

# Financial Stability Report Second Half of 2024



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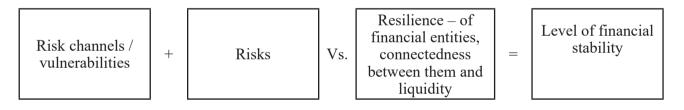
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# Financial Stability Report Second Half of 2024

### Structure of the Report, Analysis Methodology, and Its Purpose

In the Financial Stability Report for the second half of 2024, the bank's economists analyze the level of financial stability in Israel. This is determined based on the overall vulnerability of the financial system, considering the channels of risk exposure, relevant risk scenarios for the period, and the resilience of financial institutions (Figure 1.1).¹ The final assessment of the financial stability level of the economy relies on conclusions drawn from all three of these components together. The evaluations and analyses presented in the report are based on examining structural characteristics, using analytical tools, and assessing the most up-to-date background conditions in the global economy. The report highlights the main risks to the financial system in Israel, which could have significant implications for economic activity. The purpose of the report is to raise awareness among policymakers and the general public regarding potential threats to the financial system in the short and medium term, and to enable appropriate preparedness.



The Financial Stability Monitor for Israel is used to assess financial stability and indicate changes during the reviewed period.<sup>2</sup> The monitor consists of a set of quantitative indicators that describe risk levels across various exposure channels and the resilience of financial institutions. The risk level for the reviewed period is determined by comparing these quantitative indicators to their long-term historical distributions in Israel.<sup>3</sup> Based on the monitor's findings, an analysis is conducted to evaluate the observed vulnerabilities. This evaluation considers past events in the local economy and compares the developments of the selected indicators (magnitude of changes) to international developments, focusing on macroeconomic channels, asset prices, and credit. The final and subjective assessment of risk levels in each channel is presented using a color-coded heat map, ranging from the lowest potential vulnerability (dark green) to the highest vulnerability (red).

- 1 A description of the components of Figure 1.1 can be found in the Financial Stability Report for the second half of 2022.
- 2 For details, see "Monitor for Financial Stability in Israel," Periodic Papers Series 2020.02, Bank of Israel [in Hebrew].
- 3 The monitor is designed to identify the main areas of vulnerability to financial shocks in the economy and not to predict the timing or assess the magnitude of such shocks. The monitor also does not provide a perspective on the severity of vulnerabilities compared to extreme periods (crises) in other countries.

### **Main Points**

- The financial system in Israel demonstrates high resilience in the face of ongoing security challenges and geopolitical uncertainty that have persisted for over a year.
- During the reviewed period, the risk in the macroeconomic channel remained high, due to the security situation and its impact on economic activity, which remained below the long-term trend. Concurrently, the government's financing needs and costs increased, Israel's risk premium in financial markets rose, and credit rating agencies downgraded Israel's rating while maintaining a negative outlook for future ratings.
- Local stock indices rose in the last quarter, partially offsetting the cumulative underperformance since the beginning of 2023 in dollar terms. Despite the increases, stock prices in Israel remain low compared to global stock indices in dollar terms, indicating a relatively high risk assessment in Israel.
- Housing prices continued to rise, following a renewed increase in the first half of the year, alongside a
  recovery in transaction volumes. Rent prices continued to rise, leading to stabilization and even a slight
  decrease in the price-to-rent ratio.
- Credit repayment delinquency rates remained stable and historically low, and banks' credit loss provisions also decreased. Against this backdrop, our assessment is that the risk level in the credit channel moderated to a medium-high level in the second half of 2024.
- The resilience of major financial institutions remained high. There was an improvement in the capital ratios of both banks and insurance companies, which were already high.
- Two risk scenarios for the economy relate to the potential for further impact on the macroeconomic channel. The first scenario involves the continuation of security risks that materialized with the outbreak of the Swords of Iron War, referring to a worsening of the local geopolitical situation. The second scenario has to do with the high uncertainty in the global economy, alongside deglobalization processes and a decline in global growth.

### 1. Summary Assessment

Our assessment of financial system stability considers two key aspects: the level of exposure in risk channels and the risk level in various scenarios, and the resilience and absorption capacity of financial institutions. In the second half of 2024, the financial system demonstrated resilience amid the security conflict and geopolitical tensions that have persisted for over a year. This resilience is reflected in the financial institutions' adequate capital and liquidity ratios and sufficient absorption buffers. Furthermore, the financial system's stability is supported by two key macroeconomic factors: a low government debt-to-GDP ratio prior to the outbreak of the war, and a high level of foreign exchange reserves at the Bank of Israel. As shown in Figure 1.2, despite the high exposure to risk and the heightened risk scenarios, the risk to resilience remains low, and the risk to the financial system remains at a medium-low level.

Chart 2: Summary Assessment of the Risk Level in the Financial System Using a Heat Map



The macroeconomic data after more than a year of wartime activity reflect a significant slowdown in growth, alongside an inflation rate that remains above the Bank of Israel's price stability target. Nevertheless, economic activity continues to recover at a moderate pace. Supply constraints in certain sectors of the economy continue to delay the closing of the gap between actual output levels and the expected long-term trend. Tax changes, particularly the increase in VAT, alongside supply constraints and high public expenditure, are expected to raise the inflation rate during the first half of the year before it moderates into the target range in the second half.

During the reviewed period, Israel's risk premium reached a high level, and the real yield on ten-year government bonds—an indicator of the cost of government debt issuance—reached its highest point in the past decade. However, toward the end of the period, the risk premium and debt financing costs decreased, reflecting a moderation in geopolitical risk assessments and an improvement in sentiment toward local markets.

Given these developments and progress on the state budget for 2025, our assessment is that financial asset price risks have declined to a medium-high level (Figure 1.3). This is reflected in the increases in local stock indices during the half-year, which partially offset the cumulative underperformance in dollar terms since the beginning of 2023. Additionally, there were net purchases of shekel-denominated financial assets by foreign investors, reversing the trend of sell-offs that characterized the beginning of the war.

Activity in the construction industry remains low compared to prewar levels, mainly due to significant labor constraints that persisted until the end of the year. These constraints are reflected in residential construction investment data.<sup>4</sup> After the number of housing completions peaked at the end of 2023, the pace of building completions was lower in 2024.<sup>5</sup>

Private sector credit grew faster in recent months than in 2023 and early 2024, leading to an increase in the

<sup>4</sup> In normal periods, the Central Bureau of Statistics calculates this estimate based on the duration of construction, derived from annual contractor reports on building starts and completions. In other periods, such as during the Second Intifada, the COVID-19 crisis, and the current period, calculations are based on labor input.

<sup>5</sup> At the time of writing this report, data on investment, building starts, and building completions are available only until the end of the third quarter of 2024.

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debt-to-GDP ratio for both business and household credit. Concurrently, nonaccruing credit<sup>6</sup> as a share of bank loans has been in a moderate downward trend across all segments, including construction and real estate, since the local peak at the end of 2023. As a result, banks have reduced their credit loss provisions. Based on these indicators, our assessment is that the credit channel risk has declined relative to the beginning of the war, and that the construction industry has adjusted to the new business and financial environment.

Credit growth was primarily driven by business lending to construction companies and by household mortgages. As part of the process of adjustment to the interest rate environment, there has been a shift in payment schedules to construction contractors, with a larger portion of the buyer's payment being made to the contractor at a later stage. Consequently, contractors are required to obtain more bank financing during the construction process. This phenomenon is reflected in the growth of credit to the construction industry and lower profitability for contractors due to higher financing costs and lower profit margins relative to sales (Spotlight 2). For households, the pace of mortgage borrowing and the proportion of high-leverage and high-repayment mortgages remain high. In this situation, households are particularly sensitive to changes in disposable income, which could be affected by wage reductions or increased household expenses.

Global monetary policy has shifted, with inflation moderating and economic activity slowing during the reviewed period. In the US, the Federal Reserve lowered interest rates by half a percentage point in September and by another quarter percentage point in December, but the forecast for rate cuts in 2025 has been reduced to only two cuts. Similarly, the European Central Bank and the Bank of England also reduced interest rates. The results of the US presidential election in November led to mixed reactions in financial markets. US stock indices rose, while European markets saw declines. Concurrently, global government bond prices fell, with ten-year yields in the US rising by 20 basis points in the days following the election results. Potential changes in US trade policy could reduce global trade volumes and increase global economic uncertainty.

The risks to the financial system include a scenario of renewed fighting and uncertainty regarding its end. These primarily impact the system through the macroeconomic channel, which is directly linked to geopolitical developments and includes potential harm to business activity, increased government financing needs, and a negative impact on Israel's trade volume. The geopolitical situation also affects other risk channels, particularly financial asset prices and credit.

The economic and financial situation reflected in this report indicates that despite the risks and impact on activity, the Israeli financial system, as of late 2024, shows resilience against ongoing challenges, particularly the consequences of the conflict and geopolitical uncertainty. This resilience is based on several key factors, primarily the implementation of appropriate monetary and fiscal policies, alongside active responses from the Bank of Israel's Banking Supervision Department and the government in implementing support mechanisms for borrowers directly affected by the war.

Given the expected continuation of potential threats to the economy and financial stability, it is crucial to

<sup>6</sup> Nonaccruing credit is defined as credit for which no payments (principal or interest) are received, and is characterized by a high probability that the borrower will not repay the debt (or part of it) according to the agreement terms. However, since there is no certainty regarding the prospects of collection, it is not yet appropriate to write it (or part of it) off from the financial statements. Credit deferred under relief measures for eligible populations due to the Swords of Iron War is not included in nonaccruing credit.

continue implementing cautious and balanced economic policies, both fiscal and monetary. This approach will help maintain the economy's resilience against realized risks and potential future risk scenarios. Specifically, the 2025 budget (yet to be approved) includes a relatively high deficit and significant expansion of public expenditure. Furthermore, the government's financing needs in the coming years will also be influenced by decisions regarding the recommendations of the Nagel Committee on Reviewing the Defense and Force Building Budget to increase defense spending in the coming years. It will be important to ensure that as part of implementing the recommendations, future budgets include convergence measures to ensure a continuous decline in the debt-to-GDP ratio starting in 2026. Without a clear fiscal framework addressing defense needs alongside offsetting budgetary measures, macroeconomic risks may increase.

Beyond the ongoing analysis, the Financial Stability Report includes an in-depth analysis (Box 1) of the impact of the insolvency reform on the repayment rates of debtors who entered the legal process. The insolvency reform, implemented in mid-September 2019, brought significant changes to these procedures. The analysis shows that the debtor's monthly payments are primarily determined based on their ability to make payments, with little correlation to the total debt. Additionally, the shortened discharge period set by the new law, without a sufficient increase in monthly payments, led to a decrease in the debt repayment rate in these proceedings from an average of 31 percent to 25 percent. This decrease may have a long-term impact on the supply of credit. Interest rates, determined for the borrower based on credit risk, are influenced by repayment rate estimates alongside the probability of insolvency.

### 2. Risk Exposure Channels

The financial system's vulnerability is derived from risks across key exposure channels. The current report analyzes three primary risk channels:

- Macroeconomic Channel (Economic Activity): This channel reflects the extent to which the financial system is exposed to risks arising from the macroeconomic environment. It shows how macroeconomic conditions in the economy affect the financial status of key participants—households, the business sector, and financial intermediaries. The greater the instability in the macroeconomic environment and the more volatile or negative the forecasts for its future development are, the more vulnerable the financial system is through this channel.
- Asset Prices Channel: This channel expresses the financial system's exposure to risk arising from the
  deviation of financial and real asset prices from their levels derived from fundamental conditions. Among
  other things, such deviations can result from underpricing of risks in the markets. This environment
  increases the risk of a sharp correction in asset prices, which could develop into a negative dynamic
  within the financial system.
- Credit Channel: This channel reflects the financial system's exposure to risks arising from the leverage levels of households and the business sector. High leverage levels expose borrowers to risks from changes in interest rates (especially in variable-rate credit), economic slowdowns, and declines in asset prices. Credit characteristics—including overall leverage levels, its distribution among borrowers, its growth rate, and its uses—affect the intensity of exposure in this channel.

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Figure 1.3 presents an assessment of the risk level in the financial system's main exposure channels over time. The assessment is partly based on results obtained from the financial monitor (detailed in the Financial Stability Report for the first half of 2020). Detailed developments in these channels are presented in the following subsections (2.1–2.3).

Chart 1.3: Vulnerability of the Main Exposure Channels According to the Monitor

	That the value about of the main Exposure of annion / too or any to the monitor											
	2020:H1	2020:H2	2021:	H1	2021:H2	2022:H1	2022	2:H2 2	2023:H1	2023:H2	2024:H1	2024:H2
Marco												
Asset prices												
Credit												
											•	
	Very	high	High	Me	dium-high	Medium-lo	ow	Low	Ve	ery low		

### 2.1 The Macro Channel

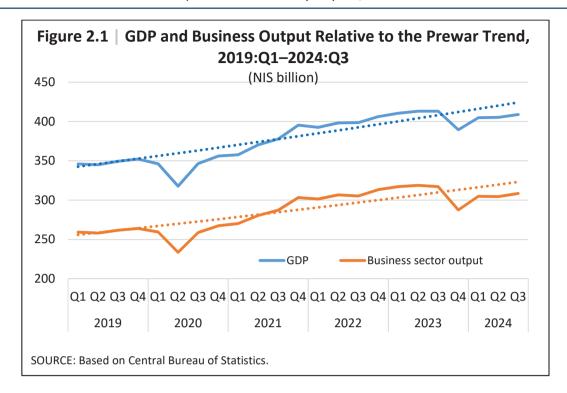
	2024:H1	2024:H2
Real activity		
Foreign exchange market		
Total environment		

The macroeconomic channel remained highly vulnerable in the second half of the year due to the security situation and its impact on global sentiment toward Israel. This negative influence was evident in several ways: disrupted business activities, expanded government financing needs, and higher financing costs, as reflected in rising government bond yields. Although the country's credit risk premium declined toward the end of the reviewed period, it remained high compared to the prewar period. International rating agencies downgraded Israel's credit rating and maintained a negative outlook. Despite the ceasefire in the north and increasing assessments of a potential diplomatic settlement, the level of uncertainty regarding geopolitical developments remained high. Therefore, our assessment is that the macroeconomic risk level remained high in the second half of the year.

According to updated National Accounts data for the third quarter of the year, the gross domestic product (GDP) increased since the decline recorded in the last quarter of 2023, but its level remained low relative to the long-term trend (Figure 2.1). The Composite State of the Economy Index, which serves as an indicator of economic activity, continued to stagnate in October and November, indicating significant challenges in economic activity during the fighting period—before the ceasefire agreement in the north came into effect.

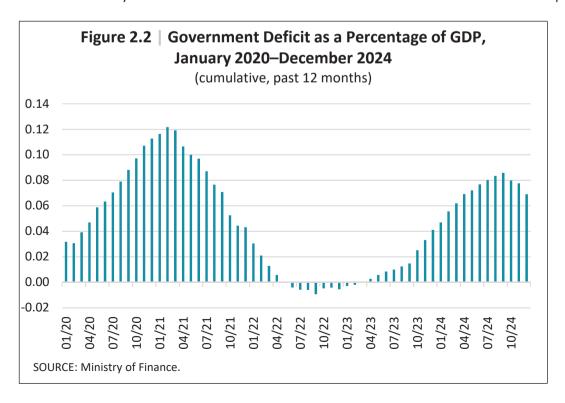
The cumulative deficit in the state budget over the past 12 months continued to rise until September, mainly due to the expansion of government expenditures. However, in the last quarter, there was a slight moderation in the cumulative deficit, which decreased to 6.9 percent of GDP in December (Figure 2.2). This decrease was mostly due to an increase in tax revenues, partly because of purchases that were brought forward to avoid the tax rate increases at the beginning of 2025.

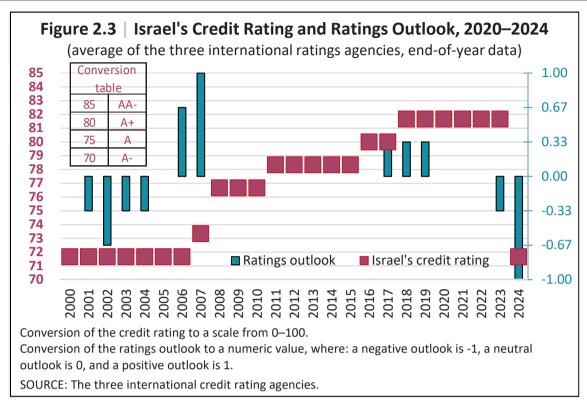
International credit rating agencies downgraded Israel's credit rating during 2024, while maintaining a



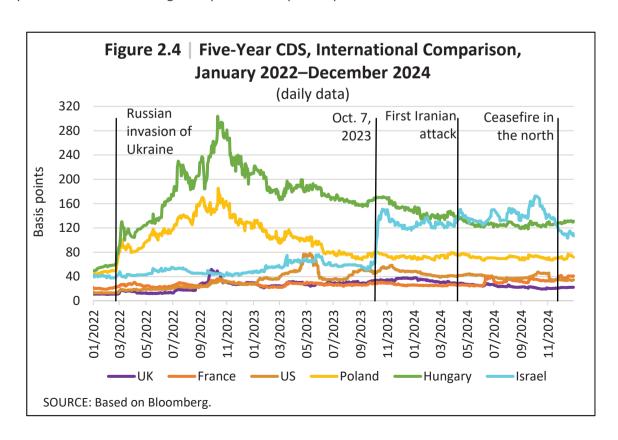
negative outlook, indicating the potential for further downgrades. Figure 2.3 presents the quantitative development of the average credit ratings and rating outlook over time. The main reasons for the downgrade include uncertainty regarding the potential expansion of the conflict, the expected duration of the fighting, and changes in fiscal policy.

The increased vulnerability in the macroeconomic channel is reflected in the rise of Israel's credit risk premium,

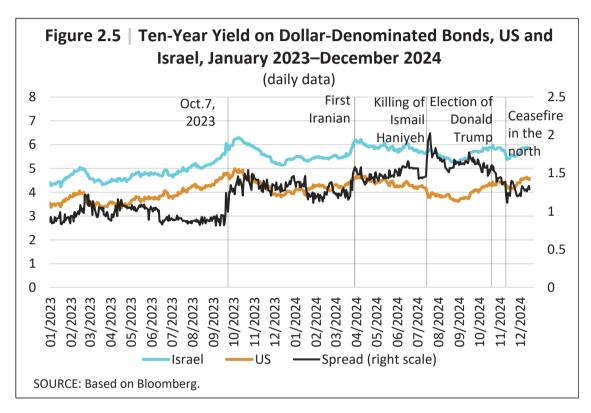




as measured, for example, by the CDS instrument (Figure 2.4). This premium remained high throughout the reviewed period, with significant volatility. Toward the end of the period, there was a significant decline, but the premium level was still high compared to the prewar period.

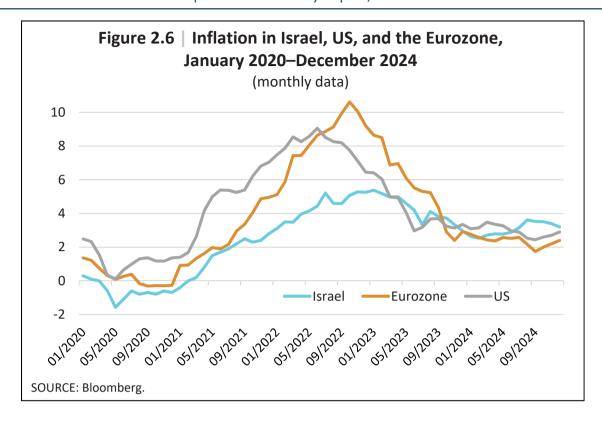


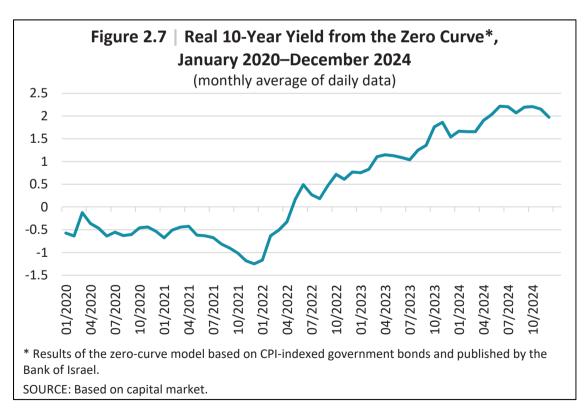
The country's financial risk is also reflected in the increase in the costs of financing government debt, as indicated by the yield spread between Israel's dollar-denominated government bonds and those of the US. The spread increased by about a percentage point at three key points in time—the outbreak of the war and the security developments with Iran (Figure 2.5). At the end of the reviewed period, particularly after the ceasefire agreement in the north, the yield spread declined significantly but remained higher than that of the prewar period.



The inflation rate inIsrael (3.2 percent) slightly exceeded the upper limit of the target during the reviewed period. It was high by international comparison (Figure 2.6), after being much lower at the beginning of the decade. Toward the end of the period, expectations derived from the capital market and forecasters' assessments indicated a decline in the inflation rate for the next 12 months, approaching the midpoint of the inflation target.

The real interest rate on government debt issuances, derived from the yield to maturity of 10-year CPI-indexed government bonds, stood at 2.2 percent for most of the reviewed period (Figure 2.7). This rate reflects a significant increase in the real cost of financing government debt compared to the last decade. Amid a moderation in geopolitical risk assessments and an improvement in sentiment toward local markets, the most recent data show was a slight decline in the real yield.





# Spotlight 1: Analysis of the development of the yield on long-term government bonds

- The long-term government yield, which serves as an important benchmark for the capital and financial markets, increased by three percentage points over the past two years compared to 2021 and 2022.
- An empirical model analysis indicates that fiscal factors, primarily the debt-to-GDP ratio which rose in 2023 and 2024, account for 0.6 percentage points of the increase in the long-term yield during these years. Additionally, credit rating downgrades in 2024 contributed a further 0.2 percentage points to the rise.

### Motivation and description of methodology

Since the outbreak of the Swords of Iron War, government bond yields have sharply increased: in 2022, the 5–10 year forward yield¹ (hereinafter, "the long-term yield") stood at 1.5%, and in 2024 it was 4.7% (December average). This yield serves as an estimate of the cost of government debt issuance and a benchmark interest rate for the financial system. This spotlight applies an empirical model to analyze the factors influencing this yield (Michelson and Stein, 2023).²,³ The research dissects the economic and financial impacts into three main groups:

- 1. Fiscal risk factors: tax revenue-to-GDP ratio; debt-to-GDP ratio;
- 2. Cyclical factors: short-term real interest rate as determined by monetary policy; inflation over the past year; the extent of central bank bond purchases as a percentage of the country's total government bond liabilities (in the previous year); growth rate of per capita GDP; current account surplus; and changes in the real effective exchange rate;
- 3. Structural factors representing long-term changes in the natural interest rate in each of the sampled countries. These variables include the level of per capita GDP and the demographic situation represented by the dependency ratio between the population aged 65 and over and the prime working-age population (those aged 20–64).<sup>4</sup>

When analyzing the sources of changes in government bond yields, it is important to consider economic and financial factors as well as credit ratings. Although there is significant overlap between the fundamental conditions affecting both, the implications of changes in them are not identical. Changes in government bond yields occur continuously in the markets, based on extensive information including economic, financial, and other developments. In contrast, changes in a country's credit rating are

<sup>1</sup> In this study, the researchers use the 5–10 year forward yield as the dependent variable, defined as "the long-term yield." This yield is the five-year interest rate expected to prevail in five years, neutralized from short-term effects. The empirical literature attributes this rate as an estimate of the long-term cost of government debt.

<sup>2</sup> Noam Michelson and Roy Stein (2023). "Factors Explaining Long-Term Government Bond Yields in Israel and OECD Countries," Bank of Israel Review 93, pp. 103–146 [in Hebrew].

<sup>3</sup> For similar analyses of Israel's forward yields, see Bar, Brender, and Ribon (2004); and Brender and Ribon (2014).

<sup>4</sup> The use of the working-age definition starting at age 20 is in line with OECD standards.

occasional events, usually occurring when the economic information is already known. Nevertheless, a rating change, based on the judgment of credit rating agencies, signals to many investors a crossing of a risk threshold, prompting them to adjust their exposure according to regulatory and investment policy rules ("certification effect"). Therefore, it is important to jointly estimate the impact of publicly known economic and financial factors and credit ratings.

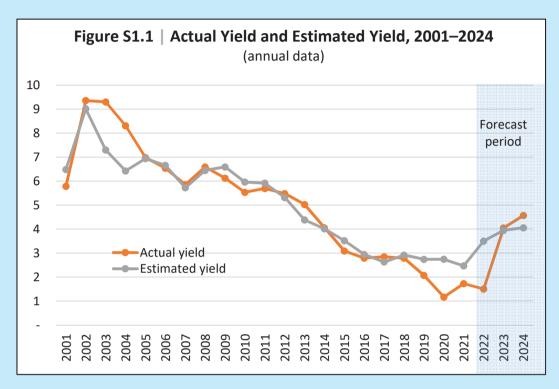
The model was estimated using panel data from OECD countries, including Israel, from 2001 to 2021 and examined the contribution of credit ratings given the impact of economic and financial factors on long-term yields. It was found that economic and financial factors explain nearly 90 percent of the variance in long-term yields, with additional contributions from rating changes, particularly downgrades. However, the rating level was not found to have any significant impact on yields beyond the influence of economic and financial factors. The significant impact of rating changes on yields is explained in the literature as a "certification effect," which mandates how financial companies diversify their asset portfolios. A downgrade in a country's credit rating requires large investment entities, which rely on credit ratings, to reduce their exposure to that country's bonds, affecting bond prices and the cost of capital raised by the state, beyond the economic factors influencing these rates. However, it is important to note that the impact of a rating change on yields does not persist over time, but only during the period of portfolio adjustment by regulated investors.

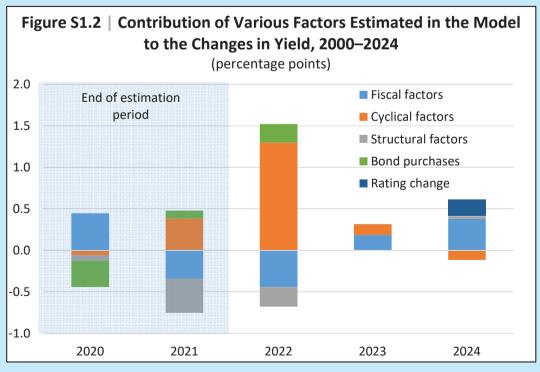
### **Findings**

Based on the coefficients estimated in the model and the variables sampled for the years 2022 to 2024, we calculated the contribution of each factor for those years to the change in interest rates in Israel.<sup>6</sup> Figure S1.1 shows the actual yield and the yield predicted by the model, and demonstrates that the estimated yield successfully explains the long-term yield in Israel for most of the estimation period. Figure S1.2 presents the contribution of the various factors estimated in the model to yield changes, starting from 2020.<sup>7</sup> It shows that in 2022, fiscal factors contributed to a decrease in yield, while cyclical factors, primarily inflation, pushed the yield up by 1.5 percentage points. The cessation of Bank of Israel government bond purchases also contributed to the rise in the long-term yield. Overall, the actual yield at the end of 2022 was significantly lower than the yield predicted by the model, and only at the beginning of 2023 did the actual yield begin to rise. In 2023 and 2024, the actual long-term yield increased, with fiscal factors contributing 0.6 percentage points and rating downgrades in 2024 contributing an additional 0.2 percentage points.<sup>8</sup> Ultimately, at the end of 2024, the actual yield was higher than the predicted yield by about half a percentage point. A possible explanation for the unexplained portion for that year is greater investor concern about the deterioration of Israel's economic and financial factors due to the war. For example, Brender and Ribon (2014) find that expected fiscal

- 5 A one-notch decrease in the average rating (e.g., from AA to AA minus) leads to a 0.1 percentage point increase in the long-term interest rate.
- 6 Data for 2024, which were not available at the time of writing, were completed based on Bank of Israel forecasts.
- 7 Since the estimation period ends in 2021, the figure presents the results as obtained in the estimation equation, and for the years 2022 to 2024, we calculated using updated explanatory variables.
- 8 S&P downgraded by 2 notches, Moody's by three, and Fitch by one.

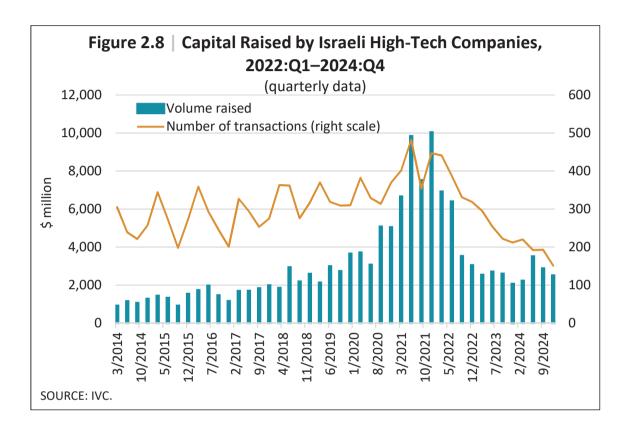
variables have a greater impact on yields than concurrent data. The possible explanation is partly based on the fact that all credit rating agencies noted in their 2024 downgrades that the rating outlook is negative. It is therefore possible that investors, facing high uncertainty due to the geopolitical situation, are pessimistic about the economic developments indicated by the available data.



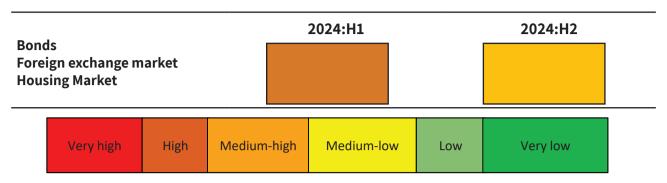


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The volume of capital raised by high-tech companies in the second quarter of 2024 increased slightly compared to 2023 and the first quarter of 2024, but was lower in the third and fourth quarters. Additionally, the number of transactions continues to decline as part of the downward trend that began in 2022 (Figure 2.8). It is worth noting that the growth rate in the volume of capital raised by high-tech companies in Israel is similar to that in the US and higher than in the rest of the world, where the downward trend persisted.



#### 2.2 The Asset Price Channel



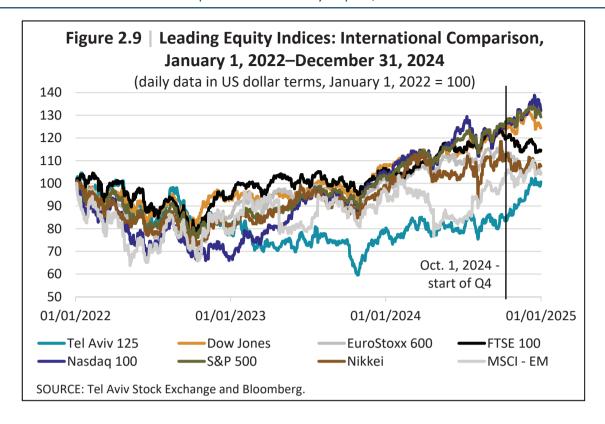
The Israeli stock indices rose in the last quarter, partially reducing the cumulative underperformance in dollar terms since the beginning of 2023. This reduction appears to reflect the improvement in the geopolitical situation toward the end of the reviewed period, which was reflected in positive sentiment in the capital market. The decline in corporate bond yield spreads continued during the reviewed period, alongside the ongoing trend of increased holdings by mutual funds, which tend to react sharply during crisis periods. Although this slightly increases the risk in this sector, the bond market is relatively small compared to the stock and real estate markets.

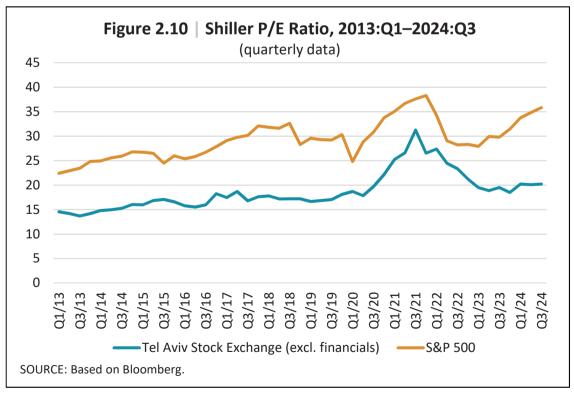
Housing prices continued to rise during the half-year following a renewed increase in the first half of the year, alongside a recovery in transaction volumes. Rent prices also continued to rise, and the ratio of housing prices to rent prices stabilized and even declined slightly at the end of the period.

Uncertainty regarding geopolitical developments decreased slightly at the end of the reviewed period, and the potential negative impacts on stock prices diminished somewhat due to the assimilation of risks, as reflected in the price-to-earnings ratio. Additionally, supply constraints in the housing market remained, and the risk of sharp declines in housing prices is not high. Against this backdrop and the improvement in sentiment towards the Israeli economy, as reflected in asset markets and risk premia, our assessment is that the financial system's vulnerability from asset price channels has decreased compared to the first half of the year to a medium-high level.

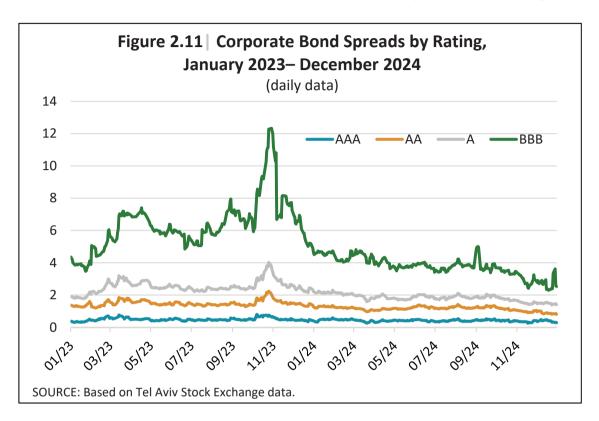
Israeli stock indices rose in the last quarter of the year, partially reducing the cumulative underperformance (in dollar terms) since the beginning of 2023, relative to advanced economies (Figure 2.9). This development seems to be explained by the improvement in sentiment toward the capital market in view of assessments of improved security conditions toward the end of the reviewed period.

The price-to-earnings ratio, which reflects the relationship between the stock price and net earnings per share based on financial statement data, is a common indicator of pricing relative to profitability. The gap between the price-to-earnings ratio of the S&P 500 stock index and the ratio of stocks traded on the Tel Aviv Stock Exchange (excluding financial companies) continued to widen in the third quarter of the year (Figure 2.10). In the last quarter, for which financial statements have not yet been published, the gap is expected to partially narrow due to the significant rise in the Israeli stock indices that occurred in the last quarter of the year. Although there has been a correction in the local market prices, they remain relatively low and seem to still reflect geopolitical risks in Israel.





Corporate bond spreads, which widened with the outbreak of the war, have since narrowed and decreased across all ratings to below their prewar levels (Figure 2.11). This trend is particularly evident in the yields of lower-rated bonds. It should be noted that this development of narrowing spreads is part of a global trend.<sup>7</sup>

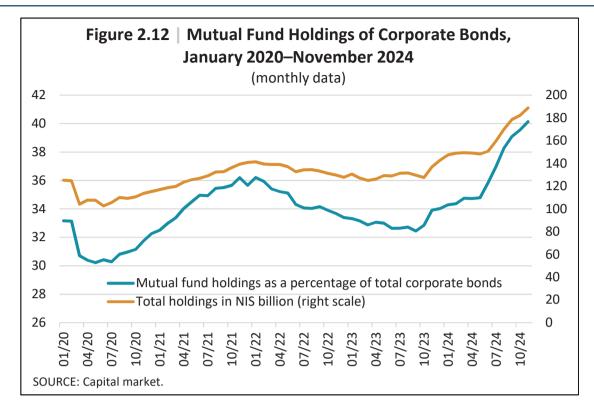


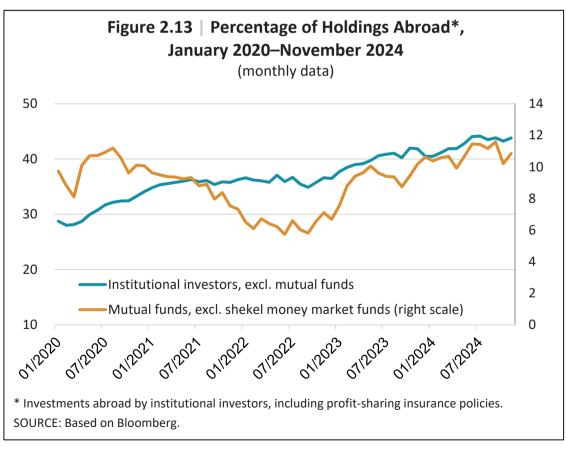
Corporate bond holdings through mutual funds reached new highs during the reviewed period—40 percent of total corporate bonds listed for trading (Figure 2.12). The high demand from households through mutual funds is pushing yields down, as reflected in yield spreads (Figure 2.11). This high concentration of holdings by mutual funds increases the risk of sharp market volatility, since during crises, mutual fund investors may react sharply and withdraw their investments quickly and collectively. This phenomenon, known as "herd behavior," could lead to sharp declines in bond prices and exacerbate the crisis in the corporate bond market, especially if institutional investors are unwilling to buy the bonds that the public sells.

The rate of institutional investors' investments in foreign financial assets stabilized at a relatively high level compared to the past, following an upward trend that continued from the beginning of 2023 until the first half of 2024 (Figure 2.13). A similar phenomenon was observed in mutual funds, where investment decisions are directly made by households rather than fund managers.

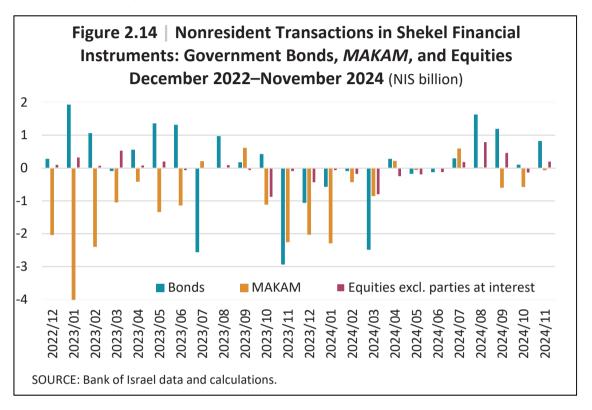
<sup>7</sup> See the International Monetary Fund's Financial Stability Report (October 2024), which states: Corporate bonds worldwide continued to trade at tight spreads by historical standards, leading to a mismatch in pricing and indicating an increased risk of sudden changes in credit risk pricing.

<sup>8</sup> Akbas, F., W.J. Armstrong, S. Sorescu, and A. Subrahmanyam (2015). "Smart Mmoney, Dumb Money, and Capital Market Anomalies", Journal of Financial Economics, 118(2): 355–382; Frazzini, A. and O.A. Lamont (2008). "Dumb Money: Mutual Fund Flows and the Cross-section of Stock Returns", Journal of Financial Economics, 88(2): 299–322.





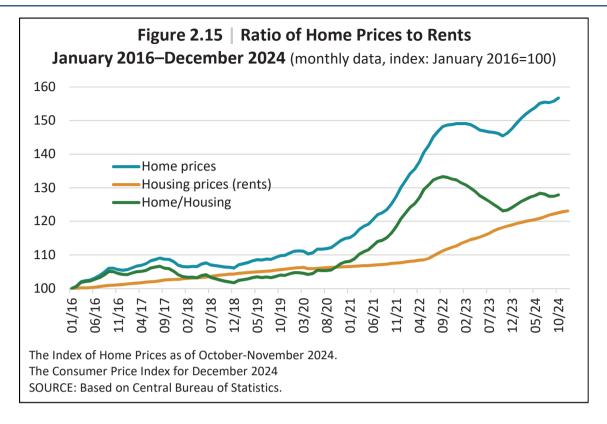
The negative trend in foreign investments in Israel's financial markets reversed in the second half of 2024. While from the outbreak of the war until June 2024, foreign investors withdrew approximately NIS 18 billion from shekel-denominated assets, a positive inflow of about NIS 6 billion into these investments was recorded from July to November (Figure 2.14). This change in trend may reflect foreign investors' improved sentiment towards the Israeli economy.

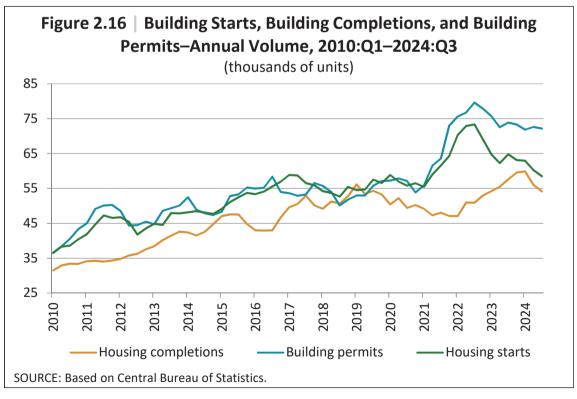


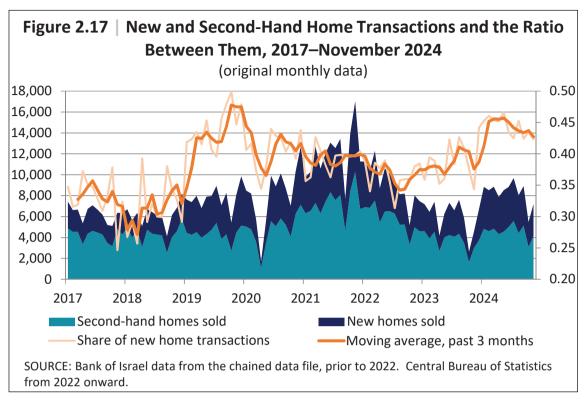
Housing prices continued to rise during the half-year, following a renewed increase in the first half of the year, against the backdrop of a recovery in transaction volumes (Figure 2.15). The rent index also continued to rise at a relatively fast and steady pace. As a result, the ratio of home prices to rent prices did not continue to rise during the reviewed period and remained relatively low compared to the peak recorded in mid-2022.

The number of housing completions reached a historic high in the first quarter of 2024, partly due to the exceptional volume of building starts recorded in 2022 (Figure 2.16). However, there was a downward trend in the number of housing completions in the second and third quarters of 2024, and building starts increased in the third quarter. Nevertheless, National Accounts data for the third quarter of 2024 indicate that investment in residential construction remained about 20 percent lower than in the period before the war, a phenomenon mainly attributed to the labor shortage that has existed since October 2023.

Transaction volumes in the housing market recovered, following limited activity in 2023, which came after a significant decline in 2022 due to interest rate hikes (Figure 2.17). An analysis of new and second-hand housing transactions reveals that the proportion of transactions in new apartments declined slightly, but remained higher than the average in recent years.

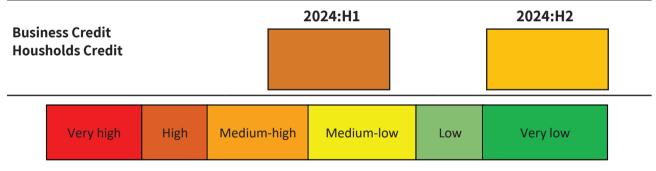






### 2.3 The credit channel

Given the stability and low levels of credit delinquency rates, as well as the reduction in banks' credit loss allowances, our assessment is that credit risks have moderated. Accordingly, we are lowering the risk level



in the credit channel for the second half of 2024 to a medium-high level.

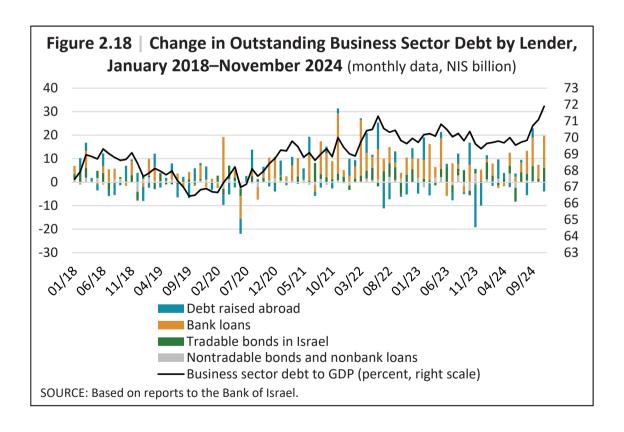
Since June, the growth rate of credit to the nonfinancial private sector has accelerated. The main components driving this growth are household credit for housing and business sector credit—both through bond issuances and bank loans to large businesses. A significant portion of the increase in business credit is directed toward the construction market.

Business sector debt increased by more than NIS 60 billion between June and November, while risk indices were stable and corporate profitability improved.

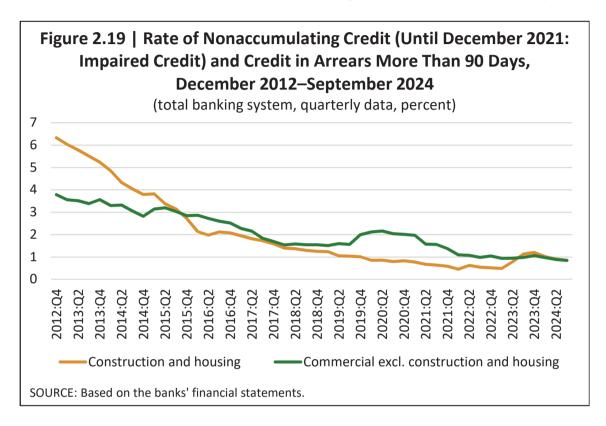
Households have increased their housing debt at a high rate in recent months. New mortgage borrowing averaged nearly NIS 9 billion per month over the past six months. In view of the macroeconomic environment, particularly interest rates and housing prices, new high-risk mortgages and bullet mortgages as a share of total mortgages are higher than in the past. New mortgage borrowers who pay more than 30 percent of their income toward mortgage repayment are particularly exposed to risk due to potential changes in disposable income or monthly debt repayment. Such borrowers constitute close to 42 percent of new borrowers.

### Credit to the business sector

The growth rate of business sector debt has accelerated in recent months, both through bank loans and bond issuances, in contrast to the slow growth rate that characterized 2023 and early 2024. The increase in debt was faster than GDP growth. The construction and real estate industry is leading this trend through loans and bond issuances, while the volume of bank loans to the financial services industry has also increased. Some of the credit to financial services is channeled to the construction and real estate industry through financing provided by nonbank companies to medium and small construction firms. As of November, the business sector's debt stood at NIS 1.4 trillion, of which NIS 777 billion were in bank loans.



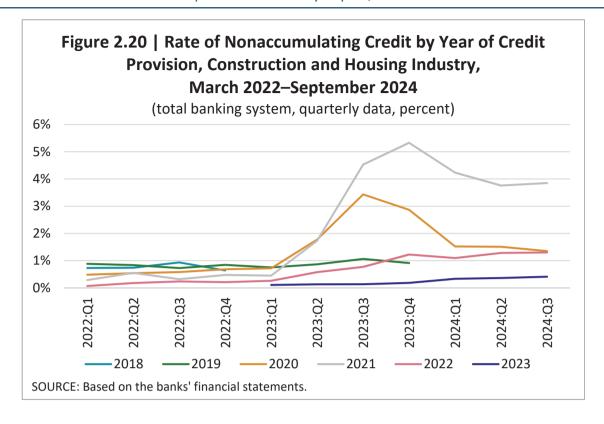
The nonaccruing credit<sup>9</sup> rate in the construction and real estate industry has been gradually declining since reaching a domestic peak in the last quarter of 2023. There is a similar trend in other commercial credit, where the nonaccruing credit rate is slightly lower. The construction subindustry and the real estate subindustry constitute approximately 25 and 15 percent of bank business credit, respectively. The nonaccruing credit rate in construction is more than double that in real estate, although both are low from a historical perspective.

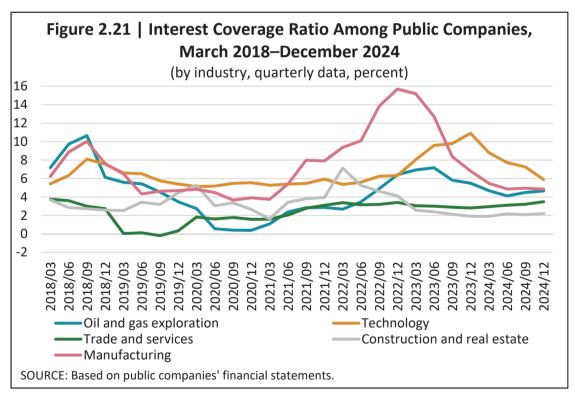


The nonaccruing credit rate in the construction industry is high among businesses that took out loans before 2022, prior to the rise in monetary interest rates. This phenomenon may reflect the difficulty these businesses face in adapting their business models to the high-interest rate environment in a timely manner. However, the scope of risk is relatively limited, as the credit granted until 2022 currently constitutes less than one-third of the total credit to the construction and real estate industry.

Although interest expenses still constitute a significant portion of the operating profit (interest coverage ratio) of public companies, improved profitability since the end of 2023 eases this burden somewhat. The current interest coverage ratio is also not particularly high compared to the years preceding the rise in monetary interest rates. Technology companies are experiencing a slight deterioration in their ability to cover interest expenses from their operating profit, while in other industries, this indicator remains stable or even improves slightly.

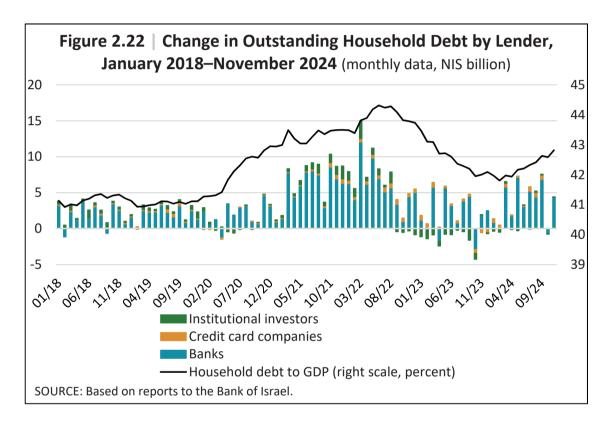
<sup>9</sup> Nonaccruing credit is defined as credit for which no payments (principal or interest) are received, and is characterized by a high probability that the borrower will not repay the debt (or part of it) according to the agreement terms. However, since there is no certainty regarding the prospects of collection, it is not yet appropriate to write it (or part of it) off from the financial statements. Credit deferred under relief measures for eligible populations due to the Swords of Iron War is not included in nonaccruing credit.





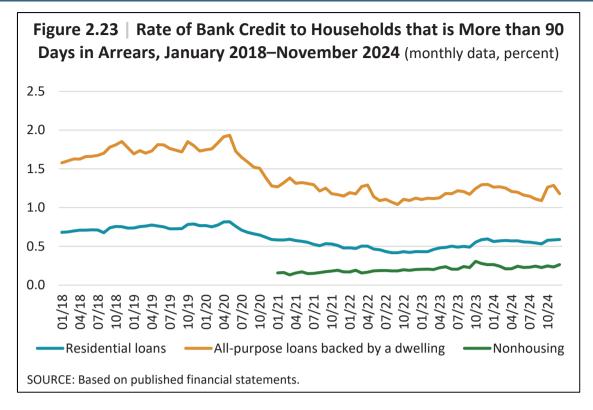
#### **Household Credit**

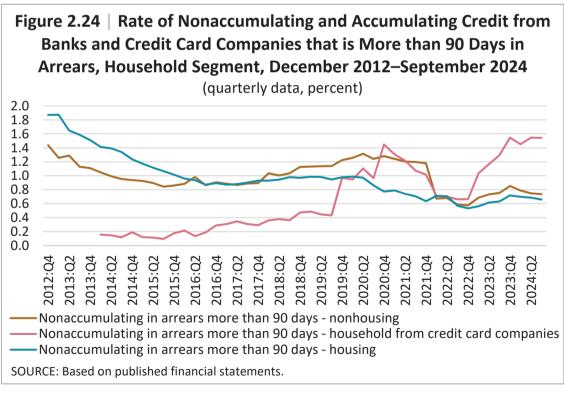
Household debt continues to grow at a steady pace, with the main driver of this growth being bank mortgages. Outstanding housing debt totaled NIS 602 billion in November 2024. In contrast, nonhousing debt (NIS 232 billion) presents a mixed picture: a moderate contraction in credit from institutional investors, alongside a moderate increase in bank credit, while the volume of credit card debt remains stable. Since the beginning of 2024, the growth rate of household debt has exceeded GDP growth, leading to an increase in the debt-to-GDP ratio, although it is still lower than the peak recorded in 2022.



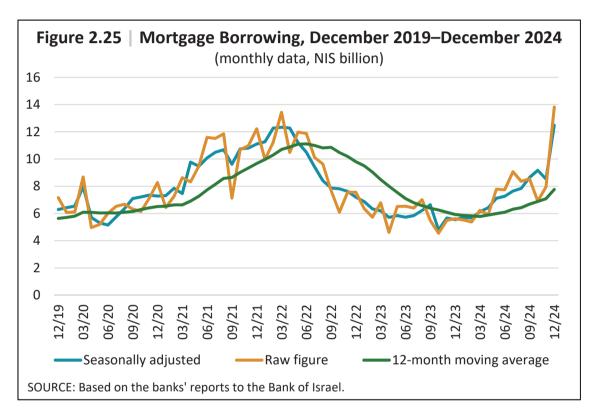
The rates of delinquency over 90 days in household credit repayments to banks have remained at a level similar to the average of recent years (Figure 2.23). A common indicator for assessing the rate of loans with a high probability of default is the combined rate of nonaccruing credit and credit delinquent over 90 days. From a long-term historical perspective, the rates of credit in this category are also low (Figure 2.24).

In a small portion of household credit that is in a high-risk profile, several indicators point to difficulties faced by these households. The nonaccruing credit rate in credit card debt (outstanding balance of approximately NIS 40 billion) has been higher than in the past for several months, without further deterioration. Additionally, in bank credit secured by residential property, with an outstanding balance of NIS 33 billion (used essentially as consumer credit rather than for financing home purchases), the rate of delinquency over 90 days has increased, although it is not historically high.



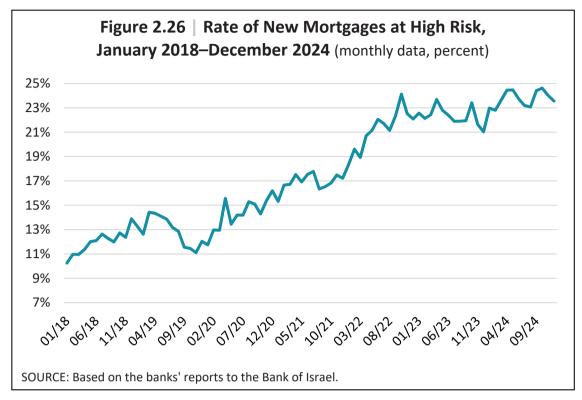


The rate of new mortgage borrowing has increased in recent months, alongside rising housing prices and high transaction volumes since the beginning of 2024. Particularly high new mortgage volumes were recorded at the end of the year, possibly partly due to buyers and contractors wanting to advance payments before the VAT increase. An examination of the composition of new mortgages shows that 40 percent are taken at fixed interest rates (mainly in the nonindexed track), and the rest at variable interest rates (also mainly in the nonindexed track). While before the rise in monetary interest rates, most loans in the variable nonindexed interest rate track were in the prime track, there has since been a shift to a track where the interest rate is updated every 1–5 years. This structure still exposes borrowers to the risk of short- to medium-term interest rate changes.



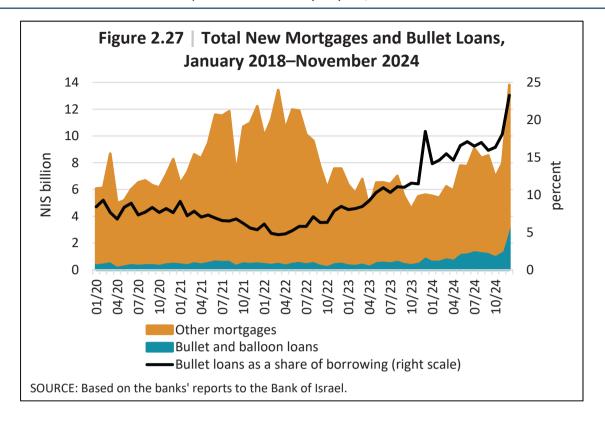
Overall, in the existing mortgage portfolio, approximately 60 percent of total housing credit is in variable interest rate tracks: 40 percent in the nonindexed track and 20 percent in the indexed track.

The proportion of new mortgages defined as high-risk—loans where the leverage ranges between 60 and 75 percent of the property value, and the monthly payment-to-income ratio ranges between 30 and 40 percent—is currently at a historic high. Particularly notable is the increase in the percentage of borrowers dedicating more than 30 percent of their income to mortgage repayment (PTI ratio). These constitute over 40 percent of all new mortgage borrowers for the past two years, after their proportion rose sharply and quickly. These borrowers are particularly exposed to shocks to their disposable income, whether due to an increase in monthly repayment, an increase in other expenses, or a decrease in income.



Financing campaigns such as the 20/80 model or similar schemes offered by developers continue, allowing for the deferral of most payments until occupancy. Under such payment spreads, developers require more financing during construction. Additionally, buyers with low equity can commit to purchasing a home, with the remaining equity to be raised by the time the dwelling is delivered. Furthermore, due to the deferral of most payments, mortgage borrowing is also deferred to a later stage, and buyers do not undergo bank underwriting at the time of signing the purchase agreement. On the developers' side, payment deferral campaigns erode their profitability. (See Spotlight 2 in this chapter.)

Bullet loans as a share of total new mortgages remains high. As analyzed in the previous Financial Stability Report<sup>11</sup>, some of the bullet loans granted recently are organized by developers to increase sales. This phenomenon has advantages for buyers and developers but also increases the risk in the housing market. On the buyers' side, there is uncertainty regarding the future mortgage terms they will receive upon receiving the property. On the developers' side, paying the interest on behalf of the buyer requires additional expenses from the developer. However, since the interest on housing loans is cheaper than the interest on construction credit, the first alternative reduces expenses for contractors.



# Spotlight 2: The development of construction companies' credit and their ability to make repayments

- During the reviewed period, bank credit to the construction industry increased, primarily for
  financing construction processes. This occurred against the backdrop of a decline in the industry's
  activity, extended construction processes, and efforts by building contractors to attract customers
  through financial promotions. We see these trends as a continuation of the process of adapting
  operational and financing methods to the higher interest rate environment and rising production
  costs.
- The increase in the ratio of financing expenses to operating profit of public construction companies, which began in 2022, continued. This ratio reached 50 percent in the last four quarters.
- The profitability level of public construction companies has declined over the past three years and is low compared to previous years.
- The price-to-earnings ratio of public companies in the construction industry indicates that the ratio between the companies' market value and the reported profitability in the financial statements published so far is higher than in the past.

• The allowance for credit losses in the banking system in respect of the construction industry are higher than nonaccruing credit. From a financial stability perspective, this gap provides an important safety buffer in case risks materialize. Additionally, the delinquency rates of credit repayments in the construction industry have been stable in recent months and are not high from a historical perspective (see Section 2.3).

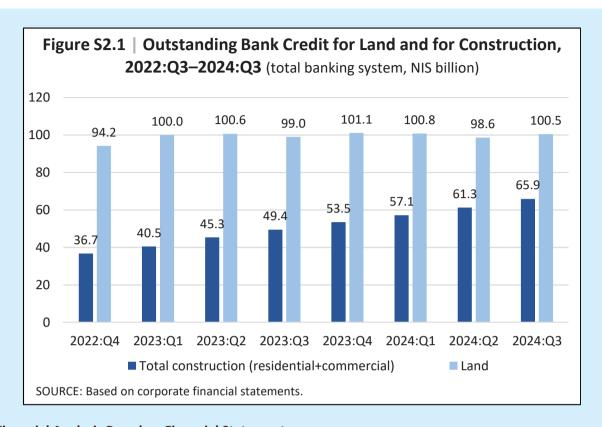
#### Introduction

The construction industry in Israel is a central component of the economy, and has a significant impact on the gross domestic product and the credit market. Given the industry's centrality in business sector credit and indirectly in household credit in the form of mortgages, it influences systemic financial stability. The financial analysis of companies in this industry is a crucial tool for understanding their financial robustness and repayment capacity, and its importance is heightened due to the industry's unique characteristics: long activity cycles, significant capital investments, dependence on external financing, and high sensitivity to price fluctuations according to macroeconomic conditions. The use of financial ratios, based on the financial statements of public companies and capital market trading data, allows for the assessment of several key aspects of company performance: profitability, liquidity, operational efficiency, and particularly, financial robustness and repayment capacity.<sup>2</sup> Monitoring the financial condition of construction companies contributes to the assessment of emerging risks in the financial system, against the backdrop of increased credit to this industry.<sup>3</sup>

#### Development of credit to the construction industry

The total volume of credit to the construction industry has continued to grow in recent years. There has been an increase in bank credit allocated to construction processes, while the volume of credit allocated to land has remained constant since the beginning of 2023 (Figure S2.1).<sup>4</sup> Furthermore, an examination of the industry's debts and guarantees (which constitute off-balance-sheet debt<sup>5</sup>, which are coordinated with receipts from home buyers) shows, among other things, the impact of extended construction processes and the contractors' financial promotions to home buyers<sup>6</sup>, where they increase credit at the expense of early payments by buyers (Figure S2.2). In view of these developments, it is important to examine activity in this industry, and particularly the companies' debt repayment capacity.

- 1 Nonaccruing credit is defined as credit for which no repayment (principal or interest) is received, and is characterized by a high probability that the borrower will not repay the debt (or part of it) according to the agreement terms. However, there is no certainty regarding the collection chances, and it is not yet appropriate to write it off (or part of it) from the financial statements. Credit in deferral under the reliefs for eligible populations due to the Swords of Iron War is not included in nonaccruing credit.
- 2 Roy Stein, Nadav Steinberg, and Hanan Zalkinder (2012). "A Suggested Methodology for Analyzing Stock Price Levels," Periodic Papers Series 2012.03, Bank of Israel.
- 3 This spotlight is based on public companies, due to the availability of detailed data from their financial statements.
- 4 In March 2022, the Banking Supervision Department imposed an additional capital allocation requirement for high-leverage land financing.
- 5 These guarantees mainly include Sale Law guarantees, intended to protect home buyers. The guarantees ensure the completion of construction or the refund of payment in case of project failure and are mandated by law (for any payment by the buyer exceeding 7 percent).
- 6 The rate of contractor promotions relative to total sales increased from about 20 percent before the war to about 50 percent after the war.



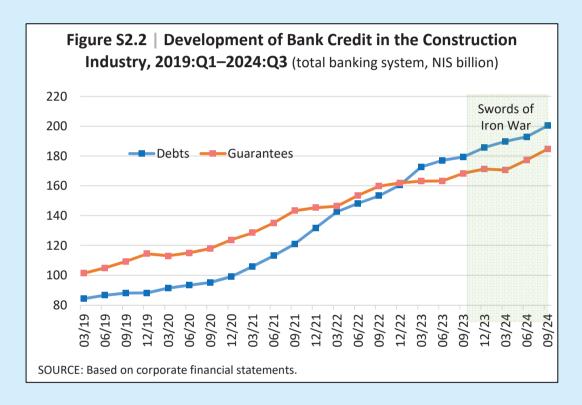
### **Financial Analysis Based on Financial Statements**

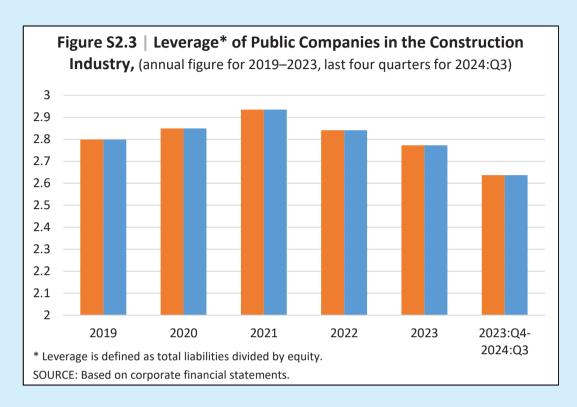
The leverage of public construction companies, defined as the ratio of liabilities to equity, has declined slightly over the past three years (Figure S2.3), while the rate of financing expenses, defined as the ratio of financing expenses to operating profit, has increased (Figure S2.4). These trends continued in the last four quarters, and the financing expense rate is even higher than it was in 2020. Despite its increase, the financing expense rate of about 50 percent that public companies reached in the past year is within the reasonable and acceptable range for companies in the construction industry.<sup>7</sup> This increase in the financing expense rate has reduced companies' profitability over the past three years, defined as the ratio of net profit to sales (Figure S2.5). These findings primarily reflect the increase in financing expenses following the rise in interest rates on their loans.

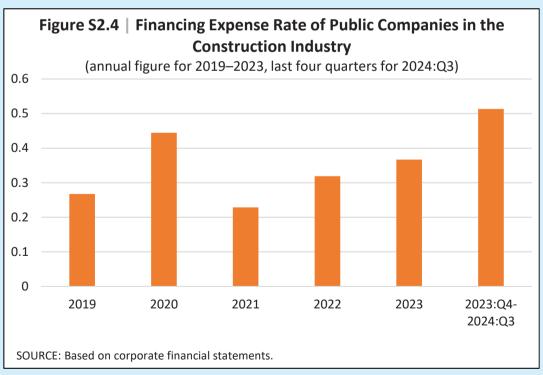
Alongside the low profitability of construction companies, Figure S2.6 shows that the price-to-earnings ratio, defined as the ratio of market value to net profit, is at its highest level in the past five years, reflecting a relatively high market price for public companies in the construction industry compared to companies in other industries (see Figure 2.11). This high ratio may indicate investor expectations for a recovery in company profitability in the future.

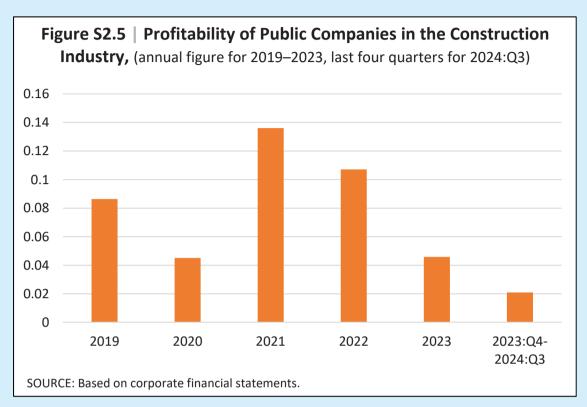
<sup>7</sup> According to the research literature, this ratio is a standard measure for assessing a company's repayment capacity. A higher ratio means a larger portion of operating profit is required to cover the company's financing expenses, and as it approaches 1, the company is at risk of being unable to meet its obligations. See, for example, Arhinful and Radmehr (2023) and Lian and Ma (2021).

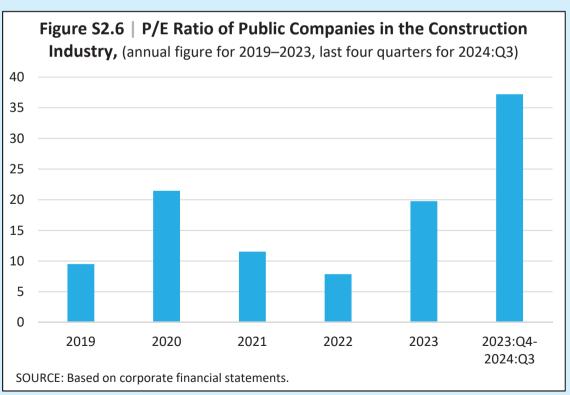
Against the backdrop of increased credit to the construction industry and the decline in the debt repayment capacity of public companies in the industry, the banking system's allowance for credit losses is higher than the nonaccruing credit and serves as a broad safety cushion in case risks materialize. Additionally, credit providers can limit credit risk by defining a credit framework for each project, separate from the construction company's overall credit. However, given the trends mentioned above, continued monitoring of the quality of the credit portfolio to the construction industry and the development of various risk indicators is required.











## 3. The Resilience of the Financial System

The stability of the financial system depends on the ability of its various institutions to withstand shocks that reach them through the main exposure channels. In addition to examining recent developments, the Financial Stability Report's assessment of the system's resilience relies on a range of indicators derived from financial institutions' accounting data. These indicators are used to monitor the institutions' capacity to absorb losses arising from the materialization of risk scenarios.

The key financial institutions—namely banks and insurance companies—have maintained their strength, as reflected in their high capital ratios. Israeli banks rely heavily on financing through public deposits and, relative to banks abroad, make limited use of market-based financing. This factor supports the assessment of their stability. The primary risks to financial institutions are the possibility of a sharp decline in financial asset prices or a deterioration in credit quality. However, our assessment is that risks to the stability of banks and insurance companies is low, given their financial strength and the capital buffers they have in place.

#### 3.1 The Banking System

Israeli banks have maintained their financial strength. In the first three quarters of 2024, capital ratios and liquidity levels remained high, alongside strong profitability (see Spotlight 3 below) and improvements in credit portfolio quality. However, the banks were adversely affected by the increase in Israel's risk premium and by the downgrading of Israel's credit rating by rating agencies<sup>8</sup>, which led to higher yields on bank bonds.

The downgrade of Israel's credit rating by S&P<sup>9</sup> resulted in increased capital requirements for the banks' exposures to the Government of Israel<sup>10</sup>, to public sector entities, to institutional investors, and to other banks. It also eroded the Common Equity Tier 1 (CET1) ratio by up to 0.25 percentage points. Should S&P decide on an additional downgrade of Israel's rating (BBB+), the banks' CET1 ratio could be reduced by as much as 0.36 percentage points.

Despite the negative impact of Israel's credit rating downgrade, the Common Equity Tier 1 ratio increased during the first three quarters of 2024, supported by high profitability.

During the first three quarters of 2024, improvements in the banks' credit portfolio quality indicators (see Section 2.3 of this report) led to a lower rate of loan loss provisions than in 2023. Some banks even reported income under this item in the first half of the year—that is, allowances previously made effectively "returned" to their balance sheets.<sup>11</sup>

The loss-absorption cushion (i.e., the allowance for credit losses) increased by 1.7 percent during the first three quarters of 2024 (to about NIS 27 billion). However, as a share of total credit, the loan loss allowance declined from 1.7 percent at the end of 2023 to 1.6 percent at the end of the third quarter of 2024.

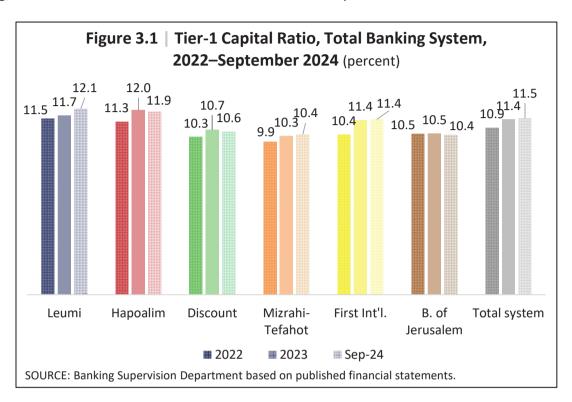
<sup>8</sup> For further details, see the Financial Stability Report for the first half of 2024.

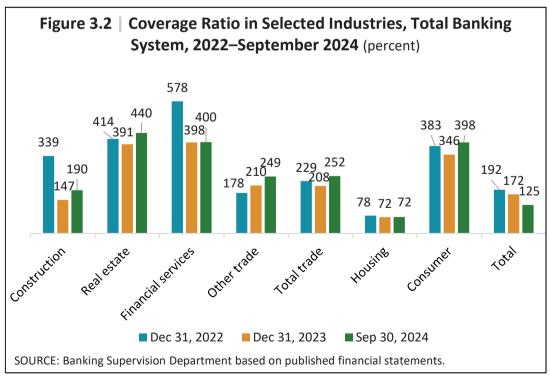
<sup>9</sup> We note that, with the exception of Bank Leumi—which uses the strictest credit rating among the three agencies (S&P, Fitch, and Moody's)—all other banks rely solely on S&P's rating. Therefore, for most banks in the system, additional downgrades by alternative rating agencies are not expected to have a direct impact on capital.

<sup>10</sup> Banking corporations' exposures to the Government of Israel and to the Bank of Israel that are denominated in, or paid in, foreign currency.

<sup>11</sup> The annualized loan loss provision rate was 0.09 percent in the first half of 2024, compared with 0.5 percent for all of 2023.

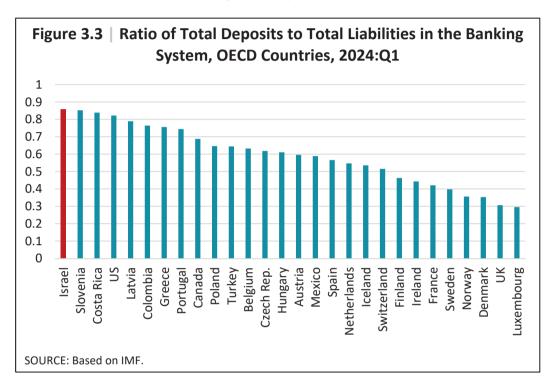
In this context, there was an improvement in the coverage ratio<sup>12</sup>, driven by a decline in the volume of nonaccruing loans and accruing loans more than 90 days past due. The main improvement was in commercial lending, about half of which came from the construction industry.





<sup>12</sup> The ratio of the loan loss provisions to the volume of nonaccruing loans and accruing loans more than 90 days past due.

A recent study<sup>13</sup> examining historical data on bank insolvencies in the US over more than 150 years identified three main predictors of bank failure: an increase in credit losses (i.e., an increase in the share of nonaccruing loans), growing reliance on market-based funding rather than deposits, and a cycle characterized by rapid growth followed by rapid contraction in assets. It is important to note that a failure event may be the result of a liquidity crisis triggered by a "bank run" or from a balance-sheet crisis. Either way, the factors predicting such events have remained consistent throughout the years.



Across these three parameters, the Israeli banking system appears stable. The share of nonaccruing loans remains historically low, despite a slight increase in recent years and during the war (see Section 2.3). Although the nominal rate of asset growth was high during 2020–2022 (about 12 percent per year) and has since moderated somewhat to about 5 percent annually, deposit growth has kept pace. Furthermore, the Israeli banking system relies heavily on deposit-based funding rather than raising capital in the financial markets. This source is considered to be less volatile than market-based financing and also reflects the public's confidence in the system's stability.

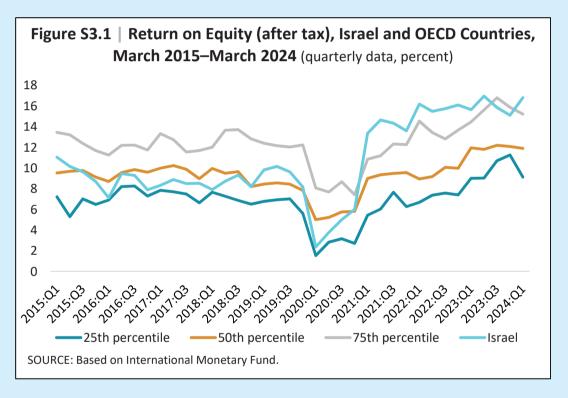
# **Spotlight 3: Sources of Profitability in the Banking System**

- The banking system in Israel has demonstrated a high profitability rate in recent years, driven by both an increase in the income rate and a decrease in the expense rate relative to assets.
- The rise in income, particularly net financing income, has significantly contributed to the
  increase in profitability, occurring against the backdrop of changes in the inflation and interest
  rate environment. This increase in the income rate is similar to the trend experienced by other
  advanced economies.
- On the expense side, the Israeli banking system has significantly reduced noninterest expenses
  relative to assets, surpassing the reductions seen in other advanced economies. This reduction in
  noninterest costs began even before the COVID-19 crisis, aided by efficiency improvements and
  rapid asset growth.
- In view of the profitability, banks have increased their capital ratios and buffers, contributing to their stability.
- The return on equity in the Israeli banking system increased sharply in 2021, as the economy emerged from the COVID-19 crisis, and has remained relatively high compared to the precrisis years. Recent profitability levels are higher than in most advanced economies but are not exceptional (Figure S3.1). Before the COVID-19 crisis, profitability in the Israeli banking system was similar to the average among advanced economies. The increase in the average return on equity during these years encompassed all banks in the system, although some banks recorded lower figures in certain years, and some consistently exhibit higher profitability than others.

The rise in profitability since 2021 is based on both increased income and a relative decline in expenses. On the income side, at the end of 2019, total income stood at approximately NIS 50 billion, including NIS 33 billion from net interest income and about NIS 13 billion from fees. By the end of 2023, total income had risen to NIS 81 billion, with NIS 61 billion from net interest income and about NIS 15 billion from fees. Thus, the main increase in income was in the net interest income component, which rose by about 85 percent during this period. This was partly due to changes in the interest rate and inflation environment and, in comparison to other advanced economies, the sharper recovery of the Israeli economy, which was also reflected in rapid asset growth for banks.

However, the increase in net interest income does not fully explain the high profitability in Israel compared to other advanced economies. Figure S3.2 indicates that the rise in net interest income in Israel was not exceptional. The increase in net interest income occurred alongside growth in both bank deposits and the public's credit portfolio, with deposits growing faster than credit, at 52 percent and 42 percent respectively. It is important to note that interest payments on public credit are more sensitive to changes in the interest rate environment than interest on deposits. In the business sector, the proportion of loans given at variable unindexed interest rates has remained between 60 percent for large businesses and over 80 percent for medium and small businesses. The proportion of variable

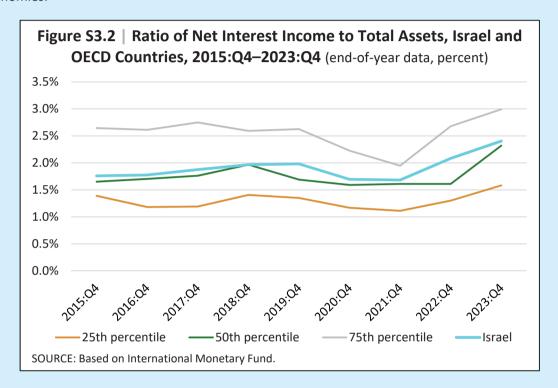
interest rate housing loans is lower than the same proportion in business loans, partly due to regulatory constraints over the past decade. Specifically, only about 40 percent of the mortgage balance is at variable unindexed interest rates, which are mainly influenced by changes in the monetary interest rate. Conversely, a high proportion of housing credit is indexed (between 30 and 50 percent of new mortgages in recent years). Therefore, the rise in the monetary interest rate and inflation environment quickly and immediately translated into increased interest income from credit, while on the deposit side, it took time for the public to shift funds from current accounts to interest-bearing deposits. The volume of term deposits grew faster than total deposits starting in 2019, by 88 percent cumulatively, mainly during 2022 and 2023. Nevertheless, term deposits constitute only about a quarter of total deposits.



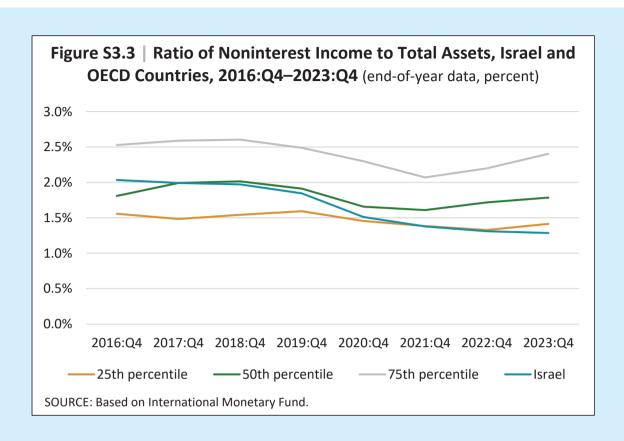
During 2021 and 2022, banks had particularly low loan loss provisions, following very high provisions during the COVID-19 crisis, which largely did not materialize. Since the beginning of the war, loan loss provisions have remained low compared to the COVID-19 period, contributing to high profitability in the system.

On the expense side, banks have reduced all expense categories, with a focus on salary expenses, relative to assets, which have grown rapidly. Since 2014, when salary expenses peaked at about NIS 18.5 billion, this expense has remained largely unchanged. At the end of 2023, salary expenses stood at about NIS 17.5 billion. Other expenses have risen from about NIS 13 billion at the end of 2014 to NIS 15 billion. However, total operational and other expenses relative to assets have decreased from 2.3

percent at the end of 2014 to 1.3 percent at the end of 2023, and this ratio continued to decline during 2024. Figure S3.3 illustrates that the reduction in noninterest expenses in Israel has been significant and greater than in other advanced economies. Since the rise in the monetary interest rate in Israel and globally, the noninterest expense ratio in Israel has continued to decline, contrary to other advanced economies.



In conclusion, the Israeli banking system has shown high profitability in recent years, both compared to the past and internationally. This profitability results from a combination of factors: a significant increase in income from the provision of credit due to changes in the interest rate and inflation environment; rapid asset growth; low loan loss provisions; and a continuous decrease in operational expenses, particularly salary expenses, relative to assets. The reduction in operational expenses in Israel is particularly notable compared to other advanced economies, reflecting a long-term trend of increasing efficiency in the local banking system.



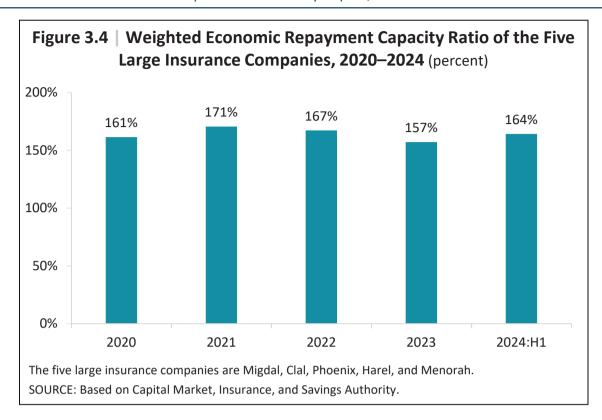
# **3.2 The Insurance Companies**

The insurance companies have improved their financial soundness, showing higher economic solvency ratios and larger capital surpluses in the first half of 2024 compared with the end of 2023.<sup>14</sup> As of mid-2024, the aggregate economic capital<sup>15</sup> of the five largest insurance companies<sup>16</sup> totaled approximately NIS 72 billion, while the capital required for solvency stood at around NIS 43 billion—resulting in an aggregate solvency ratio of 164 percent.

<sup>14</sup> Insurance companies in Israel must comply with the Economic Solvency Regime, which is based on European Solvency II directives. Under this regime, companies prepare an economic balance sheet that reflects the economic value of their assets and liabilities, and they calculate the capital required based on estimated declines in economic capital under various scenarios. The resulting economic solvency ratio is derived from the company's capital relative to the amount required by regulation and under these scenarios. For more on Israel's Economic Solvency Regime, see Chapter 6.2: Insurance Companies in the Financial Stability Report for the first half of 2023.

<sup>15</sup> All economic capital and economic solvency ratio data reflect results under transitional provisions, unless otherwise noted.

<sup>16</sup> The five largest insurance companies are Migdal, Clal, Phoenix, Harel, and Menorah.



The improvement in the solvency ratio was primarily due to an increase in the inflation-linked risk-free interest rate curve used to calculate the economic solvency ratio.<sup>17</sup> However, this curve has declined in recent months, including since mid-2024, which is expected to negatively affect the yet-to-be-reported year-end 2024 solvency ratios.

Several additional factors contributed to the enhanced balance-sheet stability of insurance companies, including rising financial asset prices, increased profitability in property vehicle insurance, and capital-raising efforts. Counteracting these positive effects were updates to pensioners' mortality tables (part of updating the demographic assumptions for life insurance), inflationary pressures, and dividend distributions. These factors constrained the solvency ratio's improvement. Furthermore, the gradual reduction of the deduction linked to the increase in insurance reserves required of the companies also lowered the solvency ratio, similar to trends in the previous half-year.<sup>18</sup>

- 17 The interest rate curves used to calculate the economic solvency ratio are based on the yields published by the successful bidder in the official rate quotes, which are themselves based on yields to maturity on tradable Israeli government bonds. These curves match the published yields up to the 10th year (the "Last Liquid Point," or LLP). Beyond that, rates are determined using the Smith-Wilson extrapolation method until the final "Ultimate Forward Rate" (UFR), which is set at 60 years. From that point onward, the interest rate remains fixed. For more on how changes in the interest rate curve affect key calculation components, see the Financial Stability Report for the first half of 2023. Based on interest-rate sensitivity tests published by insurers as of December 31, 2023, a 0.5 percentage-point rise in the interest rate curve (up to the LLP) would increase the economic solvency ratios of major insurers by 12 to 19 percentage points.
- 18 This phased deduction pertains to one of the transitional options under the Solvency II implementing directives, which allows companies authorized by the Capital Market, Insurance and Savings Authority to gradually spread out the required increase in certain insurance reserves through 2032. Companies whose insurance reserves rose due to the regulatory move to the Solvency II regime may spread out this increase over the transition period. The level of the deduction decreases over time, depending on the time remaining until the end of the transition period, and may be adjusted if material changes occur (e.g., major shifts in the interest rate curve). As of June 2024, six out of the seven traditional insurance companies (the five largest plus Ayalon and Hachshara) had chosen to apply this transitional reservededuction provision.

Despite significant uncertainty regarding the duration of the war, the potential for escalation on other fronts, and the associated economic implications, there has been no observed material impact on the insurers' stability to date.

#### The effects of the IFRS 17 standard

As stated, the insurance companies have enhanced their financial strength, presenting higher economic solvency ratios and larger capital surpluses in the first half of 2024 than at the end of 2023. The IFRS 17 standard came into effect at the beginning of 2025, altering the accounting practices of insurance companies. The new standard allows for a clearer distinction between underwriting results and financial results, thereby providing greater transparency with regard to insurance companies' profit structures. Four of the five largest insurance companies reported substantial Contractual Service Margin (CSM) balances—totaling tens of billions of shekels—reflecting anticipated future profits from existing insurance contracts, subject to future estimate and assumption changes.

It is important to emphasize that, apart from affecting the calculation of the transitional provision deduction and the tax reserve, the accounting changes arising from the new standard are not expected to materially influence the regulatory assessment of the insurance companies' stability, as this assessment is based on the economic solvency (Solvency II) regime, which is not directly impacted by accounting rules. Thus, while the new standard enhances the analysis of company profitability, the regulatory indicators used to evaluate their stability remain unchanged.

# **Spotlight 4: Cyber Threat to Payment Systems**

The International Monetary Fund (IMF) has estimated that about a quarter of cyberattacks worldwide are directed at financial institutions. Research by the IMF has found that size, level of digitalization, and geopolitical risk increase the risk of an attack on a system. Conversely, state-level legislation addressing cyber issues, including the use and protection of information, reduces it. Additionally, the research found that concentration of activity in a particular sector could exacerbate the potential damage, while substitutability could improve the situation.

The expansion of the use of digital financial services brings with it increased opportunities for cyberattacks by hostile entities. Nevertheless, the economic and operational benefits derived from digitalization are numerous, with cyber risk management achieved partly through redundancy and substitutability of services in the financial system.

A systemic issue arises due to regulated financial institutions' increasing dependence on third-party service providers, particularly technology companies. While these providers are not usually subject to direct supervision by financial regulators, the responsibility for ensuring the adequacy of the protection framework in their interface lies with the regulated financial institutions.

1 IMF Global Financial Stability Report, April 2024.

In 2016, the BIS published a document of principles for assessing the cyber resilience of financial market infrastructures, and in 2022, it conducted an assessment survey of financial market infrastructures' compliance with those principles.<sup>2</sup> The survey included 37 market infrastructures and did not include Israel.

The survey revealed the following main findings:

- Only a small number of financial market infrastructures have developed response and recovery plans for a cyber event with a recovery time objective of two hours.
- There are gaps in the planning and testing of cyber resilience in financial market infrastructures.
   Only some have conducted cyber resilience tests after significant changes, and most have not conducted significant scenario tests.
- Even financial market infrastructures that have conducted cyber resilience tests did not include critical service providers in the tests.

The cybsersecurity landscape is characterized by a wide variety of attackers, differing in motivation, capabilities, and methods of operation. State-sponsored cyber attackers are professional groups operating with funding and support from governments, aiming for espionage, disruption of critical infrastructures, and promotion of geopolitical interests. Hackers, on the other hand, are often individuals or small groups with diverse motivations, usually ambivalent to geopolitical changes, focusing on demonstrating their personal abilities—thus also characterized by a wide range of capabilities that are not necessarily consistent. Hacktivists, however, have a political agenda not backed by state funding, but their motivations may align with those of state-sponsored attackers—as in the case of the Swords of Iron War—and their goals certainly overlap. The last group are criminal attackers, who usually have economic goals and possess a wide range of capabilities backed by funds from criminal organizations.

The geopolitical risk to which Israel is exposed makes it a high-priority target for cyberattacks from various sources, with an emphasis on attacks backed by hostile states. The attackers' motivation ranges from industrial or security espionage, through publicity achievements, to actual disruption of normal life in Israel.

Cyberattacks on the country's payments array could harm the economy's financial stability, varying in impact depending on their intensity and success, in several ways:

- **Disruption of economic activity**: Situations where businesses cannot honor payments due to disruptions in payment card services, or scenarios of disruptions in the payment system leading to delays in salary payments, are examples of economic activity disruptions. These disruptions could lead to a cascading effect of delays and further impacts on the financial system as a whole.
- Damage to public trust: A decline in public trust in digital systems in the economy, public fear of
  using digital payment methods, or damage to Israel's image as a technologically advanced and safe
- 2 Monitoring of the PFMI: Level 3 assessment on Financial Market Infrastructures' Cyber Resilience, BIS.

country for business. A significant impact, or a series of sequential impacts, could also deter foreign investors and harm Israel's international standing.

• **Impact on GDP**: Theft of funds and fraud resulting in financial losses for individuals, businesses, and banks in the short term, and higher insurance premia and security costs in the long term, could cause significant economic damage.

#### Availability of Payment Systems – A Cornerstone in Cyber Defense

The availability of payment systems is crucial for maintaining the functional continuity of the economy and the financial sector. Availability refers to a payment system's ability to be accessible and operational for customers and partners during business hours. Disruption in the availability of payment systems, even for a short time, can cause widespread disruptions in business activity, delay essential payments, and harm the supply chain. In many payment systems, such as real-time gross settlement (RTGS) systems, response time during a failure is critically important. Delays in processing transactions can cause financial losses and damage public trust. Since payment systems serve millions of users daily, disruption in their availability can cause significant confusion and frustration among users.

Several cyber threat scenarios could impact the availability of payment systems in the economy:

- DDoS Attacks: One of the most common methods to disrupt availability is a Distributed Denial of Service (DDoS) attack. Such an attack floods the target system with an enormous number of requests, overloading the servers until they crash. DDoS attacks are relatively easy to implement.
- Server Shutdowns: Attackers may attempt to shut down critical servers in the payment system by exploiting vulnerabilities or installing malware. Shutting down servers will prevent access to the system and disrupt its operation.
- Disruption of Communication Networks: Attacks on the communication infrastructure used by the payment system could prevent data transmission and disrupt transaction flows.

The year 2024 was characterized by an increase in hostile cyber activity against the financial system in Israel. During the year, several cyber incidents caused temporary disruptions in the payments array, mainly through DDoS attacks on critical infrastructures. In the last quarter of the year, increased activity was identified, including preliminary reconnaissance attempts on the systems of SHVA and other financial institutions, leading to several disruptions in the routine operation of payment systems, which caused very limited economic damage.

The financial system in Israel is constantly working to enhance the cyber resilience of critical payment infrastructures. The cooperation between financial regulators, security agencies, the National Cyber Directorate, and financial institutions enables a systemic response to the evolving challenges in the cyber arena, while maintaining the functional continuity of payment systems and the stability of the financial system.

#### 4. Risk scenarios

The analysis of the financial system is based on the current economic environment. In addition, the financial system is exposed to risk scenarios pertinent to this period, taking into account the channels through which risks materialize and the extent of their vulnerability. The selection and assessment of the likelihood of occurrence of the risk scenarios described below involve subjective judgment and are influenced by the latest developments in risk factors emerging in Israel and in other advanced economies, as reflected in reviews by international institutions worldwide.

## **4.1 Primary Domestic Risk Scenario**

A scenario involving the escalation and prolonged duration of hostilities—potentially resulting in additional harm, including the mobilization of reserve forces, loss of employment, increased defense spending, the expansion of international sanctions, and more. This would come at a time when the starting point for the economy is weaker than it was before the outbreak of hostilities. Under such a scenario, the main risk channel likely to be directly affected is the macroeconomic channel, which, in turn, could lead to additional repercussions in both asset prices and the credit channel.

## 4.2 Primary Global Risk Scenario

A worsening of global growth and an increase in inflation against a backdrop of macroeconomic uncertainty and a likely US retreat from globalization policies. The Global Financial Stability Report (GFSR), published in October, underscores the risk posed by macroeconomic uncertainty and its impact on financial and economic activity—namely increased volatility, steeper declines in financial markets, delayed consumption (a fall in demand), delayed investment (a drop in investments), and even a reduction in credit supply. The result could be a hit to global GDP growth. Alongside the risk of increased uncertainty, the report also highlights further risks to global growth—specifically, a projected slowdown in China's growth rate and an additional decline in commercial real estate prices abroad. It should be noted that the International Monetary Fund's report was published prior to the US elections. Announcements regarding the US administration's new economic policies heighten risks to global growth and price increases over the short term, given the intention to impose tariffs and trade restrictions.

# Box 1: Repayment Rates and the Impact of the Insolvency Reform: An Empirical Analysis

- The reform in insolvency proceedings, which came into effect in September 2019, led to a decline in the repayment rate, which is defined as the ratio between the present value of payments until discharge and the amount of debt approved by the court.
- The repayment rate is primarily determined based on the debtor's repayment ability. It is possible that the shortening of the procedure duration, a central component of the reform, without a sufficient increase in monthly payments, led to a decline in the overall repayment rate.

## Introduction, Legal Background, and Empirical Evidence

The repayment rate is defined as the ratio between the present value of cash flows received from the debtor and the total original debt. This indicator has an effect on economic activity, particularly the supply of credit. Interest rates, set for the borrower based on credit risk, are influenced by estimates of the repayment rate alongside the probability of insolvency. In cases where the risk materializes and the borrower defaults on loan repayments, higher repayment rates mean lower potential loss for creditors.

In September 2019, the "Insolvency and Economic Rehabilitation Law, 5778–2018" came into effect. The main goals of the Law are the economic rehabilitation of the debtor, increasing the debt repayment rate to creditors, enhancing legal stability and certainty, and streamlining bureaucratic procedures. This box examines the reform's impact on repayment rates and various characteristics of debts, creditors, and monthly payments until discharge.<sup>1</sup>

Research literature indicates a significant correlation between the efficiency of insolvency proceedings and economic performance, as measured by the "leniency index." Empirical findings show that higher efficiency in proceedings, reflected in shorter timeframes, lower costs, and higher repayment rates, leads to higher credit availability and an improved investment-to-GDP ratio.

Agarwal et al. (2003) examined repayment rates on credit card debts and found that the average repayment rate is about 25 percent.<sup>3</sup> International empirical findings show that the average repayment rate, based on a sample of 90 countries between 2004 and 2017, is 33.12 cents per dollar. However, there is significant variance between countries, ranging from 7.33 cents to 75.91 cents. In the Israeli context, Nadiv (2023) found that the average repayment rate is 23 percent in insolvency cases, based on data mostly preceding the implementation of the new law.<sup>4</sup>

- 1 Discharge is the point at which the judge determines that the debtor has fully complied with the payment order and is exempt from the remaining debt approved by the court.
- 2 The leniency index reflects the extent of insolvency system's leniency or flexibility toward debtors. The index is built of a number of components. See Stein, Ophir, and Berzani (2023), which calculates the leniency index for Israel.
- 3 In the context of a mortgage failure, Qi and Yang (2009) provides some interesting insights regarding the repayment rates for residential loans. Their study, which analyzed data from Fanny May and Freddy Mac, found that the rehabilitation rate of failed mortgages averaged about 65 percent, with significant variance based on the LTV ratios and local housing market conditions.
- 4 In contrast with this work, Nadiv's study is based on a statistical sample of insolvency files that were closed in 2018, 2019, and 2020. In other words, the findings are mostly based on insolvency files that were opened under the old law.

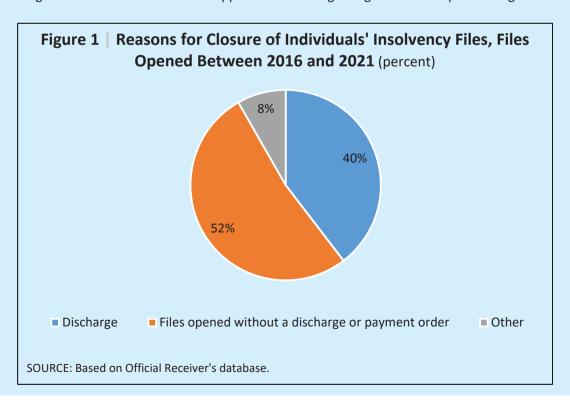
The current research is based on an analysis of anonymized granular data from bankruptcy/insolvency cases, including information on the approved debt amount, types of creditors, monthly payment amounts, and the number of payments until discharge, from 2016 to 2021. This analysis allows for a more accurate assessment of repayment rates set under two different laws—bankruptcy until September 2019 and insolvency thereafter.

#### **Characteristics of Case Closures**

An analysis of the characteristics of closed cases shows that the rate of cases ending in discharge between 2016 and 2021 was about 40 percent of all cases, and remained unchanged between the two periods—before and after the reform. Figure 1 presents this finding and highlights that most debtors who begin the process do not receive a discharge from their debts, even after the reform's implementation. The legal proceedings in the cases are divided into two main periods:

- 1. Interim Period: Begins with the issuance of an order to initiate proceedings and ends with the issuance of a payment order. During this period, the trustee (appointed by the court to review the case) examines the debtor's total debts, assets, and repayment ability, while the court sets a temporary monthly payment, which is revised according to developments in the debtor's financial situation and the progress in reviewing their debts.
- 2. Payment Period: Begins with the issuance of the payment order and ends with the discharge, according to the payment plan set by the court.

Only debtors who manage to meet the payments set for them during both payment periods will receive a discharge from their debts that were approved at the beginning of the court proceedings.



## **Debt Characteristics, Payment Amounts, and Types of Creditors**<sup>5</sup>

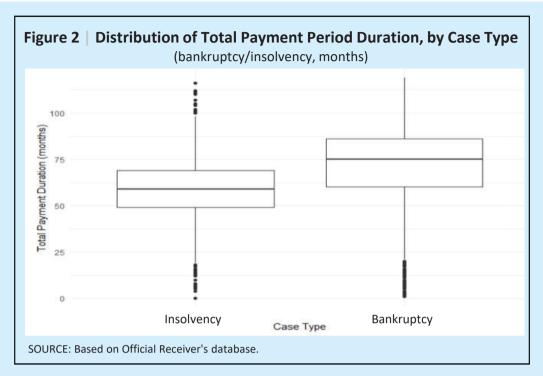
In this section, we present statistical data on debt amounts, payments, and types of creditors in cases opened before and after the reform. The median debt amount in the period before the reform was about NIS 250,000, and in cases opened after the reform, the median debt amount increased to about NIS 320,000. One possible reason for this phenomenon is a change in the characteristics of cases opened during this period. The reform, which increased incentives to initiate proceedings, likely increased the attractiveness for debtors with higher debts to enter insolvency proceedings. Another possible explanation is the COVID-19 crisis, which began in March 2020, soon after the reform's implementation, and may have affected the characteristics of debts and debtors entering insolvency proceedings.

The types of creditors included in the cases are: banks, which are the main creditors with about 50 percent of the approved debts; corporate creditors, holding 25–30 percent of the debts; and state and local authorities, which hold about 10 percent of the debt. Debts to private creditors accounted for a small share, and even shrank to just a few percent during the sample period.

A comparative analysis of the duration of proceedings indicates significant differences between cases opened under the new law, which limits the duration to three years, and those opened under the Bankruptcy Ordinance (Figure 2). The median duration in insolvency cases under the new law is 60 months (beyond the period set by law), compared to 75 months in bankruptcy cases under the old law. Moreover, while under the new law, half of the cases receive a discharge within 60 months, under the Bankruptcy Ordinance, only a quarter of the cases received a discharge within 60 months.

The data show that after the reform's implementation, the monthly payment amount and the debt amount in cases opened under the Insolvency Law increased at a similar rate to those opened under the Bankruptcy Ordinance. However, since the duration of the process until discharge shortened and the number of payments declined, the repayment rate declined accordingly.

In this analysis, we use anonymized granular data from the Official Receiver's database, covering the years 2016–2021 and 2023. These data include information based on the case status dates according to its stages: the submission of the application to initiate proceedings; the determination of the monthly payment amounts paid during the interim period, before the issuance of the economic rehabilitation order; the issuance of the economic rehabilitation order and the monthly payment set in the order; and the case closure date. It is important to note that the monthly payment amount data in the payment orders are incomplete, and in some cases, the discharge date is not recorded.



## **Analysis of Repayment Rate Trends**

An examination of monthly average repayment rates<sup>6</sup> indicates a decline from an average level of 31 percent before the reform to 25 percent after its implementation (Figure 3). This finding highlights that although the monthly payment amount increased, the shortening of the process duration is one of the main explanations for the decline in the repayment rate. In other words, the increase in monthly payments did not compensate for the impact of the shortened payment period.

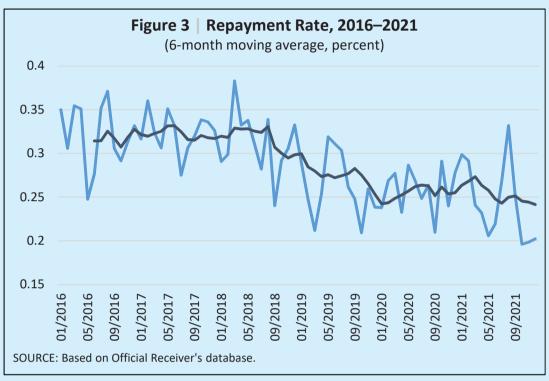
Figure 4 shows the change in the shape of the distribution of repayment rates following the reform. The decline in repayment rates is mainly reflected in a significant reduction in the number of cases with high repayment rates, alongside an increase in the frequency of cases with low repayment rates, shifting the distribution slightly to the left. It should be noted that one of the goals of the Insolvency and Economic Rehabilitation Law is to attain the highest possible debt repayment to creditors. This finding indicates that based on the sample in this analysis, it appears that this goal was not achieved.

# **Repayment Patterns by Debt Characteristics**

An examination of repayment rates in different groups of cases divided by debt amount and creditor type shows that the observed decline in repayment rates after the reform is evident across various segments. The highest repayment rates are observed in two main cases: (a) debts less than NIS 250,000, and (b) debts where the banking system is the sole creditor.

<sup>6</sup> The calculation is based on the ratio of payment amounts to total debts, without capitalization in view of the relative stability of interest rates throughout the sample period. According to data from the Accountant General, between 2016 and 2021, the Accountant General's interest rate ranged between 1.5 and 1.75 percent, the late payment interest rate for money transfers from the banking system ranged between 6.1 and 6.25 percent, and the indexed late payment interest rate ranged between 7.5 and 7.6 percent.

An examination of debt amounts after the reform presents a mixed picture (Table 1). While in most segments, there was an increase in the average debt amount, in the group of cases with high debt, the average debt amount declined moderately. Additionally, in cases where banks are the sole creditors, there was a significant decline in the debt amount.



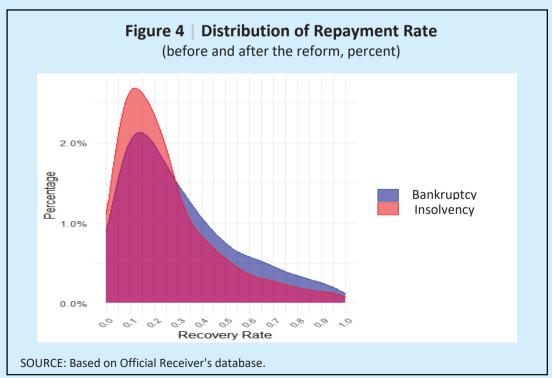


Table 1 | Descriptive Statistics and Correlation Coefficient

between Repayment Rate and Debt Amount, Before and After the Reform, by Selected Debt Characteristics

Reference Group	Average				Correlation Coefficient between Repayment Rate and Debt Amount (percent)
[Number of Cases]	Debt (NIS thousand)	Monthly Payment	Number of Payments	Repayment Rate	
Before the Reform					
All cases [2,881]	533	1,062	73	31	-26
High debt cases [1,486]	899	1,250	76	19	-24
Low debt cases [1,385]	141	865	70	45	-45
Most debt to nonbank creditors** [115]	748	1,197	72	27	-46
Bank creditors only [142]	359	873	70	34	-35
After the Reform					
All cases [1,613]	601	1,779	60	25	-30
High debt cases* [1,019]	865	2,038	63	17	-30
Low debt cases* [604]	155	1,326	56	40	-45
Most debt to nonbank creditors** [58]	1,315	1,816	63	21	-24
Bank creditors only [66]	240	1,268	55	29	-48

<sup>\*</sup> High or low debts are amounts above or below NIS 250,000; \*\* Bank debts constitute up to 10 percent of the total debt.

Table 1 shows that the decline in the repayment rate following the reform occurred across various segments, with relatively high repayment rates set in cases where debts are less than NIS 250,000 and in cases where the creditors are banks only. The table also shows that the average debt increased after the reform in most segments, except in the group of cases with high debts, where the average debt declined slightly, and in cases where banks are the sole creditors, where the average debt declined significantly.

To understand the factors influencing the repayment rate, we examined the repayment rate relative to the debt amount. Table 1 shows a negative correlation between the repayment rate and the debt amount both before and after the reform. In particular, we find that in the division of cases based on debt amount, the correlation between them is not similar, with a stronger correlation coefficient between the repayment rate and the debt amount in cases with low debt. These findings indicate that the payments set for the debtor in court are primarily based on the debtor's repayment ability, and therefore the repayment rate decreases as the total debt amount increases.

# **Implications of the Reform and Policy Conclusions**

The structural changes that occurred following the reform that came into effect in September 2019 indicate lower repayment rates, which may significantly impact the credit risk premium embedded in loan interest rates. It should be noted that the increase in the monthly payment set in the payment order has not compensated for the decrease in the total number of payments, and the average repayment rate declined from 31 to 25 percent. This decline may have a long-term impact on the supply of credit. Interest rates, set for the borrower based on credit risk, are influenced by estimates of the repayment rate alongside the probability of insolvency.

The findings indicate that the reform achieved its goals of increasing the accessibility and efficiency of insolvency proceedings, but at the cost of lower repayment rates. Therefore, it is recommended that policymakers consider regulatory adjustments to ensure the effectiveness of the legislation from both the debtors' and creditors' perspectives.

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