Chapter 4

The Private Sector's Financial Assets and Liabilities

- The private sector’s financial assets portfolio grew at a rate similar to the average in recent years and similar to the rate of growth in GDP. The low interest rate environment influenced the composition of the portfolio, so that in 2017, as in previous years, the share of cash, current accounts and short-term deposits increased.
- The liabilities of the nonfinancial private sector grew by a slow rate in 2017 relative to the previous year, primarily due to the decline in the rate of growth of business sector debt. The growth in household debt also moderated this year, particularly households’ nonhousing debt.
- New mortgage volume was slightly lower than last year, due to the decline in the number of transactions in the housing market. The interest rate on mortgages declined during the year, against the background of the decline in interest rates on government bonds.
- Slower growth in business sector debt was a result of the decrease in liabilities to abroad, which was partly due to the change in the exchange rate. However, the business sector's debt to households and to institutional investors grew at high rates, based on the high level of net bond issues and the continued growth in direct loans from institutional investors.
- The banks continued to increase credit to small and micro businesses, and their share in total credit to the business sector rose to 22 percent. As a result of the increase in risk, the interest rate on credit in this sector rose.
- This year, there were additional legislative measures aimed at increasing competition and supervision in the nonbank market and a law was passed that regulates the activity of online platforms for the provision of credit. The volume of credit provided by way of these platforms in Israel and worldwide is still very small. The online credit intermediaries have the advantage of low operating costs, but since they have only developed in recent years and have not yet had to deal with a complete business cycle, an increase in the interest rate will present a significant challenge to their activity.
- Institutional investors in Israel, which manage close to half of the asset portfolio, invest only a small proportion of their assets in venture capital, relative to institutional investors in other countries. The gap is a result of, among other things, the unique regulatory setup in Israel.

1. INTRODUCTION

This chapter analyzes the financial assets and liabilities of the private sector (households and the business sector) and of the financial intermediaries in the economy. In addition to their internal sources of financing (retained earnings), the business sector needs external financing for investment. One of the main ways in which savings by households become investments in the business sector is provision of credit. For example, the issue of bonds by a company will add to the liabilities of the business sector and the new bonds will be recorded as assets of households. Similarly, a deposit in a bank will be recorded as an asset of households and a liability of the bank. A bank loan to a company will be recorded as a liability of the business sector and as an asset of the bank. In an open economy such as Israel's, the business sector can obtain financing from domestic sources or foreign sources (capital inflow). Savings can also be used for investment abroad (capital outflow). A surplus in the current account, which has characterized the Israeli economy in recent years, is reflected in a deficit in the financial account, which implies a net outflow of capital.

The influence of the low interest rate environment can be seen in the composition of assets and liabilities of individuals and firms.

Since the financial crisis almost a decade ago, advanced economies have been characterized by a low (and even negative) central bank interest rate and low yields on government bonds, even in the intermediate and long terms. The effect of the low interest rate environment can be seen in the composition of assets and liabilities of individuals and companies. One of the most notable characteristics on the assets side has been the positive price effect on the assets portfolio of the increase in equity prices and the decline in bond yields, both in Israel and abroad. Furthermore, the low interest rate environment reduces the incentive to save in long-term deposits and therefore the share of cash and current accounts has risen and there has been a shift to short-term deposits at the expense of long-term ones. These two trends continued this year.

On the liabilities side, household debt has grown rapidly in recent years, including both housing and non-housing debt. The rate of growth in household debt in 2017 was somewhat slower than in the previous year, primarily in nonhousing credit, although it remained high at 5 percent.

The growth of business sector debt[1] this year was slow at only 1.5 percent, which is markedly lower than in the previous year. The year 2016 was an outlier and was characterized by a high rate of growth (5 percent) following the period since the financial crisis in which business sector debt grew very slowly. However, the reason for the slower rate of growth this year differs from that in the years prior to 2016 and is related to the reduction in the business sector's debt to abroad, a large part of which is a result of the appreciation of the shekel. The change in liabilities to other lenders this year indicates that business sector debt is growing at a rate similar to last year. In the capital market, there were large net bond issuances (issues less redemptions) while the business sector's debt to banks grew even faster this year than the average in previous years.

[1] Excluding banks and insurance companies.

In recent years, the share of small and micro businesses in total credit of the business sector has increased, as a result of the shift of bank credit from large companies to this sector. The trend continued this year, despite a moderate rise in the interest rate on credit to small and micro businesses, against the background of an increase of risk in this sector.

Since 2001, there has been a current account surplus, which implies net capital outflows (the investment by Israelis abroad exceeds that of foreign investors in Israel), and the trend continued this year. Due to the continuing capital outflows, Israel's inventory of assets abroad is larger than the inventory of its liabilities to abroad, and in particular the surplus of assets over liabilities has grown significantly in the past two years.

An increase in the global interest rate environment is expected to have a major effect on both global and domestic financial markets.

In 2017, there were increasing signs that the global interest rate environment is about to change. The US Federal Reserve began to gradually increase interest rates recently, against the background of a recovery in economic activity and an increase in inflation. Intermediate and long-term interest rates also rose in the US and the negative interest rate gap with Israel widened. Interest rates were raised in the UK and Canada as well. In the eurozone, the interest rate is still negative, however the ECB is expected to reduce the bond purchases that are part of its quantitative easing program. An increase in interest rates is expected to have a significant impact on the global and domestic markets, which at the moment enjoy very high liquidity. An increase in the interest rate will also affect the credit market, by bringing about an increase in interest rates on deposits and making loans more expensive.

2. THE FINANCIAL ASSETS OF THE PRIVATE SECTOR[2]

The financial assets portfolio includes the financial holdings of households and the business sector (financial and nonfinancial companies), while it does not include the assets of the government, the Bank of Israel, nonresidents or the banks. Part of the savings portfolio is managed by institutional investors on behalf of the public (hereinafter, the managed portfolio[3]) and the rest is held directly by the public.[4]

The growth in the asset portfolio this year was characterized by a sharp rise in net flows to the savings portfolio managed by institutional investors.

The financial assets portfolio grew by 5 percent in 2017, somewhat faster than last year. Since 2012, the portfolio of financial assets has grown at a high average rate of 6 percent. The growth in the assets portfolio this year was characterized by a jump

[2] For a detailed analysis of the changes in the public's portfolio of financial assets in 2017, see the Statistical Bulletin for 2017 which was published in March 2018 (in Hebrew) by the Department of Information and Statistics of the Bank of Israel.

[3] This definition includes the investments of institutional investors, i.e. provident funds and severance pay funds, advanced training funds, pension funds (veteran and new) and also life insurance plans managed by the insurance companies (not including their nostro portfolio, i.e. the portfolio that they manage for themselves).

[4] The definition includes the stock of financial assets, including cash and deposits, tradable and nontradable securities and index products, which the public (households and the business sector) holds directly or through portfolio managers or mutual funds.

Table 4.1

Public's gross financial assets portfolio[a]—distribution by asset type, 2007–17, end of period data

Period	Total portfolio	Cash and current accounts	Government bonds			Corporate bonds[b]	Equities[c] in Israel	Israeli residents' investments abroad[d]			Other[e]
			Deposits	*Makam*	Tradable	Nontradable			Deposits	Bonds	Equities	
	NIS billion	Distribution in percent										
2017	3,614.5	10.0	25.0	1.3	11.0	9.7	10.2	14.2	0.3	4.9	8.4	5.0
2016	3,441.0	9.5	25.7	1.5	11.2	9.6	9.8	14.5	0.6	5.3	7.9	4.5
2015	3,319.9	8.3	25.4	2.2	11.9	9.7	9.5	14.8	0.8	5.3	8.1	4.0
2014	3,182.3	6.2	25.9	3.0	12.5	9.8	9.7	15.5	0.7	5.2	8.4	3.2
2013	2,977.8	4.9	27.0	2.6	12.9	9.3	10.7	16.7	0.9	4.2	7.4	3.3
2012	2,731.8	4.6	28.9	2.6	13.1	9.4	11.5	14.9	1.1	4.4	6.4	3.1
2011	2,533.6	4.4	29.5	3.0	12.1	9.6	11.5	15.4	1.8	4.2	5.7	2.8
2010	2,563.6	4.3	25.8	2.7	12.0	8.7	11.5	21.4	2.2	3.2	5.6	2.6
2009	2,302.1	4.6	27.1	2.7	12.6	9.3	11.4	18.5	3.2	3.1	4.8	2.7
2008	1,882.6	4.0	33.0	3.5	13.9	11.2	9.8	11.6	3.9	3.1	3.3	2.7
2007	2,055.5	3.0	27.8	3.2	10.1	6.6	11.2	24.0	4.0	3.6	4.0	2.5

[a] "Public" does not include the government, the Bank of Israel, nonresidents' investments, commercial banks or mortgage banks.

[b] Includes convertible bonds.

[c] Includes warrants.

[d] Including investment in Israeli securities traded abroad, and excluding investment in Exchange Trade Notes on the Tel Aviv Stock Exchange that track indices abroad.

[e] From 2000, includes convertible bonds.

SOURCE: Bank of Israel.

in net flows to the portfolio managed by institutional investors while the portfolio directly held by the public grew only somewhat. The share of the portfolio managed by institutional investors within the asset portfolio is currently about 42 percent. The Compulsory Pension Law, alongside the tax system that encourages additional types of saving (in provident funds and advanced study funds), creates a situation in which managed savings are growing faster than direct savings.

The low interest rates reduce the incentive to save and therefore the proportion of cash and demand deposits within the asset portfolio rose and there was a shift to short-term deposits.

The low interest rate environment is affecting the composition of the asset portfolio by reducing the incentive to deposit in saving plans and long-term deposits, in favor of short-term deposits and cash, and is encouraging riskier investments as part of the "search for yield". One of the main changes in the composition of the financial assets portfolio in recent years has been the increasing share of cash and current accounts from 3 percent about a decade ago to 10 percent today. This is primarily the result of the increased share—currently 15 percent—of cash and current accounts in the public's directly held portfolio. There was also a shift to short-term unindexed deposits at the expense of long-term deposits and foreign currency deposits. In contrast, the component of *makam* (bills) has shrunk during the last three and a half years, from 3 percent to 1.5 percent. In the low interest environment that prevails today, the convenience of holding cash and current accounts is preferred to holding makam which involves the payment of fees.[5]

In recent years, the prices of financial assets have risen in Israel, and this had a significantly positive effect on the value of the asset portfolio.

The low interest rate environment, the high level of liquidity and the search for yield also supported the rise in equities prices (Figure 4.1) and the decline in bond yields in recent years. This was reflected in a significant positive price effect on the assets portfolio. Thus, about half of the increase in the value of the asset portfolio since 2012 can be attributed to the estimated price effect of the holding of equity and bonds (both government and corporate) during this period. This year as well, there was a positive price effect on the assets portfolio, primarily due to the increase in equity prices abroad (equity markets abroad performed exceptionally well but the strengthening of the shekel against the dollar partly offset the gains) and the decrease in spreads on corporate and government bonds in Israel. During the last two years, the stock market in Israel has lagged behind foreign markets and its effect on the portfolio was negative in 2016 and neutral in 2017.[6]

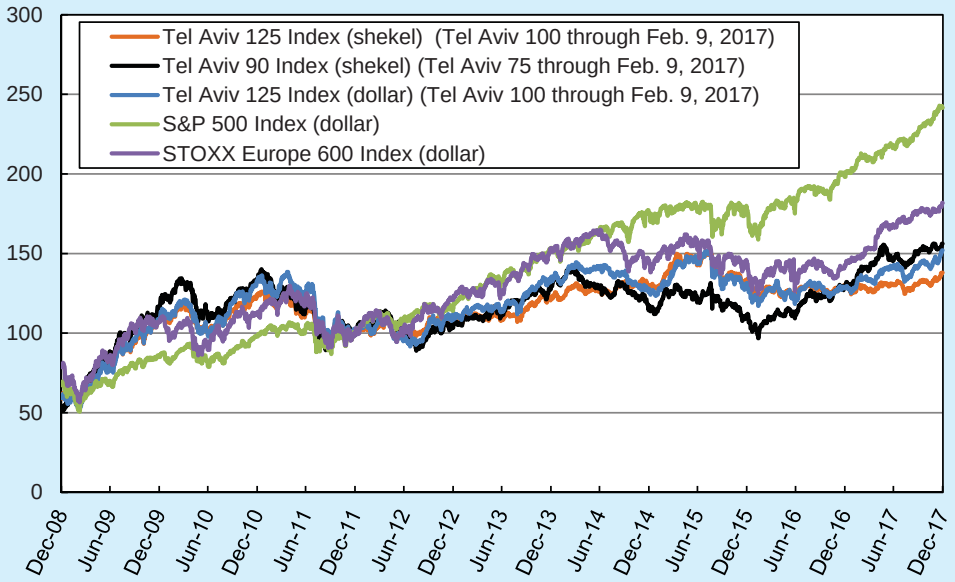
Net of the price effects in 2017, the public increased its investment in corporate bonds and stocks in Israel and to a lesser extent foreign corporate bonds and stocks, while reducing their investment in traded Israeli government bonds and foreign currency deposits.

The extent of exposure to Israeli corporate bonds in the overall assets portfolio has not changed during the last decade; however, in the background, institutional investors have reduced their exposure while in the portfolio directly held by the public

[5] In order to encourage competition for households' short term savings, the Banking Supervision Department canceled the securities management fee for *makam* and money market funds in 2012.

[6] The large-cap stock indexes in Israel were adversely affected by the decreases in the value of pharmaceutical companies. This effect on the asset portfolio is described in detail in Section 5 of this chapter.

Figure 4.1
Equity Indices in Israel and Abroad
Daily Data, 2009–17, Index 1.1.2012=100



SOURCE: Bank of Israel.

Institutional investors reduced their exposure to corporate bonds, while in the portfolio managed directly by the public this exposure has doubled since 2007.

the exposure has doubled since 2007. Currently, close to 60 percent of total traded bonds are held directly by the public, half of which is by means of mutual funds. In view of the low spreads and the increased probability of a decrease in bond prices as a result of interest rate increases abroad, the high share of holdings by the mutual funds may be reflected in a rapid drop in prices and a selloff when the trend reverses, as occurred in 2007–08 with the selloff of corporate bonds held by mutual funds and provident funds. It should be noted that according to the Financial Stability Report for the second half of 2017, there are signs of overpricing in the corporate bond market.[7]

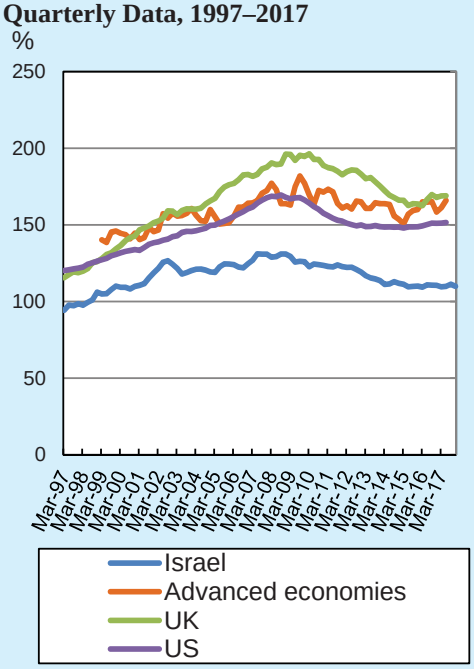
3. FINANCIAL LIABILITIES OF THE PRIVATE SECTOR

The decline in the rate of growth in private sector debt this year is the result of the slower growth in the debt of households and of the business sector.

In this section, the changes that occurred in the liabilities of the nonfinancial private sector, namely the liabilities of the business sector (not including banks and insurance companies) and of households, will be analyzed. The liabilities of the nonfinancial private sector totaled NIS 1.4 trillion at the end of 2017. About 60 percent of the private sector debt is that of the business sector and the remainder is that of households. The rate of growth in private sector debt was lower this year than in 2016 (2.9 percent versus 5.5 percent) and similar to that in 2014 and 2015. The decline in

[7] For further details, see the Financial Stability Report for the second half of 2017.

Figure 4.2
Nonfinancial Private Sector Debt to GDP Ratio, Israel and Selected Countries, Quarterly Data, 1997–2017



SOURCE: Based on BIS.

the rate of growth in the debt this year resulted from the slowing of growth of household and business sector debt, in contrast to their growth in the previous year, a decline that was particularly noticeable in business sector debt. Despite this decline, the ratio of total liabilities of the nonfinancial sector to GDP in Israel (about 110 percent at the end of 2017) has been stable in the last three years. This ratio is lower than the average for advanced economies (169 percent), which is due to the low level of household debt (relative to GDP) and also of business sector debt.

During the period 2008–15, private sector debt was characterized by a downward trend relative to GDP (from 130 percent to 110 percent), while during the last three years the ratio has been stable. In other advanced economies, the ratio of private sector debt to GDP, which fell following the financial crisis, has been characterized by a moderate upward trend in recent years.

a. The liabilities of households

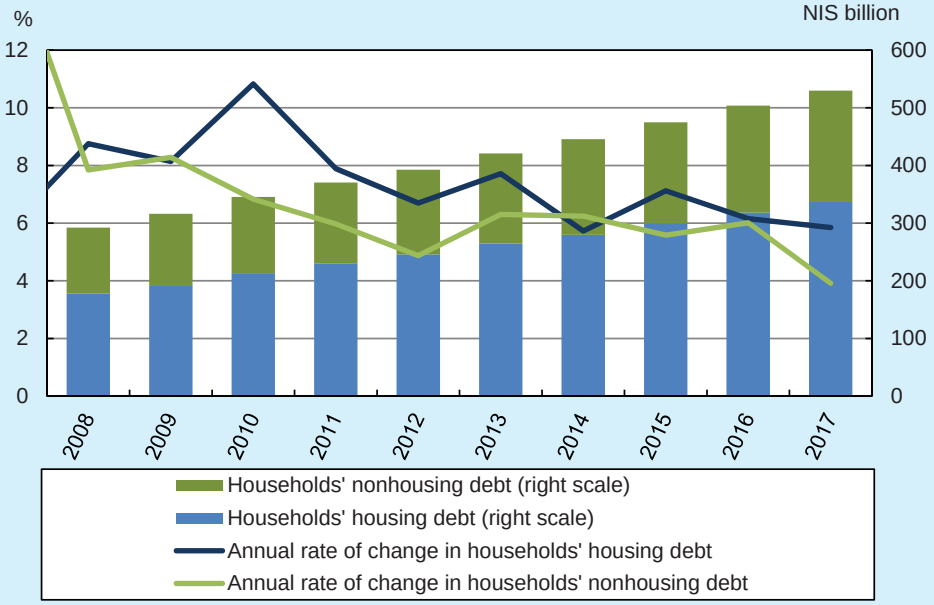
The growth of non-housing household debt was significantly more moderate than in 2016.

Household debt[8] has grown at high rates for several years in a row. This year again, the debt increased more rapidly than GDP, but the rate of increase was lower than in previous years. The total debt grew by 5.1 percent, with housing debt growing by 5.8 percent (in contrast to 6.2 percent in 2016) and non-housing debt growing more moderately at a rate of 3.9 percent (in contrast to 6.0 percent in 2016) (Figure 4.3). Although household debt has grown rapidly since the financial crisis, the rate of growth has been gradually declining. Thus, during the period 2008–11, it grew rapidly, at an average rate of 8.5 percent; subsequently, from 2011 to 2016 it stabilized at around 6.4 percent; and it appears that this year there was an additional decline. The total debt relative to GDP currently stands at 42 percent. Although this ratio is considered to be low relative to other countries, it is explained by the low level of housing credit, while non-housing credit is somewhat higher than the average.

A clear majority of households' housing debt is owed to the banks, and they have maintained their dominance in this type of debt. In contrast, their share of non-

[8] This includes the debt to the banking system, credit card companies, institutional investors and the government.

Figure 4.3
Households' Housing and Nonhousing Debt and Their Rates of Change
Annual Data, NIS Billion, 2008–17

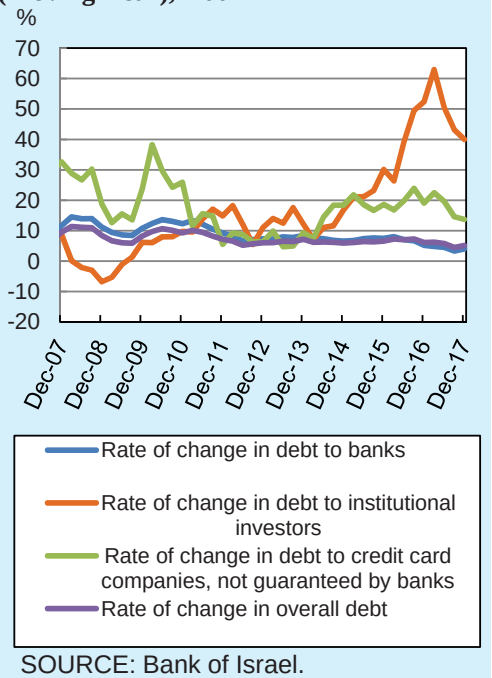


SOURCE: Bank of Israel.

Household debt to institutional investors and the credit card companies that is not guaranteed by the banks continued to grow at high rates.

housing debt has gradually declined in recent years as a result of the accelerated growth in the debt to credit card companies that is not guaranteed by the banks, and to institutional investors, and in parallel the slower growth in debt to the banks. These trends continued this year (Figure 4.4). The total liabilities of households to the credit card companies and institutional investors stands at NIS 18 billion and NIS 24 billion, respectively, which together constitute 7.9 percent of households' total liabilities. The credit provided by credit card companies to households is non-housing credit, while half of the liabilities to institutional investors is essentially housing debt that was provided directly by the institutional investors or was obtained by them as part of mortgage portfolios sold to them by the banks.

Figure 4.4
Growth of Household Debt, by Lender, Rate of Change over Past 12 Months (Moving Year), 2007–17



SOURCE: Bank of Israel.

There is additional nonbank non-housing household debt which is not taken into account in the data, since only in 2017 did the Capital Market Authority and Insurance Supervision begin supervising the non-institutional credit providers, including online credit intermediaries.[9] Although the amount of credit from these sources is still very small, it is important to create regulatory uniformity with regard to consumer protection and compliance issues. The reduced share of the banks in non-housing credit to households may be evidence of increased competition in this type of credit, which is likely to intensify with the future separation of two credit card companies from the banks. The degree of competition is dependent on the cost of funding of credit providers, since it in turn affects the cost of credit to the borrower. To the extent that the banks benefit from significantly cheaper funding costs than other entities, this will limit competition in the provision of credit.

In 2017, the Knesset approved Amendment 5 to the Regulation of Nonbank Loans Law, 5753–1993 (its new name is the "Fair Credit Law"). The law establishes a uniform interest rate ceiling for bank and nonbank credit providers and differentiates between two levels—a civil ceiling and a criminal ceiling. Since the law only applies to loans of up to NIS 1.2 million, it is primarily relevant to retail credit. This is in contrast to the situation prior to the law, when there was only a civil interest rate ceiling, which applied only to nonbank lenders and was lower than what is specified by the mechanism of the new legislation. The law is intended to create one set of conditions for all credit providers. The raising of the interest rate ceiling in the law is meant to enable nonbank credit providers to expand their activity. In contrast, the law added consumer protections for borrowers.

In 2017, the Fair Credit Law was passed. The Law specifies a uniform interest rate ceiling for bank and non-bank credit providers.

During the year being surveyed, there was an increase in credit loss allowances and the share of problematic debts of the banks and the credit card companies for credit provided to the household sector.[10] (This is the case for non-housing credit; there was no such increase for housing credit.) Although these are not high rates in historical terms, the increase may indicate that the end of the current financial cycle is near.[11] In this context, it should be noted that the Knesset recently approved the Insolvency and Economic Rehabilitation Law which is expected to bring about major changes in the bankruptcy processes in Israel. The law will affect the order of priority of the various creditors in the collection of a debt and is expected to reduce the rate of repayment in case of default to secured creditors, i.e., the banks. In addition, it is expected to shorten the bankruptcy processes, particularly in the case of private individuals. This legislation adopts the directives of the Receiver General from 2013 which have already brought about a shortening of processes, and around that time the

[9] For further details, see Box 4.2 in this chapter.

[10] See the Financial Stability Report for the second half of 2017.

[11] The term "financial cycle" refers to the cyclical behavior of the main financial variables in the economy, namely risk perception, credit, default rates, housing prices and share prices. For further details on the financial cycles and the connection between them and real cycles, see Ana Danieli, "Financial and Real Cycles in Israel according to the Approach of Borio et al.", Discussion Paper 2016.11, December 2016, Bank of Israel [Hebrew].

number of bankruptcy requests by individuals has increased.

Concerned that the level of risk in the vehicle market is increasing, following the large number of purchases in 2016 and the rapid growth in credit secured by a vehicle[12], the Banking Supervision Department published new directives[13] during the year being surveyed concerning the provision of credit secured by a vehicle. During the third quarter of 2017, there was a significant slowdown in the rate of growth of bank credit secured by a vehicle, which was influenced by the increased cost of bank credit, to both consumers and companies, in the automobile sector.

(1) Developments in mortgages

The pace of new mortgage volume during the year reflected the relative calm in the housing market.

The housing market was relatively calm this year, which was manifested in a drop in the number of transactions and a moderation in the increase of prices as a result of the government's efforts to increase supply.[14] New mortgage volume during the year reflected this relative calm and was somewhat lower than in 2016. The number of transactions and the size of the average mortgage were essentially unchanged, as were the risk characteristics of those taking out new mortgages.[15] The proportion of home investors in those taking out new mortgages was 13 percent on average and there were indications that it had stabilized at this level. This followed the sharp decline since 2015, due to government measures that made purchase of homes by investors more costly relative to the purchase of homes for residence.

During 2017, interest rates on new mortgages fell.

The decline in demand for new mortgages and with it the decrease in the yield on government bonds—which reduced the cost of funding for the banking system—led to lower interest rates on new mortgages during 2017. This is in contrast to the upward trend in these interest rates from mid-2015 until the end of 2016. During that period, two requirements were imposed on the banks: to increase the capital reserve by 1 percent for the portfolio of housing credit and to reach a core capital ratio of 10 percent by the beginning of 2017 (imposed only on the two largest banks). The effect of these regulatory measures was exhausted during 2016, when the banks reached the required capital targets. In addition to the effect of the capital requirements, the real and nominal interest rates on government bonds rose during 2016, a development that fueled the upward trend in the mortgage interest rate. The gap that opened up in 2015 between the mortgage interest rate and the yield on government bonds has remained stable since mid-2016 and it reflects the permanent effect of the more stringent capital requirements and the increase in interest rates relative to their level in mid-2015 (see Figure 4.5). Part of the response of those taking out new mortgages to the increase in the mortgage interest rate during 2015 and 2016 was reflected in longer average terms to redemption. The reversal in the trend of the interest rate this year was also reflected in a shortened average term to redemption.

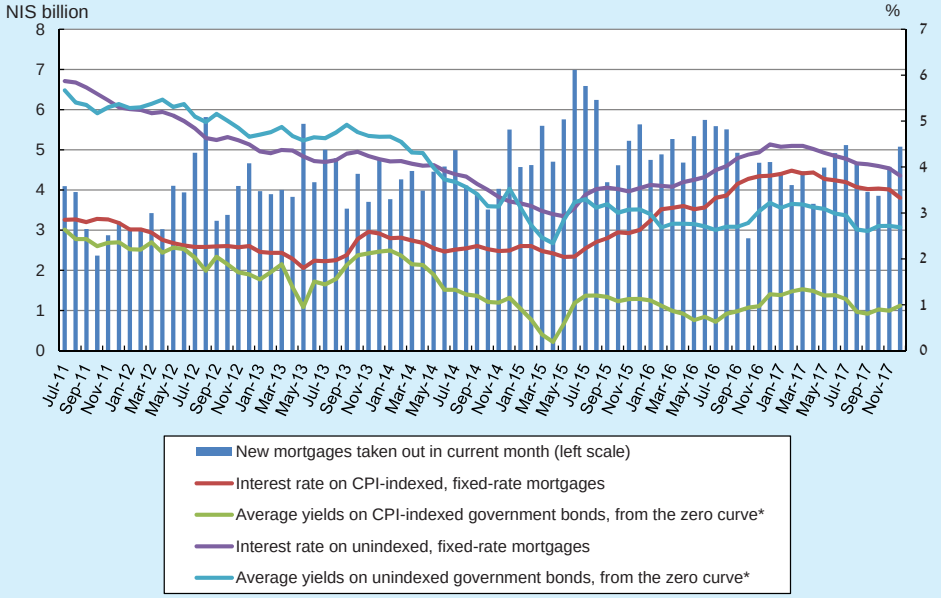
[12] Total bank credit secured by a vehicle was NIS 11 billion in the third quarter of 2017 and that provided by credit card companies was NIS 2.2 billion.

[13] The Banking Supervision Department recommended limiting the maximum LTV in the case of a pledge on a vehicle to 60 percent and not to accept a vehicle over 5 years old as collateral.

[14] For further details, see Chapter 9 in this report.

[15] For further details, see the Financial Stability Report for the second half of 2017.

Figure 4.5
New Mortgage Volume, Interest Rate on New Mortgages, and Government Bond Yields Based on the Zero Curve, Monthly Data, July 2011–December 2017



*The government bond yield based on the zero curve presented in the figure is the yield on government bonds in which the term to maturity is similar to that of the mortgages.
SOURCE: Bank of Israel.

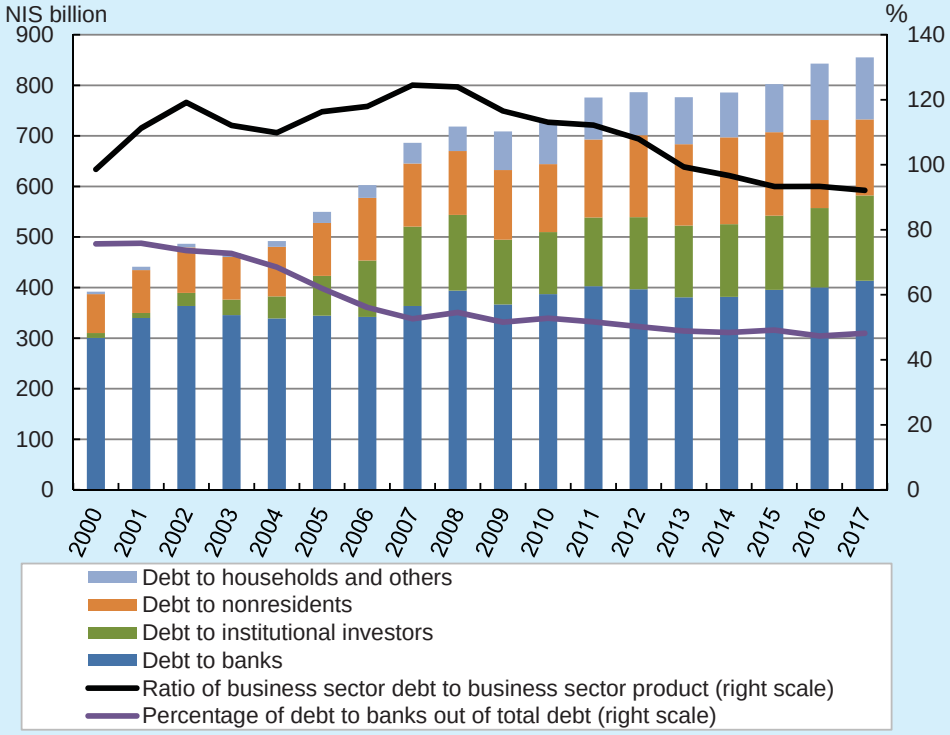
b. The liabilities of the business sector

The debt of the nonfinancial business sector (not including the banks and the insurance companies) rose by only 1.5 percent in 2017, due to the relatively sharp decline in liabilities to abroad. More than half of the decrease in liabilities to abroad is attributed to the price effect that resulted from the strengthening of the shekel, while the rest was a result of the redemption of direct liabilities to abroad. In contrast to the decline in liabilities to abroad, the debt of the business sector to households and institutional investors continued to grow at high rates (8 percent and 10 percent, respectively). The debt of the nonfinancial business sector grew in 2016 by a high rate (5.1 percent) as a result of the significant increase in the level of net bond issues, which had been negligible in previous years. In 2017, the level of net bond issues remained high, but this was not reflected in the overall growth rate of debt due to the decline in liabilities to abroad. Debt to the banks increased by 3 percent in 2017, as opposed to 1 percent in the previous year.

Since the crisis of 2008, the debt of the nonfinancial business sector has grown at a very moderate pace, apart from two years (2011 and 2016). This trend led to the ratio of business sector debt to business sector product decreasing up until 2015, and remaining stable the last three years. The ratio of business sector debt to GDP in Israel is somewhat low relative to ratios in the advanced economies. In those countries the ratio also declined between 2008 and 2015, but the decline in Israel was larger. Since 2015, the ratio of business sector debt to GDP in advanced economies has renewed an

increase. Prior to 2008, business sector debt in Israel had increased rapidly, particularly nonbank debt. This led to a major increase in rates of leverage among public companies prior to 2008. The moderate growth in the debt of the business sector since then is due to, among other things, the need of these companies to reduce leverage, which is reflected in the moderate demand for credit among the large companies. The decline in leverage was also reflected in debt reorganizations among a large number of public companies that suffered financial distress.

Figure 4.6
Business Sector Debt by Source and as a Percentage of Business Sector Product, 2000–17



SOURCE: Bank of Israel.

In recent years, there has been a change in the composition of business sector debt. The debt of small and micro businesses has grown at the expense of the debt of large companies. (For further details see the section below on the business sector's debt to banks).

In recent years, additional sources of financing for the business sector have developed in the non-institutional market. The credit from these sources is growing rapidly[16] although its balance is still very small relative to the total debt. Among the factors that support this expansion are the low interest rate and the positive economic

[16] The value of the credit portfolio of public companies that provide nonbank credit grew by about 32 percent from 2016 to 2017. For further details, see the Financial Stability Report for the second half of 2017.

In recent years, the composition of business sector debt has changed: the debt of micro and small businesses has grown at the expense of the debt of large companies.

conditions. The low interest rate encourages investors to search for investment alternatives that provide them with a high yield, increases risk appetite, and reduces the costs of funding for nonbank credit companies. The favorable economic conditions increase the demand for credit. Government policy in recent years has also worked to strengthen the non-institutional credit market. This includes expanding the ability of nonbank public companies to raise capital by issuing bonds, placing nonbank credit providers under the supervision of the Capital Market and Insurance Authority as part of the Control of Financial Services (Regulated Financial Services) Law, 5776-2016, which makes it possible to impose regulation on those entities, and legislation regarding loans from credit intermediaries that was approved this year, which will enable small businesses as well to borrow by way of online platforms, without having to publish a prospectus. These steps are expected to support the continued development of a non-institutional market. In many other economies, both advanced and developing, nonbank credit has been growing faster than bank credit since the financial crisis, as a result of additional background factors that are common to both Israel and other countries, namely the increased regulation of the banking system following the lessons learned from the financial crisis and the technological financial improvements that are challenging some of the functions that were exclusive to the banking system until now.

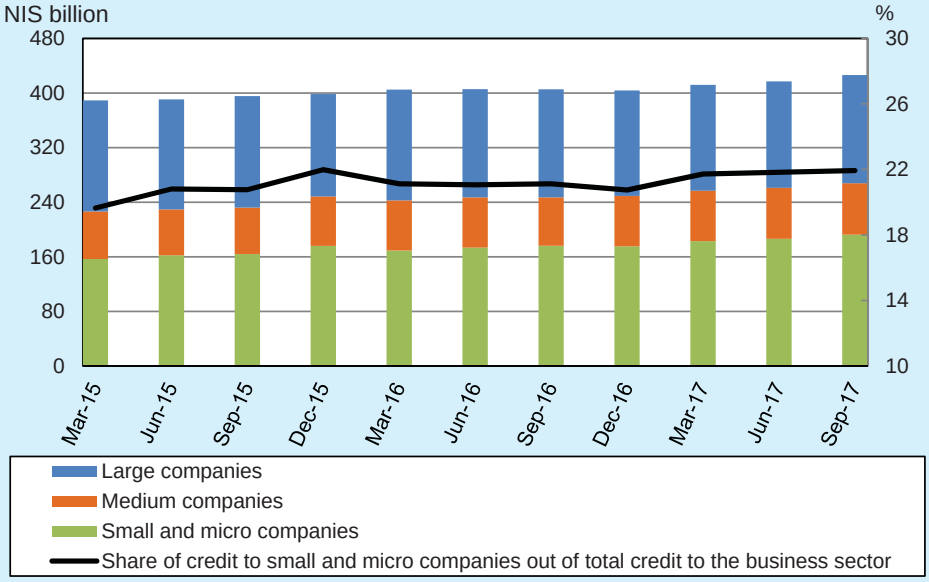
The distribution of the business sector debt by industry shows that the five largest industries with respect to total debt are manufacturing, financial services, trade, real estate and construction. In view of the momentum in residential construction and commercial real estate, the share of the construction and real estate industries in total debt has risen during the last two years relative to the other industries. While in the case of business sector debt to the banks, all the aforementioned industries have similar shares, in the case of corporate bonds there is a clear bias toward certain industries. Thus, both institutional investors and households hold a relatively high proportion of bonds issued by holding companies, and institutional investors also hold a larger proportion of bonds issued by real estate companies.

(1) Liabilities of the business sector to the banks

Bank credit to the business sector has grown at a moderate rate in recent years and its composition has changed. Thus, total bank credit to small and micro businesses has grown, a trend that characterized all the banks, while in contrast, the growth rate of credit to mid-size businesses was lower and the credit to large businesses declined. The large companies in the economy are able to raise funds by issuing bonds and equities in the capital market and they also have access to foreign capital markets and to credit from institutional investors. This is in contrast to other companies in the economy, and in particular small and micro businesses, which have to rely exclusively on the banking system for their financing needs. In recent years, the banks have shifted their credit to the business sector toward small and micro businesses (Figure 4.7). This is against the background of the high level of competition in credit to large businesses from the nonbank market, which in recent years has been characterized by low bond

spreads that continued to decline this year; the more moderate demand for credit by large businesses; as well as the regulatory incentives that are encouraging the banks to prefer providing credit to small businesses over providing credit to large businesses (since the share of credit to small businesses in the risk assets of the banks is lower compared with credit to large businesses and also because credit to large businesses is limited by the restriction on exposure to a single borrower and single group of borrowers). The proportion of credit to micro, small and mid-size businesses within total bank credit to the business sector is over 50 percent, a level which is considered high relative to other countries.[17]

Figure 4.7
Balance of Bank Credit to the Business Sector at Reported Period End, by Firm Size, and Share of Credit to the Small and Micro Business Sector in Total Credit to the Business Sector, from All Sources, Quarterly Data, 2015–September 2017



SOURCE: Based on banks' financial reports.

The interest rate on new bank credit provided during 2017 to small and micro businesses increased, while in the rest of the business sector it remained unchanged or even declined somewhat. The background to the increase in the interest rate for small and micro businesses is the increased credit risk of this sector. Thus, the banks' allowance for credit losses has grown for this sector relative to the rest of the business sector. With respect to the demand for credit, the degree of financing difficulties as reported to the Bank of Israel's Companies Survey indicates an easing of the situation relative to 2016 also among small and mid-sized businesses, which are almost completely dependent on bank credit to finance their activity. In the past, there was

[17] As of 2015, the average proportion of loans to SMEs within total loans to the business sector in the OECD countries stood at 46 percent.

a gap between small and mid-sized companies compared with the large companies, with the former reporting greater financing constraints than the latter. In the last three years, this gap has narrowed as a result of the easing of financing constraints, according to the reports of small and mid-sized companies.

Bank credit to the business sector by size of the company is characterized by different levels of interest rates and also different terms to redemption. On average, the smaller the company, the higher the interest rate on credit will be, due to the higher level of risk (loan loss provisions), but primarily due to higher operating costs.

(2) Nonbank liabilities of the business sector and public firms

The nonbank debt of the business sector is divided almost equally between institutional investors, nonresidents, and—with a somewhat smaller proportion—to households. Since the financial crisis of 2008, the share of the debt to households has grown consistently, from 15 percent of the nonbank debt in 2009 to about 30 percent today. The increase in the share of the debt held by households was particularly rapid during the last two years, in parallel to the increased level of bond issues during this period. Apart from net bond issues, which as noted, increased in the last two years, the main growth component in business sector debt in recent years has been direct loans from institutional investors. This component has grown from a negligible level in 2008 to NIS 74 billion today. However, this growth occurred simultaneously with the decline in the bond holdings of institutional investors—primarily nontradable bonds although tradable bonds as well—such that the total debt of the business sector to institutional investors is not significantly higher than a decade ago. (Therefore, the share of debt (of the business sector) in the asset portfolio managed by institutional investors' has declined markedly.)

Against the background of low corporate bond yield spreads, there was a high volume of issues by non-financial Israeli companies. Prominent among the issuers was the real estate and construction industry.

As a result of the low yield spreads in the corporate bond market, the level of issuances by nonfinancial Israeli companies was high this year (NIS 48 billion), similar to its level in previous years. The high level of bond issues was reflected primarily in the increased rate of holdings of corporate bonds among the public, both directly and through mutual funds. The current spreads on bonds are close to the low level observed at the end of 2007. This phenomenon cuts across all sectors and characterizes low-rated bonds as well. Companies in the real estate and construction industry continued to take advantage of the low spreads by issuing NIS 20 billion of bonds. The oil and gas industry raised NIS 10 billion in bonds, an unprecedented level for this industry.

This year, there was a particularly notable presence of foreign companies in bond issues in the domestic market. The issues by foreign companies stood at NIS 10 billion this year, which is double the average for the previous three years. Most of the foreign companies that issue bonds in Israel are in the real estate and construction industry.[18] These companies are characterized by a higher risk profile than the local companies.

[18] During 2017 and the beginning of 2018, two foreign companies that provide nonbank credit also issued bonds. A discussion of the characteristics of bond issues by foreign companies appears in the Financial Stability Report for the second half of 2014.

There was a major presence of foreign companies in bond issues in the domestic market.

Thus, in the rating distribution of foreign real estate companies that issued bonds in Israel, the share of low-rated companies is higher compared with local real estate companies that issued bonds, and this share increased in 2017.

Apart from debt financing, the business sector can use two other sources of financing, namely internal sources (retained earnings) and the issue of equity.[19] The use of retained earnings and the issue of equity can be examined using the data on public companies. It should be noted that public companies in Israel are only partially representative of the business sector in Israel. Thus, the proportion of public nonfinancial companies within the nonfinancial business sector[20] is about 38 percent (as of 2015). An examination of the data for recent years shows a gradual decline in the ratio of cash to total assets, or in other words an erosion of the availability of internal sources of financing and a growing dependency on external sources.

This year, total equity issues increased, particularly IPOs.

The Tel Aviv Stock Exchange has for several years been characterized by delisting of companies, a low level of issues by new companies and a decline in trading volume. The year 2017 deviated from the trend and the rate of equity issues grew significantly. This year, domestic nonfinancial companies issued equity worth NIS 10 billion, which is double the annual level during the period 2014–16. The main part of the increase was due to 16 local companies that carried out initial public offerings (IPO), which exceeds the number of initial offerings during the previous four years combined. Excluding initial public offerings, the amount of equity raised by listed companies and in private placements was similar to that in the previous year. Construction and real estate companies are also prominent in the issue of equity, although their proportion of equity issues (40 percent) is somewhat smaller than their proportion of bond issues. Manufacturing companies were also prominent in equity issues with a total of close to NIS 4 billion. In addition, Israeli companies raised NIS 1.1 billion by issuing equity abroad. The number of listed companies rose somewhat, as did daily trading volumes. The phenomenon of delisting is not unique to Israel and can also be seen in the stock exchanges of other developed economies in recent years.[21] However, at least since the financial crisis, the decline in the number of companies listed on the Tel Aviv Stock Exchange was sharper than in the OECD countries, in the eurozone and in the US. It is reasonable to claim that the decline in the number of public companies is to a large extent the result of a structural change since it occurred during a period of robust capital market activity and high GDP growth rates. Therefore, it is difficult to determine whether or not 2017 represented a reversal in this trend, i.e., a stabilization of the situation or an improvement related to the favorable conditions of the economy at this stage of the business cycle.

[19] For further details on the use of these channels and their advantages and disadvantages, see the Bank of Israel Report for 2015, Box 4.2.

[20] As measured by the share of public companies in the total revenue of the nonfinancial business sector.

[21] For further details, see the analysis in the Fiscal Survey and Selected Research Analyses of the Bank of Israel, August 2016.

As in 2016, the stock prices of large companies were characterized by a different trend than the rest of the companies this year. Some of the largest listed companies, particularly in the pharmaceuticals[22] and communication industries, had negative returns, while most other companies had positive returns. Thus, while the Tel Aviv 35 Index remained almost unchanged in 2017, the Tel Aviv 90 Index, which does not include the 35 largest companies on the Tel Aviv Stock Exchange, increased by almost 20 percent. Equity indices in Israel lagged behind those in other countries this year. Thus, in dollar terms, the Tel Aviv 35 Index increased by 7 percent, similar to the rise in the STOXX Europe 600 Index but less than the S&P 500 Index, and it lagged well behind the Emerging Markets Index. During February 2017, a reform of the share indices was carried out, which increased the number of companies included in the leading indices. The reform contributed to the recovery in the trading volume of stocks, which had been characterized by a downward trend in recent years. The trading volume of mid-cap companies showed a particularly large improvement. These changes apparently also contributed to the recovery in equity issuances.

4. THE FINANCIAL ACCOUNT OF THE BALANCE OF PAYMENTS

The balance of payments presents a periodic summation of the economy's international transactions. The balance of payments is composed of three parts: the current account (movements of goods, services, factors of production and transfers), the capital account (transfers of capital between Israeli residents and foreign residents) and the financial account. The current account has been discussed in Chapter 7 of the Bank of Israel Annual Report in recent years. This section focuses on the financial account[23]—transactions involving financial assets and liabilities between Israeli and foreign residents. The account is divided into four sub-accounts: direct investment,[24] financial investment,[25] other investment and reserve assets (which are managed by the Bank of Israel). The flows in the financial account reflect domestic sources of financing that are channeled to investment in foreign assets and foreign sources of financing that are channeled to the local economy.

[22] Since the beginning of 2016, there were sharp declines in the market capitalization of the three large pharmaceutical companies traded in Tel Aviv: Teva (a decline of 75.1 percent through mid-December 2017), Mylan (31.4 percent) and Perrigo (46.4 percent). The market cap of these three companies accounted for 32 percent of the total value of the stock market at the end of 2016. (The weight of Teva alone was 18 percent.) The sharp declines in the value of these companies reduced their proportion of the stock market to 20 percent at the end of 2017.

[23] For further details on the financial account of the balance of payments in 2017, see the Statistical Bulletin for 2017, which was recently published by the Information and Statistics Department of the Bank of Israel.

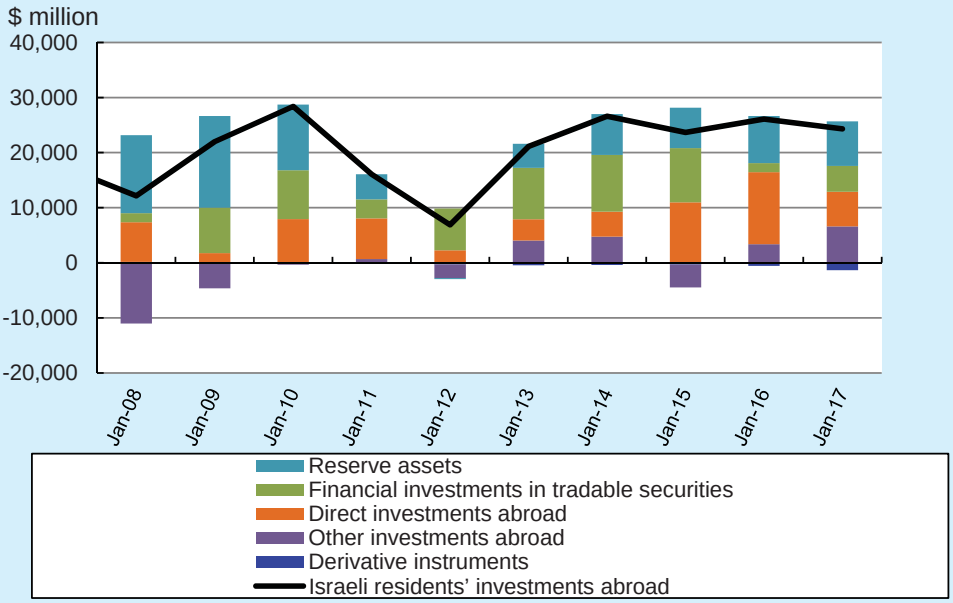
[24] Direct investment in a company is defined as the holding of more than 10 percent of the company's equity capital. It can be in the form of the purchase of equity, shareholder loans and other types of loans and investment in land.

[25] All of the investments in tradable securities that are not defined as direct investments.

The net investment abroad by Israeli residents in 2017 totaled $24 billion.

The Israeli economy has had a negative balance in its net financial account (that is, net export of investment) since 2001, reflected in the consistent growth in the surplus of assets over liabilities. The net investment abroad by Israeli residents was $24 billion in 2017 (Figure 4.8) as opposed to net investment by foreign residents of $19 billion in the local economy during the same period (Figure 4.9). This implies that again this year, there was a net capital outflow of investment. The investment from abroad rose relative to the previous year, while total investment by Israeli residents abroad remained relatively unchanged. Within them, the component of direct investment declined while financial investment rose relative to the previous year. Direct investment in foreign equity capital has been concentrated in recent years in the pharmaceuticals industry, though in 2017 the problematic situation of pharmaceuticals company Teva resulted in a low volume of this type of investment and this effect is expected to continue in coming years.

Figure 4.8
Israeli Residents' Investments Abroad, Net Flows, 2008–17



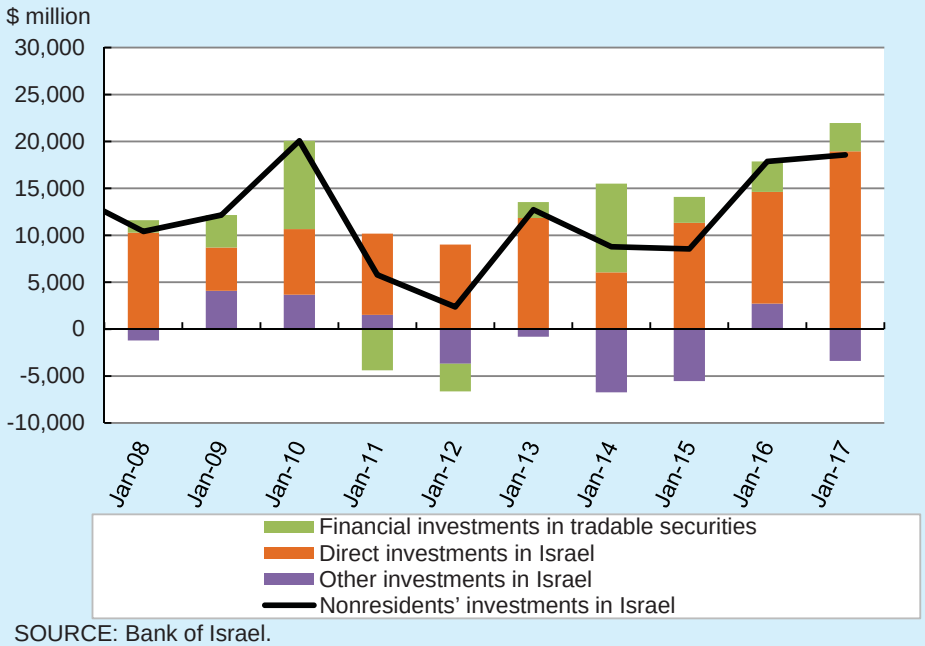
SOURCE: Bank of Israel.

In the past two years, the amount of financial investment by Israeli residents in foreign tradable securities has declined.

The total financial investment by Israeli residents in tradable securities abroad during the last two years was lower than in the four years preceding them. Both households and institutional investors markedly reduced the volume of this type of investment during the past two years, while the banks continued to invest abroad. This was reflected in the halt of the upward trend in the share of exposure to foreign assets in the asset portfolio of institutional investors over the past two years.

On the side of the economy's assets abroad (not including reserve assets), the weight of financial assets has increased in recent years, while on the side of the economy's liabilities to abroad, the weight of direct investment has grown significantly. It may

Figure 4.9
Nonresidents' Investments in Israel, Net Flows, 2008–17



SOURCE: Bank of Israel.

be assumed that direct investment is less volatile. The increase in the surplus of assets over liabilities this year, as was the case last year as well, was the result of the rise in stock prices abroad and the decline in domestic stock prices (particularly those of pharmaceutical companies, which have a large weight in the portfolio of foreign investors). The net flow of investment had a small effect on the asset surplus this year, though it was similar to the effect in the previous year.

5. FINANCIAL INTERMEDIARIES

Financial intermediation is a general name for entities and means that translate the public's savings into credit to the private sector (businesses and households). The functions fulfilled by financial intermediaries in any country are primarily: an infrastructure and means for the transfer of payments; the pooling of sources of financing for large projects; the management and hedging of risks; and mediation in cases of information asymmetry and agency problems. While the structure of financial intermediation varies from country to country, and changes over time and as a result of regulation and reforms, the functions of the various financial intermediaries remain similar. If the pace of technological progress accelerates, it may be expected that the structure of financial intermediation will change at a more rapid pace. Primarily, new technology already today allows borrowers and lenders to meet directly, without need of intermediaries, and also assists in the gathering and distribution of information.

The structure of financial intermediation in Israel today is the result of significant reforms carried out at the beginning of the 2000s, which changed the characteristics of the public's managed intermediate term and long term savings, in parallel with reducing government intervention in the credit market. The reforms led to a diminished share of the banks in the business credit market and to the development of the bond market. Today, more than one-half of the debt of the business sector is held outside of the banking system. The creation of a nonbank market intensified competition in the provision of credit to large and mid-sized businesses and reduced its price. A significant proportion of the public's savings is channeled to the asset portfolio managed by institutional investors. The current rapid growth of the portfolio of managed assets is expected to continue in coming years.[26]

The entry of new financial intermediaries, whose activity has expanded in recent years with the support of regulatory exemptions and technological advances, to the noninstitutional market is encouraging competition in credit and increasing its accessibility.

New financial intermediaries in the non-institutional market, whose activity has expanded in recent years as a result of regulatory leniencies and technological advances, are intensifying the competition in credit and increasing access to credit. Nonetheless, since the supervision over them and the transparency of their activity are low and they are not subject to prudential regulation like the banks and the insurance companies, they can intensify over-borrowing, primarily among households.

The legislative steps to increase competition and supervision of the nonbank market continued this year. Within this framework, the Knesset approved the "Social Loans Law", which regulates and imposes supervision on P2P platforms for the provision of credit.[27] The bodies that operate in this sector will benefit from infant industry protection, such that banks and related corporations will not be allowed to enter this market for three years after the law goes into effect. However, new banks that will obtains a license according to the Banking (Licensing) Law after the law goes into effect and the credit card companies that will be separated from the banks will be able to enter this market. No similar restrictions were placed on institutional investors and there are institutional investors that have already bought into the activity of P2P companies. The law also opens up the possibility of increasing availability of nonbank credit to small businesses by way of these platforms and according to the conditions it specifies.

The Increasing Competition and Reducing Concentration in the Banking Market in Israel Law (Legislative Amendments), 5777–2017, (hereinafter: the Strum Law), which went into effect at the beginning of 2017, created the Committee to Examine Competition in the Credit Market, whose main functions are to monitor the implementation of the law's provisions, to carry out periodic assessments of the level of competition in the credit market and to identify barriers to the development of competition in this market. In October 2017, the Committee published a list of measurable criteria for evaluating the success of the effort to increase competition in the banking market, in accordance with the law. On the basis of these criteria, the

[26] In comparison to the OECD countries, the assets under management of pension funds in Israel are somewhat larger than the average. To this should be added the savings in provident funds and with insurance companies, which manage assets of a similar amount to that of the pension funds.

[27] For further details on P2P platforms, see Box 4.2 in this report.

Committee will publish semiannual reports.

The Bank of Israel has in recent years adopted an accommodative monetary policy; that is, it is maintaining a low rate of interest. The interest rate has remained at a historically low level of 0.1 percent for the past three years. This is intended to bring the currently low (and even negative) rate of inflation to within the target range. One of the ways in which the Bank of Israel interest rate is meant to affect economic activity and inflation is by means of the array of short-term interest rates in the economy, which determine, among other things, the basic interest rate on short-term credit. The assessments of the development of the Bank of Israel interest rate in the future also affect interest rates in the longer term. The transmission is dependent on, among other things, the structure of the financial sector. Thus, the more competition there is between financial intermediaries, the more efficient will be the transmission, since a reduction in the base interest rate will be more effectively translated into a reduction in interest rates in the market.

The accommodative monetary policy acts to increase investment and private consumption both directly and by increasing the access of the private sector to credit and making it cheaper, as well as encouraging consumption by reducing the incentive to hold money in deposits. This policy indeed has facilitated the growth of credit in recent years, during which the growth was particularly rapid in the household sector (faster than the growth in GDP) but slower in the business sector (and slower than the growth in GDP). However, a low interest rate over time also has a negative effect, since certain sectors may over-borrow and thus endanger the stability of the financial system.[28] Therefore, in recent years the Banking Supervision Department has adopted a series of measures that are intended to reduce the risk implicit in credit to households, and primarily housing credit, in view of its rapid growth. A low interest rate also encourages investment in projects with low profitability.

a. The banking system

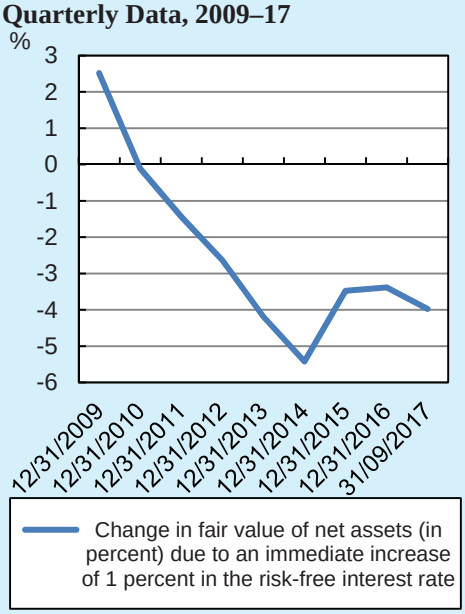
In recent years, the duration of liabilities in the banks' balance sheets has shortened.

The banks use the sources available to them—primarily the public's deposits and bond issues—to extend credit to the business sector and households. The vast majority of their sources come from the public's deposits (which account for 85 percent of their liabilities) with only about 7 percent from bonds and commercial paper. The total deposits of the public with the banks are growing at a fairly stable rate: 6 percent in the past year and 7 percent on average during the last three years. In contrast, the share of bonds and commercial paper in total bank liabilities has been declining and the trend continued this year. Estimated net bond issues (issues less redemptions) during 2017 indicate that there was a net negative issuance of NIS 8 billion by the banking system. The reduced share of bonds in total bank liabilities is partially the result of the rapid growth in total deposits, which supply the financing needs of the banks, as well as the banks' reduced ability to use bonds for their capital needs, as a result of changes in

[28] See the Financial Stability Report for the second half of 2017.

regulatory directives. The changes in the composition of the banks' assets and liabilities has in recent years led to a shortening of duration in liabilities and a widening of the duration gap relative to assets (which have a longer duration than liabilities).[29] On the liabilities side, the growth in deposits of the public was characterized in recent years by an increase in the proportion of short-term deposits at the expense of longer-term deposits. The relative decline in the share of bonds, which are characterized by a longer term than deposits, is further contributing to the downward trend in duration on the liabilities side. On the assets side, the share of mortgages in the banks' credit portfolio has increased in recent years. At the same time, the share of cash and deposits in total assets has risen consistently during the past four years and is high in historical terms (17.2 percent). These two trends have offsetting effects on duration on the assets side and therefore it has remained stable. The duration gap exposes the banks to losses as a result of the risk of repricing. This risk becomes larger as the interest rate in the economy increases. The result of the widening of the duration gap is that the effect of an expected increase in the interest rate on net assets (assets less liabilities) has in recent years gone from positive to negative and its value has fallen (risen in absolute value; see Figure 4.10). To hedge against interest rate risk, the banks use derivatives. To the extent that the derivatives' coverage is only partial,[30] and in any case does not protect against an increase in the cost of funding as a result of an increase in the bank's risk premium, a future adverse impact to the value of net assets is liable to negatively impact the supply of bank credit.

Figure 4.10
Effect of a Hypothetical Increase of 1 Percent in Interest Rates on Net Fair Value of Financial Instruments of the Five Large Banks[a], Annual and Quarterly Data, 2009–17



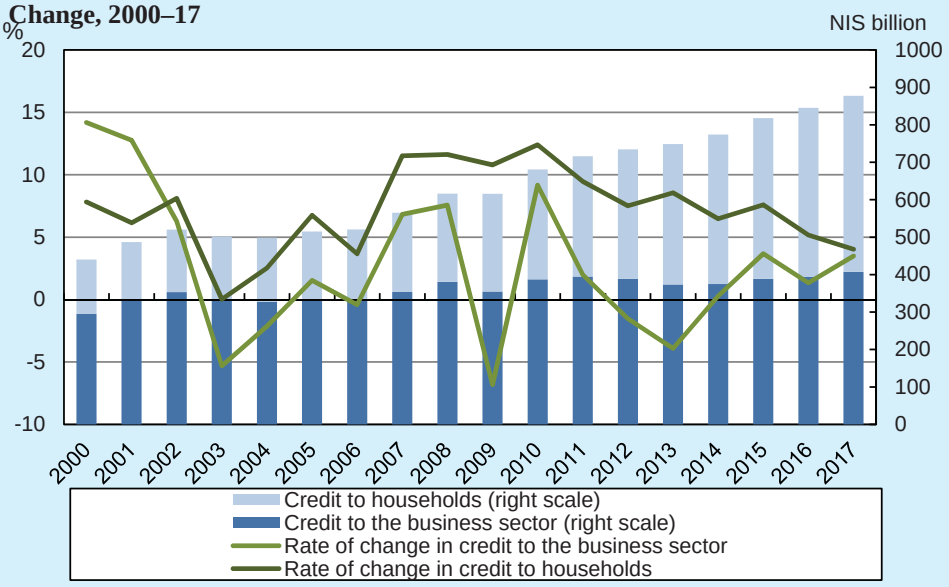
[a] Beginning from the 4th quarter of 2015, the calculation of net assets' fair value changed at one of the banks in the system and there is a break in the series.
SOURCE: Banks' reports to the public.

The slowdown in the growth of the portfolio of credit to households, in contrast to the acceleration in the growth of the portfolio of credit to the business sector, has resulted in a growth rate of 3.8 percent in bank credit to the private sector in 2017, which is somewhat higher than last year (Figure 4.11). Against the background of a high rate of growth in credit to households and a moderate rate of growth in credit to

[29] The comparison of durations is based on the effective duration of total financial assets and total financial liabilities measure in fair value.

[30] The comparison of effective duration of assets and liabilities in the five largest banks indicates that duration gap exists even when derivatives and options are taken into account.

Figure 4.11
Bank Credit to Households and the Business Sector, Balance and Rates of Change, 2000–17



SOURCE: Bank of Israel.

the business sector in previous years, the share of credit to households within the total credit portfolio has increased and it currently accounts for more than half of the credit to the private sector. In this sense, Israeli banks currently resemble banks in the advanced economies, which experienced rapid growth in credit to households and an increase in its share within the credit portfolio already in previous decades.

The increase in the interest rate on mortgages during 2015–16 was reflected in a widening of the gap between mortgage interest rates and the yield on government bonds. This gap remained after the decline in mortgage interest rates during 2017 and was reflected in a significant increase in the banks' financial spread (income from interest relative to total assets and liabilities) in the mortgage sector this year. The financial spread also rose in the business sector as a result of the continuing change in the composition of credit to this sector, namely an increase in the proportion of small and micro businesses, which pay a higher rate of interest on loans than large businesses.

On the deposits side, there was no change and the weighted interest rate on deposits of up to three months in the various sectors remained stable at a very low level.

b. Institutional investors

The rate of growth in the managed asset portfolio has been stable at a high level in recent years.

Institutional investors manage the medium term and long term savings portfolio for the public. Most of the savings accumulate in the managed portfolio as a result of the Compulsory Pension Law and there is also a layer of savings that is not obligatory, but the government's tax policy encourages the public to take advantage of it (advanced

study funds, provident funds for investment and the component of "Savings for Every Child" that is added by the parents). The size of the managed savings portfolio in Israel was NIS 1.6 trillion at the end of 2017, after growing by 10 percent during the year. The rate of increase of the managed assets portfolio has been high and stable in recent years, the result of the combined effect of an increase in the rates of provision to pension savings mandated by law in previous years; the robust state of the economy in general and of the labor market in particular, which are contributing to the accumulation of funds in the portfolio; and the rising prices in the financial markets which have increased the value of assets. The high level of growth of the managed portfolio this year was the result of the addition of the Savings for Every Child channel, the Provident Fund for Investment channel and the implementation of obligatory pensions for the self-employed during 2017. These were reflected in exceptionally large deposits in the provident funds, which for the first time in many years exceeded redemptions.

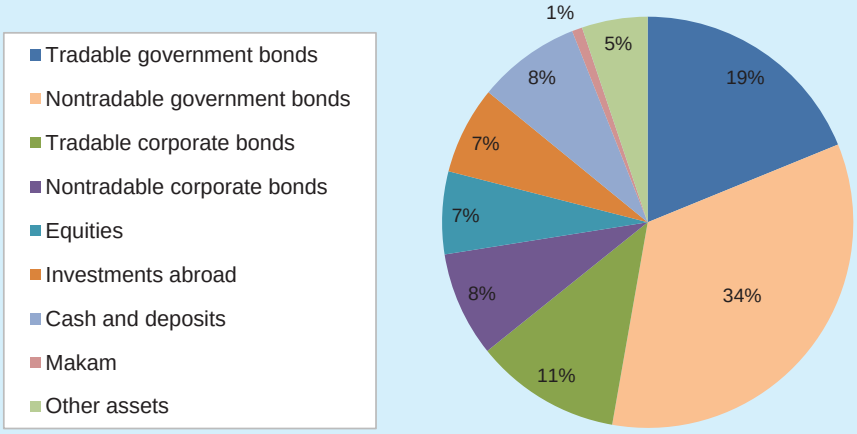
It would be worthwhile for the rapid increase in the size of the managed asset portfolio to be accompanied by greater diversification in order to reduce risk, as well as from the perspective of the economy's financing needs. The passing of the Securitization Law would allow the banks to release sources of financing through the sale of loan portfolios and would make it possible for institutional investors, who currently are hardly exposed to the household and small business sector, to diversify their investments. Exposure to mortgages will also lengthen the term of investments in the institutional investors' portfolio, which would be beneficial since it is characterized by liabilities with long durations. In practice, transactions involving loan portfolios are carried out between the banks and the institutional investors privately making them less transparent and therefore the financial regulators have placed limits on them. The scope of syndication transactions in Israel is still low relative to other countries.

The increasing cost of hedging exchange rate exposure was apparently one of the reasons for the end, two years ago, of the upward trend in the exposure to foreign currency assets and foreign assets in the managed portfolio.

During the past decade, the share of investment in foreign assets has increased significantly[31] relative to the total managed savings portfolio, from about 11 percent at the end of 2007 to 25 percent at the end of 2015, which is contributing to the diversification of risk in the portfolio. During the past two years, the increase in the rate of exposure to foreign assets in the portfolio came to a halt. The exposure to foreign assets is highest in profit-sharing insurance policies (35 percent of total assets) and lowest in the veteran pension funds (14 percent of assets). The rest of the types of managed portfolios are to be found somewhere in the middle. In comparison to many other countries, the rate of exposure of the managed savings portfolio in Israel to foreign assets is not high, a finding that still holds when excluding countries that use the euro and the US (for further details see Box 4.2 in the Bank of Israel Annual Report for 2016). This is in spite of the large scope of assets under management in

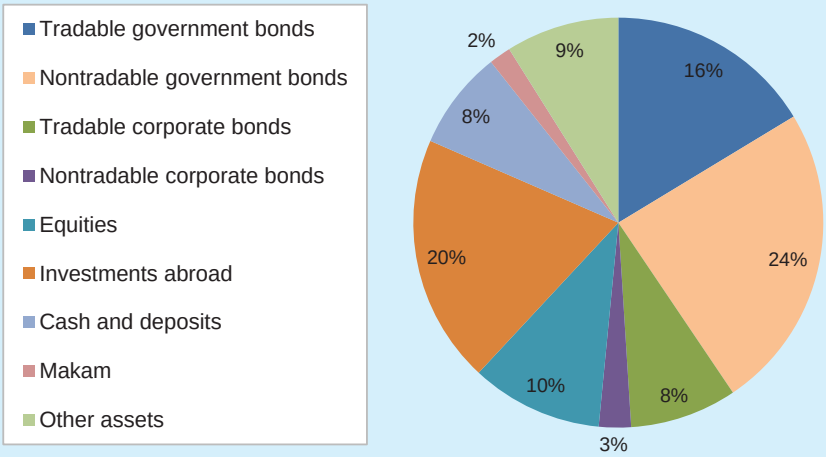
[31] Foreign assets: foreign equity abroad including mutual funds and ETFs of equity traded abroad; foreign bonds abroad; investment funds abroad; direct investment abroad; deposits and current accounts abroad; loans provided to foreign residents; and the net value of futures and shekel/foreign currency options. This applies to assets of provident funds and study funds, pension funds and profit-sharing insurance companies.

Figure 4.12
Distribution of the Managed Asset Portfolio in 2008, by Asset Type
Total Portfolio Value: NIS 667 Million



SOURCE: Bank of Israel.

Figure 4.13
Distribution of the Managed Asset Portfolio in 2017, by Asset Type,
Total Portfolio Value: NIS 1,590 Million



SOURCE: Bank of Israel.

pension funds in Israel relative to GDP in comparison to other advanced economies. Although the exposure to foreign assets contributes to risk diversification in the portfolio, it exposes institutional investors not only to macroeconomic developments in foreign markets but also to fluctuations in the exchange rate and therefore they purchase derivatives on those exchange rates. The exposure to foreign currency risk is not fully hedged however. Thus, while the proportion of assets denominated in foreign currency[32] within the total assets of financial institutions stands at 24 percent, hedging reduces foreign currency exposure to 16 percent. The cost of hedging is derived from the interest rate spreads in the various foreign currency markets and since 2014 there has been a negative spread between the five-year nominal shekel interest rate and the nominal dollar interest rate for the same term (as can be seen from the yield curves of government bonds). In 2017, this spread widened markedly and extended to the longer term of the yield curve. The implication is that the cost of hedging exposure to the dollar against the shekel has recently increased. As a result, the exposure to foreign currency in the asset portfolio has continued to rise during the last two years despite the fact that the share of foreign assets has remained almost unchanged. It is reasonable to assume that the growing cost of hedging was one of the factors behind the halt of the upward trend in exposure to assets denominated in foreign currency and in the exposure to foreign assets.

It is reasonable to assume that in the future financial institutions will be forced to further increase the share of their holdings of foreign assets since the domestic market will simply be too small for them. The value of the stock and convertibles market in Israel is about NIS 477 billion and the corporate bond market is about NIS 375 billion.[33] The market is not uniform with respect to size, such that most of the trading involves a small number of large companies, which limits the possibilities of institutional investors to invest in the local market.

The Israeli equities market has been characterized by a sharp drop in the value of the pharmaceutical companies. Since the beginning of 2016, there have been major declines in the market value of the three largest pharmaceutical companies traded in Tel Aviv—Teva, Mylan and Perrigo. Taking into account the level of exposure of the institutional investors to these firms, which was low from the beginning, the losses from the decline in the market capitalization of pharmaceutical companies between December 2015 and September 2017 is estimated at 1.3 percent of the total assets of the institutional investors.

[32] Assets in foreign currency: equities, bonds, investment funds abroad, ETFs and foreign assets traded in Israel, deposits and current accounts abroad, credit to nonresidents, direct investment, deposits and checking accounts in Israel (par value), futures and options, assets in shekels that are issued by foreign residents abroad (-), deposits in Israel (indexed to foreign currency) and bonds indexed to foreign currency in Israel.

[33] As of the end of November 2017. The source of the data is the Tel Aviv Stock Exchange.

Box 4.1

Israeli institutional investors' private equity and venture capital investments

A private investment fund collects capital from a small number of investors and uses it for collective purchases of assets, based on the investment strategy established by the fund. The category includes private equity (PE) funds, venture capital (VC) funds, hedge funds, direct investment in infrastructure, and real estate funds. Out of the total investment in investment funds, about 70 percent is invested in PE and VC funds. The focus of this box is investors' allocation to private equity funds, a category that generally includes VC funds. These are new and unique investments in the composition of assets of institutional investors in Israel. The capital invested in them can be used to finance new technologies, to expand the activity of firms or to rehabilitate them—but the capital invested in them by institutional investors is still relatively small, compared with major institutional investors worldwide.

Private equity fund managers can adopt several common investment strategies: 1. Leveraged buyouts—borrowing money to purchase a poorly performing company and implementing a recovery plan with the goal of turning it profitable. This term also covers the purchase of a failing public company, delisting it, and implementing a recovery plan. 2. Growth capital—investments in relatively stable companies that are seeking capital to expand their activities. 3. Mezzanine capital—an investment strategy that combines debt and equity. A leveraged, usually young, company that is seeking a larger loan than what it is offered by a bank can turn to private equity to raise the funds. If the company defaults, the fund will be able to take over the remaining stake in the company, to maintain ownership of it or to sell it. 4. Venture capital—investment in start-up companies, that generally develop new technologies. Private equity funds generally adopt one of the first three strategies, and VC funds take on the fourth strategy.

The entities that invest in PE funds are called limited partners (LPs). These investors are not involved in managing the investments and are exposed to high risk, and they expect a high return to be generated by the management skills of the fund managers. The limited partners can be institutional investors such as insurance or pension funds, banks, privately owned or government owned investment companies, or private individuals. All the capital managed by the fund is capital that was invested by these limited partners. The PE funds are managed by General Partners (GPs), who earn a management fee as well as a performance fee in the form of capital gains.

One of the risks in holding such an asset derives from its illiquidity, which makes it difficult to establish the holding value at a given point in time and to assess the risk incorporated in it. Furthermore, these are long term investments with a small secondary market. From the moment the limited partners invest in the fund, there is no legal option to withdraw the investment before the end of the vesting period (generally 10 years from the time the partnership is formed). The investors can only try to find another investor that will agree to acquire their share in the fund.

Review of the literature

The literature found in academic journals that researches the features of investment fund returns compared with market returns reports on the numerous difficulties in the databases. PE funds are not tradable, and their managers do not report to the public, only to their investors (their LPs), and

the LPs, who are obligated to maintain secrecy, cannot report to other entities. As such, the empirical literature is limited in terms of availability and quality of the data, and it is quite difficult to assess the funds' returns compared with market performance. Harris, et al., in a 2014 article, admitted that their previous research reported mistaken findings due to problems with the data. Their new article relied on a unique database, which was based on reports by institutional investors in the US. Based on monitoring 1,400 investment funds held by 200 institutional investors, they found that although in the 1980s and 1990s, investment funds markedly outperformed the market, in the 2000s—particularly after 2005—these funds' returns weakened and became similar to the market's returns. However, they noted that some of the funds were not fully redeemed, and therefore it is possible that in the future the investment in them will yield better returns. They also found that funds that outperformed in the past would not necessarily yield good results in the future; meaning that from the perspective of consistency of returns, investment funds are not better than other investment alternatives. However, these data may also be biased, as institutional investors' decision on which investment fund to invest in relies on, among other things, past performance. Additionally, in an article published in 2017, Braun, et al., claim that the persistence of investment manager's private-equity returns declined with the maturing of the market and increased competition, although investment in VC funds still outperformed the market returns in the various channels. They relied on reports by Funds of Funds (funds that invest in funds and not directly in companies), which are also exposed to selection bias when choosing the funds in which to invest. Another important reason that makes it difficult to measure the returns of investment funds, and especially the persistence of their returns, is based on the structure of their profitability curve, described in the literature as a J shape: the first years are characterized by low or even negative results, and then there are positive, market-beating returns. This shape of the profitability curve reflects the value added by investment fund managers, reflected over the long term, when managerial outcomes are reflected in the portfolio companies. The authors of the articles cited here also find that investment in venture capital is riskier than investment in private equity, apparently without concurrent outperformance.

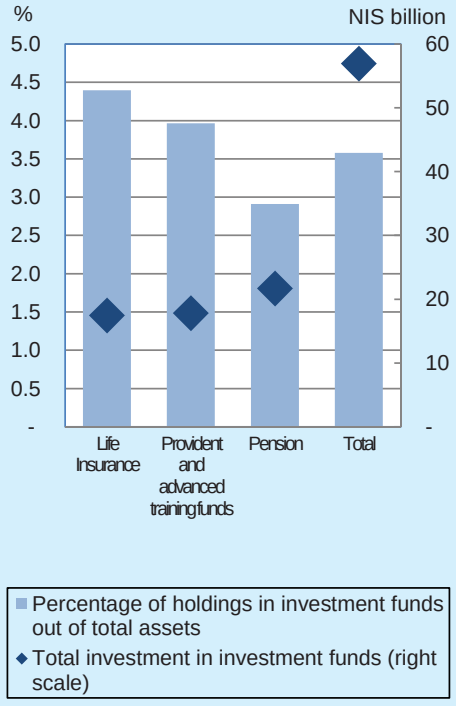
Israeli institutional investors' investment in investment funds

Institutional investors, in their reports, include PE funds, VC funds, hedge funds, and real estate funds in the "investment funds" category. What is common to all these funds is that the money being managed is from a relatively small number of investors. Details on the investment are reported by net asset value, but as these assets are not tradable, it is a calculation by the institutional investors based on the reports provided by the funds.

The value of institutional investors' holdings in investment funds, as of December 2017, reached NIS 56.9 billion, approximately 3.6 percent of the Israeli institutional investors' total portfolio (Figure 1). Insurance companies' holdings are higher, approximately 4.4 percent, while pension funds only allocate around 2.9 percent. These findings support the conclusions of Hamdani, et al. (2016), who claimed that institutional investors that charge performance-based fees and for which the money invested with them is less liquid (insurance companies), outperform, apparently deriving from the incentive for quality investment management and from the ability to invest for the long term.

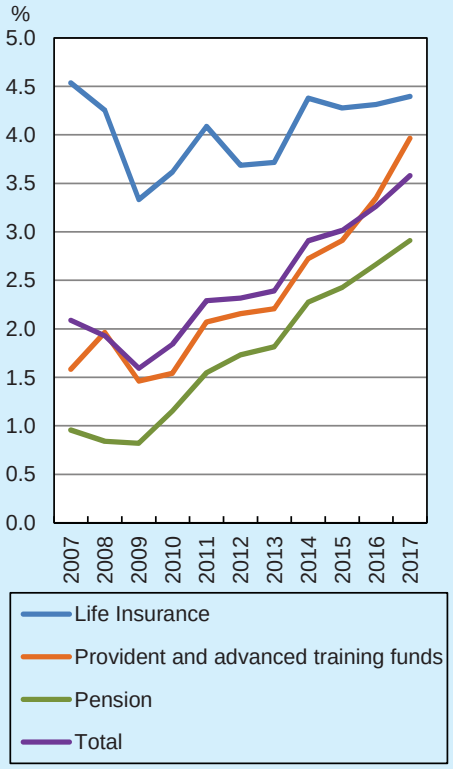
Looking over time, it can be seen in Figure 2 that the share of investment in private equity out of total funds managed in pension and provident funds has increased over the past decade, while the

Figure 1
Institutional Investors' Investments in Investment Funds, NIS Billion and as a Percent of Total Assets, December 2017



SOURCE: Based on monthly reports by institutional investors.

Figure 2
Percentage of Holdings in Investment Funds out of Total Asset Portfolio of Institutional Investors, 2007–17



SOURCE: Based on monthly reports by institutional investors.

percentage of the investment out of total funds managed by insurance companies was already relatively high in 2007. The gaps in scope of investment decreased in the past decade, but remain notable. Due to the global financial crisis in 2008–09, insurance companies reduced their investment in such funds for several years.

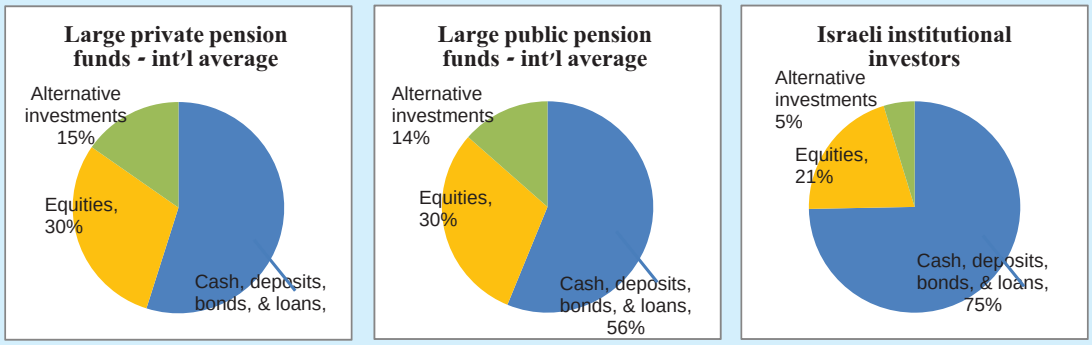
International comparison

The scope of investment by institutional investors in Israel compared with other countries can be examined in a survey of long term investments conducted by pension funds in OECD countries. In 2015, the survey covered 99 large pension funds from 36 countries, divided by private and public funds.[1] Based on this survey—which uses a broader definition of alternative investments, though the main component in them is investment funds—private pension funds worldwide allocated in 2014

[1] Private pension funds are Defined Benefit and Defined Contribution funds. Public pension funds include as well funds managed to pay unfunded pensions (National Insurance Institute funds).

(as of December) approximately 15.3 percent of their total assets to alternative investments.[2] In contrast, institutional investors in Israel[3] allocated in that same year only about 4.7 percent, on average, of their total assets to alternative investments (Figure 3).[4] The share is also low compared with the allocation from public pension funds, which was 13.5 percent. The allocation to alternative assets in December 2017 is not markedly different—the share of the allocation by institutional investors in Israel is still low, at 5.5 percent.

Figure 3
Asset Allocation in Israel Compared With Other Countries, December 2014



SOURCE: Bank of Israel.

Regulation

Institutional investors' choice of investment strategy can be the product not only of risk/return considerations but also a direct result of regulation. The significant growth of assets under management by institutional investors has created a need to invest increasingly large shares of the financial investment outside of Israel. As the institutional investors do not have sufficient expertise in managing investments abroad, they are assisted in this by external entities, which charge a management fee for their services. In the previous decade, institutional investors began to notably expand their exposure to nondomestic PE funds, and the initial investment in them was through funds of funds. That meant that three entities were charging the savers management fees—the pension fund, the intermediating private equity fund and the second private equity fund,

[2] In this survey, alternative investments are defined as investment in hedge funds, PE funds, real estate, commodities, direct investment in infrastructures, and "other investments".

[3] Institutional investors in Israel are new and old pension funds, provident funds and insurance companies. Looking just at pension funds, the share of allocation to alternative investments is even lower. In contrast to funds worldwide, pension funds in Israel allocate 30 percent of their assets to investment in earmarked bonds, which provide a government-guaranteed yield.

[4] In terms of Israeli entities, the definition of alternative investments is slightly different, but investment funds are the large majority of the classification.

which invested directly in assets. In 2015, a temporary provision went into effect that limited the direct expenses imposed on savers in addition to the management fee. Direct expenses were limited to 0.25 percent of each fund's assets. These direct expenses, which create "double management fees", derive from the management fees that the institutional entities transfer to an external entity that manages their assets abroad (such as investment funds, as well as mutual funds and ETFs, in accordance with the terms set in regulations).

With the legislation of the regulations in 2014, the Capital Markets Supervisor declared, in a parliamentary discussion, that the average share of expenditure by the institutional investors on the limited direct fees is far from the actual limit set in the regulations. While the average was in fact far from the limit, one large fund surpassed it, and several funds were close to it. Other than the limit on the scope of institutional investors' investment in such funds, it is likely that the institutional investors' reports to savers on the scope of the direct fees reduces their motivation to invest in assets that incorporate these fees, out of concern of having to report relatively high fees.

Due to the imposition of the limitation, there was some shift from funds that charge management fees to those that charge performance fees. As the management fee limitation doesn't apply to institutional investors abroad, the change in strategy was only in Israel. In fact, the management fees paid to Israeli funds are markedly smaller than those to funds abroad. For example, a pension fund from "Harel" invests only three times as much abroad as in Israel, but its management fees abroad are ten times as high as those in Israel (source: Praedicta data).

The taxation imposed on nonresident investors is different than that imposed on domestic investors, and it impacts the taxation of the fund manager as well. Nonresident investors benefit from an exemption on capital gains taxes and VAT on investments in VC funds, while the nostro funds (firms' own capital) of institutional investors are liable for taxes. The tax payment by the general partner (GP) on profits from performance fees is based on the capital gains tax liability of its investors (LPs)—the fewer capital gains taxes paid by the LP, the less tax the GP will pay. Israeli institutional investors, in contrast to nonresidents, pay full VAT, like any other Israeli investor, on the annual management fees. As these can reach around 2.5 percent of the size of the investment, the annual VAT payments can reach significant amounts. The tax status can thus impact on attractive local VC funds' availability to Israeli institutional investors, as the local VC funds will prefer the nonresident investors rather than them.

In Israel, there isn't a method of registration and monitoring of private equity funds, in contrast to the US practice. Within the framework of the Dodd-Frank Act of 2010, the SEC (the US regulator) began to require private equity fund managers with more than $100 million in assets under management to file a report including administrative information on the fund and on the management company, such as the type of legal registration, which consulting companies are used, and what their sources of funds are. As a result of the registration, numerous irregularities were found in sample tests of the funds. In Israel, with a lack of regulations, it is difficult to monitor the types of advice the funds receive, conflicts of interest that are liable to be caused, and the types of fees charged.

However, within the framework of the Control of Financial Services Law, which is based on the recommendations of the "Baris Committee", it was established that all credit providers will be

required to assign capital against loans, to submit financial statements, to bear the cost of obtaining a license for activity and to submit reports to additional authorities—although only private equity funds that use a mezzanine capital investment strategy, and some real estate funds using a strategy similar to funding transactions, are included in this law.[5] In any case, these funds are not common in Israel, and therefore the new law cannot serve as a solution for the private equity funds market in Israel.

Conclusion

Despite the trend of growth in the allocation to investment funds in recent years, institutional investors in Israel still invest only a small portion of their assets in them, relative to institutional investors worldwide. This is quite notable in international comparison, which indicates that institutional investors in Israel allocate about 5 percent of their assets to alternative investments, compared with more than double that share in large pension funds worldwide. The gap in institutional investors' allocation between Israel and abroad may derive from the unique regulation in Israel regarding double management fees, but also from Israeli institutional investors holding back from investments that although they yield a return in the long term, are liable to lose money in the short term. Contributing to this holding back by investors in Israel are the current reports to the public regarding returns and fees alongside savers' abilities to move funds among new pension funds and provident funds.[6] It is likely that there are other reasons, related to the supply available to institutional investors in Israel, such as the limited access to good investment options in funds, in Israel and abroad, which prefer large global investors. This is particularly the case in access to PE funds, which in Israel is less developed than the VC funds area. However, VC funds are characterized by higher investment risks, which may also discourage investment. The access to funds in Israel is impacted by, among other things, their managers' tax considerations.

In order to encourage institutional investors in Israel, who manage pension and provident funds, to invest in technology companies in the early development stages (venture capital) the Ministry of Finance and the Israel Securities Authority formulated a plan this year to establish new private investment funds. The plan includes a protection mechanism by the government against some of the losses, if they materialize, through government guarantees for the investments by institutional investors in funds. In order to begin to operate, the funds need to raise NIS 400 million per fund from the public and institutional investors. In recent months, the funds have not succeeded in raising the initial capital, which strengthens the claim that institutional investors in Israel avoid investing in this sphere because of the barriers, which were delineated above, and which are not dealt with in the government proposal.

5 In the law's current format, such funds were exempted under a transitory provision.

6 In contrast to regulation in Israel requiring that funds provide current information to their investors, at most pension funds worldwide the investors do not have accessible information on returns for periods shorter than a year, and there are countries and types of funds in which even annual returns are not accessible.

Box 4.2

What is Marketplace Lending? How is it Different from Banks?

Since the financial crisis of 2008, a new type of credit intermediaries has developed, as an alternative to traditional banking.[1] These credit intermediaries work via online platforms to match borrowers against lenders directly.

This activity, part of the Fintech industry, is among many innovations that have developed in finance in recent years. Israel stands out in the large number of ventures and companies that have been established in the domestic market in this area, relative to the size of the population. However, the use and implementation of financial innovations in Israel so far has been slow compared with the rest of the world. Fintech encompasses various types of financial services—payments, financial infrastructures, insurance, investment consulting, raising equity and extending credit. This box will focus only on developments in the last category, extending credit.

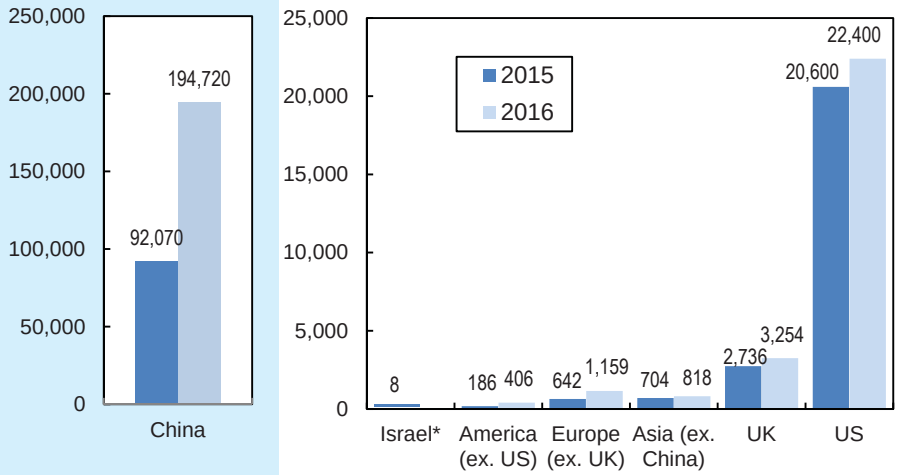
The estimated balance of credit through online financing platforms worldwide is negligible compared to the overall credit market and at this stage does not pose a threat to the traditional banking system. However, the growth rate of credit from this source is very high: in each of the years 2013–15, there were triple-figure growth rates of new loans, in both large and small markets. In the past two years, growth rates in advanced economies stabilized somewhat: in 2016, the growth rates of such credit were 22 percent in the US, 43 percent in the UK, and 41 percent in Europe (excluding the UK).[2]

The intermediaries operate according to various models. The most widespread one, in terms of scope of activities, is P2P (Person to Person) lending: individuals or institutional investors lend directly to household or to small businesses. The share of investment of institutional investors in such platforms is increasing, and there are also collaborations with banks. The first P2P platforms were established in the UK (2005) and in the US (2006). Today, such platforms are common both in advanced economies and in developing economies. In absolute terms, the largest market is China, followed at a notable distance by the US and the rest of the world (Figure 1).

[1] There isn't one accepted name for this activity, it has several broad descriptions—P2B (Person to Business), P2P (Person to Person), Marketplace Lending, and others.

[2] Growth rates are based on surveys on the Cambridge Centre for Alternative Finance website.

Figure 1
P2P Loan Originations to Households and Businesses, by Geographic Region
Annual Data, $ Million, 2015 and 2016



* Data for 2015.
SOURCE: Cambridge Centre for Alternative Finance.

In terms of the business model, P2P platforms have several common features, which also differentiate them from the banking system:

- Most of the platforms do not bear the credit risk themselves, and serve only as the intermediary. They do not profit from interest rate spreads, but rather from the fees they charge borrowers and lenders. It is the lenders who bear the credit risk.
- The intermediation activity does not involve maturity transformation. That is, unlike a bank deposit, the platforms do not commit to the lender to allow early withdrawal, before the loans have reached maturity. There is a possibility to try and sell the loans in a secondary market.
- The platforms make considerable use of technology for assessing the borrower's risk and for building a diversified investment portfolio for the lender. This greatly reduces the need for employees (and thus greatly decreases operating expenses), and shortens the loan approval process.
- A convenient "user experience".

In Israel, online credit intermediaries only began to develop in the past 3–4 years, and currently only a small number of companies operate in the sector. The balance of credit through these platforms is estimated at NIS 500 million, which is 0.3 percent compared with the total non-housing credit balance to households from the banking system, payment cards, and institutional investors. A number of institutional investors

recently entered the activities. To date, each credit intermediary has decided for itself which information to publish. However, for all of them, it would be correct to say that less information is available to the investor about the risk of the investment than compared with the bond market, for example, where the investor also bears default risk: the investor through a platform does not know the current or past financial state of the borrowers, as opposed to public companies that publish a prospectus before the issue, and periodic reports afterward. Even if the platform provides a credit rating for loans, it is based on an internal rating model, and the link between it and the default probability is not transparent. This is in contrast to a company that issued bonds, and often receives a rating from a large rating agency with a conventional rating model. New legislation approved this year will require broader publication of data by the platforms. (See below.)

Regulation generally views credit via online intermediaries positively. Most countries have not passed specific legislation for online credit, and the intermediaries in this channel are subject to the prevailing regulation in the field of financial intermediation. Countries that passed specific legislation focused on licensing, investor protections, and proper risk management. Alongside these, those same countries granted tax benefits for marketplace lending.

Oversight of credit intermediaries is very important. There have already been several platforms worldwide that turned out to be frauds.[3] In Israel, the Knesset approved this year an amendment to a law, which made the P2P platforms subject to the oversight of the Capital Market, Insurance, and Savings Authority.[4] The law established that online credit intermediaries need to receive a license in order to carry out such activity, and can receive a "basic" or "expanded" license. A basic license is for an intermediary with a total credit portfolio that does not exceed NIS 25 million, and an expanded license is for an intermediary whose total credit portfolio exceeds that sum. Within the framework of that law, requirements were instituted regarding an intermediary's capital, and limitations were imposed on the extent of an individual borrower's indebtedness and on the scope of credit from an individual lender. The law requires that the intermediaries publish the share of credit that was not repaid for every rating level (if there is one). The law also regulates provision of loans to businesses, not just private individuals. Until now, a company that wanted to receive credit from more than 35 people had to publish a prospectus and had the same reporting obligation as a company that wanted to issue bonds on the stock exchange. These are requirements that impose relatively high costs and are appropriate for large companies. Based on the amendment to the law, online platforms will be allowed to intermediate loans to businesses without the requirements of a reporting corporation under the Securities Law, so long as the total scope of loans of the corporation borrowing via such intermediaries is less than NIS 1 million. It is reasonable to presume that this change will markedly increase loans to micro companies. Worldwide, loans via online platforms to businesses generally evolve in tandem with loans to households. Within the framework of the regulation that will apply to the P2P platforms, it will also be necessary to issue a Prohibition on Money Laundering Order, which will be able to ease the opening of a bank account for online credit intermediaries. The new legislation in Israel prohibits banks from setting up their own P2P platforms for three years following the law going into effect, but allows credit card companies that will be separated from the banks as part of the "Strum Law" to do so.

[3] At the end of 2015, Ezubau, a Chinese entity that presented itself as a platform for providing credit, carried out fraud totaling $7.6 billion, while essentially it was a Ponzi scheme. Numerous irregularities were found at Swedish entity TrustBuddy, as well, leading to the bankruptcy of the company. In Sweden, this led to a marked negative impact on growth of the entire industry.

[4] This legislation is a continuation of the Control of Financial Services Law which was legislated in 2016. For details, see the box in Chapter 4 in the Bank of Israel's 2016 Annual Report.

The development of the credit platforms became possible due to the combination of several factors: 1) Technological innovations and expanded access to the Internet, from any place and at any time: These enable online intermediaries to operate on a very "thin" cost model with a minimum workforce, to expand their customer base (borrowers and lenders) rapidly and without notable investment, to offer a convenient user experience, and to develop automated risk assessment models that are updated with a high frequency and rely on new data sources. 2) The credit market is controlled mainly by banks in the household and small business sectors. Banks have high fixed costs, which derive from a large workforce and infrastructures that in some cases are obsolete. They are also subject to prudential regulation that adds on additional costs. The banks' additional costs, alongside imperfect competition, allows the credit platforms to offer loans at a lower price (interest rate) and/or to approach population segments that do not have access to bank credit. In this regard, it was found that in the UK, the Zopa platform offers interest rates that are lower than banks for small loans (FinTech Credit, BIS 2017); in Germany, it was found that although when taking into account the risk profile of the borrowers, the interest rates in the banking system and of the credit platforms are similar, yet the platforms extend credit to borrowers who are much riskier than those of the banking system—borrowers who in effect are excluded from that system (De Roure, et al. 2016).[5] 3) Another important factor that supports the platforms' business model is the low interest rate environment. Standard investment instruments such as government bonds and bank deposits have been offering near-zero yields for many years now. In such a situation, many investors search for yield and to that end are willing to accept higher risk. In addition, in a low interest rate environment, there are more profitable investment opportunities (projects with positive NPV), which increases the demand for credit. Against the background of the good state of the economy and low unemployment, the default rate is low. Furthermore, the default risk of low-interest rate loans is lower (incentive effect).[6] 4) Online platforms are viewed by the public as ventures that contribute to "social justice" as opposed to the negative image that was attached to the global banking system after the financial crisis. This is because investors can benefit directly from the interest rates paid on the loans, without the bank "eating into" the profit.

When attempting to assess what the future holds for the online credit platforms, the main issue that should be considered is the interest rate for borrowers and lenders. The final cost of a loan is made up of several components:

1. At banks, this cost is the sum of operating costs, regulatory costs, financing costs (the cost of raising the sources) and the cost of the risk of the loan not being repaid (credit risk). From the various costs, the banks can deduct noninterest income from services other than supplying the credit.
2. At online credit platforms, the cost is mainly comprised of financing costs (the cost of raising loans), as operating and regulatory costs are very low.[7] In some platforms credit risk cost is added when there is an insurance mechanism in place.

[5] The Internet site of one of the platforms in Israel conveys that new loans are requested through the platform for an average amount of NIS 18,000, for an average term of 3.3 years, shorter than the banking system, which grants nonhousing loans to households for 4.8 years, on average. The histories of the loans taken out through the online platforms indicate that about half of the borrowers noted that the loans they requested are to cover overdrafts and to repay debt.

[6] Stiglitz and Weiss, 1981.

[7] This was found for the US, for example, in Autonomous Research (2016): "Digital Lending—the 100 Billion Dollar Question", February.

The economic feasibility of the platforms is derived from a comparison of the costs of raising sources for them and for banks. A bank funds its operations through equity, bond issues, and deposits. It bears the credit risk, which is reflected in the funding costs of bonds and equities. However, the banking system generally benefits from explicit or implicit deposit insurance, and therefore the funding costs of deposits are low. Credit platforms do not have state-sponsored insurance. Some offer or mandate the use of an insurance mechanism to address instances of a delay in repayment. The cost of this insurance falls on the borrowers and lenders. However, the insurance is only partial, and can cover credit losses only up to the amount that was put aside in advance. The platforms don't bear the credit risk themselves, and lenders are supposed to take this risk into account and to require a return proportional to that risk on the loans they extend. Therefore it can be assumed that the cost of raising sources for banks is lower than the cost of attracting loans by the platforms, and that this cost of the platforms is more sensitive to changes in the interest rate environment.[8]

In a higher interest rate environment, the banks' comparative advantage in the cost of raising funds will become more significant. As people are generally risk averse, in a higher interest rate environment, more investors are likely to prefer a bank deposit that pays a reasonable interest rate with no credit risk to the borrower, rather than financing risky loans. In addition, if the default rates of loans via online platforms increase, the concern over investing in them will increase, and lenders will demand an even higher interest rate. In general, the platforms are more sensitive to changes in reputation, of each company individually and of the industry as a whole. Depositors in banks are not sensitive to banks' cyclical changes in credit losses because of the capital buffer that they maintain, and the confidence in prudential supervision. The big challenge facing credit platforms is to continue operating when the interest rate in the economy increases, alongside default rates, and their success in doing so will depend on the success of the risk assessment models they developed. The platforms rely on diversifying loans in order to minimize the risk. Although this practice does reduce the idiosyncratic risk of each loan, it does not protect against an increase in systemic risk of the overall market. This applies to the insurance mechanism as well—if the rise in default rates will be substantial, the credit losses might surpass the amount that was accumulated in the protection fund. Recall that these platforms have not yet had to deal with a financial crisis.

Facing the two extreme scenarios—complete disappearance of the banks in favor of online intermediaries or complete disappearance of marketplace lending in a higher interest rate environment—the most plausible scenario is one in which both banks and marketplace lending platforms are active in the market, whether as competing or as complementary entities. It is quite probable that the user experience and technological models that the online platforms developed will be integrated into the financial system. The development of the platforms requires the banks to increase their efficiency and invest in technological improvements, as has in fact occurred in recent years. This is a welcome outcome of the increased competition.

In any case, as of now, whether the platforms are competing with the banks for the same customers at a more attractive price, or are complementing their activities by servicing excluded segments or by extending the type of loans that banks avoid, the more their scope of activities increases, the more they will contribute to monetary pass-through by expanding the supply of credit in this period of low interest rates.

[8] For example, see the analysis regarding the UK credit market conducted by Deloitte in 2016 (see References).

References

BIS, Financial Stability Board, "FinTech Credit, Market Structure, Business Models and Financial Stability Implications", (2017).

Cambridge Centre for Alternative Finance "Expanding Horizons: The Third European Alternative Finance Industry Report", (2018).

Cambridge Centre for Alternative Finance and Chicago-Booth Polsky Center, "The Americas Alternative Finance Industry Report – Hitting Stride", (2017).

Cambridge Centre for Alternative Finance, "Entrenching Innovation: the 4th UK Alternative Finance Industry Report", 2017.

Cambridge Centre for Alternative Finance and Australian Center for Financial Studies, "Cultivating Growth - The 2nd Asia Pacific Region Alternative Finance Industry Report", 2017.

Cambridge Centre for Alternative Finance and Energy4Impact, "The Africa and Middle East Alternative Finance Benchmarking Report", 2017.

Deloitte. "A Temporary Phenomenon? Marketplace Lending – An Analysis of the UK Market", May 2016.

De Roure, C., L. Pelizzon and P. Tasca,(2016). "How Does P2P Lending Fit into the Consumer Credit Market?", Deutsche Bundesbank Discussion Papers, no. 30/2016.

Stiglitz, Joseph E. and Andrew Weiss (1981). "Credit Rationing in Markets with Imperfect Information", The American Economic Review 71.3 (1981): 393-410.

UBS, "Global Banks: Is FinTech a Threat or an Opportunity?", 2016.