START-UP NATION CENTRAL:
FINDER INSIGHTS SERIES

ISRAEL'S FINTECH INDUSTRY REPORT

START-UP NATION CENTRAL

May Nechushtan
Analyst, Fintech Sector Lead

EXECUTIVE SUMMARY

Technology is profoundly changing the competitive landscape of the Finance industry, giving rise to disruptive Fintech companies, challenger banks and tech giants that increasingly offer financial services. Concurrently, technology is also enabling financial incumbents to fight back, once they adopt an open innovation approach. Israel serves as a Fintech hub for both disruptors and incumbents, due to its inherent strength in relevant technology fields, innovative approach and diversity of solutions.

With almost 500 companies, the Israeli Fintech sector has become recognized globally, attracting investors from around the world, and serving hundreds of global financial institutions. Over the years, several global category leaders in niche areas of Fintech have emerged from Israel, including the payments company Payoneer, the SMB lending companies Fundbox and Bluevine, the Insurtech companies Lemonade and Next Insurance, and the trading platform eToro, for all of which the Israeli Fintech ecosystem was an extremely fertile breeding ground. In turn, the local ecosystem owes its successful development to several factors, including the technological strengths originating from the IDF, Israeli experienced entrepreneurs, governmental support, involvement of local and foreign financial institutions, a strong investor base and a dynamic community.

The Israeli Fintech sector has continued to grow and mature during 2018. The first six months of 2018 show record numbers for funding[1] and investment deals – more than $400 million raised in 45 deals, exceeding previous half year investments by 33% and 45%, respectively. The median deal size almost tripled, and median late stage deal size reached an all-time record of $30 million. Our sample of 277 Israeli Fintech companies shows an increase of 26% in revenues during 2017, equaling a total of $1.68 billion, with 31 companies showing revenues in excess of $10 million, compared to 26 during 2016.[2]

Since the beginning of 2017, we have also observed an increase in debt financing amounts for Fintech start-ups: $646 million in debt was raised across six deals by four companies, three of which are online lender platforms. Raising debt, as opposed to equity investments, allows these companies to dramatically expand their loan offerings, while keeping control of their companies. Interestingly, a portion of this debt comes from large banks, as it allows them to tap into the growing market of small to medium business (SMB) lending platforms.

Certain Fintech subsectors showed impressive results over the last twelve months. The Payments subsector grew, and accounted for 30% of the total sector funding. Trading & Investing companies are also attracting more funding, reflecting the global trend of rising WealthTech solutions. Insurtech has doubled the number of companies since 2015. On the other hand, both the Enterprise Solutions, and the Anti-Fraud, Risk & Compliance subsectors experienced minor reductions in funding from the previous year. The Lending & Financing subsector saw a drop in equity funding that might be attributed to the aforementioned trend of turning to debt rather than solely to equity investments for financing.

The world seems to continuously increase its interest in the Israeli Fintech ecosystem. In 2018, international investors participated in 73% of investment deals, compared to 66% in 2017. There was also a jump in the participation of multinational corporations (CVCs and other entities). MNCs participated in 38% of investment deals during 2018, compared to 26% in 2017. Almost 60% of the MNCs that invested in Israeli Fintech in the past year and a half are financial institutions making a strategic investment to tap into the innovation scene. A growing number of financial institutions have opened local presences in Israel, utilizing a variety of engagement models, which we review later in this report.

Start-Up Nation Central is proud to present its Fintech report, which offers a comprehensive and up to date analysis of the state of the Israeli Fintech ecosystem and its trends. Included are our reviews of the latest major global developments, and an analysis of the performance and activity of Fintech companies in Israel, including subsector analyses. We compiled this report utilizing data that we collected on the Israeli Fintech industry, much of which is displayed online in our innovation discovery platform - Start-Up Nation Finder.

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1 "Funding" in this report refers to total venture capital and private equity investments.

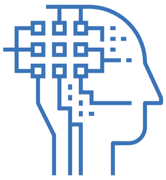
2 Based on data from Start-Up Nation Finder and CBS.

THE GLOBAL SCOPE

The global Fintech industry has grown rapidly over the past few years and its profile has significantly changed. The niche start-ups that originally characterized Fintech and mostly offered a single service, have evolved into well-established and substantial financial institutions, powered by technology, and offering a wide range of services. Since 2013, global Fintech equity funding has grown at a compound annual growth rate (CAGR) of 29%, with $75 billion in cumulative investments.[3] With 29 worldwide Fintech unicorns, and a projected record year for Fintech investments, the maturity of the industry is exerting pressure on traditional incumbents (banks, investment houses and insurance companies) to respond.

Technology has changed the way consumers think about financial services. Fintech has redefined the customer experience standard; customers now expect a seamless digital experience, fast onboarding processes, personalized advisory services, and remote loan approvals as a matter of course. Consequently, traditional financial incumbents are working hard to utilize similar technologies and keep up with the pace of innovation.

Technologies that are considerably changing the once-stagnant Finance industry include:

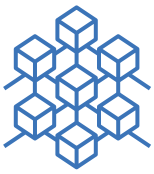


Cognitive Data Analytics and AI

These allow such basic functions as risk assessment, fraud detection, and credit scoring to be executed quickly, inexpensively and with minimal human intervention. Artificial intelligence enables companies to offer customers a better overall experience, with more targeted products, better customer service and more efficient management of financial assets. For example, United Overseas Bank (UOB) recently launched its digital-only banking service, to be powered predominantly by AI technologies and data analytics. UOB will leverage its collaboration with such AI fintech partners as the credit assessment firm Avatec.ai, and the Israeli personal finance management firm Personetics, to attract new customers across South East Asia.

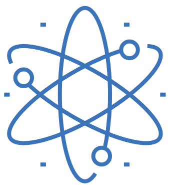
Biometrics

Biometric solutions provide a better user experience and a further layer of security to enhance authentication and payment methods. It achieves this by utilizing specific personal characteristics, such as fingerprint or facial recognition, or by measuring patterns in human-device interactions through behavioral biometrics. According to new research from Goode Intelligence, biometric authentication for banking purposes is projected to generate $4.8 billion in revenue by 2023; while by 2020, 1.9 billion bank customers will be already be using biometrics tools.[6]



Blockchain

Blockchain is attracting the interest of financial institutions across the globe, with its cryptographically secure and transparent way of sending digital assets without the need for trusted third parties. According to PwC,[4] 77% of financial institutions expect to adopt blockchain by 2020, and the majority of these are already working on one or more blockchain projects. For example, Santander Bank recently launched a blockchain-based application for cross-border payments routed through Ripple's blockchain network.[5]



Quantum Computing

By encoding and processing information utilizing multiple variables simultaneously on the same quantum bit, quantum computing can help to solve complex optimization problems in numerous areas, such as portfolio risk management and fraud detection. It can also improve product offerings according to user demand, and feature the most relevant product to a customer in real-time. At the same time, it presents a potential danger to currently used cryptographic methods, making new models necessary. Despite being at the very initial stages of development, and with implementation not expected to be executed for a while, financial institutions are nevertheless already actively seeking new developments in this field. For example, Barclays and JPMorgan Chase are partners in the development of IBM's quantum computing system, to investigate potential uses for this technology in their trading systems, portfolio optimization tools, asset pricing and risk analysis.

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3 Based on CB Insights data, excluding Ant Financial $14 billion investment.

4 Global FinTech Report 2017, PwC

5 Ripple is an enterprise blockchain solution for global payments: https://ripple.com/

6 Biometrics for Banking: Market and Technology Analysis, Adoption Strategies and Forecasts 2018-2023 - Second Edition, Goode Intelligence (2018)

THE THREAT TO FINANCIAL INCUMBENTS

Bill Gates' provocative statement circa 1994 is still the subject of much discussion.

While technology is empowering the Finance industry, it is also significantly altering its competitive landscape.

> **"Banking is necessary, but banks are not."**
>
> \- Bill Gates

Cost of **Innovation**

With changing customer needs and expectations, digital capabilities are becoming critical for acquiring new customers, and preserving existing ones. However, delivering good digital and mobile customer experiences, as well as fighting consequent cyber threats, requires massive capital investments for deployment, which is a struggle for small traditional banks. Evidence from the U.S. market shows that smaller banks are now losing their share in the millennial and mass affluent segments to large banks. These could be an indication of more future banking consolidation.[7]

In the U.S., where banking concentration is very low, this may not be a problem, but in smaller countries with more concentrated banking sectors, this represents a significant challenge. Not only does technology provide significant advantages to larger banks over their smaller traditional competitors, it also makes it possible for them to acquire and scale smaller banking entities without sacrificing efficiency or personalization.

The threat of the **Challenger Banks**

While most Fintech companies focus on creating disruptive solutions for specific areas of financial services, some of them are already aiming to replace global incumbents (largely retail banks). Over the past year, we have witnessed the rise of challenger banks and neobanks,[8] which attract millions of users and huge venture capital investments. Unlike traditional small and large banks, challenger banks do not bear the burden of large legacy systems. Consequently, they can sometimes outperform traditional banks with fast, no-fee services, enhanced user experience, and transparency, while becoming profitable within two years of their establishment as a result of low operating costs. The new European Open Banking and PSD2 regulations are further enabling this trend to grow. In turn, the rise of challenger banks tends to push traditional banks to either build a digital bank of their own or acquire an existing platform for doing so, such as the BBVA acquisition of Simple, and JPMorgan Chase buying WePay. This strategy sometimes serves as an alternative to a full digital transformation.

The threat of the **Tech Giants**

Although Fintech companies were the first to spur disruptive innovation in the Finance industry, they are no longer alone in looking for a share in the market. Adding to the apparent threat to traditional incumbents posed by challenger banks, tech giants such as Amazon, Apple, Alibaba and Tencent are also establishing a foothold in the financial services landscape, offering payments, cash deposits and lending solutions to their colossal user base. Due to their massive amounts of customer data, considerable capital, and technological capabilities, tech giants pose a growing risk to financial institutions. While some evidently wish to replace the traditional bank, the majority simply want to develop financial services that support their core business, and partner with the banks. According to a KPMG report published in 2017,[9] 26% of financial institutions are partnering with one or more tech giants, and another 27% were reported as planning to establish such partnerships very soon.

7 Consolidation of the U.S. Banking Industry, The Role of Innovation and Scale, A.T. Kearney

8 Challenger banks are relatively small, and use innovative technology to compete with the traditional bank model. Neobanks are similar to Challenger banks, based on fully digital and mobile systems, but with no physical branches.

9 Forging the future, how financial institutions are embracing fintech to evolve and grow, KPMG (2017)

There are several new areas in the Finance industry that are dramatically changing as a result of advanced technology and disruptive companies:

WealthTech

WealthTech companies offer innovation within the wealth management industry that addresses customer demand for higher returns, personalized investment products and transparent fees. WealthTech is a rising global trend, shown by the six-quarterly high hit by global WealthTech funding in Q2 2018.[10]

RegTech

RegTech companies provide technological services to ease and streamline compliance with regulations, including regulatory reporting, compliance automation, assessing and modeling risk, validating identity and monitoring real-time financial crimes.

Insurtech

Insurtech companies offer technological insurance-related products and services, and/or innovative solutions that improve processes for insurers, such as underwriting, pricing, customer engagement and compliance.

WealthTech – The Next Fintech Frontier

Omry Ben David, Partner, Viola Ventures

We believe WealthTech is emerging as one of the next big categories in Israeli innovation. WealthTech answers many of the original Fintech objectives: financial inclusion ("democratization" of financial services), market efficiencies (lower costs and increased speed) and accessibility to personalized investments.

We want to highlight three WealthTech segments with clear and immediate technology gaps – both ripe for disruption and where we believe that Israel will play a dominant, global role:

1. Investment Advisors

The current one-on-one advisory model is broken. By the time an advisor reaches the tenth customer, the generic advice is likely no longer relevant. Technology can fill the gap by allowing one-to-many communication that automates personalized portfolio balancing, compliance and trading execution. We also expect to see automation that will facilitate seamless onboarding, compliance (KYC, AML, fraud) and legal/ops, all with enhanced transaction, privacy and data security.

2. End-users (consumers, prosumers, SMBs)

Investors globally expect to be empowered with "democratized" investment opportunities. This means personalized offers (based on proprietary and external data) and newly-accessible products across asset classes. In a low interest-rate environment, technology can also offer quant-based instruments to generate alpha on top of new tradable asset classes (e.g. P2P lending, mortgages and auto leases). Some of the emerging asset classes would require new liquidity platforms, such as alternative investments, structured finance, real estate, crypto, and insurance-backed products.

3. Enterprises and Employers

We see large employers entering the WealthTech space, offering value-add, personalized services to employees, while leveraging home-grown and third-party technology. Enterprises hold vast amounts of proprietary data, which can be leveraged in order to underwrite employee-specific benefits and financial instruments. Offerings can include bespoke loans (e.g. for a new car, or for home improvement), insurance products and even end-to-end pension portfolio management.

Clearly, technology is radically changing the nature of the Finance industry, by offering new products, services, and business models, in addition to changing the way consumers think about financial services. Traditional financial incumbents can either adopt technology and gain a competitive advantage, or risk being displaced. Financial institutions that adopt an open innovation approach are able to remain the leading players in the industry, since they hold three unique assets: data, trust and capital. It seems as though this has become very clear to most financial institutions, with 82% expected to increase Fintech partnerships over the coming three to five years.[11] The question is whether this pace is rapid enough to withstand the onslaught.

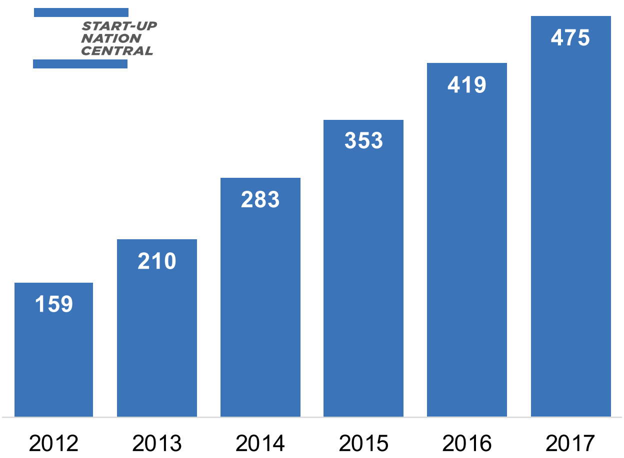
10 Global Fintech Report Q2 2018, CB Insights

11 Global FinTech Report 2017, PwC

THE ISRAELI FINTECH SECTOR

In 2012, Israel had only 159 Fintech companies. Since then, the sector has tripled in number, with 475 active Israeli Fintech companies in 2017, according to Start-Up Nation Finder.[12]

Figure 1: **Active Israeli Fintech Companies**
The number of companies that were active each year



Source: Start-Up Nation Finder
The complete data for 2018 will only be available at the end of the year

The question arises, why is Fintech specifically flourishing in Israel? This is somewhat unusual, given Israel's small market size and very concentrated financial industry, where five banks and five insurance companies control more than 90% of the market, and are therefore less worried about competition. We identified several factors that have developed over the years, each contributing in their own way to making Israeli Fintech into a self-sustainable ecosystem: the IDF, experienced Israeli entrepreneurs, governmental support, involvement of local, and foreign, financial institutions, a strong investor base and a dynamic community.

In the course of producing cutting-edge technologies for its own needs, the IDF trains many young people, providing them with very significant experience. When discharged from service, these veterans look for non-military applications of the technologies in which they have expertise, including image and video processing, big data, algorithms, real-time analytics, and biometrics, all of which have become essential to Fintech solutions.

The first entrepreneurs to realize this created the sector's early success stories, which later on inspired other entrepreneurs to move into this previously unfamiliar industry. Examples of early Fintech success stories include: Fundtech (acquired by GTCR for $390 million in 2011, and then by D+H for $1.25 billion later in 2015), SuperDerivatives (acquired by Intercontinental Exchange for $350 million in 2013), Actimize (acquired by NICE for $280 million in 2007), Traiana (acquired by ICAP, now NEX Group, for $247 million in 2007) and Fraud Sciences (acquired by PayPal for $169 million in 2008).

Fintech's potential also impressed the Israeli government, which launched an incentive program in 2011 for financial institutions to open R&D centers in Israel. Citibank and Barclays seized this opportunity, opening R&D centers in Israel later the same year. Since then, more than 40 financial institutions and corporates have established a local presence in Israel, with the aim of gaining a foothold in this growing local ecosystem, and benefiting from the local talent.

As the presence of financial multinationals in Israel increased, and the number of Israelis working in the Finance sector abroad grew, more and more talented people acquired experience in financial markets and began to recognize the inherent business opportunities. These workers gained substantial exposure to cutting-edge financial products designed by the world's biggest financial institutions. Armed now with financial knowledge, and extensive technological skills, and having been trained to develop disruptive technologies, Israelis have founded and worked in hundreds of companies that have fused their expertise with the needs of the Finance industry.

Together with innovative ideas and technological strengths, the growing Fintech industry finds an excellent testing ground in Israel. Although the small size of the Israeli market drives start-ups to target the international market from day one, the early adoption patterns of the Israeli consumer, and the centralized structure of the Israeli Finance sector allow start-ups to gain access to enough users to easily test their product in an advanced market before they scale abroad. In turn, local financial institutions receive a continuous stream of innovative solutions and talent to drive their own strategy.

With this in mind, some large Israeli financial institutions act as a catalyst within the ecosystem. They invest in local start-ups, join accelerator programs, and implement local solutions in their own IT systems and lines of products, allowing start-ups to prove their concept, and fine-tune their offering. Recent examples of this are Bank Hapoalim's investments in Thetaray, Atidot and Way2Vat, and its collaboration with Microsoft to build a blockchain platform for digital bank guarantees. Similarly, in 2017 Bank Leumi invested in the Israeli company BlueVine and launched Pepper, the first Israeli digital bank. Bank Discount acquired Paybox, the Israeli P2P payments platform, and implemented IBM's open API platform to allow their customers to join various Fintech services. The First International Bank of Israel (FIBI) announced the deployment of such Israeli Fintech solutions as Transmit Security, Finnovest, and TipRanks, and is now working on a pilot with Wave, the Israeli blockchain company providing documentation management for international trade.

In addition to all of these, a Fintech investors community has evolved in Israel, comprising local and foreign dedicated VCs, corporate VCs and individual investors. Many of these individuals utilize their previous successes in Fintech to invest their own capital, experience and knowledge in emerging Fintech companies to create new success stories in the sector, and make it a self-sustainable ecosystem.

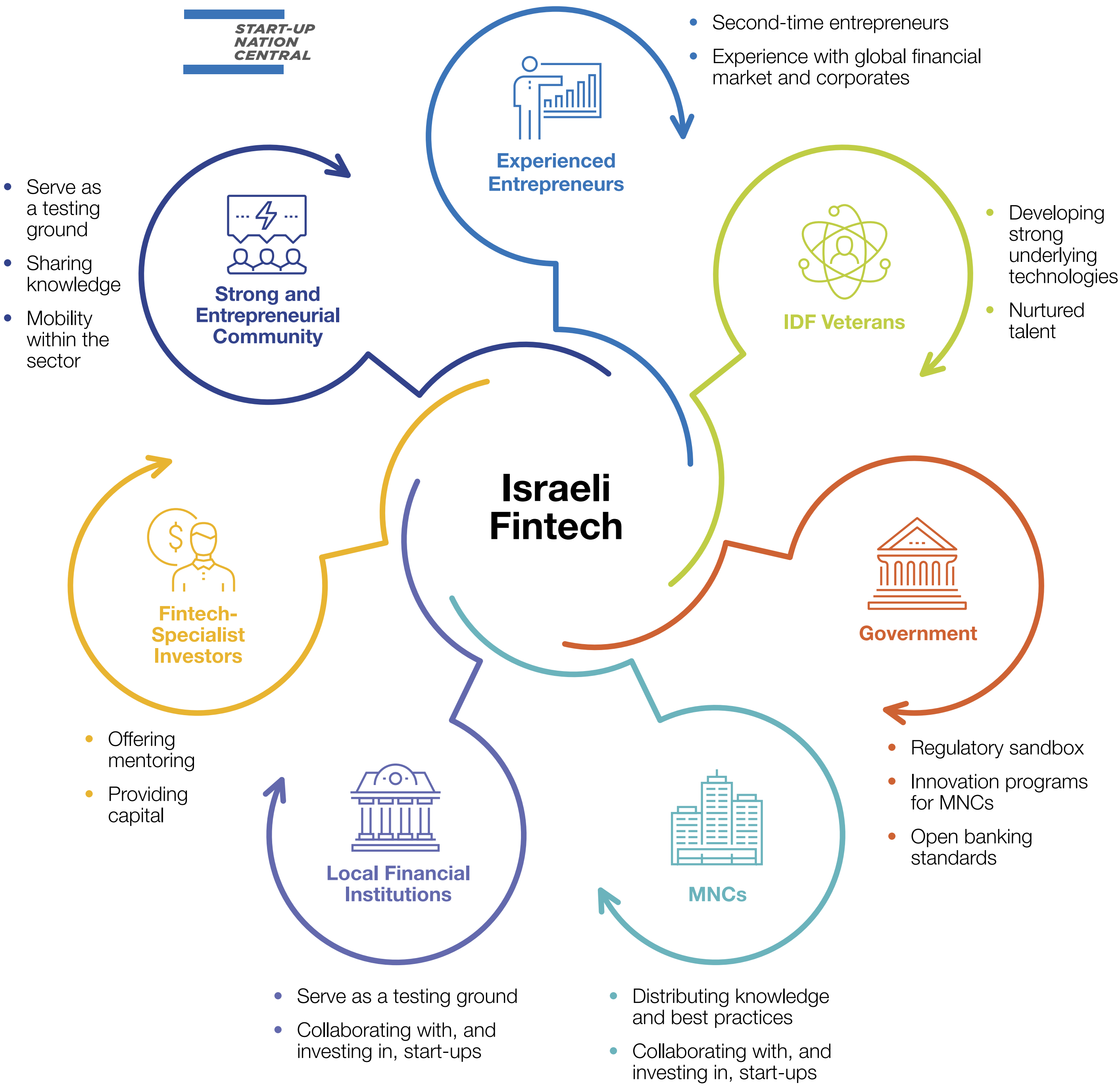
12 The complete data for 2018 will only be available at the end of the year

Although the government incentives program for financial R&D centers ended this year, the government continues to support the sector in other ways. The most important initiatives that have been promoted by the government are the Fintech-Cyber (FinSec) innovation lab in Be'er Sheva, the Fintech regulatory sandbox for start-ups, and the open banking standards. Led by the Israeli Ministry of Finance (MoF), the Israel Innovation Authority, and the National Cyber Directorate, the new FinSec lab aims to accelerate Israeli Fintech and cyber start-ups and stimulate international investments in those fields. With a government budget of $15 million, this lab aims to bring together start-ups, financial institutions, regulators, technological vendors and academic institutions to develop and test new secured Fintech products.

Similarly, the MoF and the Israeli Ministry of Justice are establishing a regulatory sandbox for Fintech start-ups that will allow them to test their technologies, services and business models on the Israeli market, with minimal legal requirements and without having to undergo a full licensing process. To further increase competitivity in the Israeli market, the Bank of Israel, in partnership with the MoF, is also establishing open banking standards that will allow Fintech companies to obtain access to bank data, and thereby be able to offer services to local customers.

The combination of the aforementioned Israeli technological strengths has created a self-sustainable Fintech ecosystem in Israel that is becoming increasingly recognized globally.

Figure 2: **Israel's Fintech Success: Self-Sustaining Ecosystem**



SECTOR DEVELOPMENT AND FINANCING

Growing Employment and Revenues

From the universe of 475 active Fintech companies in Start-Up Nation Finder, CBS identified a sample of 260 in 2016, and 277 in 2017, that had full records from either VAT or Social Security, and reported revenues on a stand-alone basis. The sample indicates a significant 26% increase in revenues from 2016 to 2017, reaching $1.68 billion in 2017. We also observed a 10% increase in the number of employees in this sample, totaling 8,442 in 2017 compared to 7,705 in 2016. Despite the sector consisting largely of small to medium sized companies (only 17 companies in total employ more than 200 workers), 31 companies in our sample exceeded $10 million in revenues in 2017, compared to 26 companies during 2016, implying an increase in growth-stage Fintech companies in Israel.[13]

Figure 3: **Total Revenues and Employees, Sample of Israeli Fintech Companies**

START-UP NATION CENTRAL	2016	2017	Percentage Change
Number of Companies	260	277	
Revenue in USD (B)	1.34	1.68	26%
Employees	7,705	8,442	10%

Source: Start-Up Nation Finder and CBS
The sample includes only Israeli Fintech companies that had full records from either VAT or Social Security in each year.

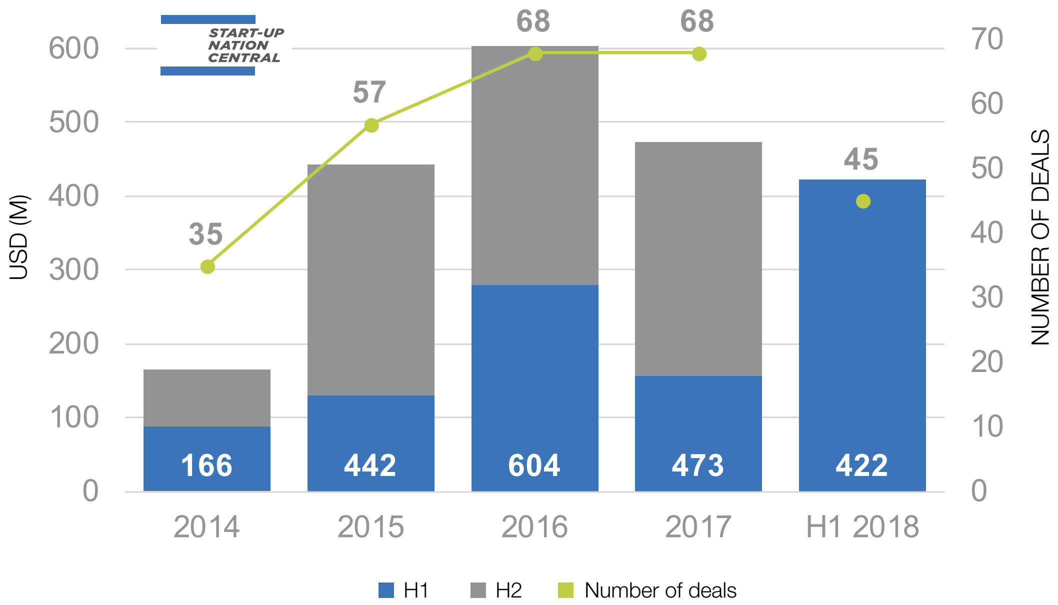
Equity Financing

As the global demand for innovative financial solutions persists, so the Israeli Fintech ecosystem continues to expand. 76 companies were founded in 2017, and an additional 30 companies were founded in the first half of 2018. In 2017 we saw a slight decline in total equity funding in the Israeli Fintech sector, which was consistent with the global trend.[14] Thus far, 2018 has shown an impressive turnaround, and is on track to be a record-breaking year for global and local investments in Fintech. According to Start-Up Nation Finder, the first half of 2018 broke all half-year records for Israeli Fintech, totaling $422 million in 45 deals, exceeding previous half-year investments by 33% in funding and 45% in the number of deals. Of this amount, $100 million was raised by eToro, the social trading and investing platform. Even without the eToro deal, H1 2018 remains the highest funded half-year ever. The peak of this half-year in the number of deals is especially interesting given that we are seeing a drop in the total number of investment deals in the Israeli high-tech industry during the same period.

13 Based on data from Start Up Nation Finder and CBS

14 Global Fintech Report Q2 2018, CB Insights

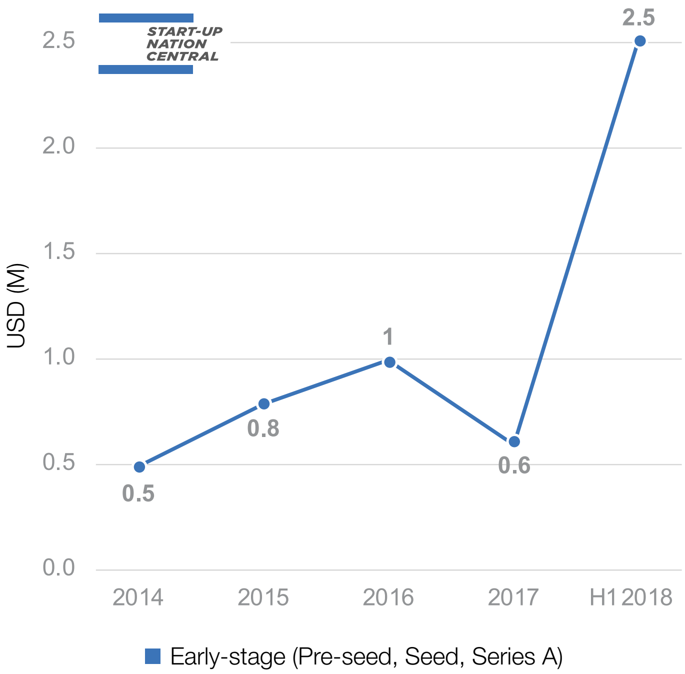
Figure 4: **Israeli Fintech Equity Investments by Half-Year**



Source: Start-Up Nation Finder

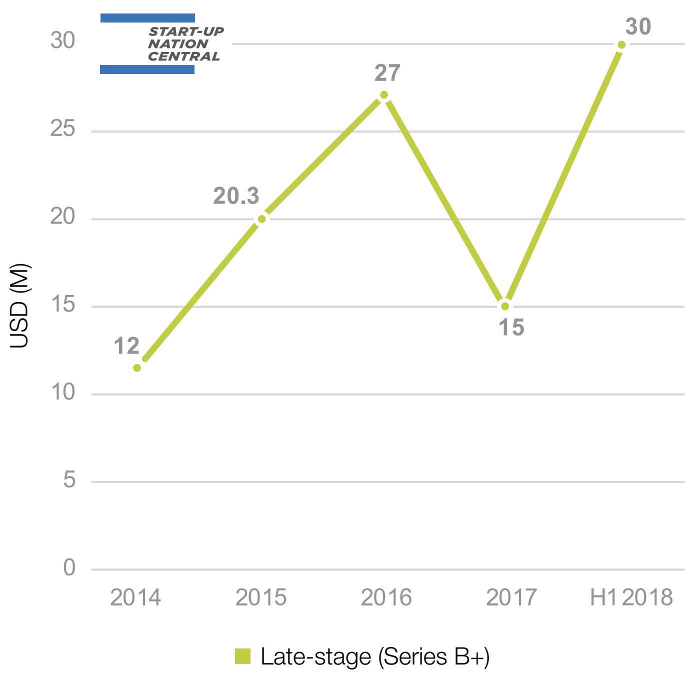
We are also seeing further potential indications of a new cohort of growth-stage companies in Israeli Fintech. Six companies raised deals of $20 million or higher, almost tripling the median deal size of the sector for H1 2018 compared with 2017 in total. Following this trend, the median deal size for late-stage investments leapt to an all-time record of $30 million. Similarly, the median deal size for early-stage investments in H1 2018 has been higher than ever before, equaling four times that of 2017 in total. This jump is consistent with the global trend of increased deal size that mostly originates from the abundance of capital streamed into Fintech equity investments.

Figure 5: **Median Deal Size for Early-Stage Investments**



Source: Start-Up Nation Finder

Figure 6: **Median Deal Size for Late-Stage Investments**

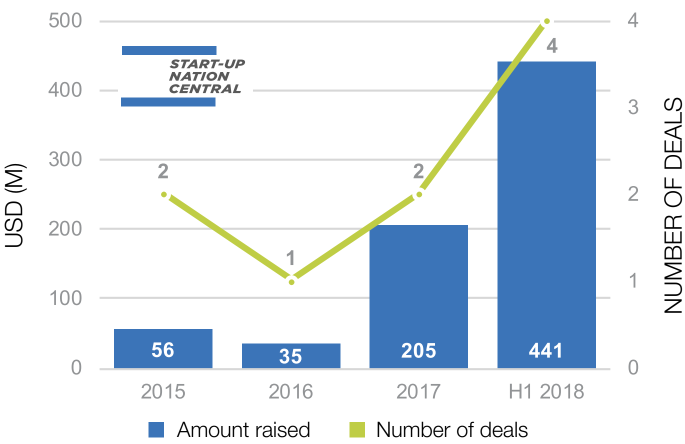


Source: Start-Up Nation Finder

Debt Financing

An interesting trend to note is the growing amount of debt as a financing source for Israeli Fintech companies over the past year and a half. $441 million in debt (more than twice the entire 2017 amount) was raised by four companies across six deals in H1 2018. Three of these companies are online lender start-ups that are entering a new phase in their effort to grow: BlueVine, Behalf and BLender. In addition to, and sometimes instead of, raising a new equity round, these online lenders raise debt for their lending operations, instead of using expensive equity. Raising significant debt is an indication of the credibility of these Israeli online lenders, and it allows them to provide more loans, expand their loan limit and offer a longer-term credit line to their customers, much like a banking business model. Notably, in some cases, banks are the ones lending to these platforms. For example, BlueVine raised its latest debt from Credit Suisse, Silicon Valley Bank, SunTrust Bank and Bank Leumi. While large banks have not traditionally been seen as significant sources of financing for SMBs, they have gradually been increasing their share in this market over the last two decades, partly thanks to technological developments in credit scoring models.[15] Large global banks now have an additional channel to increase their services for the SMB segment by providing credit (as well as making equity-based investments) to online lending platforms.

Figure 7: **Debt Financing Deals**



Source: Start-Up Nation Finder

ICOs as a Source of Capital

Another significant source of capital for Israeli Fintech startups comes through ICOs, in particular for early-stage companies offering blockchain and cryptocurrency solutions. The Israeli blockchain industry is evolving fast, with 114 active companies in this field, almost double that of two years ago. Of these companies, 53 operate within the Fintech sector. Boosted by significant academic works on crypto-technology from leading Israeli universities, and thousands of enthusiastic community members, these 53 Israeli Fintech blockchain companies have to date[16] raised a cumulative amount of $77 million in VC investments and $290 million through ICOs. The difference in these two amounts indicates that for blockchain companies, initiating tokens serves as an alternative way to raise funds, largely without any equity commitment.

Exits

2018 has so far seen five Exits, all acquisitions, which is slightly ahead of the recent trend: 2017 saw five Exits in total. Due to the greater availability of funding, particularly at later stages, companies are staying private for longer and growing their businesses, rather than looking to exit at the earliest possible stage. As a result, we are seeing several highly-valued Israeli Fintech companies that are private and independent.

As part of this trend, there were four Israeli Fintech companies that showed impressive results during the last twelve months. eToro, raised $100 million in the fifth largest Fintech investment deal in the world in Q1 2018. In August 2017, Payoneer completed its $140 million E round and became a global unicorn (more than a billion dollars valuation), enabling tech giants such as Google, Airbnb, Amazon, and Upwork to send mass payouts across the globe. In December 2017, the AI-driven insurance provider Lemonade raised its $120 million C round, which put the company at a pre-money valuation of $500 million. In the same year, Lemonade was ranked the top insurer by first-time buyers in New-York State. In June 2018, following its $200 million debt financing, BlueVine raised $60 million in a series E round, to grow its line of products and expedite its R&D activity.

15 Consolidation, Technology, and the Changing Structure of Banks' Small Business, David P. Ely and Kenneth J. Robinson (2001)

16 H1 2018

SUBSECTOR ANALYSIS AND TRENDS

Start-Up Nation Central partitions the Israeli Fintech sector into eight specific segments, each corresponding to a specific global challenge, as follows:

Trading & Investing

Capital market solutions that address front and back office issues using advanced technologies. These include investment and trading platforms, automated advisory, financial modeling and analysis tools, and algorithm-driven investment and trading systems.

Payments

Technologies designed to increase the speed, convenience, efficiency and multichannel accessibility of payments across the entire value chain, comprising a wide spectrum of categories: streamlined payments, digital platforms for B2B and P2P payments, digital wallets, distributed ledgers and digital currencies, point-of-sale products and services, smart cards, streamlined invoicing, and automation of financial processes and billing.

Enterprise Solutions

These either provide solutions for the operations of the back and front offices of financial institutions, or develop financial solutions for non-financial enterprises, for example for financial and cash management, tax and accounting, pricing methods and so on.

International Money Transfer and Exchange

Solutions that enable cross-border money transfer, remittances and currency exchange.

Insurtech

Solutions offering technological insurance-related products and services, and/or innovative solutions that improve processes for insurers, such as underwriting, pricing, customer engagement and compliance.

Lending and Financing

Solutions that make lending and financing faster, easier and more accessible to a wide range of borrowers. These include solutions which either improve traditional lender methodologies or enable non-bank entities to offer lending services. These can take the form of digital lending, crowdfunding and factoring platforms, and new technologies for risk management and credit scoring.

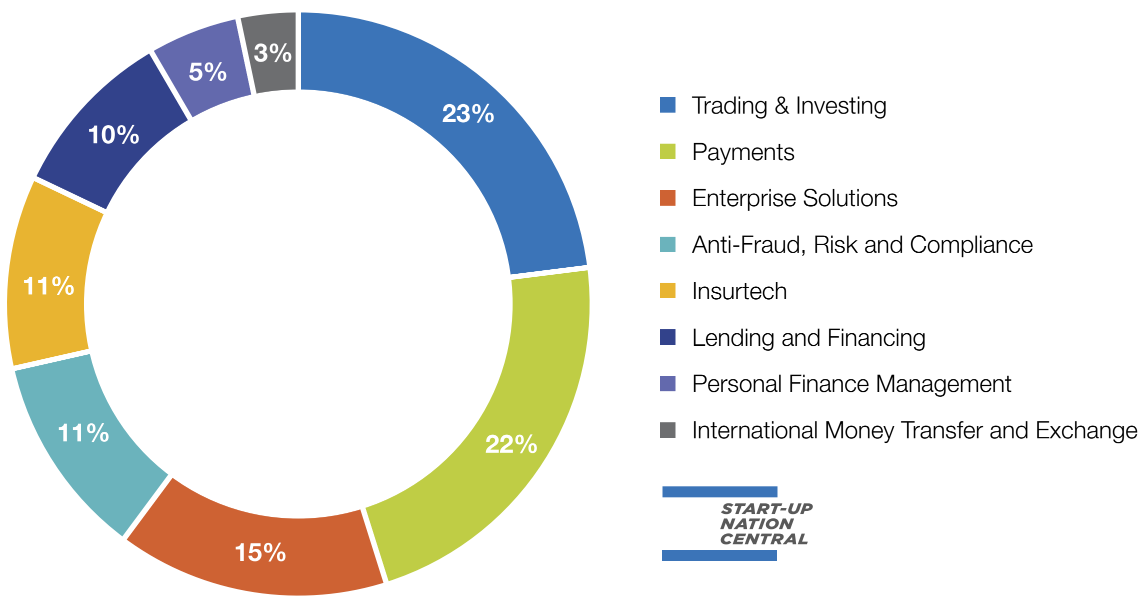
Personal Finance Management

Solutions that help individuals track and control their income, expenses and wealth, manage their personal bills, accounts and/or credit as well as handle their personal assets and investments.

Anti-Fraud, Risk and Compliance

Solutions developed to fight fraud, manage risk and comply with regulations, including technologies that address KYC procedures, anti-money laundering, identity verification, authentication and authorization, fraud prevention and so on, mostly using such capabilities as biometrics, behavior analytics, and anomaly detection.

Figure 8: **Active Fintech Companies by Subsector**



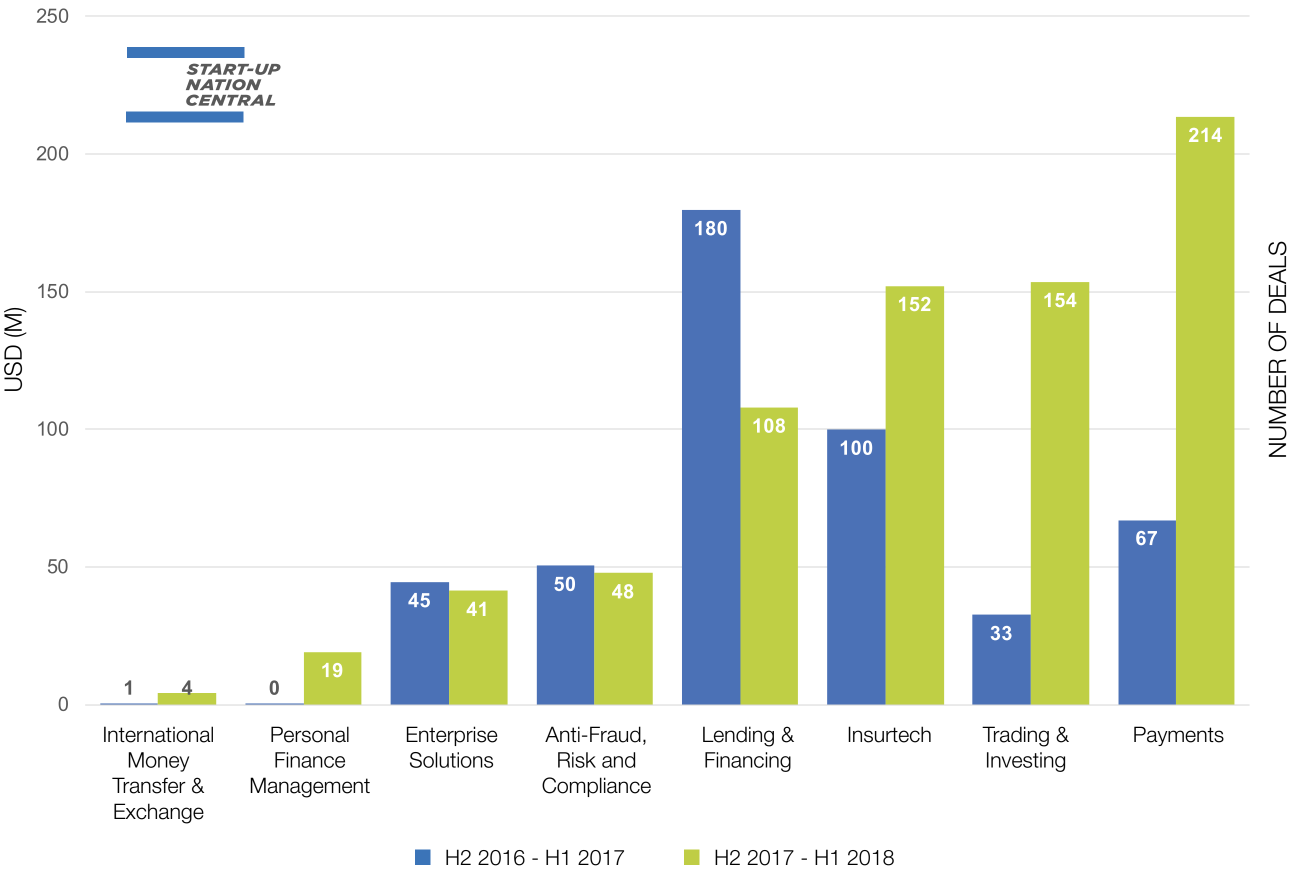
Source: Start-Up Nation Finder

To allow for consistency while keeping the comparisons current, we compare equity funding of H2 2017 – H1 2018 vs. H2 2016 – H1 2017 (see Figure 9).

Payments was the best funded subsector during the past year; in fact 30% of Fintech funding originated from payments companies throughout this period. When comparing this to last years' investments, we see a significant jump both in number of investment deals and total funding for Payments. This growth stems primarily from two areas. The first is the growing number of early-stage companies offering solutions that enable small merchants to accept digital payments in-store, and online merchants to drive sales. The second is companies that offer B2B payment solutions, such as Payoneer and Tipalti, which join a series of established payment companies worldwide that are raising more capital to increase their product offerings for enterprises.

The largest Israeli Fintech subsector in terms of number of companies is currently **Trading & Investing**, with 107 active companies. Over the last twelve months, this subsector showed a notable growth in funding, that mostly originates from the $100 million eToro deal. When excluding this deal, we can still identify an increase in funding, spread across a relatively high number of deals. Twelve Israeli Trading & Investing companies were funded during the past year, reflecting the rising global attention to WealthTech solutions (part of the Trading and Investing subsector). Recently funded Israeli companies were largely trading and investing platforms, such as eToro (social trading), Skyline AI (real-estate investments) and Carats.io (secondary diamond market on the blockchain), as well as portfolio management and analysis tools such as BondIT (algorithmic portfolio management), Tipigo (automated research for investments in the U.S.) and Zirra (analysis of private companies for investors). All these companies represent a new line of products designed to make money management and investments simpler, more accessible and more agreeable to retail customers. Given that millennials are expected to control $20 trillion of global assets by 2030,[17] this is a logical way to attract the changing needs of this market. For WealthTech in 2019, we expect to see an increase in management tools for crypto assets, since all global digital assets are climbing, as cryptocurrency trading platforms become ever more accessible and more common.

Figure 9: **Equity Funding Per Subsector, H2 2016 - H1 2018**



Source: Start-Up Nation Finder

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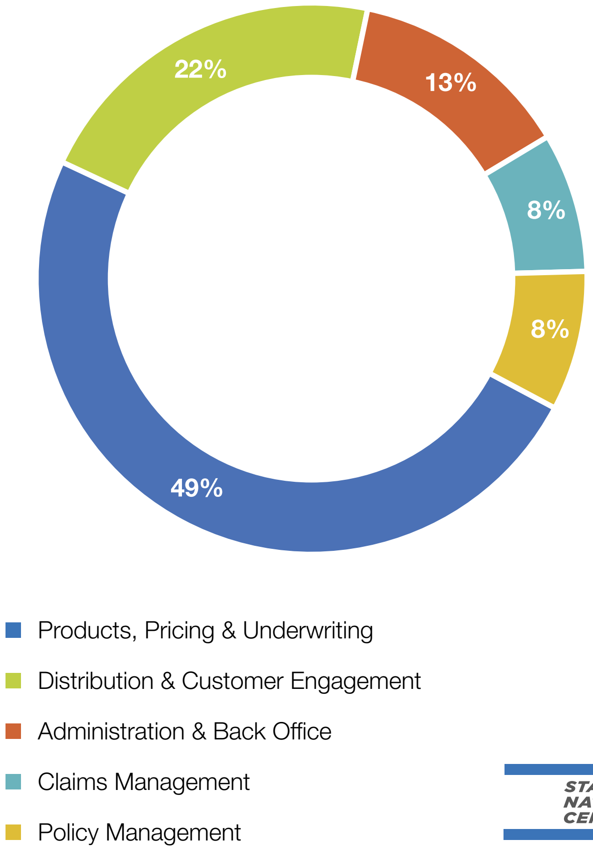
Another positive trend appeared in the **Insurtech** subsector, which showed an increase in both funding and number of investment deals over the last twelve months. Insurtech is rapidly growing in Israel, currently comprising 50 active companies, compared to 24 in 2015. Due to its early stages, most of the Insurtech funding to date[18] has stemmed from two prominent companies, Lemonade and Next Insurance. However, early-stage Insurtech companies are demonstrating strong traction with 25% of this subsector raising funding during the past year, 75% of which were founded over the last two years. Recently several leading global insurers established a strategic presence in Israel to engage with Israeli start-ups and talent, including AXA, Munich Re, Sompo Insurance and AmTrust. Other global insurers engage long-distance. The growing number of insurers interested in Israel can be attributed to Israel's abundance of Insurtech-relevant capabilities, including cybersecurity, automotive, and healthcare, plus the previously mentioned rapid growth of Insurtech companies, and the diversity of Insurtech solutions. Roughly half of the companies develop solutions to help improve processes for insurers, while the other half offer innovative underwriting models and insurance products, such as cyber-insurance, pay-per-use car insurance, mobile crop insurance, flight insurance, social insurance and drone insurance.

Figure 10: **Israeli Insurtech Breakdown by Field**



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Source: Start-Up Nation Finder

The **Israeli Personal Finance Management** (PFM) subsector saw a slight climb in funding over the past year. Although the sector has demonstrated a relatively rapid growth, from 19 companies in 2015 to 30 in 2017, it is still a very small portion of Israeli Fintech. PFM companies mostly use AI technologies and predictive analytics to deduce customer needs, and provide an interactive experience to help manage their finances, improve their cash flow and reach their financial goals. This year's PSD2 and Open Banking regulations, which allow PFM platforms to have access to multiple bank accounts, is threatening what were until now exclusive bank-customer relationships. Consequently, banks are looking to collaborate with PFM start-ups. As mentioned earlier, the Israeli PFM company Personetics, which raised its series D this year, partnered with a number of leading banks to deliver AI automated advice and management tools to more than 70 million consumers around the globe.

The above is just one example of a fast-growing number of Israeli Fintech companies that leverage AI and deep learning technologies to address various needs of the Fintech sector. According to Start-Up Nation Finder, there are currently 114 companies that apply AI technologies in Fintech. Globally these companies are gaining more attention from investors. Almost 30% of the Fintech companies that raised funds during the past twelve months were AI companies, compared to 22% in the previous twelve months.

Unlike the subsectors mentioned above, the **Enterprise Solutions** and the **Anti-Fraud, Risk & Compliance** subsectors experienced slight reductions in funding, in comparison to the previous year. Furthermore, the **Lending & Financing** subsector saw a drop over the last twelve months in both equity funding and the number of investment deals. In terms of Israeli Fintech equity funding since 2014, Lending & Financing received the most funding (30%) over this period, while representing only 9% of the sector. The equity funding decrease over the last twelve months is consistent with the trend of turning to debt for financing and giving away less equity, which indicates the growing maturity of this subsector.

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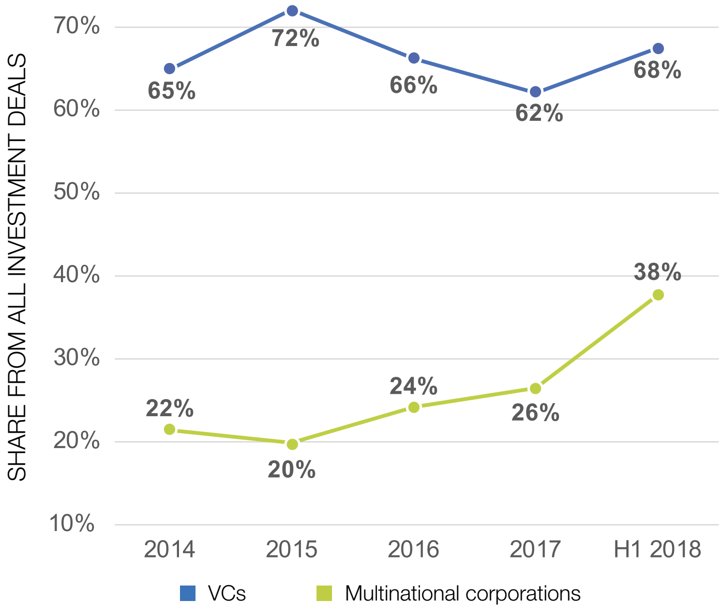
PROMINENT INVESTORS IN ISRAELI FINTECH

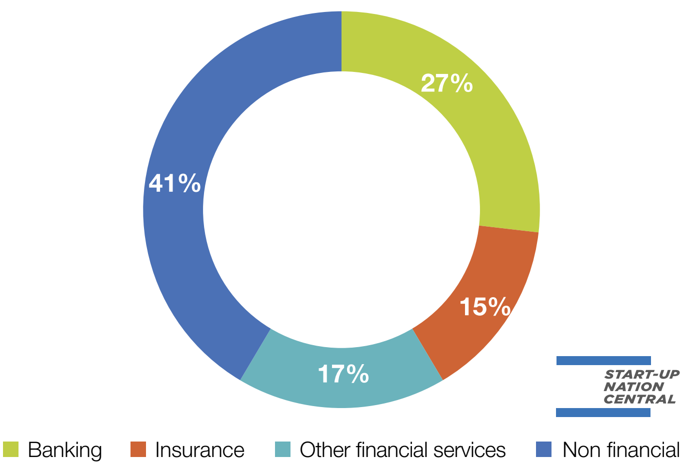
Among the most active investors in Israeli Fintech over the last four years are Viola Group, 83North, iAngels, Sequoia Capital, Aleph, lool Ventures, Entrée Capital and Moneta. When analyzing investors, we identify a significant presence of non-Israeli investors. So far in 2018, international investors participated in 73% of funding deals, totaling more deals than those in which Israeli investors were involved. Furthermore, we see a jump in the presence of multinational corporations, which participated in 38% of funding deals in 2018, compared with 26% in 2017. Almost 60% of these are financial institutions making a strategic investment to connect to the local innovation scene. Investments by MNCs in 2018 include Munich Re's investment in Next Insurance, and American Express Ventures' investments in three different Israeli companies during H1 2018: Next Insurance, BioCatch and EverCompliant. All this provides further proof of the growing recognition of Israel as a global hub for Fintech innovation, especially among global financial institutions.

Figure 11: **Investor Type**

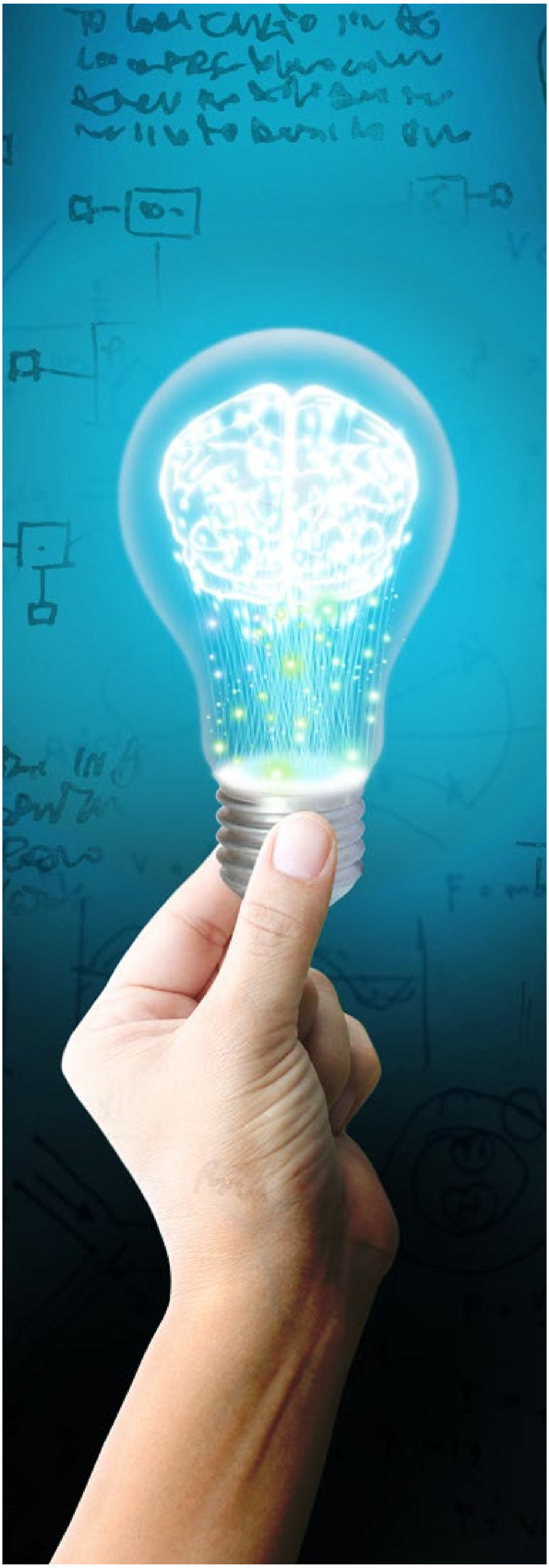


Source: Start-Up Nation Finder

Figure 12: **MNC Share of Investment Deals by Industry, 2017-2018**



Source: Start-Up Nation Finder



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MNC ENGAGEMENT WITH ISRAELI FINTECH

Over the last few years, more than 40 multinationals across various sectors of the Finance industry have established a local presence in Israel, to leverage Israeli talent and spirit of innovation, and grow their business, using a variety of engagement models. Leading financial institutions are increasingly making the strategic decision to engage with the Israeli ecosystem, and collaborating with early and late-stage Israeli Fintech start-ups, with the full realization that Israeli cutting-edge developments and ideas can address some of their most pressing challenges. Others are attracting Israeli talent and ideas to develop future products within their corporation.

Figure 13: **Sample of Financial Multinational Corporations in Israel**

SIGNIFICANT GLOBAL PRESENCE IN ISRAEL: 40+ MULTINATIONALS

BANKING		INSURANCE	PAYMENTS	OTHERS
Deutsche Bank	BARCLAYS	AXA	PayPal	intuit
BMO	citi RBS	AmTrust	VISA	FOSUN 复星
HSBC	J.P.Morgan	Munich RE	MasterCard	NEX
SMBC	Santander	SOMPO		ice
TD Bank	INTESA SANPAOLO			FINASTRA
BNY MELLON	BNP PARIBAS			

Source: Start-Up Nation Central

Collaborations take several forms:

Affiliations

Affiliations, where multinational corporations organize, participate and sponsor conferences, hackathons, challenges, competitions and meetups in Israel, as a first step to engage their organization around the strategic decision for a more extensive collaboration with the Israeli ecosystem. For example, the insurance company AXA joined forces with the Israeli VC JVP, to sponsor an Insurtech competition for Israeli start-ups.

Strategic Partnerships

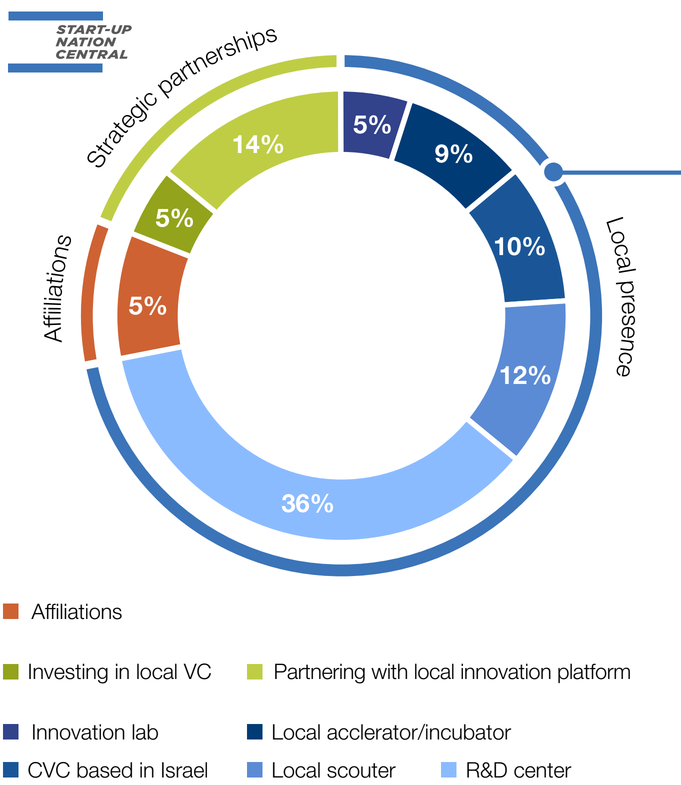
Strategic partnerships, which involve collaboration with such local players as investors, large companies, start-ups, and academia. The main purpose of these partnerships is to gain knowledge and increased familiarity with innovations in the Fintech domain, which could result in investments and POCs, commercial agreements, joint ventures and so on. The multinational companies do this by partnering with local players such as Fintech hubs or platforms that enable design partnerships with start-ups. For example, six leading banks, including HSBC, Intesa Sanpaolo, Santander Bank and the Royal Bank of Scotland, are partnering with an Israeli "reverse innovation" platform named The Floor, to find Israeli solutions to their business pain points. Another way of doing this is by investing in local VCs. For example, in 2018 BNP Paribas made a strategic investment in Viola Fintech, an Israeli $150 million fund that invests in cross-stage Fintech companies.

Local Presence

Local presence, involves multinational companies investing resources in establishing a range of extensive operations on the ground. Recently, BNY Mellon opened an R&D center in Israel, following the establishment of a similar presence in Israel by a series of corporates including Citibank, PayPal, Intuit and JPMorgan. Most of those companies anchored their activity in the Israeli Fintech ecosystem through the acquisition of start-ups to facilitate the initial recruitment of talent, although certain companies made the decision to open their centers from scratch.

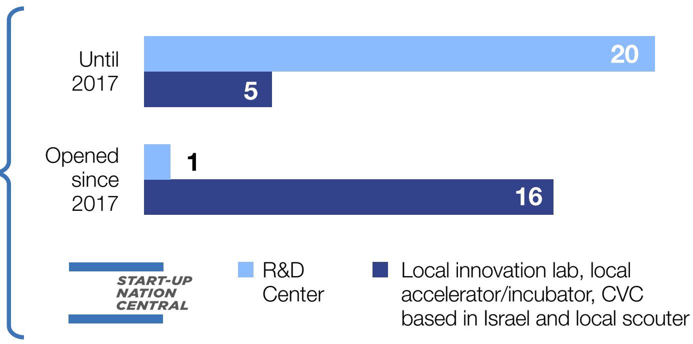
With the rising costs of talent and the difficulty in recruiting, the somewhat stifling effect of large corporate culture on innovation, and the desire to develop a wide range of different new products through engagement with a wider ecosystem, has made MNCs realize that opening a local R&D center may not be the best or only way to tap into the Israeli ecosystem. Of those that did open an R&D center in Israel, some were extremely successful, and others were far less so. Over the last few years we have seen a growing number of alternative ways in which MNCs operate within Israel. In fact, as indicated in panel A of Figure 14, more than 60% of MNC operations in the Israeli ecosystem represent an alternative approach. These include CVCs based in Israel to invest in local Fintech technologies (Citibank, Visa, AmTrust), acceleration and incubation programs (Citibank, Barclays, AXA), local scouters (Munich Re and Bank of Montreal) and cybersecurity innovation labs (TD bank, Sompo insurance and Citibank).

Figure 14, Panel A:
MNC Models of Operation in the Israeli Fintech Ecosystem



Source: Start-Up Nation Central

Figure 14, Panel B:
MNC Local Presence in Israel



Source: Start-Up Nation Cental

Panel B of Figure 14 indicates two important trends. The first of these is that until 2017 there were 25 prominent MNCs (of which Start-Up Nation is aware) that established a local presence to engage with Israeli technologies in some significant way. Since the beginning of 2017, approximately 17 more have joined their ranks, an increase of almost 70% over 18 months. This clearly indicates a rapidly growing realization that being engaged with Israeli Fintech provides a competitive advantage. The second trend is that the mode of engagement has changed dramatically – from predominantly R&D centers (mostly resulting from acquisitions of Israeli start-ups) to a much more open engagement with the ecosystem, allowing financial institutions to benefit from open innovation.

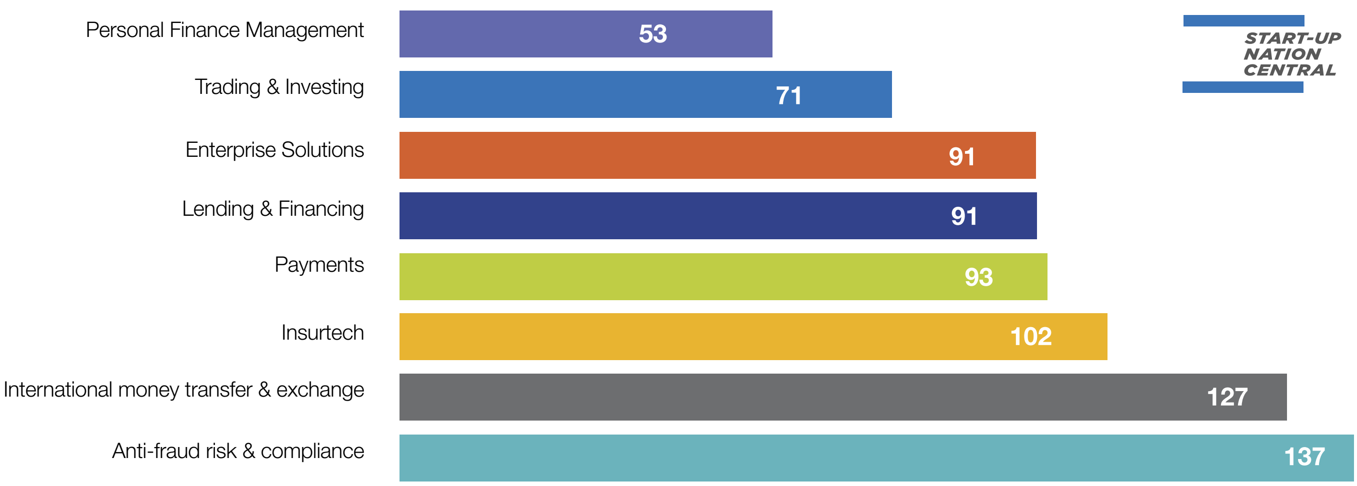
START UP NATION CENTRAL AND THE FINTECH SECTOR

Start-Up Nation Central is committed to helping global corporations engage closely with Israeli innovation, aimed at creating maximal value for them, while generating business opportunities for the Israeli innovation sector, including Fintech. Over the past few years, we have hosted more than 150 investors, multinational corporations, and senior government and NGO officials, and helped them engage with the most relevant people and technologies. These highly-customized and expertly-curated visits are carefully prepared to identify and address the corporations' most pressing challenges and needs. Having hosted more than 30 financial corporates with cumulative assets of $9.7 trillion under management, Start-Up Nation Central has connected more than a hundred Israeli Fintech companies with potential customers and strategic investors. Some of these connections have already evolved into POCs, investments, and collaborations, while in many other cases the dialogue continues. For example, we hosted AXA's executives for their first time in Israel, introduced them to the ecosystem and facilitated their partnership with JVP for the previously cited Insurtech competition. AXA's Chairman and CEO realized the potential of the Israeli innovation for their business, and opened the Tel-Aviv Insurtech Start up Studio, KAMET (following the opening of similar studios in Paris and London). Another example is Capital One's investment in the Israeli company Riskified, following an introduction made between the two by Start-Up Nation Central. Additionally, as part of a long-term relationship between Start-Up Nation Central and BNY Mellon, we engaged them with the ecosystem and various players, which led to the first step towards opening a local R&D center as a result of the acquisition of the Israeli company, Rumble.

Clients we host increasingly express interest in solutions for mobile payments, ecommerce payments, online purchase fraud, consumer identity verification and authentication (mostly using biometrics), KYC processes and bank compliance, blockchain infrastructure, enabling technologies for digital transformation (API, cloud etc.) and big data analytics for various goals. In insurance specifically, we are seeing an increasing demand for AI technologies and solutions for such fields as claims fraud, frictionless onboarding, and connecting systems for preventive and personalized care.

Another way in which Start-Up Nation Central creates opportunities for anyone around the world to connect to the ecosystem is through Start-Up Nation Finder, our online discovery platform that maps various aspects of Israeli innovation. Start-Up Nation Finder helps locate information about all the Fintech companies and investors in Israel, and provides the ability to contact them directly. In H1 2018, the term Fintech was the second most popular search in the platform, second only to Agritech (Agtech), followed by Digital Health and Cybersecurity. Insurtech, blockchain, payments and cybersecurity were some of the most popular searches when combined with "Fintech". The following subsector profiles had the highest average number of unique visits per page during H1 2018: Anti-Fraud Risk & Compliance, International Money Transfer & Exchange, and Insurtech. Despite not showing the greatest growth in funding over the last year, the Anti-Fraud Risk & Compliance and the International Money Transfer & Exchange subsectors are attracting a great deal of global interest, mostly due to a few notable companies in these fields.

Figure 15: **Average Unique Visits per Company Profile during H1 2018**



Source: Start-Up Nation Finder

ABOUT START-UP NATION CENTRAL

Start-Up Nation Central is an Israel-based non-profit that serves as a gateway to Israeli innovation. As an organization, we leverage our in-depth knowledge of Israel's innovation sector to draw insights and act on them, working in partnership with individuals and organizations in Israel and around the world, to help this sector expand and flourish.

Start-Up Nation Finder is Israel's definitive innovation discovery platform, provided as a free online resource. Mapping more than 6,500 innovative companies, investors, hubs, technology transfer offices, and multinational R&D centers, Start Up Nation Finder is a widely utilized source of information and insights. Based on its success, Start-Up Nation Central has also launched a Global Finder network that allows growing innovation hubs across the world to map and connect all the relevant stakeholders.

The success of the Israeli innovation ecosystem is the motivation behind Start-Up Nation Central's activities. We engage corporate, government, and NGO leaders from across the globe with Israeli innovation, creating customized and curated experiences where they connect to the relevant people and technologies that can address their most pressing challenges. We help start-ups build practical tools and expand their skillsets, regardless of their field, while paying especial attention to the development of the Agritech, Digital Health and Industry 4.0 sectors. We support tech communities, increasing collaboration and knowledge-sharing within the ecosystem.
Start-Up Nation Central's mission is also to help the tech innovation sector remain strongly rooted in Israel, and to this end, we have become an important voice on policies relating to this, together with creating innovative solutions to achieve this aim. We convene diverse thought leaders to help shape long-term strategy for the country, as well as directly addressing the issues of human capital shortage and development of regional ecosystems. Utilizing its knowledge and its connectivity within the community, Start-Up Nation Central promotes Israeli innovation at home, and across the globe.

METHODOLOGY

Data set

Amounts and definitions relating to Israeli innovation and entities accord with those of Start-Up Nation Finder. Companies considered for this report were founded by Israelis and pursue R&D activities in Israel, and are not service providers. This report organizes Israel's Fintech sector into eight subsectors. Subsector division organizes the relevant companies into an inherently simplistic regimentation. Some companies offer multifaceted technologies and therefore may be assigned to multiple subsectors. However, for the sake of identifying investment and tech trends, we associate each company with only one subsector, which reflects the company's major focus. Figures representing numbers of companies and investments in Israeli Fintech and its subsectors are likewise exclusive.

Financing

Refers to any equity transaction (e.g. VC, corporate, or angel investments; private equity in growth stage), but excludes full or major liquidity events (these are considered to be Exits). In cases where companies receive investments from incubators conjointly with grants from the Israel Innovation Authority, the latter are included in the funding amounts and are not specified. Funding amounts entail only the value invested in a given time period; even if a deal includes terms for future obligations, we do not include the pending conditions in the amounts listed in this report. Some investment figures may include funding that does not appear to the public on Start-Up Nation Finder. These amounts reflect data that Israeli companies disclosed to Start-Up Nation Central in confidence, which remain undisclosed on an individual level while still factored into aggregates.

Author

May Nechushtan, Fintech Sector Lead
may.nechushtan@sncentral.org

Contact us

For more information on the Israeli Fintech sector and the companies cited in this report, please visit:
finder.startupnationcentral.org

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