TAUB CENTER
FOR SOCIAL POLICY STUDIES IN ISRAEL

Household Debt in Israel

Labib Shami

Policy Paper No. 01.2019

Jerusalem, January 2019

Taub Center for Social Policy Studies in Israel

The Taub Center was established in 1982 under the leadership and vision of Herbert M. Singer, Henry Taub, and the American Jewish Joint Distribution Committee. The Center is funded by a permanent endowment created by the Henry and Marilyn Taub Foundation, the Herbert M. and Nell Singer Foundation, Jane and John Colman, the Kolker-Saxon-Hallock Family Foundation, the Milton A. and Roslyn Z. Wolf Family Foundation, and the American Jewish Joint Distribution Committee.

Center address: 15 Ha'ari Street, Jerusalem, Israel
Telephone: 02 5671818   Fax: 02 5671919
Email: info@taubcenter.org.il   Website: www.taubcenter.org.il

Internet edition

Household Debt in Israel

Labib Shami*

Abstract

The ratio of household debt to GDP in Israel is considered to be low relative to other developed countries and particularly relative to the threshold established by the IMF (65 percent) as an indicator of economic crises. Nonetheless, this ratio has been characterized by an upward trend during the last decade as the result of low interest rates, the rise in housing prices, the increase in private consumption and growth in the supply of credit as a result of the entry of new financial institutions into the credit market.

The current research examines the level of debt among households in Israel, according to income decile, and assesses the potential risk implicit in the trends during the last decade. The findings provide grounds for concern regarding the financial stability of households in the lowest decile. Although the proportion of debtors in the lowest decile is lower than in the others, the level of debt among those households far exceeds their annual income, casting doubt on their repayment ability. Moreover, the lowest decile has the lowest proportion of debtors of working age, along with the highest proportion of debtors above the age of 54. In other words, it appears that they do not take out a loan in order to smooth consumption over their lifetime, as do the upper deciles.

An examination of the debt of the lowest decile according to population group shows that the highest median ratio of debt to annual income is to be found among the ultra-Orthodox. Among the Arab Israeli population, most of the loans are for consumption and non-housing purposes, a result of the difficulty they encounter in obtaining a mortgage.

* Dr. Labib Shami, Senior Researcher, Taub Center; Economics Department, Western Galilee College; Department of Economics, Haifa University..

Introduction

The existence of a competitive credit market, which provides households with access to all banking services, is perceived as one of the main factors determining the social welfare of an economy, particularly in the case of low-income earners. Savings and the accessibility of credit products (such as loans) enable households to regulate their level of expenditure, with the goal of maintaining it at a relatively constant level over time (smoothing of consumption), protecting themselves against income shocks and investing in human and physical capital, which will enable them to achieve a higher standard of living in the future.

As a result of the global economic crisis that began in 2008, there has been increasing recognition of the growth in household debt as a cause of financial crises and a slowdown in economic growth (Bezemer and Grydaki 2014; Bezemer, Grydaki and Zhang 2016; Jordà, Schularick and Taylor 2016; Schularick and Taylor 2012). Research carried out by the International Monetary Fund (IMF) found that household debt grew at increased rates during the three years prior to an economic crisis (IMF 2017). Furthermore, the authors of the research found a negative relationship between the level of household debt and the rate of economic growth. Thus, an increase of 5 percentage points in the ratio of household debt to GDP leads to a drop of 1.25 percent in the growth of GDP during the three subsequent years.

The goal of the current research is to estimate the potential risk implicit in the trends in household debt in Israel during the past decade. The chapter describes the two main potential market failures that are liable to expose the financial system to risk. The first is the aggregate risk related to the financial vulnerability of weaker populations in the country. The debtor households in these groups are liable to collapse simultaneously in an economic slowdown. The second is that many of the households obtain loans from non-bank sources, which are unaware of their credit history. This situation can lead to moral hazard and a reduction in the overall quality of credit in the economy.

The first part of the study will focus on the changes that have occurred in the credit market in Israel in recent years and, in particular, the entry of non-bank entities into the consumer credit market. The second part will look at household debt in Israel during the last decade from the aggregate perspective. The analysis will then focus on the leverage of households according to income decile and will look at the composition of debtors according to population group, age, and source of loan.

1. Changes in the credit market in Israel

In recent years, the Bank of Israel and the Ministry of Finance have taken steps to encourage competition in the banking industry and particularly in the consumer credit market. These steps have focused on, among other things, the provision of advanced credit solutions to households and small businesses. To this end, an inter-ministerial committee was established to examine ways of increasing competition in the banking system. In March 2013, it submitted its final report which focused on three main directions: increasing the number of players both inside and outside the banking system; increasing competition between the existing players; and additional complementary steps (Bank of Israel 2013).

The alternatives proposed in the report in order to increase the number of players inside and outside the banking system included an increase in the activity of non-bank credit providers, encouraging the establishment of a virtual bank and a credit union, encouraging the entry of foreign banks and the expansion of the Postal Bank's banking activity. The authors of the report emphasized the advantages in providing retail credit to the public through financial institutions, such as insurance companies, pension funds, and provident funds. One of the main recommendations in this context was the creation of mechanisms that will enable the allocation of credit to households and small businesses from the savings of the public held with the financial institutions.

The complexity of the issue and the desire to expand credit while protecting savers led to the establishment of a working group to examine the steps needed to advance the process and the various issues in providing retail credit from pension savings. In June 2015, the Committee for Encouraging Competition in Common Banking Financial Services (the Strum Committee) was established. In September 2016, the Committee published a final report that included, among other things, a recommendation to establish new banks and independent credit companies (such as Mimun Yashir) and to provide approval for financial institutions to operate in the area of retail credit, subject to conditions to be set by the Ministry of Finance.

The last recommendation led to a public debate and even a demand that the Knesset Finance Committee cancel the initiative, based on the claim that providing consumer loans from pension savings is liable to reduce the pension savings of the borrowers and will threaten the savings of the other fund members (Ben-Israel 2016). In January 2017, the Knesset approved the Law for Promotion of Competition and Reduction of Concentration in the Banking Market in Israel, which was based on the recommendations of the Strum Committee.

The changes that have occurred in the banking and credit industry in Israel have led to major structural changes in the competitive and technological environment of the market in general and of the retail credit market in particular. These changes include the entry of non-bank entities into the credit market and the removal of technological barriers, alongside increased efficiency and the assimilation of innovative technologies (such as digital banking) in the banks' interface with clients. These developments have increased the supply of credit and improved the access to various credit products among households in general. Currently, household credit in Israel is obtained from four main sources: banks, financial institutions, the government, and credit card companies.[1]

Credit card companies are among the new players that have entered the market in recent years and they have shown rapid growth in the total consumer credit they provide. According to Bank of Israel figures, total balance-sheet credit (i.e., credit actually provided) under the responsibility of the credit card companies grew in 2017 by a rate of 15.6 percent (an increase of NIS 21.1 billion).[2] The increase in interest-bearing credit to individuals accounted for 68 percent of this growth.

Figure 1 presents the trends in interest-bearing credit provided by the credit card companies to individuals between 2008 and 2017. As can be seen, there was an increase of 148 percent in this type of credit from 2013 to 2017 and the share of credit provided by the credit card companies (which also includes, for example, lines of credit) rose from 42 percent to 57 percent.

Another player that has in recent years increased its share of the consumer credit market is the financial institutions, such as insurance companies, pension funds, and provident funds. Figure 2 presents the trend in non-housing loans provided by these sources to households between 2008 and 2017. As can be seen, there was an increase of 140 percent in the total loans they provided to households during from 2013 to 2017.

1 Poalim Express, CAL, Leumicard, and Isracard.

2 This includes commercial credit, interest-bearing credit to individuals and accounts receivable that do not bear interest (regular transactions, transactions in installments at the expense of the business, and other transactions).

Figure 1. Credit carrying interest charges for private individuals
Credit card companies

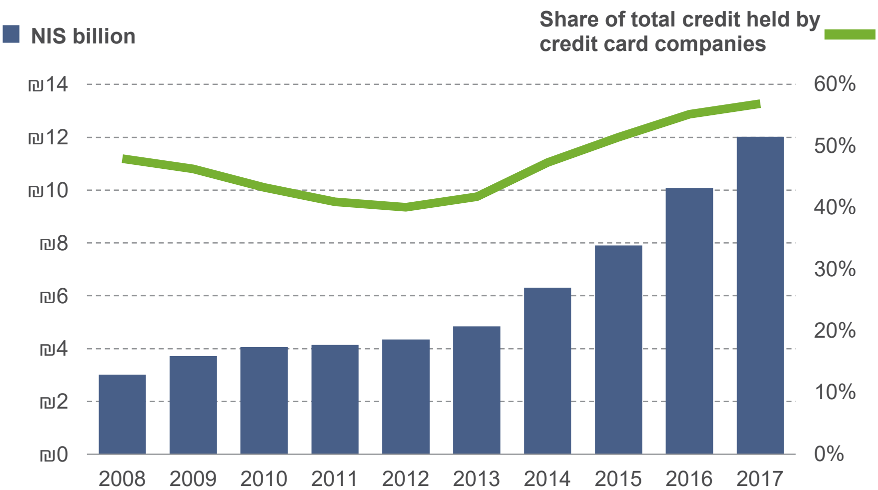
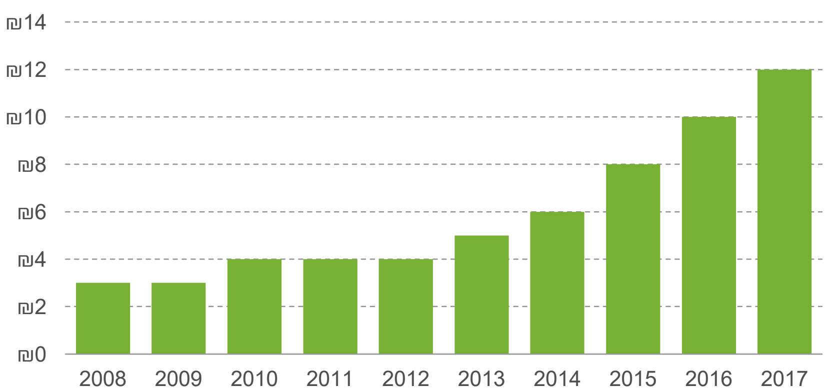


Figure 2. Trends in non-housing household loans given by financial institutions
NIS billions



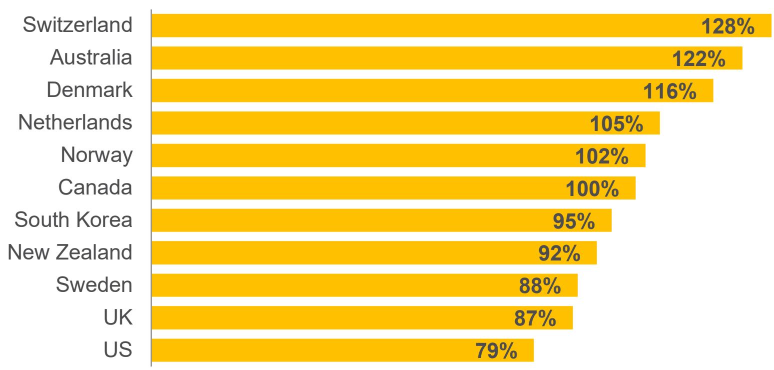
For both figures: Source: Labib Shami, Taub Center | **Data: Bank of Israel website**

The entry of financial institutions and credit card companies into the consumer credit market and the growth in the amount of credit they provide relative to past years led to a drop in the rate of growth of total household credit provided by the banks in 2017. As a result, the total credit provided by banks to households grew that year by only 3.9 percent, as compared to an average of 7.4 percent in each of the last five years (Bank of Israel 2018b).

2. Household debt during the past decade

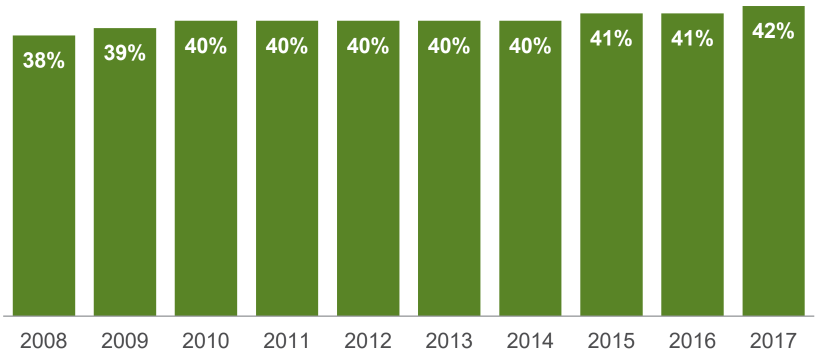
In recent years, an increasing number of countries have been characterized by a particularly high household debt to GDP ratio of close to 100 percent or even higher (Figure 3). In contrast, Israel's ratio stands at only 42 percent, as of 2017. However, and despite the relatively positive situation, the ratio of household debt to GDP in Israel during the last decade has been on an upward trend (Figure 4).

Figure 3. Household debt as a percent of GDP, 2017
Selected countries



Source: Labib Shami, Taub Center | Data: Bank for International Settlements

Figure 4. Ratio of household debt to GDP, Israel



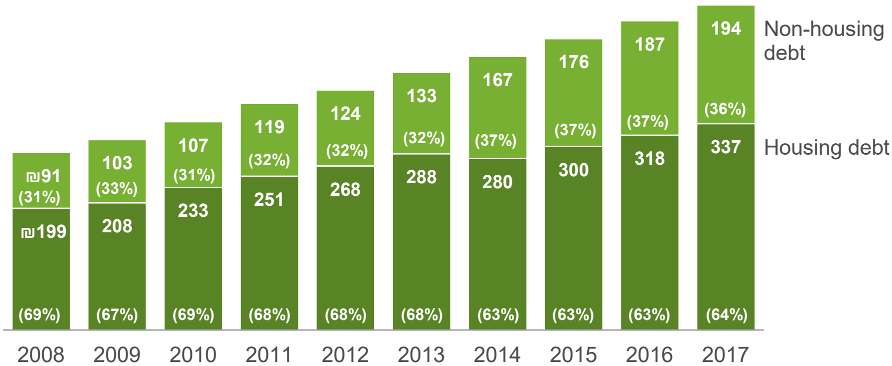
Source: Labib Shami, Taub Center | Data: Bank of Israel website, *Statistical Bulletin 2017*

Figure 5 presents the distribution of household debt according to type, that is, housing debt (mortgages) and non-housing debt. Total household debt at the end of 2017 stood at about NIS 530 billion, following growth of about NIS 26 billion during the year (5.1 percent). The rate of growth in non-housing debt in that year stood at about 4 percent while the growth in housing debt (which is in general backed by the value of the underlying asset) stood at only about 1.4 percent.

Overall, between 2008 and 2017, total household debt grew by 84 percent. Total housing debt grew by 70 percent, in comparison to total non-housing debt which grew by 114 percent.

The increase in household debt during the past decade has been the result of, among other things, the increase in housing prices. Ryoo (2016) presents a model in which household debt is positively correlated with changes in real estate prices. Stockhammer and Wildauer (2017) show that households take out mortgages of larger size as real estate prices rise, which increases their ratio of debt to disposable income. Other causes of the increase in debt include low interest rates, which encourage households to take loans; the increase in the supply of credit as a result of the entry of new financial institutions into the industry, which allows more households to obtain loans (see below in the section entitled "Breakdown by loan source"); and the increase in private consumption.

Figure 5. Household debt
NIS billion



Source: Labib Shami, Taub Center | Data: Bank of Israel website, *Statistical Bulletin 2017*

In a previous study by the Taub Center in 2015 which examined the gap between household income and expenditure in Israel, a correlation was found between household consumption patterns and the size of the negative current gap in their expenditures (Shraberman 2018). He shows that personal expenses, such as clothing, haircare, cosmetics, etc., are correlated with an increase in the negative current gap of households to a much greater extent since these are relatively large and infrequent expenditures, which are usually unplanned and which raise the household's total expenditure, making it difficult to maintain a balanced budget. An increase of 1 percent in the relative share of personal expenses within total expenses leads to an increase of 4.6 percent in the negative current gap in non-married households and 7.2 percent in married households.

The fact that the growth in debt is partly the result of the growth in consumer credit calls for an in-depth examination of the credit risks that arise from the over-leveraging of households, or, in other words, taking on more debt than is justified by their income. Such a situation is liable to endanger their financial stability in the case of an increase in the interest rate, which will raise the amounts to be repaid to the lender or will lead to a drop in the price of real estate (which will reduce the value of their assets). Therefore, the Bank of Israel has recently been working to establish a credit database that brings together information on the credit histories of households and small businesses, which will help credit providers in correctly assessing the repayment ability of borrowers. The database will be operational at the beginning of 2019.

3. Leverage among households by income decile

As mentioned, household debt relative to GDP in Israel is lower than in many other countries. However, an aggregate measure cannot provide an indication of household debt levels according to income level nor according to population group. To this end, the current research carried out an additional analysis on the basis of *Households in Israel: A Long-Term Survey*, which was conducted in 2016 by the Central Bureau of Statistics (CBS) together with the Bank of Israel, the National Insurance Institute, the Ministry of Finance, and the Ministry of Education. The survey has been carried out annually since 2012 and is unique in that it tracks a fixed, representative sample of households and thus provides individual level data and data on household debt in particular. The survey includes data gathered from 12,297 respondents, which represents 4,180 households.[3]

The analysis of the sample population according to income deciles raises concern regarding the financial stability of households in the lowest decile. Although the proportion of debtors in that decile is only 18 percent, as compared to about 56 percent among the upper deciles (Figure 6a), the depth of their indebtedness is greater. Thus, the median ratio of debt to gross annual income from all sources for debtor households in this decile stands at 2.8, while the average is close to 8.0 (Figure 6b).[4] The large gap between the median and the average indicates the existence of a "tail" in the distribution of debtor households in the lowest decile, or in other words a concentration of households whose debt is in excess of their annual income, and for whom there is some doubt regarding their repayment ability.[5] The lowest median ratio of debt to income (0.46) is observed among households in the sixth decile.

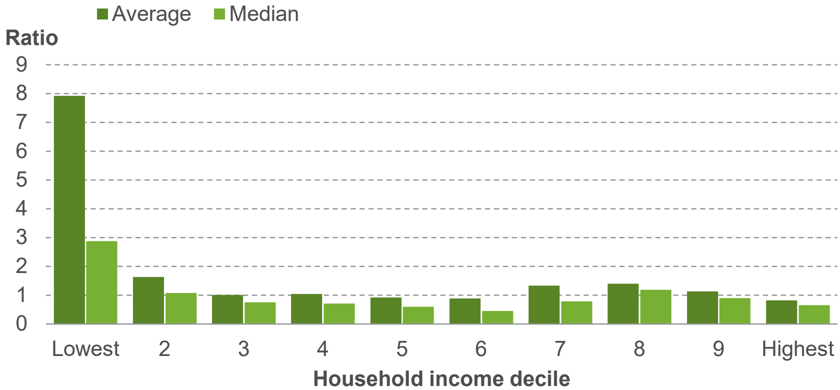
3 Data from 481 outlying observations were omitted, such that the final sample included 3,699 households.

4 Gross annual income reported per household includes gross annual income from a pension from a place of employment in Israel or abroad; income from a study fund for sabbatical studies in the case of teachers, lecturers, and researchers; income from provident funds; income from educational scholarships (including support from a yeshiva); income from foreign institutions (including reparations from Germany); income from individuals in Israel or abroad (including alimony); income from government institutions and ministries in Israel; interest income; dividends and capital gains; income from the rental of property; and business income.

5 This may also be the result of underreporting of income in the lower deciles.

Figure 6a. Share of those with debt by income decile, 2016

Figure 6b. Ratio of debt to annual income, 2016
By household income decile



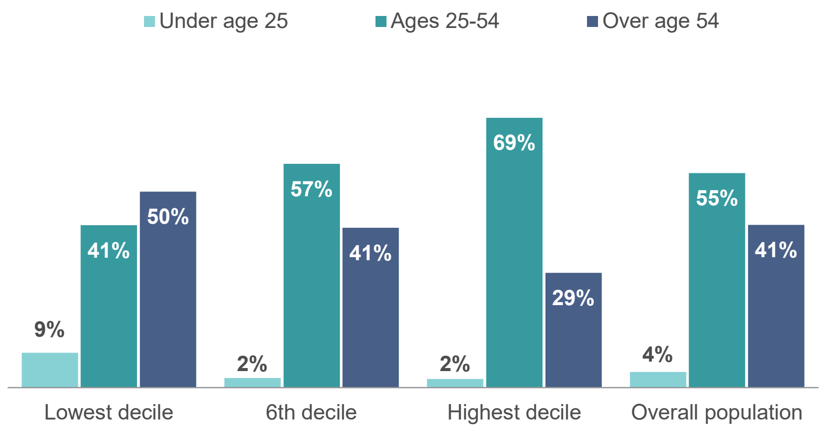
Source: Labib Shami, Taub Center | Data: CBS, *Households in Israel, Long-term survey 2016*

Distribution by age

An examination of the age distribution of the sample participants according to income decile reveals that one-half of the lowest decile is above the age of 54 while only 9 percent are below the age of 25. In contrast, most of those in the highest decile (69 percent) are individuals of working age (25–54), as opposed to only 41 percent in the lowest decile (Figure 7). The proportion of working-age debtors in the highest decile is also higher than in the lowest decile (75 percent vs. 59 percent; Figure 8). This trend is reversed when comparing the proportion of debtors above the age of 54 in the lowest and highest deciles (35 percent vs. 22 percent).

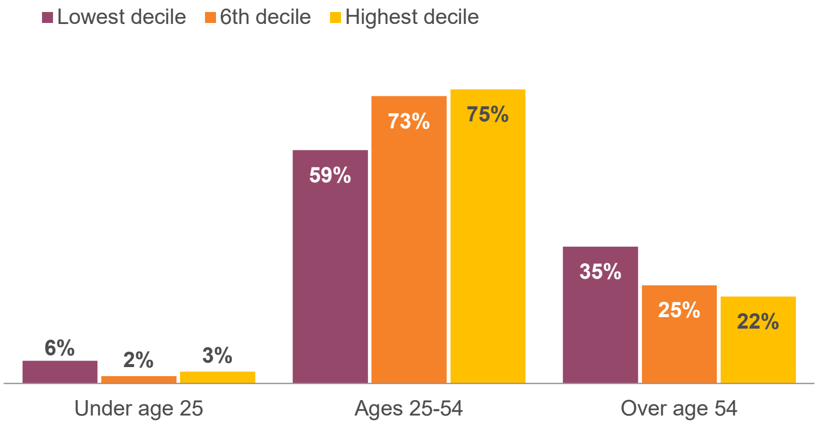
The behavior of the sample participants in the highest decile is consistent with the consumption smoothing theory, which predicts that individuals attempt to balance their level of expenditure over their lifetime, by taking loans at a young age when their income is low and reducing their indebtedness as they grow older. This implies that they are in a better position than low-income individuals who apparently are not managing to repay their loans as they grow older (which explains the higher proportion of debtors over the age of 54 in the lowest decile).

Figure 7. Age distribution, selected deciles and the overall population, 2016



Source: Labib Shami, Taub Center | Data: CBS, *Households in Israel, Long-term survey 2016*

Figure 8. Distribution of those with debt by age, selected deciles, 2016



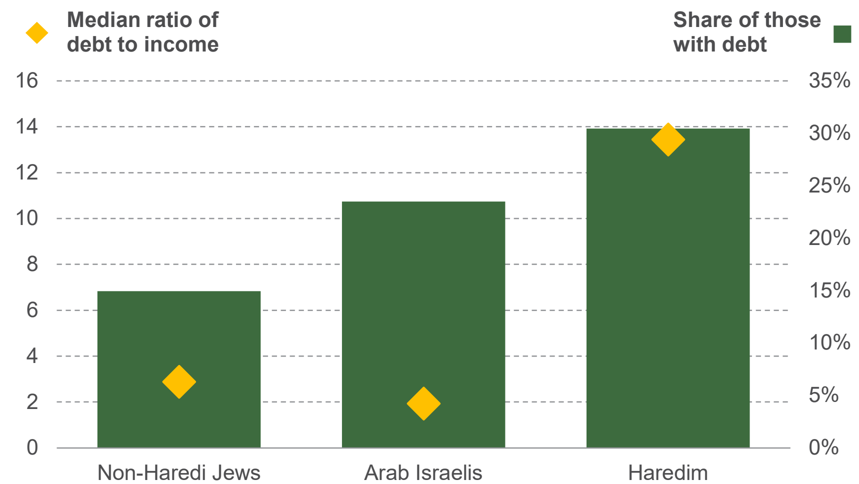
Source: Labib Shami, Taub Center | Data: CBS, *Households in Israel, Long-term survey 2016*

Distribution by population group — the lowest decile

The distribution of debtors in the lowest decile according to population group shows significant differences between the groups. Of the Arab Israelis, 23 percent of those in the lowest decile are in debt and their median ratio of debt to annual income is close to 2 (Figure 9). Among non-ultra-Orthodox Jews (non-Haredi Jews) in the lowest decile, the proportion of debtors is only 15 percent; however, their debt to income ratio is higher (about 3). Among Haredi Jews in the lowest decile, both figures are much higher than for the other population groups: 30 percent are in debt and the median debt to annual income ratio is 13.5.

The major differences between the Arab Israeli and Jewish populations and between the Jewish population in general and the Haredi population in particular are primarily the result of the purpose of their loans. Among Jews, a relatively high percentage have taken out mortgages: 52 percent of the non-Haredi and 72 percent of the Haredi; while the proportion who have taken out consumer loans is 64 percent and 43 percent, respectively. In contrast, the vast majority of Arab Israeli debtors (89 percent) have taken out consumer loans while only 15 percent have taken out a mortgage. A possible explanation of this difference was suggested in a study by the Bank of Israel (2017a) which found that the high proportion of the Arab Israeli population with consumer credit is due to their increased difficulty in obtaining a mortgage against an asset they own. In other words, the credit recorded as a consumer loan may actually be used for housing.

Figure 9. Debtors in the lowest income decile by population group, 2016

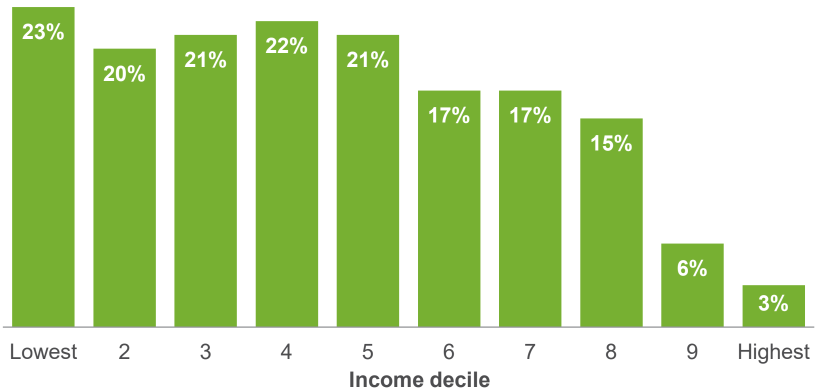


Source: Labib Shami, Taub Center | Data: CBS, *Households in Israel, Long-term survey 2016*

Furthermore, in response to a question regarding their current financial situation, the highest proportion of households which reported that they are in debt was in the lowest decile (Figure 10).[6] About one-quarter of the households in this decile reported that they are in debt, as opposed to about one-sixth (17 percent) of those in the sixth decile and only 3 percent of households in the highest decile.

6 A household in debt is defined as one whose income is not sufficient to cover its expenses and it does not have savings. In contrast, a household with debt is one that has taken out a loan from any source (see Figure 6a above).

Figure 10. Share of households with debt, by income decile
Self-report



Note: Households with income less than expenditure and who have no savings.
Source: Labib Shami, Taub Center | Data: CBS, 2016

Breakdown by loan source

An examination of the proportion of those with non-housing credit in each income decile according to source shows that the two lowest deciles tend to use non-bank sources more than the two highest deciles.[7] As can be seen in Table 1, the proportion of those with non-housing loans from a non-bank source in the lower quintile is 22.5 percent, in contrast to about 12 percent in the upper quintile. In contrast, the proportion of those who turn to the banks for a non-housing loan is greater at the higher income levels (88 percent in the lowest quintile versus 92 percent in the highest quintile).

These findings support the claim that the entry of non-bank entities into the consumer credit market is increasing the exposure of poor households to consumer credit, which may be raising the risk in this industry.

7 Non-bank sources include insurance companies, financial institutions, credit card companies, financial leasing companies and charitable institutions.

Table 1. Share of those with non-housing loans, by loan source

Decile	Share with a bank loan as a percent of all those with loans	Share with a non-bank loan as a percent of all those with loans	Share of all those with loans as a percent of all households in the decile
Lowest	87%	20%	15%
2	88%	25%	14%
3	91%	16%	22%
4	94%	20%	28%
5	93%	17%	33%
6	93%	20%	35%
7	94%	25%	34%
8	90%	18%	37%
9	92%	9%	35%
Highest	92%	14%	24%

Source: Labib Shami, Taub Center | Data: CBS, 2016

Conclusion

The ratio of household debt to GDP in Israel stands at 42 percent, which is low relative to other developed countries. Nonetheless, it is worth considering the upward trend in recent years and in particular among the low-income deciles. A higher proportion of households in the lowest decile report that they are in debt and their level of indebtedness (the median ratio of debt to income) is also higher.

It appears that in the current economic situation the proportion of lower-decile households within total debt is not at a level that puts the financial system at risk.[8] Nonetheless, if the economic situation deteriorates, this is liable to disproportionately harm poor households. Therefore, the over-leveraging of households in the lower deciles may lead to financial vulnerability and may worsen their already precarious financial situation. This possibility leads to aggregate uncertainty since the risk in this case is not dispersed among the households of the lowest income decile but rather exists simultaneously among all households.

8 According to the sample, the lowest two deciles account for about 5 percent of the economy's debt.

It is possible that the increased access of households in the lower deciles to the credit market is related to the changes in the credit industry in Israel in recent years. The entry of financial institutions and credit card companies into the market has increased the supply of credit to all households and particularly those in the lower deciles, and has led to greater competition in the industry. However, this process also has disadvantages, in that it exposes the industry to moral hazard. This is a result of the fact that these credit providers do not have any information about the overall debt of their borrowers, which may result in loans being provided to households that lack the ability to repay them. The first signs of this problem can be seen in the decline of credit quality in the economy. According to the Bank of Israel (2018a), the expense due to credit losses among credit card companies (i.e. their expense due to unpaid debts) rose from 1.45 percent of total credit in 2016 to 1.92 percent in 2017 and the proportion of written-off debts due to inability to repay rose from 0.91 to 1.28 percent of credit. Similarly, the proportion of problematic debt in 2017 was 6.2 percent.[9]

As mentioned, the Bank of Israel is in the process of creating a database that will include information on the credit history of households and small businesses. This process has two aspects: on the one hand, the creation of the database may lead to the exclusion of households with weak repayment ability from the credit market and will tie them to their bank. Furthermore, the refusal of credit providers to provide a loan to individuals with a low credit rating may force them to take loans in the gray market at high interest rates, which will increase the chance that they will be unable to repay the debt. On the other hand, the database will reduce the aggregate risk in the credit market by making information available on borrowers and thus will assist credit providers in correctly assessing their repayment ability. This step will reduce the interest rate for borrowers with a high credit rating and thus will lower the cost of financing in the economy.

9 Problematic debt is a payment that is over 90 days in arrears.

References

English

Alvarez-Cuadrado, F., & Japaridze, I. (2017). "Trickle-down consumption, financial deregulation, inequality, and indebtedness." *Journal of Economic Behavior & Organization*, 134, 1-26.

Bank of Israel (2014). *Israel's Banking System — Annual Survey, 2013*. Israel: Bank of Israel.

Bank of Israel (2018a). *Israel's Banking System — Annual Survey 2017*. Israel: Bank of Israel.

Bank of Israel (2018b). *Statistical Bulletin 2017*. Israel: Bank of Israel.

Bezemer, D., & Grydaki, M. (2014). "Financial fragility in the Great Moderation." *Journal of Banking and Finance*, 49, 169-177.

Bezemer, D., Grydaki, M., & Zhang, L. (2016). "More mortgages, lower growth?" *Economic Inquiry*, 54 (1), 652-674.

IMF (2017). *Global financial stability report October 2017: Is growth at risk?* World Economic and Financial Surveys series. Washington D.C., US: International Monetary Fund.

Jordà, Ò., Schularick, M., & Taylor, A. M. (2016). "The great mortgaging: housing finance, crises and business cycles." *Economic Policy* 31 (85), 107-152.

Kumhof, M., Ranciere, R., and Winant, P. (2015). "Inequality, leverage, and crises." *American Economic Review* 105 (3), 1217-1245.

Ryoo, S. (2016). "Household debt and housing bubbles: A Minskian approach to boom bust cycles." *Journal of Evolutionary Economics* 26 (5), 971-1006.

Schularick, M., & Taylor, A. M. (2012). "Credit booms gone bust: Monetary policy, leverage cycles, and financial crises, 1870-2008." *American Economic Review* 102 (2), 1029-1061.

Shraberman, K. (2018). *The income-expenditure gap and household debt*. Policy Paper No. 01.2018. Jerusalem, Israel: Taub Center for Social Policy Studies in Israel.

Stockhammer, E., & Wildauer, R. (2017). *Expenditure cascades, low interest rates or property booms? Determinants of household debt in OECD countries*. Post Keynesian Economics Study Group, Working Paper 1710.

Hebrew

Bank of Israel (2016). *Households in Israel, Long-term survey, fourth pulse.* Israel: Bank of Israel.

Bank of Israel (2017a). *Analysis of the mortgage market for borrowers from the Arab sector, following structural failures in the housing area in this sector.* Research Department, Discussion Papers. Israel: Bank of Israel.

Ben-Israel, A. (2016). "Anger at Strom: 'Like encouraging gambling; it will be catastrophic." *Globes*, 6 January 2016.