insurance companies within the financial services industry instead of the construction and real estate industry. The regulatory change as of September 2018 was worth about NIS 20 billion.

[11] This easing makes it possible to reduce the risk weight resulting from the Sales Law guarantees from 50 to 30 percent. An estimate of the change as of September 2018 indicates a reduction of about NIS 5 billion in the credit risk of the construction industry.

which increased their leverage levels.[12] Thus, the supply of banking credit grew this year, but at the same time companies' demand for credit also grew and therefore, the amount of debt grew without a major change in price. In our estimation, as a result of the expansion, a future increase in the banks' credit risk is possible, due to the rise in the companies' leverage. Another explanation of the aforementioned gap can be found in the banks' financial reports, which indicate that a significant portion (from one-quarter to one-half)[13] of the credit was provided to the companies in order to purchase land, which is not considered in the national investment in the construction industry (Chapter 2). Investment in land is also in line with the trend of land sales as part of the Buyer's Price program (described in Chapter 9). The increase in debt without a parallel increase in revenue or investment also explains the increase in the debt to GDP ratio this year.

Figure 4.3
Sales of New Homes, First Three Quarters, 2017 and 2018 (number of dwellings)



SOURCE: Central Bureau of Statistics and published financial statements.

c. The reasons for the low business debt to GDP ratio

Israel is an exception in the low level of its business-sector debt to GDP ratio as well as in its downward trend since 2008.

The ratio of business debt to GDP grew by one percentage point, against the background of a low level of the business debt to GDP ratio, both historically and relative to other countries (Figure 4.4).[14] The low debt to GDP ratio indicates that debt is not heavily used in the financing of the companies' activity. It should be noted that the major differences in the ratio between the countries is likely an indication that there is no optimal ratio and that a high ratio is not necessarily better than a low one.

[12] Because these are private companies, we do not have access to their financial reports in order to analyze their activity further.

[13] This estimate is supported by figures from the banks' financial reports. In one of the banks, the rate of increase in total debt for the purchase of land is 26 percent of the increase in the debt for residences and land during the first three quarters of the year; at a second bank, there is a maximum ceiling on the value of the debt for the purchase of land since there is no differentiation between the figures. For this bank, if it is assumed that all of the debt for the purchase of land is for residences, then its increase is about 48.5 percent of the total increase in the debt for residences during the first three quarters of the year.

[14] The Statistical Bulletin for 2018 presents an international comparison, which includes data from the OECD and additional reference countries. The picture remains the same in both analyses.

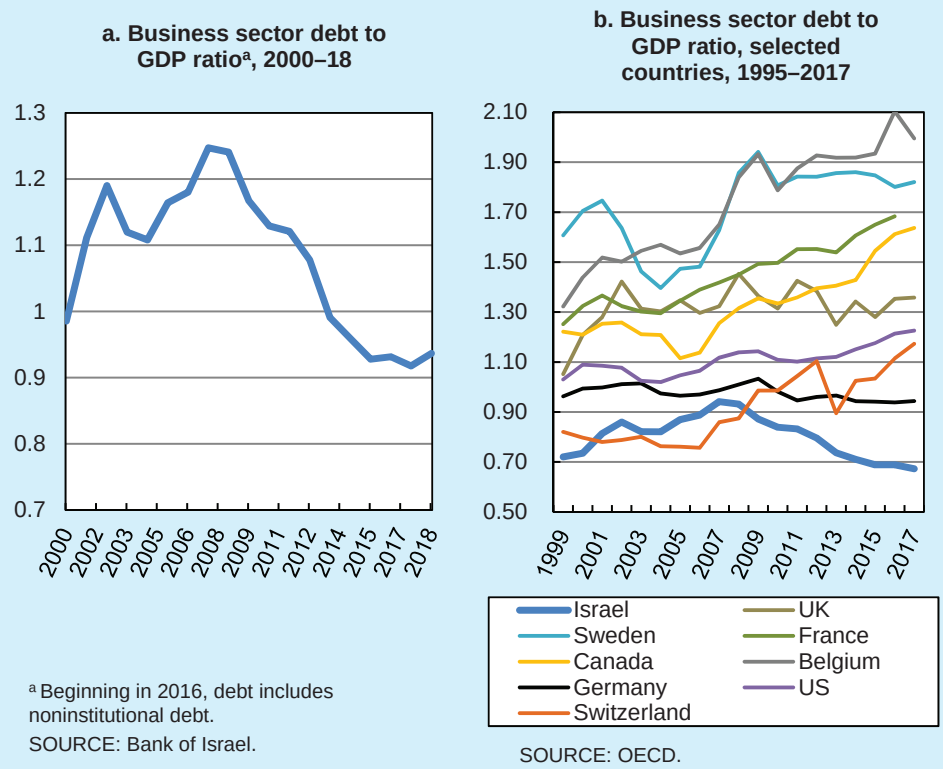
However, Israel is an exception not only in its low level of the debt to GDP ratio but also in its downward trend that began in 2008. Following are possible explanations for the two phenomena.

(1) Companies' demand for debt

A change in the industry structure—the shift to services and high technology companies—is one of the explanations for the low business-sector debt to GDP ratio in Israel, in international comparison.

The industry structure of companies in Israel. During the period 1995–2015[15], the average share of GDP accounted for by manufacturing, mining, electricity and water and agriculture industries was 19.6 percent, compared to an average of 25.5 percent in the OECD countries. In contrast, the average share of the activity of the information and communication industry in GDP was higher in Israel than in the OECD (7.9 percent vs. 4.5 percent). The share of the real estate industry was 13.4 percent in Israel vs. 9.3 percent in the OECD, and the share of the public services industry was 20.1 percent in Israel vs. 17.4 percent in the OECD. The information and communication industry in Israel includes the high tech sector, which is financed

Figure 4.4
Business Sector Debt as a Share of GDP and by International Comparison



[a] Beginning in 2016, debt includes noninstitutional debt.

SOURCE: Bank of Israel.

SOURCE: OECD.

[15] The analysis is based on CBS and OECD data, which were also presented in the Economic Survey from July 2, 2017 of the Chief Economist in the Ministry of Finance, as part of the weekly focus: The Composition of GDP and Concentration of Added Value.

primarily by venture capital, and the companies use debt to only a small extent in order to finance their activity. In 2018, Israeli venture capital raised more than NIS 4 billion per quarter.[16] It was also found (in the Financial Stability Report for the second half of 2018) that the level of debt in the real estate industry in Israel is low relative to other countries. The public services industry is mostly financed from the State budget and therefore does not have an effect on business sector debt (though it does affect GDP). In short, the industry composition in Israel leads to a low level of debt relative to GDP, compared to other countries.

The downward trend in the debt to GDP ratio that began in 2008 is also apparently influenced by changes in Israel's industry structure. Table 2.8 in Chapter 2 shows that in Israel the output of the trade and business services industry grew in recent years more than the output of other industries, and in particular more than the output of the manufacturing, production (which includes manufacturing, mining, and quarrying) and agriculture industries. The change in the industry structure can also be seen in the business sector debt (Figure 4.5). Table 4.2, which presents the relationship between industries and the quantity of debt for public companies in Israel, shows that the total debt of the trade and services industry is statistically significantly lower than that of the production and agriculture industries. Therefore, an increase in the share of the trade and services industry in the economy contributes to explaining the downward trend in the business debt to GDP ratio in recent years. Table 2.8 in Chapter 2 also shows the increased importance of the information and communication industry, which as noted contributes to the decline in the debt to GDP ratio. In addition, the bankruptcies of holding companies[17] during the period 2008–15, and primarily the coming into effect of the Enhancing Competition and Reducing Concentration Law in 2013, reduced the possibilities for the expansion of holding companies in a pyramidal structure, as well as the demand of these companies for debt, which can be seen in the decline in the industry's debt (Figure 4.5). Table 4.2 also shows that the use of debt by the public holding companies is higher than that of the production and agriculture industries and therefore the drop in the demand of these companies also leads to a reduction of the debt to GDP ratio. There may be differences in the debt trends between the public and private companies that do not come to light in the above analysis of public companies in Table 4.2. In this context, it also should be noted that the proportion of public companies within total credit to the business sector fell from 44 percent in 2010 to 37 percent in the third quarter of 2018.

[16] IVC Research Center data.

[17] The analysis by Brodesky (2017) which looked at the debt restructuring in the bond market during the period 2008–15 shows default rates of 2–4 percent of the negotiable nominal debt during this period.

Table 4.2

Public companies' debt (in NIS), divided among industries and comapred to amount of debt in manufacturing and agriculture industries, 2008–17

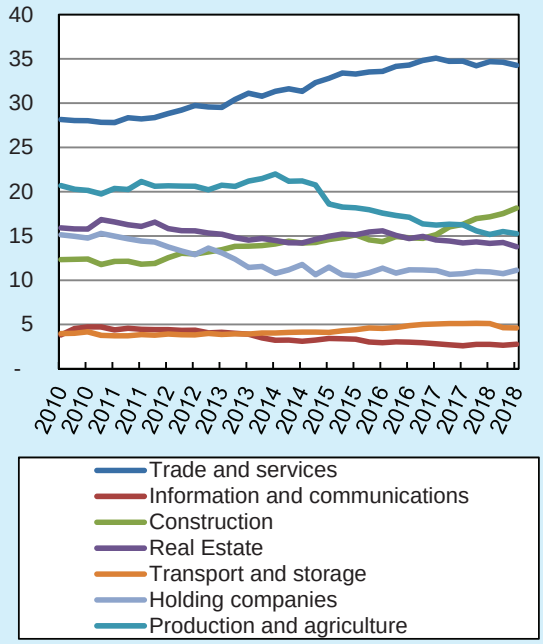
Trade and services (excluding real estate)	***-681,605
Information and communication	45,285
Construction	217,543
Real estate	***833,764
Holding companies	***1,158,641

* p value=0.1; **0.05, ***0.01

The table presents the results of an OLS regression on panel data of the public companies in Israel for 2008–17. Those years were chosen because a notable accounting regulation went into effect in 2008. The regression is for the companies' debt balance against dummy variables for industries. The industries that were taken out of the regression are the manufacturing and agriculture industries. Thus the regression coefficient of an industry reflects the average amount of debt in the industry relative to the manufacturing and agriculture inustries. The regression controls for time and company fixed effects.

SOURCE: Based on published financial statements.

Figure 4.5
Distribution of Debt to Banks and Bonds, by Industry, 2010:Q1–2018:Q3 (percent)



SOURCE: Bank of Israel and published financial statements.

Public companies in Israel use internal sources for financing investment activity. These sources have been growing in recent years, and thus can lead to a decline in companies' demand for credit.

Increased use of internal sources to finance activity. There is a positive and statistically significant connection between the annual flow of investment from public companies and the various sources of financing, i.e., external financing, through debt, and internal sources (retained earnings and share capital) (Table 4.3). The table shows that companies indeed finance their investments from all sources, including internal capital.

Since 2008, there has been a visible upward trend in the internal sources of public companies, as evidenced by the increase in operating profits, retained earnings and equity (not including capital reserves) out of the overall balance sheet in recent years (Figure 4.6).[18] This year as well, there was an increase in the internal sources of

[18] The effect of Teva in 2017 is neutralized in the graphs. If it had been included, the indicators would have been lower, due to the upheaval it experienced in that year. The source of capital funds is activity directly involving the company's equity (such as the valuation of a fixed assets reserve or a capital reserve for transactions with a controlling shareholder). From an economic viewpoint, capital reserves sometimes do not represent a company's internal sources, since they are not created from the company's profits during its current operations or from capital investments. Therefore, equity without capital reserves primarily represents the company's internal sources, which have two main components: surpluses – profits that the company has retained during its current operations or as a result of capital investments; and share capital and share premiums, which are recorded as a result of the issuing of shares to a controlling shareholder or to the public against the flow of cash into the company. For further details on internal sources of companies operating in commercial real estate, see the Financial Stability Report for the second half of 2018.

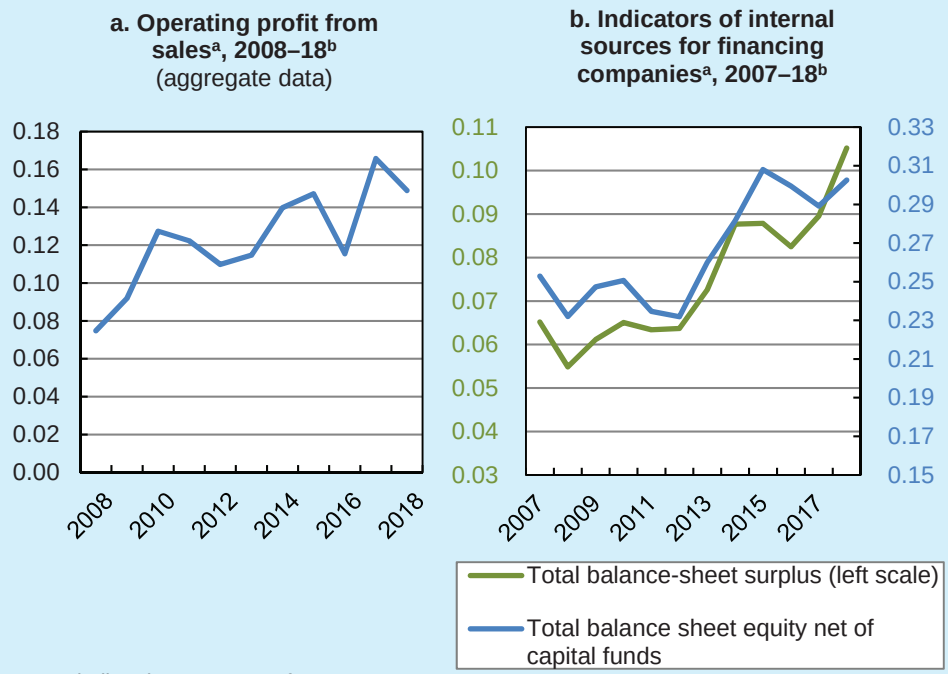
public companies. (However, it appears that those of private construction companies declined, as mentioned above.) This increase points to the ability of the companies in recent years to rely more heavily on internal sources in order to finance their activity and in particular investment activity.

Table 4.3
The effect of the change in sources of financing on annual investment flows of public companies, 2000–17

External sources	Annual change in financial debt	0.04***
Internal sources	Annual change in retained earnings	0.17***
	Annual change in share capital	0.39***

* p value=0.1; **0.05, ***0.01
The table presents the results of an OLS regression on panel data of the public companies in Israel for 2008–17. Those years were chosen because a notable accounting regulation went into effect in 2008. The regression is for the companies' annual rate of change of investment flows on the annual rate of change in the various sources of financing: the annual rate of change in financial debt, the annual rate of change in companies' retained earnings, and the annual rate of change in share capital. The regression controls for the effect of the years and of the specific companies. All coefficients are statistically signficant at the 99 percent level or above.
SOURCE: Based on published financial statements.

Figure 4.6
Internal Sources for Financing Companies



[a] Excluding data on "Teva" from 2017.
[b] 2018 data are based on the first three quarters of the year.
SOURCE: Based on published financial statements.

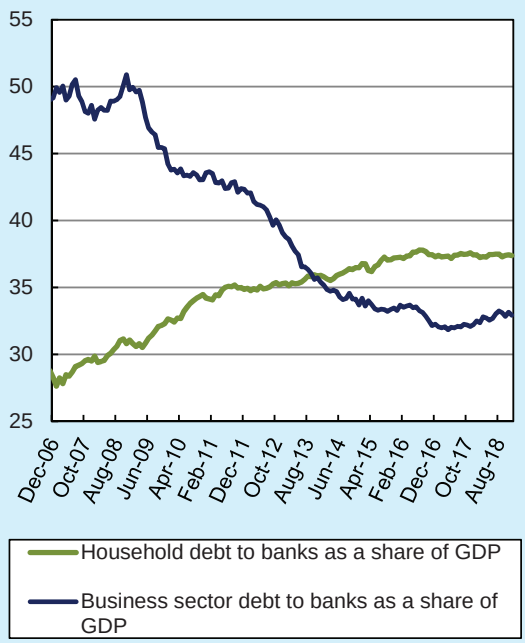
(2) The supply of credit

Over the past decade, regulatory changes have led to a shift of bank credit toward households, and together with limitations on supply of credit from institutional investors reduced the possibility of expanding business credit.

Limits on the exposure of bank credit. In 2009, the banks were required to increase their capital, and those targets were reached in 2017. This process limited their ability to provide credit in recent years. In addition, the Banking Supervision Department imposed limits in 2017 on the exposure of the banks to a single borrower and to borrower groups, which reduced their exposure to large borrowers. As a result, the average amount of credit provided to a large borrower by the five largest banks fell from about 17 percent of the banks' capital in 2008 to about 11 percent in 2017. (For further details, see Box 3.3 in Israel's Banking System—Annual Survey for 2017.) The expansion of credit to small and midsize businesses is slower due to the increasing cost of risk and operational cost. This trend is also likely to be one of the explanations for the drop in the supply of bank credit to businesses in recent years.

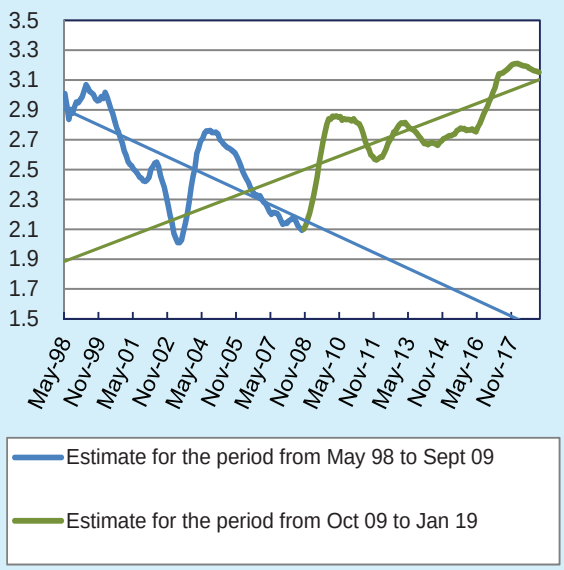
The shift of the banks' credit sources to households. As a result of the increase in home prices and the fact that starting from 2010—and in particular after 2012 and in preparation for Basel III—the banks were required to allocate less capital in the granting of mortgages (primarily mortgages with low Loan to Value (LTV) ratios), bank assets were shifted to housing credit and the banks reduced credit supply to the business sector (Figure 4.7). This shift of bank debt is part of an international trend

Figure 4.7
Nonfinancial Private Sector Debt to Banks, 2000–18 (percent of GDP)



SOURCE: Bank of Israel.

Figure 4.8
Estimated[a] Bank Margin (The Five Large Banks) to the Business Sector, May 1998 to January 2019 (moving 12-month average, percent)



[a] The bank margin is estimated as income from the interest and fees on unindexed credit to business customers as a share of total unindexed credit to the business sector, minus the Bank of Israel interest rate.

SOURCE: Based on reports to the Banking Supervision Department.

(Jorda, et al. 2016). It is of interest that starting from about 2008, the (estimated) bank interest rate for the business sector started to rise, which was another indication of the drop in the supply of bank credit (Figure 4.8).

Limited supply from institutional investors. The institutional investors provide credit directly (by means of both bonds and loans) and almost exclusively to large companies, and provide only a limited amount of credit to small and midsize companies. Furthermore, since there is no developed securitization market in Israel, institutional investors are unable to purchase credit portfolios on a regular basis from the banks, which have the operational capability to provide credit to small and midsize businesses. Securitization would free up sources for the banks and would allow them to increase the credit they provide to small and midsize businesses.[19] This situation raises the concern that even though there is an increasing flow of cash to the institutional investors, their ability to increase their credit to companies in Israel is limited. (For further details on this issue, see below.) This trend is consistent with what is shown in Figure 4.8, according to which the activity of the institutional investors has contributed to increasing the supply of credit to large businesses, to increased competition with the banks and to a drop in the bank interest rate up until about 2008 (while in recent years the supply of credit from institutional investors has not necessarily reduced the interest rate).[20]

Limited supply of nonbank suppliers or institutional investors. The activity of regulated credit intermediaries, which provide credit to small and midsize companies, is quite limited in Israel. Furthermore, there is hardly any securitization carried out, as already mentioned, which would allow the expansion of bank credit and its transfer to additional players from Israel and from abroad.

In sum, the low level of the debt to GDP ratio in Israel and its downward trend since 2008 are apparently the result of a combination of supply and demand factors. Some of the changes are part of long-term processes, while others can explain the downward trend since 2008 as well as the change in trend this year, during which the ratio rose, primarily as a result of the increase in the supply of bank credit to the construction industry along with the decrease in the internal sources of private companies in that industry. Changes in the supply of bank credit are based on, among other things, regulatory changes, which make it easier to provide credit to the business sector and in particular to companies in the construction industry.

[19] The institutional investors can purchase credit portfolios directly from the banks, but this involves one-time non-negotiable transactions, which differ from securitization. Currently, the institutional investors purchase portfolios of housing credit rather than business credit.

[20] There is no possibility of analyzing the price of credit from the institutional investors due to a lack of data on the flow of private loans, and the price of bonds over the years is influenced by the supply of credit from households and mutual funds.

3. HOUSEHOLD DEBT[21]

a. Main developments

The growth rate of nonhousing debt slowed this year, after years of rapid growth. In contrast, housing debt grew at a rapid pace, due to the removal of regulatory limitations, which led to a shift of household debt to it.

In 2018, household debt increased by 4.9 percent, a somewhat lower rate than in previous years. The ratio of household debt to GDP has risen from 40 percent in 2010 to 42 percent at the end of 2018. In comparison to other countries, this is a high rate of growth, although the ratio of household debt to GDP remains at a low level. Furthermore, the proportion of housing debt is relatively low in comparison to other countries, although the proportion of nonhousing debt is not (for further details, see the Financial Stability Reports for 2018 and the Statistical Bulletin for 2018).

The growth rate of nonhousing credit slowed in 2018 to a low level of 1.4 percent (Table 4.4) following several years of high growth (4–6 percent annually). This was the result of the decrease in nonhousing bank credit. Nonbank credit from the institutional investors and the credit card companies continued to grow at a high rate this year, though it was lower than in previous years.

The decline in nonhousing bank credit was apparently also the result of the shift to housing credit, whose supply from the banks grew this year, due to regulatory changes. It is of interest that as in the case of the business sector and despite the stability in the real estate market, the financial debt of the real estate sector as a whole (businesses and households) continued to grow. Households' housing debt grew by 6.8 percent compared to 2017, a rate that was somewhat higher than in previous years (Table 4.4). The growth in housing debt, despite the slight drop in home prices (Chapter 9), is partly due to the reduced capital requirements imposed by the Banking Supervision Department on mortgages with a high LTV (60–70 percent), which went into effect in March 2018. The proportion of mortgages within this LTV range has increased since March 2018 by 14 percent, to 34 percent. The increase in these mortgages was accompanied by a drop in the proportion of mortgages with lower LTVs, which is an indication that the increase was a direct effect of the regulatory changes. Calculating total mortgage balances for 2018 as the number of mortgages from March to December 2018 multiplied by the size of the average mortgage for 2017,[22] and subtracting the product from the total mortgage balance for 2018, yields a difference of NIS 3.1 billion. If all NIS 3.1 billion represents a shift over from nonhousing debt (as a result of regulatory changes), then nonhousing debt grew by 3 percent this year and housing debt grew by 5.9 percent. The result is therefore a lower decline in the size of the nonhousing debt and a rate of increase similar to that in recent years for housing debt.

[21] The analysis describes the trends in household financing with regard to the sources for which data are available, namely the banks, the institutional investors, the credit card companies and two public regulated credit intermediaries. The credit from the latter apparently accounts for a relatively small proportion of total credit provided by the regulated credit intermediaries to households, which has grown in recent years.

[22] The sum of the monthly gap from March until December between the size of the monthly mortgages on the one hand and the number of monthly mortgages multiplied by the average mortgage for 2017 on the other hand, which stood at NIS 660,000.

Table 4.4
Households' debt balances

(NIS billion, current prices, end of period)

	Balances (NIS billion)			Rate of change over previous period (percent)		
	2016	2017	2018	2016	2017	2018
Total debt of households[a]	505	531	557	6.1	5.2	4.9
By sources:						
From banks	457	476	496	5.2	4.0	4.3
of which: Housing	301	317	339	5.7	5.3	6.9
of which: Nonhousing[b]	156	159	158	4.2	1.6	-0.9
From institutional investors	17	24	29	52.4	40.0	20.3
of which: Housing	7	12	14	131.7	58.8	15.3
of which: Nonhousing	10	12	15	20.7	25.6	25.1
From the credit card companies[c]	16	19	20	19.1	16.9	7.5
From the government (earmarked credit)[e]	15	13	12	-11.5	-12.3	-7.9
By use:						
Total housing debt	318	337	360	6.2	6.0	6.8
Total nonhousing debt	187	194	197	6.0	3.8	1.4
Debt from regulated credit intermediaries[d]	1.4	1.5	1.6		14.2	6.0

[a] Excludes credit from nonresidents—due to lack of data.

[b] Includes loans that are not for residential purposes that are secured by a dwelling.

[c] Debt to credit card companies and credit at the responsibility of/guaranteed by banks is included in banks data.

[d] Loans from the government to borrowers generally pass via the banking system, which serves as a conduit for transferring payments. The main part is loans from the government, but the items also include loans to employees from employers (who are not part of the government or local authorities), which we are unable to separate out.

[e] The debt from regulated credit intermediaries includes the balance of credit of "IDI Insurance Company (Direct Insurance)" and "Albar". The data is as of the end of the third quarter of 2018. These data were only collected starting in 2016

SOURCE: Bank of Israel.

The hypothesis regarding the increase in the supply of housing credit is supported by the stable or downward trend (depending on the type of interest rate) in the interest rate spreads on mortgages this year.[23]

The decline in nonhousing debt occurred in view of a high historical level of the risk indices[24] for the portfolios of nonhousing credit from the banks and the credit card companies, which even rose this year, alongside changes in the legal environment for bankruptcy. (For further details, see the Financial Stability Report – Second Half 2018.) The indices of credit risk for housing credit are at a high level historically,

[23] The indexed or non-indexed interest rate less the yield on 10-year government or bank bonds, indexed or non-indexed respectively.

[24] An increase in the following indicators: proportion of loan loss provisions, write-offs, problematic debt and impaired debt.

but lower by tens of percent than those for nonhousing credit. In contrast, there was no increase in the interest rate spread on nonhousing credit from the banks, which implies that a significant part of the decline in nonhousing credit apparently originated from the demand side, namely the shift to housing debt. Nonetheless, it is possible that steps by the Banking Supervision Department to tighten restrictions on the marketing of nonhousing credit are working to limit nonhousing credit.

b. The connection between household debt and private consumption

The more that homeowners are able to use housing debt, which is the least expensive financing source for buying a home, the more their disposable income rises, and enables them to increase current consumption.

In view of the growth in the housing and nonhousing debt of households in recent years, the question arises as to the connection between the various types of debt and private consumption. We ran a regression of the quarterly rate of change in private consumption on the rate of quarterly change in housing and nonhousing debt, controlling for variables similar to those found by Barak (2017) to impact private consumption in the short run,[25] including the interest rate, net income, home prices and number of real estate transactions. We found a positive and statistically significant connection between nonhousing debt and housing debt with private consumption, and that the connections between each type of debt and private consumption were similar, strong and statistically significant (Table 4.5). It was also found that the connection of housing debt to private consumption is the result of its connection to private consumption without durables[26] (Table 4.5) while the connection of nonhousing debt to private consumption is the result of a connection to other components of private consumption as well. Since home prices were controlled for in the regression, it does not appear that the connection is the result of a wealth effect.[27]

As such, there is a positive relationship between housing debt and current consumption. A possible explanation is that when households are given the option of obtaining higher mortgages (as occurred this year), which is the cheapest type of debt for them, they rely less on more expensive sources (nonhousing credit or equity) when purchasing a home, and therefore their income grows and with it their consumption. This explanation also points to the substitutability between housing debt and nonhousing debt and is also consistent with the possibility, which we were witness to this year, of a shift from nonhousing debt to housing debt. According to the regression results, the growth rate of housing debt and the decline rate of the nonhousing debt should maintain a high level of current consumption this year.

[25] Barak (2017) showed that private consumption during the period 1995–2015 was influenced in the short run by a number of factors: income (and particularly transfer payments), lagged net financial assets (the portfolio of assets net of debt), the value of housing assets, the lagged global trade index and the one-year interest rate.

[26] The positive connection between housing debt and private consumption is the result of the positive connection with private consumption without durables, and a similar connection was found between housing debt and current consumption. According to this regression, housing debt is not positively related to the consumption of durables or semi-durables.

[27] Ribon and Kahn (2013) found that home prices positively affect consumption.

Table 4.5
OLS regression for private consumption and current consumption on housing and nonhousing debt

	Private consumption	Private consumption excluding durables
Housing debt	0.26***	0.3***
	(0.09)	(0.07)
Nonhousing debt	0.28***	0.24***
	(0.07)	(0.05)
Control for additional variables	Y	Y
R^2	0.43	0.5
Number of observations	69	69

p.value=0.1*,0.05**,0.01***
The table presents an OLS regression for the debt, quarterly rates of change of private consumption and private consumption excluding durables on the quarterly rate of change of housing debt and nonhousing debt, from the fourth quarter of 2000 through the end of 2017. Control variables: Bank of Israel interest rate (level), net income (quarterly rate of change), the public's assets portfolio (quartely rate of change, with a lag), index of goods imports from advanced economies (quarterly rate of change, with a lag), housing oprices (quartelry rate of change), and number of real estate transactions (quarterly rate of change).
SOURCE: Bank of Israel and based on Central Bureau of Statistics.

4. The shift of the business sector from bank debt to debt from institutional investors: the accessibility of credit for businesses

a. Introduction

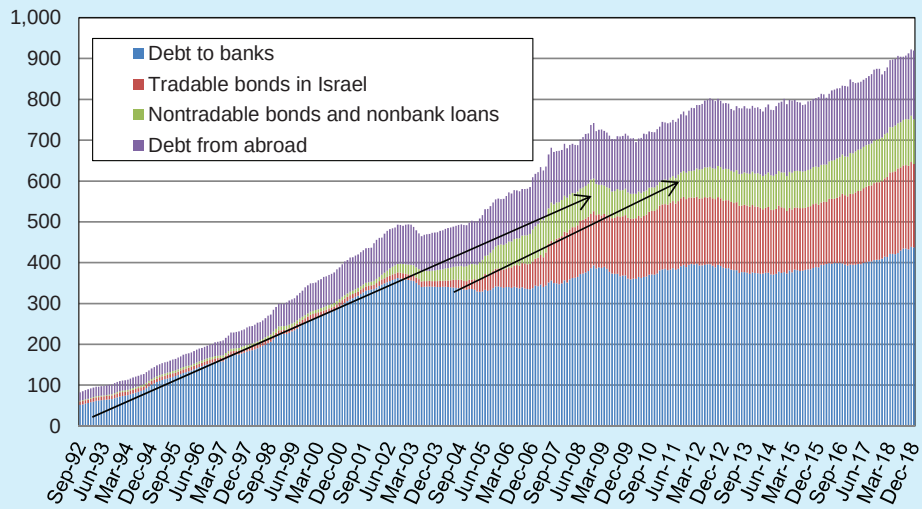
In the past decade, the credit market has been undergoing a structural change—an increased share of nonbank financing relative to bank financing. Part of the change is due to private loans from institutional investors.

As a result of the reforms during the last two decades, the public's savings have increasingly been channeled to institutional investors and therefore the proportion of assets held by financial institutions within the public's portfolio of assets rose from 31 percent in 2000 to 43 percent in 2018. Also during this period, the proportion of the institutional investors' assets that can be invested in the business sector in Israel grew significantly.[28] Accordingly, the composition of the business sector's sources of financing shifted from relying primarily on the banks to greater financing from the financial institutions and the Israeli capital market. At the beginning of the 2000s, debt to banks was 75 percent of the business sector's total financing while nonbank domestic debt (to financial institutions and other bond holders) was only about 5 percent.[29] In contrast, at the end of 2018 about 50 percent of the business sector's financing came from the banks and 35 percent from domestic nonbank sources, of which about 73 percent was by means of bonds (Figure 4.9). Apart from the increase in the proportion of nonbank credit, in recent years there has been an upward trend in

[28] At the same time, the requirement that the financial institutions invest in the government by means of earmarked bonds was cancelled and as a result not only did the funds held by the financial institutions grow but so did the amount invested in the capital market (for further details, see below).
[29] The remainder came from abroad.

the proportion of loans provided directly by institutional investors. At the beginning of 2010, the loans from institutional investors constituted 2 percent of the business sector's debt, while at the end of 2018 the figure had grown to 9 percent. It appears that these trends—the shift of the business sector's financing to domestic nonbank sources—will continue and are expected to intensify in coming years, as the supply of funds from the institutional investors grows. The shift in financing sources may have a major influence on Israel's macroeconomy, by affecting, among other things, competition in the supply of capital, the nature of shocks to the financial cycle, the possibility of collecting debts in situations of bankruptcy and the transmission of monetary policy (Laeven, 2014).

Figure 4.9
Business Sector Debt by Lender, 1992–2018 (NIS billion)



SOURCE: Bank of Israel.

The current analysis focuses on whether these developments—the shift from bank financing to nonbank financing and, within nonbank financing, the shift from financing by means of bonds to financing by means of private loans from the institutional investors—are contributing to the accessibility of credit for companies in Israel. Section b presents a survey of the literature; Section c describes the conditions in Israel that serve as the background for the shift to nonbank financing; Section d presents an international comparison of financing trends; Section e describes the characteristics of the companies that use the various types of debt; Section f presents the trends in the financing of public companies; Section g describes the shift of the institutional investors' investments from bonds to private loans; and Section h concludes.

b. Survey of the literature

(1) The identity of the credit supplier and the various debt instruments

The expansion of credit via nonbank financing enables the economy to recover relatively rapidly after crises.

According to the literature, an expansion of the supply of credit intermediaries leads to increased growth, regardless of the intermediary's identity (Levine, 2002; Chakraborty and Ray, 2006). In recent years, studies have been published which show that the expansion of credit by means of nonbank financing has a positive effect on growth, due to the access of companies to financing during periods of financial-economic crisis, when the banks reduce their level of credit (Langfield and Pagano, 2016; Allen, et al. 2012).

The banks, as credit intermediaries, have the ability and the incentive to monitor and gather information on companies and thus lessen the asymmetry of information they face. They rely on long-term relationships, access to private information and the ability to carry out effective negotiations with a company in bankruptcy (Diamond, 1984; Fama, 1985; Gertner and Scharfstein, 1991; and Booth et al., 2000). In contrast, Rajan (1992) claims that private loans have negative effects, since the ability of lenders to collect rents is liable to undermine the incentives of company executives.

In the case of financing by means of bonds in the capital market, the information on investments is public and accessible, and the investment is liquid and tradable and therefore involves lower costs to lenders. However, relying on public rather than private information reduces the ability to monitor companies and may adversely impact debt repayment. Therefore, only companies for which there is less asymmetry of information and those that have a greater incentive not to declare bankruptcy—usually companies with a high rating who wish to preserve it—will borrow in the capital market (Diamond, 1991). The decision to issue debt is also related to the companies' reasons for issuing debt in order to finance their operations. In this context, it is worth mentioning the pecking order theory (Myers and Majluf, 1984) according to which issuing has a cost (which includes the revelation of information) and therefore only large companies, that can afford the cost and which have a greater need for debt, will choose to issue in the capital market. Private loans from financial institutions have similar characteristics to loans from the banks, although financial institutions in Israel have less experience and suffer from greater information asymmetry than the banks (since they do not have access to current account information). As the financial institutions become more professional in the provision of loans, these differences are likely to diminish.

It is expected that debt provided by the banks and that provided by the institutional investors will have different characteristics, according to their relative advantages. These are based on their different abilities to underwrite credit and the different structures of their liabilities—mostly short-term liabilities in the case of the banks and long-term liabilities in the case of the institutional investors. These characteristics are expected to affect the companies' demand for the different types of debt.

(2) The breakdown of types of debt by type of company

Small and midsize companies and those with an intermediate credit rating finance their activity through the banks; large and strong companies finance their activity through the capital market.

With respect to the breakdown of companies according to the various types of debt, the question arises as to the quality of the companies. Beck, et al. (2008), Denis and Mihov (2003) and Gomes and Phillips (2012) present empirical evidence showing that in the US small and midsize companies with an intermediate credit rating finance their activity through the banks; large and resilient companies finance their activity through the capital market; and companies with the lowest ratings finance their activity by means of loans from non-bank institutions. Benzion et al. (2015) showed that in Israel, during the period 1999–2009 large and resilient public companies had a relatively high likelihood of issuing bonds, although companies that went bankrupt at the end of the period had a relatively higher proportion of bonds within their total debt. Rauh and Sufi (2010) point out that companies can obtain financing from a number of sources and show that most companies include debt provided by the banks within their debt. Companies with a low rating have a variety of sources, which include collateralized debt from the banks and secondary debt with weak collateral, namely bonds and nonbank loans.

In conclusion, according to the literature, all companies have access to bank financing, but only large and "resilient" companies also enjoy the possibility of obtaining debt from institutional investors by way of the capital market; "intermediate" companies finance their activity through bank loans; and the "weakest" companies also raise capital, from non-bank sources. In what follows, we will examine whether the growth trend of nonbank financing in Israel is similar to that abroad and the differences in the characteristics of the various types of debt (bank debt, bonds and private loans from institutional investors).

c. A survey of the structural changes in the credit market

Since the beginning of the 2000s, there have been a number of major changes in Israel that created the conditions for the expansion of nonbank credit, in view of a decline in debt provided by the banks and companies' changing demand for credit, which were discussed at the beginning of this chapter. These changes can be divided into two categories: the development of the Israeli capital market and the supply of credit from institutional investors.

(1) The development of the Israeli capital market

The main background conditions for the Israeli capital market's development are the continued decline of government debt and the decline in the percentage of bonds earmarked for institutional investors.

Up until 2004, the Israeli bond market was of almost negligible size. At the beginning of 2004, financing by way of bonds accounted for only 3 percent of the business sector's financing; between 2004 and 2009 the supply (and demand) for tradable and nontradable bonds in Israel grew significantly, eventually accounting for 22 percent of the business sector's financing (Figure 4.9). The background conditions, which are described below, include the base for development of the capital market and the shift to non-bank financing.

The diminished need for government financing and the broadening of investment by institutional investors. The decrease in the government's financing needs was the result of the long-term reduction in the government debt and the reduction in the proportion of earmarked bonds[30] issued to institutional investors, particularly the new and old pension funds, to 30 percent, as part of a gradual process that began in 2004. Graham et al. (2013) demonstrated a correlation between a decrease in government debt and an increase in companies' leverage. The reduction of earmarked bonds allowed the financial institutions to use their funds for investment that is not primarily in the government of Israel.

The sale of the provident funds from the banks to institutional investors. In 2005, the recommendations of the Bachar Committee were approved by the Knesset. The Committee's goal was to prevent conflicts of interest in the provision of credit by the banking system and to reduce concentration in the credit market. The main outcome of the Bachar reform was the sale of the provident funds that were under the control of the banks to insurance and pension companies or other institutional investors. This step transferred credit resources from the management of the banks to that of the institutional investors.

(2) The supply of credit from the institutional investors

The main background conditions for the increase in supply of credit from institutional investors are the expansion of the public's retirement savings and reforms whose purpose is to lead to improved quality of such entities' investments.

The expansion of the public's savings (Figure 4.10): The assets of institutional investors began to grow in 2004, due to the closure of government and army pay-as-you-go pensions to new participants, the imposition of a compulsory pension for employees in 2008, the gradual increasing of the percentage of salary contributions for pension savings through 2017, and the imposition of compulsory pensions for the self-employed in 2017. There were other trends (of a smaller scope) as well that also increased the funds available to institutional investors. Starting in 2016, the financial institutions' assets grew as a result of the public's non-pension saving, by way of provident funds for investment (which was facilitated by tax exemptions on deposits of up to NIS 70,000 annually). The assets of the provident funds for investment grew in 2017 also as a result of a government program entitled "Saving for every Child".[31] In addition, starting in 2012 the tax rate on capital gains[32] was gradually raised, which increased the profitability of leaving liquid funds[33] with the institutional investors.

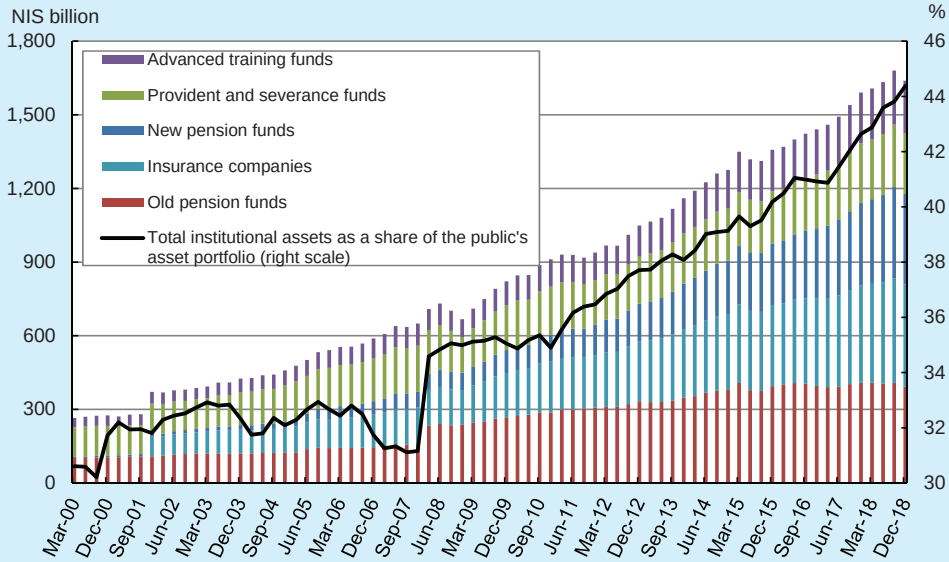
[30] Prior to 2000, a large part of the capital market and the assets of the financial institutions were invested in government bonds, and primarily non-tradable earmarked government bonds. These were bonds issued by the State at fixed yields in order to finance the government debt. The financial institutions were obligated to hold these bonds.

[31] The "Saving for Every Child" program invests NIS 50 per month for every child in Israel with the possibility for parents to increase the amount to NIS 100 per month. The parents have the option of investing the funds in a provident fund or in a bank. For children under the age of 15, the default is a provident fund.

[32] The tax rate on capital gains rose from 20 percent in 2012 to 25 percent at the beginning of 2016.

[33] Funds that have been deposited for a period of more than 6 years in an advanced training fund and funds that have been deposited for a period of over 15 years before 2008 in provident funds.

Figure 4.10
Total Assets Managed by Insitutional Investors, by Entity, 2000–18



SOURCE: Bank of Israel.

Total assets of the financial institutions grew by 22 percent from 2013 to 2017, a period in which business output grew by only 19 percent and deposits and cash held with the banks decreased by 2 percent. The supply of credit from the institutional investors is expected to continue growing in coming years due to the growth of pension assets (into which net deposits are expected to be positive until 2050[34]) and the increase in provident fund assets.

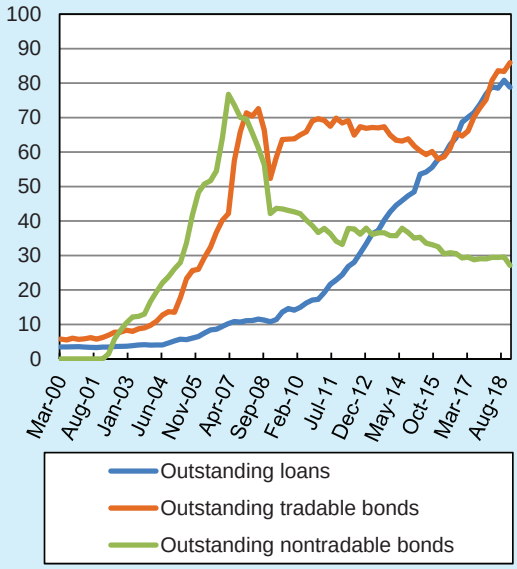
The Hodek and Goldschmidt committees.[35] With the expansion of the financing of companies by the institutional investors and following the economic crisis of 2008, a number of concerns arose regarding the manner of investment by the institutional investors. These led to the establishment of two committees that were meant to improve the quality of the investments. The Hodek Committee, whose recommendations were implemented in 2010, stressed the need for analysis before purchasing bonds and the need to establish contractual covenants and financial standards in the purchase of corporate bonds. After the conclusions went into effect, corporate bond issues declined and during the first three years, companies did not issue new corporate bonds, but rather primarily expanded existing series (Figure 4.11; for further details, see the box on corporate financing in the Financial Stability Report for the first half of 2014). After the implementation of the Hodek Committee's recommendations, there was an

[34] See "Appropriate Pension Saving – Report of the Working Group to Increase Pension Saving", 2015.

[35] See the "Report of the Committee to Set Parameters for Examining Financial Institutions that Provide Credit by means of Purchasing non-Government Bonds" – the Hodek Committee; and "Report of the Committee to Examine the Investments of the Financial Institutions in Private Loans" - the Goldschmidt Committee.

increase in private loans provided by the institutional investors. The changes in the characteristics of their investments also took place amidst public and media discourse on debt restructuring and therefore it is not possible to disentangle the desire of companies to avoid negative media attention from the effect of the Hodek Committee's recommendations. The Goldschmidt Committee, whose recommendations were implemented in 2015, looked at syndicated loans[36] and private loans and recommended, among other things, that institutional investors be required to determine a rating for private loans that they provide (an internal rating) and to report it. The establishment of rules and regulatory restrictions for the investments of institutional investors has an effect on their supply of credit.

Figure 4.11
Outstanding Credit to the Business Sector from Institutional Investors, by Instrument, 2000–18 (NIS billion)



SOURCE: Bank of Israel.

d. An international comparison

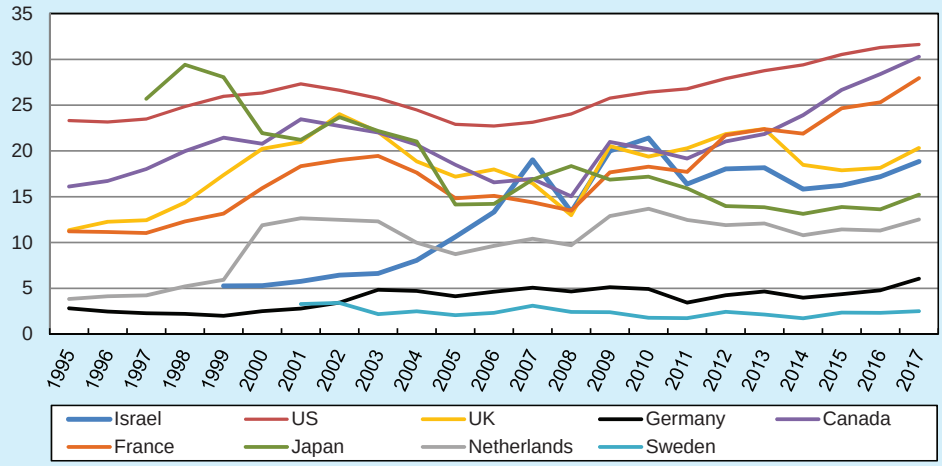
The percentage of financing via bonds out of total debt is not anomalous in international comparison, but the share of private loans is high in such a comparison.

The background conditions and structural change in Israel led to a change in the debt mix of companies, and the resulting trends differed from those in other countries during the same period. From 2000 to 2007, the proportion of companies' financing by means of bonds[37] grew at a much higher rate than in other countries. (Figure 4.12). This growth was accompanied by a drop in the banks' credit interest rate, which signaled an increase in the supply of credit to businesses (Figure 4.8). In contrast, in Europe, bank assets as a share of GDP and the value of bonds issued by the business sector grew only moderately during this period (Langfield and Pagano, 2016). Subsequent to 2010, the growth in the proportion of bond financing within total credit to the business sector slowed and as a result, this statistic was higher in Canada, France and UK than in Israel.

[36] Cooperation between a number of credit intermediaries in the provision of loans, usually by means of an organizing bank.

[37] In many countries, a significant proportion of corporate bonds are held by the banks; in Israel, the proportion is negligible.

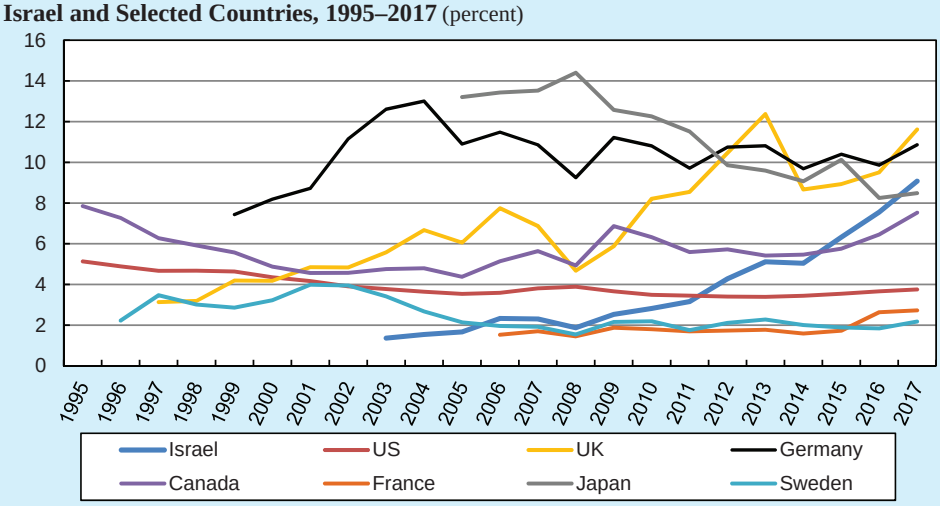
Figure 4.12
Bonds (Tradable and Nontradable) of the Business Sector as a Share[a] of GDP, Israel and Selected Countries, 1995–2017 (percent)



[a] In terms of market value. The trend regarding Israel remains when calculating according to outstanding bonds at adjusted value (capital registered for trading plus indexation and interest differentials not yet paid).
SOURCE: BIS.

An examination of the trend in the provision of private loans by the institutional investors[38]—to the business and household sector (Figure 4.13)—shows that the proportion of this financing as a percentage of GDP is higher in Israel than in other countries and in recent years has risen sharply. When accounting for the fact that in Israel most of the loans are provided to the business sector—which is not necessarily the case in other countries—Israel's unique situation becomes even more pronounced.

Figure 4.13
Total Direct Loans[a] by Insurance Companies and Pension Funds as a Share of GDP, Israel and Selected Countries, 1995–2017 (percent)



[a] Total loans to businesses and households, including nondomestic loans.
SOURCE: OECD.

e. Debt characteristics

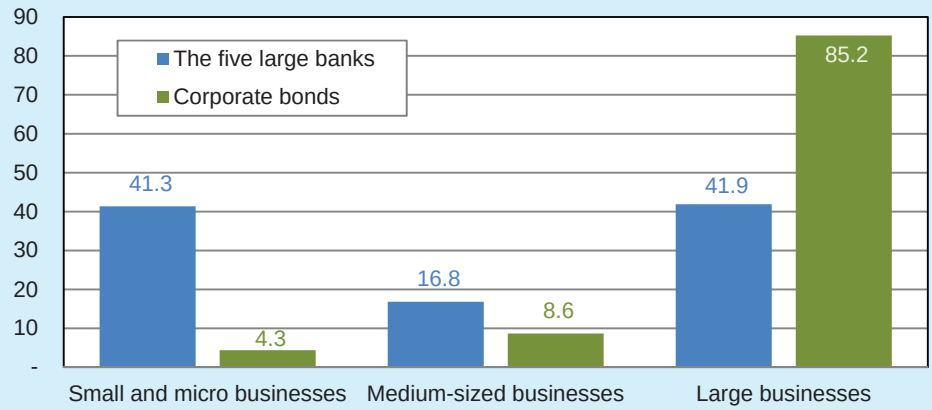
Taking into consideration the changes in the supply of financing in the economy, there may be differences between the companies that finance their activity by means of the various sources—bank loans, bonds issued to institutional investors and loans from institutional investors. In what follows, we will examine the differences in the characteristics of the companies with respect to the supply of credit available to them.

(1) Characteristics of bank debt

Access to bank credit is available to companies of different sizes.

The breakdown of bank credit provided by the five largest banks according to size of borrower during the third quarter of 2018 shows that currently 58 percent is provided to midsize, small and micro businesses, or in other words, a diversity of companies (Figure 4.14).[39] The breakdown according to size of business is consistent with the literature and shows that bank credit is available to companies of various sizes.

Figure 4.14
Rate of Outstanding Credit[a] by Company Size[b] (Nonfinancial Companies, Excluding Investment Companies and Foreign Companies) 2018:Q3 (percent)



[a] The distribution of company size in loans by institutional investors is not shown because manual data collection did not allow us to reach an appropriate level of detail.
[b] Business size is determined by the Banking Supervision Department's supervisory operation sectors. In bonds, size is determined only according to the criteria of sales turnover: small business - sales turnover of up to NIS 50 million; medium - between NIS 50 and 250 million; large - above NIS 250 million. Therefore, there may be companies classified as small in the area of bonds and large by the banks.
SOURCE: Banking Supervision Department reports and Bank of Israel data.

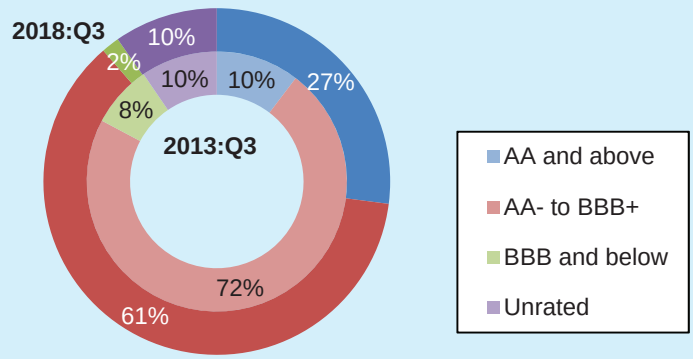
[39] This statistic has been reported since the first quarter of 2015 and is not retroactively revised; nonetheless, it is stable during the entire period.

(2) Characteristics of bonds[40]

Bond financing is more accessible to large companies with high ratings, and it appears that bond quality increased in recent years.

As of the third quarter of 2018, tradable bonds of Israeli companies in the business sector for the most part were those of large businesses (Figure 4.14). The high proportion of large businesses that issued bonds during the period supports the claim found in the literature that only large and resilient companies raise debt capital through the capital market (due to the supply of the institutional investors or the demand by companies). The assumption that financing by means of bonds is primarily accessible to strong companies is also in line with the analysis of domestic bond ratings.[41] The proportion of bonds that are investment grade or better was 88 percent in the third quarter of 2018 (Figure 4.15) and company ratings have risen relative to the third quarter of 2013[42], which is mainly due to the proportion of bonds rated AA or higher. The picture remains the same when investment and holding companies are excluded. The rise in ratings occurred about five years after the financial crisis and following the bankruptcy of several borrowers, which perhaps led to the lowering of ratings for companies as a whole. Thus, the increase in ratings perhaps points to an improvement

Figure 4.15
Corporate Bonds (Nonfinancial Companies Excluding Foreign Companies), 2013:Q3 and 2018:Q3



SOURCE: Bank of Israel.

[40] Total debt also includes convertible bonds, which are considered a financial instrument not directly comparable in terms of substitutability to regular bonds or private loans. However, its proportion is negligible (on average less than 1 percent) and therefore it does not materially change the trend reflected by the analysis and the conclusions drawn from it.

[41] Bonds in Israel are rated according to the Israeli rating system rather than the international one and therefore the result is biased upward.

[42] A figure that is comparable to the loan data of the institutional investors, for which we have figures only for two points in time—the third quarters of 2013 and 2018. The year 2013 is also relevant from the viewpoint of the bond portfolio prior to the Hodek Committee. This is because it took several years for the committee's recommendation to have their full effect on bonds. During the initial years, companies did not change the characteristics of their bonds and continued to issue the old series (see the box in the Financial Stability Report for the first half of 2016).

in the quality of corporate bonds held by the institutional investors. Similarly, the proportion of bonds backed by collateral rose during this period and at the end of the third quarter of 2018 stood at 26 percent (28 percent without investment and holding companies).

(3) The characteristics of private loans provided by the institutional investors[43]

Loans from institutional investors were provided this year at investment grade and higher, similar to bonds during the year. This composition of loans has been stable for several years.

An analysis of the institutional investors' portfolio of loans showed that out of the NIS 62 billion of loans they held in the third quarter of 2018, 87 percent were investment grade and higher, as in the case of the bond mix for that period (Figure 4.16). The rating mix of the loans has remained unchanged over time. Forty-seven percent of the loans from the institutional investors were provided through syndication and therefore the process of underwriting the loan is in general not directly the responsibility of the institutional investor but is usually that of a bank, which also provides part of the loan. Ninety-five percent of syndicated loans are investment grade or higher.

The proportion of loans with collateral is very high and rose from 89 percent in 2013 to 94 percent in 2018. The proportion of loans with collateral is significantly higher than the proportion of bonds with collateral throughout the period.

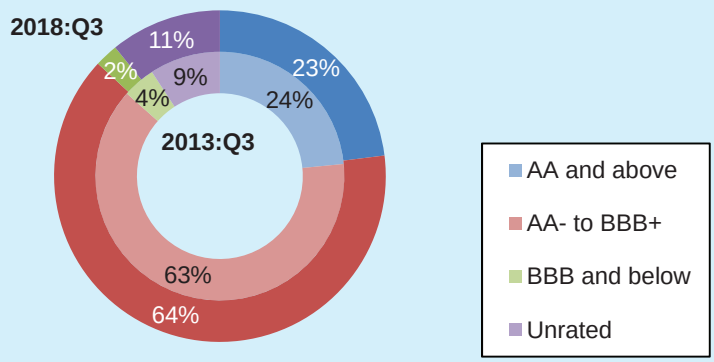
Private loans from institutional investors are generally given to private companies, but most of those companies are related to large and/or public companies.

The information published on loans provided by the institutional investors usually does not allow for the identification of the borrowing company. For the third quarter of 2018, we have detailed data[44] for loans in the amount of NIS 22 billion. Of the loans for which we have information, 56 percent were not part of a syndication deal and of that, 62 percent were provided to private companies that have not issued shares or bonds. With respect to private companies that received direct loans that were not part of a syndication deal, we can identify about one-quarter of the companies and one-third of the value of the loans from within a list of about 885 large companies in the economy according to Dun & Bradstreet for 2016. With respect to the companies that could not be identified according to Dun & Bradstreet, it can be seen from their names that most of the loans were provided to infrastructure companies, and in particular renewable energy, many of the loans are to the subsidiaries or conduit companies of public companies and that loans were provided to public companies or projects (including municipalities), as well as to the real estate industry.

[43] The loans provided by the institutional investors were analyzed by the manual gathering of data for loans that were provided during the third quarters of 2013 and 2018. Account was taken of direct loans to Israelis that were not provided to pension fund members, as mortgages or based on a vehicle as collateral. This constitutes about 64.4 percent of the institutional investors' portfolio of loans. The data for 2018 were taken from the ten largest institutional investors in the market, which account for 95 percent of the total loans of all institutional investors.

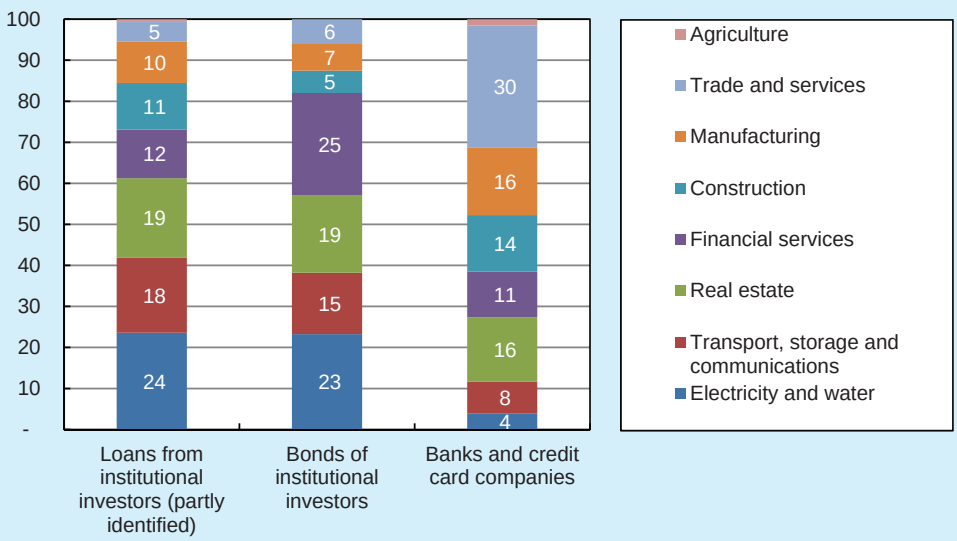
[44] Some of the institutional investors reported the corporation number for each loan and even the name of the borrowing company, which made it possible for us to gather information on them. Of the ten institutional investors we examined, we managed to get information on 4–95 percent, which relates to specific funds/insurance policies. For five of them, we gathered information on 60–93 percent of the corporation's total loans and 72 percent of the loans for a specific fund in the sixth corporation. Thus, a high proportion of loans was identified for the funds/insurance policies that were identified.

Figure 4.16
Ratings of Loans from Institutional Investors, 2013:Q3 and 2018:Q3



SOURCE: Based on reports by the institutional investors at the individual asset level.

Figure 4.17
Distribution of Debt by Industry, Loans from Institutional Investors, Bonds, and Bank Loans, 2018:Q3 (percent)



SOURCE: Bank of Israel, published financial statements, and reports by the institutional investors at the individual asset level.

A large percentage of institutional investors' private loans are extended for financing infrastructure projects.

When examining the distribution of loans provided by identified institutional investors (NIS 18 billion)[45] by industry, in comparison to the distribution of bond debt and bank debt by industry, it can be seen that the breakdown of the loans by industry is more similar to that of bonds, though it has a higher exposure rate to electricity and water, transportation, warehousing and communication and construction, which are for the most part related to infrastructure (Figure 4.17). The high proportion of loans provided for infrastructure can be explained by the phenomenon of the high level of infrastructure investment in the economy in recent years, together with the lack of a parallel increase in the debt of infrastructure-related industries to the banks and in the form of bonds. It appears therefore that the investment in infrastructure is financed largely by loans from the financial institutions.

f. Public companies

The public companies (which issue shares, bonds or both) are the only companies that enjoy access to all types of debt, namely bank loans, bonds and loans from the institutional investors. An analysis of the financial reports of the public companies reveals a different trend than that observed for the debt of the business sector as a whole. Thus, starting from 2010 there is a moderation in the use of bonds to finance operations by the entire sector (Figure 4.12) while an analysis of the public corporations' liabilities, according to their financial statements,[46] indicates an upward trend in the proportion of financing through tradable bonds (Figure 4.18). Of particular interest is the drop in the proportion of financing by means of private bonds and nonbank credit since 2014, in parallel to the increase in the supply of loans from the institutional investors during this period (Figure 4.13).

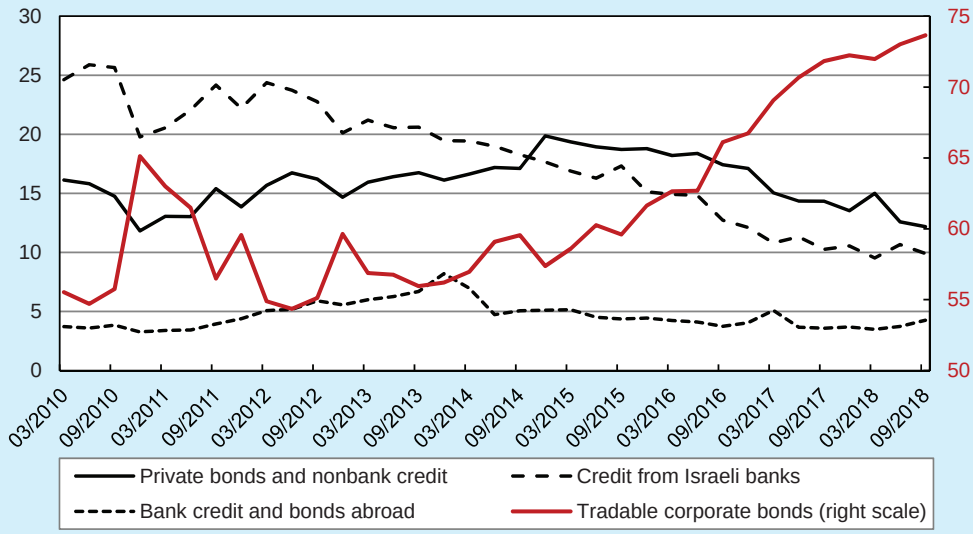
The increase in the proportion of financing by means of bonds during the period is also an indication that most of the loans provided by institutional investors were not to public companies but rather to private ones (or private subsidiaries/conduit companies). The advantages are apparently the lower cost of issuing bonds for companies that have issued in the past and that are already obligated to report; liquidity,

[45] Of the NIS 22 billion lent by the institutional investors, only NIS 18 billion can be identified according to the Central Bureau of Statistics industry classification.

[46] The report on liabilities by maturity date is published by each company together with its quarterly financial statement. In the balance sheet, the liabilities are usually presented on a cost basis adjusted according to the effective rate of interest (according to the rate of interest on the date of issue) while the report on liabilities presents in nominal value, without taking into account the time value of the money. By definition, there is a gap between these two presentations; however, it is not significant in order to understand the trends and breakdown of the liabilities according to lender. We compared the total adjusted value of the tradable bonds to the total bonds held by the public (less the gross payment of interest) according to the report on liabilities. The difference between them is on the scale of about 3 percent and it is reasonable to assume that it is primarily the result of the accrued interest within the adjusted value. It is also possible that associated entities (parent companies, a controlling shareholder or subsidiaries) held some proportion of tradable bonds, which are not considered to be bonds held by the public; however, this is apparently a negligible amount.

as a result of tradability; and low pricing of the debt, which is also determined by the demand by mutual funds and the public.

Figure 4.18
Liabilities of Public Companies (as a Share of Total Credit in the Solo Report), by Lender, 2010:Q1–2018:Q3 (percent)



SOURCE: Published financial statements.

g. Holdings of the institutional investors

Institutional investors view bonds and loans as partial substitutes.

An examination of the companies that finance by means of bonds versus companies that finance by means of private loans shows many similarities between the two groups (primarily in size and in rating), although there are also differences. Thus, public companies borrow by means of bonds while private ones use direct loans. Similarly, there are differences according to the breakdown by industry. The question therefore arises as to whether the institutional investors view the two types of debt, namely loans and bonds, as substitutes. An examination of the investment portfolio of the institutional investors over time yields a negative and statistically significant regression coefficient[47] of about 0.35 between the proportion of loans in the fund's investment portfolio and the proportion of investment in Israeli bonds. The coefficient remains at the same magnitude even if control variables are added for years (2009–17) and for the specific fund. Thus, institutional investors indeed view the two types of debt, at least in part, as substitutes. Therefore, in view of the growth in private loans, the institutional investors appear to be shifting their investments from bonds to private loans.

[47] At the 1 percent level of confidence.

One of the explanations for this shift is that the two types of debt are similar and the greater preference for loans stems from the desire of companies to avoid the costs of issuing bonds, which are higher than for direct loans. Therefore, public companies that could obtain financing by means of bonds, set up private conduit companies in order to benefit from the advantages implicit in loans while reducing the costs stemming from the requirements imposed on public companies. It is possible that the decline in the number of public companies in recent years is also the result of this motive. However, among the loans for which we have detailed information, we identified 61 public companies, whether they are currently public or were in the past, that received loans from the institutional investors; of these only 8 stopped issuing bonds after 2010 and perhaps became private companies. Furthermore, there was an increase in the financing of public companies by means of bonds, which in fact points to the advantage of this type of financing for them. It does not appear therefore that this is a full explanation of the phenomenon.

A second reason for the shift is that institutional investors are reducing their exposure to corporate bonds, as they prefer to extend loans. This is perhaps because the loans are apparently extended mainly for long-term infrastructure projects or because of their excess return due to the illiquidity premium. The decline in the proportion of investment in bonds, which is accompanied by an increase in the proportion of investment in loans, may be the result of a general desire on the part of the institutional investors to invest less in bonds.[48] This may be because the expansion of investment in bonds will bring about an increase in the leverage of the companies or the solicitation of relatively risky companies, which is not in alignment with the institutional investors' risk aversion (and particularly after the bankruptcies and their media coverage in 2009 and the Hodek Committee recommendations). It should be mentioned that there is a decline in the proportion of bonds in the institutional investors' total assets, since alongside the growth in the financial institutions assets the value of their investments have also increased. It is also possible that a greater expansion of credit is not possible in view of the overall constraint on the demand of the large companies in Israel for debt, due to the industry breakdown of the companies (which was described at the beginning of this chapter). The decline in the proportion of bonds may also be the result of reduced demand for debt among public companies, which have begun to finance their activity by establishing private companies.

The shift to loans derives apparently from the advantage of investment in private loans together with the lack of institutional investors' desire to expand their bond exposure and limited demand for credit from the large companies in Israel.

h. Conclusion

The expansion of nonbank financing in Israel since the 2000s is evidence of a structural change that is significant in magnitude even relative to the global trend. In addition, there has been a sharp increase in private loans provided to companies by the institutional investors.

[48] Together with the shift to investment in foreign assets. The proportion of investment in foreign assets has been characterized by an upward trend in recent years, and at the end of 2018 it was about 19 percent of the financial institutions' assets.

It was found that, as described in the literature, bank financing is provided to a range of companies while nonbank financing by means of bonds is primarily used by large and high-rated companies. The public companies, which benefit from access to all types of debt, choose to borrow by means of bonds. This choice is evidence of the advantage of this type of debt for them, which is apparently the result of the pricing and tradability of bonds.

In contrast to what was found in the past in the US, private loans provided by institutional investors in Israel have a high rating and are provided primarily to private companies. Nonetheless, it appears that a large proportion of the companies that obtain financing from the institutional investors are connected to large companies in the economy and to public companies, and that many of them use the financing for infrastructure projects. The shift of the institutional investors to providing private loans broadens the types of companies and projects that receive financing from them. A strong, negative and statistically significant relationship of 0.35 was found between the private loans provided by the institutional investors and their investment in corporate bonds in Israel, which indicates a shift between the two types of debt. The shift to loans is apparently due to the advantages of investing in them, together with the desire of the institutional investors to avoid expanding their exposure to bonds and the limited demand for credit among the large companies in Israel.

The entry of the institutional investors into the corporate bond market led to an expansion of credit and greater access to credit for the large companies in the economy, and according to the professional literature, this will result in relatively rapid recoveries of the economy following an economic crisis. In contrast, it does not appear that the shift of the financial institutions to investment through private loans has led to an increase in the access to credit for companies as a whole, since they are provided mainly to large companies in the economy or to companies connected to large and public companies. The challenge to increase access to credit for small and midsize businesses therefore remains unresolved. The ability of the financial institutions to provide credit to small and midsize businesses directly is limited, due to the operational and collection costs involved, and due to the lack of a developed securitization market that would contribute to the expansion of credit within the domain of the banks. Nonetheless, by allowing regulated credit intermediaries to issue bonds in 2015, the institutional investors have the option of investing in credit to small and midsize businesses also indirectly, such that the regulated intermediaries issue bonds to them and then lend the money they raised to smaller businesses. Indeed, in recent years, and this year in particular, we are seeing an increase in issues by the regulated credit intermediaries (most of which are issued directly to the institutional investors) and in the quantity of credit provided by the regulated credit intermediaries to the business sector.[49] The increase in credit provided by the regulated credit intermediaries is also evidence of the demand for credit among small and midsize companies. The

[49] Recall that we are currently viewing only a partial picture of the credit provided by regulated credit intermediaries.

government is also working to increase the access to credit from the institutional investors for small and midsize companies, by means of two investment funds that were established in 2016. The State provides 25 percent of the total investment in these funds and has the status of an "inferior investor", which raises the return for the institutional investors and reduces their losses. These funds have raised about NIS 900 million, of which about NIS 350 has been invested in small and midsize businesses. In addition, the State has declared that it would provide a grant to regulated credit intermediaries whose total credit to small and midsize businesses reaches NIS 500 million.

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Box 4.1

Financial literacy and digital interfaces in the banking system

Households need to make decisions in numerous financial areas—including managing bank accounts, taking out loans, purchasing insurance, and managing savings and retirement funds. In any such area, they have to choose the financial intermediary that will provide the service, the product that is appropriate for them, the level of risk and the liquidity level. The entry of regulated credit intermediaries[1] makes households' decision-making process more complicated—first, they have to choose a product from among a wider range of intermediaries and products; second, the intermediaries approach them directly and encourage them to take on more financial activities. Households' ability to take advantage of the growth of the range of financial intermediaries and the benefits of competition depend on their access and understanding of the area, meaning their financial literacy. Recent years have seen a transfer of responsibility from the government and employers to households with regard to savings, and in particular the choice of pension savings. This transfer of responsibility increases the importance of households' financial decisions, as they can have a dramatic impact on their income throughout the lifecycle, and particularly after retirement.

Objective financial literacy—meaning, the actual level of financial knowledge—is related to making financial decisions. Objective financial literacy is found in the literature to have an impact on proper decision making in the areas of pension planning and savings, management of personal loans, capital market activity, the choice of mutual funds that charge reduced management fees, and even accumulating and managing equity. The literature also finds that objective financial literacy is correlated with characteristics of socioeconomic status, reflected in education and wealth, as well as with ethnicity and gender.[2]

The differences in the public's level of objective financial literacy together with the correlation with socioeconomic characteristics create differences in decision making by the public, which can expand inequality. Regulation can assist households with complex financial decisions by adopting measures that range from 1) paternalism, in which the state takes on itself the full range of decision making, and thus the level of objective financial literacy should have no effect. For example, consumer regulation can establish an automatic default, such as the mandatory pension saving and the reduced fee track in banks; to 2) increasing the financial literacy of the public, in particular weaker population groups, in order to allow correct financial decision making while leaving the decision making process to the public. Numerous papers have found that people's financial decision making improves if they participated in financial educational programs at work, at educational institutions, or other frameworks.[3] In recent years, the Banking Supervision Department has adopted measures to increase the public's financial literacy. The main steps were in the education system (ninth grade), for households via bank branches, and in implementing financial-banking studies among soldiers in intelligence units.

[1] Financial intermediaries that are not banks or institutional investors. For example, financial intermediaries that provide loans to households or companies that provide credit directly, such as P2P companies. For an expanded discussion, see Box 4.2 in the Bank of Israel Annual Report for 2017.

[2] For a survey see Lusardi and Mitchell (2015).

[3] For a survey, see Lusardi and Mitchell (2015).

The importance of financial literacy increases with the shift of financial information and decision-making to digital infrastructure. When using digital infrastructure, such as a website or application, there are no intermediaries or consultants, and the users have to be active and understand the information themselves.

Along the regulation spectrum is the possibility to manage regulatory campaigns, with the goal of encouraging the public to take simple and clear actions. The thought behind this is that if the action is simple enough, the level of financial literacy should not have an effect. This is paternalistic regulation that "digests" the information for the public and guides it directly on how to act. Actually taking the step itself remains with the public.

This box will examine the connection between financial literacy and households' response to the Banking Supervision Department's "Money Mountain 2" regulation, as a test case for digital regulation that has a clear goal—prompting the public to go to a website to find inactive bank accounts. The "Money Mountain 2" regulation provides households with access to an Internet site in order to search for inactive accounts in the banking system, and it was publicized in a marketing campaign on the radio and social networks with the "Money Mountain 2" website going live in September 2016.[4] The campaign's subject was very simple—the existence of bank accounts (yours or of relatives, including deceased relatives). The action was also simple: enter the website and continue the clarification vis-à-vis the bank. The access was also simple: a designated website. The regulation was relevant to anyone for whom a bank account or deposit were possibly opened in the past, or for someone whose family members (particularly deceased ones) might have a lost account. Accordingly, we would not have expected that objective financial literacy would have an impact on the success of the campaign. Due to the "Money Mountain 2" campaign, there was a decline of approximately NIS 3.8 billion out of NIS 9 billion in balances in inactive accounts and deposits in the banking system. That same year, 2.5 million people entered the "Money Mountain 2" website, of which 600,000 received positive results indicating that they have inactive accounts.[5]

The research method: Internet survey

In January 2018, an online survey[6] was conducted among 1,500 people, representing Israel's population segmented by districts, gender, and family status. We clarify that there is a bias in the sample, deriving from the survey being online—the population surveyed was younger than the general population and had higher average income. The characteristics of the sample population bias the estimates upward, and apparently in the general population financial literacy and their response to the regulation are lower. Nonetheless, it is important to examine the conduct of this population, with the relatively high financial literacy, as the digital financial infrastructure is designated to that population.

[4] The "Money Mountain 2" campaign followed the "Money Mountain 1" campaign, which was presented as a service to the public in 2013 and makes it possible to search for inactive pension accounts in provident funds, pension funds, and insurance policies. Both Money Mountain campaigns are presented on the same website.

[5] Information from the Banking Supervision Department.

[6] The survey was carried out by the Rushinek firm.

Financial literacy

The literature indicates that not only **objective financial literacy**—people's level of financial information in and of itself—impacts on financial conduct; but that **subjective financial literacy,** meaning the level of confidence that people have about their knowledge of financial topics, also has an effect on financial conduct. The literature finds that subjective financial literacy is correlated with socioeconomic characteristics, similar to objective financial literacy.[7] However, in contrast to objective financial literacy, subjective financial literacy that is not based on real knowledge is liable to lead to impaired decision making.[8] With that, the question arises of whether subjective financial literacy also has a positive impact on the response to the relatively simple regulation of "Money Mountain 2".

According to the findings of the survey we conducted for this box, 37 percent of the people asked knew the answer to the three general questions asked—about interest rates, inflation, and risk diversification[9]—and 45 percent knew the answer to two questions on bank accounts and fees.[10] Seventy-eight percent of those asked have general subjective financial literacy and 70 percent have subjective financial literacy regarding banking.[11] The correlation between the objective financial literacy and subjective financial literacy variables is 0.21, the correlation between general and banking objective financial literacy is 0.29, and the correlation between the two types of subjective financial literacy is 0.56.

In 2012, the Central Bureau of Statistics published a survey on financial literacy, based on a representative sample of 1,200 people above the age of 20.[12] Based on that survey, the financial awareness

[7] Subjective financial literacy, as defined here, is found to be influential in among other things the survey by Lusardi and Mitchell (2015). Primarily, it was found in the literature that women have low subjective financial literacy relative to their objective financial literacy, while men's subjective financial literacy is higher than their objective financial literacy.

[8] Barber and Odean (2001).

[9] The questions are:

1. Assume that you have a savings account at a bank with NIS 100, which returns (profit) of 2 percent per year. Assume that for 5 years you don't withdraw any money from this savings. According to what you know, how much money will you have after 5 years?
   More than NIS 102; Exactly NIS 102; Less than NIS 102; Don't know/unsure/depends.
2. Assume that you have a savings account at a bank on which you earn 1 percent (profit) per year, and assume that inflation is 2 percent. How much can you buy in a year's time, with the money that you have saved?
   In 1 year I will be able to buy more; in 1 year I will be able to buy exactly the same; in 1 year I will be able to buy less, Don't know/unsure/depends.
3. Is the following sentence correct/incorrect? Buying a share of one company yields a safer return (profit) than buying a mutual fund that invests in shares (correct/incorrect/don't know).

It has been proven that these questions allow the clear discerning of naïve responders and sophisticated responders, and that there is a high correlation between them and other financial literacy indicators.

[10] The questions were:

1. Is the following sentence correct/incorrect in your opinion: To withdraw/deposit money in an ATM is less expensive than to withdraw/deposit money through a teller at the bank. (correct/incorrect/don't know).
2. Is the following sentence correct/incorrect in your opinion: Today it is possible to invest in stocks directly through the bank (correct/incorrect/don't know).

[11] Survey takers with subjective financial literacy responded that they have much or very much (4 or 5 on a scale of 1 to 5) confidence in their financial literacy.

[12] Financial literacy survey: knowledge, views and conduct in financial issues, November 2012, Central Bureau of Statistics. The questions in the survey by the Central Bureau of Statistics are not identical to the format of the questions in the current survey.

of the population in Israel is lower than the international average. The Central Bureau of Statistics survey states that 59 percent of Israel's population understand how interest on a loan is calculated (compared with 76 percent in the current survey we conducted), 65 percent know the definition of the term "inflation" (compared with 50 percent in our sample), and 48 percent understand the term "diversification of risks" (compared with 45 percent in the current sample).

Households' response to the "Money Mountain 2" regulation

Out of the people questioned, 32 percent were aware of the campaign, meaning they had heard of it, 38 percent had entered the website[13], and 7 percent contacted the Bank as a result of entering the website, for further clarification regarding their inactive accounts. Out of those who had heard about the campaign, 76 percent entered the website, and out of those who entered the website, 10 percent found an inactive account, 32 percent found an inactive pension account, and 17 percent contacted the Bank for further clarification.

Logit[14] regressions are presented (Table 1), examining how indices of objective financial literacy[15] and subjective financial literacy explain the probability that individual was aware of the "Money Mountain" regulation or took action regarding that regulation. For control, the regression included personal variables of the respondents.[16] The regressions also control for use of digital means to carry out banking activities. The importance of awareness of the campaign is that even if we assume that a person knows for certain that he does not have an inactive account, and therefore does not enter the website, (even though there is essentially no cost to enter), he should know about the campaign. The two other dependent variables relate directly to the individuals' activity level and the success of the campaign: digital entry to the website or contacting the bank for further clarification on the inactive accounts (for one whose digital literacy is low or after inactive accounts have been found on the site).

Despite the simplicity of the campaign, the estimation results indicate that objective financial literacy is important in awareness of the campaign and in entering the "Money Mountain 2" website (Columns 1, 3), but literacy in the area of banking has a stronger correlation with the probability to be exposed to and to respond to policy. The subjective financial literacy in the area of banking is particularly important to the probability of contacting the bank for continued clarification (Columns 5, 6), when no a priori

[13] It appears that the high rate includes people who entered due to "Money Mountain 1" as well.

[14] The findings are similar when using an OLS or probit regression, and when running the regression with interaction between the objective literacy variable and the subjective literacy variable. When running a regression for contacting the bank for further clarification only on the population that heard of the campaign, the results are similar to what is presented in Table 1; however, when running the regression for entering the website only on the population that heard of the campaign, only the subjective financial literacy is statistically significant, in Column 3, and in the regression in Column 4 no variable is statistically significant. In order to deal with endogeneity, the questions on survey-takers' confidence regarding financial issues appeared at the beginning of the questionnaire and before the other questions. In the survey by Haran Rosen and Sade (2017), the questions on confidence were asked toward the end of the questionnaire, and as detailed below, the effects of subjective financial literacy in the two surveys are similar.

[15] The index is calculated (similar to how it is calculated in the literature) so that every question of objective financial literacy that was answered correctly grants the respondent a grade of 1, and the survey ranges from 0 to 3.

[16] Gender, family status, income, education, district of residence, ultra-Orthodox, Arab, immigrant from the former USSR, and age.

correlation was found between the level of literacy and the existence of an inactive account.[17] These findings strengthen previous findings, according to which objective and subjective economic literacy impact positively on the awareness of and active response to the "Money Mountain 1" campaign.[18] The lack of reference to subjective financial literacy likely also explains part of the contradictory findings in the literature regarding the impacts of increasing financial literacy on economic conduct.[19] The emphasis of objective financial literacy is important, but apparently does not suffice, and it must be accompanied by increased subjective financial literacy.

Table 1
Findings of a logit regression examining the effect of finaical literacy on the public's response to the "Money Mountain 2" campaign

	Heard about "Money Mountain 2"		Entered website of "Money Mountain 2"		Contacted the bank for further clarification on inactive accounts as a result of "Money Mountain"	
	(1)	(2)	(3)	(4)	(5)	(6)
Objective financial literacy, general	0.12*	0.07	0.14**	0.09	0.18	0.15
	(0.06)	(0.06)	(0.06)	(0.06)	(0.12)	(0.12)
Subjective financial literacy, general	0.67***	0.34*	0.81***	0.53***	0.65***	0.13
	(0.15)	(0.17)	(0.14)	(0.17)	(0.24)	(0.28)
Objective financial literacy, banking		0.23**		0.16*		0.13
		(0.09)		(0.09)		(0.18)
Subjective financial literacy, banking		0.52***		0.45***		0.83***
		(0.16)		(0.16)		(0.27)
Additional control variables	+	+	+	+	+	+
McFadden Pseudo R^2	0.19	0.2	0.21	0.22	0.19	0.2
Number of observations	1,367	1,367	1,367	1,367	1,367	1,367

p. value = 0.1*, 0.05**, 0.01***
SOURCE: Based on Rushinek survey data.

[17] The goal of looking at the whole population is to examine the activism of the general population in directly contacting the bank, including people who did not enter the website and contacted the bank directly for clarification. When running the regression only on those who found an inactive account upon entering the website, it was found that only subjective financial literacy in banking issues is statistically significant, and there is concern that the decline in significance derives from the size of the sample. In addition, the coefficients between the various literacies and finding inactive accounts on the website are lower than 0.1 and there is no a priori correlation between the level of literacy and the existence of an inactive account.

[18] Haran Rosen and Sade (2017).

[19] This may also be the explanation for mixed results that were found in research regarding the effect of plans to increase financial literacy, particularly in educational institutions.

Other than at the paternalistic extreme, in which the public does not have the ability or need to make decisions, regulators have to take financial literacy into account in any consumer regulation. The results of the analysis show that also in regulation that ostensibly is not supposed to depend on the level of the public's financial literacy, objective financial literacy has an effect. If the consumer regulation acts mainly with the objective of increasing transparency and disclosing financial information, it will only impact on those with high financial literacy, will not generate activism among the general public, and is liable to contribute to inequality. Therefore, regulators should act—in the various education systems and additional enrichment frameworks—to increase literacy in the specific areas in which the responsibility for making decisions is imposed on households (such as banking, pension, loans). The regulation should also focus on regulatory campaigns that act to increase individuals' sense of adjustment and confidence in the field (such as through providing information by humans).[20]

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[20] Haran Rosen and Sade (2018).