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(Editor's Note: This article is part of a series of commentaries on retail banking sectors, illustrating how technology disruption forms part of S&P Global Ratings' analysis of banks.)

Key Takeaways

- Tech disruption risk in retail banking and fintech penetration in Israel so far have been limited, with regulation as a high barrier to entry and banks benefitting from customer loyalty and stable market shares.
- The regulator is gearing up structural reforms to enhance competition and promote technological innovation in the financial sector, including the entrance of new players.
- Israel is one of the global leaders of technology and innovation, but most of the country's fintechs do not attempt to operate in the local market.
- At the same time, banks are responding by preparing themselves for digital disruption, when customer preferences could change rapidly or new tech players could enter.
- For this reason, we believe regulation is key to determining the pace of digitalization in the financial sector and its impact on existing players.

S&P Global Ratings thinks the operating environment in Israel's financial sector is likely to quickly become more digital and competitive, though in the next few years the country's banks should be able to manage the risk of technological disruption.

Applying our four-factor analysis of a banking system's technology, regulation, industry, and preferences (TRIP), we think the key driver for change is regulation, with the introduction of broad changes to enhance competition and facilitate the adoption of new technologies. Israel is one of the world's largest hubs for technology and fintech companies, but most of them currently are not addressing the local market. Local banks are also increasingly collaborating with fintechs to address current and evolving customer preferences.

Israeli banks demonstrate resilient profitability. They have gradually diversified their lending activities, reduced single-name concentrations, and demonstrated solid asset quality that has been supported by positive economic conditions. The regulator also actively encouraged them to improve operational efficiency and adapt to innovation, which led to workforce cuts and branch closures, and to use digital solutions for banking services.

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However, despite being an exporter of advanced technologies to the world, the Israeli economy is less digital than many Western European countries and the population widely uses paper-based means of payment, such as cash and checks. Banking customers are also loyal to the leading banking groups, with little change in bank market shares over the years.

Over the past few years, regulators have focused on structural changes in the market. They introduced new players, following the separation of credit card companies from two large banks, and formulated the licensing of nonbank lenders, allowing them to tap the capital markets to diversify their funding and become competitors in the area of lending to small and midsize enterprises (SMEs). At the same time, the regulator is also increasingly promoting initiatives to facilitate the digitalization of the financial sector, such as reducing barriers to the establishment of digital-only banks, adoption of an open banking standard, and adoption of an EMV (Europay, MasterCard, and Visa) standard in payment services, which is expected to be implemented this year. We therefore believe that once all the relevant regulatory, legal, and consumer operating conditions are set, the Israeli financial sector will likely catch up with other more digitalized economies. Considering there is a vast supply of technology and innovation in the country, with most of the population open to the adoption of digital services, we believe the pace of regulation and legislation will largely determine the risk of disruption to the Israeli financial sector.

Chart 1

Tech Disruption Risks: Israeli Banks

Regulation Is Shifting To Encourage Innovation, While The Banking Industry Is Adjusting, Supported By Vast Technology Supply



Our view of digital disruption risk is the outcome of a point-in-time analysis of four factors of a country's banking industry. There is no explicit quantitative analysis behind the scoring; the assessment is derived from discussions with market participants and S&P Global Ratings' analysis. Technology--Banks' technological capabilities relative to nonbank competitors. Regulation--Degree to which regulations protect banks' market positions. Industry--Structure of the banking system and its ability to adapt and invest. Preferences--Consumer preference for emerging technologies and digital banking, and perceived likelihood of customers switching to nonbank competitors. Source: S&P Global Ratings.

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Regulation: Disruption Risk / High

Israeli banking regulation has geared up efforts in recent years to encourage greater competition in the banking sector not only in terms of structural changes but also in promoting and encouraging technological innovation. This year might be a turning point, when many regulatory initiatives will begin to take effect. This is why we believe the risk to the financial sector stemming from changes in regulation is currently high.

Israel's Supervisor of Banks supported the initiative to separate the two large credit card companies from the two large banks, which was completed in the first half of 2019. In addition, the regulator granted a license to a new fully digital bank, which is expected to start operating in 2021. This was after a 40-year absence of new bank licenses in Israel. The Bank of Israel had to remove several barriers and revise the requirements to ease the process. At the same time, the regulator is behind several changes in the operating environment to reduce information gaps, to allow new players, potentially fintechs as well, to compete effectively with banks, which traditionally hold most customer information. The establishment of a credit bureau in April 2019 is an example of such a change.

In 2019, the Bank of Israel also published several guidelines to promote the open banking initiative by adopting the principles of PSD2, the EU's second Payment Services Directive, allowing a unified standard for the banking system for effective collaboration with third-party suppliers. Implementation of an EMV standard, as many other countries are doing, is aimed at making the payment system "smarter" and increasing the activity of fintech players.

Table 1

Israel's Regulatory Initiatives To Promote Competition And Encourage Technological Innovation In The Banking System

Initiatives to promote technological innovation	Initiatives to promote competition
Establishment of the Bank of Israel's Technology and Innovation Division in 2016. The goal is to address major technological change in the banking system.	Separation of two credit card companies from two large banks in 2019, to create two additional players in the financial system and weaken the power of the two large banks.
Open Banking. Definition of the next-generation PSD2 standard for open banking starting stage 1 in 2020, to encourage the development of new services and products by allowing access to customers' data to new players.	Establishment of the Credit Bureau in 2019 to minimize information gaps between the players, while all the banks and 18 nonbank financial institutions are contributing to the database.
Cloud Computing. Defined the use of the cloud in 2015, to enable banks to promote the rapid development of innovative products, improve flexibility, and reduce response time and operating expenses.	"Moving by Click" project starting in 2021 to make the process of changing banks easier for customers.
EMV. Overall transition to the EMV standard, starting in April 2020 to allow smart payments, including contactless payments via mobile phone and facilitate potential entrance of new global players.	Licensing of first fully digital bank in 2019, expected to begin operations in 2021 and become a new banking player. Easing of the process for the licensing of new banks and of requirements.
Removing the cap on use of P2B payments by bank payment apps starting in 2022.	Strengthening of midsize banks by allowing, for example, mergers and acquisitions, captial relief.

Source: S&P Global Ratings.

The regulatory mindset seems open and responsive, with the aim of allowing more players in the payments and nonbank lending sectors, including fintechs, and at the same time enhancing public confidence in their operations. The Bank Supervisor operates under the Bank of Israel and

supervises banks, credit card companies, and the payments system, while the Capital Markets Insurance and Savings Authority, operating under Ministry of Finance, recently assumed the responsibility over nonbank lenders, in addition to supervision of insurance companies. Those usually require licensing and a controlling permit for the owner.

Despite an openness to change, the development of regulation to facilitate the activity of fintechs is still evolving. This is despite a clear government interest to increase the penetration of fintech companies in the Israeli economy and in a "regulatory sandbox" approach that an interministerial team comprising several ministries and financial regulators has recommended. Nevertheless, they have not yet defined a regulatory and legislative framework for fintechs, even though this is a prerequisite for their successful entrance on the market and execution of regulatory initiatives such as open banking.

We believe that over the next few years, Israel might issue additional regulations to facilitate the initiatives announced last year, when the risks and opportunities of open banking, easier transfers of customer accounts between banks, and the adoption of payment system enhancements will become more prominent. At the same, regulators and policymakers will have to proactively address supplemental issues arising from growing tech activity, such as information security, privacy, and cybersecurity to allow supportive conditions for the continuous evolution of the financial industry.

The regulators' determination to reduce the regulatory burden and promote changes in the operating environment to enhance competition indicates a shift in its state of mind and awareness to changing market conditions. At the same time, given changes in the banking system, we also believe the Bank Supervisor feels comfortable that promoting competition and encouraging technological innovation in the financial system will not jeopardize its stability.

Looking at the initiatives that have already been implemented and participation of fintechs or challenger banks as active players in the financial system, the competitive landscape in Israel still lags far behind that of countries such as the U.K. or the Nordics. Nevertheless, we believe the actions taken by regulators, as well as the sufficient number of fintechs and a national openness to new technologies, are now setting the scene for change and for catching up with other developed markets. This is provided that execution and creation of the legislative framework will be effective in creating the required conditions for the success of fintech players and that they will increase their operations in Israel.

Technology: Disruption Risk / Moderate

Israel, also known as "the start-up nation," is one of the global leaders in technology and innovation, largely due to its innovative and entrepreneurial culture supported by a skilled workforce and high technical capabilities often adopted from the Israel Defense Forces. Along with traditional fields such as information security, cyber, and telecommunication , Israeli technology is quickly developing into financial technology and artificial intelligence. Nevertheless, Israeli start-ups, including fintechs, usually target larger global markets and their presence is less visible in Israel. As a result, most Israelis do not feel they are part of the start-up nation.

Tel Aviv is ranked No. 18 in top global fintech hubs, and Israel No. 12 in global fintech countries for 2020, according to Findexable's Global Fintech Index. A report by Deloitte estimates that Israel is home to over 7,000 active start-ups, of which over 500 are fintechs and 350 are innovation and R&D centers of global companies. The local ecosystem is partnering with global players such as Citibank, Barclays, and MasterCard to find innovative solutions and advanced technologies. Several global banks have established global accelerators to look for advanced solutions and talent from the local industry, according to Deloitte's Israel Fintech Landscape Report 2018."

Notable Israeli start-ups in fintech include Lemonade and Next Insurance, which both offer fully digital insurance platforms. FundBox, Riskified, and BlueVine are engaged in financial services. These companies completed later-stage megarounds of fundraising of above \$100 million in 2019, allowing further independent growth, based on Start-Up Nation Central data. Other Israeli fintechs include Payoneer, Rapyd, eToro, Colu, Pagaya, and OurCrowd.

So far, the presence of fintechs in the local market is modest and in general there seems to be little appetite for entering the Israeli market, given its limited scale and growth potential. However, we believe that local banks are looking for ways to increase collaboration with fintechs to ensure their relevance and support their business models. This is in particularly crucial if one of the fintechs or Big Tech players enters the market and begins to compete with current players. Based on the pace of adoption of technological solutions by local banks and the availability of resources, we believe the risk posed by technology on the banking system is currently manageable. Nevertheless, this could rapidly change if operating conditions encourage the presence of fintech or big tech companies, which will become a valid competitor with the banks on various financial services.

Industry: Disruption Risk / Moderate

We believe it is unlikely that digitization of banking and forthcoming changes to open banking and payments regulation will materially disrupt the role of the leading Israeli banking groups in the near term. The five largest players hold more than 95% of the market: Bank Hapoalim, Bank Leumi, Mizrahi Tefahot Bank, Israel Discount Bank (IDB), and First International Bank of Israel, with little changes in their market shares over the years. The regulator is pushing for increased competition, mainly by adding new players, strengthening midsize banks, and prospectively easing the process of switching between banks. It led to the separation of credit card companies Isracard and Max IT Finance (former Leumi Card) from Bank Hapoalim and Bank Leumi, the two largest banks. However, it allowed IDB, a midsize bank, to keep its credit card subsidiary. The regulator gave its approval to Mizrahi Tefahot Bank to acquire Bank Igud, the larger of the smallest banks, which would bring it closer in terms of size and market share to Hapoalim and Leumi. Another example is approval granted for a license to the first digital bank, which expects to begin operations in 2021.

Chart 2



Israel's Top Five Banking Groups Comprise 95% Of The Market Market share as of December 2018

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Israeli banks have actually benefited from concentration of their operations on the Israeli market and demonstrated relative resilience during the great financial crisis, enjoying supportive economic conditions. Since 2008, their balance sheets have become stronger as their lending became more diverse across retail, mortgage, corporate, and midmarket lending. Their historical concentration on single borrowers and large groups has reduced, along with the structural changes in the Israeli economy, and underwriting standards have become tighter, especially in mortgage lending. Nevertheless, unlike more competitive markets like the U.K. and the Nordic countries, Israeli banks have not yet faced major competition from new players or entrants. The small scale of the market is not attractive enough for foreign players, especially considering the investments required to adapt to local regulation. The separation of the credit card companies has been in place only for less than one year, and the impact on the profitability of the two large banks has been manageable so far.

We believe Israeli banks are increasingly preparing themselves to change the nature of banking and for the potential entrance of new players. Bank Hapoalim and Bank Leumi have developed their own payment applications, Bit and PepperPay, while IDB has acquired Paybox. They are currently based on credit card platforms and people are increasingly using them, especially for peer-to-peer transactions. The regulator has limited its volumes for business transactions for the next two to three years, allowing the separated credit card companies to adapt their business models to this change. In the future, these apps can potentially use interbank clearing for payment processing.

Bank Leumi established Pepper, a separate fully mobile bank, with technology based on artificial intelligence, allowing for tailor-made banking services, operating by its existing license. Bank Leumi also launched Videa, which allows customized digital portfolio management. Bank

Hapoalim made a strategic investment in Viola FinTech Fund to allow increasing exposure to fintech solutions and is collaborating with Technion, the Israeli Institute of Technology, and Microsoft to create a block chain-based digital platform for issuing bank guarantees. Israel Discount bank is collaborating with iCount, a fintech company that provides digital solutions for managing SMEs, allowing them open banking options through the API platform. The banks are heavily investing in the optimization of internal processes to allow for the development of advanced websites and mobile applications, where banking services can be executed directly. Increasing use of direct channels reduces the banks' fee income; however, despite about a 30% decrease in fee income of the last decade, the overall profitability of the banking sector remains solid, with an average return on equity of 10.7% in the first half of 2019.

In our view, relatively high profitability is an important differentiating factor for Israeli banks compared with banks in Western Europe and other countries. Most banks in Israel are capable of adequately covering their cost of equity and remunerating shareholders in line with expectations. This is significantly easing pressure on the system to revamp their business and financial models. Bank shares are actually trading above 1x their book value, indicating on investors' positive view about their future profitability.

Moreover, banks have recently intensified their efforts to improve efficiency and reduce or optimize branch networks. Between 2011 and 2018, the total number of employees in the banking system declined by about 15%. Meanwhile, banks added employees in technology-related jobs, which enjoy relatively high wages. Over the same period, the total number of branches declined 11%. In terms of efficiency and profitability, Israeli banks score well in global comparison.

Chart 3



Israeli Banks Compare Well With Many European Peers In Efficiency And Profitability

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Israel: The Use Of Direct Banking Channels Is Growing Quickly

Banking by households via direct channels to total activities compared with branch banking

Note: Direct channels include websites, mobile applications, self service, and call centers. Source: Bank of Israel.

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We believe that in the next few years, banks may focus their efforts on continuous optimization and streamlining of their internal operations and to some extent address issues related to their legacy core systems. They will likely use, with greater sophistication, the vast amount of data they hold on their customers, potentially by increasing collaboration or partnerships with fintechs. This is to ensure they remain relevant players in financial services, in light of quickly developing needs and the growing availability of technological solutions.

Preferences: Disruption Risk / Moderate

On the one hand, Israel is an innovation and technology hub, which ranks highly in global innovation indices, in aspects such as one of the highest percentage of research and development spending to GDP, concentration of high-tech companies, and high level of services industries contributing to economic growth. On the other hand, in terms of digital adoption, Israel somewhat lags behind many European countries, ranking below the EU average according to the European Commission's International Digital Economy and Society Index 2016, the latest available data covering Israel. Despite widespread access to the internet, its use is still low in global comparison for finance and banking, businesses, as well as government services.

Israeli customers are considered to be open to the adoption of innovation technologies and increasingly consume digital banking services, but at the same time, still extensively use cash and feel comfortable with brick-and-mortar banking because it allows personal interaction. As of year-end 2018, 39% of daily payments were made with cash and checks and 38% with credit cards. Only 1% of daily transactions use digital apps or wallets. Nevertheless, the pace of cash use is decreasing. While the value of the cash used was estimated at 6% of GDP in 2018, lower

than in the U.S. (8%) and the EU average (10%), but significantly higher than in Sweden (1%), which ranks at the top of cashless economies, according to a Bank of Israel survey.

Chart 5

The Use Of Digital In Finance Is Increasing, Especially In Payments

Use of direct channels by households as a share of total activities



*Direct channels include website, mobile applications, self service, and call centers. Source: Bank of Israel.

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Chart 6

But Cash And Checks In Israel Are Still Widely Used For Payments

Payment of daily expenses by payment, 2018



Source: 2018 annual report of the Bank of Israel's currency department. Copyright © 2020 by Standard & Poor's Financial Services LLC. All rights reserved.

We believe the difference between the innovation level of the economy and its digitalization adoption potentially reflects socioeconomic gaps. Differences in age, education, and income are wide, with younger, more educated and higher-income individuals making more extensive use of advanced technologies. At the same time, there are some segments of the population, mainly the ultraorthodox Jewish and Israeli Arab communities, comprising about 25%-30% of the population, who have less access to internet and typically lower digital literacy. Nevertheless, we believe this gap can close quickly, as Israel is a country with a relatively young and growing population compared with many European countries, whose needs are changing and who are open to the adoption of new technologies. It is likely that once regulation and legislation paves the way, we will see increasing demand for advanced payment methods, primarily at the expense of cash, but also somewhat at the expense of credit cards and checks, as well as higher usage of digital banking.

Israeli Bank Ratings Are Stable And Factor In The Risks Of Technological Disruption

Israeli banks are increasingly preparing themselves for greater digitalization and structural changes that promote competition in the financial sector. They start from a relatively good position, as they operate in a stable and growing market, with strong market shares, good ties with their customer bases, and a profitable and well-established business model. We therefore think Israeli banks are relative well positioned toward potential new players and to underpin their

market relevance.

We understand one of the big global payments players such as ApplePay will likely enter the market next year. Therefore, we believe the payments sector will likely be the first to feel the heat. In this respect, the credit card companies' profitability might be more sensitive to changes in consumer preferences and growing use of advanced payment methods. Their business model is currently narrower and their fee income is already weakening, while their operational efficiency is also weaker than those of most banks. We believe they will have to adjust and heavily invest to retain their revenues to minimize the impact on profitability.

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