
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 20-F
ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2004 COMMISSION FILE NO. 0-24790

TOWER SEMICONDUCTOR LTD.

(Exact name of registrant as specified in its charter and translation of registrant's name into English)

Israel

(Jurisdiction of incorporation or organization)

Ramat Gavriel Industrial Park
P.O. Box 619, Migdal Haemek, Israel 23105
(Address of principal executive offices)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

None

Securities registered or to be registered pursuant to Section 12(g) of the Act:

Ordinary Shares, par value New Israeli Shekels 1.00 per share

(Title of Class)

Warrants

(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report:

65,699,796 Ordinary Shares

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days:

Yes No

Indicate by check mark which financial statement item the registrant has elected to follow:

Item 17 Item 18

This annual report on Form 20-F includes certain “forward-looking” statements within the meaning of Section 21E of the Securities Exchange Act of 1934. The use of the words “projects,” “expects,” “may,” “plans” or “intends,” or words of similar import, identifies a statement as “forward-looking.” There can be no assurance, however, that actual results will not differ materially from our expectations or projections. Factors that could cause actual results to differ from our expectations or projections include the risks and uncertainties relating to our business described in this annual report at “Item 3. Risk Factors.”

We have prepared our consolidated financial statements in United States dollars and in accordance with accounting principles generally accepted in Israel (“Israeli GAAP”). Israeli GAAP varies in certain significant respects from accounting principles generally accepted in the United States of America (“U.S. GAAP”). The effect of the application of the latter on the financial position and results of operations as of the dates and for the years presented herein is summarized in Note 19 to our consolidated financial statements included herein. All references herein to “dollars” or “\$” are to United States dollars, and all references to “Shekels” or “NIS” are to New Israeli Shekels.

Manufacturing or production capacity refers to installed equipment capacity in our facilities and is a function of the process technology and product mix being manufactured because certain processes require more processing steps than others. All information herein with respect to the wafer capacity of our manufacturing facilities is based upon our estimate of the effectiveness of the manufacturing equipment and processes in use or expected to be in use during a period and the actual or expected process technology mix for such period. Unless otherwise specifically stated, all references herein to “wafers” in the context of capacity in Fab 1 are to 150-mm wafers and in Fab 2 are to 200-mm wafers.

References to “Israel Corporation” or “Israel Corp.” include its wholly-owned subsidiary Israel Corporation Technologies (ICTech) Ltd. (“ICTech”).

microFLASH® is a registered trademark of Tower and N-ROM™ is a trademark of Saifun Semiconductor Ltd.

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PART I.

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

Selected Financial Data

This section presents our selected historical financial data. You should read carefully the financial statements included in this annual report, including the notes to the financial statements. The selected data in this section is not intended to replace the financial statements.

We derived the selected statement of operations data and other financial data for the years ended December 31, 2004, 2003 and 2002, and selected balance sheet data as of December 31, 2004 and 2003 from the audited financial statements in this annual report. Those financial statements were prepared in accordance with Israeli GAAP and audited by Brightman Almagor & Co., a member firm of Deloitte Touche Tohmatsu, independent registered public accounting firm. We derived the selected statement of operations data and other financial data for the years ended December 31, 2001 and 2000 and the selected balance sheet data as of December 31, 2002, 2001 and 2000 from our audited financial statements that are not included in this annual report, which were prepared in accordance with Israeli GAAP. Statements of operations and other financial data in accordance with US GAAP would not have materially differed from respective data in accordance with Israeli GAAP. Other than as indicated below, balance sheet data in accordance with US GAAP would not have materially differed from the respective data in accordance with Israeli GAAP. Our management believes that the financial statements contain all adjustments needed to present fairly the information included therein.

	Year Ended December 31,				
	2004	2003	2002	2001	2000
Statement of Operations Data:	(in thousands, except share data and per share data)				
Sales	\$126,055	\$61,368	\$51,801	\$52,372	\$104,775
Cost of sales	228,410	122,395	67,022	76,733	88,787
Gross profit (loss).....	(102,355)	(61,027)	(15,221)	(24,361)	15,988
Research and development.....	17,053	20,709	17,031	9,556	8,965
Marketing, general and administrative	21,297	22,615	17,091	14,489	11,428
Operating loss.....	(140,705)	(104,351)	(49,343)	(48,406)	(4,405)
Financing income (expense), net.....	(29,745)	(9,826)	(2,104)	1,465	1,394
Other income (expense), net.....	32,682	(84)	45	8,419	(478)
Loss before income tax expense.	(137,768)	(114,261)	(51,402)	(38,522)	(3,489)
Income tax expense.....	—	—	—	—	(500)
Loss for the year.....	<u>\$(137,768)</u>	<u>\$(114,261)</u>	<u>\$(51,402)</u>	<u>\$(38,522)</u>	<u>\$(3,989)</u>
Basic loss per ordinary share.....	<u>\$(2.13)</u>	<u>\$(2.40)</u>	<u>\$(1.63)</u>	<u>\$(1.92)</u>	<u>\$(0.26)</u>
Other Financial Data:					
Depreciation and amortization.....	\$121,067	\$54,611	\$18,821	\$21,721	\$25,917
Capital expenditures (accrual basis) before Investment Center grants.....	172,617	164,187	243,431	364,347	79,060

	As of December 31,				
	2004	2003	2002	2001	2000
Selected Balance Sheet Data in Accordance with Israeli GAAP:	(in thousands, except share data)				
Cash and cash equivalents, including short-term deposits and designated cash	\$81,457	\$56,490	\$69,695	\$33,202	\$18,707
Working capital.....	63,591	50,492	21,927	(16,335)	28,635
Total assets.....	847,508	788,335	716,261	472,054	179,298
Long-term debt from banks.	497,000	431,000	253,000	115,000	12,064
Convertible debentures	26,651	25,783	24,121	—	—
Long-term liabilities in respect of customers' advances.....	64,428	46,347	47,246	17,910	—
Shareholders' equity.....	167,980	229,457	298,334	252,805	134,648
Weighted average number of ordinary shares outstanding (*)	64,717	47,608	31,523	20,020	13,676
Number of shares issued and outstanding (*)	65,700	51,696	43,436	24,997	12,263

(*) Net of 1,300,000 Ordinary Shares held by our Company as of each date presented.

	As of December 31,				
	2004	2003	2002	2001	2000
	(in thousands)				
Reconciliation to US GAAP:					
Total Assets					
According to Israel GAAP.....	\$847,508	\$788,335	\$716,261	\$472,054	\$179,298
The effect of:					
Presentation of long-term liabilities in respect of employees.....	16,350	14,607	12,368	10,334	7,952
Hedging activities.....	(4,619)	(5,947)	(5,727)	(4,564)	—
Sale of securities.....	(196)	(196)	(196)	—	—
Presentation of securities.....	—	—	—	—	12,563
According to US GAAP.....	<u>\$859,043</u>	<u>\$796,799</u>	<u>\$722,706</u>	<u>\$477,824</u>	<u>\$199,813</u>
Shareholders' Equity					
According to Israel GAAP.....	\$167,980	\$229,457	\$298,334	\$252,805	\$134,648
The effect of:					
Hedging activities.....	(7,025)	(15,867)	(17,807)	(8,169)	—
Proceeds on account of share capital	—	(16,428)	—	—	—
Sale of securities (*).....	2,363	2,363	2,363	—	—
Presentation of securities.....	—	—	—	—	12,563
According to US GAAP.....	<u>\$163,318</u>	<u>\$199,525</u>	<u>\$282,890</u>	<u>\$244,636</u>	<u>\$147,211</u>

(*) The allocation of a portion of the total proceeds from the sale of securities issued in January 2002.

Risk Factors

This annual report and statements that we may make from time to time may contain forward-looking information. There can be no assurance that actual results will not differ materially from our expectations, statements or projections. Factors that could cause actual results to differ from our expectations, statements or projections include the risks and uncertainties relating to our business described below.

Risks Affecting Our Business

If the terms reflected in the letter of intent that we signed with our banks in May 2005 are not effectuated, or if do we not find alternative financing, we may not be able to maintain our operations.

In May 2005, we signed a letter of intent with our banks which provides for financing in the amount of up to \$30 million, subject to, among other things, a similar amount being raised by us from investors. To date, certain of our equity investors and wafer partners have informed us of their willingness to invest \$23.5 million towards such funding by investors. The letter of intent is subject to the execution of a definitive amendment to our credit facility agreement, which we are currently negotiating. If a definitive amendment to our credit facility agreement is not executed and consummated or if we are unable to raise the funds from investors as stipulated in the letter of intent, or cannot find alternative financing for said amounts, we do not expect to have adequate liquidity for our short-term activities and liabilities during the second half of 2005 and may have to cease our operations. If we raise the funds contemplated by the letter of intent, we will still need to raise additional funds in order to finance our activities and liabilities in 2006, at least until we achieve positive cash flow from our operations.

If we do not complete the equipment installation, technology transfer and ramp-up of production in Fab 2, our business will be materially adversely affected.

Fab 2 production capacity at the end of December 2004 was 14,600 200-mm wafers per month and we currently expect to have production capacity of 15,400 wafers per month by the end of 2005. Depending on the process technology and product mix, we estimate that Fab 2 will be able to achieve capacity levels of up to 36,000 wafers per month. We have not completed the acquisition, installation, equipping and financing necessary in order for production at our Fab 2 facility to reach such levels. Our determination as to the timing to increase Fab 2's production levels is dependent on prevailing and forecasted market conditions and our ability to fund these increases. We need to complete the qualification process of the 0.13-micron technology transferred from Freescale Semiconductor, Inc. (formerly Motorola, Inc.) to Fab 2 and develop new process technologies for Fab 2 in order to suit our customers' needs. The ramp-up of Fab 2 is a substantial and complex project. We have and may in the future experience difficulties that are customary in the installation, functionality and operation of equipment during manufacturing. Failures or delays in obtaining and installing the necessary equipment, technology and other resources may delay the completion of the ramp-up of Fab 2 and add to its cost, which would have a material adverse effect on our business and results of operations.

If we do not have sufficient funds to complete Fab 2, our business will be materially adversely affected.

Fab 2's cost was estimated to be approximately \$1.5 billion, including costs of construction, equipment, installation, libraries, intellectual property, technology transfers and other related ramp-up and pre-operation costs. However, the actual total cost of Fab 2 may exceed our estimates. If we cannot successfully raise sufficient funding to complete the ramp-up and to fund other related costs, we will be required to scale back our equipment purchases and capacity forecasts, and, as a result, we will not fully utilize the substantial investment made in constructing Fab 2, which will adversely affect our financial results.

If we do not meet conditions to receive the Israeli government grants and tax benefits approved for Fab 2, we may be required to seek alternative financing sources.

In connection with Fab 2, we received approval for grants and tax benefits from the Investment Center of the government of Israel under its Approved Enterprise Program. Under the terms of the approval, we are eligible to receive grants of 20% of up to \$1.25 billion invested in Fab 2 plant and equipment, or an aggregate of up to \$250 million. As of December 31, 2004, we had received \$150.6 million in grants from the Investment Center. To be eligible to receive grants, we are required to invest minimum amounts on an annual basis. We notified the Investment Center of our reduced rate of annual investments and in July 2004, we received approval of our revised investment schedule from the Investment Center. In addition, we are required to complete our Fab 2 investments by the end of 2005, which we do not currently expect to satisfy. Israeli law limits the ability of the Investment Center to extend this time limitation, unless approved through an expansion plan. We have been holding discussions with the Investment Center to achieve satisfactory arrangements to approve a new expansion program to commence on January 1, 2006. In April 2005, at the Investment Center's request, we submitted a revised business plan to the Investment Center for the period commencing on January 1, 2006. There can be no assurance that we will obtain the Investment Center's approval for the new expansion program. Any failure by us to meet the conditions of our grants may result in the cancellation of all or a portion of our grants and tax benefits and in the Investment Center requiring us to repay all or a portion of grants already received. If this were to happen, we would be required to seek alternative financing sources to refund the grants we received and complete the ramp-up of Fab 2, which would have an adverse effect on our operations.

If our future operations do not increase or if we fail to raise additional funding, we may be unable to repay our debt on a timely basis.

We may from time to time lack liquidity to finance our ramp up of Fab 2. Accordingly, there is no assurance that our future operations will increase or that we will succeed in raising the additional funding required for the completion of the ramp up of Fab 2. As a result, we may be unable to repay on time or repay at all our short-term and long-term debt consisting mainly of trade accounts payable, bank debt and convertible debentures. If we foresee that we will be unable to secure additional financing, we may have to revise our anticipated operations, or even cease our operations. We cannot assure you we will be successful at negotiating price reductions and arrangements to slow down or postpone payments to our suppliers and service providers when we have liquidity problems and any postponement of payments may delay our ramp-up of Fab 2 and therefore harm our financial results.

The cyclical nature of the semiconductor industry and the resulting periodic overcapacity have adversely affected our business in the past, resulting in a history of losses; downward price pressure may seriously harm our business.

The semiconductor industry has historically been highly cyclical. Historically, companies in the semiconductor industry have expanded aggressively during periods of increased demand. This expansion has frequently resulted in overcapacity and excess inventories, leading to rapid erosion of average sale prices. We expect this pattern to repeat itself in the future. The overcapacity and downward price pressures characteristic of a prolonged downturn in the semiconductor market may not allow us to operate at a profit, even at full utilization, and could seriously harm our financial results and business.

We have a history of operating losses and expect to operate at a loss for the foreseeable future; our facilities must operate at high utilization rates for us to be profitable.

We have operated at a loss for the last number of years and expect to operate at a loss for the foreseeable future. Because fixed costs represent a substantial portion of the operating costs of semiconductor manufacturing operations, we must operate our facilities at high utilization rates for us to be profitable. We began construction of Fab 2 in 2001 and Fab 2 operations began in 2003. Our losses since 2003 are due primarily to significant depreciation and amortization expenses related mainly to Fab 2, as well as financing and operating expenses which have not yet been offset by a sufficient increase in the level of our sales.

Our operating results fluctuate from quarter to quarter which makes it difficult to predict our future performance.

Our revenues, expenses and operating results have varied significantly in the past and may fluctuate significantly from quarter to quarter in the future due to a number of factors, many of which are beyond our control. These factors include, among others:

- The cyclical nature of both the semiconductor industry and the markets served by our customers;
- Changes in the economic conditions of geographical regions where our customers and their markets are located;
- Shifts by integrated device manufacturers (IDMs) and customers between internal and outsourced production;
- Inventory and supply chain management of our customers;
- The loss of a key customer, postponement of an order from a key customer, failure of a key customer to pay accounts receivables in a timely manner or the financial condition of our customers;
- The occurrence of accounts receivables write-offs;
- The rescheduling or cancellation of large orders or planned capital expenditures;

- Our ability to satisfy our customers' demand of quality and timely production;
- The timing and volume of orders relative to our available production capacity;
- Our ability to obtain raw materials and equipment on a timely and cost-effective basis;
- Environmental events or industrial accidents such as fires or explosions;
- Our susceptibility to intellectual property rights disputes;
- Our ability to continue with existing and to enter into new partnerships and technology and supply alliances on mutually beneficial terms;
- Actual capital expenditures exceeding planned capital expenditures;
- Currency and interest rate fluctuations that may not be adequately hedged;
- Technological changes and short product life cycles; and
- Timing for designing and the qualification of new products.

Due to the factors noted above and other risks discussed in this section, many of which are beyond our control, you should not rely on quarter to quarter comparisons to predict our future performance. Unfavorable changes in any of the above factors may seriously harm our company.

The lack of a significant backlog resulting from our customers not placing purchase orders far in advance makes it difficult for us to forecast our revenues in future periods.

Our customers generally do not place purchase orders far in advance, partly due to the cyclical nature of the semiconductor industry. As a result, we do not typically operate with any significant backlog. The lack of a significant backlog makes it difficult for us to forecast our revenues in future periods. Moreover, since our expense levels are based in part on our expectations of future revenues, we may be unable to adjust costs in a timely manner to compensate for revenue shortfalls. We expect that in the future our revenues in any quarter will continue to be substantially dependent upon purchase orders received in that quarter and in the immediately preceding quarter. We cannot assure you that any of our customers will continue to place orders with us in the future at the same levels as in prior periods.

Our sales cycles may be long and, as a result, orders received may not meet our expectations which may adversely affect our operating results.

Our sales cycles, which measure the time between our first contact with a customer and the first shipment of product orders to the customer, vary substantially and may last as long as two years or more, particularly for new technologies. In addition, even after we make initial shipments of prototype products, it may take several more months to reach full production of the product. As a result of these long sales cycles, we may be required to invest substantial time and

incur significant expenses in advance of the receipt of any product order and related revenue. If orders ultimately received differ from our expectations with respect to the product, volume, price or other items, our operating results may be adversely affected.

Demand for our foundry services is dependant on the demand in our customers' end markets.

We are ramping-up Fab 2 based on our expectations of customer demand and our financial resources. In order for demand for our wafer fabrication services to increase, the markets for the end products using these services must develop and expand. For example, the success of our imaging process technologies will depend, in part, on the growth of markets for certain image sensor product applications. Because our services may be used in many new applications, it is difficult to forecast demand. If demand is lower than expected, we may have excess capacity, which may adversely affect our financial results. If demand is higher than expected, we may be unable to fill all of the orders we receive, which may result in the loss of customers and revenues.

If we do not attract additional customers, our business may be adversely affected.

For the year ended December 31, 2004, approximately 63% of our business was generated by five significant customers which contributed between 6% to 24% of our revenues. We expect to continue to receive a significant portion of our revenue from a limited number of customers in 2005. Loss or cancellation of business from, or decreases in, the sales volume or sales prices to these customers, could seriously harm our financial results and business. Since the sales cycle for our services typically exceeds one year, if our customers order significantly fewer wafers than forecasted, we will have excess capacity that we may not be able to sell in a short period of time, resulting in lower utilization of our facilities. We may have to reduce prices in order to try to sell the excess capacity. In addition to the revenue loss that could result from unused capacity or lower sales prices, we might have difficulty adjusting our costs to reflect the lower revenues, which could harm our financial results.

We depend on a small number of products for a significant portion of our revenues.

From time to time, a significant portion of our revenue is generated from a small number of very high volume products that are shipped to volatile consumer-oriented markets. The volume of orders of such products may adversely change or demand for such products may be abruptly discontinued. We expect that in the foreseeable future we will continue to be dependent upon a relatively limited number of products for a significant portion of our revenue due to the nature of our business. We cannot assure you that revenue generated from these products, individually or in the aggregate, will reach or exceed historical levels in any future period. A decrease in the price of, or demand for, any of these products could negatively impact our financial results.

If we do not receive orders from our wafer partners we may have excess capacity.

We have committed a portion of our Fab 2 capacity for future orders. During the ramp-up of Fab 2, our capacity commitments to our wafer partners are limited to approximately 50% of our Fab 2 capacity. Parties to whom we have committed capacity are generally not obligated to utilize or pay for all or any portion of their allocated capacity, and generally provide and confirm their orders to us less than one month before the production start date. If these parties do not

place orders with us, and if we are unable to fill such unutilized capacity, our financial results may be adversely affected.

If we do not maintain and develop our technology processes and services, we will lose customers and may not be able to attract new ones.

The semiconductor market is characterized by rapid change, including the following:

- rapid technological developments;
- evolving industry standards;
- changes in customer requirements;
- frequent new product introductions and enhancements; and
- short product life cycles with declining prices as products mature.

In order to maintain our current customer base and attract new customers, we must continue to advance our manufacturing process technologies. We are developing and introducing to production specialized process technologies. Our ability to achieve and maintain profitable operations depends on the successful development and introduction to production of these processes, which we may not achieve.

If we do not compete effectively, we will lose business to our competitors.

The semiconductor foundry industry is highly competitive. We compete with more than ten independent dedicated foundries, the majority of which are located in Asia-Pacific, including new foundries based in Taiwan, China, Korea and Malaysia, and with over 20 integrated semiconductor and end-product manufacturers that allocate a portion of their manufacturing capacity to foundry operations. The foundries with which we compete benefit from their close proximity to other companies involved in the design and manufacture of integrated circuits, or ICs. Many of our competitors may have one or more of the following competitive advantages over us:

- greater manufacturing capacity;
- multiple and more advanced manufacturing facilities;
- more advanced technological capabilities;
- a more diverse and established customer base;
- greater financial, marketing, distribution and other resources;
- a better cost structure; and/or
- better operational performance in cycle time and yields.

We have a large amount of debt which could have significant negative consequences.

We have a large amount of long-term debt, which could have significant negative consequences. As of December 31, 2004, we had \$497 million of bank debt and \$26.7 million of debt in connection with our issuance of convertible debentures in January 2002. Our current and future indebtedness could have significant negative consequences, including:

- requiring the dedication of a substantial portion of our expected cash flow from operations to service our indebtedness;
- increasing our vulnerability to general adverse economic and industry conditions;
- limiting our ability to obtain additional financing;
- limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we compete;
- placing us at a competitive disadvantage to less leveraged competitors and competitors that have better access to capital resources; and
- affecting our ability to make interest payments and other required debt service on our indebtedness.

If we fail to satisfy the covenants set forth in our amended credit facility, our banks will be able to call our loans.

Our credit facility, under which we have drawn down \$497 million as of December 31, 2004, requires that we comply with certain financial, capital raising and production milestone covenants. Currently, we estimate that we may not comply with certain of the financial ratios and covenants for the third quarter of 2005 and thereafter. In connection with the negotiations for a definitive amendment to our credit facility agreement with our banks following the signing of a letter of intent in May 2005, we have submitted to our banks an updated Fab 2 working-plan based on prevailing and forecasted market conditions and requested our banks to amend the financial ratios and covenants in order to align them with the updated Fab 2 working-plan. Should we fail to comply with our covenants, and our banks do not waive our non-compliance, they may require us to immediately repay all loans made by them to us, plus penalties, and the banks would be entitled to exercise the remedies available to them under the credit facility, including enforcement of their lien against all our assets. This would have a material adverse effect on our company.

Israeli banking laws may impose restrictions on the total debt that we may borrow from our banks.

Pursuant to an amendment to a directive published by the Israel Supervisor of Banks, effective March 31, 2004, we may be deemed part of a group of borrowers comprised of the Ofer Brothers Group, The Israel Corp., and other companies which are also included in such group of borrowers pursuant to the directive, including companies under the control or deemed control of these entities. The directive provides for limits on amounts that banks may lend to borrowers or groups of borrowers. Should our banks exceed these limitations, they may limit our ability to

borrow other money in the future and may require us to return some or all of our outstanding borrowings (which were \$497 million as of December 31, 2004), which may have a material adverse effect on our business, financial condition and results of operations.

If we experience difficulty in achieving acceptable device yields, product performance and delivery times as a result of manufacturing problems, our business will be adversely affected.

The process technology for the manufacture of semiconductor wafers is highly complex, requires advanced and costly equipment and is constantly being modified in an effort to improve device yields, product performance and delivery times. Microscopic impurities such as dust and other contaminants, difficulties in the production process, defects in the key materials and tools used to manufacture a wafer and other factors can cause wafers to be rejected or individual semiconductors on specific wafers to be non-functional. We have from time to time experienced production difficulties that have caused delivery delays or returns and lower than expected device yields. We may also experience difficulty achieving acceptable device yields, product performance and product delivery times in the future as a result of manufacturing problems. Any of these problems could seriously harm our financial results and business.

If we are unable to purchase equipment and raw materials, we may not be able to manufacture our products in a timely fashion, which may result in a loss of existing and potential new customers.

To complete the ramp-up of our Fab 2 facility and to maintain the quality of production in our facilities, we must procure new equipment. In periods of high market demand, the lead times from order to delivery of manufacturing equipment could be as long as 12 to 18 months. In addition, our manufacturing processes use many raw materials, including silicon wafers, chemicals, gases and various metals, and require large amounts of fresh water and electricity. Manufacturing equipment and raw materials generally are available from several suppliers. In many instances, however, we purchase equipment and raw materials from a single source. Shortages in supplies of manufacturing equipment and raw materials could occur due to an interruption of supply or increased industry demand. Any such shortages could result in production delays that could have a material adverse effect on our business and financial condition.

Our exposure to currency exchange and interest rate fluctuations may increase our cost of operations.

Almost all of our cash generated from operations and from our financing and investing activities is denominated in U.S. dollars and New Israeli Shekels, or NIS. Our expenses and costs are denominated in NIS, U.S. dollars, Japanese Yen and Euros. We are, therefore, exposed to the risk of currency exchange rate fluctuations.

Our borrowings under our Fab 2 credit facility provide for interest based on a floating LIBOR rate, thereby exposing us to interest rate fluctuations. Furthermore, if our banks incur increased costs in financing our Fab 2 credit facility due to changes in law or the unavailability of foreign currency, our banks may exercise their right to increase the interest rate on our Fab 2 credit facility as provided for in the credit facility.

We regularly engage in various hedging strategies to reduce our exposure to some, but not all, of these risks and intend to continue to do so in the future. However, despite any such hedging activity, we are likely to remain exposed to interest rate and exchange rate fluctuations, which may increase the cost of our operating and financing activities.

We depend on intellectual property rights of third parties and failure to maintain or acquire licenses could harm our business.

We depend on third party intellectual property in order for us to provide foundry and design services to our clients. If problems or delays arise with respect to the timely development, quality and provision of such intellectual property to us, our customers' design and production could be delayed, resulting in underutilization of our capacity. If any of our third party vendors go out of business, liquidate, merge with, or are acquired by, another company that discontinues the vendor's previous line of business, or if we fail to maintain or acquire licenses to such intellectual property for any other reason, our business may be adversely affected. In addition, license fees and royalties payable under these agreements may impact our margins and operating results.

Failure to comply with the intellectual property rights of third parties or defend our intellectual property rights could harm our business.

Our ability to compete successfully depends on our ability to operate without infringing on the proprietary rights of others and defend our intellectual property rights. Because of the complexity of the technologies used and the multitude of patents, copyrights and other overlapping intellectual property rights, it is often difficult for semiconductor companies to determine infringement. Therefore, the semiconductor industry is characterized by frequent litigation regarding patent, trade secret and other intellectual property rights. There are no lawsuits currently pending against us regarding the infringement of patents or intellectual property rights of others nor are we currently plaintiff in any such action against other parties. However, we have been subject to such claims in the past, all of which have been resolved through license agreements, the terms of which have not had a material effect on our business. One of these agreements expires at the end of 2005, and if we are unable to extend or renew it on similar terms, we may have to agree to less favorable terms or consider other alternatives, including designing around certain processes.

Because of the nature of the industry, we may continue to be a party to infringement claims in the future. In the event any third party were to assert infringement claims against us or our customers, we may have to consider alternatives including, but not limited to:

- negotiating cross-license agreements;
- seeking to acquire licenses to the allegedly infringed patents, which may not be available on commercially reasonable terms, if at all;
- discontinuing use of certain process technologies, architectures, or designs, which could cause us to stop manufacturing certain integrated circuits if we were unable to design around the allegedly infringed patents;

- fighting the matter in court and paying substantial monetary damages in the event we lose; or
- seeking to develop non-infringing technologies, which may not be feasible.

Any one or several of these developments could place substantial financial and administrative burdens on us and hinder our business. Litigation, which could result in substantial costs to us and diversion of our resources, may also be necessary to enforce our patents or other intellectual property rights or to defend us or our customers against claimed infringement of the rights of others. If we fail to obtain certain licenses and if litigation relating to alleged patent infringement or other intellectual property matters occurs, it could prevent us from manufacturing particular products or applying particular technologies, which could reduce our opportunities to generate revenues.

As of May 31, 2005, we held 53 patents worldwide. We intend to continue to file patent applications when appropriate. The process of seeking patent protection may take a long time and be expensive. We cannot assure you that patents will be issued from pending or future applications or that, if patents are issued, they will not be challenged, invalidated or circumvented or that the rights granted under the patents will provide us with meaningful protection or any commercial advantage. In addition, we cannot assure you that other countries in which we market our services will protect our intellectual property rights to the same extent as the United States. Further, we cannot assure you that we will at all times enforce our patents or other intellectual property rights or that courts will uphold our intellectual property rights, or enforce the contractual arrangements that we have entered into to protect our proprietary technology, which could reduce our opportunities to generate revenues.

We could be seriously harmed by failure to comply with environmental regulations.

Our business is subject to a variety of laws and governmental regulations in Israel relating to the use, discharge and disposal of toxic or otherwise hazardous materials used in our production processes. If we fail to use, discharge or dispose of hazardous materials appropriately, or if applicable environmental laws or regulations change in the future, we could be subject to substantial liability or could be required to suspend or adversely modify our manufacturing operations.

We are subject to the risk of loss due to fire because the materials we use in our manufacturing processes are highly flammable.

We use highly flammable materials such as silane and hydrogen in our manufacturing processes and are therefore subject to the risk of loss arising from fires. The risk of fire associated with these materials cannot be completely eliminated. We maintain insurance policies to reduce losses caused by fire, including business interruption insurance. If any of our fabs were to be damaged or cease operations as a result of a fire, or if our insurance proves to be inadequate, it would reduce our manufacturing capacity and revenues.

Possible product returns could harm our business.

Products manufactured by us may be returned within specified periods if they are defective or otherwise fail to meet customers' prior agreed upon specifications. Product returns in excess of established provisions may have an adverse effect on our business and financial condition.

We may be required to repay grants to the Israel Investment Center that we received in connection with Fab 1.

We received grants and tax benefits for Fab 1 under the government of Israel Approved Enterprise program. As of December 31, 2001, we completed our investments under our Fab 1 program and are no longer entitled to any further investment grants for future capital investments in Fab 1. We have agreed that if we do not achieve Fab 1 revenues of \$90 million for 2003 and \$100 million for 2004 and maintain at Fab 1 at least 600 employees for 2003 and 625 employees for 2004, subject to prevailing market conditions, we will, if demanded by the Investment Center, be required to repay the Investment Center up to approximately \$2.5 million. Since our actual level of Fab 1 revenues and employees for 2003 and 2004 were not in compliance with the above mentioned levels, we may be required to repay the Investment Center up to approximately \$2.5 million.

We are subject to risks related to our international operations.

In 2003 and 2004, we made substantial sales to customers located in Asia-Pacific and in Europe. Because of our international operations, we are vulnerable to the following risks:

- we price our products primarily in U.S. Dollars; if the Euro, Yen or other currencies weaken relative to the U.S. Dollar, our products may be relatively more expensive in these regions, which could result in a decrease in our sales;
- the need to comply with foreign government regulation;
- general geopolitical risks such as political and economic instability, potential hostilities and changes in diplomatic and trade relationships;
- natural disasters affecting the countries in which we conduct our business, such as the earthquakes experienced in China, Japan and Taiwan;
- reduced sales to our customers or interruption in our manufacturing processes in Asia Pacific that may arise from regional issues in Asia;
- imposition of regulatory requirements, tariffs, import and export restrictions and other barriers and restrictions;
- adverse tax rules and regulations;
- weak protection of our intellectual property rights; and
- delays in product shipments due to local customs restrictions.

If our new executive officers are unable to fully transition into their new positions, our company may be adversely affected.

We have made several changes to our senior management team in recent months. If our new executive officers are unable to fully transition into their new positions, or if such transition is significantly delayed, our company may be adversely affected.

Our business could suffer if we are unable to retain and recruit qualified personnel.

We depend on the continued services of our executive officer, senior managers and skilled technical and other personnel. Our business could suffer if we lose the services of some of these personnel and we cannot find and adequately integrate replacement personnel into our operations in a timely manner. We seek to recruit highly qualified personnel and there is intense competition for the services of these personnel in the semiconductor industry. Competition for personnel may increase significantly in the future as new fabless semiconductor companies as well as new semiconductor manufacturing facilities are established. We may need to review employee compensation competitiveness with the purpose of retaining our existing officers and employees and attracting and retaining additional personnel.

Risks Related to Our Ordinary Shares

Our stock price may be volatile in the future.

The stock market, in general, has experienced extreme volatility that often has been unrelated to the operating performance of particular companies. In particular, the stock prices for many companies in the semiconductor industry have experienced wide fluctuations, which have often been unrelated to the operating performance of such companies. These broad market and industry fluctuations may adversely affect the market price of our ordinary shares, regardless of our actual operating performance.

In addition, it is possible that in some future periods our operating results may be below the expectations of public market analysts and investors. In this event, the price of our securities may under perform or fall.

Issuance of additional shares pursuant to our Fab 2 financing arrangements and options granted to our Fab 2 building contractor, employees and directors may dilute the interest of our shareholders.

In connection with Fab 2, we have issued as of December 31, 2004, 53,405,787 ordinary shares to our wafer and equity partners and other shareholders. In January 2001, we issued warrants to our banks exercisable into 400,000 ordinary shares with an exercise price of \$6.20. In December 2003, we issued to our banks and to one of our shareholders warrants exercisable into 896,596 and 58,906 ordinary shares, respectively, with an exercise price of \$6.17. Up to approximately 8.5 million additional ordinary shares may be issued upon the conversion of our outstanding convertible debentures and upon exercise of warrants held by some of our shareholders, our debenture holders and our Fab 2 contractor.

In addition, as of May 31, 2005, we had outstanding employee and directors options to purchase up to 11.5 million shares at a weighted average exercise price of \$4.74 (excluding

options to purchase up to 1,325,724 shares approved by our board to be granted to our CEO but which are subject to approval of our shareholders), of which 2.9 million options have an exercise price below \$1.71. We have also entered into a number of agreements which may result in our issuing large numbers of shares, particularly if we complete the transactions contemplated by these agreements at a time when our share price is low. For example, we have agreed that our wafer partners may elect to convert, on a quarterly basis through 2006, wafer credits we have issued them into our ordinary shares rather than use these credits to reduce their cash payments for wafers manufactured in Fab 2, based on the average trading price of our ordinary shares during the 15 consecutive trading days preceding the relevant quarter. As of May 31, 2005, we have issued 703,554 of our ordinary shares to Sandisk upon conversion of \$1.5 million of wafer credits. See "Item 5 – Liquidity and Capital Resources – "Fab 2 Agreements".

In May 2005, we signed a letter of intent with our banks which provides for financing in the amount of up to \$30 million, subject to, among other things, a similar amount being raised by us from investors. To date, certain of our equity investors and wafer partners have informed us of their willingness to invest \$23.5 million towards such funding by investors. In addition, we may seek to raise additional funds from other sources. The investments to be made towards the funding by investors required by our banks, or from other sources, may be for shares or for securities convertible into shares, which would dilute the holdings of our current shareholders.

Market sales of large amounts of our shares eligible for future sale may lower the price of our ordinary shares.

Of our 66,286,187 outstanding ordinary shares as of May 31, 2005, 24,589,143 are freely tradable and held by non-affiliates, and an additional 108,951 shares held by non-affiliates are eligible for sale pursuant to Rule 144 under the Securities Act of 1933, subject to the time, volume and manner of sale limitations of Rule 144. In addition, certain of our affiliates (Israel Corp., SanDisk, Alliance Semiconductor, and Macronix International) hold 41,588,093 of our shares, of which 4,086,037 are registered for resale and are therefore freely tradable and 6,810,462 are currently eligible for sale subject to the time, volume and manner of sale limitations of Rule 144. An additional 691,594 shares held by SanDisk will become eligible for sale subject to the time, volume and manner of sale limitations of Rule 144 during 2005 and 2006. Shares held by these affiliates are subject to the share transfer restrictions set forth in the shareholders agreement to which they are a party and which remain in effect through January 2008. The sales of large amounts of our ordinary shares (or the potential for those sales even if they do not actually occur) may depress the market price of our ordinary shares. This could also impair our ability to raise capital through the sale of our equity securities.

Our principal shareholders own a controlling interest in us and will be able to exercise their interest in ways which may be adverse to your interests.

Our wafer partners and Israel Corp. own approximately 65% of our outstanding shares. Under our articles of association, two shareholders holding together 33% of our outstanding shares constitute a quorum for conducting a shareholders meeting. Our wafer partners and Israel Corp. could constitute a quorum for purposes of conducting a shareholders meeting. While we have always solicited proxies from our shareholders prior to our shareholders meetings, we would have a sufficient quorum with two large shareholders even if none of our other shareholders were to participate in our shareholders meetings. If only two large shareholders

were to participate in one of our shareholders meetings, these shareholders would determine the outcome of our shareholders meeting without the benefit of the participation of our other shareholders. In addition, even if our other shareholders were to participate in our shareholders meetings in person or by proxy, our wafer partners and The Israel Corporation effectively control our company and may exercise this control in a manner adverse to the interests of our other shareholders.

Risks Related to Our Operations in Israel

Instability in Israel may harm our business.

All of our manufacturing facilities and our corporate and some of our sales offices are located in Israel. Accordingly, political, economic and military conditions in Israel may directly affect our business.

Since the establishment of the State of Israel in 1948, a number of armed conflicts have taken place between Israel and its Arab neighbors, as well as incidents of civil unrest. In addition, Israel and companies doing business with Israel have, in the past, been the subject of an economic boycott. Although Israel has entered into various agreements with Egypt, Jordan and the Palestinian Authority, Israel has been subject to civil unrest and terrorist activity, with varying levels of severity. Parties with whom we do business have sometimes declined to travel to Israel during periods of heightened unrest or tension, forcing us to make alternative arrangements where necessary. In addition, the political and security situation in Israel may result in parties with whom we have agreements claiming that they are not obligated to perform their commitments under those agreements pursuant to force majeure provisions. We do not believe that the political and security situation has had any material impact on our business to date; however, we can give no assurance that security and political conditions will have no such effect in the future. Any hostilities involving Israel or the interruption or curtailment of trade between Israel and its present trading partners could adversely affect our operations and could make it more difficult for us to raise capital. Furthermore, our manufacturing facilities are located exclusively in Israel, which is currently experiencing civil unrest, terrorist activity and military action. We could experience serious disruption of our manufacturing if acts associated with this conflict result in any serious damage to our manufacturing facilities. In addition, our business interruption insurance may not adequately compensate us for losses that may occur, and any losses or damages incurred by us could have a material adverse effect on our business.

Our operations may be negatively affected by the obligations of our personnel to perform military service.

In the event of severe unrest or other conflict, individuals could be required to serve in the military for extended periods of time. In response to increases in terrorist activity, there have been periods of significant call-ups of military reservists, and it is possible that there will be additional call-ups in the future. A large part of male Israeli citizens, including our employees, are subject to compulsory military reserve service through middle age. Our operations could be disrupted by the absence for a significant period of time of one or more of our key employees or a significant number of our other employees due to military service. Such disruption could harm our operations.

Our operations may be affected by negative economic conditions in Israel.

In recent years, Israel has experienced periods of recession in economic activity, resulting in low growth rates and growing unemployment. Our operations could be adversely affected if the economic conditions in Israel deteriorate. In addition, due to significant economic measures proposed by the Israeli Government, there have been several general strikes and work stoppages in 2003 and 2004, affecting all banks, airports and ports. These strikes have had an adverse effect on the Israeli economy and on business, including our ability to deliver products to our customers or to receive raw materials from our suppliers in a timely manner. From time to time, the Israeli trade unions threaten strikes or work-stoppages, which may, if carried out, have a material adverse effect on the Israeli economy and our business.

If the exemption allowing us to operate our manufacturing facilities seven days a week is not renewed, our business will be adversely affected.

We operate our manufacturing facilities seven days a week pursuant to an exemption from the law that requires businesses in Israel to be closed from sundown on Friday through sundown on Saturday. This exemption expires on December 31, 2005. In addition, a significant increase in the number of employees permitted to work under this exemption will be needed as we ramp-up production at Fab 2. If the exemption is not renewed and we are forced to close any or all of the facilities for this period each week, our financial results and business will be harmed.

If we are considered to be a passive foreign investment company, either presently or in the future, U.S. Holders will be subject to adverse U.S. tax consequences.

We will be a passive foreign investment company, or PFIC, if 75% or more of our gross income in a taxable year, including our pro rata share of the gross income of any company, U.S. or foreign, in which we are considered to own, directly or indirectly, 25% or more of the shares by value, is passive income. Alternatively, we will be considered to be a PFIC if at least 50% of our assets in a taxable year, averaged over the year and ordinarily determined based on fair market value, including our pro rata share of the assets of any company in which we are considered to own, directly or indirectly, 25% or more of the shares by value, are held for the production of, or produce, passive income. If we were to be a PFIC, and a U.S. Holder does not make an election to treat us as a “qualified electing fund,” or QEF, or a “mark to market” election, “excess distributions” to a U.S. Holder, and any gain recognized by a U.S. Holder on a disposition of our ordinary shares, would be taxed in an unfavorable way. Among other consequences, our dividends would be taxed at the regular rates applicable to ordinary income, rather than the 15% maximum rate applicable to certain dividends received by an individual from a qualified foreign corporation. The tests for determining PFIC status are applied annually and it is difficult to make accurate predictions of future income and assets, which are relevant to the determination of PFIC status. In addition, under the applicable statutory and regulatory provisions, it is unclear whether we would be permitted to use a gross loss from sales (sales less cost of goods sold) to offset our passive income in the calculation of gross income. In light of the uncertainties described above, we have not obtained an opinion of counsel with respect to our PFIC status and no assurance can be given that we will not be a PFIC in any year. If we determine that we have become a PFIC, we will then notify our U.S. Holders and provide them with the information necessary to comply with the QEF rules. If the IRS determines that we are a PFIC for a year with respect to which we have determined that we were not a PFIC, however, it

might be too late for a U.S. Holder to make a timely QEF election, unless the U.S. Holder qualifies under the applicable Treasury regulations to make a retroactive (late) election. U.S. Holders who hold ordinary shares during a period when we are a PFIC will be subject to the foregoing rules, even if we cease to be a PFIC in subsequent years, subject to exceptions for U.S. Holders who made a timely QEF or mark-to-market election.

It may be difficult to enforce a U.S. judgment against us, our officers and directors and some of the experts named in this annual report or to assert U.S. securities law claims in Israel.

We are incorporated in Israel. Most of our executive officers and directors and our Israeli accountants and attorneys are nonresidents of the United States, and a majority of our assets and the assets of these persons are located outside the United States. Therefore, it may be difficult to enforce a judgment obtained in the United States, against us or any of these persons, in U.S. or Israeli courts based on the civil liability provisions of the U.S. Federal securities laws. Additionally, it may be difficult for you to enforce civil liabilities under U.S. Federal securities laws in original actions instituted in Israel.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

We are a pure-play independent wafer foundry dedicated to the manufacture of semiconductors and strategically focused on embedded non-volatile memory, complementary metal oxide semiconductor (“CMOS”) image sensor, mixed signal and radio frequency CMOS (RFCMOS) technologies. Typically, pure-play foundries do not offer products of their own, but focus on producing integrated circuits, or ICs, based on the design specifications of their customers. We manufacture semiconductors using advanced production processes for our customers primarily based on third party designs and our own proprietary designs. We currently offer the manufacture of ICs with geometries ranging from 1.0 to 0.13-micron, while 0.13-micron is expected to be ready for production by the end of 2005. We also provide complementary technical services and design support. ICs manufactured by us are incorporated into a wide range of products in diverse markets, including consumer electronics, personal computers, communications, automotive, industrial and medical device products.

We are focused on establishing leading market share in high-growth specialized markets by providing our customers with high-value wafer foundry services. Our historical focus has been standard digital CMOS process technology, which is the most widely used method of producing ICs. We currently are focused on the emerging opportunities surrounding CMOS image sensors, embedded flash, mixed-signal and RFCMOS technologies. In addition, we have commenced development of a new technology that targets the radio frequency identification, or RFID, Tags market. Through our expertise and experience gained over a decade of operations, we differentiate ourselves in these areas by creating a high level of value for our clients through innovative technological processes, design support and services, competitive manufacturing indices, such as cycle times and yields, and dedicated customer service.

Our company was founded in 1993, when we acquired National Semiconductor’s 150-mm wafer fabrication facility, or Fab 1, and commenced operations as an independent foundry with a production capacity of approximately 5,000 wafers per month. Since then, we have significantly modernized our Fab 1 facility and equipment, which has improved our process geometries to

range from 1.0-micron to 0.35-micron and enhanced our process technologies to include CMOS image sensors, embedded flash and mixed-signal technologies. We have also expanded our capacity in Fab 1 to approximately 16,000 wafers per month to meet additional customer demand.

In May 2004, we signed a foundry agreement with Siliconix incorporated, a subsidiary of Vishay Intertechnology, Inc., for the long-term production of semiconductors. Pursuant to the terms of this agreement, Siliconix will place with us orders valued at approximately \$200 million for the purchase of semiconductor wafers to be manufactured at our Fab 1 facility over a seven to ten year period. Siliconix has advanced to us \$20 million to be used for the purchase of additional equipment required to satisfy Siliconix's orders, with this amount credited towards the purchase price of the wafers.

We have completed the construction of the building and infrastructure and are in the course of ramping our second manufacturing facility, or Fab 2. Fab 2 is designed to operate in geometries of 0.18-micron and below, using advanced materials and advanced CMOS technology licensed from Freescale and Toshiba and other technologies that we might acquire or develop independently or with development partners. Production capacity at the end of December 2004 was 14,600 wafers per month. We currently expect to have production capacity of 15,400 wafers per month by the end of 2005, of which approximately 800 wafers per month are expected to be in 0.13-micron.

Our capital expenditures net of Investment Center grants for 2004, 2003 and 2002 of \$142 million, \$137 million and \$206 million, respectively, were made principally in connection with the construction of, and purchase of equipment and technology for, Fab 2.

Our legal and commercial name is Tower Semiconductor Ltd. We were incorporated under the laws of Israel. Our manufacturing facilities and executive offices are located in the Ramat Gavriel Industrial Park, Post Office Box 619, Migdal Haemek, 23105 Israel, and our telephone number is 972-4-650-6611. Our worldwide web site is located at <http://www.towersemi.com>. Information on our web site is not incorporated by reference in this annual report.

B. Business Overview

Industry Overview

Semiconductor devices are responsible for the rapid growth of the electronics industry over the past fifty years. They are critical components in a variety of applications, from computers, consumer electronics and communications, to industrial, military, medical and automotive applications. The semiconductor industry is characterized by rapid changes in technology, frequently resulting in the obsolescence of recently introduced products. As performance has increased and size and cost have decreased, the use of semiconductors and the number of their applications have grown significantly.

Historically, the semiconductor industry was composed primarily of companies that designed and manufactured ICs in their own fabrication facilities. These companies, such as Intel and IBM, are known as integrated device manufacturers, or IDMs. In the mid-1980s, fabless IC companies, which focused on IC design and used external manufacturing capacity, began to emerge. Fabless companies initially outsourced production to IDMs, which filled this need

through their excess capacity. As the semiconductor industry continued to grow, increasing competition forced fabless companies and IDMs to seek reliable and dedicated sources of IC manufacturing services. This need has been met by the development of independent companies, known as foundries, that focus primarily on providing IC manufacturing services to semiconductor suppliers. Foundry services are now used by nearly every major semiconductor company in the world, including IDMs as part of a dual-source, risk-diversification and cost effectiveness strategy.

Semiconductor suppliers face increasing demands for new products that provide higher performance, greater functionality and smaller form factors at lower prices, which require increasingly complex ICs. In addition to the increased complexity of designs, there has also been a dramatic increase in the number of applications for semiconductors. To compete successfully, semiconductor suppliers must also minimize the time it takes to bring a product to market. As a result, fabless companies and IDMs are focusing more on their core competencies — design and intellectual property — and outsourcing manufacturing to foundries.

The consumer sector is expanding worldwide with new applications and multi-functional devices, including those that incorporate CMOS image sensors, embedded flash and mixed-signal ICs. Increasingly, emerging applications, such as camera-equipped cell phones, digital still cameras and flat panel displays, are enabled by ICs manufactured using advanced process technologies.

The enormous costs associated with modern fabs, combined with the increasing demand for complex ICs, has created an expanding market for outsourced manufacturing offered by foundries. Foundries can cost-effectively supply the technologies involved in manufacturing advanced ICs to even the smallest fabless companies by creating economies of scale through pooling the demand of numerous customers. In addition, customers whose IC designs require process technologies other than standard digital CMOS have created a market for independent foundries that focus on providing specialized process technologies, such as CMOS image sensors, embedded flash and mixed-signal technologies. Foundries also offer competitive customer service through design, testing, and information services, often at a level previously found only at an IDM's internal facilities.

These trends have led to the rapid growth in demand in recent years for advanced semiconductor manufacturing services provided by independent foundries.

Specialized Technologies

We provide wafer fabrication services and technologies to fabless IC companies and IDMs and enable smooth integration of the semiconductor design and manufacturing processes. By doing so, we enable our customers to bring high-performance, highly integrated ICs to market rapidly and cost effectively. We believe that our technological strengths and emphasis on customer service have allowed us to develop unique positions in large, high-growth specialized markets for CMOS image sensors, embedded flash memory, mixed signal and RF CMOS ICs. We serve as a sole source or alternative provider of foundry services.

We believe that we are a trusted, customer-oriented service provider that has built a solid reputation in the foundry industry over the last twelve years. We have built strong relationships

with customers, who continue to use our services, even as their demands evolve to smaller form factors and new applications. Our consistent focus on providing high-quality, value added services, including engineering and design support, has allowed us to attract customers for both our Fab 1 and Fab 2 facilities who seek to work with a proven provider of foundry services. As a result, we have a high customer retention rate, which is illustrated by our long-standing relationships with leading semiconductor suppliers such as Motorola (now Freescale).

We derived approximately 39% of our revenues for the year ended December 31, 2004 from our target specialized markets: CMOS image sensors, embedded flash and mixed-signal ICs. We are highly experienced in these markets, being an early entrant and having developed unique proprietary technologies, primarily through licensing and joint development efforts with our customers and other technology companies.

CMOS Image Sensors

CMOS image sensors are ICs used to capture an image in a wide variety of consumer, communications, medical, automotive and industrial market applications, including camera-equipped cell phones, digital still and video cameras, security and surveillance cameras and video game consoles. We are currently actively involved in this mass market as well as the high-end sensor and applications specific markets, which include applications such as industrial machine vision, medical equipment and automotive sensors. While CMOS image sensors for advanced optical applications are an emerging technology, we believe that they are becoming the preferred technology to traditional charge coupled devices, or CCDs. CCDs have historically provided superior image quality; however, advances in semiconductor manufacturing processes and design techniques have led to significant improvements in CMOS image sensor performance and image quality. These advances have resulted in smaller size circuits and better current control, making it possible to design CMOS image sensors that provide high image quality at a significantly lower cost.

As early as 1997, we recognized the market potential of using CMOS process technology for a digital camera-on-a-chip, which would integrate a CMOS image sensor, filters and digital circuitry. In entering the CMOS image sensor foundry business, we utilized research and development work that had been ongoing since 1993. Our services include a broad range of turnkey solutions and services, including sensor design services, optical characterization of a CMOS process, innovative stitching manufacturing technique and optical testing and packaging. CMOS image sensors manufactured by us deliver outstanding image quality for a broad spectrum of digital imaging applications. As the market for these products becomes more main stream, we expect that more competition will enter this high growth market and some of those products will become commodities.

Embedded Flash

Flash memory is a constantly powered nonvolatile memory that can be erased and reprogrammed in units of memory called blocks. The IC of flash memory is organized so that a section of memory cells may be erased in a single action (or “flash”). Applications for flash memory products range from most types of portable electronic equipment devices to high volume mass storage of data. Flash is particularly suitable for applications such as handheld devices, combining the need for portability, high density, ruggedness and lower power

requirements. Flash memory products are also well-suited for audio products such as digital answering machines and MP3 players, as well as other applications including networking devices, digital cameras, personal computer motherboards and portable memory devices.

Embedded flash is the combination of flash memory with other components, such as other memory, logic and analog, on a single IC to provide speed, functionality and form factor advantages and reduce system cost. Embedded flash memory products are used in communications, consumer, industrial, military and automotive applications. End products include networks, base stations, servers, microcontrollers, toys, set-top boxes, DVD players, cell phones and smart cards.

In 1997, we entered into a strategic investment and technology agreement with Saifun Semiconductors Ltd., pursuant to which we obtained approximately a 10% equity stake in Saifun. Together we brought to market a new non-volatile memory technology based on 0.5-micron, microFlash™/NROM™. NROM technology enables the implementation of ultra high-density flash arrays using CMOS processes, and is particularly suitable for embedding flash arrays with standard CMOS logic, as well as for commodity memories. Our microFLASH technology, based on Saifun's patented NROM technology, provides greater memory cell density than other currently available flash architectures for given design rule generation, permitting an approximately four-fold reduction in the size of the memory cell for stand-alone memories and embedded applications in a given geometry.

In December 2004, we sold our entire equity stake in Saifun for approximately \$39 million. This sale had no effect on our technology rights under our agreement with Saifun.

Mixed Signal and RF CMOS

Mixed-signal ICs are an essential part of any electronic system that interacts with the real world. Analog ICs monitor and manipulate real world signals such as sound, light, pressure, motion, temperature and electrical current and are used in a wide variety of electronic products such as PCs, cell phones, DVD players, automotive electronics and medical imaging equipment. Digital ICs perform arithmetic functions on data represented by a series of ones and zeroes, provide critical processing power and have enabled many of the computing and communication advances of recent years. Mixed-signal ICs combine analog and digital semiconductor functionality on a single IC to enable digital systems to interface with the real world. As these digital systems proliferate, there is a growing need for analog functionality to enable them to interface with the real world.

We focus on providing high-quality mixed-signal capabilities, as this technology is a cornerstone to both CMOS image sensor and embedded flash applications. Our expertise in mixed signal has been further enhanced through several strategic initiatives. In 1998, Motorola transferred its 0.6- and 0.8-micron analog and mixed-signal processes to our Fab 1 facility. In May 2003, we licensed a wide array of intellectual property from Chipidea for our Fab 2. Our customers can use Chipidea's extensive IP portfolio with our advanced technology for a state-of-the-art solution that meets their analog and mixed-signal design needs. For example, in February 2004, we launched production of a Coder-Decoder (CODEC) IC for Smart Link, Ltd. utilizing 0.18-micron, mixed-signal technology provided by Chipidea in our Fab 2 facility.

In recent years, more and more designers opt to develop high frequency products based on RFCMOS technologies as opposed to exotic process technologies, such as SiGe or GaAs. The superior cost structure of CMOS technologies enables high volume, low cost production of such high frequency products. We use our mixed signal expertise to leverage and develop processes and provide services for customers utilizing CMOS technologies.

Convergence of Technologies

In response to the growing demand for a single chip to offer a wide array of functions, we are leveraging a combination of some of the abovementioned technologies by developing a single chip with multiple functions. The successful development of this chip will allow us to provide additional value to our customers and obtain a unique market position by offering our customers a unique technology platform. During 2004, we engaged in projects merging CMOS, NVM and CIS for unique solutions to customers' needs, as well as in a project targeting RFID Tags applications merging RFCMOS, Mixed Signal and NVM technologies onto a single chip.

Customers, Marketing and Sales

Our marketing and sales strategy seeks to aggressively expand our global customer base. To achieve this objective, we match our standard digital CMOS technology to the industry benchmark and differentiate ourselves based on customer service, design support and expertise in specialized technologies, such as CMOS image sensors, embedded flash and mixed signal. We have marketing, sales and engineering support personnel in the United States, Taiwan and Israel. Our marketing and sales staff is supported by independent sales representatives, located throughout the world, who have been selected based on their understanding of the semiconductor marketplace.

Our sales cycle is generally 12-24 months or longer for new customers and can be as short as 9-12 months for existing customers. The typical stages in the sales cycle process from initial contact until production are:

- technical evaluation;
- product design to our specifications including integration of third party intellectual property;
- photomask design and third party manufacturing;
- silicon prototyping;
- assembly and test;
- validation and qualification; and
- production.

The primary customers of our foundry services are fabless semiconductor companies and IDMs. A substantial portion of our product sales are made pursuant to long-term contracts with our customers, under which we have agreed to reserve manufacturing capacity at our production

facilities for such customers. When we commenced business in March 1993, our only customer was National Semiconductor. Since then, we have succeeded in adding a significant number of new customers, including many industry leaders and a number of Taiwanese companies who preferred our solution to that offered locally. During the year ended December 31, 2004, we had five significant customers who contributed 24%, 17%, 8%, 8% and 6% of our revenues, respectively. In 2003, we had three significant customers who contributed 24%, 20% and 11% of our revenues, respectively. In 2002, we had three significant customers who contributed 31%, 16% and 13% of our revenues, respectively.

In addition to further developing our customer base, we have also made a concentrated effort to expand the geographical diversity of our sales. The percentage of our sales from customers located outside the United States was 38%, 27% and 40% in the years ended December 31, 2002, 2003 and 2004, respectively. We believe that a substantial portion of our sales will continue to come from customers located outside the United States. The following table sets forth the geographical distribution, by percentage, of our net sales for the periods indicated:

	Year ended December 31,		
	2004	2003	2002
United States	60%	73%	62%
Israel	20	2	2
Pacific Rim (including Japan)	11 (*)	10	25 (*)
Europe	9	15	11
Total	100 %	100 %	100 %

(*) Including payments made to us in connection with our June 2002 joint development agreement for 0.18-micron embedded *microFLASH* technology.

We currently allocate a portion of our wafer manufacturing capacity in Fab 2 to certain customers under several types of agreements. We are also obligated to make capacity available to customers under certain other agreements (see “Item 5 - Management’s Discussion and Analysis of Financial Condition and Results of Operations – Fab 2 Agreements”). Some of our primary customers are also our shareholders.

Competition

The global semiconductor foundry industry is highly competitive. We compete with more than 10 independent dedicated foundries, including Taiwan Semiconductor Manufacturing Corporation, United Microelectronics and Chartered Semiconductor Manufacturing; emerging and existing Chinese, Korean, Malaysian and Taiwanese foundries, including Semiconductor Manufacturing International Corp., DongBuAnam, He Jien Technology, ASMC, Hynix, Powerchip Semiconductor, 1st Silicon, Grace, HHNEC, and Silterra; other specialized foundries, such as AMI Semiconductor, Jazz Semiconductor and X-Fab; and IDMs and end-product manufacturers that produce ICs for their own use and/or allocate a portion of their manufacturing capacity to foundry operations. Most of the foundries with which we compete are located in Asia-Pacific and benefit from their close proximity to other companies involved in the design

and manufacture of ICs. We believe that the principal elements of competition in the wafer foundry market are:

- technical competence;
- production quality;
- time-to-market;
- device and end-product price;
- available capacity;
- device yields;
- design and customer support services;
- access to intellectual property; and
- research and development capabilities.

Many of our competitors have greater manufacturing capacity, multiple manufacturing facilities, more advanced technological capabilities, a more diverse and established customer base, greater financial, marketing, distribution and other resources and a better cost structure than ours.

We seek to compete primarily on the basis of technology, production quality, device yields and services involving both design and manufacturing. We believe we have a differentiated service offering and track record in specialized markets, which enables us to effectively compete with larger IC manufacturers.

Wafer Fabrication Services

Wafer fabrication is an intricate process that consists of constructing layers of conducting and insulating materials on raw wafers in intricate patterns that give the IC its function. IC manufacturing requires hundreds of interrelated steps performed on different types of equipment, and each step must be completed with extreme accuracy for finished ICs to work properly. The process can be summarized as follows:

Circuit Design. IC production begins when a fabless IC company or IDM designs the layout of a device's components and designates the interconnections between each component. The result is a pattern of components and connections that defines the function of the IC. In highly complex circuits, there may be more than 35 layers of electronic patterns. After the IC design is complete, we provide these companies with IC manufacturing services.

Mask Making. The design for each layer of a semiconductor wafer is imprinted on a photographic negative, called a reticle or mask. The mask is the blueprint for each specific layer of the semiconductor wafer.

IC Manufacturing. Transistors and other circuit elements comprising an IC are formed by repeating a series of processes in which photosensitive material is deposited on the wafer and exposed to light through a mask. Advanced IC manufacturing processes consist of hundreds of steps, including photolithography, oxidation, etching and stripping of different layers and materials, ion implantation, deposition of thin film layers, chemical mechanical polishing and thermal processing. The final step in the IC manufacturing process is wafer probe, which involves electronically inspecting each individual IC in order to identify those that are operable for assembly.

Assembly and Test. After IC manufacture, the wafers are transferred to assembly and test facilities. In the assembly process, each wafer is cut into dies, or individual semiconductors, and tested. Defective dies are discarded, while good dies are packaged and assembled. Assembly protects the IC, facilitates its integration into electronic systems and enables the dissipation of heat or cold. Following assembly, the functionality, voltage, current and timing of each IC is tested. After testing, the completed IC is shipped to the IC supplier or directly to its final destination.

Manufacturing Processes

We manufacture ICs on silicon wafers, generally using the customer's proprietary circuit designs. In some cases, we use third-party or our own proprietary design elements. The end product of our manufacturing process is a silicon wafer containing multiple identical ICs. In most cases, our customer assumes responsibility for dicing, assembly and testing. Although we are an independent foundry specializing in wafer fabrication, we offer our customers the option to purchase from us finished semiconductor products that have been assembled and tested. In these cases, we take responsibility for the production and delivery of finished IC products to our customer on a turnkey basis and subcontract some or all of the dicing, assembly and testing functions to third parties. We also maintain limited assembly capabilities for manufacturing prototype units to facilitate customer evaluation and thereby accelerate new product introduction.

We manufacture ICs using CMOS process technology. CMOS is currently the dominant semiconductor manufacturing process because it requires lower power than other technologies and allows dense placement of components onto a single IC. The low power consumption and high-density characteristics of the CMOS process allow the continued development of high performance ICs that are smaller and faster. We believe that our specialized process technology distinguishes our IC manufacturing services and attracts industry-leading customers. The specific process technologies that we currently focus on include:

CMOS Image Sensors. Our advanced CMOS image sensor process is intended to meet the established growing demand for optical sensors used in consumer, industrial, medical and automotive applications. Our dedicated manufacturing and testing processes assure consistently high electro-optical performance of the integrated sensor through wafer-level characterization. Our CMOS image sensor processes have demonstrated superior optical characteristics, excellent spectral response and high resolution and sensitivity. The ultra-low dark current, high efficiency and accurate spectral response to our photodiode enable faithful color reproduction and acute detail definition.

In addition, our innovative “stitching” technology enables semiconductor exposure tools to manufacture single ultra high-resolution CMOS image sensors containing millions of pixels at sizes far larger than their existing field. Our 0.5, 0.35-micron and 0.18-micron CMOS image sensor processes are designed to permit the customer to create high-quality solutions and integrate a product’s CMOS analog and logic circuitry together with the sensor pixel array all on one chip, thereby facilitating miniaturization, reducing power consumption and increasing performance.

Embedded Flash. Our microFLASH technology, based on Saifun NROM patented technology, provides greater memory cell density than other currently available flash architectures for given design rule generation, permitting an approximately four-fold reduction in the size of the memory cell for stand-alone memories and embedded applications in a given geometry. The relative simplicity of our microFLASH manufacturing process offers cost advantages over competing flash technologies for high density memories. Using our 0.5-micron technology, we have introduced the first of our microFLASH processes into production with the manufacture of a 2 megabit stand-alone memory device and embedded multi-time programming modules, with a limited number of rewrite cycles. Our 0.18-micron embedded flash technology was introduced during 2004, with multiple Flash modules ranging in sizes from 2 megabit to 8 megabit and is currently expected to be ready for production during 2005.

Mixed Signal. We have developed the Tower Mixed-Signal Design Kit, which contains a comprehensive characterization of a wide range of analog devices, providing our customers with the ability to design mixed-signal ICs for their specific needs. In addition, we developed certain mixed-signal features for use in Fab 2 with our 0.18-micron process (such as high and medium poly-resistors and MIM capacitors) and are constantly expanding those features.

RFID. In 2004, we started a joint development program that targets the RFID Tag market and utilizes a platform technology of Mixed Signal, RF and Non Volatile memory function. We currently expect prototyping for this technology to commence in 2005 and readiness for production is expected in 2006.

Procurement and Sourcing

Our manufacturing processes use many raw materials, including silicon wafers, chemicals, gases and various metals. These raw materials generally are available from several suppliers. In many instances, we purchase raw materials from a single source. In connection with our technology advancement plans, we expect to continue to make purchases of semiconductor manufacturing equipment, mainly for Fab 2.

Research and Development

Our future success depends, to a large degree, on our ability to continue to successfully develop and introduce to production advanced process technologies that meet our customers’ needs. Our process development strategy relies on CMOS process technologies that we primarily license and transfer from third parties. We also develop these technologies on our own, at our own initiative, our customers’ request or in cooperation with our customers.

From time to time, at a customer’s request, we develop a specialty process module, which we use for such customer on an exclusive basis, and, if permitted under our agreements with our

customers, we then add it to our process offering. Such developments are very common in all of our value added process technologies noted above. In 2004, in response to market demand, we introduced a 0.16-micron optical shrink solution which represents a 10% linear shrink from our existing 0.18-micron offering while utilizing virtually the same 0.18-micron libraries and IP. The shrink allows a 15 to 20 percent die size reduction and a potentially higher wafer ASP and lower die cost. Applications include industry standard CMOS logic and some mixed-signal technologies. This 0.16-micron technology is expected to be ready for production by the end of 2005.

Our research and development activities have related primarily to our process development efforts and have been sponsored and funded by us with some participation by the Israeli Office of the Chief Scientist, or OCS. Accordingly, we are subject to restrictions set forth in Israeli law which limit the ability of a company to manufacture products or to transfer technologies outside of Israel, if such products or technologies were developed with OCS funding. Research and development expenses for the years ended December 31, 2002, 2003 and 2004 were \$17.0 million, \$20.7 million and \$17.1 million, net of government participation of \$1.2 million, \$1.1 million and \$1.5 million, respectively.

As of December 31, 2004, we employed 165 professionals in our research and development department, 29 of whom have PhDs. In addition to our research and development department located at our facilities in Migdal Haemek, we maintain a design center in Netanya, Israel.

Proprietary Rights

Intellectual Property and Licensing Agreements

Our success depends in part on our ability to obtain patents, licenses and other intellectual property rights covering our production processes. To that end, we have acquired certain patents and patent licenses and intend to continue to seek patents on our production processes. As of May 31, 2005, we held 53 patents. We have entered into various patent licenses and cross-licenses with technology companies including Toshiba, Motorola (now Freescale), Synopsys, ARM, Ceva, IMEC, Cadence Design Systems, Chipidea Microelectronics, Virage Logic, Mentor Graphics Corporation and others. We may choose to renew our present licenses or obtain additional technology licenses in the future. There can be no assurance that any such licenses could be obtained on commercially reasonable terms. In addition, we cannot assure you that other countries in which we market our services will protect our intellectual property rights to the same extent as the United States or Israel.

We constantly seek to strengthen our technological expertise through relationships with technology companies and silicon suppliers. We seek to expand our core strengths in CMOS image sensors, embedded flash and mixed-signal technologies by combining our proprietary technology with those of other technology companies. A main component of our process development strategy is to acquire licenses to standard CMOS technologies and cell libraries from leading designers, such as Freescale and Toshiba, and further develop specialized processes through our internal design teams. The licensing of these technologies has enormously reduced our internal development costs.

CMOS Process Technology Platform

We have licensed an array of process technologies through the following arrangements:

- *Toshiba*. In April 2000, we entered into a technology transfer agreement with Toshiba, pursuant to which Toshiba has transferred to us certain advanced CMOS technologies for use in Fab 2. In exchange for certain license and technology transfer fees and royalties, Toshiba has provided us with recipes, know-how and patent licenses and has trained a group of our engineers and managers. Subject to prior termination for cause by Toshiba, our licenses under the agreement with Toshiba are perpetual. Based on Toshiba's 0.18-micron CMOS process technology, we have internally developed an enhanced industry compatible version of the process technology.
- *Motorola (now Freescale)*. In September 2002, we entered into a technology transfer and development agreement with Motorola, pursuant to which Motorola has and will transfer to us its 0.13-micron HiPerMOS7 CMOS process technology for Fab 2 as well as co-developed with us an industry-standard compatible version of the process technology. Subject to prior termination for cause by Motorola, our licenses under the technology transfer agreement with Motorola are perpetual. In August 2004, Motorola assigned all of its rights and obligations under the aforementioned agreement to Freescale.

Digital CMOS and Foundation IP (Libraries)

To better serve our customers design needs in advanced CMOS processes, we have entered into a series of agreements with leading providers of physical design libraries. These libraries are basic design building blocks, such as standard cells, interface input-output (I/O) cells and software compilers for the generation of on-chip embedded memories arrays. To achieve optimal performance, these libraries must be customized to work with our manufacturing process and are used in virtually every digital chip design of our customers.

- *Synopsys*. In June 2001, we entered into an agreement with Synopsys (formerly, Avant!) under which Synopsys has developed libraries for our 0.18-micron process technology. Multiple customers use the Synopsys libraries in producing their ICs at our company. In April 2004, we entered into a comprehensive technology transfer and license agreement with Synopsys that provides us with broad rights to use Synopsys' library technology in multiple process technology generations including 0.18 micron and 0.13 micron. Under the agreement, we will develop, customize, validate and characterize libraries, based on Synopsys' library technology, which will be distributed and supported by Synopsys. This agreement places us in a unique position of having in-house capability to serve our customers' needs.
- *Artisan Components (now ARM Physical IP)*. In June 2002, we entered into a master services and license agreement with Artisan Components. Under this agreement, Artisan Components has developed a suite of library products for our 0.18-micron process technology. Artisan Components is licensing its libraries to our customers free of charge and multiple customers are using the Artisan Components libraries in their chip design for manufacturing at our company. In June 2004, we concluded an additional agreement with Artisan Components whereby Artisan Components customizes its libraries for our 0.13-micron process and licenses these libraries to end-users free of charge. The Artisan Components libraries include standard cells,

general purpose and specialty input-output cells and memory generators. In December 2004, Artisan Components was acquired by ARM Physical IP and assigned thereto the aforementioned agreements.

- *ARM Physical IP*. In November 2002, we joined ARM's Foundry License Program. Through the ARM Program, our customers have gained access to two of ARM's most widely used 32-bit embedded microprocessor cores, or elements, which have been optimized and tested to work on our 0.18-micron manufacturing process. As ARM cores are the most widely used embedded microprocessors today, our agreement with ARM provides our customers a low-risk, low-cost solution for designing and manufacturing advanced ARM-based SoCs, or system-on-chips, at our facilities.

- *Virage Logic*. In March 2002, we entered into an agreement with Virage Logic for the development of a suite of SRAM and ROM memory compilers for our 0.18-micron process technology, which are available for licensing by our customers. Presently, multiple customers' products that use Virage Logic's memory products are in production at Fab 2.

In June 2004, we entered into a license agreement with Virage Logic Corporation under which Virage Logic will develop its platform of standard and special libraries for our 0.13-micron process and license the libraries to the end-users free of license charge. The Virage libraries include standard cells and general purpose IO cells and a wide variety of memory compilers.

In December 2004, we introduced Virage Logic's patented Nonvolatile Electrically Alterable embedded memories for production on our 0.18-micron CMOS logic process. NOVeA is the industry's first embedded reprogrammable nonvolatile memory to be manufactured on a standard CMOS logic process without any additional masks or process steps. We have selected and qualified these memories for our process to help our customers meet their application requirements for cost-effective embedded non-volatile memory for security, encryption, unique device identification, analog trimming, silicon repair and flexible program store.

Mixed-signal Technologies

To address a variety of applications for mixed-signal ICs, such as use in cell phones, we have developed strong mixed-signal process capabilities as well as proven mixed-signal IP components.

- *IMEC*. In January 2002, we entered into a technology transfer and licensing agreement with IMEC pursuant to which we acquired certain advanced analog and mixed-signal process technologies to complement our CMOS process technology capabilities in the 0.18-micron geometry. Pursuant to this agreement, we received a non-exclusive, non-transferable license to manufacture or have manufactured integrated circuits utilizing the technology licensed by IMEC. The mixed-signal offering developed pursuant to this agreement is available to our customers.

- *Chipidea Microelectronics*. In January 2003, we entered into a non-exclusive, perpetual, royalty-free license and design agreement with Chipidea Microelectronics. Further to this agreement, several Chipidea cores, including Chipidea's USB 2.0 (Universal Serial Bus 2.0)

and OTG (On The Go), are currently being utilized by our customers.

- *Cadence Design Systems.* Under our agreement with Cadence Design Systems signed in 2001, Cadence Design Systems has developed a mixed-signal Process Design Kit, or PDK for the use of our mixed-signal customers. PDK is a process specific analog-mixed signal library designed to work with the Cadence Design Systems custom IC tools and can be used to create analog mixed-signal ICs.

Embedded Non-Volatile Memories

To enhance our strength in embedded non-volatile memories in the 0.18-micron process node, we are collaborating with leaders in embedded non-volatile memory technologies to address the market needs in both the high-end and the low-end of the spectrum.

0.18 micron Embedded microFlash Technology

In June 2002, we entered into a joint development agreement for 0.18-micron embedded *microFLASH* technology with a Japanese semiconductor manufacturer. We currently offer off-the-shelf memory blocks based on this development. In April 2005, the Japanese semiconductor manufacturer elected, and we agreed to terminate this agreement. According to the terms of the termination agreement, the Japanese manufacturer paid us, net of deducted tax, \$2.25 million. In addition, each party expressly released the other party from any obligations or liabilities of any nature in connection with the joint development agreement. The license rights granted to the parties continue pursuant to the terms of the original agreement.

Image Sensor Technologies

We developed, both independently and together with our customers, basic pixel intellectual property to be used by those customers in the manufacturing of our CMOS image sensor products.

In May 2005, we entered into a technology development partnership agreement with Atmel Corporation (Nasdaq:ATML) for the development of CMOS image sensor-related processes, including technology modules specifically designed for advanced photodiode structures. Under the agreement, both companies have rights to use the jointly developed technology. Process development and fabrication activities will be carried out at Fab 2.

Our ability to compete also depends on our ability to operate without infringing the proprietary rights of others. The semiconductor industry is characterized by frequent litigation regarding patent, trade secret and other intellectual property rights. There are no lawsuits currently pending against us regarding the infringement of patents or intellectual property rights of others nor are we currently plaintiff in any such action against other parties. However, we have been subject to such claims in the past, all of which have been resolved through license agreements, the terms of which have not had a material effect on our business. One of these agreements expires at the end of 2005, and we may be unable to extend or renew it on similar terms.

Because of the nature of the industry, we may continue to be a party to such infringement claims in the future. In the event any third party were to assert infringement claims against us or our customers, we may have to consider alternatives including, but not limited to:

- negotiating cross-license agreements;
- seeking to acquire licenses to the allegedly infringed patents, which may not be available on commercially reasonable terms, if at all;
- discontinuing use of certain process technologies, architectures, or designs, which could cause us to stop manufacturing certain semiconductors if we were unable to design around the allegedly infringed patents;
- fighting the matter in court and paying substantial monetary damages in the event we lose; or
- seeking to develop non-infringing technologies, which may not be feasible.

In the event that any third party causes us or any of our customers to discontinue using certain process technologies, we believe that such an outcome would not have a long-term material and adverse effect, as we could design around such technologies.

C. ORGANIZATIONAL STRUCTURE

The legal and commercial name of our company is Tower Semiconductor Ltd. We were incorporated under the laws of the State of Israel in 1993. We have one subsidiary, incorporated in the United States under the name Tower Semiconductor USA, Inc.

D. PROPERTY, PLANTS AND EQUIPMENT

Manufacturing Facilities

Fab 1

We acquired our Fab 1 facility from National Semiconductor in 1993, which had operated the facility since 1986. We occupy the facility pursuant to a long-term lease from the Israel Lands Authority that expires in 2032.

Due to the sensitivity and complexity of the semiconductor manufacturing process, a semiconductor manufacturing facility requires a special “clean room” in which most of the manufacturing functions are performed. Our Fab 1 facility includes an approximately 51,900 square foot clean room.

Since we commenced manufacturing at Fab 1, we increased its manufacturing capacity from 5,000 wafers per month, using 1.25-micron and 1.0-micron processes, to approximately 16,000 wafers per month based on our current product mix, using our 1.0 micron to 0.35-micron processes, including specialized processes.

However, our exact capacity is variable and depends on the combination of the processes being used and may be significantly lower at certain times as a result of certain of our combinations. In general, our ability to increase our manufacturing capacity has been achieved through the addition of equipment, improvement in equipment utilization, the reconfiguration and expansion of the existing clean room area and the construction of an additional clean room area within the building shell of Fab 1. During 2004, we began the transfer of Siliconix technology to Fab 1 and started wafer production for Siliconix in the second quarter of 2005.

Fab 2

In January 2001, we commenced construction of Fab 2, our new advanced wafer fab adjacent to Fab 1 in Migdal Haemek. Fab 2 offers integrated circuits manufacturing services utilizing advanced materials and a 0.18-micron process technology we licensed from Toshiba. We have also licensed 0.13-micron process technology from Freescale, and are in the process of completing its qualification. The overall clean room area in Fab 2 is approximately 100,000 square feet. We began volume production at Fab 2 during the third quarter of 2003. The land on which Fab 2 is located is subject to a long-term lease from the Israel Lands Authority that expires in 2049.

Since 2000, we have invested significantly in the purchase of fixed assets, primarily in connection with the construction of Fab 2, technology advancement and capacity expansion. Capital expenditures in 2004, 2003 and 2002 were approximately \$172 million, \$164 million and \$243 million, respectively, before related Investment Center grants of \$30 million, \$27 million and \$37 million, respectively.

Environmental Matters

Our operations are subject to a variety of laws and governmental regulations relating to the use, discharge and disposal of toxic or otherwise hazardous materials used in our production processes. Failure to comply with these laws and regulations could subject us to material costs and liabilities, including costs to clean up contamination caused by our operations.

We believe that we are currently in compliance in all material respects with applicable environmental laws and regulations.

In February 2004, we received ISO 14001 certification from The Standards Institution of Israel. A series of international standards on environmental management, ISO 14000 provides a framework for the development of an environmental management system and the supporting audit program. ISO 14001 is the cornerstone standard of the ISO 14000 series. It specifies a framework of control for an environmental management system pursuant to which an organization can be certified by a third party. The ISO 14001 certification applies to all of our manufacturing facilities. Our authorized design center in Netanya, Israel also received certification.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

A. OPERATING RESULTS

Management's Discussion and Analysis of Financial Condition and Results of Operations

The information contained in this section should be read in conjunction with our consolidated financial statements and related notes and the information contained elsewhere in this annual report. Our financial statements have been prepared in accordance with generally accepted accounting principles ("GAAP") in Israel. Differences between Israeli GAAP and US GAAP as they relate to our financial statements are described in Note 19 to our audited annual consolidated financial statements.

Overview

We are a pure-play independent wafer foundry dedicated to the manufacture of semiconductors. Pure-play foundries do not offer any products of their own, but focus on producing integrated circuits based on the design specifications of their customers. We manufacture semiconductors using advanced production processes for our customers primarily based on third party designs and our own proprietary designs. We currently offer the manufacture of ICs with geometries ranging from 1.0 to 0.13-micron, while 0.13-micron is expected to be ready for production by the end of 2005.

Our primary source of revenue is from the fabrication of ICs using CMOS process technology. We are currently focused on the emerging opportunities involving CMOS image sensors, embedded flash, mixed-signal and RFID technologies. ICs manufactured by us are incorporated into a wide range of products in diverse markets, including consumer electronics, personal computer and office equipment, communications, automotive, professional photography and medical device products.

The primary customers for our products are fabless IC companies and IDMs. A substantial portion of our product sales are made pursuant to long-term contracts with our customers, under which we have agreed to reserve manufacturing capacity at our production facilities. Our sales cycle is generally 12-24 months for new customers and can be as short as 9-12 months for existing customers. The typical stages in the sales process, from initial contact until production are: technical evaluation; photomask design specification; silicon prototyping; assembly and testing; validation and qualification; and production.

During the year ended December 31, 2004, we had five significant customers who contributed between 6% to 24% of our revenues. In 2003, we had five significant customers who contributed between 6% to 24% of our revenues. In 2002, we had three significant customers who contributed 31%, 16% and 13% of our revenues, respectively. In 2004, SanDisk was instrumental in ramping up our business. While we currently expect that SanDisk will continue to be a significant customer of Fab 2, additional customers are expected to commence or increase their purchase orders following the qualification of their products in Fab 2 during 2005. In addition to further developing our customer base, we have also made a concentrated effort to expand the geographical diversity of our sales. The percentage of our sales from customers located outside the United States was 40%, 27% and 38% in the years ended December 31, 2004,

2003 and 2002, respectively. We believe that a substantial portion of our sales will continue to come from customers located outside the United States.

Our company was founded in 1993, when we acquired National Semiconductor's 150-mm wafer fabrication facility, or Fab 1, and commenced operations as an independent foundry with a production capacity of approximately 5,000 wafers per month. Since then, we have significantly modernized our Fab 1 facility, which has improved its process geometries from 1.0-micron to 0.35-micron and enhanced its process technologies to include CMOS image sensors, embedded flash and mixed-signal technologies. We have also expanded our production capacity in Fab 1 to approximately 16,000 wafers per month to meet additional customer demand. Fab 1 has been cash flow positive from operations since the second quarter of 2002. During 2004, we began the transfer of Siliconix technology to Fab 1 and started wafer production for Siliconix in the second quarter of 2005.

During the third quarter of 2003, we completed the construction of the building and infrastructure of our second manufacturing facility, or Fab 2 and since then are in the process of ramping-up Fab 2. Fab 2 is designed to operate in geometries of 0.18-micron and below, using advanced materials and advanced CMOS technology licensed from Motorola (now Freescale) and Toshiba, as well as other technologies that we might acquire or develop independently. We began volume production at Fab 2 during the third quarter of 2003. Production capacity of Fab 2 as of the end of December 2004 was 14,600 wafers per month, and we expect to have production capacity of 15,400 wafers per month by the end of 2005, of which approximately 800 wafers per month are expected to be available in 0.13-micron.

Critical Accounting Policies

Revenue Recognition. In accordance with generally accepted accounting principles, our revenues are recognized upon shipment or as services are rendered when title has been transferred, collectibility is reasonably assured and acceptance criteria are satisfied, based on tests performed prior to customer on-site testing. Prior to commencement of our production, both our customers and our personnel test and pre-approve the prototype, on the basis of which specifications and features the ordered products will be produced. Electronic, functional and quality tests are performed on the products prior to shipment and customer on-site testing. Such testing reliably demonstrates that the products meet all of the specified criteria prior to formal customer acceptance and that product performance upon customer on-site testing can reasonably be expected to conform to the specified acceptance provisions. Our revenue recognition policy is significant because our revenues are a key component of our results of operations. We follow very specific and detailed guidelines in measuring revenue; however an accrual for estimated returns, which is computed primarily on the basis of historical experience, is recorded. Any changes in assumptions for determining the accrual for returns may affect mainly the timing of our revenue recognition and cause our operating results to vary from quarter to quarter.

Accordingly, our financial position and results of operations may be affected. That effect, if any, under Israel GAAP and US GAAP would be similar.

Depreciation and Amortization of Fab 2 Assets. Depreciation and amortization expense in 2004 amounted to \$121.1 million. During the third quarter of 2003, we commenced depreciating the Fab 2 property and equipment and amortizing the 0.18-micron technology, based on the

straight-line method. Currently, we estimate that the expected economic life of the Fab 2 assets will be as follows: (i) prepaid perpetual land lease and buildings – 14 to 25 years; (ii) machinery and equipment – 5 years; and (iii) the 0.18-micron technology – 4 years, while amortization phases in commencing on the dates on which each of the Fab 2 manufacturing lines is ready for its intended use. We expect that the depreciation and amortization expenses relating to Fab 2 facilities will be approximately \$130 million in 2005 due to the Fab 2 ramp-up. Changes in our estimates regarding the expected economic life of Fab 2 assets, or a change in the dates on which each of the Fab 2 manufacturing lines is ready for its intended use, might affect our depreciation and amortization expenses. That effect, if any, under Israel GAAP and US GAAP would be similar.

Impairment of Assets. Standard No. 15, “Impairment of Assets,” of the Israeli Accounting Standards Board addresses the accounting treatment and presentation of impairment of assets, and establishes procedures to be implemented in order to ensure that assets are not presented in amounts exceeding their recoverable value. Though according to US GAAP, e.g. FASB 144 and FASB 142, recoverability tests are performed based on undiscounted expected cash flows, Standard No. 15 indicates that an asset’s recoverable value is the higher of the asset’s net selling price and the asset’s value in use, the latter being equal to the asset’s discounted expected cash flows. While applying the provisions of Standard No. 15 had no effect on our financial position and results of operations, the use of different assumptions with respect to the expected cash flows from our assets and with respect to other economic variables, primarily the discount rate, may lead to different conclusions regarding the recoverability of our assets’ carrying values and to the potential need to record an impairment loss for our long-lived assets.

Stock-Based Compensation. For the purpose of our financial statements under Israeli GAAP, we account for employee and director stock-based compensation in accordance with Accounting Principles Board Opinion No. 25, “Accounting for Stock Issued to Employees” (“APB 25”) and authoritative interpretations thereof. Accordingly, we account for share options granted to our employees and directors based on the intrinsic value of the options on the measurement date, and expense deferred compensation in respect of awards with graded vesting terms over the relevant vesting periods.

We account for stock-based compensation of non-employees (our banks, the construction company of Fab 2 and Israel Corp., our current major shareholder) using the fair value method in accordance with Financial Accounting Standards Board Statement No. 123, “Accounting for Stock-Based Compensation” (“SFAS 123”) and EITF 96-18: Accounting for Equity Instruments That are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services.

Commencing in 2006, the initial reporting period in which we are to implement the provisions of SFAS No. 123 (revised 2004) "Shared Based Payments", including authoritative interpretations thereof, in our reconciliation note to US GAAP, we are to account for options granted to our employees and directors using the fair value method. In order to estimate the fair value of options and warrants we have granted and may grant in the future, we use the Black-Scholes option-pricing model. The overall compensation award expenses related to these options and warrants may significantly differ from those recorded in our financial statements as a result of applying different assumptions required for utilizing this model. These assumptions relate

mainly to risk-free interest rates, expected life of options and warrants, expected annual volatility and expected dividend yield.

Non-Capitalizable Costs. In accordance with generally accepted accounting principles, we capitalized through the third quarter of 2003 most of our costs relating to the establishment of Fab 2, primarily for property and equipment and other assets. Capitalizable Fab 2 costs were only incremental direct costs that related to the establishment and equipping of Fab 2 and to the integration and transfer of technology to be implemented in Fab 2. Following commencement of operations of Fab 2 in the third quarter of 2003, most of the direct costs related to the construction and equipping of Fab 2 and to the transfer of the Fab 2 technologies that were capitalizable until Fab 2 came into production, are no longer capitalizable.

Direct internal costs which were capitalized to Fab 2 consisted primarily of payroll-related costs, and allocated payroll costs, on the basis of management's estimates and assumptions and methodologies, including timesheet inputs. Most of the capitalized payroll-related costs consisted of wages to employees dedicated solely to the establishment of Fab 2. In addition, other direct related expenses such as import costs, transportation, installation and consulting fees were also capitalized. Under different assumptions relating to these costs and their being attributable to Fab 2, the classification and accounting recognition of these costs may have been different, which may significantly affect our financial position and results of operations. The effect, if any, under Israel GAAP and US GAAP would be similar.

Recent Accounting Pronouncements under US GAAP as they apply to us

SFAS No. 154. Accounting Changes and Error Corrections. This Statement, published in May 2005, replaces APB Opinion NO. 20, *Accounting Changes*, and FASB Statement No. 3, *Reporting Accounting Changes in Interim Financial Statements*, and changes the requirements for the accounting for and reporting of a change in accounting principle. This Statement applies to all voluntary changes in accounting principle, and to changes required by an accounting pronouncement in the unusual instance that the pronouncement does not include specific transition provisions.

Opinion 20 previously required that most voluntary changes in accounting principle be recognized by including in net income of the period of the change the cumulative effect of changing to the new accounting principle. This Statement requires retrospective application to prior periods' financial statements of changes in accounting principle, unless it is impracticable to determine the specific effects or the cumulative effect of the change. The Statement also provides guidance for cases in which it is impracticable to determine the period-specific effects of an accounting change on one or more individual prior periods presented, and/or for cases in which it is impracticable to determine the cumulative effect of applying a change in accounting principle to all prior periods.

This Statement defines retrospective application as the application of a different accounting principle to prior accounting periods as if that principle had always been used or as the adjustment of previously issued financial statements to reflect a change in the reporting entity. This Statement also redefines restatement as the revisiting of previously issued financial statements to reflect the correction of an error.

This Statement also requires that a change in depreciation, amortization, or depletion method for long-lived, non-financial assets be accounted for as a change in accounting estimate effected by a change in accounting principle. This Statement carries forward without change the guidance contained in Opinion 20 for reporting the correction of an error in previously issued financial statements and a change in accounting estimate. This Statement also carries forward the guidance in Opinion 20 requiring justification of a change in accounting principle on the basis of preferability.

The provisions of this Statement are effective for accounting changes and corrections of errors made during fiscal years beginning after December 15, 2005. The adoption of this Standard is not expected to have a material effect on our financial position and results of operations.

SFAS No. 151. Inventory Costs, an Amendment of ARB No. 43, Chapter 4 – In November 2004 the FASB issued SFAS No. 151, “Inventory Costs, an Amendment of ARB No. 43, Chapter 4”. SFAS No. 151 amends the guidance in ARB 43, Chapter 4, “Inventory Pricing”, which provides guidance on the allocation of certain costs to inventory. SFAS 151 clarifies that abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage) should be recognized as current-period charges. In addition, SFAS 151 requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. The provisions of this statement are effective for inventory costs incurred during fiscal years beginning after June 2005. The provisions of this statement shall be applied prospectively. This Standard is not expected to have a material effect on our financial position and results of operations.

SFAS No. 123 (revised 2004) “Share Based Payments”. In December 2004, the FASB issued SFAS No. 123 (revised 2004) “Share Based Payments” (“SFAS 123(R)”). This Statement, including authoritative interpretation thereof, is a revision of FASB Statement No. 123, “Accounting for Stock-Based Compensation”, which supersedes APB Opinion No. 25, “Accounting for Stock Issued to Employees” and its authoritative interpretations. SFAS 123(R) will be implemented in the U.S. GAAP reconciliation Note. According to Israeli GAAP, accounting for costs associated with share-based payments is not required. SFAS 123(R) establishes standards for the accounting for transactions in which an entity exchanges its equity instruments for goods or services; focuses primarily on accounting for transactions in which an entity obtains employee and directors services in share-based payment transactions; and does not change the accounting guidance for share-based payment transactions with parties other than employees.

SFAS 123(R) eliminates the alternative to use APB 25’s intrinsic value method of accounting that was provided in SFAS 123 as originally issued and requires to measure the cost of employee services received in exchange for an award of equity instruments based on the grant-date fair value of the award. The fair-value-based method in this Statement is similar to the fair-value-based method in SFAS 123 in most respects. The costs associated with the awards will be recognized over the period during which an employee is required to provide service in exchange for the award - the requisite service period (usually the vesting period). The grant-date fair value of employee share options and similar instruments will be estimated using option-pricing models adjusted for the unique characteristics of those instruments (unless observable market prices for the same or similar instruments are available). If an equity award is modified

after the grant date, incremental compensation cost will be recognized in an amount equal to the excess of the fair value of the modified award over the fair value of the original award immediately before the modification.

On March 29, 2005, the Securities and Exchange Commission issued Staff Accounting Bulletin No. 107 ("SAB 107"). This staff accounting bulletin expresses views of the staff regarding the interaction between SFAS 123(R) and certain SEC rules and regulations and provides the SEC staff's views regarding the valuation of share-based payment arrangements for public companies.

On April 14, 2005, the SEC adopted a new rule amending the compliance dates for SFAS 123(R). Under the SEC rule, the provisions of SFAS 123(R) apply to all awards to be granted after January 1, 2006 and to awards modified, repurchased, or cancelled after that date.

When initially applying the provisions of SFAS 123(R), in the first quarter of 2006, we will be required to elect between using either the "modified prospective method" or the "modified retrospective method". Under the modified prospective method, we will be required to recognize compensation cost for all awards granted after the adoption of SFAS 123(R) and for the unvested portion of previously granted awards that are outstanding on that date. Under the modified retrospective method, we are required to restate its previously issued financial statements to recognize the amounts previously calculated and reported on a pro forma basis, as if the original provisions of SFAS 123 had been adopted. Under both methods, it is permitted to use either a straight line or an accelerated method to amortize the cost as an expense for awards with graded vesting.

Recently we have commenced identifying the potential future impact of applying the provisions of SFAS 123(R), including each of its proposed transition methods, yet are currently unable to fully quantify the effect of this Standard on the future financial position and results of operations in accordance with U.S. GAAP. Nonetheless, it is expected that the adoption of SFAS 123(R) will increase the stock-based-award expenses we are to record in the future in comparison to the expenses recorded under the guidance currently applied by us.

SFAS 153, Exchange of Non-Monetary Assets. In December 2004, the FASB issued SFAS No. 153, "Exchanges of Nonmonetary Assets an amendment of APB No. 29". This Statement amends Opinion 29 to eliminate the exception for nonmonetary exchanges of similar productive assets and replaces it with a general exception for exchanges of nonmonetary assets that do not have commercial substance. The Statement specifies that a nonmonetary exchange has commercial substance if the future cash flows of the entity are expected to change significantly as a result of the exchange. This Statement is effective for nonmonetary asset exchanges occurring in fiscal periods beginning after June 15, 2005. Earlier application is permitted for nonmonetary asset exchanges occurring in fiscal periods beginning after the date this Statement is issued. Retroactive application is not permitted. The adoption of this Standard is not expected to have a material effect on our financial position and results of operations.

Recent Accounting Pronouncements under Israeli GAAP as they Apply to us

Accounting Standard No. 19 "Taxes on Income". In July 2004, the Israeli Accounting Standard Board published Accounting Standard No. 19 "Taxes on Income" (the "Standard"). The Standard established the guidelines for recognizing, measuring, presenting and disclosing

taxes on income in the financial statements. The Standard is effective for financial statements relating to reporting periods commencing on, or after, January 1, 2005. The initial adoption of the Standard shall be accounted for by the cumulative effect of change in accounting method, for the beginning of the period in which the Standard is initially adopted. The adoption of the Standard is not expected to have a material effect on the Company's financial position and results of operations.

Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with the financial statements and the related notes thereto included in this annual report. The following table sets forth certain statement of operations data as a percentage of sales for the years indicated.

	<u>Year Ended December 31,</u>		
	<u>2004</u>	<u>2003</u>	<u>2002</u>
Statement of Operations Data:			
Sales	100.0%	100.0%	100.0%
Cost of sales	<u>181.2</u>	<u>199.4</u>	<u>129.4</u>
Gross loss	(81.2)	(99.4)	(29.4)
Research and development expenses, net	13.5	33.7	32.8
Marketing, general and administrative expenses ..	<u>16.9</u>	<u>36.9</u>	<u>33.0</u>
Operating loss	(111.6)	(170.0)	(95.2)
Financing expense, net.....	(23.6)	(16.1)	(4.0)
Other income (expense), net	<u>25.9</u>	<u>(0.1)</u>	==
Loss	<u>(109.3)%</u>	<u>(186.2)%</u>	<u>(99.2)%</u>

Year Ended December 31, 2004 Compared To Year Ended December 31, 2003

Sales. Sales in the year ended December 31, 2004 increased by 105.4% to \$126.1 million from \$61.4 million in 2003. This \$64.7 million increase was attributable to the ramp up of capacity of our Fab 2 wafer fabrication and the increase in production levels.

Cost of Sales. Cost of sales in the year ended December 31, 2004 totaled \$228.4 million, compared with \$122.4 million in 2003. This increase was due mainly to Fab 2 operations, which in 2003 operated only for half a year while in 2004 operated for a full year, resulting in an increase of \$61.6 million in depreciation and amortization expenses and an increase of \$23.9 million in materials usage mainly related to Fab 2.

Gross Loss. Gross loss in the year ended December 31, 2004 was \$102.4 million compared to a gross loss of \$61.0 million in 2003. The increase in gross loss was primarily attributable to the increased cost of sales, which was partially offset by the increase in revenues.

Research and Development. Research and development expenses in the year ended December 31, 2004 decreased to \$17.1 million from \$20.7 million in 2003. The decrease was primarily due to decreased expenses related to the Fab 2 0.13-micron technology agreement signed with Freescale in 2002. Research and development expenses are reflected net of

participation grants received from the Israeli government (\$1.5 million and \$1.1 million, in 2004 and 2003, respectively).

Marketing, General and Administration. Marketing, general and administrative expenses in the year ended December 31, 2004 decreased to \$21.3 million from \$22.6 million in 2003, primarily due to decreased use of outsourcing services.

Operating Loss. Operating loss in the year ended December 31, 2004 was \$140.7 million, compared to \$104.4 million in 2003, attributable primarily to the ramp-up of Fab 2. This increase in the operating loss reflects an increase in gross loss of \$41.4 million, a decrease in research and development expenses of \$3.6 million and a decrease in marketing and sales, general and administrative expenses of \$1.3 million.

Financing Expenses, Net. Financing expenses, net in the year ended December 31, 2004 were \$29.7 million compared to financing expenses, net of \$9.8 million in 2003. This increase is mainly due to an increase of \$19.5 million in connection with our Fab 2 facility agreement attributable to (i) an increase during 2004 in the total amount of long-term loans which financed the construction and equipping of Fab 2, (ii) the discontinuation of capitalization of financing costs that had been capitalized prior to the commencement of operations of Fab 2 in the third quarter of 2003 and (iii) the increase in the interest rate from LIBOR plus 1.5% in 2003 to LIBOR plus 2.5% commencing from January 2004 pursuant to the November 2003 amendment to our credit facility agreement with our banks.

Other Income (Expense), Net. Other income, net in 2004 was \$32.7 million compared to other expense, net of \$0.1 million in 2003 due to the sale in 2004 of our shareholdings in Saifun Semiconductors Ltd. for a net capital gain of \$32.4 million.

Loss. Our loss in the year ended December 31, 2004 was \$137.8 million, compared to \$114.3 million in 2003. This increase is primarily attributable to the increased operating loss of \$36.3 million and the increase in financing expenses, net, of \$19.9 million offset by increased other income, net of \$32.8.

Year Ended December 31, 2003 Compared To Year Ended December 31, 2002

Sales. Sales in the year ended December 31, 2003 increased by 18.5% to \$61.4 million from \$51.8 million in 2002. This \$9.6 million increase was attributable to a higher volume of wafer shipments, which resulted in an increase in Fab 1 sales of \$2.9 million, and a \$6.6 million increase in Fab 2 revenues. Fab 2 revenues in 2003, which derived from the sale of wafer products, were \$14.7 million, in comparison with Fab 2 revenues of \$8.1 million in 2002, all of which was attributable to our joint development agreement for the development of 0.18-micron embedded microFLASH technology.

Cost of Sales. Cost of sales in the year ended December 31, 2003 totaled \$122.4 million, compared with \$67.0 million in 2002. This increase was due mainly to the commencement of Fab 2 operations in the third quarter of 2003, which resulted in (i) an increase of \$37.3 million in depreciation and amortization expenses related to Fab 2 assets; and (ii) an increase of \$25.5 million attributable to the commencement of Fab 2 operations and the discontinuation of capitalization of costs that had been capitalized prior to the commencement of Fab 2 operations.

Gross Loss. Gross loss in the year ended December 31, 2003 was \$61.0 million compared to a gross loss of \$15.2 million in 2002. The increase in gross loss was primarily attributable to an increase of \$58.0 million in 2003 in expenses related to Fab 2 (mainly due to an increase of \$37.3 million in depreciation and amortization costs and an increase of \$11.4 million in payroll costs). This increase was offset by a moderate increase in revenues of \$9.6 million, which was primarily attributable to the commencement of production operations of Fab 2 that amounted to \$6.6 million.

Research and Development. Research and development expenses in the year ended December 31, 2003 increased to \$20.7 million from \$17.0 million in 2002. The increase was primarily due to increased research and development activities related to the technologies we licensed from Freescale and Toshiba for Fab 2. Research and development expenses are reflected net of participation grants received from the Israeli government (\$1.1 million and \$1.2 million, respectively).

Marketing, General and Administration. Marketing, general and administrative expenses in the year ended December 31, 2003 increased to \$22.6 million from \$17.1 million in 2002, primarily due to an increase of \$4.3 million associated with the expansion of our worldwide marketing and sales efforts in connection with the commencement of production in Fab 2.

Operating Loss. Operating loss in the year ended December 31, 2003 was \$104.4 million, compared to \$49.3 million in 2002, attributable primarily to the commencement of Fab 2 operations during the third quarter of 2003. The \$55.1 million increase in the operating loss reflects the increase in gross loss of \$45.8 million, increase in research and development expenses of \$3.7 million and increase in marketing and sales, general and administrative expenses of \$5.5 million.

Financing Expenses, Net. Financing expenses, net in the year ended December 31, 2003 were \$9.8 million compared to financing expenses, net of \$2.1 million in 2002. This increase is mainly due to an increase of \$9.2 million in connection with our Fab 2 activities and is attributable to (i) an increase during 2003 in the total amount of long-term loans which financed the construction and equipping of Fab 2, and (ii) the discontinuation of capitalization of financing costs that had been capitalized prior to the commencement of operations of Fab 2.

Loss. Our loss in the year ended December 31, 2003 was \$114.3 million, compared to \$51.4 million in 2002. This increase is primarily attributable to the increased operating loss of \$55.0 million and the increase in financing expenses, net, of \$7.7 million.

Impact of Inflation and Currency Fluctuations

The dollar cost of our operations in Israel is influenced by the timing of any change in the rate of inflation in Israel and the extent to which such change is not offset by the change in valuation of the NIS in relation to the dollar. During 2004, the dollar was devalued against the NIS by 1.6%, and the Israeli Consumer Price Index, or CPI increased by 1.2%. During 2003, the dollar was devalued against the NIS by 7.6%, while the CPI in Israel decreased by 1.9%.

We believe that the rate of inflation in Israel has had a non-material effect on our business to date. However, our dollar costs will increase if inflation in Israel exceeds the devaluation of the NIS against the dollar, or if the timing of such devaluation lags behind inflation in Israel.

Almost all of our cash generated from operations and from our financing and investing activities is denominated in U.S. dollars and NIS. Our expenses and costs are denominated in NIS, U.S. dollars, Japanese Yen and Euros. We are, therefore, exposed to the risk of currency exchange rate fluctuations.

Our borrowings under our Fab 2 credit facility, which comprise the majority of our long-term liabilities, provide for interest based on a floating Libor rate, and we are therefore exposed to interest rate fluctuations. From time to time, we engage in various hedging strategies to reduce our exposure to some, but not all, of these risks and intend to continue to do so in the future. However, despite any such hedging activity, we are likely to remain exposed to interest rate and currency exchange rate fluctuations, which may increase the cost of our business activities, particularly our financing expenses.

Our convertible debentures are denominated in NIS linked to the Israeli CPI and therefore we are exposed to fluctuation in the NIS/dollar exchange rate. The dollar amount of our financing costs (interest and currency adjustments) related to the convertible debentures will increase if the rate of inflation in Israel is not offset (or is offset on a lagging basis) by the devaluation of the NIS in relation to the dollar. In addition, the dollar amount of any repayment on account of the principal of the convertible debentures will increase as well.

The quantitative and qualitative disclosures about market risk are in Item 11 of this annual report.

B. LIQUIDITY AND CAPITAL RESOURCES

At December 31, 2004, we had an aggregate of \$81.5 million in cash, cash equivalents, and short-term interest-bearing deposits, of which \$39.7 million was contractually restricted for Fab 2 use only and \$14.1 million was contractually restricted for use in the Siliconix project only. This compares to \$56.5 million in cash, cash equivalents, and short-term and interest-bearing deposits, of which \$44.0 million was contractually restricted for Fab 2 use only, as of December 31, 2003. In addition, as of December 31, 2004, we had \$5.1 million (as of December 31, 2003, \$4.8 million) in long-term interest-bearing deposits, which were contractually serving as a security for our convertible debentures.

During the year ended December 31, 2004, we generated cash from the following sources: \$66.0 million from bank loans; \$75.9 million from the issuance of shares, net; \$38.7 million in proceeds from the sale of Saifun shares; \$20.0 million from Siliconix advances on account of future wafer purchases; \$32.6 million from Investment Center grants and \$2.6 million in proceeds from disposal of property. These liquidity resources financed our operating activities (net amount of \$54.3 million) and our investments made during the year ended December 31, 2004, which aggregated \$155.7 million mainly in connection with the construction, and purchase and installation of equipment and other assets, of Fab 2.

As of December 31, 2004, we had loans in the amount of \$497.0 million in connection with the loans we obtained during 2004, 2003 and 2002 for the establishment of Fab 2.

We completed the construction of the building and infrastructure of Fab 2 during the third quarter of 2003 and since then are in the process of ramping-up Fab 2, our new advanced wafer facility adjacent to Fab 1 in Migdal Haemek, Israel. Production capacity of Fab 2 at the end of December 2004 was 14,600 wafers per month. We currently expect to have production capacity of 15,400 wafers per month by the end of 2005, of which approximately 800 wafers per month are expected to be in 0.13-micron. As of December 31, 2004, we received a total of \$1,164 million for Fab 2, as set forth below in tabular form. The remainder of the Fab 2 ramp up financing may be funded by additional grants available from the Investment Center, sales of our securities, additional loans, including from our banks, wafer prepayments from our customers and cash flow from operations or from other sources.

In recent years, we have experienced significant recurring losses from operations and recurring negative cash flows from operating activities and an increasing accumulated deficit. In order to have adequate liquidity for our activities in 2005, we have taken measures to reduce our short-term liabilities. We have implemented cost reduction measures, including measures to reduce expenses, cost structure and cash burn, and in March 2005, we completed a workforce cutback, as part of an across-the-board savings plan focused on operational efficiencies. In addition, in May 2005, we signed a letter of intent with our banks which provides for financing in the amount of up to \$30 million, subject to, among other things, a similar amount being raised by us from investors. To date, certain of our equity investors and wafer partners have informed us of their willingness to invest \$23.5 million towards such funding by investors. The letter of intent is subject to the execution of a definitive amendment to our credit facility agreement, which we are currently negotiating. If the definitive amendment to our credit facility agreement is executed and consummated and we raise from investors the funds stipulated in the letter of intent, or if we find alternative financing for said amounts, we expect to have adequate liquidity for our short-term activities and liabilities during the second half of 2005. If we raise the funds contemplated by the letter of intent, we will still need to raise additional funds in order to finance our activities and liabilities in 2006, at least until we achieve positive cash flow from our operations. During the years 2004, 2003 and 2002, the majority of our liquidity and capital resources and expenditures were in connection with Fab 2, in which we have spent as of December 31, 2004, \$1,185 million, including net cash flows for operating activities.

The following chart illustrates the various financial sources available to us to fund the construction and ramp-up of Fab 2, the amounts received as of December 31, 2004 and the amounts expected or required to be received from various sources as of December 31, 2004. We cannot assure you that we will be able to obtain funds from these sources as expected due to poor conditions in capital markets, poor conditions in the semiconductor market, failure to benefit from upswings in the semiconductor market or other factors, any or all of which may affect our ability to raise funds. If we do not satisfy our need for funds for Fab 2 or if the timing of the receipt of financing lags behind the timing of expenses, we may from time to time experience lack of liquidity for our activities. The table does not reflect the letter of intent signed with our banks in May 2005 which provides for financing in the amount of up to \$30 million, subject to, among other things, a similar amount being raised by us from investors (See "Risk Factors - If the terms reflected in the letter of intent that we signed with our banks in May 2005 are not effectuated, or if do we not find alternative financing, we may not be able to maintain our operations.").

Financial Sources based on agreements and arrangements completed through December 31, 2004	Received as of December 31, 2004	Amounts expected or required to be received after December 31, 2004 <u>(in millions)</u>	Total (5)
Wafer Partners and other equity investors.....	\$306	\$0	\$306
Israel Government Investment Center.....	151	99(1)	250
Credit facility.....	497(2)	0(4)	497
Other financing sources.....	210	28(3)(4)	238

(1) Under the requirements of Israeli Law, we are required to complete our approved investment program for Fab 2 by the end of 2005 (see “— Investment Center Grants” below). Currently, we do not expect to complete our investments by December 2005 and failure to achieve a satisfactory arrangement with the Investment Center by way of an expansion plan may result in the cancellation of all or a portion of our grants and the Investment Center may require us to repay all or a portion of grants already received. See “Risk Factors — If we do not meet conditions to receive the Israeli government grants and tax benefits approved for Fab 2, we may be required to seek alternative financing sources.”

(2) Under the credit facility agreement, we are required to comply with minimum production capacity milestones and maintain certain financial ratios and additional conditions and covenants. For a description of these ratios and covenants, see below “Fab 2 Agreements-Credit Facility”.

(3) Under the November 11, 2003 amendment to our Fab 2 credit facility, we are required to raise additional financing from specified sources by various prescribed dates in an aggregate amount of \$152.0 million by no later than the end of 2005 (see “Material Agreements — Credit Facility”). As of December 31, 2004, we have raised an aggregate of \$123.7 million and are required to raise \$28.3 by December 31, 2005. We expect to raise the remaining funding through: (i) equity investments, including the sale of convertible securities and/or (ii) wafer prepayments from customers.

(4) We have agreed with our banks and the Israel Corporation Ltd. to complete a rights offering on pre-determined terms if we do not complete the required fundraising of \$152 described above. This arrangement may result in the availability of up to \$12 million additional loans under our credit facility and up to \$14 million from Israel Corp.

(5) We will be required to make capital investments and acquire and implement advanced technologies in order to complete the ramp-up Fab 2. In addition to the amounts listed in footnote 3 above, we will require additional cash to complete the full ramp-up of Fab 2. (See "Risk Factors - If the terms reflected in the letter of intent that we signed with our banks in May

2005 are not effectuated, or if do we not find alternative financing, we may not be able to maintain our operations.")

Fab 2 Agreements

In January 2001, we commenced construction of Fab 2, our new advanced wafer fabrication facility adjacent to Fab 1 in Migdal Haemek. Fab 2 offers integrated circuit manufacturing services utilizing advanced materials and using a 0.18-micron process technology we licensed from Toshiba. We have also licensed 0.13-micron process technology from Motorola (now Freescale) and are in the process of completing its qualification. The overall clean room area in Fab 2 is approximately 100,000 square feet. We began volume production at Fab 2 during the third quarter of 2003. Production capacity at the end of December 2004 was 14,600 wafers per month, and we currently expect to have production capacity of 15,400 wafers per month by the end of 2005, of which approximately 800 wafers per month are expected to be in 0.13-micron.

Wafer Partner Agreements. During 2000, we entered into a series of agreements with four wafer partners: SanDisk Corporation, Alliance Semiconductor, Macronix International and QuickLogic Corporation. The wafer partners agreed to invest \$250 million in us; SanDisk, Alliance and Macronix each committed to invest \$75 million, and QuickLogic committed to invest \$25 million in exchange for our ordinary shares and credits towards the purchase of wafers from Fab 2 under the terms set forth in the agreements. We also agreed to reserve approximately 50% of Fab 2's capacity for our wafer partners for a 10-year period ending in January 2011, including during the ramp-up of Fab 2. In addition, these agreements generally provide for a five percent discount on wafer purchases made by the wafer partners of up to 80% of the maximum Fab 2 wafer fabrication capacity committed to the wafer partners, subject to minimum holdings of our ordinary shares. These agreements (and the agreements with our financial investors) were amended in April 2002, May 2003, and November 2003.

To date, we have received an aggregate of \$246.8 million from our wafer partners, of which \$199.6 million was invested in consideration for 26,242,875 of our ordinary shares, and the remaining \$47.2 million was established as wafer credits. Our wafer partners are not obligated to invest any more money in us. However, in connection with the letter of intent we signed with our banks in May 2005, certain of our equity investors and wafer partners have informed us of their willingness to invest \$23.5 million in our company.

Investment by Israel Corporation and other Financial Investors. In December 2000, Israel Corp., our current principal shareholder and one of Israel's major holding companies, agreed to invest \$50.0 million contemporaneous with the investments by the wafer partners. In consideration of Israel Corp.'s aggregate investment of \$50 million, we issued ICTech a total of 6,749,669 of our ordinary shares through January 2004.

In February 2001, the Challenge Fund-Etgar II agreed to invest \$5.0 million in our company on substantially the same terms as ICTech. In consideration of Challenge's aggregate investment of \$5.0 million, we issued Challenge a total of 670,166 of our ordinary shares through January 2004.

Wafer Credits. In connection with their investments in Fab 2, we issued to our wafer partners non-transferable credits which may be used to reduce the cash amounts to be paid by them when paying for wafers manufactured in Fab 2. These credits could generally be used at a rate of 7.5% for purchases made through June 2005 and 15% for purchases made thereafter. Our major wafer partners, SanDisk, Alliance and Macronix, have agreed that they will not utilize any of their credits, which amounted to \$40.5 million as of December 31, 2004, for purchase orders of our wafer products until December 31, 2006. From January 1, 2004 to December 31, 2006, each major wafer partner is entitled, every quarter, to convert into our ordinary shares its wafer credits that could have been utilized by such wafer partner against the actual payment of wafers manufactured at Fab 2 during such quarter; otherwise, these credits will bear interest payable every quarter at three-month LIBOR plus 2.5% through December 31, 2007. On December 31, 2007, the remaining wafer credits that could have been utilized during this period that have not been converted into shares will be repaid to all our major wafer partners. Should the wafer partners elect to convert their wafer credits into our ordinary shares, they will be issued ordinary shares at the average trading price of our ordinary shares during the 15 consecutive trading days preceding the last day of the relevant quarter. For example, if our major wafer partners purchase an amount of wafers which would otherwise result in their using the full amount of credits available to them as of March 31, 2005, and they elect to convert all of these credits into ordinary shares, we will issue them an aggregate of 27.6 million shares, assuming the average trading price of our ordinary shares during the 15 consecutive trading days preceding the last relevant quarter is \$1.55. We have also agreed to allow our wafer partners to convert, during January 2006, their remaining wafer credits issued in connection with their fourth milestone payment up to an aggregate of \$13.2 million, which they may have as of December 31, 2005, into our ordinary shares, at the average trading price of our ordinary shares during the 15 consecutive trading days preceding December 31, 2005. If the wafer partners exercise this right and are issued more than 5%, in the aggregate, of our shares on January 31, 2006, we have agreed to offer all of our other shareholders the right to purchase our shares at the same price per share.

All the ordinary shares issued to our wafer partners and Israel Corp. in connection with their committed investments are subject to (i) restrictions on transfer and (ii) registration rights. These transfer restrictions have been extended by two years to January 2006 with respect to the ordinary shares that represent 70% of the ordinary shares held by such investor which were acquired in connection with (a) its committed investments which are held in January 2004, (b) our September 2002 rights offering and (c) ordinary shares issued upon the conversion of its wafer credits as described above.

Technology Agreement with Toshiba. In April 2000, we entered into a technology transfer agreement with Toshiba Corporation pursuant to which Toshiba has transferred to us certain advanced CMOS technologies for use in Fab 2. In exchange for license and technology fees and royalties, Toshiba has provided us with recipes, know-how and patent licenses and has trained a group of our engineers and managers. We have internally developed an enhanced industry compatible version of the CMOS process technology, as well as specialized technologies such as CMOS image sensor and mixed signal. Subject to termination for cause by Toshiba, our licenses under this agreement are perpetual. Our agreement with Toshiba does not include any non-competition arrangements. Toshiba has invested \$10 million in our equity in exchange for 772,667 ordinary shares pursuant to this agreement. We also agreed to reserve a portion of our Fab 2 capacity for Toshiba for a period ending in December 2005.

Technology Transfer and Development Agreement with Motorola (now Freescale). In September 2002, we entered into a technology transfer and development agreement with Motorola, Inc. (which was later assigned to Freescale) pursuant to which Freescale has and will transfer to us its 0.13-micron HiPerMOS7 CMOS process technology for Fab 2 as well as co-develop with us an industry-standard compatible version of the process technology. Subject to termination for cause by Freescale, our licenses under this agreement are perpetual. Our agreement with Freescale does not include any non-competition arrangements.

Joint Development Agreement. In June 2002, we entered into an agreement for the joint development of 0.18-micron embedded microFLASH technology with a Japanese manufacturer. The Japanese manufacturer granted to us the non-exclusive right to utilize, on a royalty-free basis, our jointly developed technology, which is based on its 0.18-micron process technology, for foundry services and for the manufacture and sale of our own proprietary products. We granted the Japanese manufacturer a royalty-free, non-exclusive license with respect to our microFLASH technology for manufacturing semiconductor devices that utilize our jointly developed technology for its own semiconductor business.

In April 2005, the Japanese manufacturer elected, and we agreed, to cease the joint development of certain technology and to terminate the agreement. According to the terms of the termination agreement, the Japanese manufacturer paid us, net of deducted tax, \$2.25 million. In addition, each party expressly released the other party from any obligations or liabilities of any nature in connection with the joint development agreement. The license rights granted to the parties continue pursuant to the terms of the original agreement.

Credit Facility. In January 2001, we entered into a credit facility with two leading Israeli banks, Bank Hapoalim and Bank Leumi, pursuant to which the banks committed to make available to us up to \$550 million in loans for Fab 2. As a result of our reduction of the total project cost of Fab 2 through the renegotiation of equipment prices and a change of equipment suppliers, in January 2002, we and our banks agreed to amend the credit facility such that the total amount of loans committed by the banks was reduced to \$500 million. Pursuant to the comprehensive amendment to the credit facility signed on November, 11, 2003, the loans were to be drawn down through December 2004 and are repayable as follows: (i) with respect to loans received by us through December 31, 2003, we repaid our banks on December 31, 2003 all payments due by such date, amounting to \$431 million and, concurrently, drew down an equivalent amount from our banks on such date to be repaid in 12 quarterly installments commencing on March 31, 2007 and bearing interest, payable quarterly, at LIBOR plus 2.5%, and (ii) with respect to loans received after December 31, 2003 (amounting to \$66.0 million), we will repay our banks, in 12 quarterly installments, or before the maturity date of the facility, commencing three years from the drawdown date of each loan and bearing interest, payable quarterly, at LIBOR plus 2.5%. As of December 31, 2004, we have drawn \$497 million in loans. We paid the banks an annual commitment fee of 0.25% on any unused portion of the facility. Under the terms of the amended facility agreement, (i) Fab 2 must have full manufacturing capacity of 33,000 wafer starts per month by December 31, 2007; (ii) there are limitations on changes of ownership which generally requires that, through January 2006, (a) our three largest wafer partners not sell the shares they purchased in connection with each of their \$75 million investments in our shares other than a portion of their holdings which may be sold prior to this date and (b) Israel Corp. hold during this period at least the higher of (i) eight million of our ordinary shares or (ii) 16.5% of our issued share capital less two million ordinary shares, with

portions of the shares held by our wafer partners being released from these restrictions through January 2008 and January 2009 with respect to Israel Corp.; and (iii) additional conditions and covenants, including restrictions on debt and a prohibition on the distribution of dividends prior to 2008.

Under the terms of the amended facility agreement, we must also meet certain financial ratios. For any quarter, the “life of loan coverage ratio” (which is the ratio of our Fab 2 net cash flow to our total debt related to Fab 2 in any quarter) is not permitted to be less than 1.3 at any time. In addition, our ratio of equity to assets is not permitted to be less than 0% until the end of 2006, 20% during 2007 and 30% thereafter, until the termination of the facility agreement. The facility agreement also provides that we must comply with additional financial covenants relating to quarterly sales and quarterly earnings before interest, taxes, depreciation and amortization (quarterly EBITDA). As of December 31, 2004, due mainly to the recent and current slow-down in the semiconductor industry, we did not comply with certain of the above financial ratios and covenants. We prepared an updated Fab 2 working-plan for 2005 based on prevailing and forecasted market conditions. We requested our banks to amend the financial ratios and covenants in order to align them with the updated Fab 2 working-plan. In January 2005, we signed a waiver letter agreement with our banks according to which the banks waived our non-compliance with certain financial ratios and covenants for the fourth quarter of 2004. Said agreement also amended certain of the financial ratios and covenants that we are required to comply with during 2005. Currently, we estimate that we may not comply with certain of the financial ratios and covenants for the third quarter of 2005 and thereafter. In connection with the negotiations for a definitive amendment to our credit facility agreement with our banks following the signing of a letter of intent in May 2005, we have submitted to our banks an updated Fab 2 working-plan based on prevailing and forecasted market conditions and requested our banks to amend the financial ratios and covenants in order to align them with the updated Fab 2 working-plan. While the banks have waived our past noncompliance, should we fail to comply with our covenants, and our banks do not waive our non-compliance, the banks may require us to immediately repay all loans made by them to us, plus penalties, and the banks would be entitled to exercise the remedies available to them under the credit facility, including enforcement of their lien against all our assets.

Pursuant to our credit facility agreement, we have to raise an aggregate amount of \$152 million from specified financial sources by December 31, 2005. As of the date of this annual report, we have raised \$126 million out of the \$152 million we have to raise. The amendment to the credit facility provides that, should we fail to meet any of the fundraising obligation, the banks will have the option to demand that we consummate a rights offering under the following terms:

- The amount of the rights offering shall equal the difference between the amount actually raised towards the failed financing obligation and what was to be raised;
- We will offer convertible securities to all of our shareholders in units comprised of convertible debentures, convertible into, and warrants exercisable for, our ordinary shares so that each unit will include 45% warrant coverage of the amount of shares that may be

issued on the basis of an assumed conversion of the convertible debentures;

- Each convertible debenture will bear interest at the rate of 6% per year; 1% interest will be payable once a year, and the balance of such interest (5%) will accrue until the maturity of the convertible debentures on a compounded basis, which maturity shall not be earlier than December 31, 2009;
- The convertible debentures (principal and compounded interest) will be convertible into our ordinary shares at a rate equal to the amount that was to be raised plus the accumulated interest at such time of conversion divided by the lower of a (i) 50% discount of the market price of our shares at the close of trading on the trading day immediately prior to the date of the prospectus relating to the rights offering; or (ii) 50% discount of the average market price of our ordinary shares during the 15 consecutive trading days prior to the date of the prospectus relating to the rights offering;
- Each warrant will be exercisable into one of our ordinary shares at such exercise price, which is equivalent to 80% of the lower of (i) the trading price for our ordinary shares at the close of trading on the trading day immediately prior to the date of the prospectus relating to the rights offering; or (ii) the average trading price for our shares during the 15 consecutive trading days preceding the date of the prospectus relating to the rights offering; and
- The warrants shall expire five years from their date of issuance.

If our banks exercise this option, Israel Corp., our current major shareholder, has undertaken to our banks to exercise all of the rights Israel Corp. receives in the rights offering. In addition, as part of Israel Corp.'s commitment, it will purchase from us additional securities in a private placement on the same terms as the rights offering, in an amount equal to 50/93 of the difference between what we actually raised towards the failed financing obligation and what was to be raised, less amounts raised in the rights offering, if any (including less any amounts invested in the rights offering in connection with Israel Corp.'s exercise of its own rights). As a result of our satisfying certain of our fund raising obligations, the aggregate maximum amount of Israel Corp.'s undertaking to our banks was effectively reduced to \$14 million from \$50 million. If certain of our shareholders participate in the above investments, then their investments will be deemed to be investments made by Israel Corp. towards its maximum commitment. In the event that the rights offering cannot be completed, Israel Corp. has undertaken to purchase from us in a private placement 50/93 of the amount we were to raise in the rights offering. Israel Corp. may fulfill its investment commitments through IC Tech.

Israel Corp.'s commitment and our obligation to consummate a rights offering expire on the earlier of: (i) such time that we will fulfill our fundraising obligation to raise an aggregate of \$152 million under the credit facility, (ii) such time as Israel Corp. has invested its maximum

commitment as described above (\$14 million), or (iii) June 30, 2006. Under certain conditions, the term of Israel Corp.'s commitment and our corresponding obligations may be reduced.

Following the receipt of the above described investments from Israel Corp., our banks will permit us to draw additional funds under the credit facility at a ratio of \$43 for every \$50 invested by Israel Corp., up to \$12 million in the aggregate, which will be repayable by December 31, 2007. Should we draw down loans using this additional amount of our credit facility, our banks will be issued 30% warrant coverage of the amount drawn down, based on the average closing price of our ordinary shares during the 15 consecutive trading days prior to the time we draw down such loans.

In consideration for Israel Corp.'s commitment to complete this investment, we agreed to issue warrants to Israel Corp. comprised of a commitment fee and a subscription fee: The commitment fee equals 1.0% of the initial \$50 million commitment less Israel Corp.'s portion of a theoretical rights offering if held on November 11, 2003 (the date we signed the amendment to the credit facility). We therefore issued warrants for the purchase of 58,906 of our ordinary shares at an exercise price of \$6.17 (the 15 trading day average closing price of our shares on Nasdaq prior to the date of the November 11, 2003 amendment with our banks). The subscription fee will equal 5% of the total amount of money invested by Israel Corp. in consideration for all of the unsubscribed rights that it actually purchases. The exercise price for the warrants to be issued with respect to the subscription fee will be the 15 trading day average closing price of our shares prior to the date of the rights offering prospectus. All the warrants issued with respect to the commitment fee and the subscription fee shall expire five years from their date of issuance.

We have agreed to indemnify Israel Corp. for any liabilities they incur with respect to these arrangements, following the execution of Israel Corp.'s undertaking, up to a maximum of \$100 million as follows: up to \$25 million cash and any amount exceeding such \$25 million limit will earn interest at LIBOR plus 2.5% and will be paid on the same terms that we repay our loans to our banks.

Our November 11, 2003 amendment to the credit facility further provides that upon certain triggering events (such as the commencement of bankruptcy or receivership, proceedings against us ordered by a court of competent jurisdiction or the prior determination of an arbitrator that bankruptcy or receivership proceedings would be issued by a court against us were a petition to be filed with a court seeking reorganization or arrangement under applicable bankruptcy law or our requesting creditor protection), our banks will be able to bring a firm offer made by a potential investor to purchase our shares at the price provided in the offer. In such case, we shall be required thereafter to procure a rights offering to invest up to 60% of the amount of this offer on the same terms. If the offeror intends to purchase a majority of our outstanding share capital, the rights offering will be limited to allow for this, unless Israel Corp. and the wafer partners (excluding QuickLogic) agree to exercise in a rights offering rights applicable to their shareholdings and agree to purchase in a private placement enough shares to ensure that the full amount of the offer is invested.

In May 2005, we signed a letter of intent with our banks which provides for financing in the amount of up to \$30 million, subject to, among other things, a similar amount being raised by us from investors. To date, certain of our equity investors and wafer partners have informed us of

their willingness to invest \$23.5 million towards such funding by investors. The letter of intent is subject to the execution of a definitive amendment to our credit facility agreement, which we are currently negotiating.

If, as a result of any default, our banks were to accelerate our obligations, we would be obligated to immediately repay all loans made by the banks, plus penalties, and the banks would be entitled to exercise the remedies available to them under the credit facility, including enforcement of their lien against all our assets. An event of default under the credit facility and the subsequent enforcement by the banks of their remedies under the credit facility may result in the cancellation of all or a portion of our Fab 2 Investment Center grants and tax benefits and in the Investment Center requiring us to repay all or a portion of grants already received (\$154.1 million as of March 31, 2005).

In January 2001, we also issued the banks warrants to purchase an aggregate of 400,000 ordinary shares at a purchase price of \$6.20 per share, exercisable until January 2006. Pursuant to the November 11, 2003 amendment to the credit facility, we issued our banks additional five year warrants to purchase an aggregate of 896,596 ordinary shares at a purchase price of \$6.17 per share, exercisable until December 2008. In addition, in the event that our banks increase our credit facility as described above, we will issue our banks additional five-year warrants equivalent to 30% of the amount drawn down based on the average closing price of our ordinary shares during the 15 trading days prior to the time we draw down such loan.

We have registered liens in favor of our banks on substantially all of our present and future assets. The agreements with our banks restrict our ability to place liens on our assets (other than to the State of Israel in respect of investment grants and to Siliconix in respect of assets purchased under our agreement with it) without the prior consent of the banks.

Investment Center Grants. In December 2000, the Israeli government's Investment Center approved an investment program in connection with Fab 2. The approval certificate provides for government grants equal to 20% of qualified investments up to \$1.25 billion (i.e., up to \$250 million), subject to customary conditions and other conditions, including a requirement that approximately \$400 million of our Fab 2 funding consist of paid-in-capital and that \$550 million of our Fab 2 funding be obtained by way of a credit facility from commercial banks (which amount was subsequently reduced to \$500 million with the consent of the Investment Center). We have registered a lien on our assets for the benefit of the Investment Center which ranks subordinate to that of our banks. The approval certificate also provides for a tax holiday on all taxable income related to Fab 2 for the first two years of undistributed profitable operations. As of December 31, 2004, we had received \$150.6 million in grants from the Investment Center, and raised approximately \$385 million as paid in capital towards the \$400 million requirement described above. As long as we comply with the terms of our approval certificate, we are not required to make royalty payments or any other payments under the terms of our Investment Center grants.

To be eligible to receive grants, we are required to invest minimum amounts on an annual basis. We notified the Investment Center of our reduced rate of annual investments and in July 2004, we received approval of our revised investment schedule from the Investment Center. In addition, we are required to complete our Fab 2 investments by the end of 2005, which we do not currently expect to satisfy. Israeli law limits the ability of the Investment Center to extend this

time limitation, unless approved through an expansion plan. We have been holding discussions with the Investment Center to achieve satisfactory arrangements to approve a new expansion program that shall commence on January 1, 2006. In April 2005, at the Investment Center's request, we submitted a revised business plan to the Investment Center for the period commencing on January 1, 2006. During 2005, we received letters from the Israeli Minister of Industry, Trade and Employment and from the General Manager of the Investment Center stating that they will act under Israeli law to support such expansion. However, there can be no assurance that we will obtain the Investment Center's approval for the new expansion program and we cannot estimate the outcome of our efforts to obtain such approval.

Since the inception of our financing activity for Fab 2, we have completed the following public offerings:

Sale of Units. In January 2002, we completed a sale of units in Israel, composed of NIS 110,579,800 principal amount of convertible unsecured subordinated debentures and 2,211,596 options, resulting in net proceeds of approximately \$21.5 million. Each debenture is NIS 1 in principal amount, and is adjusted to reflect increases in the Israeli Consumer Price Index and bears interest at a rate of 4.7% per annum, payable yearly commencing January 20, 2003. Principal is payable in four installments beginning in January of 2006 through 2009. Prior to December 31, 2008, the debentures are convertible into ordinary shares at a conversion rate of one ordinary share per NIS 41 principal amount of debentures linked to the Israel Consumer Price Index. Each option is exercisable into one ordinary share until January 20, 2006 at an exercise price of NIS 39 (as of December 31, 2004 – NIS 41.20, \$9.56), linked to the Israel Consumer Price Index.

Rights Offering. In September 2002, we distributed to our shareholders and certain of our employees in Israel and the United States rights to purchase ordinary shares and warrants to purchase our ordinary shares. Substantially all of the rights exercised in connection with the rights offering were exercised by Israel Corp. and our major wafer partners. The rights offering resulted in net proceeds of approximately \$19.7 million.

Underwritten Public Offering. In January 2004, we completed an underwritten public offering in the United States of 11.44 million of our ordinary shares at a price to the public of \$7.00 per share. The underwritten public offering resulted in net proceeds of approximately \$75.1 million.

C. RESEARCH AND DEVELOPMENT, PATENTS AND LICENSES

Our research and development activities have related primarily to our process development and microFLASH module design efforts, and have been sponsored and funded by us with some participation by the Israeli government. Research and development expenses for the years ended December 31, 2004, 2003 and 2002 were \$17.1 million, \$20.7 million and \$17.0 million net of government participation of \$1.5 million, \$1.1 million and \$1.2 million, respectively. We have also incurred costs in connection with the transfer of Toshiba and Motorola (now Freescale) technology for use in Fab 2, some of which have been amortized over the estimated economic life of the technology following the commencement of production in Fab 2 during the third quarter of 2003 (see also in this Item "Critical Accounting Policies – Depreciation and Amortization of Fab 2 Assets"). For a description of our research &

development policies and our patents and licenses, see “Item 4. Information on the Company—4.B. Business Overview.”

D. TREND INFORMATION

The semiconductor industry has historically been highly cyclical on a seasonal and long-term basis. On a long-term basis, the market has fluctuated, cycling through periods of weak demand, production overcapacity, excess inventory and lower sales prices and periods of strong demand, full capacity utilization, product shortages and higher sales prices.

There is a trend within the semiconductor industry toward ever-smaller features and ever-growing wafer sizes. State-of-the-art fabs are currently using process geometries of 90-nanometer and below and wafer sizes of 300-mm. As demand for smaller geometries increases, there is downward pressure on the pricing of larger geometry products and increasing underutilization of fabs that are limited to manufacturing larger geometry products, which results in less profitability for manufacturers of larger geometry products. Fab 1 is limited to geometries of 0.35-micron and above on 150-mm wafers and Fab 2 currently operates primarily at process geometries of 0.18-micron and produces 200-mm wafers. We are in the process of completing the qualification of the 0.13-micron technology transferred from Freescale.

E. OFF-BALANCE SHEET ARRANGEMENTS

We are not a party to any material off-balance sheet arrangements. In addition, we have no unconsolidated special purpose financing or partnership entities that are likely to create material contingent obligations.

F. TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS

The following table summarizes our contractual obligations and commercial commitments as of December 31, 2004:

Contractual Obligations	Total	Payment Due					
		Less than 1 Year	2 Years	3 Years	4 Years	5 Years	After 5 Years
(in thousands)							
Short-term debt and other current liabilities (1)	\$73,012	\$73,012	-	-	-	-	-
Long-term debt (2)	618,532	29,803	32,863	182,115	185,178	174,108	14,465
Convertible Debentures (3)	31,577	1,274	8,054	7,735	7,416	7,098	-
Long-term liability in respect to customer advances	20,000	600	1,532	2,572	2,168	2,123	11,005
Operating leases	10,614	4,137	3,861	2,443	173	-	-
Purchase obligations in connection with equipment purchases(4)	40,410	38,579	1,831	-	-	-	-
Other long-term liabilities	9,945	--	2,894	2,463	--	--	4,588
Other purchase obligations	36,085	5,358	2,652	2,652	2,652	2,652	20,119
Total Contractual Obligations	\$840,175	\$152,763	\$53,687	\$199,980	\$197,587	\$185,981	\$50,177

- (1) Short-term debt and other current liabilities include our trade accounts payable for equipment and services that have already been supplied.
- (2) Long-term debt includes principal and interest payments in accordance with the terms of the credit facility amended in November 2003, as well as the impact of our hedging transactions.
- (3) Total amounts include expected principal and interest payments for the presented periods.
- (4) These amounts primarily consist of ordered equipment that has not yet been received. In addition to these contractual obligations, we have committed approximately \$0.6 million in standby letters of credit and guarantees to secure our Fab 2 construction and equipment obligations.

The above table does not include other contractual obligations or commitments we have, such as undertakings pursuant to royalty agreements, commissions and service agreements. We are unable to reasonably estimate the total amounts or the time table for such payments to be paid under the terms of these agreements, as the royalties, commissions and required services are a function of future sales revenues, the volume of business and hourly-based fees. In addition,

the above table does not include our long-term liability with respect to our wafer partner advances, which as of December 31, 2004, amounted to \$45.0 million that may be utilized by them against future purchases of Fab 2 products. We are unable to reasonably estimate the total amounts that may be utilized by our wafer partners since we can not reasonably estimate their future orders in the periods set forth in the above chart; and even if we could reasonably estimate our wafer partners' future orders, we are unable to determine which portion of the advances they are entitled to utilize against purchases will be chosen by them to be converted into our fully paid ordinary shares, as provided under the amendment with our wafer partners (see "Fab 2 Agreements").

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

Directors and Senior Management

Set forth below is information regarding the members of our administrative, supervisory or management bodies and our directors.

Name	Age	Title
Russell C. Ellwanger.....	50	Chief Executive Officer
Oren Shirazi.....	35	Acting Chief Financial Officer
Doron Simon	40	President, Tower Semiconductor USA, V.P. Marketing, Tower Semiconductor Ltd.
Dr. Itzhak Edrei.....	45	Vice President of Research and Development
Rafi Nave.....	55	Vice President of Customer Services
Erez Taoz.....	50	Vice President, Fab 2 General Manager
Dalit Dahan	37	Vice President of Human Resources
Hagay Dvir	41	Vice President of Sales, Europe and Asia
Nati Somekh Gilboa	30	Corporate Secretary and General Counsel
Rafi Mor	41	Vice President, Fab 1 Manager
Directors		
Ehud Hillman	52	Acting Chairman
Russell C. Ellwanger	50	Director
Yossi Rosen.....	65	Director
Dr. Eli Harari.....	60	Director
Miin Wu	56	Director
N.D. Reddy.....	66	Director
Hans Rohrer	55	Independent Director
Tal Yaron-Eldar	41	Independent Director

Russell C. Ellwanger has served as our Chief Executive Officer since May 2005. From 1998 to 2005, Mr. Ellwanger served in various executive positions for Applied Materials Corporation, including Group Vice President, General Manager of the Applied Global Services (AGS), from 2004 to 2005, Group Vice President, General Manager of the CMP and Electroplating Business Group, from 2002 to 2004. Mr. Ellwanger also served as Corporate Vice President, General Manager of the Metrology and Inspection Business Group, from 2000 to 2002, during which he was based in Israel. From 1998 to 2000, Mr. Ellwanger served as Vice

President of Applied Materials' 300-mm Program Office, USA. Mr. Ellwanger served as General Manager of Applied Materials' Metal CVD Division from 1997 to 1998 and from 1996 to 1997, Mr. Ellwanger served as Managing Director of CVD Business Development, during which he was based in Singapore. In addition, Mr. Ellwanger held various managerial positions in Novellus System from 1992 to 1996 and in Philips Semiconductors from 1980 to 1992.

Ehud Hillman has served as Acting Chairman of the Board since May 2005. Mr. Hillman served as Acting Chief Executive Officer from February 2005 to April 2005. Mr. Hillman has served as a director from October 1996 through August 1999 and was reappointed to the Board in January 2000. In January 2001, Mr. Hillman was appointed Vice Chairman of the Board and resigned as Vice Chairman in March 2005. Mr. Hillman serves on the Tender Committee. Since March 2001, Mr. Hillman has served as President and Chief Executive Officer of ICTech, a subsidiary of Israel Corp., which is one of our current principal shareholders. Since February 2004, Mr. Hillman has served as a member of the Board of Directors of ZIM Integrated Shipping Services. Mr. Hillman served as Chief Financial Officer of Israel Corp. from September 1996 to 1997 and as Executive Vice President and Chief Financial Officer of Israel Corp. from May 1997 to 2001. Mr. Hillman served as a director of several subsidiaries of Israel Corp., including Israel Chemicals Ltd., ZIM Integrated Shipping Services and others. Prior thereto, Mr. Hillman was Vice President and Controller of Clal Industries Ltd. and a director of several companies in the Clal Group.

Yossi Rosen has served as a director and Chairman of the Stock Option and Compensation Committee since February 2005. Since November 30, 1998, Mr. Rosen has served as the President and CEO of The Israel Corporation. Mr. Rosen is also Chairman of the Board of Directors of Israel Chemicals Ltd. and a director of its subsidiaries, a member of the Board of Directors and Executive Committee of ZIM Integrated Shipping Services, Chairman of the Board of Dead Sea Magnesium Ltd. and a director of Oil Refineries Ltd. Mr. Rosen was previously President of Mashav Initiating & Development Ltd. and Chairman of the Board of various industrial companies, such as Neshor cement. Mr. Rosen holds a BA in Economics from the Hebrew University of Jerusalem and an MA in Business Management from the Hebrew University of Jerusalem.

Dr. Eli Harari has served as a director since January 2001. Dr. Harari serves on the Stock Option and Compensation Committee. Dr. Harari, the founder of SanDisk Corporation, has served as President and Chief Executive Officer and as a director of SanDisk since 1988. In 1983, Dr. Harari founded Wafer Scale Integration, or WSI, a semiconductor company acquired by STMicroelectronics in 2000, and served as WSI's President and Chief Executive Officer from 1983 to 1986 and as Chairman and Chief Technical Officer from 1986 to 1988.

Miin Wu has served as a director since January 2001. Mr. Wu serves as President, Chief Executive Officer and an Executive Director of Macronix International and has been an executive officer of Macronix since its formation in 1989. Mr. Wu received both a B.S. and an M.S. in Electrical Engineering from National Cheng-Kung University in Taiwan as well as an M.S. in Material Science & Engineering from Stanford University.

N. Damodary Reddy has served as a director since January 2001. Mr. Reddy serves on the Audit Committee. Mr. Reddy is the co-founder of Alliance Semiconductor Corporation and has served as its Chairman of the Board, President and Chief Executive Officer since its

inception in February 1985. Mr. Reddy also served as Chief Financial Officer of Alliance Semiconductor from June 1998 to January 1999 and from May 2001 until April 2002. From September 1983 to February 1985, Mr. Reddy served as President and Chief Executive Officer of Modular Semiconductor, Inc., and from 1980 to 1983, he served as manager of Advanced CMOS Technology Development at Synertek, Inc., a subsidiary of Honeywell, Inc. Prior to that time, Mr. Reddy held various research and development and management positions at Four Phase Systems, a subsidiary of Motorola, Inc., Fairchild Semiconductor and RCA Technology Center. He holds an MS degree in Electrical Engineering from North Dakota State University and an MBA from Santa Clara University.

Hans Rohrer has been a director and member of the Audit Committee since April 2002. Since May 2002, Mr. Rohrer serves as President and Chief Executive Officer of Acuid Corporation. From 1999 to 2002, Mr. Rohrer served as President of Taiwan Semiconductor Manufacturing Company — Europe (TSMC – Europe). Mr. Rohrer has held various engineering, marketing, sales and general management positions, including Vice President and General Manager, Europe, with National Semiconductor between 1980 and 1998. Mr. Rohrer started his career in the semiconductor industry with Texas Instruments.

Tal Yaron-Eldar has been a director and member of the Audit Committee and the Stock Option and Compensation Committee since January 2005. Since September 2004, Ms. Yaron-Eldar serves as Chief Executive Officer of Arazim Investment Ltd. and she is a partner in Cohen, Cohen, Yaron-Eldar & Co. law offices. Ms. Yaron-Eldar served as Israel's Income Tax and Real Property Tax Commissioner from 2002 to 2004. Between 1998 and 2001, Ms. Yaron-Eldar served as the Chief Legal Advisor to the Customs and V.A.T. Authority. During the preceding ten years, Ms. Yaron-Eldar served in various positions with Israel's Income Tax and Real Property Tax Commission, including Senior Head of its legislation department and Deputy Chief Legal Advisor. Ms. Yaron-Eldar holds a master's degree in business and a bachelor's degree in law from Tel-Aviv University and is a member of the Israeli Bar Association.

Oren Shirazi was appointed as our acting Chief Financial Officer in November 2004. Mr. Shirazi joined us in October 1998 and served as our controller since July 2000, after serving as vice controller since October 1998. Prior to joining us, Mr. Shirazi was employed as an Audit Manager in the accounting firm of Ratzkovski-Fried & Co., which merged into Ernst & Young (Israel). Mr. Shirazi is a Certified Public Accountant in Israel (CPA). He has an MBA from the Graduate School of Business of Haifa University with honors and a BA in economics and accounting from the Haifa University.

Doron Simon was appointed Vice President of Marketing in November 2003 and has been President of Tower Semiconductor USA since April 2001. Since 1993, Mr. Simon has served in various capacities, including Director of Customer Service, Director of Planning and Turnkey Operations and Director of Worldwide Sales Operations. Prior to 1993, Mr. Simon was employed by National Semiconductor in Migdal Haemek as their Production Control Manager. Mr. Simon earned a B.Sc. in Industrial Engineering from the Technion – Israel Institute of Technology and an MBA from Herriot-Watt University Edinburgh, Scotland.

Hagay Dvir was appointed as Vice President of Sales, Europe and Asia, in February 2005, having served as Director of Sales since March 2004. From 2001 to 2004, Mr. Dvir served as Customer Program Manager, Director of Customer programs and Director of Applications.

From 1998 to 2001, before joining our company, Mr. Dvir was employed by Oren Semiconductor Ltd. as Director of Operations. From 1990 to 1998, Mr. Dvir was employed by National Semiconductor Ltd. as Product Engineering Manager and Project Leader. Mr. Dvir earned a B.Sc. in Electrical Engineering from Ben Gurion University and an MBA from the Technion – Israel Institute of Technology.

Nati Somekh Gilboa was appointed as Corporate Secretary and General Counsel in March 2005, as served as our Associate General Counsel since May 2004. From 2001 to 2004, Ms. Somekh Gilboa was employed by Goldsobel & Kirshen, Adv. Ms. Somekh Gilboa holds an LL.M. and J.D. from Boston University and a B.A. from Johns Hopkins University. She is a member of the Israeli Bar Association and the New York bar.

Dr. Itzhak Edrei was appointed Vice President of Research and Development in August 2001, having served as Director of Research and Development since 1996. From 1994 to 1996, Dr. Edrei served as our Device and Yield Department Manager. Prior to joining Tower, Dr. Edrei was employed by National Semiconductor as Device Section Head. Dr. Edrei earned his Ph.D. in physics from Bar Ilan University and his post-doctorate from Rutgers University.

Rafi Nave was appointed Vice President of Customer Services in August 2003. From 1996 to 2003, Mr. Nave served as Vice President of Research and Development for NDS Group. From 1974 to 1995, Mr. Nave was employed by Intel Corporation in a variety of positions of increasing responsibility, among them chip design engineer and General Manager of Intel's design center in Israel. Mr. Nave earned master and bachelor degrees in electrical engineering from the Technion – Israel Institute of Technology.

Erez Taoz was appointed Vice President and Fab 2 General Manager in March 2003, having served as VP and Fab 1 General Manager since August 2001 and as Director of Fab 1 since 1999. Mr. Taoz joined Tower in 1996 as our Fab 1 Director of Manufacturing. Prior to that time, Mr. Taoz served as VP of Operations at Cyclone Aviation Products. Mr. Taoz earned a B.Sc. in mechanical engineering from the Technion.

Dalit Dahan was appointed Vice President of Human Resources in April 2004. Ms. Dahan joined us in November 1993 and served as Personnel Manager since April 2000, after having served as Compensation & Benefits Manager and in various other positions in the Human Resources Department. Prior to joining us, Ms. Dahan served as Manager of the North Branch of O.R.S - Manpower Company for 3 years. Ms. Dahan holds a bachelor's degree in social science from Haifa University and an MBA from the University of Derby.

Rafi Mor was appointed Vice President and Fab 1 Manager in August 2003, having served as Senior Director and Fab 1 Manager since March 2003. From November 2000 to March 2003, Mr. Mor served as Senior Director of Process Device & Yield of Fab 1. From 1998 to 2000, Mr. Mor served as Director of Equipment Reliability & Support of Fab 1. Previously, Mr. Mor was employed by National Semiconductor in various engineering and management capacities. Mr. Mor earned master and bachelor degrees in chemical engineering from Ben Gurion University.

B. COMPENSATION

For the years ended December 31, 2004 and 2003, we paid to all our directors and senior management, as a group, an aggregate of \$1.2 million and \$0.9 million, respectively, in salaries, fees and bonuses, excluding management fees paid to a subsidiary of Israel Corp. (see Item 7 “Major Shareholders and Related Party Transactions—Related Party Transactions”). The total amount set aside or accrued in the year ended December 31, 2004 to provide for severance, retirement and similar benefits for such persons was \$0.3 million. No directors received cash compensation other than the annual and meeting fees described below. During 2004, our former Chief Executive Officer and Chairman of our Board of Directors, Mr. Carmel Vernia received annual compensation at a total cost to us of approximately \$210,000, including customary benefits provided to our officers. As of December 31, 2004, our directors, excluding Mr. Vernia (see Item 7 “Major Shareholders and Related Party Transactions—Related Party Transactions”) were granted options to purchase an aggregate of 240,000 ordinary shares at a weighted average exercise price of \$8.41 per share. During February 2005, we granted our two new directors 80,000 options at an exercise price of \$1.87. These options will become exercisable according to various vesting schedules over four years and generally remain exercisable for five years following the vesting date.

In April 2005, our Board of Directors approved the grants of options to purchase up to 1,325,724 Ordinary Shares to our new appointed Chief Executive Officer, who was also appointed as a director. These options are exercisable at an exercise price of \$1.56, the opening market price of our shares on the date of the board approval of the grants. Options granted under the plan vest over a four-year period, 25% over each year of employment. The options granted are exercisable for a period of ten years from the date of grant. If as a result of future equity financings (excluding the exercise or conversion of currently existing warrants, options or other rights to acquire the Company's securities), the number of total options granted to our CEO through April 30, 2007 would represent less than 1.2% of our total number of issued and outstanding shares as of such date, additional options will be granted to the CEO to represent a 1.2% holding of the total number of our issued and outstanding shares as of April 30, 2007. The grant of options is subject to the approval of our shareholders.

During the year ended December 31, 2004, we granted a total of 364,913 options to purchase ordinary shares to our senior managers as a group. These options have a weighted average exercise price of \$3.04 per share with vesting periods over four years and expire in 2014.

Since October 2001, our directors have foregone their directors' fees, except for fees required by law to be paid to our independent directors, consisting of a NIS 26,000 (approximately \$6,030) annual fee plus NIS 915 (approximately \$210) per meeting. The aggregate amount payable to our independent directors with respect to the year ended December 31, 2004 was approximately \$14,000. The annual and meeting fees paid to our independent directors are adjusted semiannually to reflect changes to the published guidelines in Israel for independent directors.

In May 2005, our board of directors approved the grant of 2,900,000 options to our employees at an exercise price equal to the market price of our shares as of the date of grant. The options will vest over a four-year period from the date of grant and will expire ten years from such date.

C. BOARD PRACTICES

Our Articles of Association provide that the Board of Directors shall consist of at least five and no more than 11 members. All directors, except for independent directors, hold office until their successors are elected at the next annual general meeting of shareholders. Pursuant to a shareholders agreement described in “Certain Transactions,” Israel Corp., SanDisk, Alliance Semiconductor and Macronix have agreed to vote all their respective shares for nominees designated by each shareholder and for the election of a nominee of Israel Corp. as Chairman of the Board. Our officers are appointed by the Board of Directors and (subject, in certain cases, to employment agreement provisions that require 270 days notice of termination) continue to serve at the discretion of the Board of Directors.

Our Articles of Association provide that any director may, by written notice to us, appoint another person to serve as an alternate director, and may cancel such appointment. Any person who is not already a director may act as an alternate, and the same person may not act as the alternate for more than one director at a time. The term of appointment of an alternate director may be for one meeting of the Board of Directors or for a specified period or until notice is given of the cancellation of the appointment.

None of the members of the Board are entitled to receive any severance or similar benefits upon termination of service with the Board of Directors.

Pursuant to Israeli law, we are required to appoint two independent directors. These directors must be unaffiliated with us and our principals. Any committee of the Board of Directors which is authorized to exercise any function of the Board must include at least one independent director.

Independent directors are to be elected by a majority vote at a shareholders’ meeting, provided that such majority includes at least one-third of the shares held by non-controlling shareholders voted at the meeting or the total number of shares held by non-controlling shareholders voted against the election of the director does not exceed one percent of the aggregate voting rights in the company.

The initial term of an independent director is three years and may be extended for an additional three years.

Mr. Rohrer, who currently serves as an independent director, was appointed for an initial three-year term expiring in April 2005 and was reappointed for a subsequent three-year term expiring in April 2008. Ms. Yaron-Eldar, who currently serves as an independent director, was appointed for an initial three-year term expiring in December 2007.

Independent directors may be removed only by the same percentage of shareholders as is required for their election, or by a court, and then only if the independent directors cease to meet

the statutory qualifications for their appointment or if they violate their duty of loyalty to the company.

An independent director is entitled to compensation, as provided in regulations adopted under the Israeli Companies Law, and is otherwise prohibited from receiving any other compensation, directly or indirectly, in connection with service provided as an independent director.

The Companies Law requires public companies to appoint an audit committee. The responsibilities of the audit committee include reviewing the company's financial statements, monitoring the company's independent auditors, identifying irregularities in the management of the company's business and approving related party transactions as required by law. An audit committee must consist of at least three directors, including the independent directors of the company. The chairman of the board of directors, any director employed by or otherwise providing services to the company, and a controlling shareholder or any relative of a controlling shareholder, may not be a member of the audit committee. An employee, executive officer or director of a controlling shareholder of an Israeli company may serve as a member of an audit committee under Israeli law, unless such individual controls more than 50% of the controlling shareholder. Each of our independent directors and Mr. Dan Reddy (who according to public filings is the Chairman, President, Chief Executive Officer and a 21% shareholder of Alliance Semiconductor) are members of our audit committee.

Under the Companies Law, the board of directors must appoint an internal auditor, who is recommended by the audit committee. The role of the internal auditor is to examine, among other matters, whether the company's actions comply with the law and orderly business procedure. Under the Companies Law, the internal auditor may be an employee of the company but not an office holder, an affiliate, or a relative of an office holder or affiliate, and he may not be the company's independent accountant or its representative.

Mr. Rosen, Dr. Harari and Ms. Yaron-Eldar serve on the Stock Option and Compensation Committee. The committee meets at least once a year. The primary function of our Stock Option and Compensation Committee is to approve our employee compensation policy and determine remuneration and other terms of employment for our officers and senior employees. In setting our remuneration policy, the committee considers a number of factors including:

- the overall employment market environment;
- the basic salaries and benefits available to comparable officers at comparable companies;
- the need to attract and retain officers of an appropriate caliber;
- the need to ensure such executives' commitment to the future success of our company by means of incentive schemes;
- the performance of the employee; and
- financial and operating results of our company.

D. EMPLOYEES

The following table sets forth for the last three fiscal years, the number of our employees engaged in the specified activities.

	As of December 31,		
	2004	2003	2002
Process and Product Engineering, R&D, Design	360	405	407
Manufacturing, Operations (*)	780	670	102
Manufacturing Support	124	134	208
Administration, Marketing, Finance	100	117	130
Fab 2 Construction and Technology Transfer (*)	5	45	438
Total	1,369	1,371	1,285

(*) Following the commencement of operations of Fab 2 during the third quarter of 2003, most of the employees that prior to that date were classified under Fab 2 construction and technology transfer activities are classified under manufacturing operations activities.

Except for an arrangement regarding pension contributions, we have no collective bargaining agreements with any of our employees. However, by administrative order, certain provisions of the collective bargaining agreements between the Histadrut (General Federation of Labor in Israel) and the Coordination Bureau of Economic Organizations, relating primarily to the length of the work day, minimum wages, pension contributions, insurance for work-related accidents, procedures for dismissing employees, determination of severance pay and other conditions of employment are applicable to our employees. In accordance with these provisions, the salaries of our employees are partially indexed to the Consumer Price Index in Israel.

We generally provide our employees with benefits and working conditions beyond the minimum requirements. We consider our relationship with our employees to be good, and we have never experienced a labor dispute, strike or work stoppage.

E. SHARE OWNERSHIP

All of the persons listed above under the caption "Directors and Senior Management" own ordinary shares and/or options to purchase ordinary shares. None of such persons own shares and/or options amounting to 1% or more of the outstanding ordinary shares. Information regarding our share option plans and warrants presented in Note 13B to our consolidated financial statements is incorporated herein by reference.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

Major Shareholders

The following table and notes thereto set forth information, as of May 31, 2005, concerning the beneficial ownership (as defined in Rule 13d-3 under the Securities Exchange Act of 1934) of ordinary shares by any person who is known to own at least 5% of the ordinary shares of our company. On May 31, 2005, 66,286,187 ordinary shares were issued and outstanding. The table also sets forth information as to the percentage of the ordinary shares owned by each such person in accordance with Rule 13d-3 under the Securities Exchange Act of 1934 and on a fully diluted basis.

<u>Identity of Person or Group</u>	<u>Shares Beneficially Owned</u>	<u>Percent of Class⁽¹⁾</u>	<u>Percent of Class (Diluted)⁽²⁾</u>
Israel Corporation Technologies (ICTech) Ltd. (“ICTech”) ⁽³⁾⁽⁴⁾	15,143,064 ⁽⁴⁾	22.54%	17.29%
SanDisk Corporation ⁽³⁾	10,006,115 ⁽⁵⁾	15.01%	11.42%
Alliance Semiconductor Corporation ⁽³⁾	9,266,137 ⁽⁶⁾	13.90%	10.58%
Macronix International Co. Ltd. ⁽³⁾	9,070,395 ⁽⁷⁾	13.62%	10.35%
Ontario Teachers’ Pension Plan Board (“OTPP”)	4,350,000 ⁽⁸⁾	6.43%	4.97%

(1) Assumes the holder’s beneficial ownership of all Ordinary Shares that the holder has a right to purchase within 60 days from May 31, 2005.

(2) Assumes that all currently outstanding rights to purchase Ordinary Shares have been exercised by all holders. As of May 31, 2005, a total of 21,313,680 such rights were outstanding (excluding options to purchase up to 1,325,724 shares approved by our board to be granted to our CEO but which are subject to approval of our shareholders).

(3) Pursuant to a shareholders agreement among Israel Corp., Alliance Semiconductor Corporation, SanDisk Corporation and Macronix Co. Ltd., each of Israel Corp., Alliance Semiconductor Corporation, SanDisk Corporation and Macronix Co. Ltd. may be said to have shared voting and dispositive control over

63.78% of our outstanding shares.

- (4) Based on information provided by Israel Corp., represents 14,260,504 shares currently owned by Israel Corp. and 823,656 shares issuable upon the exercise of currently exercisable warrants and 58,906 shares issuable upon exercise of warrants granted on December 2003 at an exercise price of \$6.17.
- (5) Based on information provided by SanDisk, represents 9,645,803 shares currently owned by SanDisk and 360,312 shares issuable upon the exercise of currently exercisable warrants.
- (6) Based upon information provided by Alliance, represents 8,908,390 shares currently owned by Alliance, and 357,747 shares issuable upon the exercise of currently exercisable warrants.
- (7) Based on information provided by Macronix, represents 8,773,395 shares currently owned by Macronix, and 297,000 shares issuable upon the exercise of currently exercisable warrants.
- (8) Based on information provided by OTPP, represents 3,000,000 shares currently owned by OTPP and 1,350,000 shares issuable upon the exercise of currently exercisable warrants issued pursuant to a Share Purchase Agreement dated July 23, 2002.

The voting rights of our major shareholders do not differ from the voting rights of other holders of our ordinary shares. However, certain of our major shareholders are parties to a shareholders agreement which is described in the following paragraph as a result of which they may be able to exercise control over matters requiring shareholder approval, including the election of directors and approval of significant corporate transactions.

Pursuant to a shareholders agreement dated January 18, 2001, among Israel Corp., Alliance Semiconductor, SanDisk and Macronix, such parties have agreed, among other things, to vote or cause to be voted all their respective shares for the election to the Board of Directors of nominees designated by each party, nominees recommended by the Board, the election of a designee of the Israel Corp. to serve as Chairman of the Board, and against the election of any other persons to the Board of Directors. In addition, subject to certain exceptions, each shareholder agreed to restrictions on the transfer of its shares and to maintain a minimum share ownership for five years. The shareholders agreement also provides for certain rights of first refusal.

As of June 23, 2005, there were a total of 40 holders of record of our ordinary shares, of which 27 were registered with addresses in the United States. Such United States holders were, as of such date, the holders of record of approximately 29% of our outstanding ordinary shares.

B. RELATED PARTY TRANSACTIONS

Expense Reimbursement Agreement with Israel Corp. In March 2002, we entered into an agreement with Israel Corp., pursuant to which Mr. Ehud Hillman, a director of our company currently serving as Acting Chairman of our board of directors, provides management services to our company in consideration of an annual fee of \$240,000 and \$120,000 in 2003 and 2004, respectively. The term of this agreement is for one year, with automatic renewal for successive

one-year periods thereafter, unless earlier terminated by one of the parties. Our Audit Committee, Board of Directors and shareholders approved this agreement.

Grant of Options to Ehud Hillman. In November 2000 and September 2001, we granted to Mr. Hillman, options to purchase up to 50,000 and 21,500 ordinary shares, respectively, at an exercise price of \$20.00 and \$10.75 per share, respectively, which have all vested. All options granted will remain exercisable for a period of three years from the date of vesting.

Grant of Options to Directors. During 2001, the Audit Committee, Board of Directors and shareholders approved a stock option plan pursuant to which our Board members will be granted options to purchase up to 400,000 ordinary shares. As of December 31, 2004, 240,000 options to purchase ordinary shares, of which 200,000 options were exercisable at an exercise price of \$8.88 per share, and 40,000 options were exercisable at an exercise price of \$6.08 per share, were outstanding under the plan. In February 2005, we granted additional 80,000 options under this plan at an exercise price of \$1.87. These options vest over a four-year period, according to various vesting schedules and are generally not exercisable following the fifth anniversary of their vesting date.

Exemption and Indemnification Agreements with Directors. In December 2001, we entered into exemption and indemnification agreements with the members of our Board of Directors, pursuant to which, subject to the limitations set forth in the Israeli Companies Law and our Articles of Association, they will be exempt from liability for breaches of the duty of care owed by them to the Company or indemnified for certain costs, expenses and liabilities with respect to events specified in the exemption and indemnification agreements.

C. INTERESTS OF EXPERTS AND COUNSEL

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. CONSOLIDATED STATEMENTS AND OTHER FINANCIAL INFORMATION

Our consolidated financial statements are incorporated herein by reference to pages following the signature page of this Annual Report.

Legal Proceedings

In August 2004, the United States District Court dismissed the class action filed in July 2003 by certain of our shareholders in the United States against us and certain of our directors, wafer partners and equity investors (the “Defendants”). The plaintiffs had asserted claims arising under the Securities Exchange Act of 1934, alleging misstatements and omissions made by the Defendants in materials sent to our shareholders in April 2002 with respect to the approval of an amendment to the investment agreements with our Fab 2 investors. In December 2004, one of the lead plaintiffs filed an appeal of the decision dismissing the complaint. The Company believes that the complaint is without merit and is vigorously contesting it.

From time to time we are a party to various litigation matters incidental to the conduct of our business. There is no pending or threatened legal proceeding to which we are a party, that, in the opinion of management, is likely to have a material adverse effect on our future financial results or financial condition.

B. SIGNIFICANT CHANGES

Not applicable.

ITEM 9. THE OFFER AND LISTING

Markets and Share Price History

The primary trading market for our ordinary shares is the Nasdaq National Market, where our shares are listed and traded on the under the symbol “TSEM.” The following table sets forth, for the periods indicated, the high and low reported sales prices of the ordinary shares on the Nasdaq National Market:

Period	High (\$)	Low (\$)
May 2005	1.81	1.56
April 2005	1.90	1.45
March 2005	1.86	1.36
February 2005	2.06	1.64
January 2005	2.38	1.78
December 2004	2.45	2.00
First Quarter 2005	2.38	1.36
Fourth quarter 2004	3.66	1.62
Third quarter 2004	5.96	2.95
Second quarter 2004	7.20	4.87
First quarter 2004	10.80	6.22
Fourth quarter 2003	7.90	4.00
Third quarter 2003	5.30	4.02
Second quarter 2003	6.46	2.78
First quarter 2003	3.56	2.16
2004	10.80	1.62
2003	7.90	2.16
2002	8.50	3.11
2001	17.12	3.80
2000	43.50	10.38

In January 2001, our shares commenced trading on the Tel Aviv Stock Exchange (TASE) in Israel under the symbol “Tower.” The following table sets forth, for the periods indicated, the high and low reported sales prices, in NIS, of the ordinary shares on the Tel Aviv Stock Exchange:

Period	High (NIS)	Low (NIS)
May 2005	7.40	6.85
April 2005	8.00	6.76
March 2005	8.30	6.36
February 2005	8.70	7.40
January 2005	10.30	8.25
December 2004	10.68	8.85
First Quarter 2005	10.30	6.36
Fourth quarter 2004	15.55	7.70
Third quarter 2004	26.95	13.03
Second quarter 2004	32.70	21.80
First quarter 2004	46.39	29.30
Fourth quarter 2003	35.00	18.30
Third quarter 2003	22.90	18.20
Second quarter 2003	28.60	12.90
First quarter 2003	16.46	10.25
2004	46.36	7.70
2003	35.00	10.25
2002	37.99	15.30
2001	58.50	16.80

ITEM 10. ADDITIONAL INFORMATION

Articles of Association; Israeli Companies Law

Articles of Association

Our Articles of Association (“Articles”) were adopted in November 2000. The objective stated in the Articles is to engage in any lawful activity.

We have currently outstanding only one class of equity securities, our ordinary shares, par value NIS 1.00 per share. Holders of ordinary shares have one vote per share, and are entitled to participate equally in the payment of dividends and share distributions and, in the event of

liquidation of the Company, in the distribution of assets after satisfaction of liabilities to creditors. No preferred shares are currently authorized.

Our Articles require that we hold our annual general meeting of shareholders each year no later than 15 months from the last annual meeting, at a time and place determined by the Board of Directors, upon at least 21 days' prior notice to our shareholders. No business may be commenced until a quorum of two or more shareholders holding at least 33% of the voting rights is present in person or by proxy. Shareholders may vote in person or by proxy, and are required to prove title to their shares as required by the Israeli Companies Law (the "Companies Law") pursuant to procedures established by the Board of Directors. Resolutions regarding the following matters must be passed by an ordinary majority of those voting at the general meeting:

- amendments to our Articles;
- appointment and termination of our independent auditors;
- appointment and dismissal of directors;
- approval of acts and transactions requiring general meeting approval under the Companies Law;
- increase or reduction of authorized share capital or the rights of shareholders or a class of shareholders;
- any merger as provided in section 320 of the Companies Law; and
- the exercise of the Board of Directors' powers by the general meeting, if the Board of Directors is unable to exercise its powers and the exercise of any of its powers is essential for Tower's proper management, as provided in section 52(a) of the Companies Law.

A special meeting may be convened by the request of two directors or by written request of one or more shareholders holding at least 5% of our issued share capital and 1% of the voting rights or one or more shareholders holding at least 5% of the voting rights. Shareholders requesting a special meeting must submit their proposed resolution with their request. Within 21 days of receipt of the request, the Board must convene a special meeting and send out notices setting forth the date, time and place of the meeting. Such notice must be given at least 21 days but not more than 35 days prior to the special meeting.

The Companies Law

We are subject to the provisions of the Israeli Companies Law. The Companies Law codifies the fiduciary duties that "office holders," including directors and executive officers, owe to a company. An office holder, as defined in the Companies Law, is a director, general manager, chief business manager, deputy general manager, vice general manager, executive vice president, vice president, another manager directly subordinate to the managing director or any other person assuming the responsibilities of any of the forgoing positions without regard to such person's title. Each person listed in the table in "Item 6. Directors, Senior Management and Employees" above is an office holder. Under the Companies Law, all arrangements as to compensation of office holders who are not directors require approval of the board of directors. With the exception of compensation of outside directors in an amount specified in the regulations adopted under the Companies Law, arrangements regarding the compensation of directors also require audit committee and shareholder approval.

The Companies Law requires an office holder to promptly disclose any personal interest that he or she may have and all related material information known to him or her, in connection with any existing or proposed transaction by the company. In addition, if the transaction is an extraordinary transaction, the office holder must also disclose any personal interest held by the office holder's spouse, siblings, parents, grandparents, descendants, spouse's descendants and the spouse of any of the foregoing, or any corporation in which the office holder is a 5% or greater shareholder, holder of 5% or more of the voting power, director or general manager or in which he or she has the right to appoint at least one director or the general manager. An extraordinary transaction is defined as a transaction not in the ordinary course of business, not on market terms, or that is likely to have a material impact on the company's profitability, assets or liabilities.

The Companies Law requires that specific types of transactions, actions and arrangements be approved as provided for in a company's articles of association and in some circumstances by the company's audit committee, board of directors and shareholders. In the case of a transaction that is not an extraordinary transaction, after the office holder complies with the above disclosure requirements, only board approval is required, unless the Articles provide otherwise. If the transaction is an extraordinary transaction, then, in addition to any approval required by the Articles it must be approved first by the audit committee and then by the board of directors, and, in specific circumstances, by a meeting of the shareholders. Subject to exceptions set forth in the Companies Law, an office holder who has a personal interest in a matter that is considered at a meeting of the board of directors or the audit committee may not be present at such meeting or vote on such matter.

The Companies Law applies the same disclosure requirements to a controlling shareholder of a public company, which is defined as a shareholder who has the ability to direct the activities of a company, other than if this power derives solely from the shareholder's position on the board of directors or any other position with the company and includes a shareholder that holds 25% or more of the voting rights if no other shareholder owns more than 50% of the voting rights in the company. Extraordinary transactions with a controlling shareholder or in which a controlling shareholder has a personal interest, and agreements relating to employment and compensation terms of controlling shareholders require the approval of the audit committee, the board of directors and the shareholders of the company. The shareholder approval must either include at least one-third of the shares held by disinterested shareholders who are present, in person or by proxy, at the meeting, or, alternatively, the total shareholdings of the disinterested shareholders who vote against the transaction must not represent more than one percent of the voting rights in the company.

In addition to approval by a company's board of directors, a private placement in a public company requires approval by a company's shareholders in the following cases:

- A private placement that meets all of the following conditions:
 - 20 percent or more of the voting rights in the company prior to such issuance are being offered.
 - The private placement will increase the relative holdings of a shareholder that holds five percent or more of the company's outstanding share capital (assuming the exercise of all of the

securities convertible into shares held by that person), or that will cause any person to become, as a result of the issuance, a holder of five percent or more of the company's outstanding share capital.

- All or part of the consideration for the offering is not cash or registered securities, or the private placement is not being offered at market terms.
- A private placement which results in anyone becoming a controlling shareholder.

The above transactions must not be adverse to the company's interest.

Under the Companies Law, a shareholder has a duty to act in good faith towards the company and other shareholders and refrain from abusing his power in the company, including, among other things, vote in the general meeting of shareholders on the following matters:

- any amendment to the Articles;
- an increase of the company's authorized share capital;
- a merger; or
- approval of interested party transactions that require shareholder approval.

In addition, any controlling shareholder, any shareholder who knows that it possesses power to determine the outcome of a shareholder vote and any shareholder who has the power to appoint or prevent the appointment of an office holder in the company is under a duty to act with fairness towards the company. The Companies Law does not describe the substance of this duty.

Tender Offer. A person wishing to acquire shares or any class of shares of a publicly traded Israeli company and who would as a result hold over 90% of the company's issued and outstanding share capital or of a class of shares which are listed, is required by the Companies Law to make a tender offer to all of the company's shareholders for the purchase of all of the issued and outstanding shares of the company. If the shareholders who do not respond to the offer hold less than 5% of the issued share capital of the company, all of the shares that the acquirer offered to purchase will be transferred to the acquirer by operation of law. The Companies Law provides for an exception regarding the threshold requirement for a shareholder that prior to and following February 2000 holds over 90% of a company's issued and outstanding share capital. However, the shareholders may petition the court to alter the consideration for the acquisition. If the dissenting shareholders hold more than 5% of the issued and outstanding share capital of the company, the acquirer may not acquire additional shares of the company from shareholders who accepted the tender offer if following such acquisition the acquirer would then own over 90% of the company's issued and outstanding share capital.

The Companies Law provides that an acquisition of shares of a public company must be made by means of a tender offer if as a result of the acquisition the purchaser would become a 25% or greater shareholder of the company. This rule does not apply if there is already another 25% shareholder of the company. Similarly, the Companies Law provides that an acquisition of shares in a public company must be made by means of a tender offer if as a result of the

acquisition the purchaser would become a 45% or greater shareholder of the company, if there is no 45% or greater shareholder of the company.

Merger. The Companies Law permits merger transactions if approved by each party's board of directors and the majority of each party's shares voted on the proposed merger at a shareholders' meeting called on at least 21 days' prior notice. Under the Companies Law, merger transactions may be approved by holders of a simple majority of our shares present, in person or by proxy, at a general meeting and voting on the transaction. In determining whether the required majority has approved the merger, if shares of a company are held by the other party to the merger, or by any person holding at least 25% of the outstanding voting shares or 25% of the means of appointing directors of the other party to the merger, then a vote against the merger by holders of the majority of the shares present and voting, excluding shares held by the other party or by such person, or anyone acting on behalf of either of them, is sufficient to reject the merger transaction. If the transaction would have been approved but for the exclusion of the votes of certain shareholders as provided above, a court may still approve the merger upon the request of holders of at least 25% of the voting rights of a company, if the court holds that the merger is fair and reasonable, taking into account the value of the parties to the merger and the consideration offered to the shareholders. Upon the request of a creditor of either party to the proposed merger, the court may delay or prevent the merger if it concludes that there exists a reasonable concern that, as a result of the merger, the surviving company will be unable to satisfy the obligations of any of the parties to the merger. In addition, a merger may not be executed unless at least 30 days have passed from the receipt of the shareholders' approval and 50 days have passed from the time that a proposal for approval of the merger has been filed with the Israeli Registrar of Companies.

Nasdaq Marketplace Rules and Home Country Practices

Nasdaq's Marketplace Rule 4350 was recently amended to permit foreign private issuers to follow certain home country corporate governance practices without the need to seek an individual exemption from Nasdaq. Instead, a foreign private issuer must provide Nasdaq with a letter from outside counsel in its home country certifying that the issuer's corporate governance practices are not prohibited by home country law.

In May 2005, pursuant to this new exception, we provided a notice to Nasdaq with a letter from our outside Israeli counsel certifying that our practice of amending employee share option plans that do not permit the grant of options to directors upon the approval of our board of directors, and without seeking shareholder approval (which approval is required for Nasdaq-listed companies under Marketplace Rule 4350(i)), is not prohibited by Israeli law. We may in the future provide Nasdaq with an additional such letter or letters notifying Nasdaq that we are following our own practices, consistent with the Companies Law and practices in Israel in lieu of other requirements of Marketplace Rule 4350.

Material Contracts

Fab 2 Agreements. During 2000 and through 2002, we entered into several important Fab 2 agreements and arrangements with a key technology partner, wafer and equity financing partners, the Israeli Investment Center and two leading Israeli banks. Discussions of these agreements are incorporated herein by reference to the discussion under the caption "Fab 2

Agreements” in “Item 5. Operating and Financial Review and Prospects” of this annual report and to Note 12A to the consolidated financial statements included in this annual report.

Exchange Controls

Under Israeli law, non-residents of Israel who purchase ordinary shares with certain non-Israeli currencies (including U.S. dollars) may freely repatriate in such non-Israeli currencies all amounts received in Israeli currency in respect of the ordinary shares, whether as a dividend, as a liquidating distribution, or as proceeds from any sale in Israel of the ordinary shares, provided in each case that any applicable Israeli income tax is paid or withheld on such amounts. The conversion into the non-Israeli currency must be made at the rate of exchange prevailing at the time of conversion.

Under Israeli law and our company’s Articles, both residents and non-residents of Israel may freely hold, vote and trade our ordinary shares.

Taxation

The below discussion does not purport to be an official interpretation of the tax law provisions mentioned therein or to be a comprehensive description of all tax law provisions which might apply to our securities or to reflect the views of the relevant tax authorities, and it is not meant to replace professional advice in these matters. The below discussion is based on current, applicable tax law, which may be changed by future legislation or reforms. Non-residents should obtain professional tax advice with respect to the tax consequences under the laws of their countries of residence of holding or selling our securities.

A. Israeli Capital Gains Tax

Until the end of the year 2002, and provided we maintained our status as an industrial company, capital gains from the sale of our securities were generally exempt from Israeli Capital Gains Tax. This exemption did not apply to a shareholder whose taxable income is determined pursuant to part B of the Israeli Income Tax Law (Inflationary Adjustments), 1985 or pursuant to the Income Tax Regulations (Rules on Bookkeeping by Foreign Invested Companies and Certain Partnership and Determination of their Chargeable Income), 1984 (hereinafter the “Dollar Regulations”), or to a person whose gains from selling or otherwise disposing of our securities are deemed to be business income.

As a result of the Israeli tax reform legislation of January 2003, gains from the sale of our securities derived from January 1, 2003 and on will, in general, be subject to capital gains tax of 15%. This will be the case so long as our securities remain listed for trading on the Tel Aviv Stock Exchange or NASDAQ; if the shareholder did not claim financial expenses related to the purchase of the securities; and if the securities are not sold to a “relative” as defined under section 105k to the Income Tax Ordinance. In those cases where the 15% rate does not apply the real capital gain from the sale of the securities will be subject to capital gains tax of 25%. According to the tax reform legislation, non-residents of Israel will be exempt from any capital gains tax from the sale of our securities so long as the gains are not derived through a permanent establishment that the non-resident maintains in Israel, and so long as our securities remain listed for trading as described above. A non-resident corporation will generally not enjoy this exemption if Israeli residents are (1) its controlling shareholders, as defined for the purpose of

this section, or (2) directly or indirectly eligible to receive or are beneficial owners of 25% or more of the income or the profits of the corporation.

These provisions dealing with capital gains are not applicable to an Israeli resident whose gains from selling or otherwise disposing of our securities are deemed to be business income or whose taxable income is determined pursuant to part B of the Israeli Income Tax Law (Inflationary Adjustments), 1985 or pursuant to the “Dollar Regulations”.

Pursuant to part B of the Israeli Income Tax Law (Inflationary Adjustments), 1985 or the Dollars Regulations, capital gains derived from selling our securities will be subject to the tax rate under section 126 to the Ordinance (2005 - 34%, 2006 - 32%, and from 2007 and on - 30%) if the seller is a corporation. Individuals will be subject to the tax rates under section 121 to the Ordinance (up to 49%).

In any event, under the US-Israel Tax Treaty, a person who qualifies as a resident of the United States within the meaning of the Tax Treaty and who is entitled to claim benefits under the Treaty, may, in general, only be subject to Israeli capital gains tax on the sale of our ordinary shares (subject to the provisions of Israeli domestic law as described above) if that US treaty resident holds 10% or more of the voting power in our company.

B. Israeli Tax on Interest Income and on Original Issuance Discount

Interest and Original Issuance Discount (OID) on our convertible debentures, issued in January 2002, accruing from January 1, 2003 and on will, in general, be subject to Israeli tax of up to 15% if received by an individual. This reduced rate of tax will not apply if the interest and OID are business income in the hands of the recipient, if the recipient is a controlling shareholder of our company, or if financing expenses related to the purchase of the debentures were deducted by the individual in the calculation of the individual’s Israeli taxable income. In such cases the regular rate of tax on Interest and OID will apply – for corporations a rate of 35% in 2004, 34% in 2005, 32% in 2006 and from 2007 on - 30%, and for individuals a tax rate of up to 49%. As a result of the provisions related to tax withholding, as explained below, foreign resident individuals and corporations will be subject to tax of 25% or less, according to the relevant treaty relating to their domicile country.

Under regulations promulgated as part of the tax reform discussed in section A above, withholding tax at source from debenture interest and OID paid to resident individuals will, in general, be at a rate of 15%, and corporations will be subject to a rate of 35%. Withholding tax at source from debenture interest and OID paid to non-resident individuals or corporations will be at a rate of 25% or less, according to the relevant treaty relating to their domicile country. In any event, under the US-Israel Tax Treaty, the maximum Israeli tax withheld on interest and OID paid on our convertible debentures to a US treaty resident (other than a US bank, savings institution or company) is 17.5%.

C. Israeli Tax on Dividend Income

Israeli tax at a rate of 25% is generally withheld at source from dividends paid to Israeli individuals and non-residents; in general, no withholding tax is imposed on dividends paid to Israeli companies (subject to the provisions of the Israeli Income Tax Ordinance). The applicable

rate for dividends paid out of the profits of an Approved Enterprise is 15%. These rates are subject to the provisions of any applicable tax treaty.

Under the US-Israel Tax Treaty, Israeli withholding tax on dividends paid to a US treaty resident may not, in general, exceed 25%, or 15% in the case of dividends paid out of the profits of an Approved Enterprise. Where the recipient is a US corporation owning 10% or more of the voting stock of the paying corporation and the dividend is not paid from the profits of an Approved Enterprise, the Israeli tax withheld may not exceed 12.5%, subject to certain conditions.

D. PFIC Rules

A non-U.S. corporation will be classified as a passive foreign investment company, or a PFIC, for U.S. federal income tax purposes if either (i) 75% or more of its gross income for the taxable year is passive income, or (ii) on a quarterly average for the taxable year by value (or, if it is not a publicly traded corporation and so elects, by adjusted basis), 50% or more of its gross assets produce or are held for the production of passive income.

We do not believe that we satisfied either of the tests for PFIC status in 2004 or in any prior year. However, there can be no assurance that we will not be a PFIC in 2005 or a later year. If, for example, the "passive income" earned by us exceeds 75% or more of our "gross income", we will be a PFIC under the "income test". Passive income for PFIC purposes includes, among other things, gross interest, dividends, royalties, rent and annuities. For manufacturing businesses, gross income for PFIC purposes should be determined by reducing total sales by the cost of goods sold. Although not free from doubt, if our cost of goods sold exceeds our total sales by an amount greater than our passive income, such that we are treated as if we had no gross income for PFIC purposes, we believe that we would not be a PFIC as a result of the income test. However, the tests for determining PFIC status are applied annually and it is difficult to make accurate predictions of future income and assets, which are relevant to the determination of PFIC status.

If we were to be a PFIC at any time during a U.S. holder's holding period, such U.S. holder would be required to either: (i) pay an interest charge together with tax calculated at maximum ordinary income tax rates on "excess distributions," which is defined to include gain on a sale or other disposition of ordinary shares, or (ii) so long as the ordinary shares are "regularly traded" on a qualifying exchange, elect to recognize as ordinary income each year the excess in the fair market value, if any, of its ordinary shares at the end of the taxable year over such holder's adjusted basis in such ordinary shares and, to the extent of prior inclusions of ordinary income, recognize ordinary loss for the decrease in value of such ordinary shares (the "mark to market" election). For this purpose, the Nasdaq National Market is a qualifying exchange. U.S. holders are strongly urged to consult their own tax advisers regarding the possible application and consequences of the PFIC rules.

Documents on Display

We are required to file reports and other information with the SEC under the Securities Exchange Act of 1934 and the regulations thereunder applicable to foreign private issuers. Reports and other information filed by us with the SEC may be inspected and copied at the SEC's public reference facilities described below. Although as a foreign private issuer we are

not required to file periodic information as frequently or as promptly as United States companies, we generally do publicly announce our quarterly and year-end results promptly and file periodic information with the SEC under cover of Form 6-K. As a foreign private issuer, we are also exempt from the rules under the Exchange Act prescribing the furnishing and content of proxy statements and our officers, directors and principal shareholders are exempt from the reporting and other provisions in Section 16 of the Exchange Act.

You may review and copy our filings with the SEC, including any exhibits and schedules, at the SEC's public reference facilities in Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549. You may also obtain copies of such materials from the Public Reference Section of the SEC, Room 1024, Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549, at prescribed rates. You may call the SEC at 1-800-SEC-0330 for further information on the public reference rooms. In addition, such information concerning our company can be inspected and copied at the offices of the National Association of Securities Dealers, Inc., 9513 Key West Avenue, Rockville, Maryland 20850 and at the offices of the Israel Securities Authority at 22 Kanfei Nesharim St., Jerusalem, Israel. As a foreign private issuer, all documents which were filed after November 4, 2002 on the SEC's EDGAR system will be available for retrieval on the SEC's website at www.sec.gov. These SEC filings are also available to the public on the Israel Securities Authority's website at www.isa.gov.il and from commercial document retrieval services. We also generally make available on our own Web site (www.towersemi.com) all our quarterly and year-end financial statements as well as other information.

Any statement in this annual report about any of our contracts or other documents is not necessarily complete. If the contract or document is filed as an exhibit to the registration statement, the contract or document is deemed to modify the description contained in this annual report. We urge you to review the exhibits themselves for a complete description of the contract or document.

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk is the risk of loss related to changes in market prices, including interest rates and foreign exchange rates, of financial instruments and derivatives that may adversely impact our consolidated financial position, results of operations or cash flows.

Our primary market risk exposures relate to interest rate movements on borrowings, fluctuations of the exchange rate of the US dollar, which is the primary currency in which we conduct our operations, against the NIS, the Japanese Yen and the Euro. To manage those risks and mitigate our exposure to them, we from time to time use financial instruments, primarily, interest rate collar agreements with a knock-out and knock-in features, and foreign currency forward contracts and options (including zero-cost cylinders).

All financial instruments are managed and controlled under a program of risk management in accordance with established policies. These policies are reviewed and approved by our board of directors. Our treasury operations are subject to an internal audit on a regular basis. We do not hold derivative financial instruments for speculative purposes, and we do not issue any derivative financial instruments for trading or speculative purposes.

Risk of Interest Rate Fluctuation

We have market risk exposure to changes in interest rates on our long-term debt obligations with floating interest rates. We have entered into debt obligations to support our capital expenditures and needs. From time to time we enter into interest rate collar agreements with knock-out and knock-in features to modify our exposure to interest rate movements and to reduce our borrowing costs. These agreements limit our exposure to the risks of fluctuating interest rates by allowing us to convert a portion of the interest on our borrowings from a variable rate to a limited variable rate. A knock-out LIBOR-based interest rate collar is a combination of a purchased knock-out cap with a cap level, floor level and a knock out level (and a knock in level for some of the agreements).

We are subject to interest rate exposure in connection with \$497 million long-term debt outstanding as of December 31, 2004 under the Fab 2 facility agreement, as such debt bears interest at a rate of LIBOR plus 2.5% per annum. The interest rate as of December 31, 2004 on \$205 million of the Fab 2 loans, not subject to the results of our collar agreements, was 5.06%. Our remaining loans of \$292 million are covered by the collar agreements and bore annual interest rate as of December 31, 2004, including the results of our hedging activities described below, as follows: \$172 million - 6.78%, \$40 million - 5.30%, and \$80 million - 5.06%. Loans in the amount of \$431 million are repayable in 12 equal consecutive quarterly installments commencing March 31, 2007, and loans in the amount of \$66 million drawn down during 2004 are repayable in 12 equal consecutive quarterly installments, commencing three years from the end of the quarter of each draw down.

All our collar agreements, which gradually expire in 2006-2009, were effective as of December 31, 2004. These agreements provide for combinations as described below. Under the knock-out provision in these agreements, in the event that the LIBOR rate exceeds the knock-out LIBOR rate level during a particular quarter, the protection provided under the interest collar agreements will not apply with respect to that entire quarter. If the LIBOR rate decreases thereafter and remains below the knock-out LIBOR rate level in any successive quarter for the duration of the entire quarter, the protection provided under the interest rate collar will again be effective.

With respect to the \$172 million of our Fab 2 credit facility debt, under the terms of the collar agreements, if the LIBOR is below the floor rate of 4.28% we will pay total interest at the fixed rate of 6.78% (the 4.28% floor rate plus 2.5%); if the LIBOR is between 4.28% and 5.56%, we will pay total interest at the actual LIBOR plus 2.5%; if the LIBOR is between 5.56% and 7.50% we will pay total interest at a fixed rate of 8.06% (the 5.56% cap rate plus 2.5%); and if the LIBOR is higher than 7.50%, we will pay the actual LIBOR rate plus 2.5%. At December 31, 2004, the LIBOR rate was 2.56%. Accordingly, as of such date the interest rate on these long-term loans was 6.78% (the floor rate of 4.28% plus 2.5%).

With respect to the \$40 million of our Fab 2 credit facility debt, under the terms of the collar agreements, if the LIBOR is below the floor rate of 2.80% we will pay total interest at the fixed rate of 5.30% (the 2.80% floor rate plus 2.5%); if the LIBOR is between 2.80% and 5.50%, we will pay total interest at actual LIBOR plus 2.5%; if the LIBOR is between 5.50% and 7.50% we will pay total interest at a fixed rate of 8.00% (the 5.50% cap rate plus 2.5%); and if the LIBOR is higher than 7.50%, we will pay the actual LIBOR rate plus 2.5%. At December 31,

2004, the LIBOR rate was 2.56%. Accordingly, as of such date, the interest rate on these long-term loans was 5.30% (the floor rate of 2.8% plus 2.5%).

With respect to the \$80 million of our Fab 2 credit facility debt, under the terms of the collar agreements, if the LIBOR is below the knock-in of 0.70% we will pay total interest at the fixed rate of 5.25% (the 2.75% floor rate plus 2.5%); if the LIBOR is between 0.70% and 4.00%, we will pay total interest at the actual LIBOR plus 2.5%; if the LIBOR is between 4.00% and 7.00% we will pay total interest at a fixed rate of 6.50% (the 4.00% cap level plus 2.5%); and if the LIBOR is higher than 7.00%, we will pay the actual LIBOR rate plus 2.5%. At December 31, 2004, the LIBOR rate was 2.56%. Accordingly, as of such date, the interest rate on these long-term loans was 5.06% (the actual LIBOR rate of 2.56% plus 2.5%).

All our collar agreements resulted in a loss of \$5.6 million in the year ended December 31, 2004. The fair value of these agreements, as of December 31, 2004 was a \$2.4 million loss

Assuming a 10% upward shift in the LIBOR rate at December 31, 2004 (from 2.56% to 2.82%), the effective fair value of \$325 million debt would have increased by approximately \$2.5 million. The amount of \$325 is comprised of \$205 million debt not hedged by the collar agreements; \$80 million debt hedged by a collar agreement with a knock in level of 0.7% and as to which as of December 31, 2004 we are exposed to the risk of interest rate fluctuation; and \$40 million debt hedged by a collar agreement with a floor rate of 2.80%. With regard to the remaining \$172 million debt hedged by the collar agreements, as of December 31, 2004 such assumed increase in the LIBOR rate presents no change in the interest rate exposure since as of such date the collar agreements would still result in a fixed rate interest of the floor rate plus 2.5%.

Our cash equivalents and interest-bearing deposits are exposed to market risk due to fluctuation in interest rates, which may affect our interest income and the fair market value of our investments. We manage this exposure by performing ongoing evaluations of our investments in those deposits. Due to the short maturities of our investments, their carrying value approximates their fair value.

Convertible Debentures and Options (Series 1)

We are exposed to the risk of fluctuation in the NIS/dollar exchange rate with respect to our convertible debentures and the exercise price of our Options (Series 1), which are both denominated in NIS linked to the Consumer Price Index in Israel (CPI). As of December 31, 2004 the adjusted outstanding principal amount of the convertible debentures was \$27.1 million and the adjusted exercise price of the options (Series 1) was \$9.56. The dollar amount of our finance costs (interest and currency adjustments) related to the convertible debentures will be increased if the rate of inflation in Israel is not offset (or is offset on a lagging basis) by the devaluation of the NIS in relation to the dollar. In addition, the dollar amount of any repayment on account of the principal of the convertible debentures will be increased as well. On the other hand, if the devaluation of the NIS against the dollar is greater than the rate of inflation in Israel, the dollar amounts we shall raise on the date of exercising our Options (Series 1) will be decreased. From the date of the issuance of the convertible debentures and Options (Series 1) in January 2002 until December 31, 2004, the Israel consumer price index increased by 5.6% while the US dollar/NIS exchange rate decreased by 6%.

The convertible debentures bear annual interest at a fixed rate of 4.7%. The debentures are payable in four annual installments commencing in January 2006. Therefore, we are not subject to exposure to interest rate fluctuations with respect to the debentures. However, in case the actual market interest rates are lower than the interest rate provided on the convertible debentures, our actual finance costs would be higher than in case our convertible debentures bear floating interest rate.

Foreign Exchange Risk

Our main foreign currency exposures give rise to market risk associated with exchange rate movements of the US dollar, our functional and reporting currency, against the Japanese Yen, the Euro and the NIS. To protect against reductions in value and the volatility of future cash flows caused by changes in foreign exchange rates, we utilize foreign currency forward contracts and options (including zero-cost cylinder options) in order to minimize part of the impact of foreign currency fluctuations on our financial position and results of operations. A cylinder option is a combination of a purchased call option and a written put option. The exercise prices of the options may not be identical and this effectively creates a synthetic range forward. The maturity dates of the options coincide with the scheduled payments to suppliers.

Accordingly, we enter, from time to time, into foreign currency agreements to hedge exposure to equipment purchase commitments and other firm commitments. Most of our agreements to hedge equipment purchase commitments are designated to eliminate exposure changes in the Japanese Yen and the Euro vis-à-vis the US dollar. During the year ended December 31, 2004, we had \$19 million options (including zero-cost cylinder options) transactions. The loss resulted from these transactions in the year ended December 31, 2004 was immaterial. As of December 31, 2004 we had no open transactions.

We enter from time to time into foreign exchange agreements to hedge exposure relating to Value Added Tax (VAT), grants receivables and payroll payments denominated in NIS. The effect of these agreements during the year ended December 31, 2004 was immaterial. As of December 31, 2004, we had no open transactions.

We are exposed to currency risk in the event of default by the other parties of the exchange transaction. We estimate the likelihood of such default to occur is remote, as the other parties are widely recognized and reputable Israeli banks.

Impact of Inflation

We believe that the rate of inflation in Israel has had a minor effect on our business to date. However, our dollar costs in Israel will increase if inflation in Israel exceeds the devaluation of the NIS against the dollar or if the timing of such devaluation lags behind inflation in Israel.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

Not applicable.

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

None.

ITEM 15. CONTROLS AND PROCEDURES

An evaluation was performed under the supervision and with the participation of our management, including our chief executive officer and acting chief financial officer, of the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-14(c) and 15d-14(c) under the Securities Exchange Act of 1934, as amended). Based on that evaluation, which was completed within 90 days of the filing date of this annual report, our chief executive officer and acting chief financial officer, concluded that our disclosure controls and procedures were effective though we are constantly engaged in the process of improving these controls and procedures. There have been no significant changes in our disclosure controls or in other factors that could significantly affect disclosure controls subsequent to the date of the evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

ITEM 16. [RESERVED]

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Our Board of Directors has determined that a member of our Audit Committee, Ms. Tal Yaron-Eldar, is an audit committee financial expert.

ITEM 16B. CODE OF ETHICS

We adopted a code of ethics which applies to all of our directors, officers and employees, including our acting chief executive officer, acting chief financial officer, principal accounting officer, and persons performing similar functions. We amended our code of ethics to comply with the requirements of the Sarbanes Oxley Act of 2002 as follows: (i) The section relating to external requests for company information and contacts with outsiders now specifies the person responsible for managing our company's relationships with outsiders and the course of action to be taken when internal company data is mistakenly disclosed; and (ii) The section regarding reporting illegal, inappropriate or unethical behavior now requires employees to promptly report any such behavior, including violations of the code of ethics or any law, and allows for such report to be communicated anonymously.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table presents fees for professional services rendered by our independent registered public accounting firm for audit services, audit-related services and for tax services:

	2004 (US Dollars)	2003 (US Dollars)
Audit Fees(1)	362,000	309,000
Audit-Related Fees(2)	12,000	6,000
Tax Fees(3)	14,000	52,000
Other(4)	-	-
Total	388,000	367,000

- (1) Audit fees consist of fees for professional services rendered for the audit of our consolidated financial statements, services in connection with statutory and regulatory filings and engagements (including review of Forms 20-F, F-3 and S-8), and reviews of our unaudited interim consolidated financial statements included in our quarterly reports.
- (2) Audit related fees consist of accounting consultation and consultation on financial accounting standards, not arising as part of the audit.
- (3) Tax fees consist of fees for tax compliance services, tax planning and tax advice.

Our audit committee's charter states that the audit committee is responsible for receiving specific information on the independent auditor's proposed services and for pre-approving all audit services annually and separately approving any other permitted non-audit related services.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FROM AUDIT COMMITTEES.

As a foreign private issuer we remain exempt, until July 31, 2005, from Nasdaq's audit committee related listing standards that have come into effect following December 13, 1999.

ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PARTIES.

Not Applicable.

PART III

ITEM 17. FINANCIAL STATEMENTS

Not applicable.

ITEM 18. FINANCIAL STATEMENTS

See Index to Financial Statements following the signature page.

ITEM 19. EXHIBITS

1.1 Articles of Association of the Registrant, approved by shareholders on November 14, 2000 (incorporated by reference to the correspondingly-numbered exhibit to the Registrant's Annual Report on Form 20-F for the year ended December 31, 2000 (the "2000 Form 20-F"). (Pursuant to approvals by our shareholders, our Articles of Association provide for an authorized share capital of 250,000,000 divided into 250,000,000 shares).

2.1 Bank Warrants, dated January 18, 2001, between the Registrant and Bank Hapoalim B.M. and Bank Leumi Le-Israel B.M. (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

2.2 Registration Rights Agreement, dated January 18, 2001, by and between SanDisk Corporation, Israel Corporation, Alliance Semiconductor Ltd. and Macronix International Co., Ltd. (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

2.3 Terms of the Registrant's Convertible Debentures issued under an Indenture, dated January 22, 2002, (incorporated by reference to the summary of terms included under the caption "Description of the Debentures" in Exhibit C to the Registrant's Report on Form 6-K for January 2002 (No. 2), filed January 16, 2002 ("January 2002 Form 6-K")).

2.4 Terms of the Registrant's Options (Series 1) (incorporated by reference to the summary of terms included under the caption "Description of the Options" in Exhibit C to the January 2002 Form 6-K).

3.1 Consolidated Shareholders Agreement, dated January 18, 2001, by and between SanDisk Corporation, Israel Corporation, Alliance Semiconductor Ltd. and Macronix International Co., Ltd. (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

4.1 Share Purchase Agreement, dated July 4, 2000, by and between SanDisk Corporation and the Registrant (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

4.2 Additional Purchase Obligation Agreement, dated July 4, 2000, by and between SanDisk Corporation ("SanDisk") and the Registrant (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

4.3 Share Purchase Agreement, dated August 29, 2000, by and between Alliance Semiconductor Corporation ("Alliance") and the Registrant (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

4.4 Share Purchase Agreement, dated December 11, 2000, by and between QuickLogic Corporation ("QuickLogic") and the Registrant (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

4.5 Share Purchase Agreement, dated December 12, 2000, by and between Macronix International Co., Ltd. (“Macronix”) and the Registrant (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

4.6 Share Purchase Agreement, dated December 12, 2000, between Israel Corporation and the Registrant (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

4.7 Additional Purchase Obligation Agreement, dated December 12, 2000, between Israel Corporation and the Registrant (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

4.8 Share Purchase Agreement, dated February 11, 2001, between The Challenge Fund - Etgar II and the Registrant (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

4.9 Facility Agreement, dated January 18, 2001, among the Registrant, Bank Hapoalim B.M. and Bank Leumi Le-Israel B.M. (the “Facility Agreement”) (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

4.10 Design and Construction/Turn-Key Contract, dated August 20, 2000, among the Registrant, M+W Zander Holding GmbH, Meissner-Baran Ltd. and Baran Group Ltd. (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

4.11 Approval, dated December 31, 2000, of the Israeli Investment Center (Hebrew language document; a summary of the terms is included in the 2000 Form 20-F under the caption “Fab 2 Agreements” in “Item 5. Operating and Financial Review and Prospects”) (incorporated by reference to the correspondingly-numbered exhibit to the 2000 Form 20-F).

4.12 Agreement between the Registrant and Saifun, dated October 9, 1997 (incorporated by reference to exhibit 1.1 to the Registrant’s Annual Report on Form 20-F for the year ended December 31, 1997).

4.13 Registrant’s Non-Employee Director Share Option Plan 2000/3 (incorporated by reference to exhibit 4.5 to the Registrant’s Registration Statement on Form S-8 No. 333-83204 (“Form S-8 No. 333-83204”)).

4.14 Form of Grant Letter for Non-Employee Directors Share Option Plan 2001/4 (incorporated by reference to exhibit 4.9 to the Form S-8 No. 333-83204).

4.15 Form of Grant Letter for Non-Employee Directors Share Option Plan 2001/5 (incorporated by reference to exhibit 4.10 to the Form S-8 No. 333-83204).

4.16 Wafer Partner Conversion Agreements, dated September 2001, between the Registrant and each of SanDisk, Alliance and Macronix (incorporated by reference to the correspondingly-numbered exhibit to the 2001 Form 20-F).

- 4.17 Letter Agreement, dated November 29, 2001, among SanDisk, Alliance, Macronix, QuickLogic and the Registrant regarding the Utilization of Prepayments (incorporated by reference to the correspondingly-numbered exhibit to the 2001 Form 20-F).
- 4.18 Letter Agreements among Alliance, Macronix, QuickLogic, Israel Corp. and the Registrant and between SanDisk and the Registrant regarding Additional Wafer Partner Financing Date (incorporated by reference to the correspondingly-numbered exhibit to the 2001 Form 20-F).
- 4.19 Letter Agreement, dated November 15, 2001, among SanDisk, Alliance, Macronix, QuickLogic, ICTech and the Registrant regarding Amendment to Financing Plan (incorporated by reference to the correspondingly-numbered exhibit to the 2001 Form 20-F).
- 4.20 First Amendment, dated January 29, 2001, to the Facility Agreement (incorporated by reference to the correspondingly-numbered exhibit to the 2001 Form 20-F).
- 4.21 Second Amendment, dated January 10, 2002, to Facility Agreement (incorporated by reference to the correspondingly-numbered exhibit to the 2001 Form 20-F).
- 4.22 Third Amendment, dated March 7, 2002, to the Facility Agreement (incorporated by reference to the correspondingly-numbered exhibit to the 2001 Form 20-F).
- 4.23 Joint Development and Transfer and Cross License Agreement, dated May 2002, between the Registrant and a Japanese manufacturer (incorporated by reference to exhibit 10.3 to the Registrant's Registration Statement on Form F-2, No. 333-97043).
- 4.24 Technology License Agreement, dated April 7, 2000, between the Registrant and Toshiba Corporation (incorporated by reference to exhibit 10.4 to the Registrant's Registration Statement on Form F-2, No. 333-97043).
- 4.25 Technology Transfer License Agreement, dated September 2002, between Registrant and Motorola, Inc. (incorporated by reference to exhibit 10.5 to the Registrant's Registration Statement on Form F-2, No. 333-97043).
- 4.26 Fourth Amendment, dated April 29, 2002, to the Facility Agreement (incorporated by reference to the correspondingly-numbered exhibit to the 2002 Form 20-F).
- 4.27 Fifth Amendment dated September 18, 2002 to the Facility Agreement (incorporated by reference to the correspondingly-numbered exhibit to the 2002 Form 20-F).
- 4.28 Amendment to Fifth Amendment to the Facility Agreement, dated October 22, 2002, to the Facility Agreement (incorporated by reference to the correspondingly-numbered exhibit to the 2002 Form 20-F).
- 4.29 Letter Agreement, dated March 2002, among SanDisk, Alliance, Macronix, ICTech and Challenge Fund to advance Third and Fourth Milestone Payments (incorporated by reference to the correspondingly-numbered exhibit to the 2002 Form 20-F).

- 4.30 Letter Agreement, dated July 2002, among SanDisk, Alliance, Macronix, and ICTech to exercise rights distributed in rights offering (incorporated by reference to the correspondingly-numbered exhibit to the 2002 Form 20-F).
- 4.31 Letter Agreement, dated March 2003, among SanDisk, Alliance, Macronix, ICTech, and the Registrant (incorporated by reference to the correspondingly-numbered exhibit to the 2002 Form 20-F).
- 4.32 Form of Rights Agent Agreement between the Registrant and American Stock Transfer & Trust Company (including form of Rights Certificate) (incorporated by reference to exhibit 4.1 to the Registrant's Registration Statement on Form F-2, No. 333-97043).
- 4.33 Form of Warrant Agreement between the Registrant and American Stock Transfer & Trust Company (including form of Warrant Certificate) (incorporated by reference to exhibit 4.2 to the Registrant's Registration Statement on Form F-2, No. 333-97043).
- 4.34 Reserved.
- 4.35 Investment Center Agreement related to Fab 1, dated November 13, 2001 (English translation of Hebrew original) (incorporated by reference to exhibit 10.2 to the Registrant's Registration Statement on Form F-2, No. 333-97043).
- 4.36 Development and License Agreement, dated March 31, 2002, between Virage Logic Corporation and the Registrant (incorporated by reference to the correspondingly-numbered exhibit to the 2002 Form 20-F).
- 4.37 Master Services and License Agreement, dated June 2002, between Artisan Components, Inc. and the Registrant (incorporated by reference to the correspondingly-numbered exhibit to the 2002 Form 20-F).
- 4.38 Seventh Amendment to the Facility Agreement, dated November 11, 2003, (incorporated by reference to Exhibit 99.1 of the Registrant's Report on Form 6-K filed on December 17, 2003).
- 4.39 Undertaking of The Israel Corporation Ltd., dated November 11, 2003, (incorporated by reference to Exhibit 99.2 of the Registrant's Report on Form 6-K filed on December 17, 2003).
- 4.40 Undertaking of the Registrant, dated November 11, 2003 (incorporated by reference to Exhibit 99.3 of the Registrant's Report on Form 6-K filed on December 17, 2003).
- 4.41 Letter Agreement, dated November 11, 2003, by and among the Registrant, Israel Corporation Technologies, SanDisk Corporation, Alliance Semiconductor Corporation and Macronix International Co., Ltd. (incorporated by reference to Exhibit 99.4 of the Registrant's Report on Form 6-K filed on December 17, 2003).
- 4.42 Foundry Agreement, dated May 12, 2004, between the Registrant and Siliconix incorporated.#

4.43 Share Purchase Agreement, dated December 8, 2004, between the Registrant and the Purchasers named therein.#

4.44 Agreement, dated December 31, 2004, by and among the Registrant and the Purchasers named therein.#

4.45 Employee Share Option Plan 2004 (incorporated by reference to Exhibit 4.3 to the Registrant's Registration Statement on Form S-8 No. 333-117565 ("Form S-8 No. 333-117565").

4.46 Form of Grant Letter to Israeli Employees (incorporated by reference to Exhibit 4.4 to Form S-8 No. 333-117565).

4.47 Form of Grant Letter to U.S. Employees (incorporated by reference to Exhibit 4.5 to Form S-8 No. 333-117565).

11.1 Code of Ethics, as amended.

12.1 Certification by Acting Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

12.2 Certification by Acting Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

13.1 Certification by Acting Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

13.2 Certification by Acting Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

14.1 Consent of Brightman Almagor & Co.

Portions of this exhibit have been omitted pursuant to a request for confidential treatment.

SIGNATURES

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the registrant certifies that it meets all the requirements for filing on Form 20-F and has duly caused this Annual Report to be signed on its behalf by the undersigned, thereunto duly authorized on this 29 day of June, 2005.

TOWER SEMICONDUCTOR LTD.

By: /s/ Russell C. Ellwanger
Russell C. Ellwanger
Chief Executive Officer

EXHIBIT 12.1

CERTIFICATION

I, Russell C. Ellwanger, certify that:

1. I have reviewed this annual report on Form 20-F of Tower Semiconductor Ltd.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) [paragraph omitted in accordance with SEC transition instructions contained in SEC release Nos. 33-8238 and 34-47986]
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

June 29, 2005

/S/ Russell C. Ellwanger

Russell C. Ellwanger
Chief Executive Officer
Tower Semiconductor Ltd.

EXHIBIT 12.2

CERTIFICATION

I, Oren Shirazi, certify that:

1. I have reviewed this annual report on Form 20-F of Tower Semiconductor Ltd.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiary, is made known to us by others within this entity, particularly during the period in which this report is being prepared;
 - b) [paragraph omitted in accordance with SEC transition instructions contained in SEC release Nos. 33-8238 and 34-47986]
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

June 29, 2005

/S/ Oren Shirazi

Oren Shirazi
Acting Chief Financial Officer
Tower Semiconductor Ltd.

EXHIBIT 13.1

CERTIFICATION PURSUANT TO
18 U.S.C SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Tower Semiconductor Ltd. (the “Registrant”) on Form 20-F for the year ended December 31, 2004 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Russell C. Ellwanger, Chief Executive Officer of the Registrant, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. the Report fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

/s/ Russell C. Ellwanger
Russell C. Ellwanger
Chief Executive Officer

June 29, 2005

A signed original of this written statement required by Section 906 has been provided to the Registrant and will be retained by the Registrant and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 13.2

CERTIFICATION PURSUANT TO
18 U.S.C SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Tower Semiconductor Ltd. (the “Registrant”) on Form 20-F for the year ended December 31, 2004 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Oren Shirazi, Acting Chief Financial Officer of the Registrant, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. the Report fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

/s/ Oren Shirazi
Oren Shirazi
Acting Chief Financial Officer
June 29, 2005

A signed original of this written statement required by Section 906 has been provided to the Registrant and will be retained by the Registrant and furnished to the Securities and Exchange Commission or its staff upon request.