

ISRAEL HIGH-TECH & INVESTMENT REPORT

A MONTHLY REPORT COVERING NEWS AND INVESTMENT OPPORTUNITIES

JOSEPH MORGENSTERN, PUBLISHER

March 1996 Vol.XII, Issue No. 3

ISSN 0034-6307

SHAREHOLDERS vs. STAKEHOLDERS

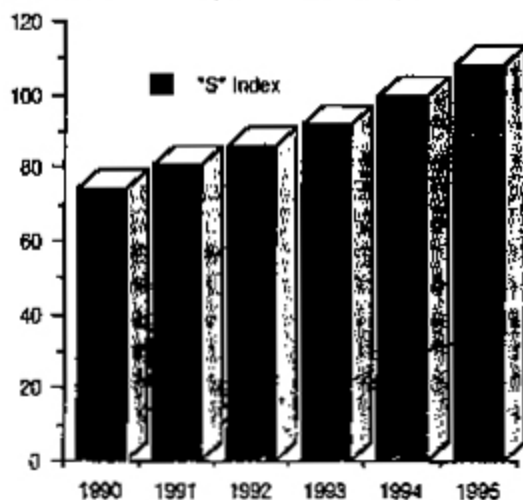
Lifetime employment, excessive pension rights and preferential relationships between supplier and buyer are customary with German and Japanese companies. Both nations are practicing "stakeholder capitalism." This approach takes into account (and rewards) the employer, the supplier and the shareholder. However, as recession grips both Germany and Japan and corporations begin to incur heavy losses, the efficacy of stakeholder capitalism is being questioned.

The German automotive and electronic giant Daimler-Benz has reported a \$4-billion loss for 1995. As part of the company's subsequent restructuring, management obtained the unions' permission to reduce existing pension rights. In Japan, some companies -- among them major banks and real estate companies -- are planning to reduce their workforces. This is a radical step in a country for which lifetime employment has been the rule. As a result, a growing number of Japanese economists and policy makers are beginning to question their traditional values. Perhaps the American and British type of shareholder capitalism, which aims to achieve the greatest return on shareholder equity, would better serve their goals.

Concurrently, Britain's Tony Blair and America's Bill Clinton are asking big business to show more responsibility towards their employees and the communities in which the businesses are located. In too many companies, productivity has risen and corporate profits are higher, but this has not resulted in higher wages or a feeling of greater job security.

Concern has been voiced that companies such as American Telephone & Telegraph, which recently announced that it would be "downsizing" its staff by 70,000, is not doing enough for the workers who are soon to be unemployed. It has been suggested that many of these workers, with their

The Rising "S" Index Poised for Further Growth
The Bank of Israel, for a number of years, has published on a monthly basis the "S" Index of Leading Indicators. The "S" Index combines a number of leading indices including: Retail Sales, Industrial Output, Import Index and the Number of Individuals Employed. The Index has been viewed as one of the indices indicating the state of the economy. The 8.43% rise in 1995 is just another confirmation that 1995 showed a continuation of the economic growth which began at the beginning of the decade and has risen yearly, without exception.



specialized training, will fail to re-enter the job market. The U.S. government is showing sensitivity to their plight by openly calling for management to give special consideration to those workers being fired. A side effect of these developments is that, even among those employees whose jobs are not immediately at risk, there is a growing feeling of insecurity.

Since the mid-1980s, shareholder capitalism has taken hold in Israel. The entrepreneurial engineer-business manager who establishes a high-tech company and, three or four years later, succeeds in an initial public offering in the U.S.A. has become the role model for a new generation. Has this always been so? Far from it. Up until the early 1980s, the Histadrut, Israel's giant federation of

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Subscription: Bulk copy and reprint information available on request.

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Labor-owned companies, and government-owned corporations such as Israel Aircraft Industries, Israel Electric Corporation, Bezeq (the national telephone company) and the Postal Service, were plagued by financial losses. Managers of these concerns practiced nepotism and favoritism, with the result that productivity was low and profits elusive. The Histadrut enforced a policy of job security unrelated to merit. Workers could not be fired or transferred short of being found guilty of an illegal act. Productivity, seniority and personal considerations did not play a role in the worker's advancement. As businesses grew shaky, the Histadrut was no longer able to maintain job security. Numerous plants were closed down and thousands of workers laid off.

A massive and painful reconstruction took place, whereby the emphasis today is on achieving profits. The movement to shareholder capitalism was accelerated by falling unemployment (from 12% to 6%), a sharp increase in the workforce due to immigration, and increases in output, export and investment.

The ailing Koor Industries has turned the corner, and many of its subsidiaries are profitable. In preparing for successful flotation of its shares on the New York Stock Exchange, Koor's managing director, Benjamin Gaon, for the first time opened the company's balance sheets for inspection. Shareholders are anticipating higher profits and share valuations commensurate with a rise in earnings.

The ever-widening circle of shareholder capitalism, now popular in Israel, ironically enough is spearheaded by the Koor Industry complex, once owned by the Histadrut. If anything is to be learned, it is that "there's a time and place for everything under the sun". In Israel's early years, there were more job-seekers than job openings. Had employment security not been assured, workers would have been averse to taking vacations, nor would they have agreed to give up a month a year for army reserve duty. Today, the situation is quite different, as unemployment is at the decade's lowest point, investments are quickening, and openings for technologically trained workers are plentiful. The director-general of the Israel Computer Association recently said the computer industry could hire an additional 100,000 trained personnel, if they were available. The new generation of managers can plan for a future, the main goal of which is the highest possible return on equity investment, but there is a growing concern for the workers who may be laid off due to technological obsolescence, loss of markets or

lack of competitiveness. Kiryat Gat's identity is being changed from a southern community relying on the textile industry to a high tech haven. Intel is about to establish a plant which will employ 1,500, and ECI Telecom has agreed to open a manufacturing plant there as well.

Medmax Raises \$34.7 Million in IPO

Medmax Ventures LP, based in Connecticut, has reported that, in early February, ESC Medical Systems Ltd., a 17.5%-owned investment, completed its initial public offering (IPO), which netted \$34.7 million to ESC. Three-and-a-half million shares were sold at \$15 per share. The shares trade on NASDAQ: ESCMF, and soared by 60% to \$24.50 per share. Commenting on the transaction, Dr. Halley Faust, Medmax Ventures' President said: "We are pleased with the progress ESC has made with the excellent level of management within the company. We look forward to continuing our involvement." Medmax Ventures was one of two investors in ESC at its founding in 1992. ESC Medical Systems, based near Haifa, produces medical devices for non-invasive treatment of varicose veins and other benign vascular lesions. The systems use a proprietary, intense, pulse-light source technology. ESC's initial product PhotoDerm® VL, has been cleared in the US by the Food & Drug Administration for treatment of benign vascular lesions.

Morgenstern's \$20 Million Investment Quadrupled

George Morgenstern, an American computer consultant, took a \$20 million chance when he acquired the know-how and facilities of a National Semiconductor plant in Israel. The company's name was changed to Tower Semiconductor, and it became a first-rate producer of chips for the computer industry. The demand for chips has grown immensely in the last few years. As a result, Tower Semiconductor sought and received approval from the government of Israel to participate in an expansion project to triple its productive space in Migdal HaEmek.

(Editor's Note: Over the past year and a half, we have mentioned and even suggested to our readers that they consider Tower shares as a possible investment vehicle. The American publication Business Week, in its end of February issue, chose to highlight a story on Tower Semiconductor. We wonder why it took them so long to realize the merits of this unusual chip company.)

Alladin Records '95 Revenues and Earnings

Alladin Knowledge Systems Ltd. (NASDAQ/NMS: ALDNF), a leading supplier of advanced solutions for software developers, has reported record revenues and earnings for the fourth quarter and for the year ended December 31, 1995.

Sales for 1995 rose by 54% to \$11.35 million, compared with \$7.39 million for 1994. Net income for the year reached \$3.38 million, an increase of 39% over net income of \$2.43 million last year. Earnings per share in 1995 were \$0.51, based on 6,676,000 shares outstanding, compared with \$0.38 per share for 1994, based on 6,457,000 shares outstanding, a gain of 34%.

The company also announced that it had exercised its option to purchase 51% of Aladdin Japan Co. Ltd., a Japanese distributor, and had released HOPE -- the Human Orientated Ltd. Programming Environment, a revolutionary object-orientated team development tool which implements new concepts in software engineering.

The new product will be on display March 14 at CeBIT 1996, to be held in Hanover, Germany, at Aladdin's booth in Hall 3, stand D45, and on March 26 at Software Development/West, in San Francisco.

Tel-Aviv Stock Exchange Perks Up

After the Mishtanim Index dipped to about the 200 level, it responded to broad demand and, entering the fourth week of the month, advanced to 210. Investors in Israeli shares followed their American counterparts as the New York Stock Exchange reached record highs.

Of special interest on the TASE were chemical company shares, including Israel Petrochemicals, Makteshim and Agam. Israeli shares on Wall Street partook in the upward drift, with ECI Telecom, Accent, Magic and LanOptics all advancing sharply.

However, many local and some foreign investors are showing a preference for Bank of Israel shekel bonds, which yield 15.5%, as well as for bank deposits which can yield 14.5% for six months. Most investors and observers are not expecting a meaningful devaluation of the shekel, and analysts point out that even should the shekel be devalued by as much as 7% during the next year, there would still be a dollar yield of more than 8%. Current interest rates could remain intact well into April 1996.

1996 and the "Wired Consumer"

As 1996 moves into high gear, more and more people around the world are joining Internet. It is expected that the Internet, and particularly the World Wide Web, will change the information technology industry more radically than did the PC and LAN 15 years ago.

The near future is very difficult to predict, but over the next 10 to 15 years, the following will take place:

- Revenues from the information technology (IT) industry will jump from

- \$500 billion to more than \$2.5 trillion.

- Corporate spending on information technology will more than double, to over 5% of revenues.

- The number of on-line users will rise to a billion or more.

- The volume of on-line commerce will reach \$150 billion by the year 2000.

From the above, it can be concluded that Internet's greatest effect will be to extend the reach of business directly into the home. The rise of the "wired consumer" will bring an enormous surge in computing and the whole IT industry. In a recent study, International Data Corporation (IDC) predicted that the World Wide Web will shift from its current "intoxication" stage to a "hangover" stage. Investors and corporations will become dissatisfied with the slow development of the on-line consumer base, and with the lower than expected financial gains promised by Internet suppliers. Many of the Fortune 500 companies which now have commercial Web sites will have closed them down. On-line subscribers will continue to increase in numbers until they, too, become disenchanted with the content of the Web and return to their TVs.

To encourage the increasingly important consumer market, the prices of personal computers, especially those with multimedia devices, will plummet to between \$800-\$1,000. Internet appliances will cost between \$300-\$500, and accessories will also drop in price. Adapters will cost \$100 or even less, and will be given away by businesses eager to entice customers to use their on-line services.

The cost of accessing Internet will drop from \$70 a month to about \$20 in 1996, and by 1998, the cost is expected to fall to the \$10-\$15 range. A good portion of the revenue of on-line services, including CompuServe, America Online, MSM and Prodigy, will come from providing access to the Web.

Though the initial euphoria may dissipate, IT suppliers should decide now on their response to

the growing consumer online presence -- what product, which services and to whom they intend to supply them -- because the "wired consumer" will become a reality in the near future, and competition will be fierce.

Those in the vanguard of the electronic marketplace will have increased their investments in such items as PC designs relevant to intended purchasers' incomes, ages and applications. They will also be investing more in application software and development tools supporting seamless connections to the Internet's interactive, multimedia interfaces.

Urgent consideration will also have been given to software licensing for network accessing and to short-term rental charges.

In the near future, corporate databases will give on-line customers direct access to information regarding their accounts and about products and services on offer. Those IT servicers who can supply the most interesting and entertaining systems, along with data security, will have the advantage.

Business investment in Web browsers, servers and development tools will concentrate on the expansion of their own employee-used systems, as well as on business-to-business systems. Many large corporations already have internal networks and individual PCs, and numerous projects were created using these technologies.

The Internet/Web's new lower-cost technologies will revive projects that were shelved as too expensive or complex (or both), and suppliers such as Oracle, Hewlett Packard and IBM, which have Internet-relevant products and intensive distribution mechanisms, will seize this opportunity.

Microsoft, acknowledged as a leader so far, will need to maintain its commitment to customers, while keeping an eye on Netscape and Sun, if it wishes to remain at the top.

Those suppliers able to create, invest and produce will succeed in the coming years. Those unable to will become prime acquisitions by companies both within and outside the IT industry, such as banks and financial institutions, already showing an interest in MECA Software, Quicken and Microsoft Money.

The future will tell whether or not these investments are wise, but without doubt, much excitement will be generated by corporate jockeying for position in this "exploding" Internet Technology race -- intent on netting countless wired consumers.

"Look-Don't-Touch" Fruit and Vegetable Tester

Today's customers insist on high-quality agricultural produce, which means that quality control is of the utmost importance. The degree of ripeness is very important in determining the probable shelf-life of a product, especially one bound for export. The old method of sorting by size, shape and color and discarding those with external defects, or of checking maturity by squeezing or opening the fruit or vegetable, is no longer acceptable.

A group of scientists at the Technion's Faculty of Agricultural Engineering has designed a fast, low-cost, piezoelectric film transducer which reliably evaluates, through non-destructive, dynamic excitation and response analysis, the internal quality of fresh produce as it passes down the sorting line.

Solar Heat In, Fossil Fuel Out

Fossil and nuclear fuels are no longer considered environmentally friendly, and legions of scientists are now searching for alternatives. At the Technion-Israel Institute of Technology, a new, cost-effective solar collector system has been designed for industrial buildings. The advantages of the system can be seen when one considers that:

- many factories and plants are in single-storey buildings with wide roofs;
- many industries operate only during daylight hours;
- large industrial complexes can enjoy large-scale economies;
- heat does not enter the building itself through the collectors;
- water temperature can be raised to 300°C.

The Technion Research and Development Foundation seeks partners and investors or licensees to develop and market the system.

Fill it up with Hydrogen!

The cars of the future may run on hydrogen, the lightest and most prevalent element in the universe. Tests carried out with experimental automobiles have already shown hydrogen to be a highly efficient and pollution-free fuel. Its production, however, is prohibitively expensive. New technology for extracting hydrogen from water with the use of solar energy is being developed at the Weizmann Institute.

Water, whose molecules consist of two hydrogen atoms and one oxygen atom, is the most readily available source of hydrogen. It is possible to break water molecules apart by heating them to very high temperatures under low pressure, but once the hydrogen and oxygen atoms cool down,

they quickly recombine.

Prof. Avraham Kogan of the Institute's Solar Research Facilities Unit has developed a new method to keep these atoms separate. It employs a special ceramic membrane collaboration with the Israel Ceramic & Silicate Institute allows mainly hydrogen atoms to pass through while leaving the oxygen on the other side. Heating for the new system is provided by solar energy. The membrane can withstand temperatures of over 2,000 C. "While operation at these temperatures shows that the method is feasible," Prof. Kogan says, "we must get it to work at even higher temperatures for it to become economically viable."

A patent on the device has been registered in the United States, Europe, Australia and Israel by the Yeda Research and Development Company, which is responsible for the commercialization of Weizmann Institute research.

Silicon Graphics In Jerusalem

The American company, Silicon Graphics, a leader in the field of Computer-aided Engineering workstations, hardware applications based on graphics and imaging, is setting up its first development station in Jerusalem. The Israeli facility will develop hardware and software for inclusion in the company's systems for biological and medical research. The company has received Approved Enterprise status from Israel's Investment Center. The initial investment is \$2.5 million. The workstation will employ 14 people and two returning Israelis.

Arms Control

A natural protein that may prove useful for designing therapies against autoimmune diseases has been identified by Weizmann Institute researchers. (In autoimmune disorders, the immune system mistakenly turns its weapons against the body's healthy tissues.)

The scientists believe that this protein, called restrictin-P, acts as a "security officer" that restricts the activity of a particular type of immune cell, namely the plasma cells that produce antibodies. The researchers think it may be possible to exploit restrictin-P's vigilance to restrain plasma cells that manufacture abnormal antibodies causing autoimmune disease. Using cancerous plasma cells as their model, Institute scientists have discovered that restrictin-P interferes with the signals emitted by the growth factor interleukin-6. Because interleukin-6 is essential for these cells' survival, interference with the growth factor's signals causes them to

die.

This study, recently reported in the Journal of Biological Chemistry, was performed by Prof. Dov Zipori of the Molecular Cell Biology Department, together with Prof. Yigal Burstein of the Organic Chemistry Department and other colleagues.

Apart from autoimmune diseases, restrictin-P may be used to fight multiple myeloma, a plasma cell cancer. It may also be capable of counteracting the dangerous side effects of treatments based on interleukin-6, which hold promise for fighting highly metastatic cancers and other clinical conditions.

A patent application covering the use of restrictin-P as an antagonist to interleukin-6 has been filed by Yeda Research and Development Co.

POBA: Plain Old Balloon Angioplasty

Coronary heart disease remains the prime killer in the Western world, causing 1.5 million myocardial infarctions and over 500,000 deaths per year -- one-third to one-half of all deaths between the ages of 35 and 64 -- in the United States alone. Although overwhelming evidence links coronary heart disease to smoking, elevated serum cholesterol, hypertension and a positive family history, modest risk-factor modification has been somewhat disappointing, failing to provide the expected benefit of reduced mortality. It appears that only marked changes in lifestyle or a lowering of serum cholesterol with multiple drugs will be necessary to halt or reverse severe coronary artery narrowing with reasonable certainty in some patients.

Percutaneous transluminal coronary angioplasty (PTCA) and thrombolytic therapy have profoundly changed the management of coronary artery disease. Formerly a diagnostic procedure, catheterization has become a therapeutic intervention, often substituting for cardiac surgery. The percentage of diagnostic cardiac catheterizations that proceed to mechanical intervention has increased from 30% to 60%. Over 400,000 procedures are done annually in the United States alone. With the average cost of a balloon angioplasty catheter at well over \$500, the economic consequences are clear.

Balloon angioplasty has developed in the space of less than two decades, from a situation in which a single manufacturer produced a relatively primitive balloon on a fixed wire, to the wide range of balloons available today. Modern balloon angioplasty uses smaller, slipperier, higher-quality balloons, making the

procedure easier, less traumatic and more successful, and resulting in fewer referrals for bypass surgery.

Human ingenuity has seen the development of a variety of sophisticated equipment, including, according to Waller (an angiologist of repute) "crackers, breakers, stretchers, drillers, scrapers, shavers, burners, welders and menders." Several of these devices are approved for clinical use by the U.S. Food and Drug Administration (FDA), but in spite of the initial enthusiasm, most do not have a lower re-stenosis rate or safety record than POBA -- plain old balloon angioplasty (a term coined by Don Baim of Beth Israel Hospital, Boston).

Directional atherectomy ("shavers") and rotational atherectomy ("drillers") have been used quite extensively, but only now are the results of randomized trials comparing these devices with POBA being published -- something which will guide the interventionist. The question will then become, not "Can it be done?" but "Should it be done?" The proportion of patients undergoing catheterization and subsequent PTCA or bypass surgery is growing annually, and is now more than 50%. This will increase with the availability of newer techniques and the refinement of existing balloon technology. Two such techniques are interventional ultrasound and directional laser therapy for clot ablation, with subsequent balloon application.

This fast-growing field allows for earlier, more effective and safer treatment of sicker, more difficult patient groups, according to Dr. Hylton Miller, Director of the Catheterization Laboratory at Tel Aviv Medical Center. *We reported on this topic in the February and May 1992 issues of the IHTIR. We further wrote that a "Star Trek or Buck Rogers" approach is beginning to be adopted by several research laboratories that are focusing on the possibilities of ultrasound.*

Ultrasonic energy applied to a clot may represent a new weapon in the treatment of the world's major killer, heart disease, and promises to do away with re-stenosis. "As soon as the last technical refinements are complete, clinical trials should begin. Ultrasound angioplasty could become an important addition to our ability to deal with clots and plaque," we quoted Dr. Miller in 1992. Nearly four years later, there is cause for optimism that ultrasound may soon become a new line of defense in cardiac cases. Clinical tests using ultrasound angioplasty are being carried out in Dr. Miller's department by cardiac surgeon Uri Rosenschein, an ultrasound pioneer in the U.S. before his return to Israel in 1992. Dr.

Rosenschein joined Dr. Miller's department at the Ichilov/Sourasky Tel Aviv Medical Center and continued his work there.

Researchers are restrained from reporting on the progress of clinical trials before they are completed and the results are published. We expect that positive results will be announced at the March International Conference of Heart Specialists. The research is being sponsored by American Angiosonics, a venture capital-backed startup. If the results are positive, it could lead to an IPO by Angiosonics.

Elscint Approves Ultrasound Sale to Elbit

At Elscint's recent Annual General Meeting of Shareholders, it was resolved that, in return for the company's sale of its ultrasound business to Elbit Ultrasound Ltd., the price will equal the net value of the transferred assets as of end 1995, plus \$850,000 and royalties on ultrasound sales over the next seven years, with a minimum of \$6 million. The total price will be nearly \$15 million. At the same meeting, a reverse stock split on a one-for-five basis was approved.

B-trieve and Magic in Strategic Alliance

B-trieve Technologies Inc. (BTI) and Magic Software Enterprises (NASDAQ: MGICF) have entered into a strategic alliance to develop and market a bundled toolkit containing BTI's database engines and Magic's development tools. BTI's products are designed to serve commercial developers by providing a unique combination of high-performance, scalability, maintenance-free operation, and mass deployment licensing. Magic's software is a highly productive, table-driven, rapid application development tool for building client-server applications. Magic features a visual programming method which is applicable to all standard computing environments, from legacy systems to LAN workgroups.

Achsaf Upbeat on Electronic Industry's Chances

Hanan Achsaf, Motorola's General Manager, was recently re-elected Chairman of the Association of Electronic Industries. Chairman Achsaf stated that satisfactory progress had been achieved by Israel's electronic industries in 1995. With 39,000 employees, the industry's sales grew by 12.5% to \$5.85 billion. The sector's exports grew by 13.5%, from \$3.7 billion to \$4.2 billion. The sector is Israel's largest exporter, accounting for 26% of all industrial exports. Electronics also include the highest added value and productivity (\$150,000 per worker), setting industry records in

Israel. A challenge for the future is the need for more technological education. Other goals for 1996 include increased R&D and marketing to penetrate new markets and attract massive investments by foreign electronic companies.

Healthcare and Organics Merger Off

Two of Israel's leading diagnostic kit manufacturers, Healthcare Technologies Ltd. (NASDAQ:HCTLF) and Organics Ltd., have terminated their negotiations according to which Healthcare would have acquired Organics Ltd. Dr. Max Hertzberg said the merger talks were called off for "business reasons."

(Editor's note: Many observers in Israel's biotechnology sector felt that the merger would have resulted in a diagnostic company with enough critical mass to expand its global sales more rapidly than would have been possible as individual units, reducing overall R&D expenditures and eliminating overlapping marketing. Some disappointment was expressed after the announcement, and Healthcare Technology shares slumped to \$1 from \$1.30.)

Bank Privatization

Recent bids to privatize Bank Hapoalim BM have not been acted upon. A Finance Ministry report stipulated that Bank Hapoalim must divest itself of its real assets prior to government sale of its holdings. (The reason for the Finance Ministry's decision was linked to its concern that a sale of the bank would include its non-banking assets, thereby allowing an outside investor to gain control of a large segment of the Israeli economy.) Estimates are that such divestiture would lower the bank's valuation by 25% from NIS 6.15 billion (\$2.1 billion) to NIS 4.7 billion (\$1.6 billion). Individuals close to the negotiations estimate that, as a result of the new valuation, a 20% holding of the share capital would be worth \$320 million, enough to establish control. Among the bidders were billionaire investor George Soros, Goldman and Sachs investment bankers, and Claridge International, for many years active in investment in Israel.

Joint R&D Activity Increases

Joint R&D activity between Israel and Europe is about to expand, thanks to agreements soon to be finalized with Belgium and Austria. Israel already has agreements for R&D cooperation with France, Spain and Holland.

Shamrock Seeks Control of Ampal

The American Shamrock Group is negotiating

with Bank Hapoalim BM for a controlling interest in Ampal. Bank Hapoalim is obliged to dispose of its controlling interest in Ampal, pursuant to the government's decision in favor of reducing the banks' non-financial holdings, and with a view to diluting concentration. In 1995, Shamrock acquired a 22% holding in Koor Ltd. Rumors have it that Koor is behind the bid, as the law does not allow it to acquire Ampal directly. If Shamrock manages to acquire Ampal, a joint management will be appointed for Ampal's Moriah Hotels holdings and those of Koor.

Frenkel: Prime Rate Hike Will Help Reach the Inflation Target

Professor Yaakov Frenkel, Governor of the Bank of Israel, says that the rise in the prime rates reflects the central bank's steadfast desire to achieve its inflation target. The central bank, according to its governor, will continue to gather and assess information, and react in a flexible manner to meet its objectives. Frenkel said there are no shortcuts in dealing with the balance of payments. "There is no other way to deal with the growing imbalance of payments other than by reducing total expenses as related to income. If we fail to achieve this, the entire credibility of Israel's economic policy will be in question."

Foreign Currency Balance as of January 1996: Up \$880 Million

In January, Israel's foreign currency balance grew rapidly. It went up by \$880 million, reaching \$9 billion, the highest level recorded since June 1995. According to the Bank of Israel, the sharp increase is explained by the government's actions when the Finance Ministry raised \$750 million in loans guaranteed by the U.S. Moreover, Israel received \$130 million, another allocation of its annual civilian aid from the U.S. government for 1995. By the end of January, Israel had received \$380 million in civilian aid, and the remaining \$820 million is to be received any day now. In the past 12 months, the foreign currency balance rose by \$1.5 billion, a 20% increase since January 1995.

Taiwan-Israel Trade Grows

The volume of commerce between Taiwan and Israel continued to grow in 1995. Taiwan's exports to Israel increased by 13.2%, while Israeli exports to Taiwan grew by 9.4%. Taiwan's Ministry of Commerce and Industry has revealed statistics indicating that, in 1995, Taiwan's exports to Israel reached a volume of \$288.3 million, compared to \$254.5 million in 1994. Israeli

export volume to Taiwan reached \$110.4 million in 1995, whereas in 1994 it came in at \$91.7 million.

Oppenheimer & Co. Replaces Oscar Gruss & Son

After 28 years of operation in Israel, the Oscar Gruss & Son representative office in Tel Aviv, owned and managed by local Israeli businessmen, is severing its ties with Oscar Gruss and opening a branch of the New York-based Oppenheimer & Co.

Israeli Economy: 1996-2000

Preparing a five-year economic forecast is a very complex operation in any national economy, but especially in Israel, affected as it is by political and demographic changes of great significance. Analyzing medium-range forecasts is particularly difficult. Objective limitations notwithstanding, an examination should be made of the economic processes now affecting the economy, since nothing less will make reasonable economic planning easier, allowing for micro- and macroeconomic measures to be introduced in all markets: goods, capital and labor. Every forecast involves some interpolation of existing trends, combined with changes expected to come or which are presently overtaking us. The following forecast is based on both objective limitations and declared policies actually being implemented.

Growth rates

The most central economic variable is the growth forecast of the national economy over the next five years, from which most macroeconomic variables, including standard of living and consumption, are actually derived. In my estimation, an examination of the labor and capital limitations of the Israeli economy indicates that, in the next five years, the business sector will increase by an average of 4% a year, assuming that the economic policy proceeds as required, with a low budgetary deficit and a policy of evenly balanced interest and exchange rates. As for employment, the Israeli economy has reached a saturation point, unemployment having declined from 12% to 6% since 1991, resulting in an expected efficient use of idle production concerns.

We do not see unemployment rate lessening by more than a further 1%, so that the rate anticipated for the next few years will be 5-7%.

The "labor" limitation also derives from the fact that population growth in the next few years will range from 2.2% to 2.5% -- moderate, relative to

the beginning of the decade, when the population grew between 2.7% and 5% a year.

Also, as regards the import of capital for financing "the import surplus," we anticipate a significant limitation. Israel is coming to the end of the guarantees era, since it is doubtful that these will be extended. The volume of U.S. aid to Israel in fixed rate (unlinked) dollars reflects a degree of real amortization, as do institutional transfers (the Jewish Agency and so forth) and personal transfers (Russian Jewry) which are expected to be lower in the future.

The only component of current flow to Israel likely to increase is that of foreign investors; but not even a big volume of foreign investments can offset the reduction in the other items. The possibility also exists of lump sum aid to facilitate a peace settlement with Syria, but in limited volume and for financing specific costs only. To sum up, manpower and capital limitations will, in my opinion, cause growth to level out at about 4% per annum, although 1996 may see a rate of about 5%, mainly because the economy is still absorbed in getting Russian Jews switched over to output- and revenue-intensive jobs, and we are still in the final stages of the guarantees.

Economic Efficiency

The second half of the decade will be characterized by continued and reinforced streamlining processes in Israel's economy. Completion of the process of exposure to imports will both ease and require an ever more intensive streamlining of the economy. All this will take place in tandem with the liberalization of various economic sectors, including the approval of new airlines, and the deregulation and exposure to domestic and foreign competition of the telecommunications, transportation and energy sectors.

The Debentures and Foreign Currency Markets

Israel is undergoing a unidirectional liberalization of its capital, foreign currency and credit markets. Even today, credit and foreign currency transactions between Israel and the rest of the world are almost completely unrestricted, but the capital market is still relatively closed.

The anticipation is that more foreign investors will enter the Israeli capital market and, at the same time, institutional and private Israeli investors will enter financial and non-bank investments abroad.

The Israeli government will operate on an

institutional basis in world markets, and will view the overseas capital market as a substitute for the local one. Both government and business will prefer to issue debentures or shares on foreign markets, if the interest they have to pay is lower than in Israel, or if the issuance prospects in other countries are more attractive.

This trend, indicated even today, will likely result in medium and long-term interest rates in Israel that will reach levels more closely resembling those of the West (meaning that interest rates will subside). Israel's capital market in the year 2000 will no longer be a drifting bubble divorced from the world, even if it will not have reached the level of western capital markets and stock exchanges, and even if the aforesaid processes are still incomplete.

Stock Exchange and Shares

A growth level of about 4% per annum, together with a process of streamlining, and the relative proliferation of foreign investors active in the capital market, give a fairly positive indication for the Israeli Stock Exchange.

Moreover, the process whereby the Israeli capital market is being opened up to foreign investors, and foreign markets to Israeli investors (including the government), will bring TASE closer to the stock exchanges of the western world. This will happen even if the process is very slow, yielding fruit only after a much longer period than five years.

Market/Equity Ratio in Israel & US 1995 : Nominal Changes in Investment Channels Q4 1995

At the same time, the indefinite pension arrangements, setting relatively high assured rates of return, will pose difficulties in the coming years for the provident funds, whose relative weight, even though they will continue to be a key factor in the capital market, will register a steady, gradual decline.

By the year 2000, the Israeli capital market will have been targeted for a great deal of complex new legislation, placing it on an established and well organized footing, but also heightening uncertainty and prolonging the relatively "difficult" transition periods. Altogether, the capital market is in for fairly good times, with high levels of competition, and accelerated streamlining and institutionalization.

Summary

Over the next few years, the State of Israel will continue the positive trends of the beginning of

the decade. By the year 2000, we will be very close to a European standard of living and will approach the productivity level of the western world. There will still be plenty of thorny problems to perplex us, some of which, indeed, have yet to be resolved in the west.

This year, the first of the relevant five-year period, is still under the influence of the preceding era. It is to be hoped that politicians, like the professionals in the economic field, will "allow" the second half of the decade to come to fruition and as openly.

It is of course always possible for some unanticipated change of direction to occur. History shows that significant directional changes are usually unforeseen (the fall of the eastern bloc, immigration from the former Soviet Union, the Gulf War), and sometimes affect all global trends.

The above discussion and ideas are based on projections put forward by Yoram Gabai, Chairman of the Board "Pe'ilim" of the Bank Hapoalim Group.

CATIC and Azimuth Open GPS Joint Venture in China

CATIC, China's largest import-export concern, and Azimuth, a leading Israeli GPS systems house, have agreed to open a joint venture to manufacture and distribute GPS products in China. Sun Lipeng, President of CATIC Beijing, signed the relevant papers during his visit to Israel.

The companies will invest \$800,000 in the new facility at Beijing, which will handle marketing, manufacturing and distribution. Azimuth targets the civilian, commercial, government and military market for land, marine and helicopter applications.

Zoran-Dolby Alliance Opens Home for New Generation of High-quality Audio

The ongoing alliance between Zoran, the Israeli semiconductor manufacturer, and Dolby Systems, the leader in high-quality audio, reached a new peak at the Consumer Electronics Show in Las Vegas earlier this month. After less than a year since Zoran introduced its AC-3 five-way audio chip, a dozen systems using the new technology were introduced to the market. Shown by leading brands such as Pioneer, Kenwood, Yamaha, Denon and EAD, most of the new systems were based on Zoran's ZR38500 Dolby AC-3 Decoder chip. This is the first and only DSP solution in the market for AC-3 processing.

GoodWheel Develops Tire Deflation Monitor For Trucks and Buses

Tire problems, the most common malfunction in vehicles, are a major cost to transportation concerns. The main reason for the expense is the absence of any prior warning of an imminent problem, especially in long vehicles and trailers. At high loads, tire explosions are common occurrences. These problems are also a major cause of accidents. Tires, revolving rapidly over often hostile terrain, are not easy places on which to position probes, and many failed attempts have been made to embed sensors measuring tire pressure on valves. The new system developed by GoodWheel provides an alternative measurement which detects the changes in the axle's inclination toward the surface. The sensor uses a robust mechanical design able to withstand harsh road conditions. The electronic signals picked up by these sensors are processed, analyzed and displayed on a monitor in the cabin. The driver can obtain deflated tire warnings after as little as a 15% loss of pressure. At these levels, he can continue traveling until he reaches a repair shop. If a sudden loss of pressure is encountered, he gets an immediate alert, before there is damage to the tire or loss of control. He can then park his truck safely and change tires. According to Raffi Edri, general manager of GoodWheel, the system could well pay for itself after a year of operation. Its estimated cost is \$1,600 per truck, and a towed trailer can be fitted for \$2,000. Edri added that future enhancements to the system will include warnings of overweight and unbalanced loads.

Magnet Program Adds Broadband On-line Group

A new industry group led by Gilat will focus on the development of broadband on-line multimedia services, to enable future distributed multimedia services via satellite, cable and telecommunications networks. The technologies targeted for development by the consortium will focus on browsing and editing tools, content processing, service development, and information retrieval over broadband channels.

The consortium will operate under the Magnet program, launched by the Chief Scientist's Office of the Ministry of Industry and Trade (Tamas). This program now provides funding and guidance to ten consortia, with diversified activities such as satellite communications, Gallium-Arsenide technologies, digital and broadband communications, hybrid seeds, programmable

yields (of agricultural products), artificial algae harvesting, and DNA markers. Another venture currently being formed under Magnet focuses on laser technology.

Hebrew University To Develop A Multimedia Judaica Collection

The Hebrew University Center for Jewish Art will develop a multimedia archive of its Judaica collection. This treasure trove of knowledge, considered the largest in the world, will include tens of thousands of listed items, documents and records currently filed and stored in Jerusalem. The multimedia resource will be edited and compiled with Enigma's Insight to Information multimedia archiving tools. The product is planned for CD-ROM, and will eventually be provided to the on-line. Enigma has already provided equipment for large-scale information systems to the United Nations, Scientific American, Fuji, Xerox and many others.

Accent Expands Distribution Channels

Expanding its distribution channels in multilingual word processing and web (Internet) publishing, Accent Software recently announced several agreements with companies in the U.S., Canada and Germany. Accent will bundle its multilingual web browser product "Internet with an Accent" with OnRamp, a major U.S. access provider. Accent expects this agreement to yield over \$ 2.4 million in the next year. Accent also concluded a distribution agreement with the Canadian company Sidus, an integrator and manufacturer of UNIX and PC-based systems, which has committed itself to sales of \$400,000. In Germany, the results of a major VAR were announced. Stadt, a major reseller of Compaq computers, reports that it sold 120,000 computers in 1995, all bundled with the Israeli word processor "Accent Express."

High-tech Dental Technology Incubator

DeneX, a new company located in Jerusalem, has developed a unique hardware and software multimedia unit featuring a virtual workbench and doll-like model. The company will also market a multimedia CD-ROM covering a wide range of dental problems.

DeneX has begun negotiations for joint ventures to market the simulator for clinical applications, and expects its acceptance by the marketplace within two years. The simulator allows dental students to learn dentistry in a scientific manner, and at their own pace. The company plans to target dental schools worldwide.