# Momentum Economies for the Digital Age THE CASE OF ISRAEL JEFFERIES PRIME SERVICES BLUE AND WHITE PAPER | 2018

# **Jefferies**

Israel is the most promising investment hub outside the U.S....

The determination, motivation, intelligence and initiative of its people are remarkable and extraordinary.

Warren Buffett

In this day and age, no one has an iota of doubt that technological innovation underpins a country's ability to create collective wealth and is the key impetus to individual success.

Li Ka Shing

Technion Israel Institute of Technology
Guangdong Inauguration Ceremony

## MOMENTUM ECONOMIES FOR THE TECH AGE: THE CASE OF ISRAEL

Each generation has a term that captures part of the zeitgeist of the investing landscape. It usually draws attention to economies with forward momentum, reflecting growing and underappreciated opportunities for investment. The 80's and 90's focused on Emerging Markets – drawing broad interest to developing countries with expected rapid economic growth. The 2000's zeroed in on country specific opportunities within the "BRICs" (Brazil, Russia, India, and China).

Now, with unprecedented, tectonic shifts in technology and across global supply chains, investors are focused on countries that are hotbeds of innovation and intellectual property to capture this next wave of momentum economies.

Israel, in particular, is the paradigm of such an economy.

Israel is producing the foundational and enabling technologies that underpin the biggest disruptive and thematic trends of the next decade. It has also matured dramatically in recent years, reaching a new level of dynamism and maturity across its sovereign ratings, capital markets and alternative investing landscape. A broad and diverse group of global institutional investors, allocators and specialist funds increasingly count Israel as a critical component of their portfolios. The diverse and rapidly expanding opportunities associated with Israel are attracting those looking for differentiated solutions and emerging investment themes.

Momentum Economies for the Tech Age: The Case of Israel explores how the country has reached a new level of maturity and dynamism, with considerable opportunities for public, private and alternative investors. Policy makers have affected material and productive change across its capital markets, infrastructure and economic fundamentals. Just as global manufacturing growth powered numerous economies forward in recent decades, the global supply chain's increasing reliance on innovation and intellectual property will continue to fuel Israel's momentum going forward. Israel produces things the world needs, not just what we want, and as a result is forming and expanding productive partnerships with investors and sovereigns across the globe. The country also plays host to some of the highest returning and differentiated alternative investment funds globally.

Inevitable changes in productivity, competitiveness and global supply chains aid different economies over time. It is clear that many of these changes have accrued to Israel, making it one of the strongest momentum economies of the next decade. We hope this piece helps to highlight and outline Israel's current landscape, and offers new ways of thinking about the opportunity set and risks posed by investing within her borders. We look forward to partnering with you as you explore these considerable opportunities and are happy to engage in dialogue and answer any questions as you explore this unique landscape.

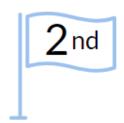
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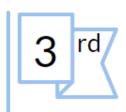
#### ISRAEL BY THE NUMBERS | 20181



Ratings and outlook upgrades for Israeli economy in 2018



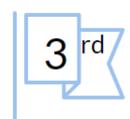
Global ranking: # of cybersecurity companies more than Asia, France, Sweden and Germany combined



Global ranking: # of NASDAQ listed companies second only to the U.S. and China, whose combined population of 1.5 B dwarfs Israel's 8 M



Record year: Most IPOs on TASE



Global ranking: # of autotech/mobility companies



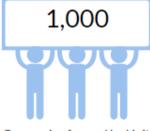
Decrease in tax rate from 25% (in 2016) to 23%



OECD ranking: R&D investment (as % of GDP)



BlueStar Indexes covering the Israeli market



Companies formed by Unit 8200—making it the world's largest startup incubator



Total value of Israel exits in 2017

As most companies transition to technology enabled firms — they will rely on the foundational technologies emerging from Israel. We believe the above is only a snapshot of what's to come.

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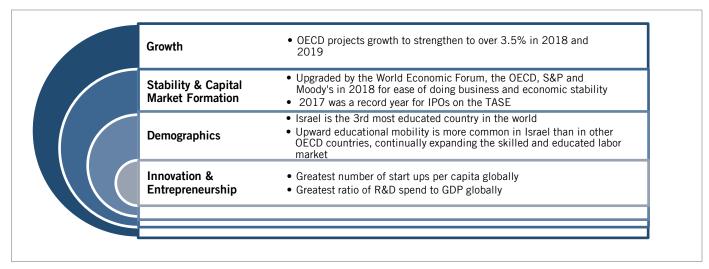
#### FROM EMERGING TO MOMENTUM ECONOMY

In every era, shifts in productivity and regulation, formation and maturity of capital markets, demographic changes, or increases in innovation and entrepreneurship create new momentum economies.

## This decade is Israel's.

Ever since the viral release of Dan Senor and Saul Singer's best-selling book *Startup Nation* in 2011, much has been written on Israel as a leading entrepreneurial hub, and that case has been well made. While we address some of the basis for the "Start Up Nation" moniker, we also examine other factors that are playing a key role in driving Israel forward.

CHART 1
Drivers of Momentum Economies: Shifts in Israel<sup>2</sup>



Source: OECD, The World Economic Forum, the Tel Aviv Stock Exchange

At the broadest level – an economy's health can be measured by various factors, including: growth, productivity, and price stability, among others. Gauging the future requires a broader perspective, spanning multiple factors to determine how the economy may become yet more productive, efficient and competitive.

In the case of Israel, multiple third parties – ranging from the World Economic Forum (WEF),<sup>3</sup> to the Organization for Economic Cooperation and Development (OECD), to Moody's and Standard & Poor's – have recently highlighted Israel's broad improvements across a variety of indicators, leading them to highlight or upgrade their outlook on the economy, and painting a robust picture of forward growth.<sup>4</sup>

Between 2015 and 2018, Israel moved from 27<sup>th</sup> to the 20<sup>th</sup> most competitive economy in the World Economic Forum's *Global Competitiveness Index* – a rapid and material move.<sup>5</sup> This was partially driven by improvements in goods and labor markets efficiency, as policy makers have explored ways to improve access and ease of doing business. Also of note: the corporate tax rate has declined from 26.5% to 23% in recent years.<sup>6</sup>

"The growth I have witnessed in the last five or six years in Israel has been growth I've not seen in any other region. Institutions, asset managers and companies have all covered a lot of ground, and it's exciting to see how formidable the technology companies have made the economy."

David Zervos, Chief Market Strategist, Jefferies

The Organization for Economic Cooperation and Development reported in March of 2018, "Israel's economy continues to register remarkable macroeconomic and fiscal performance. Growth is strong and unemployment low and falling. With low interest rates and price stability, financial policy is prudent, and public debt is comparatively low and declining. The external position is solid, thanks to a dynamic high-tech sector."<sup>7</sup>

Israel's sovereign outlook has also been on an upward march. In the summer of **2018**, **both Moody's and S&P improved their views of the country** – citing steady growth and positive economic outlook. S&P upgraded Israel, giving it an AA- rating (up from A+), and Moody's raised their outlook from "stable" to "positive." It was the first S&P upgrade of Israel's credit rating in seven years – and followed Moody's highlighting Israel's "increasingly resilient economy which is likely to sustain more favorable growth than peers." Factors like these could contribute to a ratings increase in the coming years if the improvement in debt levels and fiscal performance continues.

These changes are notable because they cover diverse corners of the Israeli economy, and give little indication of weakening. As the former Director General of the Israel Prime Minister's Office Eli Groner says, "Global phenomena are playing to Israel's strengths." The country is becoming more competitive, domestically building industries at the heart of the global economy for the foreseeable future, while strengthening its underlying debt profile, and working to improve capital markets efficiency.

CHART 2
Momentum Across Competitiveness, Economic Scorecards, and Sovereign Ratings

World Economic Forum	OECD	S&P	Moody's
<b>↑</b>	<b>↑</b>	<b>↑</b>	<b>↑</b>
Moved to 20 <sup>th</sup> from 27 <sup>th</sup> in Global Competitiveness Index	Improved standing in OECD Science, Technology and Industry Scoreboard 10	Upgraded credit rating from A+ to AA-	Improved outlook from stable to positive

Source: The World Economic Forum, The Organization for Economic Cooperation and Development, S&P Global Ratings, Moody's Corporation

## The Basics

Israel has historic areas of expertise, many of which were born of necessity. Aviation, defense related innovations, and agricultural technologies – like world class irrigation – all top the list. And the country has been a pioneer in solar technologies – as it worked to balance the challenges of limited water supply and reduced ability to depend on imported energy - with abundant available sun. Additionally, Israel is an important producer of industrial and chemical inputs such as potash and phosphates. Metallurgy, plastics and petroleum refining, also remain core strengths. 11

Over the past few decades, Israel has become an export based economy, which has produced advanced technologies that reduce costs and increase efficiencies. As such, many of Israel's technology companies behave defensively during recessionary periods. Israel has also become a meaningful leader in healthcare – particularly in medical devices, digital health technologies and the development of novel therapeutics for the biotech industry. Like other small but highly successful economies such as Singapore, Switzerland and Taiwan – Israel's innovation is even more remarkable when you consider that it is no longer driven by domestic need, but now creates products that solve problems of foreign and often distant countries - which in many cases, are well developed and innovative in their own right.

This helps explain why Israel has experienced ongoing GDP growth alongside declining gross public debt since the global financial crisis.

"Israel is no longer the 'Start Up Nation." It has now become the Innovation Nation."

Dani Dayan, Consult General of Israel in New York

CHART 3
Israel's Economy is Performing Strongly

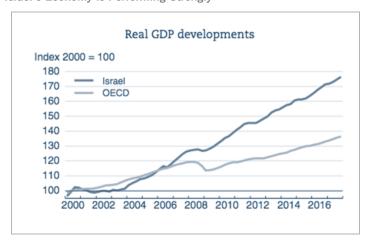
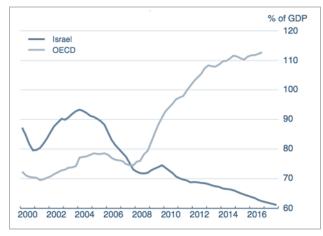


CHART 4
Gross Public Debt in Israel 2000 - 2018



Source: OECD Source: OECD

"Global phenomena are playing to Israel's strengths."

# Eli Groner, Director General of Israel Prime Minister's Office, 2015 - 2018

Considerable Asset Growth Comes on the Back of Savings Scheme

As wages have trended steadily upward, so too has the country's investible savings. Israelis are required to contribute 17.5% of annual income to a retirement savings plan which has created over \$441 billion in value. <sup>12</sup> These assets are largely managed by 10 institutions – across pension funds, insurance companies and asset managers – and are growing exponentially, doubling every few years. **This explosive growth in AUM has led policy makers to relax the rules around investing them**. The strict guidelines around investing mainly in local market stocks and bonds have loosened, spurring increased global investment. The local market, with a market capitalization of approximately \$215 billion simply can't absorb the inflows.

This massive asset growth has had multiple ripple effects. A Global Securities Fund Manager at one of the largest pension and provident funds notes, "Pensions have been diversifying their portfolios, both in terms of asset type and region – and the massive asset growth has made it easier to attract new talent to help manage it." In recent years, Israeli institutions have put some \$10 billion to work in private equity; they are now also investing in other alternatives including hedge funds and real estate. 13

Meanwhile, now that these funds can more easily invest abroad, they do so willingly and with a growing appetite. <sup>14</sup> Approximately two thirds of Israel's pension fund dollars are invested in foreign assets, and as these funds grow—perhaps to four times their current size by 2023 — this appetite will only increase. <sup>15</sup> Many local institutions have conveyed to us this is only the beginning in terms of diversification. Over the past eight years, we have seen that the level of sophistication and intelligence of the Israeli institutional investors is remarkable and comparable with the top talent in the US, Europe and Asia.

Parallels have been drawn with other countries' retirement and savings approaches – most often, Australia's. But Israel's required rate is nearly double that of Australia's or peer programs elsewhere, creating dependable cash flows for the foreseeable future. <sup>16</sup>

CHART 5
Savings Contributions Across the Globe

Country w Comparable Savings Program	Mandatory Contribution Rate
Israel	17.5% <sup>17</sup>
Australia	9%
Slovak Republic	9%
Hungary	8%

Source: OECD

The asset pool has grown, as it shifted from defined-benefit (financially unsustainable, closed to new members since 1995) to defined-contribution with a choice of five private-sector providers. The approved pension or provident funds must invest a minimum of 30% of assets in non-tradeable, earmarked government bonds. So not only is the economy growing at a steady and stable rate, with an improving credit rating – the pension and forced savings programs are amassing an enormous amount of wealth to be invested in an increasingly diverse array of products.

# CHART 6 Snapshot of the Israel Labor Force and Pension Scheme:



Source: OECD, Reuters

A Strong, Educated and Growing Workforce Is Bolstered by Mandatory Service in a Military with Strong Infrastructure

The workforce contributing to this savings program is among the most educated in the world – with more than half of citizens aged 25-64 holding higher education degrees, as compared to the OECD average of 44%. <sup>18</sup> As innovation and the creation of intellectual property become increasingly critical to building new business models and solutions, education matters even more. Also notable is the connection between highly educated and compulsory military service. This is a combination often seen across other top competitive economies.

In fact, nearly half of the 20 most competitive economies, as measured by the World Economic Forum in 2018, require compulsory military service in some form. *Forbes* estimated that companies launched by alumni of the Israeli military's internal intelligence group, called Unit 8200, exceed 1,000 – which would make it the largest entrepreneurial incubator on earth, arguably producing more talent than even the most high profile U.S. incubators and accelerators.

CHART 7

Top Competitive Economies and Compulsory Military Service

Rank	Country	Compulsory Military Service	Rank	Country	Compulsory Military Service	Rank	Country	Compulsory Military Service
1	United States		9	Sweden		17	France	
2	Singapore	YES	10	Denmark	YES	18	New Zealand	
3	Germany		11	Finland	YES	19	Luxembourg	
4	Switzerland	YES	12	Canada		20	Israel	YES
5	Japan		13	Taiwan, China	YES			
6	Netherlands		14	Australia				
7	Hong Kong SAR		15	Korea, Rep.	YES			
8	United Kingdom		16	Norway	YES			

Source: The World Economic Forum, Wikipedia

There are a few reasons for this. Military service fosters considerable adaptation, managing, social skills and discipline in its participants—these are qualities that contribute to successful entrepreneurs, and they can quickly and profoundly shape culture

nationwide when instilled broadly and methodically.<sup>19</sup> Not to mention, defense forces foster lasting social networks – the kind that can contribute to the cross disciplinary ecosystems and networks from which groundbreaking technologies emerge.

The positive effects of the Israel system are magnified in ways that they might not be in other countries with similar military service requirements. This is due to two Israel-specific factors. The first: Israel's military strategy fundamentally intertwines concepts of combat and commerce. Internal units like 8200 require members to devise nimble technological solutions to problems efficiently and creatively, honing skills that directly map onto tech, healthcare, and cybersecurity—the strongest sectors of Israel's economy. In this environment, veterans who wish to continue contributing to their country might see that creating a company addressing a real-world problem is a natural next step. Notably, Israel's military philosophy and structure enables it to identify leadership early and places young soldiers in positions of significant responsibility very quickly. They are also unique in that soldiers are encouraged to think – and (at appropriate times) question and challenge the way things are being done. By the time Israel's former soldiers start University they are often in their mid 20's and have maturity well beyond the average twenty-something.

Second, Israel puts legislation and dollars to work where they matter – allowing nascent ideas originating in the military to transform into global commercial solutions. Israel does not simply shepherd its youth into sectors like mobility, healthcare or cybersecurity— these firms are grounded in the skills needed to build a first-class defense organization.

Further, Israel invests more in research and development as a percentage of GDP than any other country in the OECD. It has put \$275 million towards building a cutting-edge healthcare database. And in the past two years alone, it has passed 3 bills—pertaining to cybersecurity, data privacy and tax reform—that pave the way for its entrepreneurs to push the envelope in their respective industries. This means that the Israeli ecosystem doesn't just create the facilitating environment to create new innovations and solutions while in the military – but it nurtures those ideas as they evolve from both a financial and regulatory perspective.

Expectations for growth of workforce, retirement savings, and the broader economy are anticipated to continue on a steady upward trajectory; notable given that growth rates are already meaningful. Since Israel graduated from being an emerging to a developed market, with its ascension to the OECD in 2010, the country has been one of the fastest growing of its peers. The economy's material growth comes not as part of a bounce back from lows, but as part of a steady and ongoing upward climb.

# The Company Landscape: The Future is Made in Israel

The world isn't getting *less* technological – in fact, it's possible we look back and think we are only in our tech age's *infancy* - and Israeli firms are creating the intellectual property and innovation driving our next era. Nearly all companies across the globe and in every industry vertical are on the steady, upward march to becoming "technology companies" themselves. While this has happened on an individual or consumer basis over the last decade, Shlomo Dovrat from Viola Ventures anticipates the next decade will be defined by *enterprise* adaptation of broad disruptive technologies.

Israel is at the epicenter of change for both B2C and B2B innovations. As automotive firms transition their focus from hardware to software, as telecom companies adapt and upgrade, and as healthcare firms inherently innovate to find new breakthroughs to deliver across populations broadly – Israel has front row center seats.

"I am even more bullish about Israeli tech than I have ever been. If you want to see what the world will look like in 10 years, visit Israel and get a glimpse of the technologies that will infuse our lives."

# Shlomo Dovrat, Co-Founder and General Partner, Viola Ventures

Israel's firms are the source of the fundamental, enabling technologies that will allow the mass transition of multisector firms to, all, in some sense, become tech companies. This is happening on two levels – at the Israeli firms that will build this future, as well as in the massive research and development (R&D) footprint of global firms located in Israel. Understanding the intersection of these two drivers helps to comprehend the critical role Israel plays in the future of the global technology ecosystem.



## The Locals

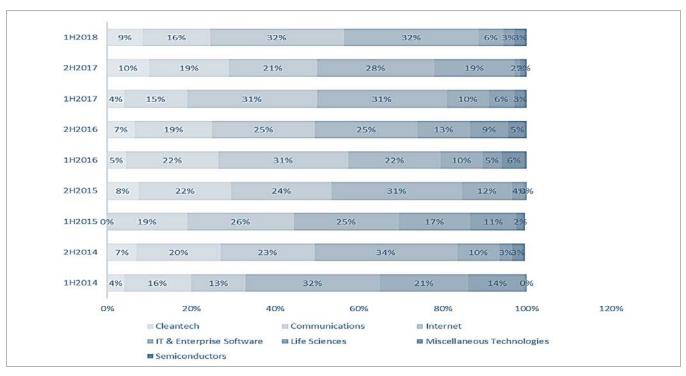
As an innovation and solution driven economy, Israel is focused on solving problems for the world beyond its borders across multiple sectors. Steven Schoenfeld's BlueStar Indexes notes, "Our central thesis for exposure to Israel tech companies has been that many companies in these groups are technology leaders/pioneers in emerging growth trends which are about to see greater adoption over the coming age." <sup>20</sup> From the first instant messenger to drip irrigation and early computer processors, Israel has a long standing history of creating breakthroughs on which the world comes to rely. Israel doesn't make things people want; they produce the foundational enabling technologies on which many of the coming decades' major innovations rely. Intel's \$15 billion acquisition of Mobileye is just one such early indicator. <sup>21</sup>

As the Israel economy has matured, the buy side involved with its mergers and acquisitions has diversified. While North American companies continue to be involved with approximately 50% of high tech deals, Israel's share has grown to 27%, and Europe participated in just over 10% of deals. Asia's share has grown to nearly the same percentage (~9%), and in 2016, China accounted for 50% of exit value.<sup>22</sup>

One of the biggest shifts is that companies are staying private longer – building their firms and their brands – and likely creating more unicorns over the long term.

# Yaron Samid, Founder, TechAviv

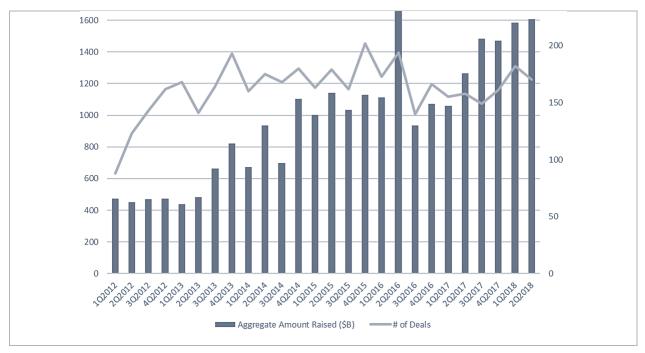
CHART 8
Exits by Sector 1H2014 – 1H2018



Source: Source: IVC Meitar H1/2018 High Tech Exit Report

Three of the dominant global technology trends of the coming decade attribute a material part of their emerging foundational technology to firms in Israel – which can clearly be seen in the upward trajectory of Israeli high tech capital raising.

CHART 9
Israeli High Tech Capital Raising 1Q2012 – 2Q2018



Source: IVC-ZAG Analysis of Israel Q2/2018 High-Tech Capital Raising Trends







Mobility: When the Most Valuable Part of a Car Is No Longer a Car Part

The future of mobility and transport is one of the biggest technological and industrial shifts expected in the coming decade. The foundational and enabling technologies on which this shift relies include: high-performance, energy-efficient hardware; localization and mapping; sensors; Advanced Driver Assistance Systems (ADAS); and decision-making neural networks. As we witness becoming more software than hardware, Israel plays a material role in each of these fields and develops the intellectual property needed to see this shift become a reality.

In a matter of years, Israel entered and helped completely revolutionize the arena of smart transportation. There are roughly 600 Israeli startups focused on autonomous vehicles and smart mobility. <sup>23</sup> In 2015 alone, Israel's high-tech startups raised \$4.4 billion and achieved \$9 billion worth of exits. <sup>24</sup> For context, Germany—the largest car manufacturing market in Europe <sup>25</sup>—only boasted some 60 startup funding deals in the mobility space in 2017. <sup>26</sup> This is particularly notable as Israel does not have a typical core competency in transportation and traditional mobility. And yet the country is building some of the most critical and necessary technology for driving us into the next decade.

The ability of Israeli entrepreneurs to adapt underlying intellectual property for different commercial uses and evolving market trends is remarkable – and can most obviously be seen in their success as hotbeds of global activity with mobility and cybersecurity start ups – solving issues and defining "new normals" that simply did not exist in decades past.



Israel's long list of startups reads like the who's who of thought leaders and industry shapers in mobility. If we use the high profile Mobileye as an example - the Jerusalem-based startup creates and develops cutting-edge vision sensor technology—the technology that enables autonomous vehicles to navigate highways without a human operator. Mobileye was acquired by Intel in March 2017 for over \$15 billion<sup>27</sup> and has since collaborated with BMW, the global automotive parts provider Aptiv and an Israeli transit data startup called Moovit, making headlines as it pushes the envelope of intelligent urban transit.

This is but one example of the many astounding mobility startups thriving in Israel's startup ecosystem. Via has honed the business of providing small-scale synchronized ride-sharing services. Innoviz Technologies is leading the charge to develop accurate mapping, localization and smart 3D sensing technologies for autonomous vehicles. The ride-hailing app Gett received a

\$300 million infusion from Volkswagen. Karamba Security provides cybersecurity solutions for autonomous vehicles and AutoTalks makes chip-sets that enable vehicles to communicate with everything (V2X).

The roster of Israeli mobility startups worth funding is considerable, as the investment arms of BMW, Google, Microsoft, Intel or Renault-Nissan-Mitsubishi can attest.

Revolutionizing smart transportation will require strategic cross-pollination across various sub-fields in technology. There are few better environments poised to capitalize on this than Israel. Israel's technology landscape, with its large and growing number of startups and ability to raise capital, mimics some of the world's best-curated incubators. It is home to best-in-class companies in each of the subsectors crucial to mobility—hardware, software, sensors and analytics, to name a few. Moreover, it has created an ecosystem where actors in each of these spaces can routinely learn from, interact with, inform, and inspire actors across verticals.

Revolutionizing smart transportation will require strategic cross-pollination across various sub-fields in technology. There is perhaps no better environment to achieve this than in Israel.

## **Data Ubiquity Drives Next Generation Connectivity and Telecom Needs**

One of the other major shifts in the next decade is ubiquitous connectivity – where sensors, smart cameras or other IoT innovations transform objects into "devices." A toaster that uses heat to warm bread is...a toaster. A toaster that automatically connects with your coffee maker and wake up call, remembering precisely the length and magnitude of *your* personal toasting preferences for sourdough is not *just* a toaster, but a connected device. And one that is probably sending all those data points to its enterprise parent for repurposing, if not commercializing

## CHART 10

# **Anticipated Growth in Various Forms of Data**

	Now	2020
loT	15+ billion devices	200 billion devices <sup>5</sup>
VOICE	1 billion voice searches per month "Siri, what is"	Voice will account for 50%+ of all searches globally <sup>6</sup>
IMAGE	4.7 trillion images stored <sup>7</sup>	Over 6 trillion images stored <sup>8</sup>
VIDEO	73% of all internet traffic	82% of all internet traffic <sup>9</sup>
GOVERNMENTAL & PUBLIC DATA	Over 300,000 datasets	Over 350,000 datasets <sup>10</sup>
INTERNET PENETRATION	48.9% worldwide internet user penetration	53.7% worldwide internet user penetration <sup>11</sup>
WEB	2 zettabytes of global IP traffic	3.3 zettabytes of global IP traffic12
SATELLITES	1,738 active satellites <sup>13</sup>	20,000 satellites14
EMPLOYMENT	Monthly, self reported surveys at 651,000 static worksites, and webscraping of company websites <sup>15</sup>	Inclusive of data from the "gig" economy <sup>16</sup>
SHIPPING (total) Ground Air Maritime	Max. 10 seconds latency Reported in real time <sup>17</sup> Reported monthly <sup>18</sup> Reported every 2 – 10 seconds	Real time across shipping subsectors

Source: Jefferies Prime Serivces

The coming ubiquity of this connectivity – it is estimated that there will be more than 200 billion connected devices by 2020 - has considerable implications for the telecom community, and Israel is already at the forefront of how evolve them. Most major global telecom groups operate R&D hubs in Israel, including AT&T, Telefonica, SingTel, Orange and Deutsche Telekom. There are more than 500 telecom related start ups in the country. Many of these telecom firms arise from intellectual property developed as part of the military and defense efforts, which responds and adapts to rapidly developing communications infrastructure.

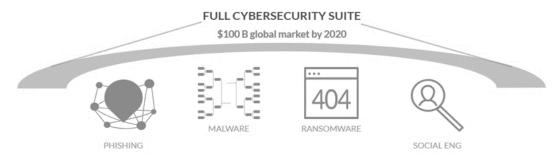
Successful Internet of Things (IoT) uptake is at least a 3-ingredient recipe. First, it calls for proper hardware—servers, storage facilities, sensors, computers—that is cheap to produce, sturdy and powerful. Second, it calls for efficient software to transfer and translate the information gleaned. Third, it requires the proper bandwidth and storage (typically cloud) to transmit and hold the data.

A successful IoT system needs seamless intercommunication across these inputs —between technology vendors, across connected devices within the same network, and across external data sources. <sup>28</sup> This means standardization across a range of factors including software interfaces, data formats, connectivity protocols and security and privacy mechanisms.

As early as 2015, Israeli IoT companies have addressed a broad spectrum of verticals, markets and levels of the IoT supply chain stack.<sup>29</sup> In terms of cybersecurity, Israel is a world leader. It attracts 20% of the global venture funding for cybersecurity and has over 500 active startups in the space.<sup>30</sup> Not to mention, it is home to a myriad of startups that marry the IoT to various verticals, from travel to retail to life sciences to agriculture.<sup>31</sup>

## Cybersecurity: The Birthplace of the Firewall Drives Next Generation Breakthroughs

The invisible and critical theme that spans all other shifts in the next decade is how to protect them. Physical security has become interchangeable with cybersecurity, and will only become more so with the ubiquity of IoT. It is a problem without an enduring solution. As the world evolves and hackers become more sophisticated, companies and individuals will constantly be challenged to improve the ways in which they protect themselves.



By 2020, IDC expects the global cybersecurity market to top \$100 billion, with no slowing in sight.<sup>32</sup> Given the country's defense expertise (which increasingly relies as much on protecting one's digital and connected assets as its physical ones), it is one of two hubs for the global cyber industry. More than 30 multinational corporations have cybersecurity R&D centers, a number we only expect to grow.

Cybersecurity and the ability to protect data origination, transmission and storage is at the heart of forward data changes. With billions of connected devices coming online in the next few years, it's possible that prior hacks like the Marriott, Equifax, Sony or WannaCry episodes could pale in comparison to future breaches. And companies are preparing accordingly.

Israel is the second largest cybersecurity landscape after the U.S. – playing host to the world's largest conference of cyber technology outside the U.S. In 2016 and 2017, the country witnessed nearly 150 new cybersecurity company launches, with 2017's average seed round increasing 16% year over year. It was the fourth consecutive year of increasing cybersecurity round sizes at the seed stage. Israeli cybersecurity companies exited for approximately \$1.3 billion in 2017 (not including IPOs), with an average exit valuation of \$130 million. The average amount of capital raised by 2017 exited cybersecurity companies was just above \$17 million, and it took 5.5 years on average for a company to be acquired. <sup>33</sup> Israeli cybersecurity firms have raised an approximate \$814.5 million in 81 deals in 2017 in both venture capital funds and private equity deals. Equally as important is the diversification of foreign investors in cyber firms - who participated in two of every three funding rounds of Israeli cybersecurity companies in 2017.

"Cyber-by-design will be critical for building secure environments going forward. We aren't protecting just data and information anymore, but critical infrastructure, national systems and biotech solutions that have massive implications for potential breaches."

# Nadav Zafrir, Co-Founder and CEO, Team8

# CHART 11 Cyber Market Grows Considerably in Israel



YL Ventures, a U.S. investor focused on seed stage Israeli innovations in cybersecurity, enterprise software & autonomous vehicle sectors maps the Israel cybersecurity ecosystem: https://www.cybermap.co/. And their influence isn't just felt domestically or via

various enterprises. Most recently, two Israeli firms, Jerusalem Venture Partners and SOSA, an open innovation platform, were the successful bidders on a project initiated by the City of New York to start a global cybersecurity center designed to make the city a world leader in the field.

Insurance companies are facing massive disruption, driven by outside-in forces, with new business models, changing customers behavior and expectations and more. Conservative and do not easily adapt to change, insurers know they need new solutions driven by big data, artificial intelligence and cyber security technologies, and many of them will come from outside via partnerships or acquisitions of startups. Israel, a world-leader in these core technologies, has a unique, vibrant and developing ecosystem with hundreds of startups that are looking to reach the Insurance market. This provides a unique opportunity for Insurance companies to capitalize on these technologies for their growing businesses.

FinTLV Ventures, a partner of Jefferies, is a Tel-Aviv-based early stage venture capital fund, that specializes in Insurtech and invests in advanced technologies, that provide unique value for the Insurance market like AI, IoT, data analytics and cyber security. With its pro-active approach, FinTLV Ventures also pivots technologies from other verticals to create new digital Insurance products and enable its global, valuable network of dozens of Insurance companies to successfully carry out their innovation strategy and meet their challenges.

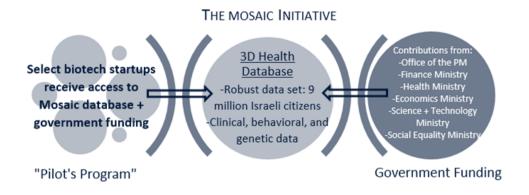
## Healthcare: Innovation in Discovery, Delivery and Disruption

Healthcare is one of the largest and fastest growing sectors globally, as countries work to work to improve the health and quality of life for their citizens. Israel is no different – and, as with many sectors, **is working collaboratively across disciplines to innovate in healthcare**, **and commercialize these innovations for the world's benefit**. The Israel Digital Health Initiative was launched in 2018 to create a 3D database of clinical, behavioral, and genetic health data. It will anonymize and share the vast data trove with companies and researchers to help Israel lead the global charge to find innovative treatments and cures for a diverse body of illnesses.

Since passing the cabinet in March 2018, tens of thousands of citizens have volunteered to join the initiative. A primary objective is to use analytics to identify preemptive personalized healthcare, beyond a self-reported "this runs in my family." It is a considerable indicator – given it was more of a bureaucratic lift than a technology challenge. But policy makers are dedicated to eliminating barriers across agencies and professional disciplines to facilitate change. They passed two bills (on cybersecurity and privacy) to make this database possible – whereas other countries' laws may inhibit this type of data sharing.

The five year project has a nearly \$300 million budget – and the "Mosaic Initiative," as it is called, will help to connect Israeli biotech start ups with multinational firms. It sits squarely at the center of big data, artificial intelligence, sensors and wearables and human intelligence.

CHART 12 Israel Digital Health Initiative



Source: Jefferies

With a global digital health market estimated to near \$200 billion, Israel is working to build core competency in healthcare, just as it did with cybersecurity and mobility. It is jointly sponsored and supported by the Prime Minister's office, the Finance Ministry, the Health Ministry, the Ministry of Economics, the Science and Technology Ministry, and Social Equality Ministry, with cooperation from the Innovation Authority and the Education Ministry's Council for Higher Education.

Israeli start ups can apply to be paired with public HMOs with specific R&D proposals, and accepted companies will get at least 20%-50% of their expenditures covered. Other start ups will get 60%-75% of costs covered if they demonstrate "the potential to significantly advance the public healthcare system in Israel and around the world, or that promise a breakthrough in their field." In the long term, it will create a massive data set of millions of Israeli citizens over the past 20 years. By contrast, the collaboration between DeepMind and the British Health System is estimated to cover just over 1.5 million patients.

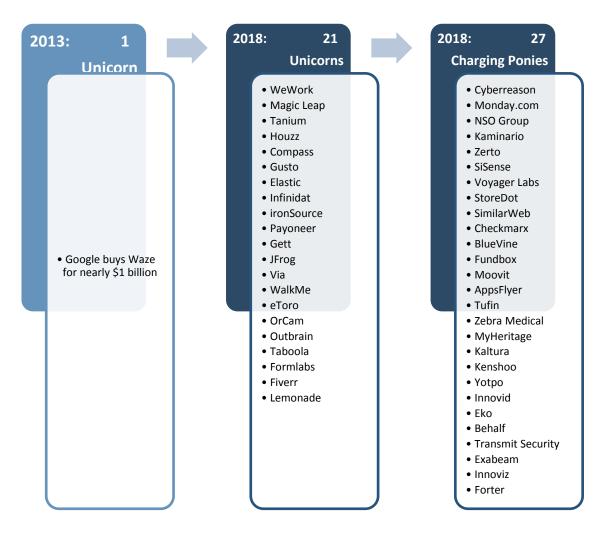
#### Unicorn Nation

One other marker of general economic health is the proliferation of unicorns – those start ups valued at \$1 billion or more. Waze was among the first Israeli \$1 billion dollar companies, and it just paved the way for a diverse group to achieve similar valuations in the years following. The number of Israeli founded unicorns and charging ponies isn't just growing, it's accelerating. And as the investor base becomes increasingly global, their number is only expected to grow even further.

#### CHART 13

# From One to Many:

Frequency of Israeli Unicorns (\$1 billion valuation) and Charging Ponies (\$500 mm - \$1 billion valuation)



Source: BlueStar Indexes, Tech Aviv

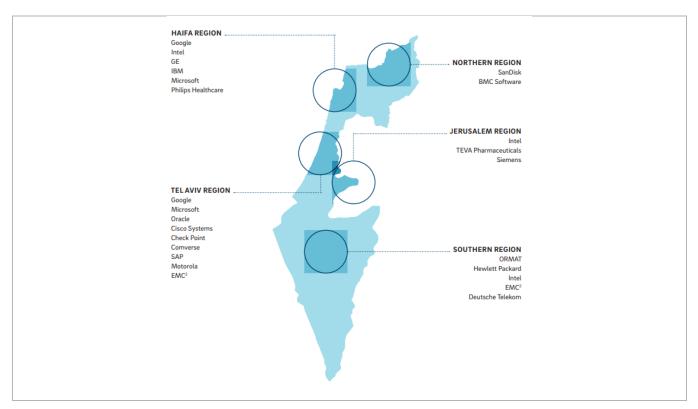
In 2017, the total value of exits reached \$23 billion, and the country is on pace to break that record in 2018. Tel Aviv boasts the highest density of technology startups per capita, the highest number of technological patents per capita and the highest investment of GDP in research and development globally.

This is possible due to a few key programs that the Israeli government designed and implemented with the explicit goal to boost its burgeoning startup economy. Tax cuts in the 1980s were followed by the Yozma program in the 1990s, which implemented tax incentives to foreign investors.<sup>34</sup> In addition, the government has eased corporate tax rates and made it simpler for high-tech companies to execute mergers.<sup>35</sup>

All of this has led to the introduction of over 20 unicorn tech startups—valued at \$1 billion or more—in 2018 alone. These include names that have littered headlines in recent years: Gett, Infinidat, OrCam, ironSource. Some 25 additional Israelifounded private tech companies sit in a pre-unicorn bullpen ("charging ponies") that are valued at more than \$500 million and may join the Unicorn club soon. And these cross border acquisitions increasingly come from farther and farther away – Japan's Rakuten acquired Israeli messaging app Viber for \$900 million.

As these companies are founded and flourish, their exit strategies are changing. They are increasingly bought by other Israeli firms (and in fact, a growing number of Israeli firms are exploring acquiring companies beyond their border). And the Waze acquisition prompted a number of firms to re-evaluate their exit timelines, and question whether they considered exits too early. As a result, more and more firms are considering initial public offerings. The caliber of Israeli IPOs is increasing, in part because the companies are more mature, they are attracting more seasoned management teams as they grow, and the enabling environment has improved.

CHART 14
International Hubs: Why 250 Global Companies Can't Be Wrong



Source: Roland Berger

More than 250 global firms have local R&D hubs in Israel – including Microsoft, Intel, Google, Cisco, Samsung, GE, 3M, Facebook, Apple, among others. Nearly 20% of Fortune 500 companies have R&D presence in the country, a number that grows annually.

Apple's R&D center in Israel is its largest outside the U.S. And indeed, that's true for many firms.

Israel's spend on R&D as percentage of GDP is the largest of any country, and more than twice that of the U.S. One of the strongest indicators of the strength of the local intellectual property market – in many cases, the Israel R&D center is the company's *first* outside of their home country. Microsoft, Apple and Facebook all chose Israel as the locations for their first international R&D centers.

As Andy Kaye, the president and CIO of OurCrowd, the pioneer in crowd sourced V.C. funding, notes, "The presence of global multinationals continues to bring further depth and legitimacy to Israeli innovation and companies."

# THE CAPITAL MARKETS INFRASTRUCTURE LANDSCAPE

# The Case of the TASE (Tel Aviv Stock Exchange)

Few corners of the Israel capital markets infrastructure have evolved as significantly in recent years as the Tel Aviv Stock Exchange (TASE). With 117 high-tech companies, representing just over \$65.5 billion in market cap, as well as 449 all shares companies, with \$216.6 billion in market cap, the TASE has matured considerably, and its recent demutualization has been a critical turning point.

On the back of releasing a new strategic plan in March of 2017, TASE set forth on three aims:

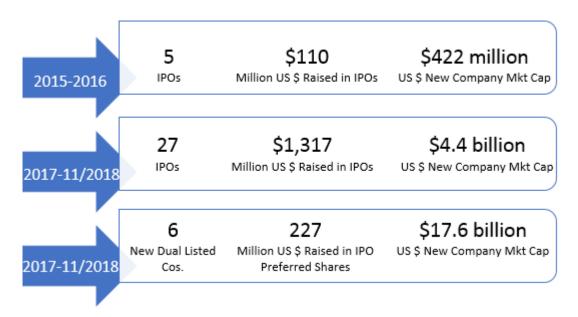
- 1. To ensure the TASE is operating in line with current international standards
- 2. To increase liquidity of Israeli market
- 3. To diversify its product offering

It is a member of DTCC and Euroclear, with 58 companies dual-listed on international exchanges. There are no international currency restrictions and has added foreign and remote members on the back of changing membership rules.

2017 was a record year for IPOs on the TASE, with 2017 and the first three quarters of 2018 notching 27 equity IPOs, raising \$1.317 billion – and creating nearly \$4.4 billion in market cap for these companies. It also witnessed nearly 27 corporate bond listings.

This comes on the back of nearly 100 adjustments to TASE listing rules and infrastructure, including tax breaks on listing fees, a simplified listing process, and more lenient capital-raising guidelines.

CHART 15
TASE Equity IPOs



The TASE is not only attractive to Israeli startups listing for the first time, but also increasingly to companies looking to dual-list. With TASE growing, these dual-listed companies enjoy the usual benefits of listing on more than one global exchange—namely, increased liquidity and trading volumes, a broader investor base, and increased name recognition. More importantly, they choose TASE because it also offers benefits that other exchanges do not offer, such as a lower minimum requirement for capital raising via convertible securities.

"The TASE has witnessed a considerable uptick in equity and bond IPOs, both as a result of a stronger environment for capital markets activity and a better perception of the stock exchange itself."

# Sraya Orgad, Head of Business Development, Tel Aviv Stock Exchange

# CHART 16 Evolution of the Tel Aviv Stock Exchange (TASE)

Challenge	Remedy	Looking Ahead
Listing stock is expensive.	Make TASE listing expenses tax-deductible	Initiated 2018
Dual-listing stock is legally complex.	TASE dual-listing procedure designed to be easy and simple	In 2018, dual listings account for 13% of TASE, compared to 9% just 5 years ago.
Companies want capital-raising to be 1) cheap and 2) easy.	1) TASE's minimum requirement for capital raised is lower than abroad.	This, coupled with steadily rising rate of IPOs on TASE, bode well for the future.
	2) TASE-listed companies can raise capital through convertibles.	

Source: Jefferies, Tel Aviv Stock Exchange

The TASE also recently changed rules in foreign/remote membership – to broaden its membership base and diversify beyond its own borders. More than 70% of the exchange is now owned by new investors. Looking ahead, there are three strategic initiatives the Exchange is focused on:

#### **CHART 17**

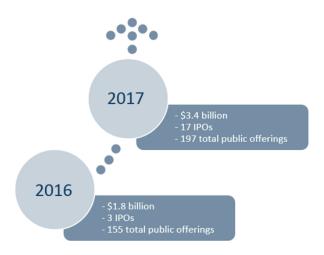
Securities Lending	Working with Intel and Accenture to build a next generation securities lending platform grounded in blockchain technology
Colocation Services	Leveling the playing field for traders by making colocated servers available
Partnership with Singapore Exchange	Launched new model of cross border partnership to embrace dual listing across Tel Aviv and Singapore stock exchanges

Source: Tel Aviv Stock Exchange

## Dual Listing and the Singapore/Tel Aviv Exchange Partnership

While a growing number of Israeli companies are listing locally on the TASE – indeed, a record number did so in 2017, Israeli companies have also historically looked outward – appearing on more than five of the world's largest non-Israeli stock exchanges (seven as of this writing).<sup>37</sup> Now, Israeli companies are increasingly looking to dual list with the TASE, and the country is pioneering new methods to make dual-listing more seamless.

# CHART 18 Capital Raising on the Tel Aviv Stock Exchange



In 2017, 13% of TASE stocks were dual-listed on foreign stock exchanges, compared to 3% in 2002.<sup>38</sup> Newer, smaller companies like Israel's high-tech startups are increasingly willing to pay for the listing and legal fees associated with dual listing. Companies seek dual listing for a variety of benefits: increased liquidity and trading volumes, a broader investor base, increased name recognition, and often greater coverage by company analysts. Numerous changes have facilitated this growth. Among them, TASE has focused on facilitating easier, lower-cost dual listing process. Listing expenses on TASE are tax-deductible. It requires a lower minimum requirement for capital raising via convertible securities.

And its appetite for innovation shows no signs of slowing. In addition to the 100 regulatory changes made to bring the exchange in line with global standards, and increase and improve its listing constituents, it has pioneered a new partnership with the Singapore exchange to support simultaneous dual-listings on the two. And the company may elect which regulatory regime to operate under – meaning firms can come to market in Israel, but operate under Singaporean regulations, or vice versa.

This is important for numerous reasons – among the most is the continuation of deep partnership with foreign investors and mutually broadening access to markets. But it also reveals the willingness to innovate at a market structure level that to date has been most visible in the start up community. It is this sort of openness to change and innovation that is witnessed *across* the capital markets landscape that is creating the momentum propelling the economy forward.

Willingness to make change and disrupt traditional business models or modes of operation are necessary to take advantage of broader opportunities – and we can see this occurring across market structure and policy making.

## BlueStar Indexes: New Approaches for 'Broad, Deep and Complete' Access

Given the nuances to the Israel market, until recently, expressing precise investment themes could be somewhat challenging. A material number of Israel companies have chosen to list on one of at least seven non-Israel markets, thus making it harder for investors to gain holistic exposure and encompass firms across multiple exchanges. In 2012, the BlueStar Indexes set out to create this more comprehensive view of the Israel public company market. The BlueStar Israel Global Index (BIGI) is the broadest and deepest benchmark for Israeli equities, trading worldwide in Tel Aviv, New York, London, Singapore and Australia, and the broader BlueStar portfolio covers more than a dozen Israel-focused, thematic or regional indices.

The approach is to create a more holistic model via a "broad, deep and complete" methodology, encompassing firms that have chosen to list outside of Israel, thus casting a more complete net and permitting inclusion in a broader number of passive vehicles. As investors increasingly look to Israel to either more holistically or precisely express investment themes, there is growing interest in the suite of thematic indices BlueStar focuses on. In fact, given the material footprint of Israeli companies in certain technology subsectors, *not* including these firms would leave some portfolios to incompletely capture the global technology supply chain.

Across four major indices BlueStar studied (the FTSE All World, the FTSE Developed Market, the MSCI All Country World Index and the MSCI World Developed Markets), it identified between 36 – 72 bps of "missing" market cap in Israel exposure. The BIGI Index reflects \$100 billion more in Israeli market cap exposure than other index providers.<sup>39</sup>

The criteria for inclusion in the BlueStar Indexes are as follows:

CHART 19

Defining the Universe: at least one quantitative criteria, and/or at least two qualitative criteria

Quantitative	Qualitative	
-The company's tax status is in Israel	-The company is listed on the TASE	
-The company is headquartered in Israel	-The company was founded in Israel	
-The company generates at least 50% of its revenues from Israel or at least 50% of its operating expenses are	-The company has major management, operational, logistical or R&D facilities in Israel	
derived from operations in Israel	-The company has a majority of its board of directors or at least two executives domiciled in Israel	
	-The company's business results would be materially altered without its Israel based assets. These may include but are not limited to: intellectual or human capital, licenses to Israeli technology that would materially affect R&D	
	-The company is a subsidiary or non-Israeli operating branch of a quantitatively defined Israeli company	

Source: BlueStar Indexes

## · Screening for Investability

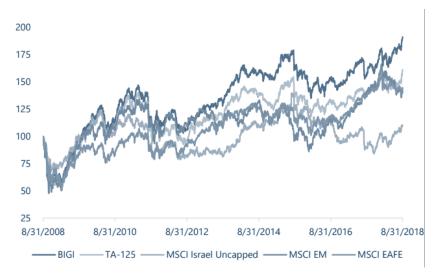
- Market Capitalization: Float adjusted market cap is at least \$75 million USD at time of rebalance
- Liquidity: Must have a 6 month average daily value traded of \$250,000 USD or more

## · Diversification Parameters

- No single component will represent more than 10% of the weight of the index
- The cumulative weight of all components with an individual weight of 5% or greater may not in aggregate account for more than 50% of the weight of the index

CHART 19

BlueStar Israel Global Index Ten Year Relative Performance Ending August 31, 2018



Source: BlueStar Indexes

Investors are constantly working to more accurately express investment theses. The BlueStar Indexes are a leading solution for a variety of allocators focused on Israel broadly, innovation firms, or fully representing the global technology supply chain in their portfolio. BlueStar's Israel indexes are used as benchmarks for both US- and Israeli-registered investment products, including ETFs and index funds. BlueStar's Israel indexes are also increasingly used as performance benchmarks by institutional investors.

US-listed ETFs tracking BIGI and BIGITech are listed on the NYSE and have more than five years (ISRA) and three years (ITEQ) of live performance history.

CHART 20
Selected Indices for Accessing and Expressing Views on Israel

Index	Description	Constituents
BlueStar Israel Global Index (BIGI)	BlueStar's flagship benchmark of Israeli equities. The BlueStar Israel Global Index includes Israeli companies across all sectors of the economy and considers all Israeli companies irrespective of their listing venue.	134
BlueStar Israel Total Investible Market Index	An index of Israeli equities including companies across all sectors of the economy and considers all Israeli companies irrespective of listing venue.	163
BlueStar Israel Global Strategic Value Index (BIGI-SV)	An index of Israeli equities with the greatest exposure to fundamental value factors. The index is rebalanced annually and considers all components of the BlueStar Israel Global Total Investable Market index.	113
BlueStar Global Strategic Dividend Index (BIGI-SD)	An index of Israeli equities with the greatest exposure to the dividend yield factor. The index is rebalanced semi-annually and considers all components of the BlueStar Israel Global Total Investable Market Index	77
BlueStar Israel Global Technology Index BIGITech	BlueStar's flagship benchmark of Israeli equities of companies operating in innovative industries. The BlueStar Israel Global Technology Index includes Israeli companies, irrespective of listing venue, operating in industries ranging from information technology to biotechnology, defense and security technology, and clean energy technology.	71
Solactive-BlueStar Israel Domestic Exposure Index	A benchmark of Israeli equities with the highest degree of revenue exposure to domestic markets. The index is rebalanced semi-annually and considers all components of the BlueStar Israel Global Total Investable Market index that report 70% or more of revenue from within Israel.	60
Solactive-BlueStar Israel Global Exposure Index	A benchmark of Israeli equities with the highest degree of revenue exposure to global markets. The index is rebalanced semi-annually and considers all components of the BlueStar Israel Global Total Investable Market index that report 70% or more of revenue from outside of Israel.	74
TA-125 Index	Comprised of the 125 largest companies by market capitalization listed on the Tel Aviv Stock Exchange (TASE)	125
TA-35 Index	Comprised of the 35 largest companies by market capitalization listed on the Tel Aviv Stock Exchange (TASE)	35
TA-Tech Elite Index	Comprised of companies that are part of the TA Blue Tech Index and have a market value of at least ILS 400 million or ILS 200 million NIS for recently established companies	61
TA-Global-Blue Tech Index	Comprised of all information technology and biotechnology companies listed on the Tel Aviv Stock Exchange (TASE)	78

Source: BlueStar Indexes, MSCI, TASE

# The Growing IPO Market: Looking Beyond Mobileye, Cyberark, and SolarEdge

Until recently, nearly 80% of investment goes to early-stage funding in Israel, and only 20% to late stage funding.<sup>40</sup> In the U.S., by contrast, venture and later stage funding is more evenly split. There is now considerable focus from policy makers and regulators in turning these numbers around, and address the idea that for every company that has gone public, there are likely multiple more that were acquired before an IPO.

This is starting to materially change. 2017 witnessed a record year for IPOs on the TASE – in part because of the structural shifts pushed by policy makers. Depending on the exit path, it's possible firms can leave material amounts of money on the table by electing to sell themselves rather than seeking an IPO. And with several process overhauls that make it easier to both bring an

IPO to TASE and participate as an investor, IPOs on TASE are increasingly attractive, especially to small- and mid-cap companies.

Most exciting among the recent changes to TASE is a new IPO process of service that makes it simple for investors to watch and participate in any IPO or bond offering on TASE in real-time. Investors can access these offerings through the exchange's website and are immediately connected with a broker. This is a boon to small- and mid-sized companies, which will have an easier time capturing the interest of retail investors now that participating is simpler.

This, coupled with a bevy of other changes to the exchange—among them a move away from Dutch auctions to allocation-style IPOs and substantial listing and maintenance cost reductions—has led to a better perception of TASE itself followed by a huge uptick in IPOs. In 2017, there were 17 equity IPOs—a five-fold increase over 2016.<sup>41</sup> More broadly, public offerings in the TASE equity market fetched \$3.4 billion in 2017, up from just \$1.8 billion in the year prior.

## **Local Broker-Dealer Landscape Matures**

As Israel's market has come to global prominence over the past decade, the country's broker-dealer landscape has evolved to accommodate demand from a fast-growing pool of both local and global investors. What has driven this growth in interest, and how has Israel met demand?

For Shay Ben Yakar, CEO of Israel's #1 brokerage firm, the equation is simple. 42 Israel's market is attractive to global investors because "In the last decade the Israeli macroeconomic indicators were very strong." The past decade has seen a total market growth of 5%, low inflation at around 2%, a doubling of total public assets and a tripling of assets in local pension and benefits funds. This growth means that "local and global investors enjoy a positive annual return of 12.7%—more than triple." This, coupled with the country's rapidly growing technology sector, makes Israel an appealing market for investors around the world.

Further, based on what Ben Yakar is seeing on the ground, the economy shows no sign of slowing. "We at Leader Capital Markets believe that the Israeli capital market is still very attractive both to local and global investors, as we estimate that the economic indicators are going to remain strong," he notes. In this light, it was crucial to expand brokerage firms' global capabilities efficiently and synergistically.

As global interest in the Israeli capital markets grows at rapid speed, top Israeli brokerage firms with excellent local offerings have partnered with U.S. firms to expand their global capabilities. Leader Capital, for example, partners with Jefferies—but it is one of many Israeli broker-dealers to form an introducing relationship with a United States-based firm to meet growing interest in the Israeli capital markets.

"In the last decade, Israel macroeconomic indicators have been very strong; total public assets have doubled and local pension and benefit funds assets have tripled.

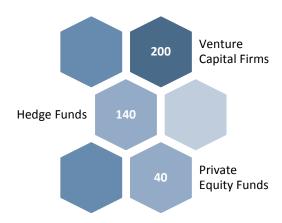
As a result of this – together with strong capital markets activity – Leader believes the Israel capital market is very attractive to local and global investors – and we strongly believe these tailwinds will remain compelling."

Shay Ben Yakar, CEO, Leader Capital Markets

## The Move from Emerging Market to Developed Market

In 2010, as Israel marked nearly a decade of continuous solid – if measured - growth, it graduated from its an Emerging Market to a Developed one in a number of indices. While this reclassification recognizes the country's economic health and stability, it is a turning point that is complex in nature, and can be somewhat a double-edged sword. When MSCI reclassified the economy in 2010, Israel went from comprising 2.8% of the Emerging Markets index and 13% of the EMEA index to only 0.4% of the World Index.<sup>43</sup> Thus, the reclassification can mean a dip in exposure to Israel via passive investing, which has follow on implications for liquidity and broader implications for coverage of Israeli companies by analysts.

# The Alternative Investing Landscape



## **Venture Capital: A Longstanding Source of Capital Globalizes and Expands**

In 2017, the Israel economy hit an inflection point. With over 20 IPOs, raising billions in fresh capital, and (over 150 private exits), Israeli companies continue their momentum in the global capital markets ecosystem – and numerous indicators point to these activities accelerating in the coming years.<sup>44</sup>

Traditionally, Israeli companies tapped capital most frequently by going the venture capital route. With more than \$5 billion in VC money invested in Israel – it has long been the strongest provider of capital.<sup>45</sup> This is led by such firms as Viola, Battery Ventures, Pitango, Bessemer, Aleph, Vertex, Disruptive, Amiti, Jerusalem Venture Partners, Maniv Mobility and others.

Tax cuts in the 1980s spurred economic growth and were followed by the Yozma program in 1993, which offered tax incentives to foreign investors and pledged that the government would match any outside investment in an Israeli company. <sup>46</sup> By the early 2000s, the government made further reforms that privatized the economy, making Israel an even more hospitable environment for venture capitalists. <sup>47</sup> Most recently, Israel has diversified this base, fostering relationships with Chinese investors and companies that has led to an appreciable uptick in VC activity, especially in the high-tech sector.

CHART 21
The Alternative Investing Landscape

•		•
Private Equity   Real Estate	Hedge Funds	Venture Capital
Most investors from outside Israel	At inflection point	Mature and diverse
1 <sup>st</sup> Israeli REIT launched in 2018	Growing asset base	Broad investor base
	Diversifying firms; both local and global focus	Growing portfolio company makeup

The last few years have witnessed considerable momentum for VC firms. For the first half of 2015, 342 companies attracted \$2.1 billion, up from 334 companies nabbing \$1.6 billion in the first half of 2014. Israeli high-tech VCs raised just under \$1 billion in 2016 from Chinese investors, about twice as much as two years prior.<sup>48</sup> Israel has been willing to accommodate Chinese stipulations, such as allowing Chinese investors majority ownership.

"The VC landscape in Israel has grown from a single government sponsored fund in the 1990s to an extremely mature, robust and diverse market.

The mutual diversification and maturation of VCs and their portfolio companies have created one of the biggest and most developed communities on earth. And as the world becomes more mobility focused, the growth in investments in IoT, blockchain, and cybersecurity (among other industries) will continue to benefit Israeli firms."

# Tal Barnoach, Disruptive

This momentum is reflected in the considerable growth of OurCrowd, which has already raised almost \$1 billion on its platform and invested in 170 portfolio companies since its founding in 2013.<sup>49</sup> OurCrowd is a pioneer of equity crowdfunding, but with an important twist: the company operates both as a traditional VC shop, sourcing and vetting deals, but also invests its own capital alongside aggregated investments from a network of institutional and individual investors worldwide. Many of these investors would not have access to the asset class without this model. In addition, OurCrowd offers specialized funds that group investments by sector or stage, such as a recently announced \$50 million venture fund for sports technology investing.

OurCrowd further capitalizes on its investor networks to support portfolio companies through connections and recruitment, as well as using them as an additional source of deal flow. Multinational companies—which use the firm to scout new innovations that can be folded into their own businesses—add additional nodes to the network. The rollout of an online platform to facilitate these connections led FastCompany to name OurCrowd one of the world's most innovative companies. <sup>50</sup>

Today more than 350 multi-national corporations are scouting for, investing in, and acquiring Israel-based technology businesses, which makes this market one of the most dynamic innovation hubs in the world. Yet Israel, unlike other fast paced innovation driven ecosystems, is characterized primarily by earlier stage mergers and acquisitions, which thus makes seed investing a more risk mitigated approach to in-country venture investing.

JANVEST Capital Partners is a U.S.-based seed fund that invests exclusively in deep technologies being developed in Israel but which have multi-vertical applications amongst the American Fortune 1000. Uniquely JANVEST tackles two significant issues venture funds have historically faced investing in Israel - the first is designing and employing a strategy specific to this market's economics and second is bridging the gap early on between Israeli founding teams and key enterprise partners abroad.

As VC activity in Israel expands, it is also reshaping the landscape of the economy in the country overall. Diversified, generalist venture capital firms are being replaced by smaller specialists. These new VCs focus on emerging sectors like aging technology, social impact, biopharma, or smart mobility—sectors where investing requires specialized knowledge and deep research.<sup>51</sup> As portfolio companies have matured and diversified, VCs and companies have learned and fed off each other to mutually develop and reach the next stage.<sup>52</sup> The VC landscape exhibits maturity across all metrics, but it is increasingly joined by other forms of alternative capital in nurturing and growing private firms.

## CHART 22

# Israel Venture Capital by the Numbers, 2017



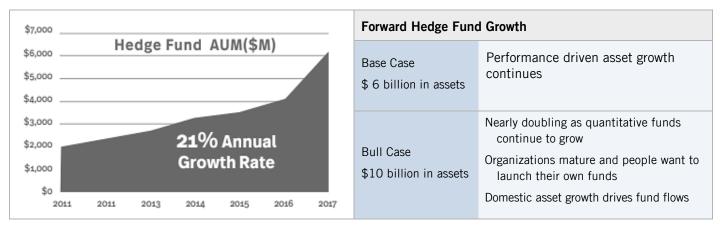
Source: Haaretz, CNBC, Forbes, and Invest In Israel

## Hedge Funds

Israel had not had a material hedge fund or private equity footprint until recently. But now, changes in the institutional market are helping to shape the future of alternative investing in Israel. Local funds are performing, growing and spawning their own spin offs. Global funds are increasingly looking to invest in the Israel market. The Israel Hedge Fund Association formally launched in 2013 to support the small but growing hedge fund community in Israel. Justin Borus, the Founder and Managing Partner of Ibex Investors – a U.S. based hedge fund with an Israel focused strategy – notes, "Israel has so many strong and growing tailwinds, it will be able to manage any bumps and bruises in the next few years. We are in the very early innings of this story. Israel today is like India ten years ago, with considerable upside."

Tzur Management, the first full service asset administrator in Israel, noted in its 2018 hedge fund report – there are approximately 140 hedge funds in Israel, about 30 of whom launched in the last 12 months, and who oversee approximately \$6.15 billion of assets. Slightly over 20 of these firms manage more than \$50 million apiece, with nearly 70% of assets located in Equity Long/Short strategies. Yitz Raab, Tzur's CEO notes, "as the hedge fund industry continues to mature and become more diverse, it will play an increasingly important role in local and foreign portfolios."

CHART 23
Growth of Hedge Fund AuM in Israel



Source: Jefferies Prime Serivces and Tzur Management Hedge Fund Survey

While this makes up a smaller percentage of overall global hedge fund AuM, the rate of growth has been considerable, in part because of the maturity of the local alternatives industry, in part because of investing opportunities, and in part because of strong performance of other Israel focused funds.

"As the hedge fund industry continues to mature and become more diverse, it will play an increasingly important role in local and foreign portfolios."

Yitz Raab, CEO, Tzur Management

"Israel has so many strong and growing tailwinds, it will be able to manage any bumps and bruises in the next few years. We are in the very early innings of this story. Israel today is like India ten years ago, with considerable upside."

# **Justin Borus, Founder and Managing Partner, Ibex Investors**

# **Private Equity**

There are just over 40 private equity funds in Israel, managing over \$13 billion in assets. The first private equity fund launched in Israel in 1996, with some funds delivering considerable returns for their investors. Some believe that Israeli PE funds more frequently focus on growing their investments' businesses, rather than participating in financial engineering with considerable leverage – and thus creating some of the most durable enterprise value.

Preqin, one of the world's largest data and insight driven solutions providers for alternative asset managers, consistently ranks FIMI Opportunity Funds, founded by CEO Ishay Davidi, as one of the top long term investment funds. With \$3 billion in assets, FIMI is the country's biggest local private equity investor and its most mature, with a more than 20 year track record. As local investors, particularly those involved in managing pension assets, are able to further diversify – private equity and real estate assets are expected to benefit and witness increased inflows.

# Local Banking Landscape Also Working Towards Continued Maturation and Efficiency

Israel's banking landscape is dominated by five major players – Bank Leumi, Bank Hapoalim, Discount Bank Group, Mizrahi-Tefahot Bank, and First International Bank, three of which boast female CEOs. Capital market activity and bank M&A has been more muted in the Israel financials industry than in some other countries. One of the last major bank deals was more than a decade ago, when Signature Bank – the New York subsidiary of Bank Hapoalim – IPO'd, reflecting a valuation of about \$500 million. The landscape remains quite centralized – with these groups controlling more than 90% of the market.

Part of the future of the Israel banking landscape will be driven by the success of its fintech sector – with an estimated 500 fintech start ups, up from 90 in recent years.<sup>55</sup> They are active across digital payments, business and personal finance, and have been active as innovators for global players ranging from Barclays to Intensa sao Paolo – but have also been particularly in focus for the dominant local players.

In addition, the consolidated nature of the current landscape remains on policy makers' minds, and as with many other corners of Israel capital markets, is in focus as an area of shifts in regulation to facilitate efficiency. From banking licensing requirements to forward use of blockchain or other easing other administrative requirements, it is possible that the banking landscape will benefit from further maturation, innovation and policy making that can drive this enabling engine forward.

# **Growing Partnerships Across the Globe**

Finally, Israel is increasingly a destination for Asian investors. There have been a handful of longstanding partnerships between Israeli institutions or companies and Asian ones – most notably in Singapore and China. But other Asian investors, even those who have been more cautious in their engagements with opportunities in the region, are starting to increase their activity. China's investments in Israeli high tech firms was nearly \$1 billion in 2016 (more than twice raised in 2014). Israel companies also are increasingly targets for Chinese and Singaporean firms – whether exemplified in ChemChina's takeover of Adama or Bright Food's acquisition of Tnuva.

Israel is a destination for Asian investors for the same reasons it attracts investments from hundreds of global and multinational firms for their research and development centers – and interest increasingly goes both ways. OurCrowd, for example, has launched an office in Singapore to invest in local start ups. But a small and growing number of Asian family offices, asset managers or alternative investors are specifically targeting Israel for fund strategies. The Israel-Asia Center is focused on building and



enhancing collaboration between the regions. Some have theorized that the tightening of CFIUS (Committee on Foreign Investment in the U.S.) rules may result in stronger relationships between Asian investors and Israeli companies. This remains to be seen, but is certainly one possible outcome of current shifting foreign policy and commercial ties.

And like some Asian nations have done successfully – China, India and Singapore come to mind – Israel is working to raise its profile by bringing next generation decision makers to visit the country. iTrek has hosted more than 300 delegations of graduate students from across business, law, policy and STEM programs to gain exposure to the country and its innovation ecosystem.

# **How Jefferies Can Help**

The Israel market today offers an array of compelling investing opportunities across the public, private and alternative investing spaces. Local realities and global phenomena are converging to benefit Israel in a way not seen before, and Jefferies is uniquely positioned to help clients and partner firms take advantage of these opportunities. Jefferies has considerable interest in and engagement with actors across the Israel capital markets spectrum.

## Israeli Equity Research Listed in US/EU

Jefferies's Global Research department continues to expand its coverage of publicly traded Israeli companies, currently covering over 20 companies across sectors including: Communication Equipment, Semiconductors, Software, Financial Services, Internet, IT Services, Specialty and Generic Pharmaceuticals, Biotech and MedTech. We are increasingly seeking and identifying quality companies that are under-covered or lack proper research coverage to deliver differentiated and valuable research and ideas for those of our clients who are global Investors.

## Israeli Listed Equities

Jefferies has a close partnership with Leader Capital Markets, a top Israeli broker dealer, and also works closely with the largest banks in Israel. Leader, Bank Hapoalim, Bank Leumi, Israel Discount Bank and First International Bank of Israel all have strong research teams covering many of Israel's best companies.

Jefferies and BlueStar Indexes together help provide efficient allocation to Israeli Equities more broadly via a suite of indexes, ETFs, analytical tools, and co-branded research. BlueStar can provide analysis and Jefferies can provide execution for the US-listed ISRA and ITEQ ETFs, tracking BlueStar's flagship indexes. Investors who want to increase or decrease their exposure to Israeli stocks and Israeli tech stocks can benefit from our partnership with BlueStar Indexes to provide data and support for their investment decisions. BlueStar also provides benchmark analysis – with up-to-date assessments of current exposure to Israeli equities vs key global and sector benchmarks (MSCI EAFE & ACWI, US and Global Tech Indexes). Jefferies also distributes insights into Capital Market and Economic Trends in Israel via our co-branded research partnership and BlueStar's monthly Israel Equity Outlook. We can provide any Jefferies client with a subscription to this material upon request.

## Capital Intelligence - Israel Focused Managers, Investors and Service Providers

Jefferies has close relationships with many of the top Hedge Fund, Venture Capital and Private Equity investors in Israel. We are happy to make introductions where appropriate. The team also covers local Israeli funds of funds, insurance companies, pensions, family offices and wealth managers to connect clients to the local investment community as they look to potentially raise money from within the country.

# **Corporate Access**

Jefferies hosts the largest technology conference, in terms of aggregate market cap represented, in the state of Israel each June. This conference, the Jefferies Tech Trek, consists of:

- Bus tour to the headquarters of five of the largest and most interesting Israeli technology companies to meet with C-Suite at each company
- Public Day including 20-25 senior executives of public technology companies with presentations, 1x1 and small group
  meetings. Panels including top VCs and Heads of Israeli R&D facilities of multi-national companies and exciting keynote
  speakers.
- Private Company Day featuring a number of Israel's fastest growing and maturing companies as well as select earlier stage companies that have potential to meaningfully disrupt legacy technologies



Additionally, Jefferies hosts over a dozen Israeli companies in the United States each year for non-deal roadshows.

In 2019 Jefferies will host its inaugural quarterly sector-focused Israel Innovation Summit in New York.

## **Investment Banking**

Jefferies is a global full-service investment banking firm that is built on in-depth industry and sector expertise, senior level experience and attention, and best-in-class execution across the full range of client solutions. Jefferies provides global sector teams across all 8 major industry verticals. Over the last 10+ years, Jefferies has experienced the greatest improvement in competitive position, rising from being ranked 23rd in 2007, to being ranked 9th in the world today. No other full-service firm has experienced such a dramatic rise in competitive position as Jefferies.

- 800+ investment bankers in 13 countries; 216 Managing Directors with an average of 20 years investment banking experience.
- 2018 Jefferies Ranks #6 in US Mergers & Acquisitions (\$1 billion+ transactions now account for over 50% of our M&A revenue)
- 2018 Jefferies Ranks #6 in US Equity Capital Markets
- 2018 Jefferies Ranks #8 in US Leveraged Buyout financing

## Israel

- Jefferies has senior sector bankers in each vertical with specific Israel responsibilities.
- Over the past 5 years, each year Jefferies has had over 20 Managing Directors from different sectors travel to Israel.
- Over the past 7 years Jefferies has advised on 16 M&A transactions with Israel-based buyers or sellers for a combined value of over \$8.1 billion.
- Since 2011, Jefferies has bookrun 25 equity offerings for Israeli Issuers raising over \$2.6 billion in proceeds for Israeli issuers. This includes 12 IPOs raising over \$1.0 billion.

## **Israel Focused Investors**

Jefferies has close relationships with many of the top VC and PE investors in Israel as well as many of the most successful Hedge Fund managers and thus is well-positioned to make appropriate connections and introductions across the industry where appropriate.

## **Further Reading**

What's Next for the Start Up Nation? A Blueprint for Sustainable Innovation. Uri Goldberg

Israel - Island of Success. Noa Kainan, Adam Reuter

Thou Shalt Innovate: How Israel Ingenuity Repairs the World. Avi Jorisch

Start Up Nation: The Story of Israel's Economic Miracle. Dan Senor & Saul Singer

Israel: A Concise History of a Nation Reborn. Daniel Gordis

BankThink: Why Women Running Banks is the Norm in Israel. Rakefet Russak-Aminoach in American Banker

Bank Leumi to Launch Online Bank Pepper in US. Laura Noonan in Financial Times

The Israeli Technology Imperative - Investing at the Crossroads of Innovation. BlueStar Indexes

Israel is Undergoing a Female Banking Revolution, Russak-Aminoach Leads the Way. Joe Wallen in Forbes

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