

**Position Paper – Apprehension of Israeli Hi-tech Splitting Away from the Global Trend
and Possible Corrective Actions**

Background

The importance of technological innovation for the growth of the Israeli economy is known and recognized and is clearly expressed in the following data: Over 11% of salaried employees in Israel work in the hi-tech industry; Hi-tech makes up 18% of GDP, over 50% of total exports and about 30% of income tax revenues. These data, and many more, indicate the major importance of the prosperity of the hi-tech industry to the Israeli economy and it is not without reason that Israeli hi-tech is dubbed "the growth engine of the economy". However, the continued success of the hi-tech industry is not guaranteed and the data that is presented below reveals a highly worrisome situation.

The Macroeconomic Environment

The global macroeconomic environment in the first quarter of 2023 is characterized by relatively high inflation and high interest rates compared to the past decade. The annual inflation rate in Israel is about 5%, while the Bank of Israel's interest rate stands at 4.5%. The inflation rate is even higher in Europe and in the USA and attains about 8% and 6% respectively, while the interest rates of the central banks stand at 3.5% and 5% respectively as well. These data reflect the end of the "cheap money era" which led to an increase in asset prices (real estate, shares, etc.) and increased investors' appetite for risk, an appetite which also led to an increase in the scope of venture capital investments around the world and in Israel.

With the outbreak of the Russia-Ukraine war in February 2022 and the global sanctions imposed on Russia, inflationary pressures increased and central banks around the world began the process of raising interest rates. We recognize that at the same time, a process of decrease in the scope of venture capital investments around the world and in Israel has begun.

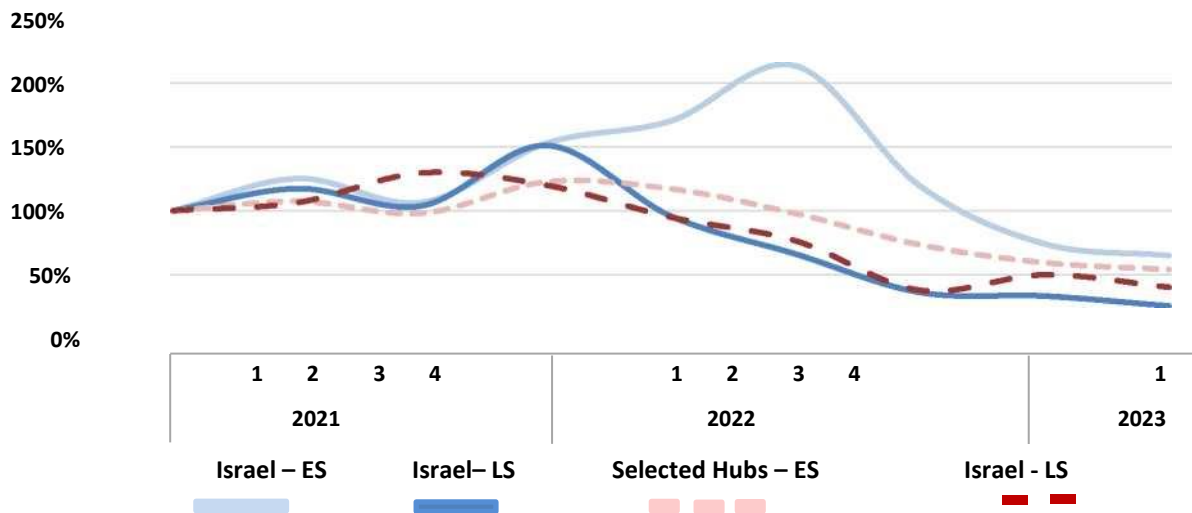
Innovation Authority

Israel Innovation Authority

Figure 1 indicates that Late Stages ("LS") venture capital investments " began to experience a decrease between the end of 2021 and the beginning of 2022, while investments Early Stages ("ES") experienced a decrease with a delay of one or two quarters. **However, all investments in Israel and around the world, at the beginning of 2023 are at a lower level than that observed at the beginning¹ of 2021.**

The scope of investments in the Israeli hi-tech industry in the first quarter of 2023 was only about 1.7 billion dollars ²- **the lowest quarterly figure since 2019**, and reflects a decrease in both the number of the rounds of investments in startups and the volumes of transactions. Also, the ongoing downward trend in the number of start-up companies opening their doors each year in Israel continues, from a peak of **1,386** in 2015 to **728** in 2021 and an estimate of approximately 630 companies in 2022 ³.

Figure 1 - Changes in the Total Fundraising in Israel and Selected Hubs Over Time



¹ The list of hubs incorporated in the comparison includes: Berlin, Stockholm, Paris and Switzerland in Europe; Boston, New York, San Francisco, San Diego and Denver in the USA; Toronto, Sydney, Seoul and Singapore. The international hubs' data were taken from the CrunchBase database, while the Israeli data are based on IVC publications. It would be prudent to note that a similar picture emerges when we examine the changes in the number of rounds of fund raising.

² Based upon IVC data This datum might be updated in the future

³ Based upon IVC data, see page 24 of the first quarterly report of 2023:

<https://www.ivconline.com/LinkClick.aspx?fileticket=AUCVEE9uwz8%3d&portalid=0×tamp=1680505842017>

Innovation Authority

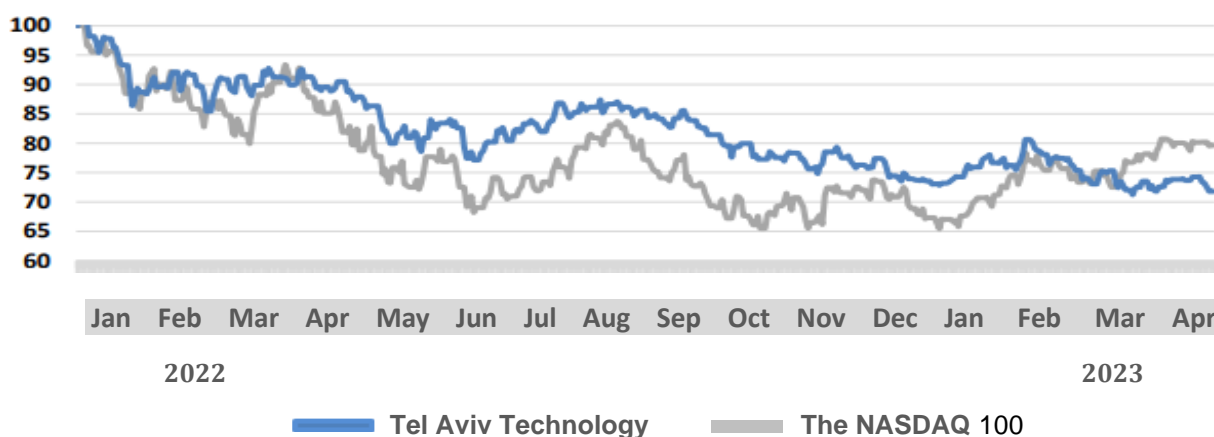
Israel Innovation Authority

Future Forecast

Several studies have determined in the past that the NASDAQ Index is seen as a good predictor of the amount of venture capital invested in Israel. Thus, for example, in a previous publication by the Ministry of Finance, it was explained that: *"The American NASDAQ Index... reflects the importance of American involvement in the Israeli hi-tech industry. In actual fact, **there is an almost perfect correlation between the growth of the NASDAQ and the total volume of investments in Israel.**"*⁴ An examination of the prices of traded Israeli technology stocks, as a predictive factor for investments in private startup companies, compared to their international counterparts, raises the concern that we are witnessing a process of decoupling, and that the coming months are expected to show a continuation of a downward trend in Israel.

As is plainly indicated in **Diagram 2**, the Tel Aviv Technology Indices (102 companies) and the NASDAQ Index (100 companies) show very different behavior during 2023 and the correlation level between them decreased from 0.93 in 2022 (a very strong correlation) to a negative correlation of -0.24 from the beginning of 2023. **In actual fact, from the beginning of 2023, the Tel Aviv Technology Index presented zero return, while the NASDAQ 100 index rose during this period by about 20%.**⁵

Figure 2 - Comparison of Tel Aviv Technology indices and NASDAQ 100 normalized values



⁴ See a weekly economic review of the Chief Economist's Division dated December 30, 2019 - https://www.gov.il/BlobFolder/dynamiccollectorresultitem/weekly_economic_review_301219/he/weekly_economic_review_weekly_economic_review_30122019.pdf

⁵ The data refer to the period between January 1, 2023 and April 22, 2023.

Innovation Authority

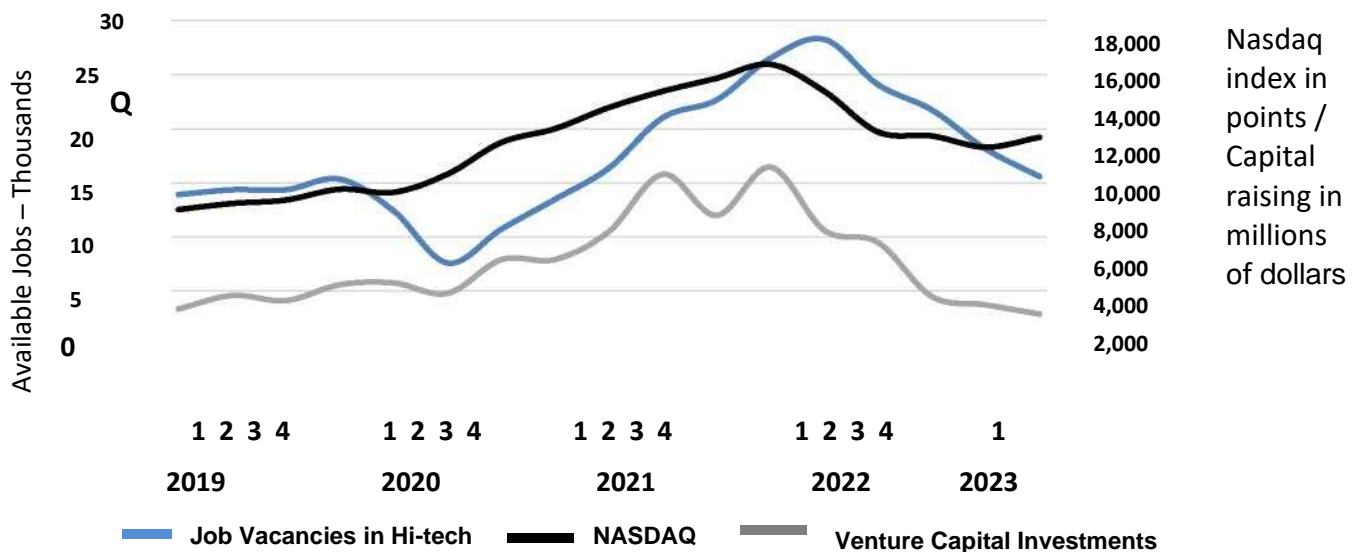
Israel Innovation Authority

Evidence of the level of correlation between the NASDAQ Index and venture capital investments can be seen in **Figure 3**. It transpires from this figure that the job vacancies in hi-tech are correlated with the performance of the NASDAQ Index and venture capital investments, with a delay of one quarter. In light of this, in a situation of "business as usual", we would expect to see a return to the growth pattern and an increase in job vacancies in Israeli hi-tech companies in the coming months.

It would be prudent to emphasize that, in light of the inherent delay in data collection, there is a need to manage risks **before they materialize** (that is, before obtaining final data that will attest to the actual occurrence of a split between the performance of the Israeli hi-tech industry and the global trends with regard to raising capital and numbers of employees) and reducing uncertainty.

The first quarter of 2023 was characterized by accelerated processes to make changes in the structure of the judicial system and in the relations between the three Authorities in the State of Israel. The anticipation of these changes resulted in the creation of a very high level of uncertainty regarding the position of the judicial authority, both in civil aspects and in business aspects, which are intertwined and, as a result, also uncertainty regarding the stability of corporate governance in Israel. The instability creates a perception of uncertainty that reduces the viability of investing in Israel at this time. In light of this state of affairs, **there is a substantial concern that Israel will disconnect in the near future from global capital trends and that its share of the global venture capital investment pie will decrease.** 6

Figure 3 - The NASDAQ Index, job vacancies in the hi-tech industry (in thousands) and venture capital investments in Israel in millions of dollars



⁶ Preliminary data on the subject were recently published in the media, see:
<https://www.themarket.com/technation/2023-04-24/tyarticle/.premium/00000187-af0a-d803-ad8f-ff5b3c110000>

Taking Decisions in a Situation of Uncertainty

As opposed to high-risk investments, uncertainty does not allow investors and managers to predict neither the scenarios, nor the probabilities of the realization thereof and therefore neither the risks embodied in them⁷. When it comes to technological entrepreneurship and long-term venture capital investments (10 to 15 years), **uncertainty similar to that which exists at this time, impacts the ability to guarantee future returns, and therefore creates great difficulty for entrepreneurs and investors to continue opening, building and investing in Israeli companies at the present time.**

One of the first decisions that a start-up company faces is determining the location of its incorporation. As a rule, there are two main incorporation alternatives for opening start-up companies by Israeli entrepreneurs:

1. Incorporation through an Israeli company, directly held by the shareholders, which also owns the intellectual property assets.
2. Incorporation through a foreign company, which owns an Israeli subsidiary that provides it with research and development services. The intellectual property assets will most likely be owned by the foreign company, although there is also the possibility of their being held by the subsidiary company.

From an analysis of the geographical locations of the incorporation of the companies opened in recent months, based on data and assessments of the leading experts, representatives and service providers vis-à-vis the start-up companies in Israel, a witness a reversal of trends in regards to the incorporation location of the start-up companies: **From a default of incorporating the startups in Israel until the beginning of 2023, to a transition to opening them as foreign startup companies which started at**

⁷ Frank Knight, *Risk, Uncertainty and Profit* (1921) 5

Innovation Authority

Israel Innovation Authority

the end of 2023 first quarter.

Up to January, about 80% of the start-up companies launched in Israel were in the corporate structure of an Israeli company, both due to tax considerations and due to the Israeli entrepreneurial-business ecosystem, which were a major factor in making the decision. During the course of February, due to the uncertainty and risks embodied therein both for the business ecosystem in Israel and for the Israeli entrepreneurs themselves, a trend began to open start-up companies through incorporation into a foreign company; A trend that intensified during March 2023.

According to our estimate, the current situation at the end of the quarter is that between 50% and 80% of the of Israeli entrepreneurs' start-up companies that were opened in March did so by incorporating through a foreign company.

Our assessment is that, in a very short time, we may face a situation where there will be an absolute majority for start-up companies that will be incorporated through a foreign company, probably in volumes of over 80%.

The change in the geographical location of the incorporation of the companies' trend is disturbing mainly due to the potential future damage to the growth of the Israeli hi-tech industry in particular and the Israeli economy in general, because the hi-tech industry is characterized both by a higher-than-average rate of employment growth in the Israeli economy and by high productivity rates of its employees. **This aspect may also be reflected in the future erosion of the Government tax base, to which the hi-tech industry, the volume of which is close to a quarter of the business output in Israel, is one of the main contributors.** The reason for this is that this trend may be the beginning of a process in which a series of individuals' decisions (of entrepreneurs, investors and companies) will continue to shape the hi-tech structure and determine, inter alia:

- The geographical location the company's intellectual property and the basis of its tax payments
- The geographical location of the CEO, the CFO and, later on, the rest of the company's management team.
- The geographical location of the financial activity of the company and its service providers and suppliers
- The geographical location of the business development, marketing and sales units

Innovation Authority

Israel Innovation Authority

- The geographical location of the companies' global operations systems, and even of its manufacturing

As the decision regarding the location of the company's incorporation is a decision that must be taken, the continuation of the uncertainty will mean that many decisions that have been delayed in anticipation for clarification of the uncertainty and for better understanding the scenarios will reach a point where a decision must be taken. At that point we are expected to see "**non-linear behavior**" - that is, we expect that changes in the nature of hi-tech companies' activity will be rapid and will encompass most of the hi-tech companies.

The assessments regarding the impact of the legal changes on the Israeli economy in general and the future of the hi-tech industry in Israel were reviewed by most of the leading economic and also gained attention from international rating agencies. The Bank of Israel, in its macroeconomic forecast from the beginning of April, noted that *"impact upon the manner that the economy in Israel is perceived, could lead to a reduction in demand for investments (in buildings, machinery, equipment and R&D) - both by Israelis and by foreign companies operating here (including in the hi-tech sector)"*. Similarly, the Budget Division at the Ministry of Finance wrote in its position paper from last March that a simulation conducted, with the assistance of the Innovation Authority, to measure the effect of the increase in the risk attributed to investments in Israel as a result of the legal changes will lead *"to a loss of GDP of 1.6% - 4.6% (from a growth of 8.2% in 2021) as well as a decrease of between 8% and 25% in the rate of hi-tech employees ."* We would like to emphasize that the above stated impact represents a 10 - 30% decrease in economic activity in the industry.

We will reiterate and emphasize that if the above stated estimates do come to fruition, then it is a complete erasure of the State's achievements in the formulation and cultivation of an extensive hi-tech industry that includes multinational Israeli growth companies that provide high-productivity employment for a wide variety of workers and a return to years of backwardness in terms of the state of the industry.

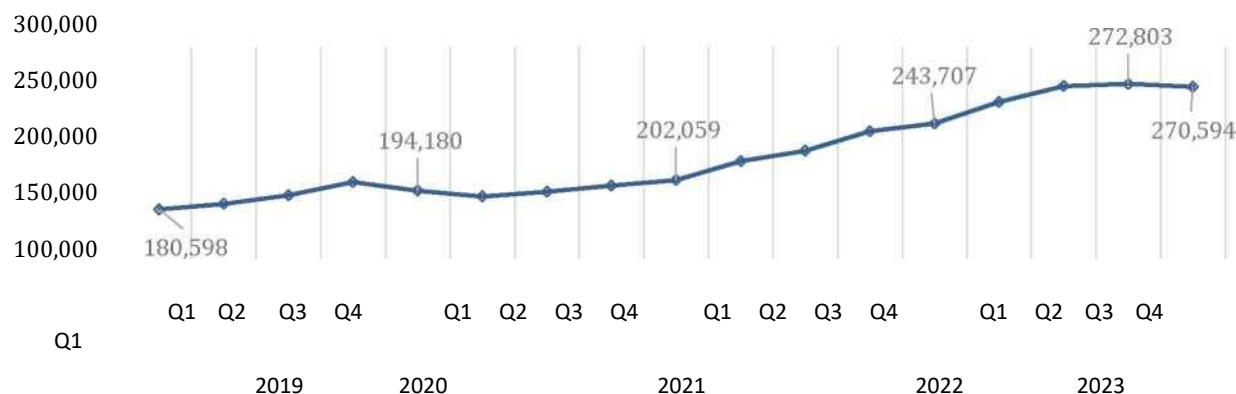
In practical terms, according to the analyses by the Central Bureau of Statistics, in **Figure 4** we see that in the first quarter of 2023, **for the first time since the Corona pandemic period, there was a decrease in the number of people employed in the hi-tech service industries**, which are the growth

Innovation Authority

Israel Innovation Authority

engine of the industry.

Figure 4 - The Number of People Employed in Hi-tech Sectors in Services, by Quarter



Summation and possible courses of action

In conclusion, the change in the trend of geographical incorporation location of companies is the first sparrow heralding the new era into which Israeli hi-tech may enter. The continued uncertainty is expected to eventually lead to a decrease in the hiring of highly paid employees in a variety of professions and fields (thereby to a further decrease in income tax collection), to a decrease in profits in Israel from future exits (both for entrepreneurs and workers in Israel and from taxes collected by the State) to a decrease in local demand for the mantle services of companies as well as to decrease in corporate tax and capital gains tax.

These trends and the individual decisions that will be made, may set Israel back many years, not only in the scope of the hi-tech product in the market and the number of people employed in it, but also to periods when investors and entrepreneurs did not consider Israel as a place to build global companies, but rather as a place to carry out research and development for multinational companies which are located and managed from headquarters in other western countries.

In order to reduce the damage that has occurred and is expected to continue in the hi-tech industry, due to a "perfect storm" combining global macroeconomic factors and an internal crisis of uncertainty in the Israeli economy and to bring the **industry's growth back to the global growth trend**, the most

Innovation Authority

Israel Innovation Authority

important thing is to remove the "extra" uncertainty from Israel through the solution of the political-legal crisis.

It would be prudent to note that it is better to remove the uncertainty sooner than later in order to reduce the damages that are already accumulating, and it is also better that the removal of the uncertainty be unequivocal in a way that will allay the concerns of investors and entrepreneurs in the medium-long term and create long-term certainty and stability.

Even in a positive scenario where the solution to the crisis will be relatively quick and bring with it certainty, it should be estimated that it will take several months to formulate and implement it. It can also be assumed that, even after the formation thereof, an additional period of time will be required to rebuild the confidence of the entrepreneurs and investors. Therefore, even in this positive scenario, the government must consider parallel courses of action that will strengthen the confidence of investors in the hi-tech industry and allow the continuation of the growth trend of Israeli technology companies owning significant assets.

- Short term - the goal of the recommendations in this term: **Minimizing damage and reducing the damage that has already occurred** until a solution to the crisis is formulated and trust is restored, including confirmation that significant assets of young technology companies will remain in Israel:
 - (1) Continuing the promotion of the law to encourage a knowledge-intensive industry, which passed the first reading in the previous Knesset and the current Government applied it continuously, in order to promote a solution to the challenges detailed in the document, increase investor confidence in government policy, and accelerate the growth of the industry.
 - (2) Updating and operating the Authority's programs in a manner that will meet the needs of the growing financing challenges of Israeli start-up companies, especially at this time.
 - (3) Examining the need to update incentives and improve regulations to encourage investments in Israeli technology companies, including increasing the weight of Israeli capital in the overall investments in these companies.
 - (4) Examining the need to update the incentives for start-up companies to register intellectual property in Israel.

Innovation Authority

Israel Innovation Authority

- Medium range - the purpose of the recommendations in this range: **restoration and acceleration of the return to the growth path, in order to reduce the gap created vis-a-vis global competition and growth.**
 - (5) Examining measures to encourage the entry of additional investors to make investments in the Israeli hi-tech sector, in addition to the continuation of what was stated in section (3) above.
 - (6) Examining methods for closing the potential gap that has been created and will be created as a result of uncertainties in the formation of Israeli technology companies.
- Medium/long term – the recommendations for this term are based on the assumption that, at this stage, we have resumed a growth trend. The purpose of the recommendations in this range are: **Continued investment in the technological innovation infrastructure, including human capital and research.**
 - (7) Continuing the implementation of the multi-year government programs for technological infrastructures (such as the national programs for artificial intelligence, quantum and bio-convergence)
 - (8) Implementation of government decisions that will increase the growth potential of the Israeli hi-tech industry, in particular the recommendations of the Perlmutter Committee report.