

The changing nature of the financial system in Israel in the last two decades

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Introduction

The 2018 Basel Committee on Banking Supervision paper titled *Sound practices – implications of fintech developments for banks and bank supervisors* outlined five possible scenarios for the future of the financial system. These scenarios include: the “better bank” scenario, where banks continue to dominate while enhancing digitalisation; the “new bank” scenario, where a technology-based financial entity replaces incumbents; the “distributed bank” scenario, where financial services are distributed among banks and technology-driven players; the “relegated bank” scenario, where new digital intermediaries are at the forefront of managing the ongoing relationship and interface with the customer; and the “disintermediated bank” scenario, where banking activity is conducted peer to peer with no significant intermediation by banks.

Since the publication of this paper in 2018, the Israeli financial system has undergone significant changes: credit to corporates and households has grown significantly, technology has started playing a major role in transforming the financial industry, and new financial players, including fintechs and big techs, have entered the Israeli market. Nevertheless, banks still have a very dominant role in the financial system in Israel and probably we are still closest to the “better bank” scenario, although there are signs that the “distributed bank” and, to some extent, the “relegated bank” and “new bank” scenarios may be gaining traction.

The banking system in Israel is dominated by domestic players and very concentrated, and it continues to play a significant role in the financial sector and credit market. One major change has been the entry of institutional investors into the corporate credit market, initially through the capital markets in the years prior to the Great Financial Crisis (GFC), and the decline in banks’ share of credit to corporates, from 70% in 2004 to 50% today. This development has focused mainly on large corporates, whereas small and medium-sized companies still rely mostly on banks for credit. In the area of household credit, the share of banks has declined from 80% to 70% in the last five years. This decline has been focused mainly on consumer credit, while mortgages are still granted almost exclusively by banks.

In recent years, technology has started to play a major role in transforming the Israeli financial industry, making it more efficient and vibrant. The use of big data, artificial intelligence (AI) and machine learning (ML), the move to the cloud and other

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technology developments have affected financial firms and their customers, corporates and individuals, including in terms of access to credit, credit pricing, speed of transactions and more. Information has become a fundamental factor in the new financial era and, together with innovation in financial services, the unbundling of banking services and other developments, has started to slowly open the door to new players, including fintechs and big techs.

The entry of new players is increasing competition, particularly in credit to households (excluding mortgages) and small and medium-sized enterprises (SMEs). This has initiated a shift and contributed towards a more inclusive and customer-oriented financial system. The boundaries between banks and non-banks are becoming blurred, creating opportunities as well as risks and challenges.

Policymakers have encouraged these changes in the Israeli financial system through regulatory intervention, particularly where it was necessary to promote growth and support end users. Policymakers have enabled innovation, removed regulatory barriers to entry and supported efficiency in areas of weakness, such as credit to SMEs, credit pricing, mortgage pricing, inclusiveness and more. Measures have been implemented to strengthen the resilience of the financial system, promote better standards of conduct of business and fairness, and contribute to credit growth, including: monetary loan guarantees, increased transparency in mortgage pricing, a credit registry, a Computer Services Bureau,³ the ability for customers to switch banks with a “click”, open banking and advanced means of payment.

This paper focuses on the Israeli financial system and its recent developments. Section 1 discusses long-term credit trends, while Sections 2 and 3 address the entry of new technologies in finance and of new financial players and credit providers, respectively. Section 4 provides examples of regulatory interventions that have had a direct impact on the resilience, credit growth, fairness and competition of the financial system. Policymakers have encouraged these developments and intervened where necessary to promote growth and support end users.

1 Long-term credit trends in Israel

The banking system in Israel is dominated by domestic banks and highly concentrated, and it plays a significant role in the financial sector and credit markets. Banks in Israel are responsible for approximately 50% of corporate credit and 70% of household credit. The dominance and concentration features of the system support financial stability and resilience, while leading to criticism concerning the level of competition; they also influence credit trends, growth and consumer welfare.

Economic literature links the level of private sector debt⁴ and its growth rate with long-term economic growth. However, since the 2008 crisis, the literature suggests

³ The Computer Services Bureau is an infrastructure supported by the state, intended to serve a number of banks and non-bank entities. This enables small and new banks to benefit from its advantage of scale.

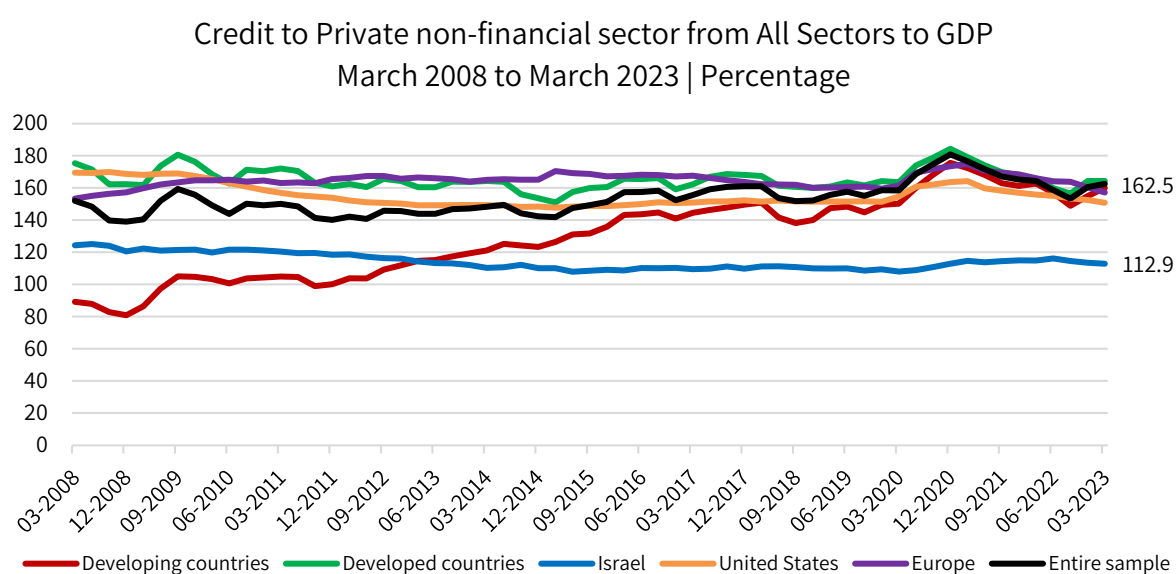
⁴ Business and household debt.

that the positive impact of debt is decreasing and may even be negative, while high debt levels are now perceived as a risk factor that could undermine financial stability.⁵

In Israel, the private debt-to-GDP ratio is low by international comparison (see Figure 1). Looking at the components of debt, both the business debt-to-GDP ratio and the household debt-to-GDP ratio are comparatively low in Israel, a position that supports financial stability and grants policymakers some degree of freedom in their measures to promote growth (see Figures 2 and 3).

In Israel credit to the private sector in relation to GDP is low in international comparison

Figure 1



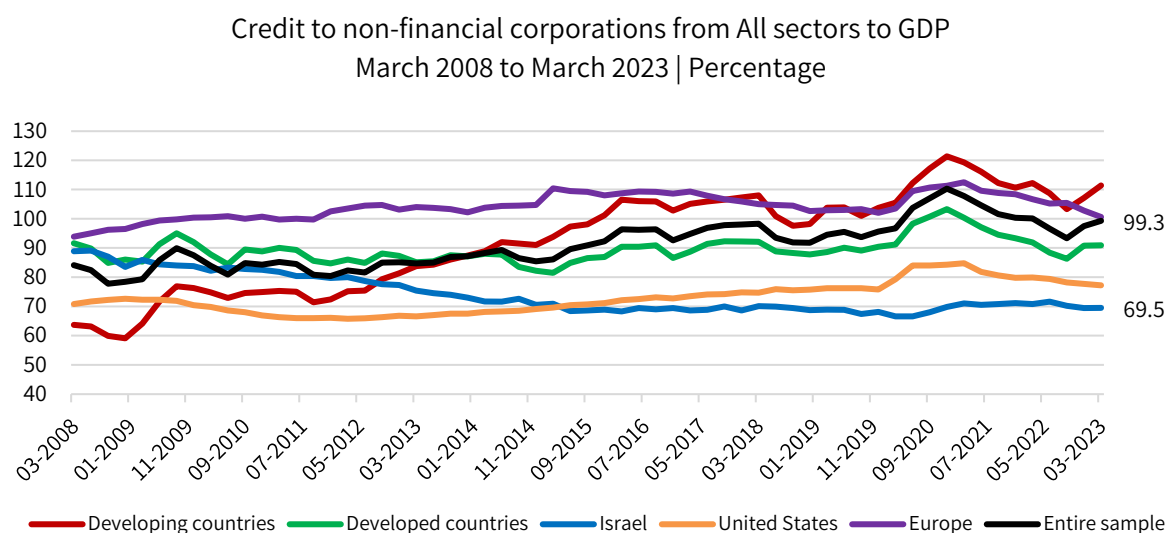
Credit to Private non-financial sector from All sectors at Market value.

Source: Bank for International Settlements (BIS).

⁵ Reinhart et al (2012); Kalemli-Ozcan et al (2015); World Bank (2017); Kose et al (2017); Giroud and Mueller (2017); Checherita-Westphal et al (2019).

Credit to the business sector – the debt ratio of the non-financial business sector to GDP in Israel is low in international comparison

Figure 2

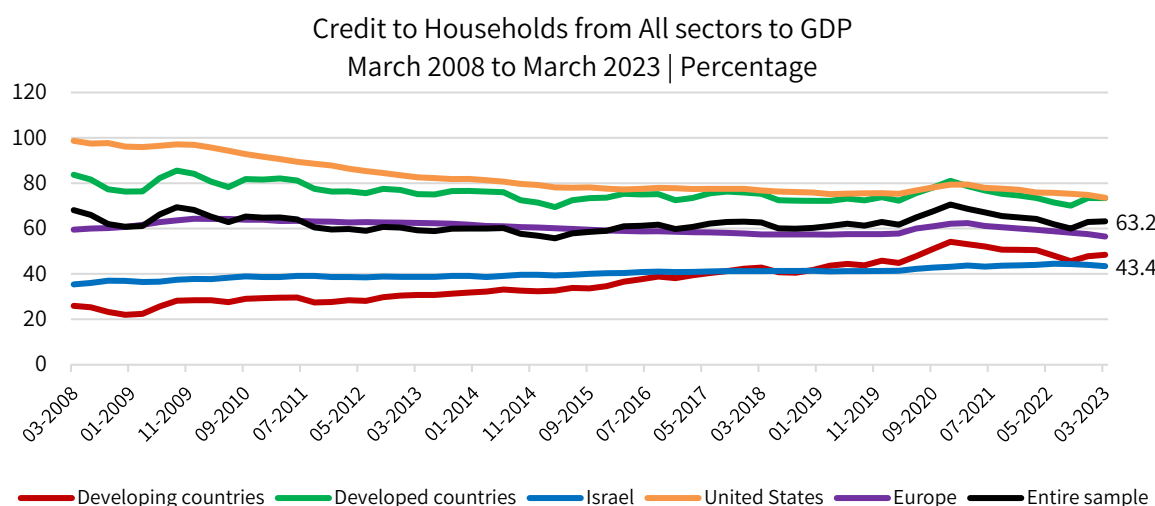


Credit to Non-financial corporations from All sectors at Market value.

Source: Bank for International Settlements (BIS).

Credit to households in relation to GDP – the ratio of household debt to GDP in Israel is on the rise but remains low relative to the rest of the world

Figure 3



Credit to Households and Non-profit institutions serving households (NPISHs) from All sectors at Market value

Source: Bank for International Settlements (BIS).

When analysing developments over time, the gap between the business debt-to-GDP ratio in Israel and that of developed countries has increased slightly in the last decade. This is explained, among other things, by: the impact of the Covid-19 pandemic, which Israel managed without significant growth in debt; the structure of the business sector in Israel; the rise of the service sector at the expense of the goods sector and the increasing weight of high-tech companies that fund their activities through equity; and perhaps a cultural reluctance to take on high levels of debt.

The household debt-to-GDP ratio in Israel is low by international comparison, particularly due to the low level of mortgage debt. Housing prices in Israel have risen significantly since 2007, and with them, the credit for housing. However, structural limitations such as low participation rates in the mortgage market and relatively low funding rates in this market, partly due to Bank of Israel (BOI) intervention with macroprudential tools, have limited the increase in debt in Israel and there are limitations on loan-to-value (LTV) ratios for mortgages. Banks are not allowed to grant mortgages with an LTV ratio exceeding 75%. Additionally, there are limitations for payment-to-income (PTI) ratios to not exceed 50% and TTM to not exceed 30 years. There are also capital requirements and general provision demands for mortgages with high-risk characteristics.

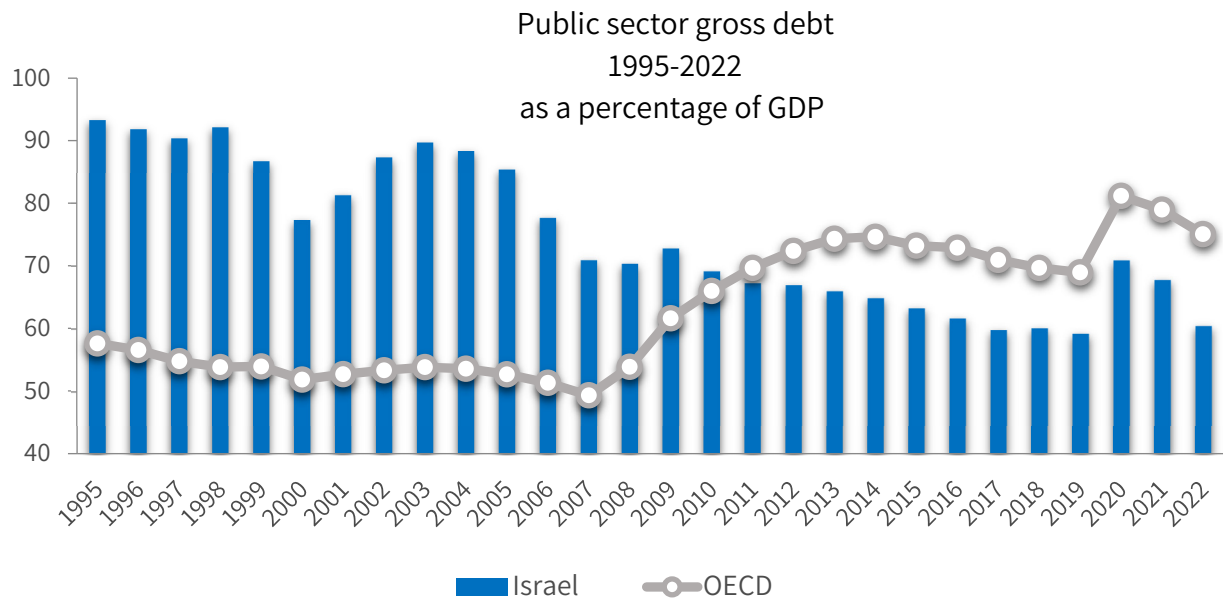
The level of private sector debt is also dependent on the level of financial development in each country, which is reflected in the variety and extent of credit supply and credit providers. The absence of a securitisation market in Israel that would allow banks to reduce their leverage and risk assets, as well as the concentration of the financial system and the dominance of the banking system, have also influenced the level of debt. Studies that examined the financing structure of businesses emphasise the importance of opening up the non-bank financing market to the business sector. These studies found a positive correlation between non-bank financing and economic growth.⁶

Two developments led to the growth in the corporate debt market. First was the reduction in government deficits, and consequently government debt (see Figure 4), which had crowded out corporate issuance. Second, starting in 2005, as part of the Bachar Reform, the management of public assets in trusts and mutual funds was transferred to non-bank financial institutions to increase competition in the financial system. During this period, there was also a significant increase in the leverage of companies in the economy. Institutional investors entered the corporate credit market through the capital markets in the years prior to the GFC, and banks' share of credit to corporates declined from 70% to 50%, where it stands today. This development has focused mainly on large corporates, whereas small and medium-sized companies still rely almost solely on banks (see Figure 5).

⁶ Allen et al (2012); Langfield and Pagano (2016).

Reduction in Israeli public sector debt

Figure 4

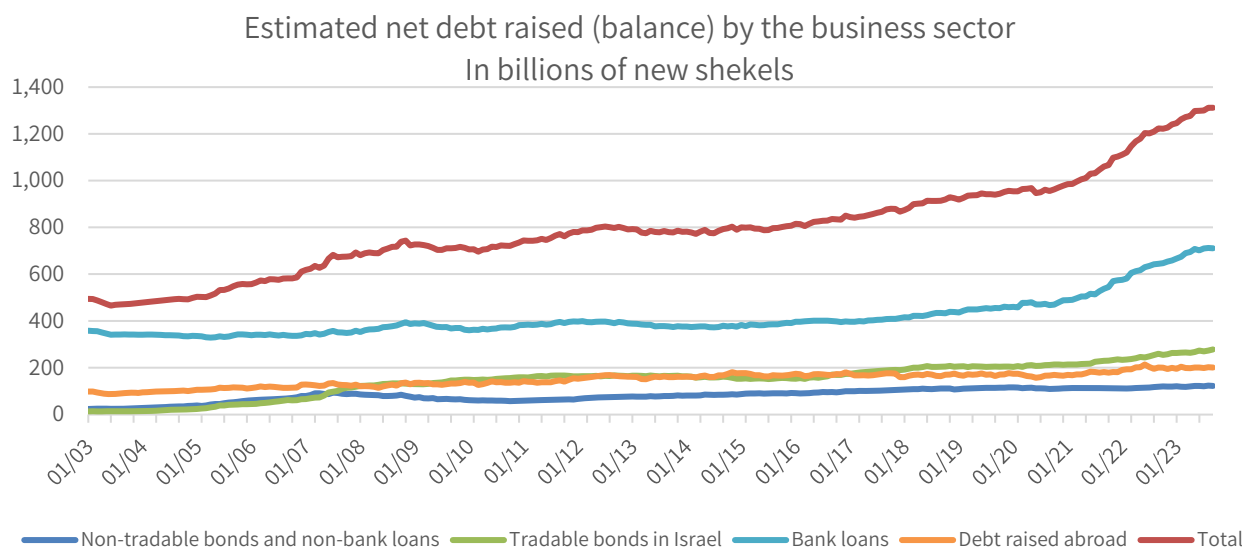


OECD average is a simple average (excluding: Latvia).

Source: Bank of Israel.

Banks' share of credit to corporates declined in the years prior to the GFC

Figure 5



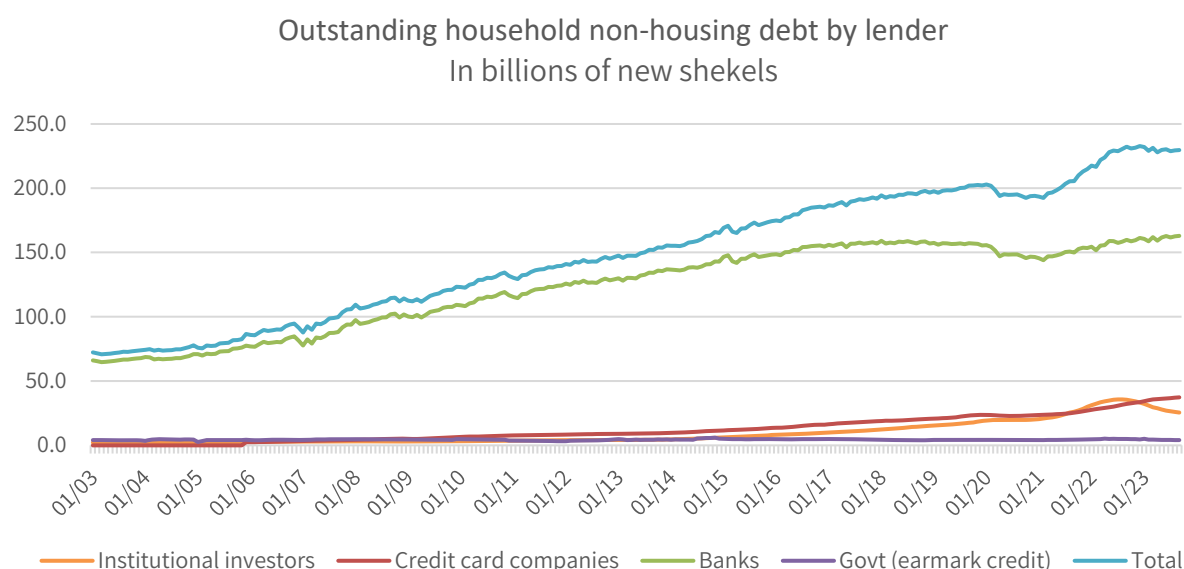
Source: Bank of Israel

In Israel, most of the credit granted to households is mortgage credit, which is almost entirely provided by the banking system.

Since 2017, as part of the remit of the Committee to Increase Competition in Common Banking and Financial Services, steps were taken to structurally separate credit card companies from banks to increase competition in the consumer credit market, as well as other structural measures. All of the aforementioned focused mainly on consumer credit, and as a result, the share of non-bank credit in the consumer credit market has increased from 20% to 30%, while mortgages are still granted almost exclusively by banks (see Figure 6).

Since 2017 the share of non-bank credit in the consumer credit market has increased

Figure 6



Source: Bank of Israel.

Analysing the structural, regulatory and economic developments in Israel over the past two decades, we note that they reflect the developments in credit demand and supply. In this short paper we will focus on two long-term developments which form the foundation of the current financial and credit position towards a more effective credit market: technology developments in finance and the entry of new players to the credit market. Both developments, which are interdependent, have influenced the credit market in Israel and encouraged credit growth in particular where weaknesses were found. Both trends and structural changes were accompanied by proactive involvement from policymakers. These interventions were made possible while maintaining financial resilience, against a background of declines in Israel's debt-to-GDP ratio.

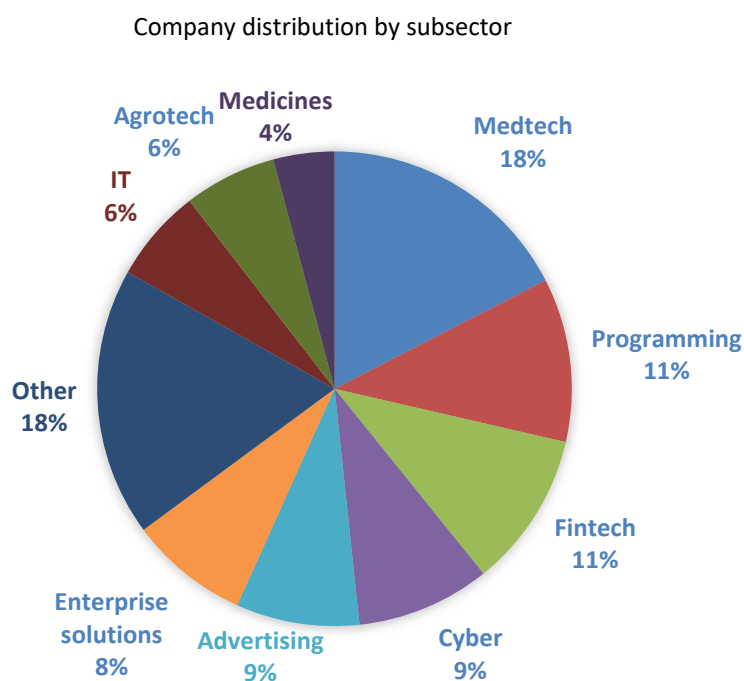
2 New technologies enter the Israeli financial system

Israel is renowned for being a high-tech nation, and the statistics speak for themselves. In the last five years, 40% of Israel's business GDP growth has been attributed to the high-tech sector. High-tech companies contribute to 17% of Israel's GDP and to 56% of its exports. Moreover, 12% of Israeli employees work in high-tech, and high-tech employees pay approximately 25% of all income tax. The high-tech sector is relatively decentralised, and 11% of high-tech companies are fintech companies (see Figure 7).

The fintech industry in Israel covers a vast variety and scale of topics. This sector is composed of almost 500 fintech companies, which operate across a range of financial fields, including trading, payments, enterprise solutions, anti-fraud, insurtech, lending and personal management. Fintech is one of the three fields that has attracted the majority of investment in recent years, highlighting the significant growth and innovation in this area

Israel's high-tech sector is relatively decentralised, with 11% of high-tech companies being fintech companies

Figure 7



Source: Bank of Israel.

Given Israel's technological environment and vibrant fintech industry, one might expect Israeli banks to be among the most technologically advanced in the world. After all, banks around the world have always to an extent been technological firms, enabling electronic transactions, cross-border activities, payments and complicated computing. However, until several years ago in Israel, this was not the case. Banks were labour-intensive and not especially innovative and most transactions were executed manually through branches in a traditional manner.

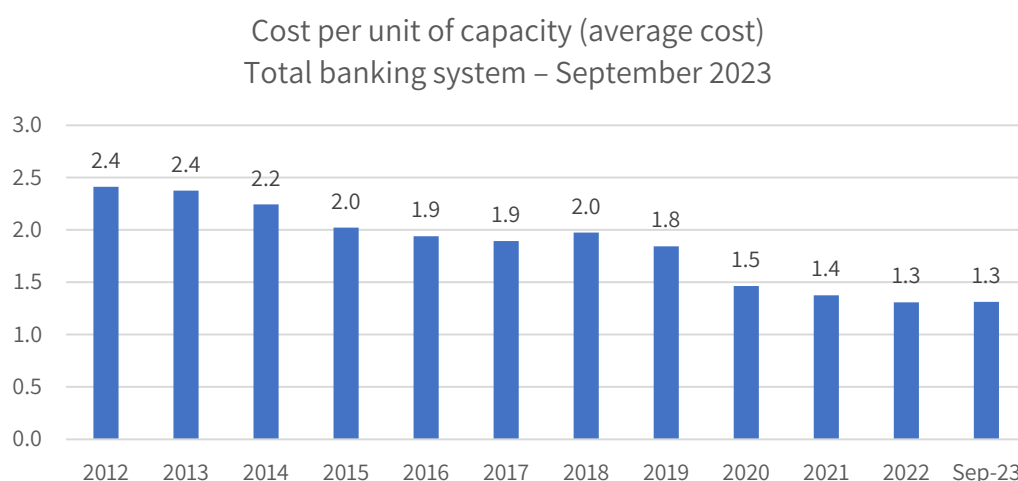
How can we explain this lack of innovation in Israeli banks in the past, and what has changed in the last few years in the banking and financial systems in Israel, with innovation starting to play a key role?

Initially, the concentration of the banking system and its dominance in the financial arena were not conducive to efficiency or promoting innovation. The efficiency ratios⁷ of Israeli banks were between 60 and 70%, indicating that Israeli banks were less efficient than their peer banks in OECD countries. **Furthermore**, strong labour unions in banks and insurance companies in Israel and a low level of financial literacy were additional factors that influenced financial institutions' considerations in implementing technological innovation. **Moreover**, the financial system in Israel is quite conservative, particularly its banks. Banks, regulators, banking regulation and supervision have historically been conservative, a result of the fallout from the banking crisis in the early 1980s. While this conservatism enabled the financial system to weather the GFC and other financial shocks with relatively good results, it also impeded it from embracing technology.

During the last few years, the financial system in Israel has undergone significant changes, with digital finance taking the lead. While industries typically embrace technological innovation and do so before regulatory authorities, in Israel a regulatory initiative and change in attitude were needed to spur the financial industry forward. As early as 2016, the supervisor of banks at the BOI added two supportive objectives to those of stability and fairness: (1) promoting technology and innovation in the banking sector; and (2) improving the efficiency of the banking sector. These interrelated objectives contributed to the changing technology environment in Israel, and induced a significant change (see Figure 8).

Israeli banks underwent a significant efficiency process in the last decade

Figure 8



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

Source: Bank of Israel.

⁷ The ratio between total operating and other expenses and total net interest and non-interest income (cost to income ratio).

At the time, there was a regulatory perception that the financial environment was changing rapidly and materially, and that this trend would continue, with new financial players entering the market. This required banks to accelerate the pace of examining new technologies, enabling them to compete in the new digital financial era.

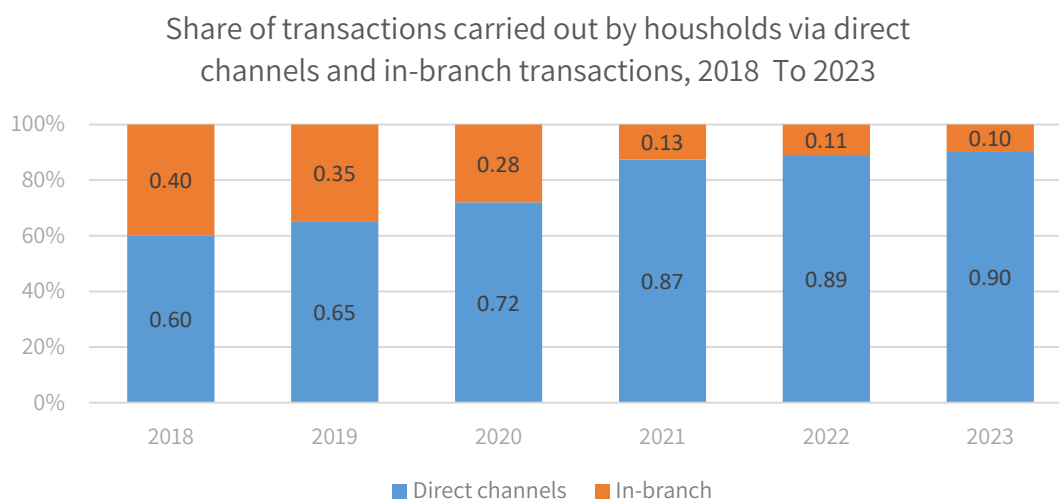
With this in mind, the BOI took several operative actions, along with a loud and clear declaration that it was aware that innovation experiments would at times entail the materialisation of risks, and it understood that this was an unavoidable part of the process of change. Therefore, creating an experimental environment, by examining the risks for trying the new initiatives, “will be an easing consideration in the Banking Supervision Department’s examination and compliance processes (examinations, sanctions, etc) should the risks materialize”.⁸

Banks were required to formulate a clear and holistic strategic approach with regard to adopting innovation in their banking activity. This referred, among other things, to improving the customer’s journey (households and businesses) and experience, enhancing automation of the operational process (back office, call centres, etc) and ameliorating the effectiveness of internal controls and risk management systems as well as the competitiveness of banking corporations.

In the last few years, banks and non-bank financial institutions in Israel have implemented new technologies such as big data based on AI and advanced ML, open banking and application programming interface (API), cloud computing, digital image processing, biometrics and voice recognition, Internet of Things (IoT), distributed ledger technology (DLT) based on blockchain, 5G internet and more.

The BOI plays a pivotal role in advancing financial service technology on two fronts: first, it has been instrumental in removing some of the regulatory barriers that had hindered banks and credit card companies from adopting new technologies. It achieved this with initiatives such as promoting open banking, removing cloud restrictions, supporting advanced means of payment, collaborating with fintech companies, using technology-based methods of identification to replace physical interactions between bank representatives and customers, and simplifying the process of opening digital accounts. Second, it actively encourages customers to switch to digital channels by reducing regulated fees, supporting financial literacy and making it easier for customers to switch from one bank to another with a digital “click”. By taking these steps, the BOI is helping to galvanise innovation in the financial services industry, making it more accessible and convenient for customers while also promoting competition among banks. Banks were requested to implement innovation in a responsible and prudent way by identifying opportunities as well as risks and taking the appropriate measures needed. The increase in digital banking can be seen in Figure 9.

⁸ Bank of Israel Supervisor of Banks letter to the banking corporations and credit card companies re: Encouraging innovation at banks and acquirers, 23 June 2019.



Source: Bank of Israel.

The Covid-19 pandemic in 2020, which necessitated remote working, facilitated significant progress in technological implementations by both financial institutions and their customers. Banks have had to adapt their business models, resulting in improved digital customer service and a wider variety of services being offered digitally. Customers have also shifted towards direct channels instead of relying on physical branches. As a result, the pandemic accelerated the adoption of digital technologies in the financial services industry, leading to greater efficiency, convenience and accessibility for both banks and their customers.

3 New financial players enter the Israeli financial system

The integration of technology and innovation into finance, along with effective policymaking measures, has created opportunities for new players to enter the Israeli financial market. While technology alone was insufficient to attract new players, and policymakers' measures and regulations were also not enough, the combination of the two has proven successful. This synergy has enabled the financial market in Israel to expand and diversify, providing new opportunities for investors and businesses alike.

Over the years, policymakers in Israel have pursued a more competitive financial market through various initiatives. The Bachar Reform in 2005,⁹ for example, resulted in the separation of provident and mutual funds from banks, while the Zaken Committee in 2013 encouraged the entry of new players such as foreign banks and credit unions. While these actions have had an impact on the Israeli financial market

⁹ The Bachar Reform refers to the Law for the promotion of competition and reduction of concentration and conflicts of interest in the Israeli capital market (legislative amendments), 5765-2005.

and fostered competition in some areas, they have not fully addressed weaknesses in other areas, particularly for households and SMEs.¹⁰ As a result, the pursuit of a more competitive financial market remains a key priority for policymakers. Israel's relatively low debt-to-GDP ratio has given some degree of freedom for regulatory intervention to foster credit supply in areas where it was needed.

In Israel and around the world, the combination of regulation and new technologies has facilitated the entry of new entities, such as digital banks, credit service providers and payment service providers. Listed below are examples of regulatory initiatives to promote competition and innovation in Israel's financial sector which directly affect the entry of new financial players and somewhat increase credit access:

- In accordance with the 2016 credit data law, the BOI established a Central Credit Register (CCR) for individuals and households. The CCR expands the information available to credit providers wishing to evaluate a customer's credit risk level. This is particularly important to new entrants who lack the banks' access to data on potential clients.
- In collaboration with the BOI, since 2017 the Ministry of Finance has promoted the establishment of a centralised Computer Services Bureau; this is in order to lower the high price of computer infrastructure, which acts as a significant barrier to establishing a new bank, and to enable new banks to enter the market and increase competition.
- Starting in 2017, two credit card companies were separated from the two big banks. These credit card companies now operate as separate non-bank credit providers and merchant acquirers, and compete with banks to provide credit to SMEs and retail customers.¹¹ A third credit card company is also going to be separated from its parent bank.
- In 2019, a licence was granted to a new digital bank, the first licence in 40 years; another digital bank is on its way, and possibly others may follow. This resulted from a change in the BOI's bank licensing process and the establishment of the centralised Computer Services Bureau.
- Between 2017 and 2022, the BOI granted three licences to new merchant enquirers by easing the licence process and removing entry barriers.
- Towards the end of the second quarter of 2023, an initiative to set up a new business credit data register was announced to improve access to credit for corporate entities and in particular for SMEs; this should increase competition between the financial players in this area.

With these measures the BOI is aiming to facilitate the entry of new financial entities into Israel's financial system. This will enhance the value for customers, not

¹⁰ The operations of foreign banks and credit unions in Israel are minor.

¹¹ See the Law for increasing competition and reducing concentration in the banking market (legislative amendments), 5777-2017.

only through the innovation that these entities bring, but also via their impact on the traditional system and the competition they can generate.

Furthermore, there are entities that begin operating in the financial system without supporting legislation, mainly due to the technological ability they bring. Various fintechs have succeeded in introducing innovation in a variety of fields of activity, starting with the world of payment services, followed by those of models for credit ratings, insurance and investment consulting, and ending with those of knowing the customer and complying with regulatory instructions. Most of them work in collaboration with the local banks (the “distributed bank” and “relegated bank” scenarios). Big techs are also in the financial world to stay; they are already significant players in the world of payment services, and their entry into additional financial worlds, although proceeding slowly, has the potential to advance quickly.

A few years ago, there were doubts about banks’ ability to adapt to the new financial technological world (the “new bank” scenario). Today it is clear that, together with the entry of new financial players, fintech and big tech, banks have risen to the challenge and implemented innovation. One worry continues to be the potential use by the banks of their dominant market position to place barriers in front of aspiring new entrants into the financial ecosystem.

4 Regulatory intervention and Bank of Israel measures

The BOI plays a central role in identifying market weaknesses and taking measures to mitigate risks in the financial sector and enable effective credit activity. This section will focus on measures taken by the BOI in three specific areas: supporting credit provision to SMEs during crisis times; implementing “open banking” in Israel to support a more efficient credit market; and increasing transparency and comparability in the mortgage market to make it more effective.

1. **Emergency monetary loans to SMEs** – Small businesses in Israel are a major growth engine for the economy, and their contribution to business output is significant. Their growth and contribution to the economy are made possible by the financing provided to them, primarily by the banking system. However, studies¹² have identified many hurdles to SME lending, including information gaps, relatively higher risk and lack of collateral. These create a potential for market failure, particularly during difficult times. To enable the financial system to continuously supply the economy’s credit needs during Covid-19 (2020) and the “Swords of Iron” war (2023), the monetary committee at the BOI launched programmes intended to ease credit terms for small and micro businesses. Within the scope of these programmes, the BOI provides low-interest credit to the banking system against loans granted to small and micro businesses totalling up to ILS 10 billion (for each programme). This helped the SME sector to weather the difficult environment during the Covid-19 pandemic, and initial data from

¹² See, for example, Committee for Examining Competition in the Credit Market (2018).

2023 suggest that the intended purpose of providing cheaper credit to micro and small businesses is starting to be achieved.

2. **Implementing open banking** – At the centre of implementing open banking activity in Israel lies the asset of information possessed by the customer. The Financial Information Service Law, 5772-2021, which was published in November 2021 and went into effect in June 2022, presented a timetable under which baskets of information in open banking were gradually introduced until the end of 2023. In Israel, information sources (such as banks) are required to share information not only on transactions in customers' accounts but also on credit, deposits and securities held by customers. We expect to see open banking expanding and promoting advanced business models and increasing opportunities for competition as time progresses. Additionally, it is reasonable to assume that open banking will expand into open finance and perhaps even open data, which will have a systemic impact and will, of course, affect various market players, including credit providers.
3. **Mortgage transparency reform** – BOI measures to enhance transparency and comparability in the mortgage market came into effect in August 2022. The mortgage market is remarkably complex for the average consumer, with banks offering a combination of fixed nominal, floating nominal and index-linked mortgages. The new measures are intended to help customers request a mortgage proposal faster and more conveniently, better understand the mortgage terms being offered and their impact on future payments, and compare the various proposals offered by several banks in a more informed and easy manner. For example, customers can submit a digital request via the bank's website, and the bank must offer three mortgage options as per the BOI format so the customer can compare different offers more easily. As a result, not only does the customer have more negotiating power, but the competition among mortgage providers is enhanced.

Conclusions

The financial system in Israel has proven to be resilient and weathered financial crises well. Yet, the system is relatively concentrated and has weaknesses in certain areas, such as SMEs and household credit. In comparison to other countries, Israel's debt-to-GDP ratios are low for both businesses and households. This has allowed policymakers to take proactive measures to increase competition while maintaining financial stability. The introduction of new technologies and financial players has encouraged the system to become more effective and inclusive. However, technology alone is not enough. The willingness of policymakers to act has played a crucial role in digitalising the financial system, promoting its development, innovation and resilience. The responsible adoption of new technologies such as AI, quantum computing, DLT and biometrics is having a tremendous and evolving effect on the financial system, for both individuals and corporations. This must be done while endorsing risk management and controls, promoting financial literacy and addressing identified weaknesses.

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