

ISRAEL HIGH-TECH & INVESTMENT REPORT

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From the Editor's Desk

FOREVER BLOWING BUBBLES

The American economy is experiencing the worst recession that anyone can recall. Nonetheless, the Dow Jones Industrial Average of the most important shares on the New York Stock Exchange recently reached a record high. Great Britain is also in the economic pits, yet the Financial Times Share Index is hovering near all-time peaks.

It would be unthinkable for Mr. Greenspan, Chairman of the American Federal Reserve Board, to publicly suggest that the New York Stock Exchange is "a financial bubble."

It is equally beyond belief that Mr. Lamont, chairman of the British Exchequer, would characterize the London Stock Exchange as a "financial bubble."

The reason for restraint could be that they appreciate the benefits of the stock market without being blind to its deficiencies. Whether for raising capital for business activity or for privatization purposes, the stock exchanges are accepted as part of the capitalist system.

And yet, are not all stock exchanges "financial bubbles" -- manifestations of the collective longing for and confidence in a sunny future?

eyebrows were raised here when Mr. Jacob Frenkel, the respected Governor of the Bank of Israel, called the Bourse "a financial bubble." Assuming that the governor knows what he is talking about, and that the only reason he used the word "bubble" was to hint that it was about to burst, many small investors rushed to sell. Share indices fell by more than 7% in four trading sessions. Total share values fell \$2.3 billion.

In those four hectic sessions, some speculators were nearly worn out by the back-and-forth maneuvering which started with the original panic selling and then swung back to fast-as-you-can repurchasing after Finance Minister Avraham Shohat appeared on television and announced that the government had no intention of intervening.

Indeed, it would not be unreasonable to believe that, for reasons of their own, the government and the governor in fact intended to bring the market "back to earth".

Buying on margin is common here, and liberal bank credit has led to deceptively high rates of oversubscription for new issues.

Banks, in spite of their denials, tend to exaggerate the amount of credit they extend for financing new issues and mutual funds (the latter being in many cases controlled by those same banks).

With new issues, we have heard that credit can be as high as ten times collateral holdings. In the case of mutual funds, preferred clients may obtain credit of 50% of their holdings at low rates of interest.

Margin requirements and interest rates for market investment can be changed by the Finance Ministry with the collaboration of the Bank of Israel.

If these factors were seen as being responsible for an overheated market, it should have been a relatively simple matter to change the rules of the game.

Mr. Frenkel is a respected professional, a world leader in his field. We must therefore assume that he knows what he is doing.

The question remains: Just what *is* he doing?

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The Governor, the Minister and the Judge

The following summarizes the movement of the General Share Index during the ten trading days beginning February 1 and ending February 18.

205: February 1, 1993: In what had become a typically positive atmosphere, the market reached this level after rising more than 2.5% in January

213: The Governor of the Bank of Israel calls the stock exchange a "financial bubble." Nervous small fry drop the index figure to **196** within a few sessions.

205: The market rises again in the aftermath of encouraging remarks by Finance Minister Avraham Shohat, who assured the public that the situation did not warrant government intervention.

On February 18, the market plunges 4.3%, bottoming out at **192**, in response to remarks by former Supreme Court Justice Moshe Bejski that bank-owned and manipulated mutual funds and provident funds had been responsible for the rapidly rising share prices. The public responded with above-average mutual fund redemptions of about \$107 million. The market is in correction phase and volatility is expected.

Emerging Markets, the Tel Aviv Stock Exchange and a Price Correction

For some reason, Israel's capital markets, and especially developments on the Tel Aviv Stock Exchange have yet to attract notice outside of this country. At a recent conference held in Tel Aviv on emerging markets, Israel was not mentioned among the international stock exchanges. Yet one of the invited guests pointed out that it was the world's best performer in 1992, beating even Hong Kong.

Christine Meyers, of GTI, a firm that manages \$20 billion, made a brilliant presentation in Tel Aviv and a conference guest speaker which encompassed the exchanges in Mexico, Turkey, Chile, Brazil, Portugal, Argentina, Thailand, Philippines, Malaysia, Korea, Indonesia, India, Greece and Taiwan. On a performance basis, it was pointed out that many emerging markets, in the five years ending June 1992, had average returns of 3% or more per month. Argentina, Brazil, Chile, Columbia, Mexico, Taiwan, China and Venezuela were among those in this league.

There were some common trends noted among markets closed to foreign investment. For example, once "closed" markets start to outperform the mature (and deregulated) "big boys," they frequently become prematurely "hot," as do their economies.

Economic slowdowns act as a stabilizing influence, but the local exchanges are likely to again start outperforming the giants in response to the long-term economic growth that comes with increasing industrialization.

In the framework of that analysis, Israel has already experienced the overheated economy -- in the mid 1980s -- followed by a slowdown. Already an industrialized country, it was primed for the next stage of development when a sudden wave of immigration from Eastern Europe acted as an economic detonator, triggering explosive growth of 6% in the GDP in 1992. Economists generally agree that 5-6% growth is again reachable in 1993.

In retrospect, the almost-overnight growth of valuations on the Tel Aviv Stock Exchange was, if not predictable, justifiable. Share prices of "blue chip" companies, which had been low, rose in response to the economic growth.

Perhaps not enough investment-quality shares were available, however. In the US \$300 billion in new investments has been poured into mutual funds since 1989.

Time magazine recently reported that major mutual funds have been forced to stop accepting new investments as they adjust investment policies to the oversupply of capital.

The Israeli mutual fund industry is only \$10 billion, compared with the US \$1.7 trillion, yet the problem is the same: too much money moving into a market which has not expanded in terms of new companies seeking funds.

If and when the government resumes its policy of privatization, up to \$4 billion dollars will be sought from investors.

In this happy environment of strong economic fundamentals and an oversupply of funds, investors have been enjoying quickly rising valuations.

On a return basis, Israel's markets have performed strongly over the past two years, unnoticed by the international media. Last year alone saw a nominal rise of 100%, and a 65% rise when expressed in US dollars.

A perhaps inevitable downward correction has taken place, and may not be over at the time of this writing (February 19). The share market lost 9.3%, or \$2.9 billion, over a period of 10 days ending February 18.

Unlike the long rise in the market, the correction has caught the attention of the international media, however, especially the BBC.

The underlying trend of strong economic growth is

expected to continue, so the current market volatility will stabilize. Few expect a duplication of the amazing 1992 performance, but low interest rates accompanied by low-yielding Treasury notes and government bonds will lure investors back to the share market, where yields have been so spectacular for the past two years.

First Windfarm in Israel

The first windfarm in Israel was recently commissioned at Tel Assania in the Golan Heights, 1,050 meters above sea level.

The installation was preceded by intensive measurements which indicated an average wind speed of 8.0 meters per second at the site. The farm contains 10 Floda 600 wind turbines placed in one row at approximately 70-meter intervals.

The Floda 600 is a new turbine developed by Pehr Wind Technologies of Austria, and which underwent operational testing in California. They are rated at 600 kW each, and the annual output of the farm is estimated at 16,000 MWh. The electricity produced will be sold to the Israel Electric Corporation.

The Floda 600, certified in November 1989, operates at variable speeds, unlike most turbines on the market today, which operate at a fixed speed. Variable-speed operation has several advantages:

Greater energy capture. A variable-speed turbine operates with special efficiency at low wind velocities, which usually comprise a large fraction of overall wind energy.

Reduced stress levels. The turbine is not limited to rotation at a fixed speed in high winds and gusty conditions. The load peaks are absorbed by variable pitching of the rotor blades and temporary acceleration of the rotor, reducing stress levels and fatigue.

Lower noise characteristics. Less noise is produced in light wind conditions.

The Tel Assania project is at present the largest cluster of such machines anywhere.

The farm is owned and operated by a private company – Mei Golan Wind Energy Ltd. It's birth is a reflection of government policy, which encourages the introduction of new and renewable energy technologies.

The Tel Assania farm is classified as a demonstration project – a status which allows investors a grant of up to 30% of the installation costs.

Courtesy Israel Energy News; Editors- S. Klempner, D. Shilo, Dr. J.Er-El

The best niche of all

Telecommunications continues to be one of the world's fastest-growing industrial sectors. Population growth, with the concomitant need for reliable and more efficient communication systems, has provided the impetus for ongoing technological improvements. Major telecommunications companies are expanding rapidly.

ECI Telecom is active in this environment, and continues to be Israel's premier telecommunications firm. Daniel Chertoff, former all-star financial analyst for Stanford Bernstein, is the latest addition to a long list of individuals who have critically appraised the company and given it high marks.

	1992	1991
Sales	\$160.5 mil	\$113.9 mil
Net income	\$ 38.6 mil	\$ 27.4 mil

Synchronous digital hierarchy is the standard for European telecommunications. The \$100 million a year market is ready to grow to \$1.0 billion by 1996, and ECI sales will surge from \$2 million to \$110 million in 1994, according to Mr. Chertoff. ECI is extremely well positioned in Germany, where its sales for multiplexers alone have exceeded \$70 million.

The ability to identify niches early and fill the need is a major corporate strength, says Mr. Chertoff. ECI's Digital Circuit Multiplication systems for telephones and faxes represent another area of growing sales.

Mr. Chertoff projects a 30% growth in revenue this year, and 38% in 1994.

Based on ECI's record of delivering earnings of 40% on sales, by the end of 1994 ECI's annual sales will be close to \$300 million, and earnings could reach \$100 million.

The Wall Street firm Furman and Seiz has joined the ranks of American brokers recommending the shares.

As avid ECI Telecom followers for 18 years, our contacts with the company indicate that the positive predictions for growth and profits are justifiable.

Based on estimated earnings per share of \$1.60 for 1993, the shares at a recent price of \$42 are selling at a justifiable price/earnings ratio of 26.

Rada Electronic Industries

This three-product company, with annual sales that have risen more than 400% since 1987 to

(Cont'd on page 7)

ISRAELI AND ISRAELI RELATED COMPANIES TRADED PUBLICLY IN THE US

Ticker Symbol	Company Name	Marketplace	Market Value	Sales (Projected)	Profits (Projected)	Equity	P/E	Year High	Year Low	% Change	Last Price Feb. 22, 1993
AIP	American Israeli Paper	AMEX	163	280	10.4	132	15	44 3/8	39	+2	39 1/4
AIS.a	Ampal American Israel	AMEX	158	70	12.5	118.3	12	9 7/8	5 1/4	+65	8
ARYTF	Aryt Optronics Ltd	NASDAQ	20	17.4	1	10	20	4 3/8	3 1/8	+28	3 1/2
BTGC	BioTechnology General	NASDAQ	165	6	-9.8	14	N	6 3/4	5 3/8	+10	5 5/8
BVRTF	BVR Technologies Ltd	NASDAQ	84	8.6	-0.5	6	N	17 3/8	11 1/2	+31	14 1/2
KML	Carmel Container Sys	AMEX	15	84	1.6	13	9	6 7/8	6	+2	5 3/8
CMVT	Converse Technology Inc	NASDAQ	245	27.2	2.8	16.6	87	1 27/32	1 1/2	+3	1 23/32
DSSI	Defence Software & Sys	NASDAQ/NMS	30	7.9	0.9	6.2	33	15 5/8	11 1/2	+25	14
ECILF	ECI Telecommunications	NASDAQ/NMS	1264	160.5	38.5	148	32	44 3/4	37 1/4	+10	36
EDUSF	Edusoft Ltd	NASDAQ	46	3.5	0.8	4.8	57	14	9 1/8	+26	10 1/8
ELBTF	Elbit Ltd	NASDAQ/NMS	829	441	30	202	27	54	46 1/4	+2	42 3/4
EIF	Electrochemical Indus. Frutar	AMEX	49	121	3.4	41.5	14	2 7/16	2	-3	1 7/8
ELRNF	Elron Electronic Industries	NASDAQ/NMS	382	585	14.2	149	26	26 7/8	22 1/8	+13	21
ELT	Elscint Ltd	NYSE	564	212	19.2	110	29	8 5/8	7 1/4	-2	6 1/2
ROBOF	Eshed Robotec	NASDAQ	35	8.7	1.7	12.6	20	3 15/16	3	+16	3
ETZ	Etz Lavud Ltd	AMEX	31	106	2.2	20.5	14	12 1/8	10 1/4	+6	11
ETZA	Etz Lavud	AMEX	31	106	2.2	20.5	14	10 7/8	8 3/4	+1	8 3/4
FBRX	Fibronics International Inc	NASDAQ/NMS	56	53.5	-11.2	18	N	9 1/2	6 1/2	+31	8 1/8
DDDDF	Fourth Dimension	NASDAQ	210	16.1	5.5	46	38	25 1/4	19 1/4	+3	17 1/4
TATTF	Galagraph Ltd.	NASDAQ	62	7.3	1.2	2.1	51	4 15/16	2 3/8	+69	3 11/16
GOTK	Geotek Industries Inc	NASDAQ	133	42	-1.1	17.6	N	6 3/8	4 1/4	+44	5 1/2
HCTLF	Healthcare Technologies	NASDAQ	21	3.7	-0.25	5.1	N	3 1/6	2 3/16	+26	2 1/2
IDANF	Idan Software Industries	NASDAQ	52	0.1	-0.1	1.1	N	3	1 11/16	+40	2 1/4
IISLF	IIS Intelligent Info	NASDAQ	293	43	6.3	36.4	46	78	52 1/4	+40	20 1/8
IPLLF	Interpharm Labs. Ltd	NASDAQ	255	48.4	6.3	21	40	47	28	+22	37
SISGF	ISG Software	NASDAQ	57	2.4	1.3	10.5	43	19	13 3/8	+7	12 1/4
ILDCY	Israel Land Development	NASDAQ/NMS	120	207	3.5	110	34	14 3/8	12 1/4	-6	12 3/4
ISTEF	Istec Industries & Technol	NASDAQ	9	0.8	0.6	2.2	1.5	1 5/8	1	+21	1 1/4
LANTF	Lannet Data Communications	NASDAQ/NMS	262	45.8	13.6	64.2	19	31 1/4	23 3/4	-4	19 3/4
LNOPF	Lanoptics	NASDAQ	119	6.9	3.1	24.2	38	24 1/4	18 1/2	+14	19 1/8
LAS	Laser Industries Ltd	AMEX	47	29	1.1	2.2	42	10 1/4	6 5/8	+45	7 7/8
MGCF	Magic Software Ent. Ltd	NASDAQ	70	10	1.3	10	53	19 1/2	15	+30	17
ORBKF	Orbotech Ltd	NASDAQ	237	111	-15	29	N	21 3/4	14 1/4	+43	16
OSHF	Oshap Technologies Ltd.	NASDAQ	51	38.6	-3.2	14.3	N	8 1/8	6 1/2	+10	6 3/4
IEC	PEC Israel Economic Corp	AMEX	521	63.5	34.2	271	15	30 7/8	26 3/8	-1	27
RADIF	Rada Electronic Indus.	NASDAQ/NMS	32	31	-0.6	11	N	10	6	+32	7
SPNSS	Sapiens International Corp	NASDAQ/NMS	220	29	4.5	33	48	27 1/4	20	-24	21 3/8
SCIXF	Scitex Corp. Ltd	NASDAQ/NMS	1675	529	116	610	14	44 3/8	39 1/2	-7	38 1/8
TAROF	Taro Vit Industries Ltd.	NASDAQ	84	25.7	1.9	9.6	44	9 1/4	8 1/8	+1	8 1/4
TEVIY	Teva Pharmaceutical Inds	NASDAQ/NMS	1226	374	28.7	198	42	51 1/8	42 5/8	+2	37 1/4
TAD	Tadiran Corp	NYSE	646	783	34.6	120	18	36 3/4	28 1/2	+18	28 1/8
TLDCS	Teledata Communications	NASDAQ/NMS	188	20.5	5.9	37	31	22 1/2	15 7/8	+19	17 1/8

The table above has been prepared by the Israeli High-Tech & Investment Report from data supplied by the T-A Rep. Office Oscar Gruss & Son.

The Case for Mutual Funds

The market is dominated by big institutions and the individual investor is served best by hiring professional managers rather than competing against them. This is provided by the country's mutual fund industry.

Invest in the Superior Performers

However, the question most raised is which of the more than 250 mutual funds best serve the individual investors' goals as well as offer the best return. To assure best results is to be invested in those mutual funds that have best performed in the past. By being invested in the best performers you assure yourself of best investment results. However, past performance is no guarantee of continuity. Above average performance implies superior management but if a fund falls out of the Top Performer List it may mean that there is a change in management or investment strategy. To gather this information by the individual would take much time. This is the type of information which now is available and makes it easy to obtain superior results. By following and being invested in the Best Performers you will improve results. You will also be able to better assess when to make a change. Aggressive top performers are generally replaced by other Top Performers and it is important to compare standings on a regular basis.

The Tables

Performance over the trailing twelve months

The tables presented here indicate performance of the leaders. If you are invested in these funds then you are getting the best results. They are classified by category, investment objective and investment policy. The Top Performing Funds are measured against their performance over the past twelve months, between January 30, 1992 and January 31, 1993.

The results are calculated in US dollar terms

The mutual funds are sold in shekels. However, many investors prefer to do their accounting in dollars and the results are expressed in US dollars, reflecting changes in the shekel's value in terms of the dollar.

Share Funds

Category: Diversified and Flexible Share Funds

Investment Objective: Growth

Management Policy: Manager invests in equities with mix of investments adjusted to market conditions.

Funds in Category: 42

Top Five Performers

Fund	Manager	% gain
Sivan	Amban	63.8
Emda	UMB	52.9
Hadas	UMB	45.1
Lapid	Unitrust	40.7
Avoka	Unitrust	39.1

Category: General, Maof and Specialized

Investment Objective: Aggressive Growth

Management Policy: Manager invests in the 70 leading shares making up the TASE Share index or in the 25 leading shares which make up the Maof Index

Funds in Category: 55

Top Five Performers

Fund	Manager	% gain
Meytav Shares	Meytav	54.0
Manof	Leumi Pia	52.7
Nof	Nassua	51.7
Analyst Ind	Analyst	51.6
Shesek	Ilanot Discount	51.1

(percentages represent gain in value in U.S. dollar terms for 12 months ending Jan. 31, 1993)

Bonds Linked to Cost-of-Living Index

Category: Government

Investment Objective: Conservative Growth

Management Policy: Manager invests in government bond issues.

Funds in Category: 35

Top Five Performers

Fund	Manager	% gain
Meytav C-O-L	Meytav	8.0
Epsilon C-O-L	Epsilon	6.5
Ziv	Amban	6.4
Egoz	Ilanot Discount	6.0
Leshem	Emda UMB	5.7

Category: Non-Government, General, Short Term & Corporate

Investment Objective: Conservative Growth

Management Policy: Manager invests in Non-Government Bonds Linked to Cost-of-Living Index

Funds in Category: 45

Top Five Performers

Fund	Manager	% gain
Gia	Amban	31.8
Heron-Lavie	Heron-Lavie	31.1
Pil	Central Trade	29.5
Hemda	Hemda UMB	15.2
General Corp.	Israel General	12.1

(percentages represent gain in value in U.S. dollar terms for 12 months ending Jan. 31, 1993)

Foreign Currency Funds

Category: Denominated or Linked in Foreign Currency

Investment Objective: Conservative Growth

Management Policy: Manager invests in foreign currency linked bonds

Funds in Category: 22

Top Five Performers

Fund	Manager	% gain
Meitav F/C	Meitav	13.8
Tevel	Emda UMB	13.7
Psagot FC	Psagot	13.3
Inbal PKN	Hapoalim	11.5
Zabar	Hapoalim	10.6

(percentages represent gain in value in U.S. dollar terms for 12 months ending Jan. 31, 1993)

Index Linked and Share Funds

Category: Mixed funds

Investment Objective: Growth

Management Policy: Manager invests in a combination of index-linked bonds and shares.

Funds in Category: 12

Top Five Performers

Fund	Manager	% gain
Barak	Ilanot Discount	24.7
Teena	Ilanot Discount	24.5
Brosh	Ilanot Discount	18.9
Zofit	Lahak American	17.1
Emda Inclusive	Emda UMB	17.0

(percentages represent gain in value in U.S. dollar terms for 12 months ending Jan. 31, 1993)

New issue activity on Wall Street

Software and electronics companies have taken advantage of the favorable conditions on the American capital markets. In 1992, seven high-tech companies -- including a major offering by Tadiran -- raised more than \$212 million. And there are more in the wings, including Tecnomatix and Gilat Satellite Networks. Both are in the process of registering in the United States, and are presenting initial public offerings.

approximately \$32 million in 1992, seems to be on the verge of a dynamic expansion of both sales and profitability over the next five years. Broker Shlomo Greenberg of Brenner International is bullish on the firm.

"Rada's Commercial Aviation Test Station is an incredible product," he says. British Air, Olympic and Continental Airlines have recently placed orders for CATS. One report suggests that Rada's sales will top \$100 million as early as 1997, with pretax profit exceeding \$28 million.

It is a tall order for Rada, with cumulative sales from 1988 to 1992 of only \$125 million, and total cumulative profits of \$3.7 million.

"The Commercial Aviation Test Station is a multi-purpose checking system that is ten times as cost effective as what it aims to replace," says Haim Nissenson, Rada president and CEO. Checking of airplanes functions between flights is currently done manually, using both special and general-purpose testers. The general-purpose testers are expensive and slow - weaknesses which open sales possibilities for Rada.

The main presence on the market is Aerospatiale, but "their strategy is to sell a few units which are highly expensive," points out Mr. Nissenson.

The stakes are substantial. There are approximately 8,800 commercial aircraft in the world, and Rada's potential of about 1,700 units represents a market value of \$1.1 billion.

Rada appears to have a competitive edge with its Test Program Generator, which allows for the creation of a library of test programs. These programs are highly profitable, enjoying a nearly 75% margin.

"It is now a proven product with a proven market," points out Mr. Nissenson.

As with a number of successful Israeli companies, Rada's main product was originally developed for the Israeli Air Force. Rada received its first orders from General Dynamics, a major vendor to the IAF.

Another Rada product is ACE, short for Autonomous Combat Maneuvers System. It is a breakthrough product, according to Nissenson. ACE is described as an all-aspects recorder which, among other things, can identify the exact location of a plane, including its angle.

It was developed with the assistance of a retiring chief test pilot of the Israel Air Force. It is ten times as cost effective as the currently used pod and antenna-based systems, according to Rada's CEO.

An unnamed foreign air force has placed orders for

ACE, and expectations are that others will follow suit. ACE and Rada's other data transfer equipment are expected to add an important source of turnover and profitability. Over 1,600 units have already been sold.

With management offices in suburban Tel Aviv, Rada has its main production facilities in Beit-Shean, and an American presence through its ownership of an Anaheim California subsidiary.

The American presence conforms to requirements related to US foreign military sales. Rada sells its systems worldwide, and its products have been purchased by customers in Israel, the USA, South America, Western Europe and the Far East. Rumors that Rada is seeking financing by private placement were confirmed to us by Mr. Nissenson. A British investment banking firm has undertaken to place Rada's shares with institutional investors. The connection was created by Zeev Holtzman of Giza. Giza's name is associated with the launch of Israel Funds on the New York Stock Exchange.

No public announcement has yet been made, since the transaction has not been finalized.

Rada's shares are registered on NASDAQ under the symbol RADIF. In the past year their price has experienced broad swings. In February 1992 they were changing hands at just under \$8. In the middle of the year they dipped to \$5, and recently were trading at about \$8.25.

Recent and new Investment Activity

Gilat Satellite Networks, Tecnomatix, Laser Industries, Pharmos, Rada Electronics, Assutech

The number of local companies seeking and obtaining initial or additional financing has grown in recent months. According to our contacts among leading law and accounting firms, brokers and investment bankers, these activities have reached historically high levels. Barring a major sell-off on the Tel Aviv Stock Exchange which could affect underlying investor sentiment, this process will continue for the foreseeable future.

The rush to tap the capital markets has been accelerated by government liberalization of institutional investment activity, particularly pension funds. The banks' new liberal lending policies have given the general public the ability to pour money into the stock market by investing in mutual funds.

The market's upward acceleration has allowed institutions to convert paper profits into cash and invest in new opportunities as they become available.

Financing activity is running at historically high levels.

Based on recent statistics, new issue activity and secondary offerings are coming at a rate of \$1.3 billion dollars a year. In December 1992, financing on the Tel Aviv Stock Exchange totaled \$106 million. Of 11 issues, seven were initial offerings. In January 1993, 26 issues came to market, raising \$110 million. Twenty-one of the issues were initial offerings. At this writing, there are 10-20 firms with draft prospectuses awaiting approval from the Israeli Securities Authority.

Additional public offerings

Institutional and private investors who have participated in such issues as IDB have profited from getting on board during the early stages, when IDB was sold on the open market. The "window of opportunity" is still open, spurring companies to take advantage of the favorable conditions for obtaining financing. Tambour Paints, mentioned in connection with PEC Israel Economic Corporation's registering of shares on the NYSE, was a highly successful new issue.

Private placement

Elscent Ltd., the imaging equipment manufacturer with shares listed on the New York Stock Exchange, announced on February 3 that it has signed a private placement agreement with a number of institutional investors. The placement was structured to raise \$22.2 million for Elscent by the sale of three million shares at \$7.40 a share – less than \$1.00 under its market price.

Elscent announced that as part of the process it will file a self-registration statement with the US Securities and Exchange Commission. The ordinary shares acquired will become saleable and transferable by complying with the US Securities Act of 1933.

Some companies now raising funds by means of private placements include Rada Electronic Industries (shares of which are listed on NASDAQ), and Laser Industries, with shares listed on the American Stock Exchange.

Pharmos has not announced it publicly yet, but capital market observers expect the innovative pharmaceutical company, with shares listed on NASDAQ, to raise capital soon by a private placement aimed at institutional investors.

Omer grant for cardiac research

The Omer Foundation for the Absorption of Russian Immigrants in the workplace recently approved a \$45,000 grant for the cardiology department at the

Ichilov Hospital, to be used in furthering the infrastructure of a research laboratory.

"This grant will enable the expansion of infrastructure for cardiac clinical work, and the employment of immigrant Russian scientists on existing research projects. We expect one of these projects to result in an important enterprise based on Russian immigrant know-how," stated an Omer board member.

The Omer Foundation's board includes community and business professionals. Its funding comes from international foundations and individual sources.

The Ichilov Research Center is providing employment for immigrant physicians, while also being active in clinical trials for a project based on Russian immigrant know-how.

Research into intravascular intervention, and improvements to non-invasive cardiac diagnostics are major efforts, holding the promise of better treatment for cardiac illness. Two companies are presently employing Omer's research services. One set of clinical trials will determine the applicability of novel ultrasound techniques in treating acute heart disease. Another is connected with non-invasive cardiac output measurements. The latter project is based on the expertise of four former Russian scientists. A company, NIM Ltd., has been formed around their technology.

The research programs, ongoing and in preparation, may soon employ even more Russian doctors and scientists, according to Ichilov's Dr. Hylton Miller.

Students present business plans

MBA candidates participating in the Business Initiative Course at the Faculty of Management at the Recanati School of Business Administration recently presented nine projects.

The presentations had been prepared over a period of three months, and included detailed plans for the formation of business entities. The projects covered products for the building trade, healthcare, and general industry. Analysis and projections were presented for market potential and capital requirements.

One of the presentations described an industrial laser system used to repair plastic molds. It was based on a development by Dr. Vladislav Opher, a recent immigrant from Russia. Dr. Opher developed the system at Katzrin's incubator, called the Golan Initiative Center. Several units have been ordered, according to Dr. M. Lev, who is associated with the project. One guest advocate, Dr. Shimshon Halpern, thought the laser system could benefit from a

connection with an existing industrial laser company.

Scitex flush with cash

John Georges, International Paper's CEO and chairman, recently attended a Scitex board meeting. IP is an 11% shareholder in Scitex, and Mr. Georges expressed satisfaction with its holding. No wonder. Scitex is in the enviable position of having cash reserves of \$360 million, \$200 million of which represents the IP investment. Although being pressured to do so by investors and analysts, however, Scitex management reports that it has not found suitable acquisitions.

Laser industries

Laser Industries, manufacturer of medical lasers, reported a \$1.4 million profit for 1992, as had been expected. In 1991 the company earned only \$33,000. Management explained that the surge in the past year reflects the completion of the company's recovery plan, after years of heavy losses.

BTG Approval

Biotechnology General's human growth hormone product has been approved as an "orphan drug" by the US Food and Drug Administration. It is to be used to help counteract the wasting that is typical in AIDS patients. Since there are 200,000 target users, all desperately ill, the approval was extended more quickly than usual.

ISRAELI SATCOM

Israel's evolving communications satellite industry, with a little imagination, can be compared to a multilayered network. At its interlocking center, Israel is a quilt of friends and associates, each of whom knows the others' business and – even more – has an opinion about it. The country presents a rich source of talent, untapped potential, modern marketing techniques, entrepreneurial spirit and dynamic (if occasionally undirected) activity. Underneath, Israel offers its citizens – a highly educated, aggressive, technical work force – a social safety net that provides coverage to individuals and, to some extent, private business.

Israel is a land where the handshake deal doesn't have to be backstopped by attorneys. It's a place where a million dollars still means something, where proposals can be refined on the back of a napkin, and where honor and reputation often define a relationship. In a rapidly changing regulatory and technological environment, all the elements of commercial satellite communications – manufacturing, services and ground segment – can be found in Israel.

Earth station strategies

It is in the development of a national industry centered on satellite communications ground segment products and equipment that Israel is having a direct impact on the world marketplace. Among the most visible of Israel's small, highly-focused companies is Gilat Communication Systems Ltd.

Gilat, with its headquarters in a Tel-Aviv suburb and about 60 employees, specializes in one- and two-way, very small aperture terminal (VSAT) electronics and other equipment. The company approached two million dollars in revenues last year, expects to reach \$6 million this year, and projects total sales of \$12 million in 1993.

The company is made up of three components. Gilat Communications Systems, says marketing vice-president Joshua Levenberg, is "satellite only, no analog, just digital." Its products are based on star networks. "We are not point-to-point," Levenberg emphasizes.

The second component is Gilat Cable Communications Ltd. – a company that has served as consultant to all of Israel's major cable operators. Gilat Cable provides a range of head-end services, including development and turnkey operations.

The third company, Giltek Communication Installations Ltd., went public in July. Giltek builds cable television networks, and specializes in the siting and installation of earth stations. The company provides the same services on an international basis through its subsidiary, Monitor Technologies.

Israel, explains Gilat's president Yael Gat, has no central economic planning facilities and no industrial policy per se. Instead of the government trying to prod industry in certain directions, he elaborates, companies "attempt to convince the government that they can secure and help build new markets." Those successful in representing themselves can receive substantial benefits and incentives, all designed to support industrial development without setting its course. Commercial companies are largely left to their own devices.

In this regard, securing a "signatory-like relationship" with Eutelsat on behalf of Israel is perhaps the most exciting recent domestic development for Gilat.

About a year ago, Gat recounts, Israel's minister of communications visited Gilat and said he would consider bestowing a satellite services license on the company. Gilat teamed up with the Postal Authority to establish a test network linking a number of post offices with 1.2-meter VAST antennae via the Eutelsat system. The tests were successful, and Gilat

received a license for domestic VAST and Eutesat IBS services. Now the challenge is to capitalize on its unique position in the Israeli marketplace.

"Gilat," confides Gat, "has found some interesting potential customers and a lot of strong interest, especially in the banking industry." The problem, he continues, is that few Israeli firms have the requisite number of locations to make an AST option viable. But, he adds brightly, Gilat needs only one major customer to launch the service.

The search for that major customer has pushed Gilat to develop unique and specialized products in transaction-oriented multipoint, two-way data networks for users that need to reach many locations. "We believe we are the only company in the global industry which has chosen to optimize products for large unit networks," explains Levenberg. Typical customers, he continues, might include retail chains, car rental outfits, the lodging industry, automatic teller machines, and fast food outlets.

The foundation of these relationships is, of course, the Gilat Communication System product line, which is based on two flagship products: the two-way USAT and the one-way UCARD.

Building ties that bind

Gilat's unpublicized relationship with GTE Spacenet, which Levenberg terms "our number one asset," positions the firm for future growth and product diversity. Describing the Gilat/GTE Spacenet agreement as "very complex," Levenberg says its key component is a master purchase agreement whereby GTE is committed to the purchase of thousands of Gilat's USAT two-way product, which it uses for its Skystar Advantage service line. This agreement, Levenberg estimates, could be worth as much as \$20 million over time, and includes exclusive rights for GTE in the US marketplace. American companies discussing deals include NDC in Atlanta, the US Postal Service and Mastercard.

Another big deal the company has in the United States is with G-Tech Corporation, a New England-based lottery management firm. Not only is G-Tech a significant user of Gilat products, it would like to become a hardware manufacturer in its own right. From its base in Rhode Island, G-Tech could act as a second source for terminal manufacturing, says Levenberg.

In international markets, Gilat and GTE are bound by a joint marketing agreement. Levenberg points to Gilat's arrangements with Italy's Olivetti as an example. "Olivetti is our customer; we brought Olivetti to the table." Other deals are developing, especially in Europe, Levenberg says. "We want to

have strong relationships with national firms in countries in and around Europe," he says.

Levenberg underscores Gilat's dependence on GTE Spacenet. "We did not anticipate in 1987 that VSATs would become a giant global business," he says. "We did not have the \$20 to \$40 million it would take to get involved in the market today. We simply could not have completed our VSAT program without the GTE partnership." Calling the partnership "the medicine for Gilat's structural weaknesses in marketing," Levenberg adds that next year Gilat will establish a European entity to complement its existing US office in East Brunswick, New Jersey.

The sky's the limit for dreamers with proven track records, and Levenberg is one of these. "We hope to see Gilat as a \$100 million company within a few years," he says. "We're not just putting our toes in the water."

Levenberg says the company has applied for a license to provide video services such as teleconferencing by satellite. But for the moment, offering "the lowest-cost VSAT system in the world" is enough to keep the Gilat staff busy, he contends.

Excerpted from the article "Coming of Age" by Scott Chase and Cynthia Boecke, which appeared in the Israel Space Research & Technology Information Bulletin.

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