

**SECURITIES AND EXCHANGE COMMISSION**

Washington, DC 20549

**FORM 20-F**

- 9 **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934**  
OR  
: **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2000

- 9 **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number 1-14700

(Exact Name of Registrant as Specified in Its Charter)

Taiwan Semiconductor Manufacturing Company Limited

Republic of China

(Translation of Registrant's Name Into English)

(Jurisdiction of Incorporation or Organization)

No. 121, Park Avenue III  
Science-Based Industrial Park  
Hsinchu, Taiwan  
Republic of China

(Address of Principal Executive Offices)

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

<u>Title of Each Class</u>	<u>Name of Each Exchange on Which Registered</u>
Common Shares, par value NT\$10.00 each	The New York Stock Exchange, Inc.*

\* Not for trading, but only in connection with the listing on the New York Stock Exchange, Inc. of American Depositary Shares representing such Common Shares

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

None

(Title of Class)

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

None

(Title of Class)

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.

As of December 31, 2000, 11,689,364,587 Common Shares, par value NT\$10 each were outstanding.

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

## TABLE OF CONTENTS

### Taiwan Semiconductor Manufacturing Company Limited.

	<u>Page</u>
Cautionary Statement for Purposes of the “Safe Harbor” Provisions of the Private Securities Litigation Reform Act of 1995.....	1
Glossary of Technical Terms .....	2
<b>PART I</b>	
Item 1. Identity of Directors, Senior Management and Advisors.....	4
Item 2. Offer Statistics and Expected Timetable.....	4
Item 3. Key Information.....	4
Item 4. Information on the Company .....	14
Item 5. Operating and Financial Reviews and Prospects .....	30
Item 6. Directors, Senior Management and Employees .....	37
Item 7. Major Shareholders and Related Party Transactions .....	42
Item 8. Financial Information .....	44
Item 9. The Offer and Listing .....	46
Item 10. Additional Information .....	47
Item 11. Quantitative and Qualitative Disclosures about Market Risk .....	57
Item 12. Description of Securities Other than Equity Securities .....	58
Item 13. Defaults, Dividend Arrearages and Delinquencies .....	58
Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds .....	59
Item 15. (Reserved) .....	59
Item 16. (Reserved) .....	59
Item 17. Financial Statements .....	59
Item 18. Financial Statements .....	59
Item 19. Exhibits .....	59

**CAUTIONARY STATEMENT FOR PURPOSES OF THE “SAFE HARBOR”  
PROVISIONS OF THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995**

Except for historical matters, the matters discussed in this Annual Report on Form 20-F are forward-looking statements that are subject to significant risks and uncertainties. Forward-looking statements include, but are not limited to, statements under the following headings: (i) “Item 3. Key Information — Risk Factors — Overcapacity in the semiconductor industry may reduce our profit margin”, about our average capacity utilization rate; (ii) “Item 3. Key Information — Risk Factors — If we are unable to manage our expansion effectively, our growth prospects may be limited and our future profitability may be affected”, about our proposed expansion plans; (iii) “Item 4. Information on the Company — Industry Background”, about increasing use of foundry services; (iv) “Item 4. Information on the Company — Overview of the Company”, about our plan for capacity expansion; (v) “Item 4. Information on the Company — Overview of the Company” and “Item 4. Information on the Company — Real Property” about our plan to decommission Fab 1; (vi) “Item 4. Information on the Company — Capacity Expansion and Technology Upgrade Plans”, about our plans for expenditures and capacity expansion and technological upgrades in the future, commitments by customers for future capacity; (vii) “Item 4. Information on the Company — Research and Development”, about our plans to significantly increase spending on research and development; (viii) “Item 5. Operating and Financial Reviews and Prospects — Results of Operation — Year Ended December 31, 2000 Compared to Year Ended December 31, 1999” about our net sales, cost of sales, operating margin and capacity utilization rate; (ix) “Item 8. Financial Information — Dividends and Dividend Policy”, about the plan to pay future dividends, if any, in the form of stock; and (x) “Item 11. Quantitative and Qualitative Disclosures about Market Risk”. Actual results may be materially different from those indicated by our forward-looking statements. Please see “Item 3. Key Information – Risk Factors” for a discussion of certain factors that may cause actual results to differ materially from those indicated by our forward-looking statements.

## GLOSSARY OF TECHNICAL TERMS

ASIC .....	Application Specific Integrated Circuit. A custom-designed integrated circuit that performs specific functions that would otherwise require a number of off-the-shelf integrated circuits to perform. The use of an ASIC in place of a conventional integrated circuit reduces product size and cost and also improves reliability.
BiCMOS .....	Integrated circuit fabrication technology that produces both bipolar transistors and CMOS transistors and combine them on one chip.
Cell .....	A primary unit that normally repeats many times in an integrated circuit. For example, a cell represents a bit in a memory integrated circuit.
CMOS .....	Complementary Metal Oxide Silicon. Currently the most common integrated circuit fabrication process technology, CMOS is one of the latest fabrication techniques to use metal oxide semiconductor transistors.
Die .....	A piece of a semiconductor wafer containing the circuitry of a single chip.
DRAM .....	Dynamic Random Access Memory. A type of volatile memory product that is used in electronic systems to store data and program instructions. It is the most common type of RAM and must be refreshed with electricity thousands of times per second or else it will fade away.
DSP .....	Digital Signal Processor. A type of integrated circuit that processes and manipulates digital information after it has been converted from an analog source.
EEPROM .....	Electrically Erasable Programmable Read-Only Memory. Similar to EPROM, except that it can be erased electronically before being reprogrammed.
EPROM .....	Erasable Programmable Read-Only Memory. A form of PROM that can be erasable using ultraviolet light, so that it can be reprogrammed.
Flash memory .....	A type of non-volatile memory, similar to an EEPROM in that it is erasable and reprogrammable. The difference is that it can be erased and reprogrammed in the electronic system into which the flash memory chip has been incorporated.
Integrated circuit .....	A combination of two or more transistors on a base material, usually silicon. All semiconductor chips, including memory chips and logic chips, are just very complicated integrated circuits with thousands of transistors.
Logic device .....	A device that contains digital integrated circuits that process, rather than store, information.
Mask .....	A piece of glass on which an integrated circuit's circuitry design is laid out. Integrated circuits may require up to 20 different layers of design, each with its own mask. In the integrated circuit production process, a light shines through the mask leaving an image of the design on the wafer. Also known as a reticle.

Mb.....	Mega Bit. One million (or 1,048,576) bits as a unit of data size or memory capacity.
Memory .....	A group of integrated circuits that a computer uses to store data and programs, such as ROM, RAM, DRAM and SRAM.
Micron .....	1/25,000 of an inch. Circuitry on an integrated circuit typically follows lines that are less than one micron wide.
MOS .....	A device which consists of three layers (metal, oxide and semiconductors) and operates as a transistor.
Nonvolatile memory .....	Memory products which retain their data content without the need for constant power supply.
RAM .....	Random Access Memory. A type of volatile memory, forming the main memory of a computer where applications and files are run.
Reticle.....	See ‘‘Mask’’ herein.
ROM.....	Read-Only Memory. Memory that is programmed by the manufacturer and cannot be changed. Typically, ROM is used to provide start-up data when a computer is first turned on.
Semiconductor .....	A material with electrical conducting properties in between those of metals and insulators. (Metals always conduct and insulators never conduct, but semiconductors sometimes conduct.) Essentially, semiconductors transmit electricity only under certain circumstances, such as when given a positive or negative electric charge. Therefore, a semiconductor’s ability to conduct can be turned on or off by manipulating those charges and this allows the semiconductor material to act as an electric switch. The most common semiconductor material is silicon, used as the base of most semiconductor chips today because it is relatively inexpensive and easy to create.
SRAM.....	Static Random Access Memory. A type of volatile memory product that is used in electronic systems to store data and program instructions. Unlike the more common DRAM, it does not need to be refreshed.
Stepper.....	A machine used in the photolithography process in making wafers. With a stepper, a small portion of the wafer is aligned with the mask upon which the circuitry design is laid out and is then exposed to strong light. The machine then ‘‘steps’’ to the next area, repeating the process until the entire wafer has been done. Exposing only a small area of a wafer at a time allows the light to be focused more strongly, which gives better resolution of the circuitry design.
Transistor .....	An individual circuit that can amplify or switch electric current. This is the building block of all integrated circuits.
Volatile memory .....	Memory products which lose their data content when the power supply is switched off.
Wafer .....	A thin, round, flat piece of silicon that is the base of most integrated circuits.

## 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

The selected income statement data and cash flow data for the years ended December 31, 1998, 1999 and 2000, and the selected balance sheet data as of December 31, 1999 and 2000 set forth below are derived from our consolidated financial statements included herein and should be read in conjunction with, and are qualified in their entirety by reference to, these financial statements, including the notes thereto. Our results of operations for all historical periods have been restated to reflect our acquisition of Worldwide Semiconductor Manufacturing Corp. on June 30, 2000 which was accounted for as a pooling-of-interest. These financial statements, together with the notes thereto, are referred to herein as the "Consolidated Financial Statements". The selected income statement data and cash flow data for the years ended December 31, 1996 and 1997 and the selected balance sheet data as of December 31, 1996, 1997 and 1998 set forth below are derived from our audited consolidated financial statements not included herein. These financial statements have been audited by T N Soong & Co, a member firm of Andersen Worldwide, SC, independent public accountants. These financial statements have been prepared and presented in accordance with generally accepted accounting principles in the Republic of China, or ROC, also called ROC GAAP, which differ in some material respects from generally accepted accounting principles in the United States, also called US GAAP. For a discussion of differences between ROC GAAP and US GAAP, see note 24 to the Consolidated Financial Statements.

	Year ended and as of December 31,					
	1996	1997	1998	1999	2000	2000
	NT\$	NT\$	NT\$	NT\$	NT\$	US\$
	(in millions, except percentages, earnings per share and per ADS, and operating data)					
<b>Income Statement Data:</b>						
<b>ROC GAAP</b>						
Net sales .....	39,400	43,927	50,525	76,305	166,198	5,011
Cost of sales .....	(17,421)	(23,801)	(33,009)	(46,237)	(89,682)	(2,704)
Gross profit .....	21,979	20,126	17,515	30,068	76,516	2,307
Operating expenses .....	(3,789)	(5,504)	(5,210)	(7,798)	(15,221)	(460)
Income from operations .....	18,191	14,622	12,306	22,270	61,295	1,848
Non-operating income .....	1,194	1,554	1,977	1,682	6,228	188
Non-operating expenses .....	(287)	(831)	(3,227)	(3,324)	(3,621)	(109)
Income before income taxes .....	19,097	15,345	11,055	20,628	63,902	1,927
Income tax (expense) benefit .....	380	2,556	2,318	2,383	1,168	35
Net income before minority interest .....	19,477	17,901	13,374	23,011	65,069	1,962
Minority-interest in loss (income) of subsidiary .....	(41)	73	1,016	516	37	1
Net income .....	19,436	17,974	14,389	23,527	65,106	1,963
Earnings per share <sup>(1)</sup> .....	1.82	1.69	1.35	2.21	5.71	0.17
Pro forma earnings per ADS .....	9.12	8.43	6.75	11.04	28.55	0.86
Average shares outstanding <sup>(1)</sup> .....	10,656	10,656	10,656	10,656	11,401	344
<b>US GAAP</b>						
Net income .....	15,617	10,039	1,249	13,884	21,740	655
Average shares outstanding <sup>(1)</sup> .....	9,016	9,437	9,860	10,383	11,401	11,401
Earnings per share <sup>(1)</sup> .....	1.73	1.06	0.13	1.34	1.91	0.06
Earnings per ADS equivalent .....	8.66	5.32	0.63	6.69	9.53	0.29

Year ended and as of December 31,

	1996	1997	1998	1999	2000	2000
	NT\$	NT\$	NT\$	NT\$	NT\$	US\$
(in millions, except percentages, earnings per share and per ADS, and operating data)						
<b>Balance Sheet Data:</b>						
<b>ROC GAAP</b>						
Working capital.....	23,231	29,193	15,926	33,267	45,769	1,380
Long-term equity investments.....	6,545	7,162	6,659	16,165	9,814	296
Properties .....	43,590	80,864	118,353	150,060	244,748	7,379
Total assets.....	80,994	137,318	165,461	235,436	370,886	11,181
Long-term bank borrowing <sup>(2)</sup> .....	5,720	8,026	14,630	22,744	23,339	704
Long-term debt payable .....	0	11,983	22,632	20,000	29,000	874
Guaranty deposit-in and other liabilities.....	9,946	9,006	6,957	6,207	9,046	273
Minority interest equity.....	5,562	10,841	9,701	7,524	322	10
Total liabilities .....	26,794	55,534	69,175	82,865	109,132	3,290
Capital Stock.....	27,567	43,613	66,472	85,209	129,894	3,916
Cash Dividend.....	0	0	0	0	0	0
Shareholders' equity .....	54,199	81,784	96,285	152,571	261,754	7,891
<b>US GAAP</b>						
Shareholders' equity .....	53,150	81,200	94,293	151,977	279,946	8,440
<b>Other Financial Data:</b>						
<b>ROC GAAP</b>						
Gross margin.....	56%	46%	35%	39%	46%	46%
Operating margin .....	46%	33%	24%	29%	37%	37%
Net margin .....	49%	41%	28%	31%	39%	39%
Capital expenditures.....	22,804	40,289	55,780	51,459	103,762	3,125
Depreciation and amortization .....	6,550	9,785	15,522	25,198	41,446	1,250
Cash provided by operating activities .....	29,023	19,288	30,130	45,302	93,413	2,816
Cash used in investing activities .....	(24,314)	(42,182)	(57,311)	(66,002)	(119,575)	(3,605)
Cash provided by financing activities .....	7,095	23,635	16,855	39,518	35,366	1,066
Net cash flow .....	11,789	1,334	(10,984)	18,646	9,323	281
<b>Operating Data:</b>						
Wafers sold <sup>(3)</sup> .....	816	1,145	1,184	1,826	3,408	3,408
Average utilization rate <sup>(4)</sup> .....	96%	102%	74%	100%	106%	106%

(1) Retroactively adjusted for all subsequent stock dividends and employee stock bonuses, including a 40% stock dividend and 467,442,629 common shares as employee bonuses to be distributed in July 2001.

(2) Excludes debt securities.

(3) In thousands.

(4) Excludes the utilization rate of Worldwide Semiconductor prior to 2000 and the utilization rate of TSMC-Acer prior to our merger with TSMC-Acer on June 30, 2000.

## Exchange Rates

We publish our financial statements in New Taiwan dollars, the lawful currency of the ROC. In this annual report, “\$”, “US\$” and “U.S. dollars” mean United States dollars, “S\$” means Singapore dollars and “NT\$” and “NT dollars” mean New Taiwan dollars. This annual report contains translations of certain NT dollar amounts into U.S. dollars at specified rates solely for the convenience of the reader. Unless otherwise noted, all translations from NT dollars to U.S. dollars and from U.S. dollars to NT dollars were made at the noon buying rate in The City of New York for cable transfers in NT dollars per U.S. dollar as certified for customs purposes by the Federal Reserve Bank of New York as of December 31, 2000, which was NT\$33.17 to US\$1.00 on that date. On June 20, 2001, the noon buying rate was NT\$34.48 to US\$1.00.

Fluctuations in the exchange rate between NT dollars and U.S. dollars will affect the U.S. dollar equivalent of the NT dollar price of our common shares on the Taiwan Stock Exchange and, as a result, will likely affect the market price of our ADSs. These fluctuations will also affect the U.S. dollar conversion by the depositary of any cash dividends paid in NT dollars on, and the NT dollar proceeds received by the depositary from any sale of common shares represented by ADSs, in each case according to the terms of the deposit agreement.

The following table sets forth, for the fiscal years indicated, information concerning the number of NT dollars for which one U.S. dollar could be exchanged based on the noon buying rate for cable transfers in NT dollars as certified for customs purposes by the Federal Reserve Bank of New York.

	NT dollars per U.S. dollar			
	Noon buying rate			
	Average	High	Low	Period-End
1996 .....	NT\$27.47	NT\$27.95	NT\$27.15	NT\$27.52
1997 .....	29.06	33.25	27.34	32.80
1998 .....	33.54	35.00	32.05	32.27
1999 .....	32.28	33.40	31.39	31.39
2000 .....	30.74	31.75	30.35	30.90
October 2000.....	31.85	32.50	31.29	32.35
November 2000.....	32.43	33.08	32.07	33.08
December 2000.....	33.12	33.25	33.05	33.17
January 2001 .....	32.72	33.65	32.23	32.35
February 2001.....	32.33	32.40	32.27	32.40
March 2001 .....	32.62	32.92	32.80	32.85
April 2001 .....	32.94	33.00	32.88	32.94
May 2001 .....	33.24	34.10	32.89	34.02
June 2001 (through June 20, 2001) .....	34.28	34.48	34.08	34.48

Sources: Federal Reserve Bulletin, 1996, Board of Governors of the Federal Reserve System; Federal Reserve Statistical Release H.10(512), 1997-2001, Board of Governors of the Federal Reserve System.

No representation is made that the NT dollar or U.S. dollar amounts referred to herein could have been or could be converted into U.S. dollars or NT dollars, as the case may be, at any particular rate or at all.

#### **Risk Factors**

We wish to caution readers that the following important factors, and those important factors described in other reports submitted to, or filed with, the Securities and Exchange Commission, among other factors, could affect our actual results and could cause our actual results to differ materially from those expressed in any forward-looking statements made by us or on our behalf:

*Since we are dependent on the highly cyclical semiconductor industry, which has experienced significant and sometimes prolonged downturns, our revenues and earnings may fluctuate significantly.*

Our semiconductor foundry business is affected by market conditions in the highly cyclical semiconductor industry. All of our customers operate in this industry. Variations in order levels from our customers result in volatility in our revenues and earnings. From time to time, the semiconductor industry has experienced significant, and sometimes prolonged, downturns. Because our business is, and will continue to be, dependent on the requirements of semiconductor companies for our services, any future downturn in the semiconductor industry would reduce demand for our services. For example, a worldwide slowdown in demand for semiconductor devices led to increased competition beginning in early 1998. As a result, surpluses in capacity and price declines in 1998 accelerated rapidly and negatively affected our operating results in 1998. Starting in the first quarter of 2001, the semiconductor industry experienced a significant downturn due to a worldwide inventory adjustment and a slow down in the worldwide economy. If we cannot reduce our costs to sufficiently offset any decline in demand, our revenues and earnings will suffer.

*Overcapacity in the semiconductor industry may reduce our profit margin.*

The price that we can charge our customers for our services is directly related to the overall worldwide supply of integrated circuits and semiconductor products. The overall supply of semiconductor products is based on the expansion plans of other companies that are outside of our control. Historically, companies in the semiconductor industry have expanded aggressively during periods of increased demand. As a result, periods of overcapacity in the semiconductor industry have frequently followed periods of increased demand. In a period of overcapacity we may have to lower the price we charge our customers for our services or we may have to operate at significantly less than full capacity. This could reduce our margin and weaken our financial condition and results of operations. Due to the

decreased demand for semiconductors in the first quarter of 2001, our average capacity utilization rate decreased to 70% during the first quarter of 2001 from 105% during the preceding quarter. We anticipate that our average capacity utilization rate for the second quarter of 2001 will decrease to below 50%.

***Decreased demand and average selling price for end-use applications of semiconductor products may adversely affect demand for our products and may result in a decrease in our revenues and earnings.***

A significant percentage of our sales revenue is derived from customers who use our products in personal computers, communications devices and consumer electronics. Any significant decrease in the demand for end-use applications of our products may decrease the demand for our products and may result in a decrease in our revenues and earnings. In addition, the historical and continuing trend of declining average selling prices of end-use applications places significant pressure on the prices of the components that go into these end-use applications. If the average selling prices of end-use applications continue to decrease, the pricing pressure on components produced by us may lead to a significant reduction of our revenue. A significant portion of our sales is attributable to the manufacture of semiconductors used in personal computer and communications devices. Both industries are subject to intense competition and significant shifts in demand, which could put pricing pressure on our foundry services and have a material adverse effect on our revenues and earnings.

***If we are unable to compete favorably in the highly competitive semiconductor foundry market, we may lose customers and our profit margin and earnings may decrease.***

The markets for our foundry services are highly competitive both in Taiwan and internationally. We compete with other dedicated foundry service providers, as well as integrated device manufacturers. Some of these companies have access to more advanced technologies and greater financial and other resources than we do. As a result, these companies may be able to compete more aggressively over a longer period of time than we could. Moreover, integrated device manufacturers from time to time allocate a portion of their capacity to contract production of integrated circuits for others, which brings them in direct competition with us. In addition, a number of dedicated foundry service providers have been expanding significantly and we are facing increased competition from them. Significant increases in competition may erode our profit margin and weaken our earnings.

Most of our customers obtain foundry services from more than one source. In particular, we face increasing competition from other foundry companies in Asia. Many of our competitors have shown a willingness to quickly and sharply reduce prices, as they did in 1998 and as they have done in early 2001, in order to maintain capacity utilization in their facilities during periods of reduced demand. Significant erosion in the prices for our foundry services or under-utilization of our capacity could cause our profits to decrease and have a material adverse effect on our financial condition and results of operations.

***If we are unable to respond to rapid technological changes in the semiconductor industry, we may become less competitive and less profitable.***

The semiconductor industry is characterized by rapid increases in the diversity and complexity of semiconductor products. The semiconductor industry and the technology used are constantly changing. If we do not anticipate these changes in technology and rapidly adopt new and innovative technology, we may not be able to provide sufficiently advanced foundry services at competitive prices. If we are unable to maintain the ability to provide sufficiently advanced foundry services at competitive prices, our customers may buy products from our competitors instead of us. As a result, we expect that we will need to offer, on an ongoing basis, increasingly advanced and cost-effective foundry technologies and processes in order to respond to competitive industry conditions and customer requirements. In addition, advances in technology typically lead to declining average prices for older technologies or processes. As a result, if we cannot reduce the costs associated with using older technologies, the profitability of a given product may decrease over time. If we fail to achieve advances in technology or processes or to obtain access to advanced technology or processes developed by others, we may become less competitive and less profitable.

***Our results of operations are subject to significant fluctuations, which could negatively impact our financial condition and the market price of our ADSs and common shares.***

Our results of operations have varied significantly from period to period and may continue to vary in the future, due to a number of factors. Downward fluctuations in our results of operations may result in decreases in the market price of our ADSs and common shares. Among the more important factors affecting our quarterly and annual results of operations are the following:

- our ability to quickly adjust to unanticipated declines or shortfalls in projected demand and market prices for our services, in light of the fact that most of our costs are fixed;
- timing of capital expenditures in anticipation of future orders;
- changes in prices of our services;
- volume of orders relative to our production capacity;
- our ability to obtain necessary equipment on a timely basis; and
- changes in costs and availability of our raw materials, equipment and labor.

Due to the factors listed above, it is possible that in some future period our results of operations or growth rate may be below the expectations of research analysts and investors. If so, the market price of our ADSs and common shares and the market value of your investment may fall.

***If we are unable to manage our expansion effectively, our growth prospects may be limited and our future profitability may be affected.***

We are currently ramping up Fab 6 in the Tainan Science-Based Industrial Park and our joint venture fab, Systems on Silicon Manufacturing Company Pte. Ltd., in Singapore. We have commenced the construction of two twelve-inch wafer fabs, Fab 12 in the Hsinchu Science-Based Industrial Park and Fab 14 in the Tainan Science Park. We expect to commence production in Fab 12 in the fourth quarter of 2001. We currently have no plan to commence production in Fab 14 due to the market slowdown.

We plan to increase our overall monthly capacity from approximately 348,000 wafers as of year-end 2000 to approximately 384,000 wafers as of year-end 2001. To successfully manage the increase in capacity, we will need to build new fabs, purchase additional equipment, train personnel to operate the new equipment and hire additional personnel. In addition, the construction and anticipated operation of our new fabs in the Tainan Science Park has required the creation of a new administrative organization in Tainan because of the distance between Tainan and Hsinchu, the site of our other fabs in Taiwan.

Since few companies have commenced production operations in the Tainan Science Park, we are not certain whether the general infrastructure in the Tainan Science Park is sufficient or adequate. Any failure in the electrical or water systems in the park, for example, would severely hamper the operations of our new fab. In addition, any significant vibration caused by a high-speed railway currently planned to pass through the Tainan Science Park may affect our yield rate for production in the Tainan Science Park. We cannot assure you that the ROC government will take the necessary action to minimize the vibration caused by the high-speed railway.

Expansion of our production facilities will increase our fixed costs. We will need to maintain a high utilization rate in our fabs in order to offset these higher fixed costs. If our customers do not correspondingly increase their purchase of our products and services, our financial performance will be adversely affected.

***We may not be able to successfully integrate and manage our mergers or acquisitions to maintain profitability.***

On June 30, 2000, we merged with Worldwide Semiconductor Manufacturing Corp., or Worldwide Semiconductor, and TSMC-Acer Semiconductor Manufacturing Corp., or TSMC-Acer. We also continue to evaluate other merger and acquisition opportunities and plan to make additional mergers or acquisitions in the future if suitable opportunities arise. These may dilute our earnings per share as a result of the specific scope of the businesses or condition of the operations being merged with or acquired. Mergers and acquisitions involve risks, including:

- unforeseen contingent risks or latent liabilities relating to these businesses that may only become apparent after the merger or acquisition is finalized;
- integration and management of the new operations;
- retention of select personnel;
- integration of purchasing operations and information systems;
- coordination of sales and marketing efforts;
- management of a larger business; and
- diversion of management's attention from other ongoing business concerns.

If we are unable to successfully integrate and manage any future mergers or acquisitions that we might pursue, our growth plans may not be met and our profitability may decline.

***We may not be able to implement our planned growth if we are unable to accurately forecast and sufficiently meet our future capital requirements.***

Our capital requirements are difficult to plan in the highly cyclical and rapidly changing semiconductor industry. We will need capital to fund the expansion of our facilities. Future acquisitions or mergers or other developments may also cause us to require additional funds. Our ability to obtain external financing in the future is subject to a variety of uncertainties, including:

- our future financial condition, results of operations and cash flows;
- general market conditions for financing activities by semiconductor companies; and
- economic, political and other conditions in Taiwan and elsewhere.

Therefore, sufficient external financing may not be available to us on a timely basis, on acceptable terms or at all. As a result, we may be forced to curtail our expansion plans or delay the deployment of our services and become less competitive, which could result in a loss of customers and limit the growth of our business.

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

We depend on the continued services of our executive officers and skilled technical and other personnel. Our business could suffer if we lose the services of any of these personnel and cannot adequately replace them. We will be required to increase substantially the number of these employees in connection with our expansion plans. We seek to recruit highly qualified personnel and there is intense competition for the services of these personnel in the semiconductor industry. We may not be able to either retain our present personnel or attract additional qualified personnel as and when needed. We expect competition for personnel to increase significantly in the future as new semiconductor facilities are established. We may need to increase employee compensation levels in order to retain our existing officers and employees and attract and retain the additional personnel that we expect to require.

***We may be unable to obtain in a timely manner and at a reasonable cost the equipment necessary for us to remain competitive and we may become less profitable.***

The semiconductor foundry business is capital intensive and requires investment in expensive equipment manufactured by a limited number of suppliers. The market for equipment used in semiconductor foundries is characterized, from time to time, by intense demand, limited supply and long delivery cycles. Our operations and expansion plans depend on our ability to obtain a significant amount of equipment from a limited number of suppliers. Currently, there is significant demand for this type of equipment and the lead time for delivery may be four to six months or more. Although we have binding supply agreements with some of our suppliers, these supply agreements do not cover all the equipment required in connection with our current capacity expansion plans and, as such, we are exposed to changing market conditions and other substantial risks. For example, shortages of equipment could result in an increase in their prices and longer delivery times. In addition, the expansion of fabs planned or announced by us and other semiconductor companies may put additional pressure on the supply of equipment. If we are unable to obtain equipment in a timely manner, we may be unable to fulfill our customers' orders, which could negatively impact our financial condition and results of operations and cause our profit to decrease.

***Our revenue and profitability may decline if we are unable to obtain adequate supplies of raw materials in a timely manner and at reasonable prices.***

Our production operations require that we obtain adequate supplies of raw materials such as silicon wafers, chemicals and photoresistors, on a timely basis. Shortages in the supply of some materials experienced by the semiconductor industry have in the past resulted in occasional price adjustments and delivery delays. We may not be able to obtain adequate supplies of raw materials in a timely manner and at reasonable prices. Our revenue and earnings could decline if we were unable to obtain adequate supplies of high quality raw materials in a timely manner or if there were significant increases in the costs of raw materials that we could not pass on to our customers.

***The loss of our right to use Philips intellectual property may require us to incur significant expenses to acquire alternate rights to necessary intellectual property.***

We are the beneficiary of many of the patent cross-licensing arrangements between Koninklijke Philips Electronics N.V., or Philips, and other semiconductor companies. We will continue to have rights to use the intellectual property governed by these licensing arrangements only if Philips, including its subsidiaries, maintains a minimum percentage ownership in us. This minimum percentage ownership varies from agreement to agreement and generally ranges from 12.5% to 25%. If we lose the right to use the intellectual property under these licensing arrangements, we may not be able to obtain similar licenses without considerable expense. In November 2000, Philip purchased from us 1,299,925,653 Preferred A shares, par value NT\$10 per share, to be redeemed at par value on May 28, 2003. As of May 31, 2001, Philips, together with its subsidiaries, owned 2,626,336,665 common shares and 1,299,925,653 Preferred A shares representing in aggregate a 30.23% equity interest in us.

***If our major shareholders use the majority of our production capacity, we will not be able to service our other customers.***

So long as Philips and its affiliates own at least 24.8% of our equity interest, Philips has an option to require us to sell to Philips 30% of our production capacity. According to our agreement with the Industrial Technology Research Institute of Taiwan, or ITRI, the Ministry of Economic Affairs of the ROC, or ROC MOEA, or the entity designated by the ROC MOEA, also has an option to purchase up to 35% of our capacity. If Philips or the ROC MOEA or the entity designated by the ROC MOEA exercises either of these options to any significant degree, we will not be able to provide services to all of our other customers. Such a situation will damage our relationship with our other customers and may encourage them to purchase more products from our competitors in the future.

***Our major shareholders may take actions that are not in, or may conflict with, our public shareholders' best interest.***

As of May 31, 2001, Philips and the ROC government, acting through the Development Fund of the Executive Yuan, or the Development Fund, owned, respectively, approximately 30.23% and 12.10% of our equity interest.

Accordingly, these shareholders will continue to have the ability to exercise significant influence over our business, including over matters relating to:

- our management and policies;
- the timing and distribution of dividends; and
- the election of our directors and supervisors.

These shareholders may take actions that are not in our or our public shareholders' best interest.

***Any inability to obtain, preserve and defend our intellectual property rights could harm our competitive position.***

Our ability to compete successfully and achieve future growth will depend, in part, on our ability to protect our proprietary technology and to secure critical processing technology that we do not own on commercially reasonable terms. We cannot assure you that in the future we will be able to independently develop, or secure from any third party, the technology required for upgrading our production facilities. Our failure to successfully obtain such technology may seriously harm our competitive position.

Our ability to compete successfully also depends on our ability to operate without infringing the proprietary rights of others. We have no means of knowing what patent applications have been filed in the United States until they are granted. Because of the complexity of the technology used and the multitude of patents, copyrights and other overlapping intellectual property rights. The semiconductor industry is characterized by frequent litigation regarding patent, trade secret and other intellectual property rights. It is common for patent owners to assert their patents against semiconductor manufacturers. We have received from time to time communications from third parties asserting patents that cover certain of our technologies and alleging infringement of intellectual property rights of others, and we expect to continue to receive such communications in the future. We do not believe that we are currently infringing any patent rights. In the event any third party were to make a valid claim against us or our customers, we could be required to:

- seek to acquire licenses to the infringed technology which may not be available on commercially reasonable terms, if at all;
- discontinue using certain process technologies, which could cause us to stop manufacturing certain semiconductors;
- pay substantial monetary damages; or
- seek to develop non-infringing technologies, which may not be feasible.

Any one 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 necessary licenses or if litigation relating to 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.

***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. Many of the semiconductor companies have experienced extensive fire damages. Although we maintain comprehensive fire insurance including insurance for loss of property and loss resulted from business interruption, we cannot assure you that our insurance coverage is sufficient to cover all of our potential losses. If any of

our fabs were to be damaged or cease operations as a result of a fire, it would reduce our manufacturing capacity and reduce our revenues and profits.

***Strained relations between the Republic of China and the People's Republic of China could negatively affect our business and the market value of your investment.***

Our principal executive offices and our principal production facilities are located in Taiwan and a substantial majority of our net revenues are derived from our operations in Taiwan. The Republic of China has a unique international political status. The People's Republic of China does not recognize the legitimacy of the Republic of China. Although significant economic and cultural relations have been established during recent years between the Republic of China and the People's Republic of China, relations have often been strained. The government of the People's Republic of China has recently indicated that it may use military force to gain control over Taiwan in some circumstances, such as a declaration of independence by Taiwan, the prolonged delay by the Republic of China to commence reunification negotiations, foreign power interference in Taiwanese affairs or the refusal by the Republic of China to accept the People's Republic of China's stated "one China" policy. Past developments in relations between the Republic of China and the People's Republic of China have on occasion depressed the market prices of the securities of Taiwanese companies, including our own. Relations between the Republic of China and the People's Republic of China and other factors affecting military, political or economic conditions in Taiwan could have a material adverse effect on our financial condition and results of operations, as well as the market price and the liquidity of our ADSs and common shares.

***We are vulnerable to disasters and other disruptive events which could severely disrupt the normal operation of our business and adversely affect our earnings.***

Taiwan is susceptible to earthquakes. On September 21, October 22, and November 2, 1999, Taiwan experienced severe earthquakes that caused significant property damage and loss of life, particularly in the central part of Taiwan. These earthquakes caused damage to production facilities and adversely affected the operations of many companies in the semiconductor and other industries. We experienced damages to our machinery and equipment as a result of these earthquakes. There were also interruptions to our production schedule, primarily as a result of power outages caused by the earthquakes, and we were forced to scrap approximately 35,000 wafers. Our production facilities, as well as many of our suppliers and customers and upstream providers of complementary semiconductor manufacturing services, are located in Taiwan. If our customers are affected by an earthquake or other natural disasters, it could result in a decline in the demand for our services. If our suppliers' services are affected, our production schedule could be interrupted or delayed. As a result, a major earthquake, natural disaster or other disruptive event in Taiwan could severely disrupt the normal operation of our business and have a material adverse effect on our financial condition and results of operations.

***Fluctuations in exchange rates could result in foreign exchange losses.***

Over half of our capital expenditures and manufacturing costs are denominated in currencies other than NT dollars, primarily U.S. dollars, Japanese yen and Dutch guilders. A larger portion of our sales are denominated in U.S. dollars and other currencies other than NT dollars. A substantial portion of our long-term borrowings are denominated in U.S. dollars. We are particularly affected by fluctuations in the exchange rate between the U.S. dollar and the NT dollar. From February 6, 2001 to June 1, 2001, the NT dollar depreciated 5.67% against the U.S. dollar from noon buying rate of NT\$32.27 per US\$1.00 to a noon buying rate of NT\$34.10 per US\$1.00. Any significant fluctuation in that exchange rate may have an adverse effect on our financial condition. In addition, fluctuations in the exchange rate between the U.S. dollar and the NT dollar will affect the U.S. dollar value of our common shares and the market price of the ADSs and of any cash dividends paid in NT dollars on our common shares represented by ADSs.

***Your voting rights as a holder of ADSs will be limited.***

Holders of ADRs evidencing ADSs may exercise voting rights with respect to the common shares represented by these ADSs only in accordance with the provisions of the deposit agreement. The deposit agreement provides that, upon receipt of notice of any meeting of holders of our common shares, the depositary bank will, as soon as practicable

thereafter, mail to the holders (i) the notice of the meeting sent by us, (ii) voting instruction forms and (iii) a statement as to the manner in which instructions may be given by the holders.

ADS holders will not generally be able to exercise voting rights attaching to the deposited securities on an individual basis. According to the ROC Company Law, the voting rights attaching to the deposited securities must be exercised as to all matters subject to a vote of shareholders collectively in the same manner, except in the case of an election of directors and supervisors. The election of directors and supervisors is by means of cumulative voting. See “Item 10 Additional Information—Voting of Deposited Securities” for a more detailed discussion of the manner in which a holder of ADSs can exercise its voting rights.

***You may not be able to participate in rights offerings and may experience dilution of your holdings.***

We may, from time to time, distribute rights to our shareholders, including rights to acquire securities. Under our ADS deposit agreement, the depository bank will not distribute rights to holders of ADSs unless the distribution and sale of rights and the securities to which these rights relate are either exempt from registration under the Securities Act of 1933 with respect to all holders of ADSs, or are registered under the provisions of the Securities Act. Although we may be eligible to take advantage of recently adopted exemptions for rights offerings by certain foreign companies, we can give no assurances that we can establish an exemption from registration under the Securities Act, and we are under no obligation to file a registration statement with respect to any such rights or underlying securities or to endeavor to have such a registration statement declared effective. In addition, if the depository bank is unable to obtain the requisite approval from the Central Bank of China for the conversion of the subscription payments into NT dollars or if the depository determines that it is unlikely to obtain this approval, we may decide with the depository bank not to make the rights available to holders of ADSs. See “Item 10 Additional Information—Foreign Investment in the ROC” and “Item 10 Additional Information—Exchange Controls”. Accordingly, holders of ADSs may be unable to participate in our rights offerings and may experience dilution of their holdings as a result.

If the depository bank is unable to sell rights that are not exercised or not distributed or if the sale is not lawful or reasonably practicable, it will allow the rights to lapse, in which case you will receive no value for these rights.

***The value of your investment may be reduced by possible future sales of common shares by us or our shareholders.***

We cannot assure you that one or more existing shareholders will not dispose of significant numbers of common shares or ADSs. One of our two largest shareholders, the Development Fund, has sold significant amounts of shares and ADSs in the past including 4,000,000 ADSs in April 2000, 8,680,400 ADSs in June 2000 and 14,000,000 ADSs in June 2001.

In addition, we have in place a conversion sale program that allows some of our shareholders to sell their common shares in ADS form to a specified financial intermediary during a 30-day period once every three to six months. In the third quarter of 1999, our shareholders sold in aggregate 5,486,000 ADSs in the program. In the first quarter of 2000, our shareholders sold an aggregate of 6,560,000 ADSs in the program. In the second quarter of 2001, our shareholders sold an aggregate of 11,682,000 ADSs in the program. We cannot predict the effect, if any, that future sales of ADSs or common shares, or the availability of ADSs or common shares for future sale, will have on the market price of ADSs or common shares prevailing from time to time. Sales of substantial amounts of ADSs or common shares in the public market, or the perception that such sales may occur, could depress the prevailing market price of our ADSs or common shares and could reduce the premium, if any, that the price per ADS on the New York Stock Exchange represents over the corresponding aggregate price of the underlying five common shares on the Taiwan Stock Exchange.

***The market value of your investment may fluctuate due to the volatility of the ROC securities market.***

The ROC securities market is smaller and more volatile than the securities markets in the United States and in some European countries. The Taiwan Stock Exchange has experienced substantial fluctuations in the prices and volumes of sales of listed securities and there are currently limits on the range of daily price movements on the Taiwan Stock Exchange. In the past 10 years, the Taiwan Stock Exchange Index peaked at 12,495.3 in February 1990, and subsequently fell to a low of 2,550.5 in October 1990. On March 13, 2000, the Taiwan Stock Exchange Index

experienced a 617 point drop, which represented the single largest decrease in the history of the Taiwan Stock Exchange Index. From January 1, 2000 to December 31, 2000, the Taiwan Stock Exchange Index dropped 45.9%. On June 20, 2001, the Taiwan Stock Exchange Index closed at 5,029.64. The Taiwan Stock Exchange has experienced problems such as market manipulation, insider trading and payment defaults. The recurrence of these or similar problems may have a material adverse effect on the market price and liquidity of the securities of ROC companies, including our ADSs and common shares, in both the domestic and the international markets.

In response to recent declines and volatility in the securities markets in Taiwan, the government of the Republic of China recently formed the National Financial Stabilization Fund which has purchased and may from time to time purchase shares of Taiwan companies to support these markets. The details of the transactions of the National Financial Stabilization Fund have not been made public. In addition, the government's Labor Insurance Fund and other funds associated with the ROC government have in the past purchased, and may from time to time purchase, shares of Taiwan companies on the Taiwan Stock Exchange or other markets. In the future, market activity by government entities, or the perception that such activity is taking place, may take place or has ceased, may cause sudden movements in the market prices of our ADSs and common shares.

#### **Item 4. Information on the Company**

##### **Industry Background**

*The Semiconductor Industry.* Since the invention of the transistor in 1948, continuous improvements in semiconductor processes and design technologies have led to smaller, more complex and more reliable devices at a lower cost per function. As performance has increased and size and cost have decreased, semiconductors, and particularly integrated circuits, have expanded beyond their original primary applications such as mainframe computer systems to applications such as personal computers, telecommunications systems, consumer electronics, office equipment, automotive products and industrial automation and control systems. Today, semiconductors have become pervasive in everyday life. In addition, system users and designers have demanded semiconductors with more functionality, higher levels of performance, greater reliability and shorter design cycle times, all in smaller packages at lower costs. These demands have resulted in increased semiconductor content as a percentage of system cost.

Semiconductor sales have increased significantly over the long term but have experienced significant cyclical variations in growth rates. It is estimated that worldwide sales of all integrated circuits increased from approximately US\$43 billion in 1990 to approximately US\$204 billion in 2000, with almost all of the growth occurring during the years between 1992 and 1995 and between 1998 and 2000. During 1996 and the first half of 1997, the worldwide per bit price in the memory market declined sharply, and prices of certain other semiconductor products also declined, as increases in supply outstripped demand as a result of technology advancements and excess inventories accumulated in 1995. In 1998, worldwide sales of semiconductors declined by approximately 8% from 1997. Demand for semiconductors improved significantly in 1999 due to the continued recovery of the worldwide semiconductor industry and worldwide sales of semiconductors increased by approximately 19% from 1998. Starting in the first quarter of 2001, the semiconductor industry experienced a significant downturn due to a worldwide inventory adjustment and a slow down in the worldwide economy. Historically, cyclical changes in production capacity and demand in the semiconductor industry have resulted in pronounced cyclical changes in the level of semiconductor sales and fluctuations in prices and margins for semiconductor products from time to time. We believe that the effect of future cyclical changes will have less impact on us than on many other companies in the industry because we hold no inventory of semiconductor products and because of our diverse customer base, which insulates us from swings in demand and supply of some segments of the electronics market.

*The Emergence of the Fabless Design Houses and Dedicated Foundries.* The manufacture of semiconductors is an extremely complex process that requires increasingly sophisticated engineering and manufacturing expertise. Advances in manufacturing process technology enable the design of higher performance semiconductors and the miniaturization of electronic circuitry. As the process of manufacturing semiconductors has become more complex, the capital required for the construction and maintenance of an advanced semiconductor manufacturing facility has increased significantly. This has contributed to an important change in the semiconductor industry. Companies that design and develop proprietary semiconductor products but do not maintain any internal manufacturing capacity, called "fabless" companies, have emerged in significant numbers in recent years. Fabless design houses have typically been

started by engineers from leading semiconductor companies who wish to test out their innovations and ideas in the market place. These companies are completely dependent on foundry services to manufacture their products. It is estimated that fabless design houses generated approximately US\$16.9 billion in worldwide semiconductor sales in 2000.

In addition, many large semiconductor companies and end-product manufacturers that maintain internal manufacturing capacities are increasingly using foundry services for a portion of their manufacturing requirements. Utilizing foundry services allows these companies to reduce manufacturing costs, efficiently allocate capital, research and development and management resources and gain ready access to manufacturing process technology they do not possess.

These changes, as well as the rapid growth of the semiconductor industry, have led to the increasing utilization of foundries. Foundry manufacturing services were traditionally provided by vertically integrated semiconductor companies with excess capacity. After our establishment, other semiconductor manufacturers have also focused on foundry services. These specialized foundries have derived significant manufacturing advantages due to their greater operational focus, economies of scale in production and capital equipment purchases, and broad access to various process technologies they have developed with their customers. Due to these advantages, dedicated foundries have experienced rapid growth and have made substantial investments in advanced facilities and process technologies. IC Insights estimates that the revenues earned by dedicated foundries will increase from approximately US\$10,900 million in 1999 to US\$39,700 million in 2005, representing a compound annual growth rate of 38.1%. IC Insights estimates that the merchant foundry market (including dedicated and integrated foundries) will more than quadruple to US\$47,500 million by 2005 from under US\$13,700 million in 1999, compound annual growth rate of 36.5%. IC Insights also estimates that sales of foundry-fabricated semiconductors, which currently account for 13.3% of the worldwide semiconductor market, will increase to approximately 25% of the market by 2005. The projections by IC Insights are forward-looking statements that are published by IC Insights independently from us. We were not involved in the preparation of these projections and take no responsibility for their accuracy.

***The Semiconductor Industry in Taiwan.*** The semiconductor industry in Taiwan, benefitting from a number of factors, experienced rapid growth through the first half of 1996, with demand for semiconductors generated from downstream manufacturers far exceeding supply during that period. It has been estimated that the market for semiconductors in Taiwan has been growing at a faster rate than that of the world market in recent years, from US\$2.4 billion in 1990 to US\$16.1 billion in 2000. The semiconductor industry in Taiwan experienced a downturn in 1998 due to an over-supply of manufacturing capacity in both the dynamic random access memory and foundry markets. The semiconductor industry in Taiwan rebounded in 1999 in the wake of expanding Asian economies and increased technology spending among U.S. companies and consumers. The semiconductor industry in Taiwan experienced another downturn starting in the first quarter of 2001 due to the worldwide slowdown in the semiconductor industry. Domestic production of semiconductors in Taiwan satisfied approximately 30% of the total domestic demand in 2000.

Taiwan possesses a well-educated and capable labor pool, in particular, a large engineering work force well-suited for sophisticated manufacturing industries. The ROC government has also provided tax incentives, long-term loans at favorable interest rates and research and development support, both directly and indirectly through leading research institutes and universities. As part of such efforts, the ROC government established the Hsinchu Science Park, where we and a number of our customers and competitors are located. Companies located in the Hsinchu Science Park enjoy preferential treatments, including tax holidays, start-up financing and research grants, a streamlined approval process for facility construction and expansion, and dedicated warehousing and shipping facilities. Due to the success of the Hsinchu Science Park, the ROC government has created the Tainan Science Park, a similar park in the southern city of Tainan, to provide additional beneficial locations for semiconductor companies and further stimulate the semiconductor industry in Taiwan.

The simultaneous growth of Taiwan's indigenous electronics industry, particularly in the personal computer markets, has created a sizable local semiconductor market and a substantial infrastructure of technology companies, particularly in the semiconductor industry, with companies that specialize in one or more of the five segments of semiconductor manufacturing: design, photomask manufacturing, wafer fabrication, assembly and testing. This full spectrum of semiconductor manufacturing services makes Taiwan companies attractive to semiconductor or systems companies from around the world pursuing an outsourcing strategy for all or a portion of their semiconductor production needs.

## Overview of the Company

We are the world's largest dedicated semiconductor foundry. As a foundry, we manufacture semiconductor designs using our advanced production processes for our customers based on their own or third parties' proprietary integrated circuit designs. We offer a comprehensive range of leading edge wafer fabrication processes, including processes to manufacture CMOS logic, mixed-signal, volatile and non-volatile memory BiCMOS semiconductors. IC Insights estimates that our revenue market share among foundries worldwide was 39% in 2000, which is 15% more than the world's second largest foundry. We also offer semiconductor design services.

We operate seven eight-inch wafer fabs and two six-inch wafer fabs. Seven of our fabs are located in Hsinchu, one is in Tainan Science Park and one is in the United States. We broke ground for a new twelve-inch wafer fab, Fab 12, in December 1999 in the Hsinchu Science Park and another new twelve-inch wafer fab, Fab 14, in 2000 in the Tainan Science Park. In 1998, we entered into a joint venture called Systems on Silicon with Philips and EDB Investment Pte. Ltd. to build a fab in Singapore, which commenced production in September 2000. We plan to decommission Fab 1, which is a six-inch wafer fab, on March 31, 2002 due to the expiration of land lease agreement with ITRI.

We believe that our large capacity is a major competitive advantage and we are in the process of expanding our monthly capacity from approximately 353,000 wafers as of year-end 2000 to approximately 395,600 wafers as of year-end 2001. Our expected capacity as of year-end 2001 includes a monthly capacity of approximately 38,000 wafers at the fabs of our joint ventures Systems on Silicon and Vanguard International Semiconductor, or Vanguard. We count among our customers many of the world's leading semiconductor companies, ranging from fabless integrated circuit design houses such as Altera, VIA Technology, Inc. and NVIDIA Corporation, to integrated device manufacturing companies such as Motorola Inc. and Philips, and systems companies such as Alcatel Microelectronics and Qualcomm Inc. Fabless integrated circuit design houses and integrated device manufacturers accounted for approximately 64% and 36%, respectively, of our 2000 sales.

## Our History and Structure

We were founded in 1987 as a joint venture among the ROC government, Philips and other private investors and were incorporated in the ROC on February 21, 1987. Our common shares have been listed on the Taiwan Stock Exchange since September 5, 1994 and our ADSs have been listed on the New York Stock Exchange since October 8, 1997.

***WaferTech Joint Venture in the United States.*** In 1996, we entered into a joint venture called WaferTech with U.S.-based Altera, Analog Devices Inc. and Integrated Silicon Solution, Inc. to construct and operate a US\$1.2 billion foundry in the United States. Initial trial production at WaferTech commenced in July 1998 and commercial production commenced in October 1998. As of December 31, 2000, the monthly capacity at WaferTech was 28,000 wafers. By the end of 2001, we expect the monthly capacity of WaferTech to be 30,000 wafers. In December 1998, we increased our percentage ownership of WaferTech from 57% to 68% by purchasing part of the interest of Analog Devices Inc. and Integrated Silicon Solution, Inc. As of April 30, 2000, our percentage interest had decreased to approximately 67% as a result of the exercise of options by certain employees of WaferTech to purchase interests in WaferTech. In December 2000, we further increased our percentage ownership of WaferTech from 67% to almost 100% by purchasing all of the interest of Altera, Analog Devices Inc. and Integrated Silicon Solutions, Inc. Please see "Item 7. Major Shareholders and Related Party Transactions – Related Party Transactions – WaferTech" for a detailed discussion about the contract terms we entered into with WaferTech.

***Systems on Silicon in Singapore.*** In March 1999, we entered into an agreement with Philips and EDB Investment Pte. Ltd. to found a joint venture, Systems on Silicon, to build a fab in Singapore. As of May 31, 2001, we owned 32% of Systems on Silicon, Philips owned 48% and EDB Investment Pte. Ltd. owned 20%. The fab commenced production in December 2000. After the ramping up of the production capability at Systems on Silicon to its full capacity, we will have the right to purchase 40% of Systems on Silicon's annual capacity. We will also be required to purchase from Systems on Silicon up to 28% of its annual installed capacity unless we and Philips purchase, in the aggregate, not less than 70% of its annual installed production capacity. Please see "Item 7. Major Shareholders and

Related Party Transactions – Related Party Transactions –Systems on Silicon” for a detailed discussion about the contract terms we entered into with Systems on Silicon.

**TSMC–Acer** In June 1999, we acquired 30% of the outstanding equity securities of Acer Semiconductor Manufacturing Inc., a specialized DRAM manufacturer in Taiwan. Upon our acquisition of this 30% interest, the name of this company was changed to TSMC-Acer Semiconductor Manufacturing Corporation. The other principal shareholders of TSMC-Acer as of December 31, 1999 were Acer Inc. and certain of its affiliates, which held an aggregate equity interest of approximately 30%, and China Development Industrial Bank, which held 8%. TSMC-Acer is located in the Hsinchu Science Park, has one eight-inch fab with a monthly production capacity of 44,000 wafers as of year-end 2000 and is expected to have a monthly production capacity of 46,500 wafers by the end of 2001. On June 30, 2000, we acquired by merger the remainder of TSMC-Acer that we did not already own. As a result of the merger with TSMC-Acer, each holder of TSMC-Acer shares was issued one of our common shares for every 3.90625 TSMC-Acer shares held. We issued 433,515,164 common shares upon the completion of the merger with TSMC-Acer. The merger was accounted for as a purchase; accordingly, the results of operations for TSMC-Acer have been included in our Consolidated Financial Statements from the date of merger.

**Worldwide Semiconductor.** To rapidly increase our capacity in response to strong demand for our services, in June 2000, we acquired Worldwide Semiconductor, the third-largest dedicated foundry in Taiwan established in May 1996. As result of the merger with Worldwide Semiconductor, each holder of Worldwide Semiconductor shares was issued one of our common shares for every two Worldwide Semiconductor shares held. We issued an aggregate of 1,150,000,000 common shares to Worldwide Semiconductor shareholders upon the completion of the merger on June 30, 2000. The merger was accounted for as a pooling-of-interest; and accordingly, our Consolidated Financial Statements have been restated to include the results of operation of Worldwide Semiconductor for all periods presented.

The following table sets forth, as of May 31, 2001, our ownership interest in, and country of incorporation of, each of our significant subsidiaries in which we own more than 10% of its equity interest.

<b>Name of the Subsidiary</b>	<b>State or Jurisdiction of Incorporation</b>	<b>Our Ownership Interest</b>
TSMC North America	California, USA	100%
TSMC Europe B.V.	The Netherlands	100%
TSMC Japan K.K.	Japan	100%
TSMC International Investment Ltd.	British Virgin Islands	100%
TSMC Partners, Ltd.	British Virgin Islands	100%
Po Cherng Investment Co., Ltd.	Taiwan, R.O.C.	25%
Chi Hsin Investment Co., Ltd.	Taiwan, R.O.C.	25%
Cherng Huei Investment Co., Ltd.	Taiwan, R.O.C.	25%
Hsin Ruey Investment Co., Ltd.	Taiwan, R.O.C.	25%
Kung Cherng Investment Co., Ltd.	Taiwan, R.O.C.	25%
Chi Cherng Investment Co., Ltd.	Taiwan, R.O.C.	25%
TSMC Development, Inc.	Delaware, U.S.A.	100%
Vanguard International Semiconductor Corporation	Taiwan, R.O.C.	25%
TSMC Technology, Inc.	Delaware, U.S.A.	100%
InveStar Semiconductor Development Fund, Inc.	Cayman Island	97%
WaferTech, LLC	Delaware, U.S.A.	99%
Investar Semiconductor Development Fund, Inc. (II)	Cayman Island	97%
Systems on Silicon Manufacturing Company Pte.	Singapore	32%

Our principal executive office is located at No. 121, Park Avenue III, Science-Based Industrial Park, Hsinchu, Taiwan, Republic of China and our telephone number at that office is (886-3) 578-0221. Our web site is [www.tsmc.com.tw](http://www.tsmc.com.tw). Information contained on our web site does not constitute part of this annual report or any registration statement in which this annual report may be incorporated by reference.

## Manufacturing Capacity and Technology

We manufacture semiconductors on silicon wafers based on proprietary designs provided by our customers or third party designers. Two key factors that characterize a foundry's manufacturing capabilities are output capacity and fabrication process technology. Since our establishment, we have possessed the largest capacity among the world's dedicated foundries. We also believe that we are the technology leader among the dedicated foundries and are one of the leaders in the semiconductor industry in terms of the circuitry resolutions of our volume production wafers and manufacturing process management capabilities. In December 2000, we announced the commercial production availability of true 0.13-micron CMOS process technology. This technology was the industry's first commercially available 0.13-micron process. We are also the sole foundry member of International SEMATECH, a consortium of 13 of the world's leading semiconductor companies that is dedicated to the research and development of advanced semiconductor manufacturing technologies.

The following table lists our fabs, together with the year of commencement of commercial production, technology and capacity during the last five years:

Fab <sup>(1)</sup>	Year of commencement	Initial technology <sup>(2)</sup>	Current technology range <sup>(2)</sup>	Monthly capacity <sup>(3)</sup>				
				1996	1997	1998	1999	2000
1 .....	1987	1.5	1.5/1.0/0.8	11,236	12,022	11,910	11,011	9,607
2A .....	1990	0.8	1.0/0.8/0.6	21,348	22,753	21,348	22,472	21,348
2B .....	1992	0.6	0.6/0.5/0.45	21,348	23,034	23,034	21,910	22,191
2C <sup>(4)</sup> .....	1994	0.8	0.8	3,933	—	—	—	—
3 .....	1995	0.5	0.35/0.25/0.15	25,506	39,000	41,000	39,000	45,000
4 .....	1996	0.5	0.35/0.25/0.18	—	23,000	31,000	31,000	36,000
5 .....	1997	0.5	0.35/0.25/0.18	—	3,000	13,000	28,000	39,500
6 .....	2000	0.25	0.25/0.18	—	—	—	—	32,000
7 <sup>(5)</sup> .....	1995	0.45	0.35/0.25/0.20	—	—	—	10,000	44,000
8 <sup>(6)</sup> .....	1998	0.35	0.35 0.25/0.18	—	—	4,000	17,000	48,000
WaferTech .....	1998	0.35	0.35/0.25	—	—	8,000	20,300	28,000
Vanguard <sup>(7)</sup> .....	1994	0.5/0.35	0.5/0.35	—	—	—	9,000	22,000
Systems on Silicon <sup>(8)</sup> .....	2000	0.25/0.18	0.25	—	—	—	—	400
Total .....				83,371	122,809	153,292	209,693	348,046

(1) Fabs 1 and 2 produce six-inch wafers. Fabs 3, 4, 5, 6, 7, 8, WaferTech, Vanguard and Systems on Silicon produce eight-inch wafers. Fab 1 is located in Hsinchu at the Industrial Technology Research Institute, Fabs 2A, 2B, 2C, 3, 4 and 5, 7, 8 and Vanguard are located in Hsinchu Science Park, Fab 6 is located in the Tainan Science Park, WaferTech is located in the United States and Systems on Silicon is located in Singapore.

(2) In microns, as of year-end.

(3) Estimated capacity in wafers as of year-end. Actual capacity during each year will be lower as new production capacity is phased in during the course of the year.

(4) Located at Macronix International Co., Ltd., or Macronix. Pursuant to an agreement with Macronix entered into in October 1993, we supplied Macronix with certain new machinery and equipment, to be used by Macronix in its wafer fab, in exchange for Macronix's commitment to supply us at a rate of 7,000 wafers per month. This arrangement concluded in October 1997.

(5) Represents that portion of the total capacity from TSMC-Acer that we utilized for foundry production prior to the completion of our merger with TSMC-Acer on June 30, 2000 and the total capacity from TSMC-Acer subsequent to the completion of the merger.

(6) Represents the total capacity from Worldwide Semiconductor since 1998 reflecting the restated operating data as a result of pooling-of-interest accounting for the merger with Worldwide Semiconductor.

(7) Represents that portion of the total capacity from Vanguard that we had the option to utilize as of December 31, 1999.

(8) Represents that portion of the total capacity that we had the option to utilize as of December 31, 2000. This fab commenced production in September 2000.

**Capacity Utilization Rates.** A key factor contributing to our profit margins has been our ability to maintain high capacity utilization. Because a high percentage of our cost of sales is of a fixed nature, operations at or near capacity have a significant positive effect on output and profitability. Our fabs in the years 1994 and 1995 operated at above 100% utilization rates. During the first half of 1996, our fabs operated at a utilization rate in excess of 100%, but due to adverse market conditions in the global semiconductor market in the latter half of 1996 and the first half of 1997, our fabs operated at utilization rates of 87% and 98% respectively. In the second half of 1997 and the first half of 1998, the utilization rate was 106% and 88%, respectively. In the second half of 1998, the average capacity utilization rate was 63%. The utilization rate for the first half of 1999 and the second half of 1999 was 98% and 102%, respectively. The utilization rate for each quarter of 2000 was 108%, 101%, 107% and 105%, respectively. The utilization rates for

2000 do not take into account the utilization rates for TSMC-Acer prior to the completion of our merger with TSMC-Acer on June 30, 2000. The utilization rates prior to 2000 do not take into account the utilization rate for Worldwide Semiconductor and TSMC-Acer. Operation at utilization rates exceeding 100% has been possible due to, among other factors, our ability to manage the production facilities and product flows efficiently. Other factors affecting utilization rates are the percentage yield of commercially useful wafers during the fabrication process, the complexity of the wafer produced and the actual product mix.

The capacity of a fab is determined by us based on the capacity ratings given by manufacturers of the equipment used in the fab, adjusted for, among other factors, actual output during uninterrupted trial runs, expected down time due to set up for production runs and maintenance, and expected product mix. All of our fabs currently operate 24 hours per day, seven days per week. Employees work shifts of 12 hours each day on a two days on, two days off basis, except during periods of annual maintenance.

**Mini-Environments.** Our fabs are organized into bays grouped by function. The general production environment consists of class 1000 or class 100 “clean rooms”. A class 100 clean room means a room containing less than 100 particles of contaminants per cubic foot. Within the clean rooms, we use the “mini-environment” approach pioneered by us in which the manufacturing steps are performed in a class 1 (in the case of Fab 3, class 0.1) clean mini-environment. We believe that the mini-environment approach has several advantages. The use of mini-environment results in reductions of building structure costs, mechanical and electrical system requirements and operating costs, allows flexibility in equipment layout and set-up and reconfiguration and facilitates the ramping-up process during capacity expansion.

### Capacity Expansion and Technology Upgrade Plans

We intend to maintain our strategy of expanding manufacturing capacity and improving manufacturing process technology to meet both the fabrication and the technological needs of our customers.

The following table sets forth the range of our circuitry resolution capability and manufacturing capacity, broken down by fabs, as of year-end 2000 and planned resolution capability and capacity during the following one year:

Fab <sup>(1)</sup>	Year ended December 31,			
	2000		2001(E)	
	Technology range <sup>(2)</sup>	Monthly capacity <sup>(3)</sup>	Technology range <sup>(2)</sup>	Monthly capacity <sup>(3)</sup>
1.....	1.5/1.0/0.8	9,607	1.5/1.0/0.8	11,011
2A.....	1.0/0.8/0.6	21,348	1.0/0.8/0.6	21,348
2B.....	0.6/0.5/0.45	22,191	0.6/0.5/0.45	22,472
3.....	0.35/0.25/0.15	45,000	0.35/0.25/0.15	45,000
4.....	0.35/0.25/0.18	36,000	0.35/0.25/0.18/0.13	37,000
5.....	0.35/0.25/0.18	39,500	0.35/0.25/0.18/0.15	39,000
6.....	0.25/0.18	32,000	0.25/0.18/0.15/0.13	42,000
Twelve-inch pilot line.....	0.18/0.15/0.13	0	0.18/0.15/0.13	0
7 <sup>(4)</sup> .....	0.35/0.25/0.20	44,000	0.35/0.25/0.20	45,000
8 <sup>(5)</sup> .....	0.35/0.25/0.18	48,000	0.35/0.25/0.18/0.15	57,000
12.....	—	—	0.15	4,500
14.....	—	—	—	—
WaferTech.....	0.35/0.25/0.18	28,000	0.35/0.25/0.18	29,000
Vanguard <sup>(6)</sup> .....	0.5/0.35	22,000	0.5/0.35/0.25	23,000
Systems on Silicon <sup>(6)</sup> .....	0.25	400	0.25/0.18	8,000
Total.....		<u>348,046</u>		<u>384,331</u>

(1) Fabs 1, 2A and 2B produce six-inch wafers. Fabs 3, 4, 5, 6, 7, 8, WaferTech, Vanguard and Systems on Silicon produce eight-inch wafers. Fab 12 and 14 will produce twelve-inch wafers.

(2) In microns, as of year-end.

(3) Estimated capacity in wafers as of year-end. Actual capacity during each year will be lower as new production capacity is phased in during the course of the year.

(4) Monthly capacity as of year-end 2000 represents that portion of the total capacity from TSMC-Acer that we utilized for foundry production prior to the completion of our merger with TSMC-Acer on June 30, 2000 and the total capacity from TSMC-Acer subsequent to the completion of the merger. Estimated monthly capacity for year-end 2001 represents all of TSMC-Acer expected capacity for this period.

(5) Represents the total capacity from Worldwide Semiconductor.

(6) Represents the portion of the total expected capacity that we have the option to utilize from these fabs.

We believe that in 2001, our aggregate capacity will represent approximately 5.5% of the worldwide capacity for the production of semiconductors. These projections for year 2001 and the capacities indicated for 2001 in the chart above are indicative only of our current plans and are subject to change based on market conditions.

We plan to spend approximately NT\$72,800 million (US\$2,195 million) for capital expenditures during 2001, primarily on the following:

- constructing Fab 12 and Fab 14, which are scheduled to be completed by the end of 2001 and 2002, respectively;
- increasing the capacity of Fab 6 and Fab 8; and
- upgrading the technology of our fabs.
- increase the capacity at Wafer Tech.

Our unconsolidated, affiliated companies also plan to spend approximately NT\$18,200 million (US\$560 million) for capital expenditures in 2001, primarily on the following:

- increasing the capacity at Vanguard and Systems on Silicon.

These investment plans are still preliminary and are subject to change based upon market conditions.

**Commitments by Customers.** A number of our customers have entered into arrangements with us to ensure that they have access to specified capacity at our fabs. These arrangements are primarily in the form of a deposit agreement. In a deposit agreement, the customer makes in advance a cash deposit for an option on a specified capacity at our fabs. Option deposits are generally credited to wafer purchase prices as shipments are made. As of May 31, 2001, our customers had on deposit an aggregate of approximately US\$57 million to reserve future capacity, over half of which was reserved for capacity during the years 2001 through 2003.

## Markets and Competition

**Markets.** The primary customers of our foundry services are fabless design houses, integrated device manufacturers and systems companies. The following table presents the breakdown of net sales (including revenues associated with application-specific integrated circuits, ASIC, and mask making services) by types of customers during the last three years:

Customer Type	Year ended December 31,					
	1998		1999		2000	
	Net sales	Percentage	Net sales	Percentage	Net sales	Percentage
(in millions, except percentages)						
Fabless integrated circuit design houses .....	NT\$ 38,339	75.9%	NT\$ 52,671	69.0%	NT\$105,202	63.3%
Integrated device manufacturers .....	11,682	23.1	21,442	28.1	60,259	36.3
Systems Companies.....	504	1.0	2,192	2.9	736	0.4
Total .....	NT\$ 50,525	100.0%	NT\$ 76,305	100.0%	NT\$166,198	100.0%

We categorize our net sales based on the country in which the customer is headquartered. The following table presents a geographic breakdown of our net sales during the last three:

Region	Year ended December 31,					
	1998		1999		2000	
	Net sales	Percentage	Net sales	Percentage	Net sales	Percentage
	(in millions, except percentages)					
USA .....	NT\$ 29,749	58.9%	NT\$ 47,803	62.6%	NT\$112,183	67.5%
Asia .....	13,716	27.1	21,926	28.7	41,716	25.1%
Europe .....	7,059	14.0	6,576	8.5	12,299	7.4%
Total .....	NT\$ 50,525	100.0%	NT\$ 76,305	100.0%	NT\$166,198	100.0%

Although we are not dependent on any single customer, a significant portion of our total net sales are attributable to a relatively small number of our customers. In 2000, our five largest customers accounted for approximately 30.6% of our total net sales. Some of our customers operate in cyclical businesses and order levels have varied in the past, and may vary in the future. Our two largest customers in 2000, Altera and Analog Device Inc. each accounted for approximately 9.3% and 7.0% of our total gross sales. See note 23 to our Consolidated Financial Statements.

Over the years, we have attempted to strategically manage our exposure to the memory semiconductor market by limiting the proportion of memory semiconductor manufacturing services to a designated percentage of total sales revenue. This policy has successfully shielded us from significant adverse effects resulting from the precipitous drop in prices in the memory semiconductor market in 1996 and 1997. In 1998 and 1999, the policy continued to protect us as the memory semiconductor market contracted further. We plan to maintain the policy through 2001 even as we work to expand our share of the emerging market for embedded memory products.

We have four marketing and customer support offices. The office in Hsinchu serves Asian (excluding Japanese) customers. Wholly owned subsidiaries in the United States, Japan and The Netherlands serve North American, Japanese and European customers, respectively. Foundry service sales are technologically intensive and involve frequent and intensive contacts with customers. We believe that the most effective means of marketing our foundry services is by developing direct relationships with our customers. We do not use agents or distributors. Our customer engineers work closely with the sales force by providing detailed technical advice and specifications to customers.

**Competition.** We compete internationally and domestically with dedicated foundry service providers, as well as with integrated semiconductor companies that allocate a portion of their manufacturing capacity to foundry operations. We seek to compete primarily on the basis of quality and service, rather than price.

Our competitors and potential competitors include companies that have substantially greater financial and other resources than we do. However, we believe that we currently enjoy competitive advantages in such areas as technology, manufacturing quality, customer service and capacity. We aim to maintain or enhance these competitive advantages in order to stay ahead of the competition. However, no assurance can be given that we will be able to maintain or enhance these competitive advantages in the future.

### The Semiconductor Fabrication Process

The semiconductor fabrication process can be categorized into a series of general stages. The following are the main stages involved in semiconductor production:

**Circuit Design:** The layout of the circuit components and interconnections is generally produced at computer-aided design terminals. A complex circuit may be designed in as many as twenty layers of patterns or more.

**Mask Making:** Each layer of the pattern of the circuit is duplicated on a photographic negative, known as the mask, by an electron beam generator. A mask is also referred to as a reticle.

**Wafer Fabrication:** This is the process by which raw silicon wafers are modified to form junctions, transistors or interconnects. In this process, the raw wafers are oxidized to form silicon dioxide, which is used as an insulator between the conductors and as an insulating layer for a controlling gate. Through the

introduction of various impurities, the characteristics of conduction in the silicon are eventually changed to form a junction or transistor. During the wafer fabrication process, conductor, semiconductor or resistor materials are applied to the wafer in multiple layers in different patterns specified in the masks.

**Wafer Probing:** After a visual inspection, individual semiconductors, called “dies”, on a wafer are tested, or “probed”, electrically. Dies that fail this test are marked to be discarded.

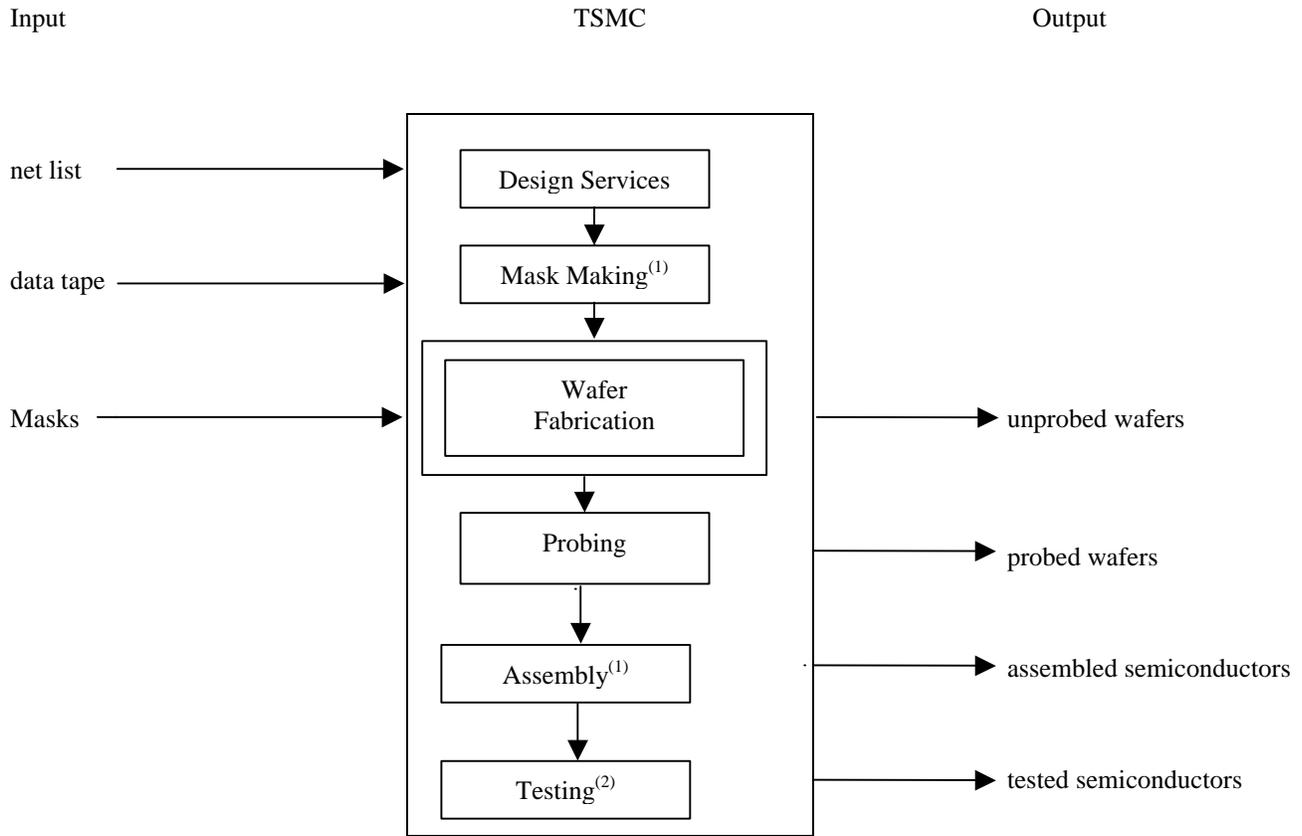
**Assembly:** Each wafer is cut into individual dies and marked semiconductors are discarded. Good dies are connected to a conductive lead frame through wire bonding and the bonded semiconductors are then encapsulated using a plastic molding compound or a ceramic casing.

**Final Testing:** Packaged semiconductors are fully tested by the use of specialized testing equipment.

## **Our Foundry Services**

**Range of Services.** We are primarily engaged in wafer fabrication for foundry customers. We also offer design, mask making, wafer probing and testing services and, on a subcontracted basis, assembly services. Because of our ability to provide a full array of services in addition to wafer fabrication, we are able to accommodate customers with a variety of input and output needs. Almost all of our customers choose to have us make the masks to be used during the fabrication process, as this decreases the risk of damage to the masks that can result from having to transport them. A growing number of customers in the recent years have also begun to use our design service to facilitate circuit design. The flexibility in input stages allows us to cater to a variety of customers with different in-house capabilities and thus to service a wider class of customers as compared to a foundry that cannot offer design or mask making services. We can deliver output in the forms of unprobed fabricated wafers, probed wafers or assembled and tested semiconductors.

The following diagram illustrates the services provided by us to our customers:



- (1) Subcontracted out to third parties.  
 (2) Portions are subcontracted out to third parties.

**Fabrication Processes.** We manufacture semiconductors using the complementary metal oxide silicon, CMOS, and BiCMOS processes. The CMOS process is currently the dominant semiconductor manufacturing process. In the past, a competing manufacturing process called the “bipolar” process was also prevalent. Bipolar devices typically operate at higher speeds than CMOS devices, but CMOS devices consume less power and permit higher density circuit design. While the bipolar process was once widely used, it is now used primarily for high speed semiconductors and analog semiconductors. The BiCMOS process combines the high speed of the bipolar circuitry and the low power consumption and high density of the CMOS circuitry. We use the CMOS process to manufacture logic semiconductors, memory semiconductors including static random access memory, or SRAM, DRAM, flash memory and mixed-signal semiconductors, which combine analog and digital circuitry in a single semiconductor, and embedded-memory semiconductors, which combine logic and memory in a single semiconductor. The BiCMOS process is used to make high-end mixed-signal and other types of semiconductors.

**Types of Semiconductors Manufactured by Us.** Different types of semiconductors with different specific functions are manufactured using the CMOS and BiCMOS processes by changing the number of and the combinations of conducting, insulating and semiconducting layers and by defining different patterns in which such layers are applied on the wafer. At any given point in time, there are over a hundred different products in various stages of fabrication at a full service foundry like us. We believe that the keys to maintaining high production quality and utilization rates are our effective management and control of the manufacturing process technology that come from our extensive experience as the longest existing dedicated foundry and our dedication to quality control and process improvements.

The following is a general description of the types of semiconductors that are manufactured by us:

**Logic Semiconductors:** Logic semiconductors process digital data to control the operation of electronic systems. The largest segment of the logic market, standard logic devices, includes microprocessors, microcontrollers, DSPs, graphic chips and chip sets.

**Memory Semiconductors:** Memory semiconductors, which are used in electronic systems to store data and program instructions, are generally classified as either volatile memory (which lose their data content when power supplies are switched off) or nonvolatile memory (which retain their data content without the need for a constant power supply). Examples of volatile memory include SRAM and DRAM and examples of nonvolatile memory include electrically erasable programmable read-only memory, or EPROM and flash memory. We currently offer CMOS process for the manufacture of SRAM in resolutions down to 0.13 micron in both high speed and low power designs, for the manufacture of 0.21 micron DRAM and for the manufacture of flash memory and embedded flash in resolutions down to 0.25 micron.

**Mixed-Signal Semiconductors:** Analog/digital semiconductors combine analog and digital devices on a single semiconductor to process both analog signals and digital data. We make mixed-signal semiconductors using both the CMOS and BiCMOS processes. We offer 0.18 micron CMOS process and 0.8 micron BiCMOS process for manufacturing mixed-signal semiconductors. The primary uses of mixed-signal semiconductors are in hard disk drives, wireless communications equipment and network communications equipment, with those made with the BiCMOS process occupying the higher end of the mixed-signal market.

The table below presents a breakdown of our net sales during the last three years by each semiconductor type:

Semiconductor Type	Year ended December 31,					
	1998		1999		2000	
	Net sales	Percentage	Net sales (in millions, except percentage)	Percentage	Net sales	Percentage
CMOS						
Logic .....	NT\$33,962	67.2%	NT\$53,242	69.8%	NT\$111,871	67.3%
Memory .....	8,277	16.4	13,033	17.1	32,692	19.7
Mixed-signal <sup>(1)</sup> .....	4,154	8.2	6,854	9.0	17,567	10.6
BiCMOS <sup>(2)</sup> .....	319	0.6	200	0.3	395	0.2
Others .....	3,814	7.5	2,977	3.9	3,671	2.2
Total .....	<u>NT\$50,525</u>	<u>100.0%</u>	<u>NT\$76,305</u>	<u>100.0%</u>	<u>NT\$166,198</u>	<u>100.0%</u>

(1) Mixed-signal semiconductors made with the CMOS process.

(2) Mixed-signal and other semiconductors made with the BiCMOS process.

**Design Services.** We provide a wide range of design services ranging from application-specific integrated circuits, or ASIC, to various chip implementation services. Since our launch of design service in April 1991, we have successfully completed more than 1,000 netlist sign-off, or design service, projects for customers in various market applications. Our design services focus on semiconductors with resolutions of 0.18 and 0.15 micron for standard cell solutions, each of which has experienced large demand.

Our chip implementation services can combine placement and routing services, library and intellectual property merge services, physical verification services and porting services in order to specifically address any customer's specific chip implementation issues. We believe that our strengths in chip implementation services allow our customers to leverage off our resources. In addition, we have been collaborating with industry leaders in electronic design automation, library and intellectual property services to create a worldwide network of expertise, resources and services that are available to implement and produce a customer's innovative designs.

**Multiproject Wafers Program.** To help our customers reduce costs, we offer a dedicated multiproject wafer processing service that allows us to provide multiple customers with wafers produced with the same mask. This program eliminates costly and time-consuming repetitive mask and wafer runs, resulting in accelerated time-to-market for our customers. In the fourth quarter of 2000, we extended this program to all customers and library and intellectual property partners using our 0.13 micron process technology. This extension offers a routinely scheduled multiproject wafer run to customers on a shared-cost basis for prototyping and verification. Multiproject wafers accelerate time-to-

market for device designers and library and intellectual property developers by reducing mask development and wafer cutting costs by up to a factor of ten.

We developed our multiproject wafer program in response to the current system-on-chip development methodologies, which often require the independent development, prototyping and validation of several cores before they can be integrated onto a single device. A complex system-on-chip may require RISC, DSP, Ethernet and physical interface cores, each of which has to be verified individually before integration. By sharing resources with our customers, the system-on-chip supplier can enjoy reduced prototyping costs and greater confidence that the design will be successful.

**Customer Service.** We believe that our focus on customer service has been an important factor in attracting leading semiconductor companies as our customers. The key elements of our customer service are:

- our firmly established customer-oriented culture, which emphasizes close interaction with our customers on many levels, from senior management, marketing staff and customer engineers in the marketing and customer service offices to product and line engineers in the fabs and the research and development staff. Some of this interaction is achieved through direct data links to customers to enhance communication and facilitate real time engineering data and order information flow;
- responsiveness to customer's requirements in terms of lead time and product cycle;
- flexibility in technical capability, order size requirements and design changes;
- delivery accuracy in terms of time and quantity;
- tight design rules that promote the design of more compact, faster dies; and
- our "virtual fab", which is a customer service program intended to integrate and formalize the customer service approach that we have pursued since our inception. The goal of the virtual fab program is to make our manufacturing services as transparent and easy to deal with for our customers as their own in-house fabs, without the additional expense and drain on management resources. The virtual fab also provides our customers with the benefits of an in-house fab, including:
  - confidentiality of proprietary customer information and data;
  - quality of service and products;
  - assurance of on-time delivery of products;
  - flexibility in scheduling and in capacity;
  - cost effectiveness;
  - real-time on-line information exchange with the customer during manufacturing, including on-line mask data review, so that the entire process is transparent to the customer; and
  - logistical support for the processes of handling, assembly and final testing, which are subcontracted out to third parties before the products are shipped to the customer.

In a move to further enhance our virtual fab program, we launched on July 20, 1999, TSMC On-Line, our on-line ordering and information delivery system. In addition to work in progress and shipping reports, TSMC On-Line provides a 24 hours a day, seven days a week, one-stop shop for our customers who wish to place orders, review technical documentation, brochures or manuals or place general queries. As of May 31, 2001, approximately 33% of our orders were processed electronically.

We believe that, owing to our extensive experience in planning and managing foundry production runs, we offer the advantage of a short lead time and product cycle to customers who need finished products within a short time frame.

We offer to our customers manufacturing processes for a wide array of semiconductors, including CMOS logic, volatile memory, non-volatile memory and mixed-signal chips. This has allowed us to pursue business from a wide range of customers, both in terms of manufacturing needs and end use. We also handle small orders as well as large ones and can accommodate design changes late into the pre-production stage. Such flexibility is possible because of our technical capability and dedication to customer service as well as our ability to plan and manage effectively many production runs.

We also provide our customers with the ability to share the ever increasing silicon verification costs through our multi-project wafer processing service. This service allows customers to share costs by combining multiple designs on a single mask set.

We believe that our customers also value our ability to deliver ordered wafers on time in consistent quality and in the desired quantities. We have received various awards and testimonials from our customers attesting to the quality of our customer service and the important role we play in the businesses of our customers.

### **Manufacturing Quality and Reliability**

We believe that our manufacturing process management experience, capabilities and high-quality system have allowed us to maintain a high standard of manufacturing quality and reliability. We believe that wafers manufactured by us provide consistent, high die yield (or electric yield), which allows our customers to determine with greater certainty the appropriate number of wafers to order and allows us to charge a higher price on a per wafer basis while keeping the cost to customers on a per die basis competitive. We have been informed by many of our customers that our semiconductors consistently meet or exceed their quality reliability specifications.

Our policy is to implement quality assurance measures during all stages in manufacturing including the research and development process. Quality is maintained through in-line testing and inspection of processed materials at various production stages in the manufacturing process. Final visual and mechanical inspection is performed before shipment to ensure quality and prevent maverick lots. Quality assurance measures also include on-going process and product reliability monitors, failure tracking for early identification of production problems and continuous customer services. Certain testing is subcontracted to semiconductor testing service providers in Taiwan for their more cost-effective services.

All our fabs, other than Fab 12 and Fab 14, were certified as meeting the ISO-9001, QS-9000 and ISO-14000 quality standards. The ISO-9001 quality standards are provided by the International Standards Organization in 1993. The International Standards Organization is an organization formed by delegates from member countries to establish international quality assurance standards for products and manufacturing processes. International Standards Organization certification is required in connection with sales of industrial products in certain European countries. The QS-9000 quality standard is a more stringent standard provided by the Auto Industry Action Group since 1998. The QS-9000 standard consolidated the ISO-9000 standards with the quality systems of Ford, Chrysler and General Motors. The ISO-14000 quality standard is part of a comprehensive series of quality standards for environmental management published by the International Standards Organization after the success of the ISO-9000 series of quality standards. The ISO-14000 quality standards covers the guide to environmental management principles, systems and supporting techniques.

### **Backlog**

Because of the fast-changing technology and functionality in semiconductor design, foundry customers generally do not place purchase orders far in advance to manufacture a particular type of product. However, we engage in discussions with customers commencing in advance of the placement of purchase orders regarding customers' expected manufacturing requirements. Certain of our customers have options on capacity at our fabs for the next few

years. See “— Capacity Expansion and Technology Upgrade Plans — Commitments by Customers” for a discussion of the options on capacity held by some of our customers.

## **Research and Development**

The semiconductor industry is characterized by rapid changes in technology, frequently resulting in the obsolescence of recently introduced products. We believe that, in order to stay technologically ahead of our foundry competitors and maintain our market position in the foundry industry, we need to maintain a process technology leader not only in the foundry sector but in the semiconductor industry in general. We spent NT\$2,314 million, NT\$3,091 million and NT\$5,132 million (US\$155 million) in 1998, 1999 and 2000, respectively, on research and development, which represented 4.6%, 4.1% and 3.1%, respectively, of our net sales for these periods. We plan to continue to substantially increase the absolute amount of spending on research and development in the coming years with the goal of maintaining leader in the development of advanced process technologies. We anticipate that our research and development efforts will allow us to begin providing our customers access to certain advanced process technology, such as 0.13 micron process technology, prior to the implementation of those advanced process technologies by integrated device manufacturers or our competitors.

Our research and development are divided into centralized research and development activities and research and development activities undertaken by each of our fabs. Our centralized research and development activities are principally directed toward developing most advanced and new generation manufacturing technologies. The research and development activities undertaken in each fab focus on upgrading the manufacturing process technology. The research and development team also seeks to develop versatile process technology that can be applied to the manufacture of different types of products. Targeted areas of research and development efforts in the next few years including advanced logic, mixed-signal chips, embedded DRAM, flash memory and SRAM.

## **Intellectual Property**

We use internally developed process technologies and process technologies licensed from our customers and third parties. In continuing to advance our process technologies, we intend to rely primarily on our internal engineering capability and know-how and our research and development efforts, including collaboration with our customers and equipment vendors.

We are a beneficiary of Philips’ patent cross-licensing arrangements with a number of companies. All of these licenses are royalty free. Most of these licenses are granted subject to a requirement that Philips’ equity ownership in us remain at not less than a certain level (generally in the range of 12.5% to 25%). As of May 31, 2001, Philips had, including 1,299,925,653 billion Preferred A shares purchased from us in November 2000, an equity ownership in us of approximately 30.23%. Although we may lose the benefit of some of Philips’ cross-licensing arrangements if it does not maintain its minimum equity ownership level, and thus may be required to expend additional funds to obtain or develop alternative intellectual property, we believe that the loss of these cross-licensing arrangements would not have a material adverse effect on our business. In particular, we have significant in-house technology and know-how and already have and use significant intellectual property rights other than those made available to us under these Philips cross-licensing arrangements. We were issued 220, 293 and 523 United States patents in 1998, 1999 and 2000, respectively, and among these patents, 153, 210 and 400 are semiconductor related patents issued in 1998, 1999, and 2000, respectively.

We entered into a technology cooperation agreement with Philips on December 31, 1986, pursuant to which Philips provides us with process and technical information for the production of unencapsulated MOS integrated circuits in wafer form. Please see “Item 7. Major Shareholders and Related Party Transactions – Philips” for a detail discussion about those agreements entered into with Philips. Under a separate agreement, Philips has an option on up to 30% of our capacity, on most favored terms and conditions for similar orders, as long as Philips’ shareholding in us remains at 24.8% or higher.

We also entered into a technical cooperation agreement with the ITRI. According to this agreement, the ITRI granted to us the license to use its technology with respect to the manufacture of silicon MOS wafers and agreed to provide certain associated assets and relevant technical assistance and information to us, in exchange for a license from

us for improvements and refinements thereof. Please see “Item 7. Major Shareholders and Related Party Transactions – ITRI” for a detailed discussion about this technical cooperation agreement.

## **Equipment**

The quality and technology of the equipment used in the semiconductor manufacturing process are important in that they effectively define the limits of our process technology. Advances in process technology cannot be brought about without commensurate advances in equipment technology. The principal pieces of equipment used by us to manufacture semiconductors are steppers, cleaners and track equipment, inspection equipment, etchers, furnaces, wet stations, strippers, implanters, sputterers, CVD equipment, testers and probers. Other than a small portion of the equipment used in Fab 1, we own all of the equipment used at our fabs.

In implementing our capacity expansion and technology advancement plans, we expect to make significant purchases of equipment required for semiconductor manufacturing. Some of the equipment is available from a limited number of vendors and/or is manufactured in relatively limited quantities, and certain equipment has only recently been developed. We believe that our relationships with our equipment suppliers are good and that we have enjoyed the advantages of being a major purchaser of semiconductor fabrication equipment. We have entered into supply agreements with equipment manufacturers covering some of our required equipment.

## **Raw Materials**

Our manufacturing processes use many raw materials, primarily silicon wafers, chemicals, gases and various types of precious and other metals. Raw materials costs constituted 13.5% of net sales in 2000. The three largest components of raw material costs — wafers, gas and chemicals — accounted for 41.4%, 18.8% and 16.2% of total raw material costs in 2000. Most of our raw materials generally are available from several suppliers. Our raw material procurement policy is to select only those vendors who have demonstrated quality control and reliability on delivery time and to maintain multiple sources for each raw material so that a quality or delivery problem with any one vendor will not adversely affect our operations. The quality and delivery performance of each vendor is evaluated monthly or quarterly and quantity allocations are adjusted for subsequent periods based on the evaluation. Although we believe that supplies of raw materials used by us currently are adequate, shortages could occur in various critical materials due to interruption of supply or increased industry demand.

The most important raw material used in our production is silicon wafers, which are the basic raw material from which integrated circuits are made. The principal suppliers for our wafers are Shin-Etsu Handotai and Sumitomo Sitix of Japan, Wacker Siltronic of Germany, Taisil Electronic Material of Taiwan and MEMC Electronic Materials of the United States. Together they supplied 85% of our total wafer needs in 2000. We have in the past obtained and believe we will continue to be able to obtain a sufficient supply of six-inch, eight-inch and twelve-inch wafers. The price of wafers decreased slightly during 1997 and 1998, but a moderate increase in price occurred during the second half of 1999 and 2000. In 2000, the supply of the twelve-inch wafers was limited.

In order to secure a reliable and flexible supply of high quality wafers, we have entered into long-term master agreements with our wafer suppliers to acquire wafers on a purchase order basis in June 2000.

## **Real Property**

Our corporate headquarters and six of our fabs are located in the Hsinchu Science Park. Another one of our fabs is located in Hsinchu at the Industrial Technology Research Institute. Our corporate headquarters and our seven fabs in Hsinchu occupy approximately 275,078 square meters of land. We lease all of this land from the SIPA in Hsinchu under agreements that will expire on various dates between March 2008 and April 2019. Other than the buildings and certain equipment for Fab 1, which we lease from the ITRI for a term that expires on March 31, 2002 and is renewable upon agreement between both parties, we own all of the buildings and equipment for our fabs. We plan to decommission Fab 1 on March 31, 2002. We have two fabs located in the Tainan Science Park. We have arrangements to lease from the Tainan Science-Based Industrial Park Development Office 395,000 square meters of land for our fabs in the Tainan Science Park. WaferTech owns 1,052,181 square meters of land in the State of Washington in the United

States, where the WaferTech fab and related offices are located. Systems on Silicon owns 78,000 square meters of land in Singapore, where Systems on Silicon fab and related offices are located.

For a discussion of our fabrication plants, see “— Manufacturing Capacity and Technology”.

### **Environmental Regulation**

The semiconductor production process generates gaseous chemical wastes, liquid waste, waste water and other industrial wastes in various stages of the manufacturing process. We have installed various types of pollution control equipment for the treatment of gaseous chemical waste and liquid waste and equipment for the recycling of treated water in our fabs. Our operations at our fabs are subject to regulation and periodic monitoring by the ROC Environmental Protection Administration, or EPA, and local environmental protection authorities, including the SIPA.

We believe that we have adopted pollution control measures for the effective maintenance of environmental protection standards consistent with the practice of the semiconductor industry in Taiwan, and that we are in compliance in all material respects with applicable environmental laws and regulations. Furthermore, we, in many cases, have implemented waste reduction steps ahead of regulatory requirements. In 1997, we received the “Outstanding Environmental Protection Company” award from the EPA of the Executive Yuan and the “National Industrial Waste Minimization Excellent Performance” award from the Joint Waste Reduction Task Force of the EPA and the ROC MOEA. We received ISO 14001 certification in August 1996 and continue to implement improvement programs in connection with this certification. In January 2000, we received OHSAS 18001 certification for our occupational health safety management system.

### **Electricity and Water.**

We use substantial amounts of electricity supplied by Taiwan Power Company in our manufacturing process. Businesses in the Hsinchu Science Park and Tainan Science Park, such as us, enjoy preferential electricity supply.

The semiconductor manufacturing process uses extensive amounts of fresh water. Due to the growth of the semiconductor manufacturers in the Hsinchu Science Park, there has been concern as to the future availability of sufficient fresh water. In 1997, the ROC government finished construction of a pipeline to provide the Hsinchu Science Park with an additional source of fresh water which is currently sufficient for our fabs in the Hsinchu Science Park. The ROC government has announced a plan to build a fresh water reservoir near the Hsinchu Science Park that is expected to satisfy the Hsinchu Science Park’s long-term water requirements. The reservoir is expected to be completed in 2005. We have also taken steps to reduce fresh water consumption for our fabs in Hsinchu and Tainan. This primarily involves the installation of water recycling systems at our fabs, which allow us to recycle between 45% to 85% of the water used during the fabrication process, depending on the fabs.

### **Risk Management**

We have a separate risk management department that develops comprehensively plans for the prevention of, and the response to, emergencies and disasters. The focuses of the department are loss prevention, emergency response, crisis management and business recovery. Our risk management department played an important role in minimizing the effect of the 1999 earthquakes on our business. We maintain insurance with respect to our facilities, equipment and inventories. The insurance for the fabs and their equipment covers certain risks including fire, typhoon, earthquake and certain other risks generally up to their respective replacement values and, subject to limitations, lost profits due to business interruption. As of March 31, 2001, we have received a total of approximately NT\$3,300 million (US\$100 million) in insurance compensation in respect of the earthquake that occurred on September 21, 1999. We have an insurance policy covering losses in respect of the construction of Fab 12 and Fab 14. Equipment and inventories in transit are also insured. We believe that our overall insurance coverage is adequate.

## Item 5. Operating and Financial Reviews and Prospects

### Overview

We manufacture a variety of semiconductors based on designs provided by our customers. We also provide various design services. Our business model is now commonly called a “dedicated semiconductor foundry”. The foundry industry as a whole experienced rapid growth over the last 13 years since our inception. As the leader of the foundry industry, we also have seen our net sales revenue and net income increase from NT\$39,400 million and NT\$19,436 million in 1996 to NT\$166,198 million and NT\$65,106 million in 2000, respectively, despite two major industry downturns over that same period. From the middle of 1996 until the middle of 1998, the growth rate of worldwide demand for semiconductor products decreased as the growth rate of worldwide semiconductor production capacity increased. As a result of the increasing disparity between the growth rate of demand and the growth rate of supply, margins were squeezed and our net income declined from NT\$19,436 million in 1996 to NT\$17,974 million in 1997 and to NT\$14,389 million in 1998. This occurred despite increases in net sales revenue from NT\$39,400 million in 1996 to NT\$43,927 million in 1997 and to NT\$50,525 million in 1998. Starting in late 1998, there was an increase in demand that led to increases in both our net sales and net income for 1999 and the second half and the third quarter of 2000. Starting in the first quarter of 2001, the semiconductor industry experienced a significant downturn due to a worldwide inventory adjustment and a slowdown in the worldwide economy that led to decreases in both of our sales and net income in the first quarter of 2001 from the preceding quarter. The principal source of our sales revenue is wafer fabrication, which accounted for approximately 92% of our net sales in 2000. The rest of our net sales is derived from design, mask making, probing, testing and assembly services.

**Demand for Semiconductors.** Global semiconductor demand grew at an accelerated pace during the period from 1992 through 1995, as a result of the growth in the electronics industry, the increase in semiconductor applications and greater demand for semiconductors that offer higher performance, speed and reliability. In the second half of 1996 and 1997, however, a number of sectors of the semiconductor industry were in a state of overcapacity, with sharp declines in the average selling prices of memory chips, and declines in prices of other semiconductor products, evident during the period. In 1998, as a result of both the slowdown in many Asian economies and the expansion of memory semiconductor capacity, the total value of semiconductor products sold decreased by 8.4% compared to 1997 according to Dataquest, and many semiconductor companies posted losses as a result. We were affected by the macro business environment and experienced a decline in sales and net income over the second half of 1998. The foundry industry, however, did not suffer as much as the semiconductor industry as a whole due to its diversified business nature. Demand for our foundry services improved significantly in 1999. Moreover, an increasing number of integrated device manufacturers are beginning to outsource manufacturing jobs to foundry service providers such as us. Motorola, for example, announced in 1999 that it will release half of its capacity to foundry service providers over the next few years. Starting in the first quarter of 2001, due to the slowdown in global economies, the demand for semiconductor decreased and the worldwide sale of semiconductors decreased by 4.5% as compared to the same period in the preceding year according to Standard & Poor’s Industry Surveys.

**Capacity and Production.** We have expanded our aggregate capacity from approximately 72,000 wafers per month as of year-end 1995 to approximately 348,000 wafers per month as of year-end 2000. The capacity in 2000 takes into account 48,000 wafers as a result of our merger with Worldwide Semiconductor. Over the same period, our annual sales volume grew from 668,322 wafers to approximately 3,408,000 wafers. The annual sale volume in 2000 takes into account the wafers sold by Worldwide Semiconductor in 2000 and the wafers sold by TSMC-Acer subsequent to our merger with TSMC-Acer on June 30, 2000.

**Technology Migration.** Since our establishment, we have regularly developed and made available to our customers manufacturing capabilities for wafers with increasingly higher circuit resolutions. Wafers designed with higher circuit resolutions yield a greater number of dies per wafer and these dies are able to integrate more functionality and run faster in application. As a consequence, higher circuit resolution wafers generally sell for a higher price than those with lower resolutions. Advanced technology wafers have accounted for an increasingly larger portion of our sales since their introduction as the demand for high technology wafers has increased. Because of their higher selling price, advanced technology wafers account for a larger pro rata portion of our sales revenue as compared to their pro rata share of unit sales volume. The higher selling prices of semiconductors with higher circuit resolutions usually offset the higher production costs associated with these semiconductors once an appropriate economy of scale is reached. Although mainly dictated by supply and demand, prices for wafers of a given level of technology typically decline over

the technology's life cycle. Therefore, we must continue to offer additional services and to develop and successfully implement increasingly sophisticated technological capabilities to maintain our average sales prices and margins.

The table below presents a percentage breakdown of wafers sold by us by circuit resolution during the last three years:

Resolution	Year ended December 31,					
	1998		1999		2000	
	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage
	(millions except percentages)					
<=0.18 micron.....	0.0	0.0%	18.0	1.0%	153.0	4.5%
0.25 micron.....	11.0	0.9	385.6	21.1	950.9	27.9
0.35 micron.....	408.7	34.5	625.1	34.2	1,313.9	38.6
0.5 micron.....	319.5	27.0	374.2	20.5	484.6	14.2
0.6 micron.....	189.6	16.0	213.4	11.7	239.1	7.0
0.8 micron.....	66.7	5.7	45.7	2.5	67.7	2.0
1.0 micron.....	49.5	4.2	45.5	2.5	88.9	2.6
>1.0 micron.....	138.8	11.7	118.1	6.5	110.0	3.2
Total.....	<u>1,183.8</u>	<u>100.0%</u>	<u>1,825.6</u>	<u>100.0%</u>	<u>3,408.1</u>	<u>100.0%</u>

These quantities and percentages take into account of the wafers sold by Worldwide Semiconductor during the last three years.

**Pricing.** We usually establish pricing levels quarterly with our customers, subject to adjustment during the course of the year to take into account market developments and other factors. We believe that our large capacity, flexible manufacturing capabilities, focus on customer service and ability to deliver high yields in a predictable and timely manner have contributed to our ability to obtain premium pricing for our wafer production in recent years. Because of our favorable yields, we believe that our pricing is competitive with other semiconductor manufacturers. Our historical pricing policy is to pass through a portion of cost savings realized as our production processes migrate to more advanced technologies and our manufacturing operations achieve higher yields and greater economies of scale.

## Results of Operations

The following table sets forth, for the periods indicated, certain financial data from our consolidated statements of income, expressed in each case as a percentage of net sales:

	Year ended December 31,		
	1998	1999	2000
Net sales.....	100.0%	100.0%	100.0%
Cost of sales.....	(65.3)	(60.6)	(54.00)
Gross profit.....	34.7	39.4	46.0
Operating expenses			
General and administrative.....	(4.2)	(3.7)	(4.5)
Marketing.....	(1.5)	(2.4)	(1.6)
Research and development.....	(4.6)	(4.1)	(3.1)
Total operating expenses.....	(10.3)	(10.2)	(9.2)
Income from operations.....	24.4	29.2	36.9
Non-operating income.....	3.9	2.2	3.7
Non-operating expenses.....	(6.4)	(4.4)	(2.2)
Income before income tax.....	21.9	27.0	38.4
Income tax (expense) benefit.....	4.6	3.1	0.7
Net income before minority interest income.....	26.5	30.1	39.2
Minority interest income.....	2.0	0.7	0.0
Net income.....	<u>28.5%</u>	<u>30.8%</u>	<u>39.2%</u>

We completed mergers with Worldwide Semiconductor and TSMC-Acer on June 30, 2000. The merger with Worldwide Semiconductor was accounted for as a pooling-of-interests transaction and thus the historical financial statements of Worldwide Semiconductor have been combined with our historical financial statements for all relevant periods. The merger with TSMC-Acer was accounted for as a purchase transaction and thus we recorded on our books an amount of goodwill that is equal to the excess of the value of our purchase price for TSMC-Acer over the net book

value of TSMC-Acer. Under regulations of the ROC MOEA, we are required to eliminate the goodwill amount and reduce our capital surplus by a corresponding amount. Under US GAAP, however, this goodwill will be amortized on a straight-line basis over five years.

***Year Ended December 31, 2000 Compared to Year Ended December 31, 1999***

**Net Sales.** Our net sales increased 117.8% in 2000, from NT\$76,305 million in 1999 to NT\$166,198 million (US\$5,011 million) in 2000. This increase primarily resulted from an 86.6% increase in wafer sales volume, from 1,826 thousand in 1999 to 3,408 thousand in 2000 and a 19.1% increase in average selling price of wafers. This increase in wafer sales volume is attributable to an increase in wafers produced at our fabrication plants as well as to the merger with TSMC-Acer. In addition, the increase in the average selling price of our wafers was the result of an increase in the proportion of wafers with higher resolution sold in 2000, partially offset by the negative impacts of appreciation of the NT dollar against the U.S. dollar and Japanese Yen. Prior year results have been restated to reflect the merger with Worldwide Semiconductor, which was accounted for as a pooling-of-interests.

The following table sets forth the actual and pro forma net sales for the year ended December 31, 1999 and 2000 assuming the merger with TSMC-Acer was effected as of January 1, 1999. Since our actual net sales for the year ended December 31, 2000 reflects only six months of operations for TSMC-Acer, a comparison of our pro forma net sales reveals more clearly the extent of the growth in net sales of wafers produced at all of our current fabs.

	1999	2000	Percent Change
	(in millions, except percentage)		
Actual net sales .....	NT\$76,305	NT\$166,198	117.8%
Pro forma net sales .....	NT\$86,130	NT\$170,132	97.5%

Our net sales in the first quarter of 2001 was approximately 26% less than our net sales in the last quarter of 2000. We expect that our net sales in the second quarter of 2001 will continue to decrease and our net sales in 2001 will be significantly less as compared to our net sales in 2000.

**Cost of Sales and Gross Profit.** Our cost of sales increased 94.0% in 2000, from NT\$46,237 million in 1999 to NT\$89,682 (US\$2,704 million) million in 2000. This increase resulted primarily from a 64.5% increase in depreciation and amortization expenses from NT\$25,198 million in 1999 to NT\$41,446 million (US\$1,250 million) in 2000 and an increase in our requirements for materials, labor and other components as a result of our 86.6% increase in wafers sold. Our depreciation and amortization increased primarily because of the increased depreciation for the second half of 2000 associated with the additional capacity acquired in the merger with TSMC-Acer as of June 30, 2000 and the increased depreciation associated with ramping up our Fab 6 and the capacity increase in Fab 5 and Fab 8. As a result of the implementation of our earlier expansion plans, we expect our depreciation and amortization expenses to increase further in 2001. Our gross margin increased from 39.4% in 1999 to 46.0% in 2000. The increase in our gross margin was principally the result of the increased average selling price of wafers sold and an increased utilization rate of our fabs from approximately 100.0% in 1999 to approximately 106% in 2000. Our average utilization rate decreased to 70% during the first quarter of 2001 from 105% during the last quarter of 2000. We expect that our utilization rate for the second quarter of 2001 will decrease to below 50%. The current decrease in market demand for semiconductors will likely adversely affect our gross margins in 2001.

**Operating Expenses.** Our total operating expenses increased 95.2% in 2000, from NT\$7,798 million in 1999 to NT\$15,221 million (US\$459 million) in 2000. This increase was below the increase in our net sales due to efficiencies related to higher production and operation at 106% utilization rate in 2000. As a percentage of total net sales, our operating expenses decreased from 10.2% in 1999 to 9.2% in 2000. General and administrative expenses increased 160.4% from NT\$2,845 million in 1999 to NT\$7,408 million (US\$223 million) in 2000. This increase resulted primarily from expenses associated with increased capacity and production, in particular, in Fab 8, the start-up of our twelve-inch pilot line and Fab 12, the purchase of employee's option of WaferTech and the expenses related to the TSMC-Acer operations acquired on June 30, 2000. Marketing expenses increased 44.0% from NT\$1,862 million in 1999 to NT\$2,682 million (US\$81 million) in 2000. This increase resulted primarily from the increase in our marketing operations and number of personnel in North America, partially offset by our policy in limiting the hiring of sales personnel. Research and development expenses increased 66.0% from NT\$3,091 million in 1999 to NT\$5,132 million

(US\$155 million) in 2000 as a result of our development of more advanced technology. We expect our operating expenses in 2001 to be slightly higher than our operating expenses in 2000 due to the increased research and development expenses as we position ourselves as an advanced technology leader and the increased general and administrative expenses due to the start-up costs to our twelve-inch fabs.

**Income from Operations.** Income from operations increased 175.2% in 2000, from NT\$22,270 million in 1999 to NT\$61,295 million (US\$1,848 million) in 2000. This was due principally to the 86.6% increase in production of wafers and the higher utilization rate resulting from a significant improvement in the worldwide demand for our foundry services. Our operating margin also increased from 29.2% in 1999 to 36.9% in 2000. We expect our operating margin to decrease in 2001 due the expected decrease of our utilization rate as a result of the decrease in worldwide market demand for semiconductors.

**Non-Operating Income and Expenses.** Non-operating income increased 270.3% in 2000, from NT\$1,682 million in 1999 to NT\$6,228 million (US\$188 million) in 2000. This increase principally resulted from the receipt of NT\$1,624 million (US\$49 million) in insurance compensation related to the earthquake that occurred on September 21, 1999 and a power failure in 2000. Non-operating income also increased due to a gain on the sale of short-term investments of NT\$1,061 million (US\$32 million) primarily distributed by InveStar Semiconductor Development Fund, Inc., a venture capital fund in which we have invested approximately US\$46 million. Non-operating expenses increased 8.9% from NT\$3,324 million in 1999 to NT\$3,621 million (US\$109 million) in 2000. This increase principally resulted from an increase of 12.4% in interest expense from NT\$2,417 million in 1999 to NT\$2,717 (US\$82 million) in 2000, despite an increase of 17.5% in our aggregate amount of outstanding bank loans, notes and bonds payable from NT\$47,866 million as of December 31, 1999 to NT\$56,224 million (US\$1,695 million) as of December 31, 2000. Our interest expense did not increase as rapidly as our increase in bank loans, notes and bonds as a result of the refinancing of our bank loans with lower interest rate in connection with our mergers with Worldwide Semiconductor and TSMC-Acer.

**Income Tax Expense (Benefit).** Income tax benefit decreased 51.0% from NT\$2,383 million in 1999 to NT\$1,168 million (US\$35 million) in 2000. This decrease resulted from increased tax expenses as a result of our increased profit.

**Net Income.** Net income increased 176.7% from NT\$23,527 million in 1999 to NT\$65,106 million (US\$1,963 million) in 2000. The increase in net income is attributable primarily to the increase in net sales associated with our fabs owned, our merger with TSMC-Acer on June 30, 2000 and the higher utilization rate. Prior year results have been restated to reflect the merger with Worldwide Semiconductor, which was accounted for as a pooling-of-interests.

The following table sets forth the actual and pro forma net income for the year ended December 31, 1999 and 2000:

	1999	2000	Percent Change
	(in millions, except percentage)		
Actual net income .....	NT\$23,527	NT\$65,106	176.7%
Pro forma net income .....	NT\$20,888	NT\$65,051	211.4%

Pro forma net income increased 211.4% from NT\$20,888 million in 1999 to NT\$65,051 million (US\$1,961 million) in 2000. Our diluted earnings per share was NT\$1.88 for the year ended December 31, 2000 compared with NT\$5.60 for the year ended December 31, 1999. Our net margin increased to 38.2% for the year ended December 31, 2000 from 24.3% for the year ended December 31, 1999.

#### **Year Ended December 31, 1999 Compared to Year Ended December 31, 1998**

**Net Sales.** Our net sales increased 51.0% in 1999, from NT\$50,525 million in 1998 to NT\$76,305 million in 1999. This increase resulted from a 54.2% increase in wafer sales volume, from 1,184 thousand in 1998 to 1,826 thousand in 1999, partially offset by a 4.8% decrease in the average selling price of wafers. The decrease in the average

selling price was the result of an average pure price erosion and the negative impact of the appreciation of the NT dollar, partially offset by an increase in the proportion of wafers with higher resolution sold in 1999.

**Cost of Sales and Gross Profit.** Our cost of sales increased 40.1% from NT\$33,009 million in 1998 to NT\$46,237 million in 1999. This increase resulted primarily from a 62.3% increase in depreciation and amortization expense from NT\$15,522 million in 1998 to NT\$25,198 million in 1999. This increase resulted from the inclusion in 1999 of a full year of depreciation and amortization expenses for WaferTech and the increased depreciation and amortization expenses as a result of the ramping up of Fab 5 and Fab 8. Materials, labor and other components of cost of sales also increased as result of our 51.0% increase in net sales, but these increases were moderated by the efficiencies of production at a 100% utilization rate in 1999 compared with a 74% utilization rate in 1998. Our gross margin increased to 39.4% in 1999, up from 34.7% in 1998, principally as a result of an increase in average utilization rate from 74% in 1998 to 100% in 1999, partially offset by a decrease in average selling price of our products and an increase of 62.3% in overall depreciation and amortization expenses as compared to 1998.

**Operating Expenses.** General and administrative expenses increased 33.7% in 1999 from NT\$2,128 million in 1998 to NT\$2,845 million in 1999. This increase resulted primarily from the additional support functions necessary in connection with our 36.8% increase in capacity, our 54.2% increase in wafer sales volume and increased expenses due to start-up costs of our Fab 6 in 1999. Research and development expenses increased approximately 33.6% in 1999, from NT\$2,314 million in 1998 to NT\$3,091 million in 1999. This increase resulted from unusually low research and development expenses undertaken in 1998 during the semiconductor market slowdown combined with accelerated research and development expenditures in 1999 for 0.18 micron technology. As part of our goal of becoming the leader in the development of semiconductor process technology, we expect the absolute amount of our research and development expenses to continue to increase. Research and development expenses as a percentage of our net sales decreased from 4.6% in 1998 to 4.1% in 1999. Sales and marketing expenses increased approximately 142.6% in 1999, from NT\$768 million in 1998 to NT\$1,862 million in 1999. This increase resulted primarily from a significant increase in the number of marketing personnel, primarily at our sales offices in the United States, and higher bad debt levels in conjunction with higher accounts receivable. As a result, total operating expenses increased 49.7% in 1999, from NT\$5,210 million in 1998 to NT\$7,798 million in 1999. As a percentage of total net sales, operating expenses decreased marginally from 10.3% in 1998 to 10.2% in 1999.

**Income from Operations.** Income from operations increased 81.0% in 1999, from NT\$12,306 million in 1998 to NT\$22,270 million in 1999. This was due primarily to the 54.2% increase in production of wafers and the higher utilization rate resulting from a significant rebound in the worldwide demand for semiconductor products. Operating margin also increased from 24.4% in 1998 to 29.2% in 1999.

**Non-Operating Income and Expenses.** Non-operating income decreased 14.9% in 1999, from NT\$1,977 million in 1998 to NT\$1,682 million in 1999, primarily as a result of a 91.3% decrease in gain on sales of long-term investments and the occurrence of a net foreign exchange loss of NT\$119 million in 1999 as compared to a loss of NT\$260 million in 1998. The 91.3% decrease in gain on sales of long-term investments resulted primarily because of the NT\$782 million gain on the sale of securities in 1998. Non-operating expenses increased 3.0% in 1999, from NT\$3,227 million in 1998 to NT\$3,324 million in 1999. The increase in non-operating expenses was primarily due to a 102.8% increase in interest expense from NT\$1,192 million in 1998 to NT\$2,417 million in 1999, partially offset by a 79.4% decrease in the net investment loss recognized by the equity method from NT\$1,400 million in 1998 to NT\$289 million in 1999.

**Income Tax Expense (Benefit).** Net income tax benefit increased 2.8% in 1999, from NT\$2,318 million in 1998 to NT\$2,383 million in 1999. This increase was mainly due to higher capital expenditures in 1999.

**Net Income.** Net income increased 63.5% in 1999, from NT\$14,389 million in 1998 to NT\$23,527 million in 1999. The diluted earnings per share were NT\$2.21 for 1999 compared with NT\$1.35 for 1998. Our net margin increased to 30.8% in 1999 from 28.5% in 1998.

## Liquidity and Capital Resources

We had cash, cash equivalents and short-term investments of NT\$38,840 million (US\$1,171 million) as of December 31, 2000. Net cash inflow in 2000 was NT\$9,323 million (US\$281 million) as compared to net cash inflow of NT\$18,646 million in 1999. The NT\$9,323 million (US\$281 million) decrease in net cash inflow in 2000 as compared with 1999 resulted primarily from a NT\$53,573 million (US\$1,615 million) increase in cash used in investing activities and a NT\$4,152 million (US\$125 million) decrease in cash provided by financing activities, partially offset by a NT\$48,110 million (US\$1,450 million) increase in cash provided by operating activities.

In 2000, our net cash provided by operating activities amounted to NT\$93,413 million (US\$2,816 million), which included non-cash depreciation and amortization expenses of NT\$41,446 million (US\$1,250 million). Depreciation and amortization expenses were significantly higher in 2000 than in 1999 primarily due to the year of depreciation and amortization expenses at Fabs 5, 6 and 8 and WaferTech. Depreciation and amortization expenses will continue to increase in 2001 due to the commencement of depreciation and amortization expenses at Fab 6. We build to order and do not maintain a significant amount of inventory of finished goods.

Net cash used in investing activities in 2000 amounted to NT\$119,575 million (US\$3,605 million). The most significant component of this was the acquisition of equipment amounting to NT\$103,762 million (US\$3,128 million), primarily in connection with Fabs 5, 6 and 8, twelve-inch pilot line and WaferTech.

Net cash provided by financing activities in 2000 was NT\$35,366 million (US\$1,066 million). This amount primarily reflects proceeds from the sale of 23,000,000 ADSs in June 2000.

As of December 31, 2000, we had aggregate short-term debt of NT\$3,834 million (US\$116 million) and aggregate long-term debt of NT\$52,339 million (US\$1,578 million). All of the short-term debt and NT\$23,339 million (US\$704 million) of the long-term debt was denominated in U.S. dollars. The short-term debt and US\$23,339 million of the long-term debt had floating interest rates based on the London interbank offer rate, or LIBOR, or Singapore interbank offer rate, or SIBOR. NT\$29,000 million of the long-term debt had fixed interest rates ranging from 5.25% to 7.71%. See notes 11, 12 and 13 to our Consolidated Financial Statements. As of December 31, 2000, we had an aggregate of NT\$1,831 million (US\$55 million) in unused short-term credit lines and NT\$2,070 million (US\$62 million) in unused long-term credit lines. As of December 31, 2000, our customers had on deposit an aggregate of approximately US\$57 million to reserve future capacity, which was reserved for capacity during the years 2000 through 2003.

The following table sets forth the maturity of our long-term banks loans and short-term bank loans outstanding as of December 31, 2000:

	<u>Long-term loans</u>	<u>Short-term loans</u>
	(in millions)	
Within the following year.....	NT\$ —	NT\$3,834
During the second year.....	12,344	—
During the third year.....	15,737	—
During the fourth year.....	10,103	—
During the fifth year and thereafter.....	11,775	—

We require significant amounts of capital to build, expand, upgrade and maintain our production facilities and equipment. We made capital expenditures of NT\$55,781 million, NT\$51,459 million and NT\$103,762 million in 1998, 1999 and 2000, respectively. We currently expect that our plans for ramping up production at our Fab 6 and Fab 8, constructing our two twelve-inch wafer fabs and upgrading our equipment in our existing fabs will require capital expenditures of approximately NT\$72,800 million (US\$2,194 million) in 2001. We estimate that the total capital expenditure for Systems on Silicon and Vanguard in 2001 will be NT\$18,200 million (US\$549 million). These expansion plans are still preliminary and are subject to change based upon market conditions, and thus no amounts have yet been budgeted in respect of such expansion plans. We expect to fund our expansion projects primarily with internally generated funds and additional external financings. In the future, we may consider additional debt and equity financing, depending on market conditions, our financial performance and other relevant factors. In particular, an industry downturn could adversely affect our profitability and internal generation of cash, and thereby increase our

reliance on external sources of funds. We believe that we will have sufficient resources available to meet our planned capital requirements.

## Inflation

Our principal export market is the United States and we do not believe that inflation in the ROC or the United States has had a material impact on our results of operations. Inflation in the ROC was approximately 1.7%, 0.2% and 1.3% in 1998, 1999 and 2000, respectively.

## Taxation

We enjoy preferential tax treatment in certain respects under the Hsinchu and Tainan Science Park regulations. We are entitled to a four-year tax holiday for income generated from construction and capacity expansions of production facilities. The exemption period may begin at any time within four years following the completion of the construction or expansion. The aggregate tax benefits of such exemption in 1998, 1999 and 2000 were NT\$2,318 million, NT\$2,383 million, and NT\$1,168 million (US\$35 million), respectively. We commenced the exemption period for Fab 5 in 1999 and expect to commence the exemption period for Fab 6 in 2001. See note 18 to our consolidated financial statements.

Pursuant to the Statute for Upgrading Industries, we are entitled to credit 5% to 20% of investments, depending on the type and origin of the assets, in most of our production and production-related equipment against tax payable in any year within five years of the acquisition date of the assets. The Statute for Upgrading Industries also grants to us the right to credit up to 10% of our investments in the emerging, important and strategic industry (as defined in that statute) against tax payable within five years after the expiration of the first three years of investment, during which period we are required to hold on to this investment.

## US GAAP Reconciliation

Our financial statements are prepared in accordance with ROC GAAP, which differs in certain material respects from US GAAP. The following table sets forth a comparison of our net income and shareholders' equity in accordance with ROC GAAP and US GAAP for the periods indicated:

	Year ended and as of December 31,			
	1998 NT\$	1999 NT\$	2000 NT\$	2000 US\$
	(in millions)			
Net income in accordance with:				
ROC GAAP.....	14,389	23,527	65,106	1,963
US GAAP.....	1,249	13,884	21,740	655
Shareholders' equity in accordance with:				
ROC GAAP.....	96,285	152,571	261,754	7,891
US GAAP.....	94,293	151,977	279,946	8,440

Note 24 to the Consolidated Financial Statements provides a description of the principal differences between ROC GAAP and US GAAP as they relate to us, and a reconciliation to US GAAP of certain items, including net income and shareholders' equity. Differences between ROC GAAP and US GAAP that have a material effect on our net income as reported under ROC GAAP relate to compensation expense pertaining to bonuses to employees, directors and supervisors and the effect of the use of the liability method to account for income taxes. Furthermore, additional amortization of goodwill is required under US GAAP for our merger with TSMC-Acer.

We paid employee bonuses in respect of 1997, 1998 and 1999 in the form of common shares and expect to pay all or a portion of employee bonuses in future periods in the form of common shares. The number of common shares distributed as part of employee bonuses is obtained by dividing the total nominal NT dollar amount of the bonus to be paid in the form of common shares by the par value of the common shares, or NT\$10 per share, rather than their market value, which has generally been substantially higher than par value. Under ROC GAAP, the distribution of employee bonus shares is treated as an allocation from retained earnings, and we are not required to, and do not, charge the value

of the employee bonus shares to income. Under US GAAP, however, we would be required to charge the market value of the employee bonus shares to employee compensation expense in the period to which they relate, correspondingly reducing our net income and income per share calculated in accordance with US GAAP. However, since the amount and the form of the payment of the compensation is subject to shareholder approval and only determinable at the annual shareholders' meeting, which is generally held after the issuance of our financial statements, under US GAAP the compensation expense is initially accrued at the nominal NT dollar amount of the aggregate bonus in the period to which it relates. For US GAAP purposes, the difference between the amount initially accrued and the market value of the common shares issued as payment of all or any part of the bonus is recorded as employee compensation expense in the period in which shareholder approval is obtained, which normally occurs during the second fiscal quarter of each subsequent year. See note 24 to the Consolidated Financial Statements. Net income and income per share amounts calculated in accordance with ROC GAAP and US GAAP differ accordingly. In addition, because the adjustment for market price for the purpose of US GAAP reconciliation is made in the second quarter of each fiscal year and the entire amount of the adjustment is charged to the results for such quarter, the adjustment has a disproportionate impact on the results for the second quarter under US GAAP. Therefore, quarterly net income and income per share amounts calculated in accordance with US GAAP tend to be understated on an annualized basis for the second quarter and overstated for the other quarters.

For purposes of US GAAP, we are required to periodically evaluate the recoverability of the carrying amount of our long-lived assets in accordance with Statement of Financial Accounting Standard No. 121. Whenever events or changes in circumstances indicate that the carrying amounts of those assets may not be recoverable over the remaining amortization period, we are required to compare undiscounted net cash flows estimated to be generated by those assets to the carrying amount of those assets. To the extent that cash flows are less than the carrying amounts of the assets, we are required to record impairment losses to write the assets down to fair value generally based on discounted cash flows. During the years ended December 31, 1998, 1999 and 2000, we recognized impairment losses on our investment in WaferTech in US GAAP reconciliation. Under ROC GAAP, we are not required to, and do not, write the assets down to the fair value of the assets.

## **Item 6. Directors, Senior Management and Employees**

### **Directors, Supervisors and Executive Officers**

Members of our board of directors are elected by our shareholders. Our board of directors is composed of seven directors. The chairman of the board of directors is elected by the directors. The chairman of the board of directors presides at all meetings of the board of directors, and also has the authority to act as our representative. The term of office for directors is three years.

We also have three supervisors. In accordance with the ROC Company Law, supervisors are elected by our shareholders and cannot concurrently serve as our directors, executive officers or other staff members. The term of office for supervisors is three years. The supervisors' duties and powers include, but are not limited to, investigation of our financial condition, inspection of corporate records, verification of statements by the board of directors, calling of and giving reports at shareholders' meetings, representation of us in negotiations with our directors and giving notification, when appropriate, to the board of directors to cease acting in contravention of applicable law or regulations or in contravention of our articles of incorporation or beyond our scope of business.

Pursuant to the ROC Company Law, a person may serve as our director or supervisor in his personal capacity or as the representative of another legal entity. A director or supervisor who serves as the representative of a legal entity may be removed or replaced at any time at the discretion of that legal entity, and the replacement director or supervisor may serve the remainder of the term of office of the replaced director or supervisor. Of our seven directors and three supervisors, four are representatives of Philips and two are representatives of the Development Fund.

The following table sets forth the name of each director, supervisor and executive officer, their positions, the year in which their term expires and the number of years they have been with us as of May 31, 2001. The business address for each of our directors, supervisors and executive officers is No. 121, Park Avenue III, Science-Based Industrial Park, Hsinchu, Taiwan, Republic of China.

<u>Name</u>	<u>Position with our company</u>	<u>Term Expires</u>	<u>Years with our company</u>
Morris Chang	Director and Chairman	2003	15
A.P.M. van der Poel	Director (Representative of Philips)	2003	5
J.C. Lobbezoo	Director (Representative of Philips)	2003	8
P.J. Zeven	Director (Representative of Philips)	2003	1
F.C. Tseng	Director and President	2003	15
Stan Shih	Director (Representative of Chi Cherng Investment Co. Ltd.)	2003	2
Chintay Shih	Director (Representative of the Development Fund)	2003	5
Jan Kees van Vliet	Supervisor (Representative of Philips)	2003	2
George C. Shiu	Supervisor (Representative of the Development Fund)	2003	2
Paul Chien	Supervisor (Representative of Hsin Ruey Investment)	2003	2
Rick Tsai	Executive Vice President of Worldwide Marketing and Sales	—	12
Harvey H.W. Chang	Senior Vice President and Chief Financial Officer	—	4
Quincy Lin	Senior Vice President of Corporate Development	—	12
K.C. Chen	Senior Vice President, General Counsel and Spokesperson	—	4
Shang-Yi Chiang	Senior Vice President of Research and Development	—	4
Yen Chun Huang	Vice President and Assistant to Chairman	—	15
C.C. Wei	Vice President of South Sites Operations	—	4
J.B. Chen	Vice President of Tainan Sites Operations	—	14
Genda Hu	Vice President of Corporate Marketing	—	1
Chung-Shih Hsu	Vice President of Business Operations	—	1
S.H. Lee	Vice President of Corporate Human Resources	—	3
John Yue	Vice President of Quality and Reliability	—	2
Mark Liu	Vice President of Fab 8 and Fab 12 Sites Operations	—	9

**Morris Chang** has been the chairman of our board of directors since our establishment. He is also chairman of the board of directors of Vanguard. From 1985 to 1994, he was president and then chairman of the board of directors of the Industrial Technology Research Institute or ITRI. Prior to that, Mr. Chang was president and chief operating officer of General Instrument Corporation and Corporate Group and vice-president for Texas Instruments. He holds a bachelor's degree and a master's degree in mechanical engineering from the Massachusetts Institute of Technology and a Ph.D. in electrical engineering from Stanford University and has been involved in the semiconductor industry for over 46 years.

**A. P. M. van der Poel** is a director. He is also chairman and chief executive officer of Philips and a member of the Group Management Committee of Philips. Mr. van der Poel holds a degree in electrical engineering from Eindhoven Technical University.

**J.C. Lobbezoo** is a director. He is also the chief financial officer of Philips since 1994. Mr. Lobbezoo majored in business economics at Erasmus University.

**P.J. Zeven** is a director. He is also the chairman of Assembleon Taiwan and president and chief executive officer of Philips Taiwan since 1999. Prior to that, he was the regional director and general manager of Philips Asia Pacific region since 1997. Mr. Zeven holds a master's degree from Nijerode School of Business.

**F.C. Tseng** assumed the presidency of our company on May 12, 1998 and also serves as a director. He formerly served as the president of Vanguard from 1996 to 1998. Prior to his presidency at Vanguard, Mr. Tseng served

as our senior vice president of operations. Mr. Tseng holds a Ph.D. in electrical engineering from National Cheng-Kung University and has been involved in the semiconductor industry for over 31 years.

**Stan Shih** is a director. He also has served as the chairman and chief executive officer of the Acer Group since 1976. Mr. Shih holds a bachelor's degree, a master's degree and a Honorary EE Ph.D degree in electrical engineering from National Chiao Tung University.

**Chintay Shih** is a director. He is also the president of ITRI and a director of each of Vanguard and the Industrial Technology Investment Corporation. Mr. Shih holds a Ph.D. in electrical engineering from Princeton University.

**Jan Kees van Vliet** is a supervisor. He is also the executive vice president of Philips Electronics Industries (Taiwan) Ltd., or Philips Taiwan, since 1999. Prior to that, he was executive board member of Philips N.V. Belgium since 1994. Mr. van Vliet holds a master's degree in business administration from the Business School of Erasmus University.

**George C. Shiu** is a supervisor. He is also the director of the Planning and Development Fund of the Executive Yuan of the Republic of China since 1999. Prior to that, he was the vice president of Overseas Chinese Commercial Bank. Mr. Shiu holds a master's degree from Johns Hopkins University.

**Paul Chien** is a supervisor. He also became the president of Vanguard Semiconductor in March 2000. Prior to that, he was the vice president of sales and marketing of Vanguard. Mr. Chien holds a master's degree in chemical engineering from Massachusetts Institute of Technology.

**Rick Tsai** has been executive vice president of worldwide marketing and sales since September 2000. Prior to that, he served as our executive vice president of operations. He joined us in 1989 as deputy director of our Fab 2 operations. He holds a Ph.D. in material science from Cornell University and has been involved in the semiconductor industry for over 20 years.

**Harvey H.W. Chang** has been senior vice president and chief financial officer since January 1998. Prior to that he was chairman of China Securities Investment Trust Corporation and president of China Development Corp. He holds a master's degree in business administration from the Wharton School, University of Pennsylvania and has been involved in the finance and semiconductor industry for over 23 years.

**Quincy Lin** has been senior vice president of corporate development since May 1997. He joined us in 1989 as director of strategic planning and development after having worked for Bell Laboratories of AT&T. He was senior director of corporate services at our company from 1992 to 1994 and vice president of corporate marketing and sales from 1994 to 1997. He holds a Ph.D. in business administration from the University of Kentucky and has been involved in the semiconductor industry for over 20 years.

**K.C. Chen** has been senior vice president and general counsel since November 1997 and company spokesperson since May 2000. Prior to that she was the president of the National Culture and Arts Foundation in Taiwan starting in 1995. She was also the founding partner of Ding & Ding Law Office in Taipei, Ding, Ding & Chan in San Francisco and Chen & Associates in Taipei. Ms. Chen holds a law degree from the Inns of Court School of Law in the United Kingdom.

**Shang-Yi Chiang** has been senior vice president of research and development since May 2001. He joined us as vice president of research and development in July, 1997. Prior to that he worked at Hewlett Packard. Dr. Chiang holds a Ph.D. in electrical engineering from Stanford University and has been involved in the semiconductor industry for over 25 years.

**Yen Chun Huang** has been vice president and assistant to the chairman since May 1997. Prior to that he served as vice president of corporate services starting in August 1995. He joined us in 1987 and has held the positions of manager of the facility department and the manufacturing department, Fab 1 director, member of the Fab 3 Project

Team, and senior director of corporate services. He holds a master's degree in business administration from Saginaw Valley State University.

*C.C. Wei* has been a vice president of south sites operations since April 2000. Prior to that he was vice president of north sites operations since February 1998. Prior to that he was senior vice president at Chartered Semiconductor Manufacturing Ltd. in Singapore starting in 1993. He holds a Ph.D. in electrical engineering from Yale University.

*J.B. Chen* has been vice president of Tainan sites operations since April 2001. Prior to that, he was vice president of Fab 7 sites operations since July 2000. He also served as president of TSMC-Acer Semiconductor Manufacturing Corp. from 1999 to 2000. He joined us in 1987 and has held the positions of manager of engineering department, director of Fab 2B and Fab 4, and senior director of north sites operations. He holds a master's degree in Physics from National Tsing Hua University and has been involved in the semiconductor industry for over 20 years.

*Genda Hu* has been vice president of corporate marketing since May 2001. Mr. Hu joined us as vice president of research and development in May 2000. Prior to that, he was chief of the Electronic Research and Service Organization for Industrial Technology Research Institute since July 1996. He holds a Ph.D. in electrical engineering from Princeton University and has been involved in the semiconductor industry for over 15 years.

*Chung Shih Hsu* has been vice president of business operation since November 2000. Prior to that he served as vice president for Vanguard since 1997. He holds a Ph.D. in Physics from Columbia University and has been involved in the semiconductor industry for over 20 years.

*S.H. Lee* has been vice president of corporate human resources since August 1998. Prior to that he was regional vice president of network systems of Lucent Technologies, Asia Pacific. Mr. Lee holds a master's degree in management from Stanford University.

*John Yue* has been vice president of quality and reliability since October 1999. Prior to that he worked for Advanced Micro Devices Inc. for 12 years. He holds a Ph.D. in physics from Stanford University.

*Mark Liu* has been vice president of our Fab 8 and Fab 12 sites operations since July 2000. Prior to that, he was the vice president of south sites operations since 1999. He formerly served as president of Worldwide Semiconductor from February to June 2000. He joined us in 1993 and has held the positions as manager director of our Fab 3 operation and senior director of north sites operations. He holds a Ph.D. in electrical engineering and computer science from the University of California, Berkeley and has been involved in the semiconductor industry for over 15 years.

There is no family relationship between any of our directors, supervisors or executive officers and any other director, supervisor or executive officer.

### **Share Ownership**

None of our directors, supervisors or executive officers, other than Philips and Development Fund owns, directly or indirectly, more than one percent of our outstanding share capital. Please see "Item 7. Major Shareholders and Related Party Transactions" for further information on the common shares owned by each of Philips, Development Fund and other directors, supervisors and executive officers as a group.

### **Compensation**

The aggregate compensation paid and benefits in kind granted to our directors, supervisors and executive officers from January 1, 2000 through December 31, 2000, which included a bonus to the executive officers of 17 million common shares, was NT\$504 million. The number of common shares distributed as stock bonus was calculated by dividing the total nominal amount of the bonus by the par value of the common shares, i.e., NT\$10 per share, rather than their market value, which has generally been substantially higher than par value. See note 24 to our Consolidated Financial Statements.

The following table sets forth remuneration paid to our individual directors and supervisors in 2000.

<u>Name</u>	<u>Position with our company</u>	<u>Total Compensation</u> <sup>(1)</sup>
Morris Chang .....	Director and Chairman	NT\$69,834,000
F.C. Tseng .....	Director and President	54,187,000
A.P.M. van der Poel.....	Director (Representative of Philips)	(2)
J.C. Lobbezoo.....	Director (Representative of Philips)	(2)
L.P. Hsu.....	Director (Representative of Philips)	(2)
Chintay Shih.....	Director (Representative of the Development Fund)	111,600 <sup>(3)</sup>
Chun Chen.....	Director (Representative of the Development Fund)	32,240 <sup>(3)(4)</sup>
Stan Shih.....	Director (Representative of Chi Cheng Investment Co. Ltd.)	85,333 <sup>(5)</sup>
Jerome S.N. Hu.....	Supervisor	34,667 <sup>(6)</sup>
Jan Kees van Vliet.....	Supervisor (Representative of Philips)	(2)
George C. Shiu .....	Supervisor (Representative of the Development Fund)	111,600 <sup>(3)</sup>
Paul Chien .....	Supervisor (Representative of Hsin Ruey Investment Co.)	85,333 <sup>(7)</sup>

- (1) Including share bonuses paid to executive officers, calculated at their par value of NT\$10 per share.  
(2) Philips was paid NT\$86,492,412 in the aggregate for the services of its representative directors and supervisor.  
(3) The Development Fund was paid NT\$64,800,749 in the aggregate for the services of its representative directors and supervisor.  
(4) Mr. Chun Chen was appointed by the Development Fund to replace Mr. Ching-Chang Yen in January 2000. Mr. Chen resigned in April 2000.  
(5) Mr. Stan Shih was appointed by the Chi Cheng Investment Co. Ltd. in April 2000.  
(6) Mr. Jerome S. N. Hu resigned in April 2000.  
(7) Mr. Paul Chien was appointed by the Hsin Ruey Investment Co. Ltd. in April 2000.

## Employees

The following table sets out, as of the dates indicated, the number of our full-time employees serving in the capacities indicated.

<u>Function</u>	<u>As of December 31,</u>		
	<u>1998</u>	<u>1999</u>	<u>2000</u>
Managers .....	602	704	1,024
Engineers .....	2,296	2,765	5,739
Technicians .....	2,711	3,675	7,370
Clerical staff .....	299	316	503
Total .....	<u>5,908</u>	<u>7,460</u>	<u>14,636</u>

The following table sets out, as of the dates indicated, a breakdown of the number of our full-time employees by geographic location:

<u>Location of Facility</u>	<u>As of December 31,</u>		
	<u>1998</u>	<u>1999</u>	<u>2000</u>
Hsinchu Science Park, Taiwan .....	5,603	6,743	12,390
Tainan Science Park, Taiwan.....	179	559	2,045
U.S.A. ....	104	127	156
Europe.....	13	14	20
Japan.....	9	17	25
Total .....	<u>5,908</u>	<u>7,460</u>	<u>14,636</u>

The numbers of employees listed in the two charts above do not take into account the 972 and 1,727 employees of Worldwide Semiconductor in 1998 and 1999, respectively.

At May 31, 2001, approximately 15.1% of our workforce possessed a university degree, with an additional 26.1% holding a junior college degree. Approximately 25.8% of the workforce held a master's or doctorate degree. We believe that, in order to maintain and improve quality control, efficiency in the manufacturing process and workplace safety, it is important that our technical workers receive continuing training in these areas. Our technical workers received an average of 26 hours of continuing training per person in 2000.

Our success depends to a significant extent upon, among other factors, our ability to attract, retain and motivate qualified personnel. Taiwan is currently experiencing a labor shortage for technical personnel and, as a result, we may face extensive competition in recruiting and retaining such personnel.

We currently do not establish any share option schemes for our employees. Instead, our employees participate in our profits by way of a bonus pursuant to our articles of incorporation. Employees are entitled to not less than 1% of our net income after the payment of taxes, deduction for prior years' losses and contributions to legal reserves. Our practice in the past has been to determine the amount of the bonus based on our operating results and industry practice in the ROC. Our shareholders have approved an aggregate bonus to the employees of NT\$4,674,426,290 with respect to 2000, which is expected to be distributed initially in the form of entitlement certificates in July 2001. The number of common shares issued as profit sharing is calculated by valuing the common shares at their par value, or NT\$10, rather than their market value. Profit-related pay is awarded according to the performance of departments and individual performance within departments.

Our employees are not covered by any collective bargaining agreements. We consider our relationship with our employees to be good.

## Item 7. Major Shareholders and Related Party Transactions

### Major Shareholders

As of May 31, 2001, Philips owned 22.47% of our outstanding common shares and 99.99% of our redeemable preferred shares and appointed three of our seven directors. The Development Fund, a governmental organization of the ROC, owned 12.10% of our outstanding common shares as of such date and appointed one of our seven directors. As a result, Philips and the Development Fund could each be deemed under the U.S. securities laws to be a controlling shareholder of us.

The following table sets forth certain information as of May 31, 2001 with respect to our common shares owned by (1) each person who, according to our records, beneficially owned five percent or more of our common shares and by (2) all directors, supervisors and executive officers as a group.

Name of Shareholders	Number of Common Shares Owned	Percentage of Total Outstanding Common Shares
Philips <sup>(1)</sup> .....	2,626,336,665	22.47%
Development Fund <sup>(2)</sup> .....	1,413,936,368	12.1%
Directors, supervisors and executive officers as a group .....	119,345,243	1.02%

(1) Includes 1,658,733,948 common shares held by Philips and 967,602,717 common shares held by Philips Electronics Industries (Taiwan) Ltd.

(2) Excludes 70,000,000 shares sold in June 2001.

In June, 2001, Development Fund sold 14,000,000 ADSs, representing 70,000,000 common shares. As a result, Development Fund's ownership in us decreased from 12.1% to 11.5%. In November, 2000, Philips purchased from us 1,299,925,653 Preferred A shares, par value NT\$10 per share, which pay a cumulative annual cash dividend at the rate of 3.5% per annum. As a result, Philips' ownership percentage of our outstanding equity securities, including the Preferred A shares, increased from 22.47% to 30.23%.

Citibank, N.A., the depository under the deposit agreement, has advised us that, as of May 31, 2001, 156,070,739 ADSs, representing 780,353,700 common shares, were held of record by Cede & Co. and 161 other U.S. persons. We have no further information as to common shares held, or beneficially owned, by U.S. persons.

We are not aware of any arrangement that may at a subsequent date result in a change of control of us.

## **Related Party Transactions**

### ***Industrial Technology Research Institute***

Industrial Technology Research Institute, or ITRI, is a government-sponsored organization in the ROC engaging in applied research to accelerate industrial technology development and promote industrial growth. ITRI has, and will continue to have, contractual relationships with us. Our relationships include the following:

- We entered into a technical cooperation agreement with ITRI pursuant to which ITRI granted us the license to use its technology to manufacture silicon MOS wafers and agreed to provide certain associated assets and relevant technical assistance and information to us, in exchange for a license from us for improvements and refinements thereof. The agreement provides that the Ministry of Economic Affairs of the ROC, or ROC MOEA, or the entity designated by the ROC MOEA, has an option to purchase up to 35% of the capacity as agreed in the agreement on favorable terms and conditions. The term of this agreement is for five years beginning January 1, 1987 and is automatically renewed for successive periods of five years unless otherwise terminated by the parties. The agreement was automatically renewed in 1992 and 1997.

- We entered into a lease agreement with ITRI in which we leased from ITRI the land of our Fab 1 in Hsinchu. The term of the agreement is for five years beginning April 1, 1997, renewable for successive periods of five years upon notice and agreement between both parties. The agreement can also be terminated upon two-year notice prior to the date of termination. We plan to decommission our Fab 1 on March 31, 2002 due to the expiration of the lease agreement with ITRI. Our total rental expenses paid to ITRI for the years 1999 and 2000 are NT\$161 million and NT\$162 million, respectively.

- From time to time, we provide foundry services to ITRI. In 1999 and 2000, we had total sales to ITRI of NT\$133 million and NT\$198million, respectively, representing less than 1% of our total net sales in each year.

### ***Koninklijke Phillips Electronics N.V. and its Affiliates***

Philips owns 30.23% of our outstanding equity securities, including the Preferred A Shares. Three of our seven directors are representatives of Philips. Philips is engaged in the business of world-wide manufacturing and processing of integrated circuits and other semiconductor devices. Philips and its affiliates currently have, and will continue to have in the future, contractual and other business relationships with us. Our relationships include the following:

- On December 31, 1986, we entered into a technology cooperation agreement with Philips pursuant to which Philips provides us with process and technical information for the production of unencapsulated MOS integrated circuits in wafer form. Under this technology cooperation agreement, we are obligated to pay to Philips a royalty equal to a certain percentage of the net sales of the products covered by the agreement during the term of the agreement and for three years thereafter. On May 12, 1997, we and Philips agreed to extend and modify the technology cooperation agreement for 10 years from July 9, 1997. Beginning on July 9, 1997, the royalty that we are obligated to pay Philips was reduced and, starting from July 9, 2002, we may deduct from such royalty payment any license fees and defense costs that we have paid to any third parties, provided that the royalty payment to Philips in any year is no less than certain percentage of net sales covered by the agreement.

- On October 28, 1992, we entered into a letter agreement with Philips under which Philips has an option on up to 30% of the capacity as agreed in the agreement on most favored terms and conditions for similar orders, as long as Philips' and its affiliates' shareholding in us remains at 24.8% or higher. From time to time, we provide

founding services to Philips and its affiliates. In 1999 and 2000, we had total sales to Philips and its affiliates of NT\$2,864 million and NT\$5,290 million, representing 4% and 3%, respectively, of our total net sales.

- In March 1999, we entered into an agreement with Philips, and EDB Investment Pte. Ltd. to found a joint venture to build the Systems on Silicon fab in Singapore. We own 32% of the joint venture, Philips owns 48% and the EDB Investment Pte. Ltd. owns 20%. After the ramping up of the production capability at Systems on Silicon, we, together with Philips, have the right to purchase up to 100% of its annual capacity. We and Philips jointly are required to purchase up to 70% of the Systems on Silicon's full capacity and we will be required to purchase no more than 28% of the annual installed capacity. See "Item 4. Information on the Company— Our History and Structure — Systems on Silicon in Singapore" for a discussion of our agreement with Philips and EDB Investment Pte. Ltd. to build our Systems on Silicon fab and "— Systems on Silicon" for a detailed discussion about the contract terms we entered into with Systems on Silicon.

#### ***Vanguard International Semiconductor Corporation***

In 1994, we and other investors entered into a joint venture agreement with the ROC MOEA to establish Vanguard, an integrated DRAM manufacturer. Vanguard commenced volume commercial production in 1995 and listed its shares on the ROC Over-the-Counter Securities Exchange in March 1999. As of May 31, 2001, we owned 25.28% of Vanguard.

On February 14, 2000, we entered into a manufacturing agreement with Vanguard in which Vanguard has agreed to manufacture integrated circuit devices and wafers required by our customers. During the term of this agreement, Vanguard is obligated to manufacture wafers for us at a fixed amount of capacity reserved. In consideration of the capacity reserved, we paid Vanguard certain amounts in securities bond which Vanguard is obligated to return to based on the amounts of wafers we order. We pay Vanguard at a discount of the actual selling price. We also agreed to grant Vanguard a royalty-free, non-exclusive and non-transferable right to use any of our logic process technologies necessary for the sole purpose of manufacturing the wafers we order, and transfer technical know-how and information in connection with the manufacturing process. In 2000, we had total purchase of NT\$6,572 million from Vanguard, representing 7% of our total cost of sales.

#### ***Systems on Silicon Manufacturing Company Pte. Ltd.***

Systems on Silicon is a joint venture in Singapore that we established with Phillips and Singapore EDB Investment Pte. Ltd. for the purpose of producing integrated circuits by means of advanced submicron manufacturing processes pursuant to the product design specifications provided primarily by us and by Phillips and its affiliates. We currently own 32% of Systems on Silicon.

We entered into a technology cooperation agreement with Systems on Silicon on May 12, 1999 in which Systems on Silicon agreed to base a major part of its production activities on processes compatible to those in use in our MOS integrated circuits wafer volume production fabs, for the purpose of maximizing efficiency and cost savings in its founding services to us. In return, we have agreed to provide Systems on Silicon with access to and benefit of the technical knowledge and experience relating to the processes in use in our MOS integrated circuits wafer volume production fabs and to assist Systems on Silicon by rendering technical services in connection with its production activities. In addition, we have agreed to grant licenses of any pertinent intellectual property rights owned or controlled by us to Systems on Silicon for the purpose of MOS integrated circuit production. Systems on Silicon pays to us during, and up to three years after, the term of this agreement a remuneration of a fixed percentage of the net selling price of all products manufactured by Systems on Silicon.

### **Item 8. Financial Information**

#### **Consolidated Financial Statements and Other Financial Information**

Please see "Item 18: Financial Statements" and pages F-1 through F-49.

## Legal Proceedings

As is the case with many companies in the semiconductor industry, we have, from time to time, received communications that we may be infringing patents or intellectual property rights of others relating to our manufacturing process, design of the integrated circuits and use of semiconductors made by us by our customers in end products. Because we neither design the integrated circuits nor control the end use thereof, we believe that we should not be ultimately liable to third parties for monetary damages, in most cases, on claims based on infringement of designs of integrated circuits or end-use products. Irrespective of the validity of these claims, we could incur significant costs in the defense thereof or could suffer adverse effects on our operations. We are not currently involved in any material litigation.

On February 25, 1997, Micron Technology Inc. filed a petition for an antidumping investigation against makers of SRAMs from Korea and Taiwan. Following the International Trade Commission's determination in April 1998 that the U.S. SRAM industry is materially injured by imports from Taiwan, the U.S. Department of Commerce announced an antidumping duty order on April 16, 1998. The Taiwan semiconductor industry appealed the determination by the International Trade Commission to the Court of International Trade. In August 1999, the International Trade Commission confirmed its determination after a remand from the Court of International Trade and this decision was further reviewed by the Court of International Trade. In April 2000, the Court of International Trade further remanded the case again to the International Trade Commission. On June 12, 2000, the International Trade Commission determined that SRAM imports from Taiwan do not cause or threaten to cause injury to the U.S. SRAM industry. The Court of International Trade affirmed such determination by the International Trade Commission and Micron Technology Inc. appealed such decision to the U.S. Court of Appeals for the Federal Circuit. SRAMs account for only 0.4% of our total direct sales to the United States in 2000.

## Dividends and Dividend Policy

The following table sets forth the stock dividends per share (as a percentage of our outstanding common shares) paid during each of the years indicated in respect of our outstanding common shares on the record date applicable to the payment of those dividends.

	<b>Stock dividends per 100 shares</b>	<b>Total shares issued as stock dividends</b>	<b>Outstanding common shares at year end</b>
1996 .....	80.0	1,151,200,000	2,654,200,000
1997 .....	50.0	1,327,100,000	4,081,300,000
1998 .....	45.0	1,836,585,000	6,047,175,967
1999 .....	23.0	1,390,850,473	7,670,881,717
2000 .....	28.0	2,147,846,881	11,689,364,587
2001 .....	40.0	4,675,745,835	16,832,553,051

In recent years, we have paid all of our dividends in the form of stock in order to reinvest our cash in operations, and we expect that we will continue in the future to pay a substantial portion of dividends in the form of stock. The form, frequency and amount of future dividends on our common shares will depend upon our earnings, cash flow, financial condition, reinvestment opportunities and other factors.

Holders of our outstanding common shares on a dividend record date will be entitled to the full dividend declared without regard to any subsequent transfer of our common shares. Payment of dividends in respect of the prior year is made following approval by our shareholders at the annual general meeting of shareholders.

Except in limited circumstances, under the ROC Company Law, we are not permitted to distribute dividends or make other distributions to our shareholders in respect of any year in which we did not record net income. The ROC Company Law also requires that 10% of annual net income (less prior years' losses and outstanding tax) be set aside as legal reserves until the accumulated legal reserves equal our paid-in capital. Our articles of incorporation require that at least one percent of annual net earnings (after deducting the legal reserve provision, outstanding tax and providing for losses incurred in prior years) be distributed as a bonus to our employees and that one percent of our annual net earnings (after deducting the legal reserve provision and outstanding taxes and providing for any losses incurred in prior years) be distributed as a bonus to our directors and supervisors.

Holders of our American Depositary Receipts, or ADRs, evidencing our American Depositary Shares, or ADSs are entitled to receive dividends, subject to the terms of the deposit agreement, to the same extent as the holders of the common shares. Cash dividends will be paid to the depositary in NT dollars and, after deduction of any applicable ROC taxes and except as otherwise provided in the deposit agreement, will be converted by the depositary into U.S. dollars and paid to holders. Stock dividends will be distributed to the depositary and, except as otherwise provided in the deposit agreement, will be distributed to holders by the depositary in the form of additional ADSs.

For information relating to ROC withholding taxes payable on cash and stock dividends, see “Item 4. Taxation — Dividends”.

## Item 9. The Offer and Listing

The principal trading market for our common shares is the Taiwan Stock Exchange. Our common shares have been listed on the Taiwan Stock Exchange under the symbol “2330” since September 5, 1994 and our ADSs have been listed on the New York Stock Exchange under the symbol “TSM” since October 8, 1997. Our outstanding ADSs are identified by the CUSIP number 874039100. The table below sets forth, for the periods indicated, the high and low closing prices and the average daily volume of trading activity on the Taiwan Stock Exchange for our common shares and the high and low closing prices and the average daily volume of trading activity on the New York Stock Exchange for our common shares represented by ADSs.

	Taiwan Stock Exchange			New York Stock Exchange <sup>(1)</sup>		
	Closing price per common share <sup>(2)</sup>		Average daily Trading volume	Closing price per ADS <sup>(2)</sup>		Average daily trading volume
	High	Low	(in thousands of shares)	High	Low	(in number of ADSs)
	(NT\$)	(NT\$)		(US\$)	(US\$)	
1997 .....	74.47	16.21	126,000	13.63	7.50	1,808,556
1998 .....	74.03	36.52	61,630	13.03	6.35	845,868
1999 .....	135.59	43.19	52,239	35.16	9.05	1,297,657
2000 .....	171.09	75.00	31,076	53.61	16.63	1,791,508
1999						
First Quarter .....	69.55	43.19	61,632	16.59	9.05	1,669,233
Second Quarter .....	100.78	66.69	65,119	21.99	13.97	1,355,259
Third Quarter .....	110.16	79.69	49,508	26.32	17.74	1,265,351
Fourth Quarter .....	133.59	101.56	30,153	35.16	23.59	919,102
2000						
First Quarter .....	171.09	135.16	38,753	53.61	35.94	1,569,599
Second Quarter .....	164.06	137.50	26,554	43.85	31.10	1,727,957
Third Quarter .....	149.00	100.00	22,391	38.75	20.44	1,699,302
Fourth Quarter .....	117.00	75.00	37,417	25.06	16.63	2,169,175
2001						
First Quarter .....	105.50	80.50	33,067	25.25	17.63	1,805,534
November 2000 .....	117.00	88.00	43,391	25.06	16.81	1,844,267
December 2000 .....	92.50	75.00	22,664	20.06	16.63	1,514,480
January 2001 .....	105.50	80.50	47,319	25.25	17.63	2,121,995
February 2001 .....	101.50	89.00	30,814	23.85	18.83	1,605,858
March 2001 .....	92.00	83.50	24,647	21.46	17.92	1,675,905
April 2001 .....	91.00	79.00	25,584	24.24	16.59	2,673,465
May 2001 .....	96.50	88.00	23,279	24.79	19.53	3,358,559

(1) Trading in ADSs commenced on October 8, 1997 on the New York Stock Exchange. Each ADS currently represents the right to receive 5 common shares.

(2) As adjusted for a 50% stock dividend in June 1997, a 45% stock dividend in June 1998, a 23% stock dividend in June 1999 and a 28% stock dividend distributed in July 2000.

As of May 31, 2001, a total of 11,689,364,587 common shares were outstanding, which number does not include the 5,143,188,414 common shares (initially in the form of entitlement certificates) issued for the 40% stock dividend and employee bonus shares to be distributed in July, 2001. With certain limited exceptions, holders of common shares that are not ROC persons are required to hold these common shares through a brokerage or custodial account in the ROC. As of May 31, 2001, 780,353,700 common shares were registered in the name of a nominee of

Citibank, N.A., the depository under the deposit agreement. Citibank, N.A. has advised us that, as of May 31, 2001, 156,070,739 ADSs, representing these 780,353,700 common shares, were held of record by Cede & Co. and 161 other U.S. persons. We have no further information as to common shares held, or beneficially owned, by U.S. persons.

## **Item 10. Additional Information**

### **Articles of Incorporation**

A copy of our Articles of Incorporation has been filed with the Securities and Exchange Commission in the United States as an exhibits to this annual report on Form 20-F.

### **Material Contracts**

We are not currently, and have not been in the last two years, party to any material contract, other than contracts entered into in the ordinary course of our business. Please see “Item 7. Major Shareholders and Related Party Transactions — Related Party Transactions” for summary of contracts with certain of our related parties.

### **Foreign Investment in the ROC**

Historically, foreign investment in the ROC securities markets has been restricted. Since 1983, the ROC government has periodically enacted legislation and adopted regulations to permit foreign investment in the ROC securities market. Currently, non-ROC persons may invest in ROC securities through the following vehicles.

***Qualified Foreign Institutional Investment.*** On December 28, 1990, the Executive Yuan approved guidelines drafted by the ROC Securities and Futures Commission which, since January 1, 1991, allow direct investment in ROC securities listed on the Taiwan Stock Exchange or other ROC securities approved by the ROC Securities and Futures Commission by certain eligible foreign institutional investors. Under the guidelines as currently in effect, eligible foreign institutional investors include:

- (1) banks which rank among the top 1,000 banks in the non-Communist world having experience in international financial, securities or trust business;
- (2) insurance companies which have existed for more than three years and hold securities assets of at least US\$300,000,000;
- (3) fund management institutions which have existed for more than three years and manage assets of at least US\$200,000,000;
- (4) offshore fund management institutions which are more than 50% owned by ROC securities investment trust enterprises, provided the funds to be used for investment in ROC securities do not come from the ROC, funds owned by the offshore fund management institutions or mainland China;
- (5) general securities firms which have a net worth of at least US\$100 million and experience in international securities investments;
- (6) offshore subsidiary securities firms which are more than 50% owned by an ROC securities firm or other offshore securities firms which are wholly owned by these offshore subsidiary securities firms;
- (7) offshore subsidiary securities firms which are 100% owned by an ROC securities firm or other offshore securities firms which are more than 51% owned by these offshore subsidiary securities firm;
- (8) foreign government-owned investment institutions;
- (9) pension funds which have been established for two years;

(10) mutual funds, unit trusts or investment trusts which have been established for three years and have assets of at least US\$200 million; and

(11) other institutional investors approved by the ROC Securities and Futures Commission.

Eligible foreign institutional investors who wish to qualify as qualified foreign institutional investors need to apply for and receive an investment permit from the ROC Securities and Futures Commission. Any application for investment exceeding US\$50 million must also be approved by the Central Bank of China. Application with the ROC Securities and Futures Commission requires the submission of, among other documents, proof of eligibility, proof of appointment of a local agent and custodian, credentials of the local agent and custodian and a copy of the custodial contract. Foreign institutional investors who receive a permit may currently invest up to US\$2 billion (with certain limited exceptions, the maximum amount of US\$2 billion may be exceeded) and are required to remit the full amount into the ROC within one year after receiving the investment permit.

Except for certain specified industries, such as telecommunications, investments in ROC-listed companies by qualified foreign institutional investors are not subject to individual or aggregate foreign ownership limits. Custodians for qualified foreign institutional investors are also required to submit to the Central Bank of China and the ROC Securities and Futures Commission a monthly report of trading activities and status of assets under custody and other matters. Capital remitted to the ROC under these guidelines may be remitted out of the ROC at any time after the date this capital is remitted to the ROC. Capital remitted out of the ROC may be returned to the ROC within one year of the outward remittance without the ROC Securities and Futures Commission's approval. Capital gains and income on investments may be remitted out of the ROC at any time.

In March 7, 2001, the government of the ROC further amended the guidelines regarding investments by qualified foreign institutional investors. Pursuant to the amended guidelines, a qualified foreign institutional investor may, effective from May 1, 2001, remit the full amount into the ROC within two years, instead of one year, after receiving the investing permit. In addition, the previous rules allowing the capital remitted out of the ROC to be returned to the ROC within one year of the outward remittance will no longer be applicable. For a qualified foreign institutional investor whose investment is approved prior to May 1, 2001, the one-year period for remitting full investment amount into the ROC and the one-year period for return of capital remitted out of the ROC shall be extended for one additional year after the date of the last outward remittance of investment amount by the qualified foreign institutional investor made prior to May 1, 2001. If the qualified foreign institutional investor has not made any outward remittance of investment amount on or before May 1, 2001, the extended one additional year period shall commence on the anniversary date of receiving the investment permit.

**Other Foreign Investment.** In addition to qualified foreign institutional investors, under existing ROC laws and regulations relating to foreign investment, individual and institutional foreign investors which meet certain qualifications set by the ROC Securities and Futures Commission may invest in the shares of Taiwan Stock Exchange-listed companies up to a limit of US\$50 million (in the case of institutional investors) and US\$5 million (in the case of individual investors) after obtaining permission from the Taiwan Stock Exchange. These investors, known as general foreign investors, are also subject to the foreign ownership percentage limitations described above.

Foreign investors (other than qualified foreign institutional investors, general foreign investors or investors investing in overseas convertible bonds and depositary receipts) who wish to make direct investments in the shares of ROC companies are required to submit a foreign investment approval application to the Investment Commission of the ROC Ministry of Economic Affairs or other government authority. The Investment Commission or such other government authority reviews each foreign investment approval application and approves or disapproves each application after consultation with other governmental agencies (such as the Central Bank of China and the ROC Securities and Futures Commission).

Under current law, any non-ROC person possessing a foreign investment approval may repatriate annual net profits, interest and cash dividends attributable to the approved investment. Stock dividends attributable to this investment, investment capital and capital gains attributable to this investment may be repatriated by the non-ROC person possessing a foreign investment approval after approvals of the Investment Commission or other government authorities have been obtained.

In addition to the general restriction against direct investment by non-ROC persons in securities of ROC companies, non-ROC persons (except in certain limited cases) are currently prohibited from investing in certain industries in the ROC pursuant to a “negative list”, as amended by the Executive Yuan. The prohibition on foreign investment in the prohibited industries specified in the negative list is absolute in the absence of specific exemption from the application of the negative list. Pursuant to the negative list, certain other industries are restricted so that non-ROC persons (except in limited cases) may invest in these industries only up to a specified level and with the specific approval of the relevant competent authority that is responsible for enforcing the relevant legislation that the negative list is intended to implement.

**Depository Receipts.** In April 1992, the ROC Securities and Futures Commission enacted regulations permitting ROC companies with securities listed on the Taiwan Stock Exchange, with the prior approval of the ROC Securities and Futures Commission, to sponsor the issuance and sale to foreign investors of depository receipts. Depository receipts represent deposited shares of ROC companies. In December 1994, the Ministry of Finance allowed companies whose shares are traded on the ROC Over-the-Counter Securities Exchange or listed on the Taiwan Stock Exchange, upon approval of the ROC Securities and Futures Commission, to sponsor the issuance and sale of depository receipts. The approval will be granted (1) if the underlying shares are newly issued shares, for a fixed number of depository receipts or (2) if the underlying shares are not newly issued shares, for a maximum number of depository receipts and, with limited exceptions (as described below), may not be increased without additional approvals by the ROC Securities and Futures Commission.

A holder of depository receipts may, from three months (in the case that the underlying shares are new shares) or immediately (in the case that the underlying shares are not newly issued shares) after the initial issue date for the deposit receipts, request the foreign depository bank issuing the depository receipts to cause the underlying securities to be sold in the ROC and to distribute the proceeds of the sale to the depository receipt holder or to withdraw from the depository receipt facility shares represented by depository receipts and transfer the shares to the depository receipt holder (other than citizens of the People’s Republic of China and entities organized under the laws of the People’s Republic of China); *provided* that settlement for trading of shares represented by the depository receipts through the book-entry system maintained by the Taiwan Securities Central Depository Co. Ltd. is permitted. As discussed above, because the ROC Securities and Futures Commission approval is for a fixed or maximum number of depository receipts, we or the foreign depository bank may not increase the number of depository receipts by depositing shares in a depository receipt facility or issuing additional depository receipts against these deposits without specific ROC Securities and Futures Commission approval, except in limited circumstances. These circumstances include issuances of additional depository receipts in connection with:

- (1) dividends on or free distributions of shares;
- (2) the exercise by holders of existing depository receipts of their pre-emptive rights in connection with capital increases for cash; or
- (3) if permitted under the deposit agreement and custody agreement, the purchase directly by any person or through a depository of the underlying shares on the Taiwan Stock Exchange or the ROC Over-the-Counter Securities Exchange (as applicable) or delivery of the underlying shares for deposit in the depository receipt facility.

However, the total number of deposited shares outstanding after an issuance under the circumstances described in clause (3) above may not exceed the number of deposited shares previously approved by the ROC Securities and Futures Commission plus any depository receipts created under the circumstances described in clauses (1) and (2) above. Issuances of additional depository receipts under the circumstances described in clause (3) above will be permitted to the extent that previously issued depository receipts have been canceled and, for so long as may be required by applicable law, the shares withdrawn from the depository receipt facility upon cancellation of such depository receipts have been sold.

Under current ROC law, a non-ROC holder of ADSs who withdraws the underlying shares must appoint an eligible local agent to:

- (1) open a securities trading account with a local securities brokerage firm after having obtained consent from the Taiwan Stock Exchange or the ROC Over-the-Counter Securities Exchange;
- (2) remit funds; and
- (3) exercise rights on securities and perform other matters as may be designated by the holder.

In addition, a withdrawing non-ROC holder must appoint a local bank to act as custodian for handling confirmation and settlement of trades, safekeeping of securities and cash proceeds and reporting of information. Under existing ROC laws and regulations, without this account, holders of ADSs that withdraw and hold the common shares represented by the ADSs would not be able to hold or transfer the common shares, whether on the Taiwan Stock Exchange or otherwise.

Holders of ADSs withdrawing common shares represented by ADSs who are non-ROC persons are required under current ROC law and regulations to appoint an agent in the ROC for filing tax returns and making tax payments. This agent, a “tax guarantor”, must meet certain qualifications set by the ROC Ministry of Finance and, upon appointment, becomes a guarantor of the withdrawing holder’s ROC tax payment obligations. In addition, under current ROC law, repatriation of profits by a non-ROC withdrawing holder is subject to the submission of evidence of the appointment of a tax guarantor to, and approval thereof by, the tax authority or submission of tax clearance certificates so long as the capital gains from securities transactions are exempt from ROC income tax. As required by the Central Bank of China, if repatriation by a holder is based on a tax clearance certificate, the aggregate amount of the cash dividends or interest on bank deposits converted into foreign currencies to be repatriated by the holder shall not exceed the amount of:

- (1) the net payment indicated on the withholding tax voucher issued by the tax authority;
- (2) the net investment gains as indicated on the holder’s certificate of tax payment; or
- (3) the aggregate transfer price as indicated on the income tax return for transfer of tax-deferred dividend shares, whichever is applicable.

Under existing laws and regulations relating to foreign exchange control, a depositary may, without obtaining further approvals from the Central Bank of China or any other governmental authority or agency of the ROC, convert NT dollars into other currencies, including U.S. dollars, in respect of the following: proceeds of the sale of shares represented by depositary receipts, proceeds of the sale of shares received as stock dividends and deposited into the depositary receipt facility and any cash dividends or cash distributions received. In addition, a depositary, also without any of these approvals, may convert inward remittances of payments into NT dollars for purchases of underlying shares for deposit into the depositary receipt facility against the creation of additional depositary receipts. The approval from the Central Bank of China is required for a depositary on a payment-by-payment basis for conversion into NT dollars of subscription payments relating to rights offerings. A depositary may also be required to obtain foreign exchange approval from the Central Bank of China on a payment-by-payment basis for conversion from NT dollars into other currencies relating to the sale of subscription rights for new shares. Proceeds from the sale of any underlying shares by holders of depositary receipts withdrawn from the depositary receipt facility may be converted into other currencies without obtaining Central Bank of China approval. Proceeds from the sale of the underlying shares withdrawn from the depositary receipt facility may be used for reinvestment in the Taiwan Stock Exchange or the ROC Over-the-Counter Securities Exchange, subject to limitations and restrictions applicable to qualified foreign institutional investors or general foreign investors (as described below).

### ***Direct Share Offerings***

The ROC Government has promulgated regulations to permit ROC companies listed on the Taiwan Stock Exchange or ROC Over-the-Counter Securities Exchange market to issue shares directly (not through depositary receipt facility) overseas.

**Overseas Corporate Bonds.** Since 1989, the ROC Securities and Futures Commission has approved a series of overseas bonds issued by ROC companies listed on the Taiwan Stock Exchange in offerings outside the ROC. Under current ROC law, these overseas corporate bonds can be:

(1) converted by bondholders, other than citizens of the People's Republic of China and entities organized under the laws of the People's Republic of China, into shares of ROC companies; or

(2) subject to ROC Securities and Futures Commission approval, may be converted into depositary receipts issued by the same ROC company or by the issuing company of the exchange shares, in the case of exchangeable bonds.

The relevant regulations also permit public issuing companies to issue corporate debt in offerings outside the ROC. Proceeds from the sale of the shares converted from overseas convertible bonds may be used for reinvestment in securities listed on the Taiwan Stock Exchange or traded on the ROC Over-the-Counter Securities Exchange, subject to limitations and restrictions applicable to qualified foreign institutional investors or general foreign investors (as applicable).

### **Exchange Controls**

The Foreign Exchange Control Statute and regulations provide that all foreign exchange transactions must be executed by banks designated to handle such business by the Ministry of Finance or by the Central Bank of China. Current regulations favor trade-related foreign exchange transactions. Consequently, foreign currency earned from exports of merchandise and services may now be retained and used freely by exporters, and all foreign currency needed for the importation of merchandise and services may be purchased freely from the designed foreign exchange banks.

Trade aside, ROC companies and resident individuals may, without foreign exchange approval, remit outside the ROC foreign currency of up to US\$50 million (or its equivalent) and US\$5 million (or its equivalent), respectively, in each calendar year. In addition, ROC companies and resident individuals may, without foreign exchange approval, remit into the ROC foreign currency of up to US\$50 million (or its equivalent) and US\$5 million (or its equivalent), respectively, in each calendar year. The above limits apply to remittances involving a conversion of NT dollars to a foreign currency and vice versa. A requirement is also imposed on all enterprises to register medium- and long-term foreign debt with the Central Bank of China.

In addition, foreign persons, may, subject to certain requirements, but without foreign exchange approval of the Central Bank of China, remit outside and into the ROC foreign currencies of up to US\$100,000 (or its equivalent) for each remittance. The above limit applies to remittances involving a conversion of NT dollars to a foreign currency and vice versa. The above limit does not, however, apply to the conversion of NT dollars into other currencies, including U.S. dollars, in respect of the proceeds of sale of any underlying shares withdrawn from a depositary receipt facility.

### **Voting of Deposited Securities**

Holders may direct the exercise of voting rights with respect to the common shares represented by the ADSs only in accordance with the provisions of the deposit agreement as described below and applicable ROC law.

Except as described below, the holders will not be able to exercise voting rights attaching to the common shares represented by the ADSs on an individual basis. According to the ROC Company Law, a shareholder's voting rights attaching to shareholdings in an ROC company must, as to all matters subject to a vote of shareholders (other than the election of directors and supervisors), be exercised as to all shares held by such shareholder in the same manner. Accordingly, the voting rights attaching to the common shares represented by ADSs must be exercised as to all matters subject to a vote of shareholders by the depositary bank or its nominee, who represents all holders of ADSs, collectively in the same manner, except in the case of an election of directors and supervisors. Directors and supervisors are elected by cumulative voting.

In the deposit agreement, the holders will appoint the depositary bank as their representative to exercise the voting rights with respect to the common shares represented by the ADSs.

We will provide the depositary bank with copies (including English translations) of notices of meetings of our shareholders and the agenda of these meetings. These agenda will contain an indication of the number of directors or supervisors to be elected if an election of directors or supervisors is to be held at the meeting. The depositary bank has agreed to request and we will, therefore, also provide a list of the candidates who have expressed their intention to run for an election of directors or supervisors. The depositary bank will mail this list to holders as soon as practicable after they receive it. Additional or different candidates may be nominated at the meeting of the shareholders than those proposed in the list provided by us. The depositary bank will also mail to holders a voting instruction form. In order to be valid, the holder of ADSs must complete, sign and return to the depositary bank the voting instruction form by a date specified by the depositary bank. The number of directors or supervisors to be elected may change after the depositary bank has mailed the voting instruction form to the holders. If such change were to occur, the depositary bank would be unable to follow exact voting instructions from the holders and may calculate the votes according to procedures not inconsistent with the provisions of the Deposit Agreement.

Subject to the provisions described in the second succeeding paragraph, which will apply to the election of directors and supervisors, if persons together holding at least 51% of the ADSs outstanding at the relevant record date instruct the depositary bank to vote in the same manner in respect of one or more resolutions to be proposed at the meeting (other than the election of directors or supervisors), the depositary bank will notify the instructions to the chairman of our board of directors or such person as he may designate. The depositary bank will appoint the chairman or his designated person to serve as the voting representative of the depositary bank or its nominee and the holders. The voting representative will attend such meeting and vote all the common shares represented by ADSs to be voted in the manner so instructed by such holders in relation to such resolution or resolutions.

If, for any reason, the depositary bank has not by the date specified by it received instructions from persons together holding at least 51% of all the ADSs outstanding at the relevant record date to vote in the same manner in respect of any resolution specified in the agenda for the meeting (other than the election of directors or supervisors), then the holders will be deemed to have instructed the depositary bank or its nominee to authorize and appoint the voting representative as the representative of the depositary bank and the holders to attend such meeting and vote all the common shares represented by all ADSs as the voting representative deems appropriate with respect to such resolution or resolutions, which may not be in your interests; provided, however, that the depositary bank or its nominee will not give any such authorization and appointment unless it has received an opinion of ROC counsel addressed to the depositary bank and in form and substance satisfactory to the depositary bank, at its sole expense, to the effect that, under ROC law (i) the deposit agreement is valid, binding and enforceable against us and the holders and (ii) the depositary bank will not be deemed to be authorized to exercise any discretion when voting in accordance with the deposit agreement and will not be subject to any potential liability for losses arising from such voting. We and the depositary bank will take such actions, including amendment of the provisions of the deposit agreement relating to voting of common shares, as we deem appropriate to endeavor to provide for the exercise of voting rights attached to the common shares at shareholders' meetings in a manner consistent with applicable ROC law.

The depositary bank will notify the voting representative of the instructions for the election of directors and supervisors received from holders and appoint the voting representative as the representative of the depositary bank and the owners to attend such meeting and vote the common shares represented by ADSs as to which the depositary bank has received instructions from holders for the election of directors and supervisors, subject to any restrictions imposed by ROC law and our articles of incorporation. Holders who by the date specified by the depositary bank have not delivered instructions to the depositary bank will be deemed to have instructed the depositary bank to authorize and appoint the voting representative as the representative of the depositary bank or its nominee and the holders to attend such meeting and vote all the common shares represented by ADSs as to which the depositary bank has not received instructions from the holders for the election of directors and supervisors as the voting representative deems appropriate, which may not be in your best interests. Candidates standing for election as representatives of a shareholder may be replaced by such shareholder prior to the meeting of the shareholders, and the votes cast by the holders for such candidates shall be counted as votes for their replacements.

By accepting and continuing to hold ADSs or any interest therein, the holders will be deemed to have agreed to the voting provisions set forth in the deposit agreement, as such provisions may be amended from time to time to comply with applicable ROC law.

The ROC Company Law and our articles of incorporation provide that the votes of common shares held by a holder of more than three percent of the total outstanding common shares will be discounted by one-tenth of one percent for the holding in excess of three percent. The voting representative, when exercising voting rights on behalf of the depositary bank, will be subject to that discount. When exercising votes on a cumulative basis for election of directors and supervisors, the aggregate votes to be cast for each candidate will be reduced by the applicable amount.

There can be no assurance that the holders will receive notice of shareholders' meetings sufficiently prior to the date established by the depositary bank for receipt of instructions to enable you to give voting instructions before the cutoff date.

## **Taxation**

### **ROC Taxation**

The following is a general summary of the principal ROC tax consequences of the ownership and disposition of ADSs representing common shares to a non-resident individual or entity. It applies to the holders only if the holders are:

- an individual who is not an ROC citizen, who owns ADSs and who is not physically present in the ROC for 183 days or more during any calendar year; or
- a corporation or a non-corporate body that is organized under the laws of a jurisdiction other than the ROC for profit-making purposes and has no fixed place of business or other permanent establishment in the ROC.

Prospective purchasers of ADSs are urged to consult their own tax advisors as to the particular ROC tax consequences of owning the ADSs which may affect them.

**Dividends.** Dividends declared by us out of our retained earnings and distributed to the holders are subject to ROC withholding tax, currently at the rate of 20%, on the amount of the distribution in the case of cash dividends or on the par value of the common shares in the case of stock dividends. However, a 10% ROC retained earnings tax paid by us on our undistributed after-tax earnings, if any, would provide a credit of up to 10% of the gross amount of any dividends declared out of those earnings that would reduce the 20% ROC tax imposed on those distributions.

Dividends paid by us out of our capital reserves are not subject to ROC withholding tax. However, due to the fact that a tax ruling confirming the foregoing was removed from the government tax publication, question arises as to whether dividends paid out of capital reserve are free from ROC withholding tax. The ROC tax authority is currently studying the issue.

**Capital Gains.** Under ROC law, capital gains on share securities transactions are exempt from income tax.

**Subscription Rights.** Distributions of statutory subscription rights for common shares in compliance with ROC law are not subject to any ROC tax. Proceeds derived from sales of statutory subscription rights evidenced by securities are exempted from income tax but are subject to securities transaction tax at the rate of 0.3% of the gross amount received. Proceeds derived from sales of statutory subscription rights that are not evidenced by securities are subject to capital gains tax at the rate of:

- 35% of the gross amount received if you are a natural person; or
- 25% of the gross amount received if you are an entity that is not a natural person.

Subject to compliance with ROC law, we, at our sole discretion, can determine whether statutory subscription rights shall be evidenced by issuance of securities.

**Securities Transaction Tax.** A securities transaction tax, at the rate of 0.3% of the gross amount received, will be withheld upon a sale of common shares in the ROC. Transfers of ADSs are not subject to ROC securities transaction tax. Withdrawal of common shares from the deposit facility is not subject to ROC securities transaction tax.

**Estate and Gift Tax.** ROC estate tax is payable on any property within the ROC of a deceased who is an individual, and ROC gift tax is payable on any property within the ROC donated by any such person. Estate tax is currently payable at rates ranging from 2% of the first NT\$600,000 to 50% of amounts over NT\$100,000,000. Gift tax is payable at rates ranging from 4% of the first NT\$600,000 to 50% of amounts over NT\$45,000,000. Under ROC estate and gift tax laws, common shares issued by ROC companies are deemed located in the ROC regardless of the location of the holder. It is unclear whether a holder of ADSs will be considered to hold common shares for this purpose.

**Tax Treaty.** The ROC does not have a double taxation treaty with the United States. On the other hand, the ROC has double taxation treaties with Indonesia, Singapore, South Africa, Australia, Vietnam, New Zealand, Malaysia, Macedonia, Swaziland and Gambia, which may limit the rate of ROC withholding tax on dividends paid with respect to common shares in ROC companies. It is unclear whether if the holders will be considered to hold common shares for the purposes of these treaties. Accordingly, if the holders may otherwise be entitled to the benefits of the relevant income tax treaty, the holders should consult their tax advisors concerning their eligibility for the benefits with respect to the ADSs.

### **United States Federal Income Taxation**

This section describes the material United States federal income tax consequences of owning our shares or ADSs. It applies to you only if you acquire your shares or ADSs in this offering of shares or ADSs by us and you hold your shares or ADSs as capital assets for tax purposes. This section does not apply to you if you are a member of a special class of holders subject to special rules, including:

- a dealer in securities;
- a trader in securities that elects to use a mark-to-market method of accounting for your securities holdings;
- a tax-exempt organization;
- a life insurance company;
- a bank;
- a person liable for alternative minimum tax;
- a person that actually or constructively owns 10% or more of our voting stock;
- a person that holds shares or ADSs as part of a straddle or a hedging or conversion transaction; or
- a person whose functional currency is not the U.S. dollar.

This section is based on the Internal Revenue Code of 1986, as amended, its legislative history, existing and proposed regulations, published rulings and court decisions, all as currently in effect. These laws are subject to change, possibly on a retroactive basis. In addition, this section is based in part upon the representations of the depositary and the assumption that each obligation in the deposit agreement and any related agreement will be performed in accordance with its terms.

You are a U.S. holder if you are a beneficial owner of shares or ADSs and you are:

- a citizen or resident of the United States;

- a corporation organized under the laws of the United States or any political subdivision thereof;
- an estate whose income is subject to United States federal income tax regardless of its source; or
- a trust if a United States court can exercise primary supervision over the trust's administration and one or more United States persons are authorized to control all substantial decisions of the trust.

A “non-U.S. holder” is a beneficial owner of shares or ADSs that is not a United States person for United States federal income tax purposes.

**You should consult your own tax advisor regarding the United States federal, state and local tax consequences of owning and disposing of shares and ADSs in your particular circumstances.**

This discussion addresses only United States federal income taxation.

In general, and taking into account the earlier assumptions, for United States federal income tax purposes, if you hold ADRs evidencing ADSs, you will be treated as the owner of the shares represented by those ADSs. Exchanges of shares for ADSs, and ADSs for shares, generally will not be subject to United States federal income tax.

### *Taxation of Dividends*

*U.S. Holders.* Under the United States federal income tax laws, and subject to the passive foreign investment company, or PFIC, rules discussed below, if you are a U.S. holder, you must include in your gross income the gross amount of any dividend paid by us on your ADRs or shares out of our current or accumulated earnings and profits (as determined for United States federal income tax purposes) including the amount of any ROC tax withheld reduced by any credit against such withholding tax on account of the 10% retained earnings tax imposed on us. The dividend will be ordinary income that you must include in income when you, in the case of shares, or the Depository, in the case of ADSs, receive the dividend. The dividend will not be eligible for the dividends-received deduction generally allowed to United States corporations in respect of dividends received from other United States corporations. The amount of the dividend distribution that you must include in your income as a U.S. holder will be the U.S. dollar value of the NT Dollar payments made, determined at the spot NT/U.S. dollar rate on the date the dividend distribution is includible in your income, regardless of whether the payment is in fact converted into U.S. dollars. Generally, any gain or loss resulting from currency exchange fluctuations during the period from the date you include the dividend payment in income to the date you convert the payment into U.S. dollars will be treated as ordinary income or loss. The gain or loss generally will be income or loss from sources within the United States for foreign tax credit limitation purposes. Distributions in excess of current and accumulated earnings and profits, as determined for United States federal income tax purposes, will be treated as a non-taxable return of capital to the extent of your basis in the shares or ADSs and thereafter as capital gain.

Subject to some generally applicable limitations and restrictions, the ROC taxes withheld from dividend distributions and paid over to the ROC (reduced by any credit against such withholding tax on account of the 10% retained earnings tax) generally will be eligible for credit against your U.S. federal income tax liabilities. Dividends paid will generally constitute “passive income” or, in the case of some U.S. financial services providers, “financial services income”, which is treated separately from other types of income for purposes of computing the foreign tax credit allowable to you.

*Pro rata* distributions of common shares by us to our shareholders, including holders of ADSs, will generally not be subject to U.S. federal income tax. Accordingly, such distributions will generally not give rise to U.S. federal income against which the ROC tax imposed on such distributions may be credited. Any such ROC tax will generally only be creditable against a U.S. holder's U.S. federal income tax liability with respect to “general limitation income” and not “passive income” or “financial services income”, subject to generally applicable conditions and limitations.

## ***Taxation of Capital Gains***

***U.S. Holders.*** Subject to the PFIC rules discussed below, if you are a U.S. holder and you sell or otherwise dispose of your shares of ADSs, you will recognize capital gain or loss for United States federal income tax purposes equal to the differences between the U.S. dollar value of the amount that you realize and your tax basis, determined in U.S. dollars, in your shares of ADSs. Capital gain of a noncorporate U.S. holder is generally taxed a maximum rate of 20% where the property is held more than one year and 18% where the property is held for more than five years. The gain or loss will generally be income from sources within the United States for foreign tax credit limitation purposes.

***PFIC Rules.*** We believe that shares and ADSs should not be treated as stock of a PFIC for United States federal income tax purposes, but this conclusion is a factual determination that is made annually and thus may be subject to change.

In general, if you are a U.S. holder, we will be a PFIC with respect to you if for any taxable year in which you held our ADSs or shares:

- at least 75% of our gross income for the taxable year is passive income; or
- at least 50% of the value, determined on the basis of a quarterly average, of our assets is attributable to assets that produce or are held for the production of passive income.

Passive income generally includes dividends, interest, royalties, rents (other than certain rents and royalties derived in the active conduct of a trade or business), annuities and gains from assets that produce passive income. If a foreign corporation owns directly or indirectly at least 25% by value of the stock of another corporation, the foreign corporation is treated for purposes of the PFIC tests as owning its proportionate share of the assets of the other corporation, and as receiving directly its proportionate share of the other corporation's income.

If we are treated as a PFIC, and you are a U.S. holder that does not make a mark-to-market election, as described below, you will be subject to special rules with respect to:

- any gain you realize on the sale or other disposition of your shares or ADSs; and
- any excess distribution that we make to you (generally, any distributions to you during a single taxable year that are greater than 125% of the average annual distributions received by you in respect of the shares or ADSs during the three preceding taxable years or, if shorter, your holding period for the shares or ADSs).

Under these rules:

- the gain or excess distribution will be allocated ratably over your holding period for the shares or ADSs,
- the amount allocated to the taxable year in which you realized the gain or excess distribution will be taxed as ordinary income,
- the amount allocated to each prior year, with certain exceptions, will be taxed at the highest tax rate in effect for that year, and
- the interest charge generally applicable to underpayments of tax will be imposed in respect of the tax attributable to each such year.

Special rules apply for calculating the amount of the foreign tax credit with respect to excess distributions by a PFIC.

If you own shares or ADSs in a PFIC that are treated as marketable stock, you may make a mark-to-market election. If you make this election, you will not be subject to the PFIC rules described above. Instead, in general, you will include as ordinary income each year the excess, if any, of the fair market value of your shares or ADSs at the end of the taxable year over your adjusted basis in your shares or ADSs. You will also be allowed to take an ordinary loss in respect of the excess, if any, of the adjusted basis of your shares or ADSs over their fair market value at the end of the taxable year (but only to the extent of the net amount of previously included income as a result of the mark-to-market election). Your basis in the shares or ADSs will be adjusted to reflect any such income or loss amounts. Your gain, if any, recognized upon the sale of your shares or ADSs will be taxed as ordinary income.

If you own shares of ADSs during any year that we are a PFIC, you must file Internal Revenue Service Form 8621.

## Document on Display

We are subject to the information requirements of the Securities Exchange Act of 1934, as amended. In accordance with these requirements, we file reports and other information with the Securities and Exchange Commission. These materials, including this annual report and the exhibits thereto, may be inspected and copied at the Commission's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549 and at the Commission's regional offices at 500 West Madison Street, Suite 1400, Chicago, Illinois 60661, and 7 World Trade Center, New York, New York 10048. Copies of the materials may be obtained from the Public Reference Room of the Commission at 450 Fifth Street, N.W. Washington D.C. 20549 at prescribed rates. The public may obtain information on the operation of the Commission's Public Reference Room by calling the Commission in the United States at 1-800-SEC-0330. The Commission also maintain a web site at <http://www.sec.gov> that contains reports, proxy statements and other information regarding registrants that file electronically with the Commission. In addition, material filed by us can be inspected at the offices of the New York Stock Exchange at 20 Broad Street, New York, New York 10005.

## Item 11. Quantitative and Qualitative Disclosures about Market Risk

Our exposure to financial market risks derives primarily from the changes in interest rates and foreign exchange rates. To mitigate these risks, we utilize derivative financial instruments, the application of which, pursuant to our internal guidelines, is primarily for hedging purposes and not for speculative purposes.

**Interest Rate Risks:** Our exposure to interest rate risks relates primarily to our long-term debts, which are normally entered into to support our corporate activities, primarily for capital expenditures.

The table below presents average principal amounts outstanding and related weighted average implied forward interest rates by year of maturity for our debt obligations as of March 31, 2001.

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005 (cut off)</u>
	(in millions, except percentages)				
Long-term debt					
US\$-denominated debt					
Variable rate.....	US\$ 768	US\$ 547	US\$ 193	US\$ 39	0
Average interest rate .....	4.62%	4.2%	4.25%	4.32%	—
NT\$-denominated debt					
Fixed rate .....	NT\$29,000	NT\$24,000	NT\$20,000	NT\$15,000	NT\$4,500
Average interest rate .....	5.8%	5.8%	5.45%	5.28%	5.36%
Variable rate.....	NT\$5,000	NT\$5,000	—	—	—
Average interest rate .....	4.10%	4.15%	—	—	—
Interest rate swaps					
Fixed rate .....	NT\$5,000	NT\$5,000	—	—	—
Average interest rate	7.23%	7.23%	—	—	—

**Foreign Currency Risk:** Substantial portions of our revenues and expenses are denominated in currencies other than the NT dollar. As of May 31, 2001, approximately 85% of our accounts payable and payables for purchases of capital goods were denominated in currencies other than the NT dollar, primarily in U.S. dollars, Japanese yen and Dutch guilders. More than 80% of our accounts receivable and receivables from related parties were denominated in non-NT dollars, mainly in U.S. dollars. To protect against reductions in value and the volatility of future cash flows caused by changes in foreign exchange rates, we utilize derivative financial instruments, mainly currency forward contracts, to hedge our currency exposure. These hedging transactions help to reduce, but do not eliminate, the impact of foreign currency exchange rate movements. Our policy is to account for these contracts on a mark-to-market rate basis and the premiums or discounts are amortized on a straight-line basis over the life of the contract. Please see note 22 of our Consolidated Financial Statements for information on the net assets, liabilities and purchase commitments that have been hedged by these derivative transactions.

The table below presents our outstanding financial derivative transactions as of March 31, 2001. These contracts all have a maturity date of not more than 12 months.

#### Foreign Currency Forward Exchange Contracts

Hedging assets/liabilities (Sell US\$/Buy NT\$)	(in thousands)
Contract amount .....	US\$645,000
Average contractual exchange rate (against NT dollars) .....	32.69
 (Sell US\$/buy Euro)	
Contract amount .....	US\$45,245
Average contractual exchange rate (against Euro) .....	0.9049
 (Buy US\$/Sell Japanese yen)	
Contract amount .....	US\$15,000
Average contractual exchange rate .....	121.07

#### Currency Options

	<u>Type</u>	<u>Option</u>	<u>Contract Amount</u>	<u>Range of Exchange Rate</u>	<u>Fair Value</u>	<u>Maturity</u>
sell	Euro	put	€525,089	0.9 – 0.97	\$711,177	June 2001
sell	Euro	put	US\$228,500	112 – 120.70	(356,967)	June 2001

See “Item 3. Key Information — Exchange Rates” for a summary of the movement between the NT dollar and the U.S. dollar during recent years.

#### Item 12. Description of Securities Other than Equity Securities

Not applicable.

#### 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. (Reserved)**

**Item 16. (Reserved)**

**Item 17. Financial Statements**

The Company has elected to provide the financial statements and related information specified in Item 18 in lieu of Item 17.

**Item 18. Financial Statements**

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

	Page
<b>Consolidated Financial Statements of Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries</b>	
Independent Auditors' Report.....	F-1
Consolidated Balance Sheets .....	F-2
Consolidated Statements of Income.....	F-4
Consolidated Statements of Changes in Shareholders' Equity.....	F-6
Consolidated Statements of Cash Flows .....	F-7
Notes to Consolidated Financial Statements .....	F-10

**Item 19. Exhibits**

- (a) See Item 18 for a list of the financial statements filed as part of this annual report.
- (b) Exhibits to this Annual Report:
  - 3.1 Articles of Incorporation of Taiwan Semiconductor Manufacturing Company Limited., as amended and restated on May 15, 2001
  - \*10.1 Merger Agreement, dated as of January 7, 2000, between us and Worldwide Semiconductor
  - \*10.2 Merger Agreement, dated as of December 30, 1999, between us and TSMC-Acer, last amended as of January 18, 2000
  - \*10.3 Acknowledgment, dated February 14, 2000, among us, TSMC-Acer and Worldwide Semiconductor
  - \*10.4 Land Lease with Tainan Science-Based Industrial Park Administration relating to the fabs located in Tainan Science-Based Industrial Park (effective August 1, 1997 to July 31, 2017) (in Chinese with English summary)
  - \*10.5 Land Lease with Tainan Science-Based Industrial Park Administration relating to the fabs located in Tainan Science-Based Industrial Park (effective May 1, 1998 to April 30, 2018) (in Chinese with English summary)

- \*10.6 Land Lease with Tainan Science-Based Industrial Park Administration relating to the fabs located in Tainan Science-Based Industrial Park (effective November 1, 1999 to October 31, 2019) (in Chinese with English summary)
- \*10.7 Land Lease with Science-Based Industrial Park Administration relating to Fab 12 (effective December 1, 1999 to November 30, 2019) (in Chinese with English summary)

21.1 List of the subsidiaries of TSMC

---

\* Previously filed in TSMC's registration statement on Form F-3 (File No. 333-11956)

## 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, in Hsinchu, Taiwan, Republic of China.

Date: June 21, 2001

TAIWAN SEMICONDUCTOR  
MANUFACTURING COMPANY LIMITED

By: /s/ F.C. Tseng  
Name: F.C. Tseng  
Title: President

## EXHIBIT INDEX

- 3.1 Articles of Incorporation of Taiwan Semiconductor Manufacturing Company Limited., as amended and restated on May 15, 2001
- \*10.1 Merger Agreement, dated as of January 7, 2000, between us and Worldwide Semiconductor
- \*10.2 Merger Agreement, dated as of December 30, 1999, between us and TSMC-Acer, last amended as of January 18, 2000
- \*10.3 Acknowledgment, dated February 14, 2000, among us, TSMC-Acer and Worldwide Semiconductor
- \*10.4 Land Lease with Tainan Science-Based Industrial Park Administration relating to the fabs located in Tainan Science-Based Industrial Park (effective August 1, 1997 to July 31, 2017) (in Chinese with English summary)
- \*10.5 Land Lease with Tainan Science-Based Industrial Park Administration relating to the fabs located in Tainan Science-Based Industrial Park (effective May 1, 1998 to April 30, 2018) (in Chinese with English summary)
- \*10.6 Land Lease with Tainan Science-Based Industrial Park Administration relating to the fabs located in Tainan Science-Based Industrial Park (effective November 1, 1999 to October 31, 2019) (in Chinese with English summary)
- \*10.7 Land Lease with Science-Based Industrial Park Administration relating to Fab 12 (effective December 1, 1999 to November 30, 2019) (in Chinese with English summary)
- 21.1 List of the subsidiaries of TSMC

---

\* Previously filed in TSMC's registration statement on Form F-3 (File No. 333-11956)



**Exhibit 21.1****Subsidiaries of Registrant**

Name of the Subsidiaries	State or Jurisdiction of Incorporation	Other Names Under which Such Subsidiary does business	Ownership Interest
TSMC North America	California, USA	None	100%
TSMC Europe B.V.	The Netherlands	None	100%
TSMC Japan K.K.	Japan	None	100%
TSMC International Investment Ltd.	British Virgin Islands	None	100%
TSMC Partners, Ltd.	British Virgin Islands	None	100%
Po Cherng Investment Co., Ltd.	Taiwan, R.O.C.	None	25%
Chi Hsin Investment Co., Ltd.	Taiwan, R.O.C.	None	25%
Cherng Huei Investment Co., Ltd.	Taiwan, R.O.C.	None	25%
Hsin Ruey Investment Co., Ltd.	Taiwan, R.O.C.	None	25%
Kung Cherng Investment Co., Ltd.	Taiwan, R.O.C.	None	25%
Chi Cherng Investment Co., Ltd.	Taiwan, R.O.C.	None	25%
TSMC Development, Inc.	Delaware, U.S.A.	None	100%
Vanguard International Semiconductor Corporation	Taiwan, R.O.C.	None	25%
TSMC Technology, Inc.	Delaware, U.S.A.	None	100%
InveStar Semiconductor Development Fund, Inc.	Cayman Island	None	97%
WaferTech, LLC	Delaware, U.S.A.	None	99%
Investar Semiconductor Development Fund, Inc. (II)	Cayman Island	None	97%
Systems on Silicon Manufacturing Company Pte.	Singapore	None	32%

**Taiwan Semiconductor Manufacturing Company Limited  
and Subsidiaries**

**Consolidated Financial Statements as of December 31, 1999 and 2000**

**Together with Independent Auditors' Report**

## Independent Auditors' Report

To the Shareholders of  
Taiwan Semiconductor Manufacturing Company Limited

We have audited the accompanying consolidated balance sheets of Taiwan Semiconductor Manufacturing Company Limited (a Republic of China corporation) and subsidiaries as of December 31, 1999 and 2000 and the related consolidated statements of income, changes in shareholders' equity and cash flows for the years ended December 31, 1998, 1999 and 2000, all expressed in New Taiwan dollars. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Taiwan Semiconductor Manufacturing Company Limited and subsidiaries as of December 31, 1999 and 2000, and the results of their operations and their cash flows for the years ended December 31, 1998, 1999 and 2000, in conformity with generally accepted accounting principles in the Republic of China.

Certain accounting practices of the Company used in preparing the accompanying consolidated financial statements conform with generally accepted accounting principles in the Republic of China, but do not conform with accounting principles generally accepted in the United States of America. A description of these differences and the adjustments required to reconcile net income and shareholders' equity to accounting principles generally accepted in the United States of America are set forth in Note 24.

T N Soong & Co  
A Member Firm of Andersen Worldwide, SC  
Taipei, Taiwan  
The Republic of China  
January 29, 2001

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LIMITED AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS  
(In Millions)

	Notes	December 31		
		1999 NT\$	2000 NT\$	2000 U.S.\$ (Note 3)
<u>ASSETS</u>				
CURRENT ASSETS				
Cash and cash equivalents	2C,4	29,517.7	38,840.2	1,170.9
Pledged time deposits	20	3,161.0	-	-
Short-term investments	2D,5,20	965.4	2,351.6	70.9
Receivables - net	2E,6	13,322.0	27,055.5	815.7
Receivable from related party	19	340.9	948.7	28.6
Inventories	2F,7	7,104.0	12,785.7	385.5
Deferred income tax assets	2N,18	2,616.6	8,178.0	246.5
Prepaid expenses and other current assets	19,22	<u>2,630.0</u>	<u>3,034.6</u>	<u>91.5</u>
Total Current Assets		<u>59,657.6</u>	<u>93,194.3</u>	<u>2,809.6</u>
LONG-TERM INVESTMENTS	2G,8	<u>16,164.7</u>	<u>9,814.3</u>	<u>295.9</u>
PROPERTIES - NET	2H,9,20	<u>150,059.9</u>	<u>244,747.9</u>	<u>7,378.6</u>
GOODWILL	2I	<u>-</u>	<u>11,531.0</u>	<u>347.6</u>
OTHER ASSETS				
Rental assets		-	625.6	18.9
Deferred income tax assets	2N,18	7,006.7	6,629.8	199.9
Deferred charges - net	2J,10	2,380.8	3,335.7	100.6
Refundable deposits		59.4	979.1	29.5
Miscellaneous		<u>106.4</u>	<u>28.3</u>	<u>0.8</u>
Total Other Assets		<u>9,553.3</u>	<u>11,598.5</u>	<u>349.7</u>
TOTAL ASSETS		<u>235,435.5</u>	<u>370,886.0</u>	<u>11,181.4</u>
<u>LIABILITIES AND SHAREHOLDERS' EQUITY</u>				
CURRENT LIABILITIES				
Short-term bank borrowings	11,20	5,026.6	3,833.8	115.6
Commercial paper payable	12	94.8	-	-
Accounts payable		3,273.9	8,507.8	256.5
Payable to related parties	19	1,036.4	2,606.3	78.6
Income tax payable	2N,18	155.1	3.3	0.1
Payables to contractors and equipment suppliers		12,593.7	25,550.3	770.3
Current portion of long-term liabilities	16	1.0	51.1	1.5
Accrued expenses and other current liabilities	22	<u>4,208.9</u>	<u>6,872.4</u>	<u>207.2</u>
Total Current Liabilities		<u>26,390.4</u>	<u>47,425.0</u>	<u>1,429.8</u>
LONG-TERM LIABILITIES				
Long-term bank borrowings	13,20	22,743.5	23,339.4	703.6
Long-term bonds payable	14	<u>20,000.0</u>	<u>29,000.0</u>	<u>874.3</u>
Total Long-term Liabilities		<u>42,743.5</u>	<u>52,339.4</u>	<u>1,577.9</u>

(Forward)

OTHER LIABILITIES				
Accrued pension cost	2K,17	1,013.8	1,511.3	45.5
Deferred gain on sale - leaseback	2L	-	434.2	13.1
Lease obligation payable	16	4.4	3.3	0.1
Guarantee deposits and other liabilities		<u>5,188.7</u>	<u>7,097.4</u>	<u>214.0</u>
Total Other Liabilities		<u>6,206.9</u>	<u>9,046.2</u>	<u>272.7</u>
MINORITY INTEREST IN SUBSIDIARIES				
	2A	<u>7,524.2</u>	<u>321.7</u>	<u>9.7</u>
Total Liabilities		<u>82,865.0</u>	<u>109,132.3</u>	<u>3,290.1</u>
SHAREHOLDERS' EQUITY				
2G,2H,15				
Capital stock				
Common stock		85,208.8	116,893.7	3,524.1
Preferred stock		-	13,000.0	391.9
Subscribed capital		13,118.0	-	-
Capital surplus		23,951.4	57,089.0	1,666.8
Retained earnings		31,382.4	75,121.0	2,319.1
Unrealized loss on long-term investment		-	( 71.6)	( 2.2)
Cumulative translation adjustment	2Q	<u>( 1,090.1)</u>	<u>( 278.4)</u>	<u>( 8.4)</u>
Total Shareholders' Equity		<u>152,570.5</u>	<u>261,753.7</u>	<u>7,891.3</u>
TOTAL LIABILITIES AND SHAREHOLDERS'				
EQUITY		<u>235,435.5</u>	<u>370,886.0</u>	<u>11,181.4</u>

The accompanying notes are an integral part of the consolidated financial statements.

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LIMITED AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME  
(In Millions Except Shares and Earnings Per Share)

	Notes	Year Ended December 31			
		1998 NT\$	1999 NT\$	2000 NT\$	2000 U.S.\$ (Note 3)
NET SALES	2M,19,23	50,524.5	76,305.1	166,197.6	5,010.5
COST OF SALES	19	<u>33,009.3</u>	<u>46,237.4</u>	<u>89,681.7</u>	<u>2,703.7</u>
GROSS PROFIT		<u>17,515.2</u>	<u>30,067.7</u>	<u>76,515.9</u>	<u>2,306.8</u>
OPERATING EXPENSES					
Marketing		767.5	1,861.6	2,681.6	80.9
Research and development	19	2,314.0	3,090.8	5,131.5	154.7
General and administrative	19	<u>2,128.2</u>	<u>2,845.3</u>	<u>7,408.1</u>	<u>223.3</u>
Total Operating Expenses		<u>5,209.7</u>	<u>7,797.7</u>	<u>15,221.2</u>	<u>458.9</u>
INCOME FROM OPERATIONS		<u>12,305.5</u>	<u>22,270.0</u>	<u>61,294.7</u>	<u>1,847.9</u>
NON-OPERATING INCOME					
Interest		1,111.9	1,114.5	1,679.7	50.6
Insurance compensation		-	184.6	1,623.8	49.0
Gain on sale of short-term investments-net		11.9	48.6	1,060.9	32.0
Foreign exchange gain - net	2P,22	-	-	828.0	24.9
Premium income	2O,22	8.3	63.8	640.5	19.3
Technology service income	19	-	-	138.5	4.2
Gain on sale of properties		3.3	4.0	62.9	1.9
Gain on sale of long-term investments	2G	781.6	67.8	15.1	0.5
Reversal of allowance for losses on short-term investment		-	140.1	0.7	0.0
Other	19	<u>59.6</u>	<u>58.9</u>	<u>177.8</u>	<u>5.4</u>
Total Non-Operating Income		<u>1,976.6</u>	<u>1,682.3</u>	<u>6,227.9</u>	<u>187.8</u>
NON-OPERATING EXPENSES					
Interest	9,22	1,191.7	2,417.0	2,717.0	81.9
Investment loss recognized by equity method - net	2G,8	1,400.0	288.5	187.2	5.6
Loss on sale of properties		4.4	164.4	114.7	3.5
Premium expenses	2O,22	-	86.8	108.1	3.3
Issuance costs of bonds		143.7	114.8	32.7	1.0
Foreign exchange loss - net	2P	259.5	119.1	-	-
Permanent loss on long-term investment	2G	5.8	31.6	-	-

(Forward)

Provision for loss on short-term investments		121.9	-	-	-
Other		<u>99.9</u>	<u>101.8</u>	<u>461.4</u>	<u>13.9</u>
Total Non-Operating Expenses		<u>3,226.9</u>	<u>3,324.0</u>	<u>3,621.1</u>	<u>109.2</u>
INCOME BEFORE INCOME TAX		11,055.2	20,628.3	63,901.5	1,926.5
INCOME TAX BENEFIT	2N,18	<u>2,318.4</u>	<u>2,382.8</u>	<u>1,167.9</u>	<u>35.2</u>
INCOME BEFORE MINORITY INTEREST		<u>13,373.6</u>	<u>23,011.1</u>	<u>65,069.4</u>	<u>1,961.7</u>
MINORITY INTEREST IN LOSS OF SUBSIDIARIES		<u>1,015.6</u>	<u>515.9</u>	<u>36.8</u>	<u>1.1</u>
NET INCOME		<u>14,389.2</u>	<u>23,527.0</u>	<u>65,106.2</u>	<u>1,962.8</u>
EARNINGS PER SHARE		<u>1.35</u>	<u>2.21</u>	<u>5.71</u>	
EARNINGS PER EQUIVALENT ADS	2R	<u>6.75</u>	<u>11.04</u>	<u>28.55</u>	
WEIGHTED AVERAGE NUMBER OF SHARES OUTSTANDING	2R	<u>10,656,033,000</u>	<u>10,656,033,000</u>	<u>11,400,882,000</u>	
WEIGHTED AVERAGE NUMBER OF EQUIVALENT ADS OUTSTANDING		<u>2,131,206,600</u>	<u>2,131,206,600</u>	<u>2,280,176,400</u>	

The accompanying notes are an integral part of the consolidated financial statements.

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LIMITED AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

(In Millions Except Shares and Par Value)

	CAPITAL STOCK (NT\$10 PAR VALUE)					Subscribed Capital NT\$	CAPITAL SURPLUS NT\$	RETAINED EARNINGS NT\$	UNREALIZED LOSS ON LONG-TERM INVESTMENT NT\$	CUMULATIVE TRANSLATION ADJUSTMENT NT\$	TOTAL SHAREHOLDERS' EQUITY NT\$
	Authorized Shares	Common Stock		Preferred Stock							
	Shares	Shares	Amount NT\$	Shares	Amount NT\$						
BALANCE, JANUARY 1, 1998	8,500,000,000	4,361,300,000	43,613.0	-	-	3,360.0	62.1	28,690.9	-	( 102.0)	75,624.0
Appropriations of prior year's earnings											
Stock dividends - 45%	-	1,836,585,000	18,365.9	-	-	-	-	( 18,365.9)	-	-	-
Bonus to employees - stock	-	129,290,967	1,292.9	-	-	-	-	( 1,292.9)	-	-	-
Bonus to directors and supervisors	-	-	-	-	-	-	-	( 161.6)	-	-	( 161.6)
Issuance of shares	-	320,000,000	3,200.0	-	-	( 3,360.0)	7,120.0	-	-	-	6,960.0
Net income in 1998	-	-	-	-	-	-	-	14,389.2	-	-	14,389.2
Gain on sale of properties	-	-	-	-	-	-	3.0	( 3.0)	-	-	-
Adjusting arising from changes in ownership percentage in investees	-	-	-	-	-	-	99.1	-	-	-	99.1
Translation adjustment on subsidiaries	-	-	-	-	-	-	-	-	-	( 625.4)	( 625.4)
BALANCE, DECEMBER 31, 1998	8,500,000,000	6,647,175,967	66,471.8	-	-	-	7,284.2	23,256.7	-	( 727.4)	96,285.3
Increase in authorized shares	600,000,000	-	-	-	-	-	-	-	-	-	-
Appropriations of prior year's earnings											
Stock dividends - 23%	-	1,390,850,473	13,908.5	-	-	-	-	( 13,908.5)	-	-	-
Bonus to employees - stock	-	110,456,595	1,104.6	-	-	-	-	( 1,104.6)	-	-	-
Bonus to directors and supervisors	-	-	-	-	-	-	-	( 138.1)	-	-	( 138.1)
Issuance of shares on April 15, 1999	-	250,000,000	2,500.0	-	-	-	5,000.0	-	-	-	7,500.0
Subscribed capital	-	-	-	-	-	13,118.0	-	-	-	-	13,118.0
Net income in 1999	-	-	-	-	-	-	-	23,527.1	-	-	23,527.1
Conversion of foreign bonds	-	122,398,682	1,223.9	-	-	-	11,290.0	-	-	-	12,513.9
Gain on sale of properties	-	-	-	-	-	-	4.0	( 4.0)	-	-	-
Gain on sale of properties from investees	-	-	-	-	-	-	246.2	( 246.2)	-	-	-
Adjusting arising from changes in ownership percentage in investees	-	-	-	-	-	-	127.0	-	-	-	127.0
Translation adjustment on subsidiaries	-	-	-	-	-	-	-	-	-	( 362.7)	( 362.7)
BALANCE, DECEMBER 31, 1999	9,100,000,000	8,520,881,717	85,208.8	-	-	13,118.0	23,951.4	31,382.4	-	( 1,090.1)	152,570.5
Increase in authorized shares	8,700,000,000	-	-	-	-	-	-	-	-	-	-
Appropriations of prior year's earnings											
Stock dividends - 25.55%	-	1,959,910,279	19,599.1	-	-	-	-	( 19,599.1)	-	-	-
Bonus to employees - stock	-	172,120,825	1,721.2	-	-	-	-	( 1,721.2)	-	-	-
Bonus to directors and supervisors	-	-	-	-	-	-	-	( 215.2)	-	-	( 215.2)
Capital transferred from capital surplus - 2.45%	-	187,936,602	1,879.4	-	-	-	( 1,879.4)	-	-	-	-
Issuance of share on January 28, 2000	-	300,000,000	3,000.0	-	-	( 13,118.0)	12,000.0	-	-	-	1,882.0
Issuance of shares on June 8, 2000	-	115,000,000	1,150.0	-	-	-	23,172.6	-	-	-	24,322.6
Issuance of shares for the acquisition of TSMC on June 30, 2000	-	433,515,164	4,335.2	-	-	-	52,225.0	-	-	-	56,560.2
Elimination TSMC goodwill against capital surplus	-	-	-	-	-	-	(52,212.7)	-	-	-	( 52,212.7)
Issuance of preferred stocks on November 29, 2000	-	-	-	1,300,000,000	13,000.0	-	-	-	-	-	13,000.0
Net income in 2000	-	-	-	-	-	-	-	65,106.2	-	-	65,106.2
Gain on sale of properties	-	-	-	-	-	-	58.2	( 58.2)	-	-	-
Gain on sale of properties from investees	-	-	-	-	-	-	5.5	( 5.5)	-	-	-
Adjusting arising from changes in ownership percentage in investees	-	-	-	-	-	-	( 231.6)	231.6	-	-	-
Unrealized loss on long-term investment from investees	-	-	-	-	-	-	-	-	( 71.6)	-	( 71.6)
Translation adjustment on subsidiaries	-	-	-	-	-	-	-	-	-	811.7	811.7
BALANCE, DECEMBER 31, 2000	17,800,000,000	11,689,364,587	116,893.7	1,300,000,000	13,000.0	-	57,089.0	75,121.0	( 71.6)	( 278.4)	261,753.7

The accompanying notes are an integral part of the consolidated financial statements.

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LIMITED AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS  
(In Millions)

	Year Ended December 31			
	1998	1999	2000	2000
	NT\$	NT\$	NT\$	U.S.\$ (Note 3)
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>				
Net income	14,389.2	23,527.0	65,106.2	1,962.8
Adjustments to reconcile net income to net cash provided by operating activities:				
Depreciation and amortization	15,522.0	25,197.9	41,446.1	1,249.5
Deferred income tax	( 3,007.9)	( 2,481.8)	( 956.1)	( 28.8)
Investment loss recognized by equity method-net	1,400.0	288.5	187.2	5.6
Gain on sale of long-term investments	( 781.6)	( 67.8)	( 15.1)	( 0.5)
Loss on sale of properties - net	1.1	160.4	51.8	1.6
Permanent loss on long-term investment	5.8	31.6	-	-
Accretion in redemption value of bonds	875.8	585.6	-	-
Accrued pension cost	264.3	260.4	370.3	11.2
Allowance for doubtful receivable	( 10.0)	148.6	524.5	15.8
Allowance for sales returns and others	( 93.2)	402.1	1,679.3	50.6
Transfer property into expenses	-	39.1	-	-
Minority interest in loss of subsidiaries	( 1,015.6)	( 515.9)	( 36.8)	( 1.1)
Changes in operating assets and liabilities				
Short-term investments	( 124.8)	5,049.7	( 1,373.6)	( 41.4)
Forward exchange contract receivable	-	-	( 113.7)	( 3.4)
Receivables	1,640.5	( 6,391.8)	( 15,428.2)	( 465.1)
Receivable from related party	215.6	( 273.2)	( 737.1)	( 22.2)
Inventories	537.5	( 2,765.2)	( 4,033.8)	( 121.6)
Prepaid expenses and other current assets	221.8	( 1,278.1)	352.0	10.6
Accounts payables	( 929.0)	985.9	3,170.7	95.6
Payable to related parties	( 46.8)	878.4	2,334.2	70.4
Income tax payable	746.8	( 622.3)	( 151.8)	( 4.6)
Forward exchange contract payable	-	6.1	( 987.6)	( 29.8)
Accrued expenses and other current liabilities	<u>318.4</u>	<u>2,137.2</u>	<u>2,024.1</u>	<u>61.0</u>
Net Cash Provided by Operating Activities	<u>30,129.9</u>	<u>45,302.4</u>	<u>93,412.6</u>	<u>2,816.2</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>				
Acquisitions of:				
Long-term investments	( 1,555.8)	( 10,057.9)	( 2,107.3)	( 63.5)
Properties	( 55,780.5)	( 51,459.1)	( 103,761.9)	( 3,128.2)
Proceeds from sales of:				
Long-term investments	1,523.5	150.0	49.4	1.5
Properties	3.5	413.1	364.9	11.0
Decrease (increase) in restricted cash	( 7.3)	7.2	-	-
Decrease (increase) in pledge time deposits	( 209.6)	( 2,290.0)	3,161.7	95.3
Increase in deferred charges	( 1,187.5)	( 1,179.3)	( 1,793.2)	( 54.0)
Decrease (increase) in refundable deposits	( 9.7)	61.4	( 915.6)	( 27.6)

(Forward)

Decrease (increase) in other assets-miscellaneous	( 0.8)	13.5	77.4	2.3
Decrease in minority interest in subsidiaries	( 86.6)	( 1,660.8)	( 15,386.9)	( 463.9)
Cash of TSMC as of July 1, 2000	-	-	736.6	22.2
Net Cash Used in Investing Activities	( 57,310.8)	( 66,001.9)	( 119,574.9)	( 3,604.9)

#### CASH FLOWS FROM FINANCING ACTIVITIES

##### Proceeds from issuance of:

Short-term bank borrowings	2,109.2	2,917.4	-	-
Commercial paper	98.2	-	-	-
Long-term bonds	9,772.5	9,450.6	9,000.0	271.3
Long-term bank borrowings	6,903.8	7,997.6	-	-
Capital stock	530.0	20,618.0	39,204.5	1,181.9

##### Payments on:

Short-term bank borrowings	-	-	( 8,592.8)	( 259.0)
Commercial paper	-	-	( 4,241.0)	( 127.8)
Short-term notes	-	( 253.4)	-	-
Long-term bank borrowings	-	-	( 2,648.9)	( 79.9)

##### Increase (decrease) in guarantee deposits and other liabilities

	( 2,318.9)	( 1,010.4)	2,977.9	89.8
Issuance costs of financing	( 78.3)	( 63.3)	( 118.3)	( 3.6)
Bonus to directors and supervisors	( 161.6)	( 138.1)	( 215.1)	( 6.5)
Net Cash Provided by Financing Activities	16,854.9	39,518.4	35,366.3	1,066.2

#### EFFECTS OF CHANGES IN FOREIGN

EXCHANGE RATE	( 657.6)	( 173.1)	118.5	3.5
---------------	----------	----------	-------	-----

#### NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS

	( 10,983.6)	18,645.8	9,322.5	281.0
--	-------------	----------	---------	-------

#### CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR

	21,855.5	10,871.9	29,517.7	889.9
--	----------	----------	----------	-------

#### CASH AND CASH EQUIVALENTS, END OF YEAR

	10,871.9	29,517.7	38,840.2	1,170.9
--	----------	----------	----------	---------

#### SUPPLEMENTAL INFORMATION

Interest paid (excluding amounts capitalized)	1,046.7	2,441.8	4,036.2	121.7
Income tax paid	77.0	594.1	96.5	2.9
Noncash investing and financing activities:				
Effect of exchange rate changes on cash	( 150.5)	( 66.4)	1,009.3	30.4
Current portion of long-term liabilities	299.5	1.0	51.1	1.5

#### SUPPLEMENTAL INFORMATION OF THE MERGERS:

TSMC acquired TSMC-Acer Semiconductor Manufacturing Corporation (TASMC) by issuing new shares. The balance sheets as of June 30, 2000 of TASMC were as follows:

	NT\$
	(Fair Value)
Cash and cash equivalent	736.6
Inventories	1,647.8
Other current assets	2,308.4
Properties - net	19,846.7
Other assets	7,335.5

Current liabilities	( 16,699.1)
Long-term liabilities	( 2,000.0)
Other liabilities	( <u>654.8</u> )
Net assets	12,521.1
Pre-write-off goodwill	<u>52,212.7</u>
	<u>64,733.8</u>
Purchase price	56,560.2
Carrying value of 32% investment	3,318.9
Carrying value of preferred stock	<u>4,854.7</u>
	<u>64,733.8</u>

The accompanying notes are an integral part of the consolidated financial statements.

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LIMITED  
AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Amounts in Millions of New Taiwan Dollars, U.S. dollars, Yen, and NLG  
Except Exchange Rate and Per Share)

1. GENERAL

Taiwan Semiconductor Manufacturing Company Limited (TSMC), a Republic of China corporation, is engaged mainly in the manufacture, sale, packaging, testing and design of integrated circuits and other semiconductor devices, and the manufacture and design of masks. TSMC was incorporated as a venture among the government of the ROC, acting through the Development Fund of the Executive Yuan; Philips Electronics N.V. and certain of its affiliates (Philips); and certain other private investors. In September 1994, its shares were listed on the Taiwan Stock Exchange. In 1997, TSMC listed the shares of stock on the New York Stock Exchange in the form of American Depositary Shares.

TSMC had acquired TSMC-Acer Semiconductor Manufacturing Corporation (TASMC). It also merged with Worldwide Semiconductor Manufacturing Corporation (WSMC) with TSMC as the surviving company. TASMC and WSMC were subsequently dissolved. The acquisition of the 68% of TASMC not previously owned and the merger with WSMC took effect on June 30, 2000, and, on that date, TSMC issued a total of 1,583,515 thousand common shares to the former shareholders of TASMC and WSMC. The additional shares issued were based on the agreed exchange ratio of three point nine TASMC shares and two WSMC shares for every share of TSMC. Also, the holders of the additional shares issued have the same rights and the obligation as the holders of the previously issued common stock of TSMC.

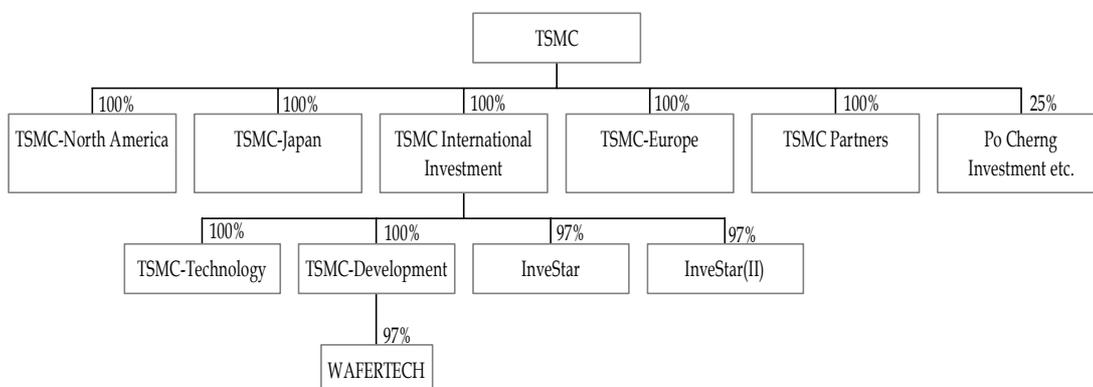
TASMC was incorporated on March 31, 1990, and commenced operations in January 1992. TASMC was engaged mainly in the research, development, design, manufacturing, packaging, testing and sale of dynamic random-access memory (DRAM) semiconductor devices, other memory integrated circuits and logic integrated circuits.

WSMC, was incorporated on March 6, 1996 and commenced operations on December 1, 1998. WSMC was engaged mainly in the manufacture of semiconductor products.

TSMC has eleven wholly-owned subsidiaries, namely, TSMC-North America, Taiwan Semiconductor Manufacturing Company Europe B.V (TSMC-Europe), TSMC-Japan, TSMC international Investment, TSMC Partners, and 25% owned affiliated - Po Cherng Investment, Chi Hsin Investment, Kung Cherng Investment, Chi Cherng Investment, Hsin Ruey Investment, and Cherng Huei Investment. As of December 31, 2000, TSMC International Investment has two wholly owned subsidiaries - TSMC Development, Inc. and TSMC Technology Inc., and two 97%-owned subsidiaries- InveStar Semiconductor Development Fund, Inc. and, InveStar Semiconductor Development Fund (II), Inc. (new investee in the year of 2000). TSMC Development Inc. in turn has a subsidiary, namely, WaferTech, LLC, which has been 68% owned

since its formation; TSMC Development Inc. acquired an additional 29% at a purchase price of \$6 in December 2000, thereby increasing its proportionate interest to 97%.

The following diagram presents information of relations and percentage of holding shares among TSMC and its subsidiaries as of December 31, 2000:



TSMC-North America, TSMC-Europe and TSMC-Japan are engaged mainly in marketing and engineering support activities. TSMC Partners and Kung Cherng Investment etc. are engaged in investments. TSMC International Investment and its subsidiaries are engaged in investing in affairs focused on the design, manufacture, and other related business of semiconductors. WaferTech, LLC. is a foundry.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### A. Consolidation

The consolidated financial statements include the accounts of TSMC and the aforementioned subsidiaries (hereinafter, referred to individually or collectively as “Company”). All significant inter-company accounts and transactions have been eliminated.

The reporting entities for the consolidated financial statements as of and for the year ended December 31, 2000 included TSMC, TSMC-North America, TSMC-Europe, TSMC-Japan, TSMC Partners, Po Cherng Investment, Chi Hsin Investment, Kung Cherng Investment, Chi Cherng Investment, Hsin Ruey Investment, Cherng Huei Investment, TSMC International Investment and its subsidiaries, InveStar Semiconductor Development Fund, Inc. and InveStar Semiconductor Development Fund, (II) Inc. (incremental investment in 2000), TSMC Development Inc. (including WAFERTECH, LLC) and TSMC Technology Inc.

As stated in Note 1, TSMC merged with WSMC on June 30, 2000. In view of the changes in reporting entities, the consolidated financial statements of the year ended December 31, 1998 and 1999 have been restated and WSMC’s assets and liabilities were included in consolidated accounts for the full year 2000. The restatement of consolidated balance sheets, income statements, statements of changes in shareholders’ equity and statements of cash flows was carried out by

including all assets and liabilities of WSMC. Also, the income statements were restated by including the income and expense of WSMC for all periods.

Minority interests in InveStar, InveStar (II) and WaferTech are presented separately in consolidated financial statements.

B. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles in the Republic of China requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

C. Cash equivalents

Government bonds acquired under repurchase agreements and commercial paper with original maturities of less than three months are classified as cash equivalents.

D. Short-term investments

Short-term investments are carried at the lower of cost or market value. The costs of investments sold are determined by the specific identification method.

E. Allowances for receivables

Allowances for doubtful receivables and sales returns and others are provided based on a review of the collectibility of individual receivables and experience on returns and allowances, respectively.

F. Inventories

Inventories are stated at the lower of standard cost (adjusted to approximate weighted average cost) or market value. Market value represents net realizable value for finished goods and work in process and replacement value for raw materials, supplies and spare parts.

G. Long-term investments

Investments in shares of stock of companies wherein the Company exercises significant influence on their operating and financial decisions are accounted for using equity method. The increase in the Company's proportionate share in the net assets of its investee companies resulting from its subscription to additional shares of stock, issued by such investee companies, at the rate not proportionate to its existing equity ownership in such investee companies, is credited to a capital surplus account while any decrease in the Company's proportionate share in the net asset of investee company is debited against the existing balance of the similar capital surplus account with the difference debited against unappropriated retained earnings.

If an investee company's losses are covered by additional paid-in capital that is sourced from an increase in the value of assets upon reappraisal after the long-

term investment was made, then the Company shall calculate such amount in accordance with its ownership percentage and debit the "Additional paid-in capital" account and credit the "Retained earnings" account; no journal entries shall be made for other types of loss coverage increase in asset values upon reappraisal.

Other stock investments are accounted by the cost method. These investments are stated at cost less decline in market value of listed stocks or decline in value of unlisted stocks which is considered irrecoverable; such reductions are charged to shareholders' equity or current income, respectively. Cash dividends are recognized as income in the year received but are accounted for as reduction in the carrying value of the long-term investment if the dividends are received in the same year that the related investments are acquired.

Stock dividends are recognized only as increase in the number of stocks held on the ex-dividend date.

Investments in foreign mutual funds are stated at the lower of cost or net asset value (NAV). Write-downs of cost and write-ups to original acquisition cost resulting from subsequent recovery of the NAV are debited or credited to shareholders' equity.

Convertible notes and stock warrants are carried at cost.

The costs of investments sold are determined by the weighted-average method.

The Company's proportionate share in the gains from disposal of property, plant and equipment, net of the applicable income tax, included as part of its share in the earnings or losses of investee companies accounted for using the equity method for the current year is transferred in to capital surplus from retained earnings. When the Company subsequently disposed such investment in shares of stock, such capital surplus shall be transferred back to retained earnings. Also, if an investee company has unrealized loss on long-term investment which is evaluated by lower-of-cost-or-market method, the Company shall recognize that unrealized loss in proportion to the Company's equity interest and record in an account as a component of shareholders' equity.

Gains or losses on transactions with investee companies wherein the Company owned at least 20% of the outstanding common stock but less than a controlling interest are deferred in proportion to ownership percentage until realized through a transaction with a third party. The entire amount of the gains or losses on sales to majority-owned subsidiaries are deferred until such gains or losses are realized through the subsequent sale of the related products to third parties. On the other hand, if the unrealized gains or losses arose from a sale by the investee companies or majority-owned subsidiaries to the Company, an adjustment should be made in accordance with the ownership percentage.

## H. Properties

Properties are stated at cost less accumulated depreciation. Major additions, renewals and betterments, and interest expense incurred during the construction period are capitalized, while maintenance and repairs are expensed currently.

Depreciation is provided on the straight-line method over estimated service lives which range as follows: buildings - 10 to 20 years, machinery and equipment - 5 to 10 years, office equipment - 3 to 7 years.

Upon sale or disposal of properties, the related cost and accumulated depreciation are removed from the accounts, and any gain or loss is credited or charged to income. Any such gain, less applicable income tax, is transferred to capital surplus at the end of the year.

Property, plant and equipment covered by agreements qualifying as capital leases are carried at the lower of the present value of all minimum future rental payments, or the leased property's market value at the inception date of the lease, whichever is lower. The periodic rental payment made by the Company includes the purchase price of the leased property, and the interest expense.

#### I. Goodwill

Goodwill represents (i) the excess of purchase price over book value of assets of former equity basis investees which have subsequently become controlled consolidated subsidiaries and (ii) the excess of goodwill recognized in the acquisition of a subsidiary for share (i.e., the excess of the value of the shares issued over the proportionate fair value of the net assets of the acquisition) over the capital surplus recognized (goodwill to the extent of capital surplus recorded is eliminated against such capital surplus) plus (iii) the excess of purchase price over the proportionate fair value of the assets of subsidiaries where shares were acquired for consideration other than shares. Goodwill is amortized over 10 years.

#### J. Deferred charges

Deferred charges, consisting of software and system design costs, technology know how, issuance costs of bonds, short-term credit instruments and technology license fee, are amortized over three years, five years, issuing period of bonds, the contract period of credit instruments, and the contract valid period or economic useful lives, respectively.

#### K. Pension costs

Net periodic pension costs are recorded on the basis of actuarial calculations. Unrecognized net transaction obligation and unrecognized net gain are amortized over 15 to 25 years, respectively.

Monthly contributions to the pension fund and accrued unfunded pension costs, as actuarially calculated, are charged to expense. Pension benefits are paid from the fund, and any shortfall is charged to accrued pension cost.

#### L. Deferred gain on sale - leaseback

The gain resulting from the sale of leased property is deferred. Such deferred gain is then amortized as follows: (a) operating lease - adjustment of rental expenses over leasing period, and (b) capital lease - adjustment of depreciation over the estimate useful life or leasing period.

M. Sale and allowance for sales returns and others

Sales are recognized when the titles of products transfer to customers, primarily upon shipment. Allowance and related provision for sales returns and others are provided based on experience; such provisions are deducted from sales and the related costs are deducted from cost of sales.

N. Income tax

The Company adopted inter-period tax allocation. Deferred income tax assets are recognized for the tax effects of temporary differences, unused tax credits, and operating loss carry forward. Valuation allowance is provided for deferred income tax assets that are not certain to be realized. A deferred tax asset or liability should, according to the classification of its related asset or liability, be classified as current or non-current. However, if a deferred asset or liability cannot be related to an asset or liability in the financial statements, then it should be classified as current or non-current based on the expected length of time before it is recovered.

Adjustments of prior years' tax liabilities are added to or deducted from the current year's tax provision.

Income taxes (10%) on undistributed earnings of TSMC are recorded as expenses in the year when the shareholders have resolved that the earnings shall be retained.

O. Derivative financial instruments

Foreign currency forward exchange contracts (forward contracts), entered into for purpose other than trading, are recorded as follows: the differences in the New Taiwan dollar amounts translated using the spot rates and the amounts translated using the contracted forward rates are amortized over the terms of the forward contracts using the straight-line method. At the balance sheet dates, the receivables or payables arising from forward contracts are restated using the prevailing spot rates and the resulting differences are recognized in income. Also, the receivables and payables related to the forward contract are netted out and the resulting net amount is presented as either an asset or liability.

One of subsidiaries of the Company also enters into foreign exchange contracts to hedge identifiable foreign currency purchase commitments. These contracts are entered into to support firm purchases of properties made in the normal course of business, and accordingly, are not speculative in nature. Gains and losses are deferred and accounted for as adjustment to the carrying value of these purchases. The forward foreign exchange contracts are primarily denominated in Japanese yen, Netherlands guilders and Eurodollar and are for periods consistent with the terms of the underlying transactions, generally one year or less.

The Company enters into interest rate swap transactions to manage liabilities. These transactions are accounted for on an accrual basis, in which cash settlement receivable or payable is recorded as an adjustment to interest income or expenses.

The notional amounts of the foreign currency option contracts entered into for hedging purposes are not recognized as either assets or liabilities on the contract dates.

P. Other foreign-currency transactions

Other foreign-currency transactions are recorded in New Taiwan dollars at the rates of exchange in effect when the transactions occur. Gains or losses caused by the application of different foreign exchange rates when cash in foreign currency is converted into New Taiwan dollars, or when foreign-currency receivables and payables are settled, credited or charged to income in the year of conversion or settlement. At year-end, the balances of foreign-currency assets and liabilities are restated based on prevailing exchange rates and any resulting gains or losses are credited or charged to income.

Q. Translation of foreign-currency financial statements

ROC Financial Accounting Standards (FAS) No. 14, "Accounting for Foreign-Currency Transactions," is applied for foreign operations, with the local currency of each foreign subsidiary as its functional currency. The financial statements of the foreign subsidiaries are translated into New Taiwan dollars at the following exchange rates: assets and liabilities - current rate; shareholders' equity - historical rates; income and expenses - weighted average rate during the year. The resulting translation adjustment is recorded as a separate component of shareholders' equity.

R. Earnings per share

Earnings per share is calculated by dividing net income by the average number of shares outstanding in each period, adjusted retroactively for stock dividends issued subsequently. Earnings per equivalent American Depository Share (ADS) is calculated by multiplying earnings per share by five (one ADS represents five common shares).

S. Reclassifications

Certain accounts in 1998 and 1999 have been reclassified to conform to 2000 classifications.

T. Mergers and acquisitions

The acquisition of TASMIC was accounted for under the Statement of Financial Accounting Standards No. 25 "Business Combination - Purchase Method". On the other hand, the merger with WSMC was accounted for as pooling of interest with the results of operations of WSMC included in the statement of income for all periods presented.

Pro forma net sales, net income and earnings per share of TSMC on the assumption that the acquisition of TASMIC was completed as of January 1, 1999 are as follows:

	<u>Year Ended December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
Net sales	86,130.1	170,132.4
Net income	20,888.3	65,050.8
Earnings per share		
Based on weighted-average number of shares		
outstanding - 11,089,548 and 11,616,455		
thousand shares in 1999 and 2000	1.88	5.60

The individual operating results of TASMC before the mergers on June 30, 2000 are as follows:

	<u>Year Ended</u>	<u>Six Months</u>
	<u>December 31,</u>	<u>Ended June 30,</u>
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
Net sales	10,656.0	3,934.7
Net loss	( 6,127.6)	( 55.4)

### 3. U.S. DOLLAR AMOUNTS

The Company maintains its accounts and expresses its consolidated financial statements in New Taiwan dollars. For convenience only, U. S. dollar amounts presented in the accompanying financial statements have been translated from New Taiwan dollars at the noon buying rate in the City of New York for cable transfers in New Taiwan dollars as certified for customs purposes by the Federal Reserve Bank of New York as of December 29, 2000, which was NT\$33.17 to US\$1.00. The convenience translations should not be construed as representations that the New Taiwan dollar amounts have been, could have been, or could in the future be, converted into U. S. dollars at this or any other rate of exchange.

### 4. CASH AND CASH EQUIVALENTS

	<u>December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
Cash and bank deposits	29,442.7	38,229.5
Commercial papers	<u>75.0</u>	<u>610.7</u>
	<u>29,517.7</u>	<u>38,840.2</u>

### 5. SHORT-TERM INVESTMENTS

	<u>December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
Listed stocks	927.9	1,502.1
Mutual funds	<u>37.5</u>	<u>959.6</u>

	965.4	2,461.7
Less - allowance for losses	<u>-</u>	<u>( 110.1)</u>
	<u>965.4</u>	<u>2,351.6</u>

#### 6. RECEIVABLES-NET

	<u>December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
Notes receivable	211.0	125.2
Accounts receivable	<u>14,240.1</u>	<u>30,335.3</u>
	<u>14,451.1</u>	<u>30,460.5</u>
Less - allowance for doubtful receivables	( 422.2)	( 946.7)
Less - allowance for sales returns and others	<u>( 706.9)</u>	<u>( 2,458.3)</u>
	<u>( 1,129.1)</u>	<u>( 3,405.0)</u>
	<u>13,322.0</u>	<u>27,055.5</u>

The changes in the allowances are summarized as follows:

	<u>December 31</u>	
	<u>1999</u>	<u>2000</u>
Allowance for doubtful receivables		
Balance, beginning of year	283.1	422.2
Additions - charged to marketing expense	406.8	532.6
Deductions	<u>( 267.7)</u>	<u>( 8.1)</u>
Balance, end of year	<u>422.2</u>	<u>946.7</u>
Allowance for sales returns and others		
Balance, beginning of year	442.0	706.9
Additions - charged to sales returns and others	905.7	3,418.5
Deductions	<u>( 640.8)</u>	<u>( 1,667.1)</u>
Balance, end of year	<u>706.9</u>	<u>2,458.3</u>

#### 7. INVENTORIES

	<u>December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
Finished goods	905.6	1,762.3
Work in process	5,924.6	9,455.5
Raw materials	632.7	770.9
Supplies and spare parts	<u>969.8</u>	<u>1,364.6</u>
	8,432.7	13,353.3
Less - allowance for losses	<u>( 1,328.7)</u>	<u>( 567.6)</u>
	<u>7,104.0</u>	<u>12,785.7</u>

## 8. LONG-TERM INVESTMENTS

	December 31			
	1999		2000	
	Carrying Value NT\$	% of Owner- ship	Carrying Value NT\$	% of Owner- Ship
<u>Common stocks</u>				
Accounted for by equity method				
Vanguard International Semiconductor (VIS) (publicly traded)	5,010.9	25	5,615.1	25
TASMC (non-traded)	3,630.2	32	-	-
Systems on Silicon Manufacturing Company Pte Ltd. (SSMC) (non-traded)	360.2	32	935.9	32
Accounted for by cost method (all non-traded except Taiwan Mask)				
Taiwan Semiconductor Technology	500.0	19	500.0	19
Global Test	71.6	5	183.9	10
Lien Ya	146.3	11	146.3	10
Hong Tung Venture Capital	80.0	10	120.0	10
Shin-Etsu Handotai Taiwan	105.0	7	105.0	7
ChipStrate Technology	32.9	2	70.9	9
APE	-	-	50.2	6
W.K. Technology, Fund IV	50.0	4	50.0	4
Programmable Microelectronics	-	-	49.6	4
Taiwan Mask	32.1	2	32.1	2
Ritch Technology	7.4	1	10.3	9
3Dfx Interactive	-	-	9.8	-
Scenix Semiconductor	5.4	-	5.7	2
Equator Technologies	-	-	3.0	-
Capella Microsystems	-	-	0.3	-
<u>Preferred stocks (all non - traded)</u>				
Empower Tel Networks	-	-	169.6	7
Sonics	31.4	2	116.8	7
LightSpeed Semiconductor	68.6	5	101.4	6
Equator Technologies	42.0	3	93.9	2
Memsic	47.1	3	82.7	24
Tropian, Inc. (Premier R. F.)	31.4	2	77.2	5
Lara Networks, Inc.	-	-	75.2	7
Rapidstream	33.0	2	69.7	6
Menolithic Power System	62.8	4	66.2	17
Formfactor	62.8	4	66.2	1
Reflectivity	62.8	4	66.2	6
NanoAmp Solutions	26.5	2	61.3	3
Integrated Memory Logic	23.6	2	59.8	10
Creosys	-	-	49.6	8
Match Lab	-	-	49.6	11
Rise Technology	47.1	3	49.6	2
Signia	47.1	3	49.6	22
(Forward)				

T-Span System	15.7	1	45.8	3
Scenix Semiconductor	66.3	5	45.0	2
SiRF Technology	41.9	3	44.1	1
Capella Microsystems	12.0	1	42.9	8
Seagull Semiconductor	-	-	41.4	14
Sensory	39.2	3	41.4	6
Pico Turbo	39.2	3	41.4	9
HINT Corporation	-	-	33.1	5
Oepic	-	-	24.8	-
Divio	15.7	1	16.5	4
Incentia Design Systems	-	-	16.5	2
FabCentric	-	-	8.3	-
TASMC	4,854.7	28	-	-
Marvell Technology	139.1	10	-	-
Lara Technology	83.2	6	-	-
Programmable Microelectronics	47.1	3	-	-
Krypton Isolation	39.2	3	-	-
Centillium Technology	23.5	2	-	-
Flow Wise Networks	15.7	1	-	-
3Dfx Interactive	9.3	-	-	-
Integrated Micromachines	4.7	-	-	-

Convertible notes (all non - traded)

Advanced Analogic Technology	-	-	41.3	-
Signia Technologies	-	-	16.5	-
Rise	9.4	1	9.9	-
FabCentric	-	-	8.3	-
Integrated Memory Logic	31.4	2	-	-
Sonics	23.6	2	-	-

Funds

Crimson Asia Capital	34.5	-	64.5	-
Horizon Ventures	31.8	-	93.3	-

Cumulative translation adjustment	-	(	13.4)	
Less - allowance for loss	( <u>30.7</u> )		<u>-</u>	
	<u>16,164.7</u>		<u>9,814.3</u>	

The carrying values of investments accounted for using the equity method and the related investment income and loss for the years ended December 31, 1999 and 2000 were based on audited financial statements of the investees in the same year as follows:

	<u>Year Ended December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
VIS	( 527.8)	597.8
SSMC	( 76.0)	( 473.7)
TASMC	<u>315.3</u>	<u>( 311.3)</u>
	<u>( 288.5)</u>	<u>( 187.2)</u>

Information on the long-term investments is as follows:

	<u>Year Ended December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
Market value of traded stocks (VIS and Taiwan Mask)	19,763.0	8,729.6
Net asset value of funds	66.3	157.9

#### 9. PROPERTIES - NET

	<u>December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
Cost		
Land and land improvements	783.8	829.2
Buildings	33,929.6	53,874.7
Machinery and equipment	148,580.1	241,995.9
Office equipment	<u>3,637.1</u>	<u>4,865.6</u>
	186,930.6	301,565.4
Advance payments	22,621.1	990.2
Construction in progress	<u>5,917.9</u>	<u>46,077.2</u>
	<u>215,469.6</u>	<u>348,632.8</u>
Accumulated depreciation		
Land and land improvements	33.7	64.0
Buildings	8,131.4	10,692.1
Machinery and equipment	55,576.5	90,956.2
Office equipment	<u>1,668.1</u>	<u>2,172.6</u>
	<u>65,409.7</u>	<u>103,884.9</u>
	<u>150,059.9</u>	<u>244,747.9</u>

Interest expenses capitalized were NT\$722.3 in 1998, NT\$845.2 in 1999 and NT\$541.1 in 2000.

The status of the expansion plans as of December 31, 2000, is as follows:

<u>Expansion Plan</u>	<u>Estimated Total Cost</u> NT\$	<u>Accumulated Expenditures</u> NT\$	<u>Date of Start of Operations</u>
TSMC's manufacturing plant - Fab 6	76,889.0	67,565.1	March 2000
TSMC's manufacturing plant - Fab 7	22,540.4	11,121.1	March 2001
TSMC's manufacturing plant - Fab 8	28,314.3	15,217.8	March 2001
TSMC's manufacturing plant - Fab 12 - 1 <sup>st</sup> stage	38,280.8	21,372.0	November 2001
TSMC's manufacturing plant- Fab 14 - 1 <sup>st</sup> stage	9,711.0	7,946.6	May 2002

10. DEFERRED CHARGE - NET

	<u>December 31</u>	
	<u>1999</u> NT\$	<u>2000</u> NT\$
Technology	1,425.1	1,442.3
Software and system design costs	625.3	1,420.6
Technology know how	211.5	157.5
Bond issue costs	37.2	142.9
Patent	18.1	-
Others	<u>63.6</u>	<u>172.4</u>
	<u><u>2,380.8</u></u>	<u><u>3,335.7</u></u>

11. SHORT-TERM BANK BORROWINGS

	<u>December 31</u>	
	<u>1999</u> NT\$	<u>2000</u> NT\$
Secured loan, US\$63.3, ¥9,832.3, DEM0.2 and NT\$12.0, repayable by June 2000 and October 2001, annual interest of 0.75%~7.39% and 5.8% in 1999 and 2000, respectively	5,026.6	329.4
Unsecured and loan secured by mortgage, US\$105.9, repayable by December 2001, annual interest of 7.53%~9.25%	<u>-</u>	<u>3,504.4</u>
	<u><u>5,026.6</u></u>	<u><u>3,833.8</u></u>

Unused credit lines as of December 31, 2000 aggregated about NT\$470.6 and US\$41.0.

12. COMMERCIAL PAPERS PAYABLE

	<u>December 31, 1999</u> NT\$
Repayable by March 2000, annual interest of 4.40%~5.51%	95.0
Less - unamortized discount	( <u>0.2</u> )
	<u><u>94.8</u></u>

13. LONG-TERM BANK BORROWINGS

	<u>December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
US\$345.0, paid in 2000, annual interest at 6.408%	10,831.3	-
US\$67.6, paid in 2000, annual interest at 6.83%	2,121.2	-
US\$200.0, paid in 2000, annual interest at 6.68%~7.21%	9,791.0	-
US\$438.0, repayable by March 2005, annual interest at 7.663%	-	14,488.6
US\$200.0, repayable by December 2003, annual interest at 6.91%	-	6,615.8
US\$46.0, repayable by October 2002, annual interest at 7.36%	-	1,521.7
US\$21.6, repayable by October 2002, annual interest at 7.41%	-	713.3
	<u>22,743.5</u>	<u>23,339.4</u>

The loan agreements require, among other things, the maintenance of specific financial ratios and consent by the banks on important transactions, such as merger, asset transfers and guarantees, and the appropriations of earnings under specific conditions.

Unused credit lines as of December 31, 2000 aggregate about US\$62.4.

14. LONG-TERM BONDS PAYABLE

	<u>December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
Domestic unsecured bonds		
Repayable in March 2003, 7.71% annual interest payable semi-annually	4,000.0	4,000.0
Repayable by November 2003, 7.12% annual interest payable annually, redeemed in November 2000	6,000.0	-
Repayable in October 2002, 5.67% annual interest payable annually	5,000.0	5,000.0
Repayable in October 2004, 5.95% annual interest payable annually	5,000.0	5,000.0
Repayable in December 2005, 5.25% annual interest payable annually	-	10,000.0
Repayable in December 2007, 5.36% annual interest payable annually	-	5,000.0
	<u>20,000.0</u>	<u>29,000.0</u>

15. SHAREHOLDERS' EQUITY

According to the ROC Company Law, capital surplus can only be used to offset a deficit or transferred to capital.

The Articles of Incorporation of TSMC provide that the following shall be appropriated from the annual net income after deducting any previously accumulated deficit and 10% legal reserve:

- a. 1% as bonus to directors and supervisors;
- b. At least 1% as bonus to employees;
- c. Dividends to shareholders of preferred stock equal to 3.5% annual rate, based on outstanding period;

These appropriations and the disposition of the remaining net income shall be resolved by the shareholders in the following year and given effect in the financial statements of that year.

The aforementioned appropriation for legal reserve shall be made until the reserve equals the Company's capital. Such reserve can only be used to offset a deficit; also, when it has reached 50% of the paid-in capital, up to 50% thereof can be transferred to capital.

TSMC issued nonpublic 1,300,000 thousand preferred stock - Series A to Philips Electronic. The following are the rights of the holders of the preferred shares and other terms and conditions.

- a. Entitled to receive cumulative cash dividends at an annual rate of 3.5%.
- b. Not be entitled participating any additional shares of stock upon transfer of unappropriated earnings and capital surplus to stock.
- c. Have priority over the holders of common shares to the assets of TSMC available for distribution to stockholders upon liquidation or dissolution of TSMC; however, the preemptive rights to the assets shall not exceed the issue value of the shares.
- d. Have voting rights similar to that of the holders of common stock.
- e. No right to convert their shares into common stock. The preferred shares will be redeemed within thirty months from its issuance. The holders will have the foregoing rights and TSMC's related obligations will remain the same until the preferred shares are actually redeemed by TSMC.

Pursuant to existing regulations promulgated by the Securities and Futures Commission, a special reserve equivalent to the debit balance of any account shown in the shareholder equity section of the balance sheets, other than the deficit, shall be made from unappropriated retained earnings. The special reserve shall be adjusted accordingly based on the debit balance of such accounts as at the year-end.

The aforementioned legal reserve and special reserve are as follow.

	<u>Legal reserve</u> NT\$	<u>Special reserve</u> NT\$
Balance January 1, 1998	4,928.5	-
Appropriations of prior year's earning	<u>1,795.7</u>	<u>-</u>
Balance December 31, 1998	6,724.2	-
Appropriations of prior year's earning	<u>1,534.1</u>	<u>-</u>

Balance December 31, 1999	8,258.3	-
Appropriations of prior year's earning	<u>2,431.0</u>	<u>1,091.0</u>
Balance December 31, 2000	<u>10,689.3</u>	<u>1,091.0</u>

Under the Integrated Income Tax System, which became effective on January 1, 1998, non-corporate resident shareholders are allowed a tax credit for the income tax paid or payable by TSMC on earnings generated in 1998 and onwards. An Imputation Credit Account (ICA) is maintained by the Company for such income tax and the tax credit allocated to each shareholder. The maximum credit available for allocation to each shareholder cannot exceed the balance shown in the ICA on the date of distribution of dividends.

#### 16. LONG-TERM LEASES

TSMC leases the land, building and certain machinery and equipment of its first manufacturing plant from ITRI under agreements which will expire in March 2002, at annual rentals and other charges aggregating NT\$170.7. The agreements are renewable upon expiration.

TSMC leases the land sites of its second through tenth manufacturing plants from the Science-Based Industrial Park Administration under agreements which will expire on various dates from March 2008 to November 2019 with annual rentals aggregating NT\$172.0. The agreements are also renewable upon expiration.

TSMC-North America leases its office premises and certain equipment under non-cancelable operating agreement, which will expire in September 2020. TSMC-Europe entered into a lease agreement for its office premises which will expire in 2004. Annual rent currently is totaled to NT\$57.4.

Future minimum rentals under these and other leases are as follows:

<u>Year</u>	<u>Amount</u> NT\$
2001	433.8
2002	308.4
2003	268.4
2004	271.1
2005	269.0
2006-2020	<u>1,990.6</u>
	<u>3,541.3</u>

TSMC and WaferTech, LLC are parties to capital leases for certain machinery and equipment for a term of two years and five years, respectively, with annual rentals aggregating to NT\$55.0.

Future minimum lease payments under capital leases are as follows:

<u>Year</u>	<u>Amount</u> NT\$
2001	53.3
2002	1.9
2003	<u>1.3</u>
Total minimum lease payments	56.5
Less - amount representing interest	( <u>2.1</u> )
Present value of minimum lease payments	54.4
Less - current portion	( <u>51.1</u> )
	<u><u>3.3</u></u>

#### 17. PENSION PLAN

The Company and its subsidiaries have pension plans covering all regular employees, which provides benefits based on length of service and average monthly salary for the final six months of employment.

The Company and its subsidiaries makes monthly contributions, equal to 2% of salaries to a pension fund that is administered by a pension fund monitoring committee and deposited in the committee's name in the Central Trust of China. In addition, the Company accrues unfunded pension cost.

The changes in the fund and accrued pension costs are summarized as follows:

	<u>Year Ended December 31</u>		
	<u>1998</u> NT\$	<u>1999</u> NT\$	<u>2000</u> NT\$
Pension fund			
Balance, beginning of year	211.3	283.8	364.3
Contributions (including accruals)	56.0	65.8	278.7
Interest income	16.5	18.2	41.2
Payment	<u>-</u>	( <u>3.5</u> )	( <u>0.2</u> )
Balance, end of year	<u><u>283.8</u></u>	<u><u>364.3</u></u>	<u><u>684.0</u></u>
Accrued pension cost			
Balance, beginning of year	487.7	753.4	1,013.8
Accruals	<u>265.7</u>	<u>260.4</u>	<u>497.5</u>
Balance, end of year	<u><u>753.4</u></u>	<u><u>1,013.8</u></u>	<u><u>1,511.3</u></u>

Certain pension information required by ROC FAS 18 as of December 31, 2000 is as follows:

	NT\$
Actuarial present value of benefit obligation	
Vested benefit obligation	-
Nonvested benefit obligation	<u>763.9</u>
Accumulated benefit obligation	763.9
Additional benefits based on future salaries	<u>1,550.0</u>
Projected benefit obligation	2,313.9
Plan assets at fair value	( <u>661.1</u> )
Projected benefit obligation in excess of plan assets	1,652.8
Unrecognized net transition obligation	( 166.0 )
Unrecognized net gain	<u>22.7</u>
Unfunded accrued pension cost	<u><u>1,509.5</u></u>
Actuarial assumptions:	
Discount rate	6.0%
Long-term salary increase rate	6.0%
Expected long-term rate of return on plan assets	6.0%

The components of the 2000 pension cost are as follows:

	NT\$
Service cost	376.7
Interest cost	91.2
Projected return on plan assets	( 26.7 )
Amortization of prior period service cost	<u>8.3</u>
	<u><u>449.5</u></u>

#### 18. INCOME TAX BENEFIT

	<u>Year Ended December 31</u>		
	<u>1998</u>	<u>1999</u>	<u>2000</u>
	NT\$	NT\$	NT\$
Income tax current payable	( 575.6 )	( 88.5 )	( 27.2 )
Deferred income tax	3,124.0	2,383.7	1,005.4
Adjustment of prior year's income taxes	<u>( 230.0 )</u>	<u>87.6</u>	<u>189.7</u>
Income tax benefit	<u><u>2,318.4</u></u>	<u><u>2,382.8</u></u>	<u><u>1,167.9</u></u>

The Company and its subsidiaries file separate income tax returns. Reconciliation between the income tax calculated on pre-tax financial statement income based on the statutory tax rate and the income tax benefit is as follows:

	<u>Year Ended December 31</u>		
	<u>1998</u>	<u>1999</u>	<u>2000</u>
	NT\$	NT\$	NT\$
Income tax on pretax income at statutory rate	( 2,759.8 )	( 4,889.2 )	( 12,787.7 )

Permanent differences	1,413.3	3,434.8	7,770.0
Tax credits	3,894.9	5,053.1	7,762.7
Valuation allowance	-	( 1,303.5)	( 1,678.8)
Adjustment of prior year's taxes	( 230.0)	87.6	189.7
Assessed additional income tax on the unappropriated earnings	<u>-</u>	<u>-</u>	<u>( 88.0)</u>
Income tax benefit	<u>2,318.4</u>	<u>2,382.8</u>	<u>1,167.9</u>

The income of the Company attributable to the following projects and services is exempt from income tax:

	<u>Tax-Exemption Period</u>
Expansion of second manufacturing plant and computer-aided design services, and third manufacturing plant	1996 to 1999
Expansion of first and second manufacturing plants - modules A and B, third manufacturing plant, and fourth manufacturing plant	1997 to 2000
Expansion of first manufacturing plant, second manufacturing plants-modules A and B, third manufacturing plant and fourth manufacturing plant, and fifth manufacturing plant	1999 to 2002

Deferred income tax assets consist of the following:

	<u>December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
Tax credits arising from investment, research and development and personnel training costs	11,098.6	21,013.3
Temporary differences	<u>1,068.3</u>	<u>( 442.8)</u>
	12,166.9	20,570.5
Less - current portion ( all related to non-current)	<u>( 2,616.6)</u>	<u>( 8,178.0)</u>
	9,550.3	12,392.5
Less - valuation allowance	<u>( 2,543.6)</u>	<u>( 5,762.7)</u>
Non-current	<u>7,006.7</u>	<u>6,629.8</u>

Unused tax credits as of December 31, 2000 aggregate NT\$21,013.3 and will expire as follows: NT\$4,015.4 in 2001, NT\$4,800.3 in 2002, NT\$5,738.6 in 2003 and NT\$6,459.0 in 2004.

Income tax returns of the Company have been examined by the tax authorities through 1996.

## 19. RELATED PARTY TRANSACTIONS

The Company engages in business transactions with the following related parties:

- a. Industrial Technology Research Institute (ITRI), its director is TSMC's chairman.

- b. Philips Electronics N.V., (Philips), a major shareholder of TSMC.
- c. Vanguard International Semiconductor Corporation (VIS), a 25% owned equity basis investee of TSMC and has the same chairman as TSMC.
- d. TSMC-ACER Semiconductor Manufacturing Corporation (TASMC), an investee of TSMC until June 30, 2000 (after which has become a wholly owned subsidiary).
- e. Systems on Silicon Manufacturing Company Pte Ltd. (SSMC), an equity basis investee of TSMC
- f. Winbond Electronics Corporation (Winbond), a director of WSMC.
- g. Taisil Electronic Materials Corporation (Taisil), a director of WSMC.
- h. Syntek Semiconductor Corporation (Syntek), a director of WSMC before March 6, 1999.

The transactions with the aforementioned parties, except those disclosed in other notes, are summarized as follows:

	<u>Year Ended December 31</u>		
	<u>1998</u>	<u>1999</u>	<u>2000</u>
	NT\$	NT\$	NT\$
<u>During the year</u>			
Sales			
Philips	3,422.1	2,864.1	5,289.9
ITRI	173.4	132.5	198.2
VIS	65.3	48.5	17.0
Winbond	84.5	625.2	-
Taisil	17.4	58.9	-
TASMC	-	22.3	-
	<u>3,762.7</u>	<u>3,751.5</u>	<u>5,505.1</u>
Purchase			
VIS	-	382.0	6,572.1
TASMC	-	808.9	-
Taisil	<u>42.3</u>	<u>30.8</u>	<u>-</u>
	<u>42.3</u>	<u>1,221.7</u>	<u>6,572.1</u>
Rental - ITRI	<u>161.5</u>	<u>161.5</u>	<u>161.6</u>
Manufacturing expenses -			
Technical service fee - Philips	637.1	862.4	2,137.2
Technology license fee - Winbond	<u>300.0</u>	<u>300.0</u>	<u>-</u>
	<u>937.1</u>	<u>1,162.4</u>	<u>2,137.2</u>

General and administrative expenses			
Consulting fee - VIS	<u>-</u>	<u>20.4</u>	<u>-</u>
Research and development expenses			
Testing expenses - Winbond	<u>67.8</u>	<u>3.5</u>	<u>-</u>
Disposal of properties - VIS	<u>-</u>	<u>-</u>	<u>87.2</u>
Non-operating income			
SSMC (mainly technical service income)	-	-	152.4
VIS	<u>-</u>	<u>-</u>	<u>5.6</u>
	<u>-</u>	<u>-</u>	<u>158.0</u>

At end of year

Receivable			
Philips		133.2	643.6
VIS		25.7	159.9
SSMC		5.3	89.1
ITRI		18.5	56.1
Winbond		131.9	-
TASMC		23.1	-
Others		<u>3.2</u>	<u>-</u>
		<u>340.9</u>	<u>948.7</u>
Prepaid expenses			
Rental - ITRI		<u>42.5</u>	<u>42.7</u>
Payable			
VIS		184.7	1,808.9
Philips		305.8	797.4
TASMC		539.5	
Taisil		<u>6.4</u>	<u>-</u>
		<u>1,036.4</u>	<u>2,606.3</u>

Sales to related parties are based on normal selling prices and collection terms. Processing charges are based on normal rates and payment terms.

Under a Technical Cooperation Agreement with Philips, as amended on May 12, 1997, TSMC shall pay technical assistance fee at a percentage of net sales, as defined in the agreement, of certain products. The agreement shall remain in force up to July 9, 2007 and thereafter be automatically renewed for successive periods of three years. Under the amended agreement, the fee is subject to deduction by the amounts TSMC pays to any third party for settling any licensing/infringement issue after the first five-year period of the amended agreement, provided that the fee after reduction will not be below a certain percentage of the net selling price.

Subject to certain equity ownership and notification requirements, Philips and its affiliates can avail themselves each year up to 30% of TSMC's production capacity.

Under a Submicron Technology License Agreement with ITRI, TSMC shall pay license fees of NT\$129.4 (including 5% value-added tax) to ITRI plus royalty fee at an agreed percentage of net sales of certain products through December 31, 2000 as amended. In addition, under a technical cooperation agreement with ITRI, TSMC shall reserve and allocate up to 35% of its production capacity for use by the Ministry of Economic Affairs (MOEA) or any other party designated by the MOEA.

Under a Technical Cooperation Agreement with SSMC entered into on May 12, 1999, SSMC shall compensate TSMC for technology service provided to SSMC. The compensation shall be a certain percentage of net selling prices of certain products sold by SSMC. The agreement will remain in force for ten years and be automatically renewed for successive periods of five years unless predetermined by either party under certain conditions.

TSMC entered into a Manufacturing Agreement with Vanguard International Semiconductor Corporation ("VIS"). VIS agreed to reserve certain capacity to manufacture for TSMC certain devices on logic or other technologies required by TSMC's customers, at discounted actual selling prices as agreed by the parties. TSMC paid NT\$1,200.0 to VIS as Security Bond (i.e. security deposit). Whenever the quantity of TSMC's order has reached to a certain level, VIS shall return certain amount of the Bond without any interest to TSMC. The contract will remain in force for five years.

## 20. PLEDGED OR MORTGAGED ASSETS

Certain assets had been pledged or mortgaged as collateral for short and long-term loan, derivative financial instruments, letter of credit, customs duties, and guarantee deposits for foreign workers are as follows:

	<u>December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
Cash - for revolving credit agreement	3,161.7	-
Short-term investments	-	937.4
Properties (net) - for long-term bank borrowings	<u>46,343.9</u>	<u>7,171.1</u>
	<u>49,505.6</u>	<u>8,108.5</u>

Other than the collateral stated above, all of WaferTech LLC.'s assets (in US\$1,244.0) are secured by the long-term bank borrowings under the credit facility.

## 21. OTHER COMMITMENTS AS OF DECEMBER 31, 2000

- a. Under several foundry agreements, TSMC shall allocate a portion of its production output for sale to certain major customers from whom guarantee deposits of US\$213.9 (NT\$7,095.1) had been received as of December 31, 2000.
- b. Under a Shareholders Agreement entered into with Philips and EDB Investments Pte Ltd. dated March 30, 1999, the parties agreed to: (a) form a joint venture company to

be named Systems on Silicon Manufacturing Company Pte Ltd. (SSMC) for the purpose of constructing an integrated circuit foundry in Singapore, (b) set SSMC's total authorized capital at about S\$1.2 billion (approximately NT\$22.9) and (c) allow TSMC to invest 32% of SSMC's capital. TSMC and Philips committed to buy a certain percentage of the production capacity of SSMC. If any party defaults on the agreement and the capacity utilization of SSMC falls below a certain percentage of its total capacity, the defaulting party should compensate SSMC for all related unavoidable costs.

- c. Under a Technical Transfer Agreement with National Semiconductor Corporation ("National") entered into on June 27, 2000, TSMC shall receive payments for the technology transferred to National. The agreement will remain in force for ten years. After expiration, this agreement will be automatically renewed for successive periods of two years unless pre-terminated by either party under certain conditions.
- d. Under a management agreement, InveStar Capital Inc. (ISC) of the Cayman Islands, provides investment and administrative services to TSMC. ISC should receive quarterly, starting from October 1, 1996, a management fee of 2% each year of total weighted average paid-in capital and capital surplus of TSMC, excluding retained earnings and losses. Fees for 1999 and 2000 were NT\$29.1 and NT\$40.2.
- e. WaferTech had recorded a reserve of US\$ 16.0 (NT\$530.7) for a litigation arising from a charge by certain contractors that WaferTech caused the contractors to incur additional labor and material costs outside the contracts. The reserve is reflected in accrued construction and equipment payable with the offset to construction in progress. On January 19, 2000, WaferTech entered into a settlement agreement with one of the construction contractors in the amount of US\$10.8 (NT\$358.2). Payment of the settlement amount will be made in four installments throughout fiscal year 2000. The remaining accrued reserve of US\$5.3 (NT\$175.8) is sufficient for payments to the other construction contractors.
- f. In 1996, WaferTech adopted an Executive Incentive Plan, which was amended in 1997. Under the 1997 amendment, the Board of Directors approved the Senior Executive Incentive Plan and the Employee Incentive Plan ("Plan") under which officers, key employees and nonemployee directors may be granted option rights. However, WaferTech is a limited liability company and does not have shares of stock. Thus, each option right granted under the Plan provides grantees rights to buy ownership interests in WaferTech. The Plans also provides for approximately 6% of the total ownership interests to be available for grant, represented by 15.15 million-option rights. For option rights granted to date, the option purchase price exceeded fair value as of the date of the grant. While WaferTech may grant employees option rights that are exercisable at different times or within different periods, it has generally granted option rights which are exercisable on a cumulative basis in annual installments of 25% each on the first, second, third, and fourth anniversaries of the date of grant.

The following table summarizes information about the Plans:

	Option Rights Available For Grant	Outstanding Option Rights	
		Number of Option Rights	Exercise Price (US\$)
Balance, December 31, 1998	6,400,252	7,099,748	0.74
Options granted			
Option price > fair market value	( 3,084,305)	3,084,305	0.86
Options exercised	-	( 1,119,323)	0.74
Options cancelled	<u>838,650</u>	<u>( 838,650)</u>	0.74
Balance, December 31, 1999	4,154,597	8,226,080	0.78
Additional option rights authorized	1,650,000	-	-
Options granted			
Option price > fair market value	( 3,203,302)	3,203,302	1.86
Options exercised	-	( 3,411,867)	0.74
Options cancelled	<u>1,180,871</u>	<u>( 1,180,871)</u>	1.09
Balance, December 31, 2000	<u>3,782,166</u>	<u>6,836,644</u>	1.23

These options will expire if not exercised at specific dates between May 2006 to December 2010.

- g. WaferTech, LLC was assessed by the Department of Revenue of the State of Washington deficiency excise taxes of approximately NT\$291.9 (US\$8.8). WaferTech, LLC intends to appeal the assessment. As of December 31, 2000, WaferTech, has recorded a reserve that management believes is sufficient to address any exposure related to this tax assessment.
- h. TSMC-North America started a stock appreciation right program whereby the employees received cash bonuses based on the appreciation of the quoted market price of the shares of stock of TSMC. Compensation expenses are recorded based on the different between the grant price and market price at the end of each period. This expense is recognized ratably over the vesting period and adjusted based on period fluctuations in the stock. In view of depreciation of the stock from December 1, to December 31, 2000, TSMC-North America did not have any compensation expense or liability related to this program.
- i. Unused credit lines for TSMC as of December 31, 2000 were approximately NT\$250.3.

## 22. FINANCIAL INSTRUMENTS

The Company entered into derivative financial instrument transactions in 1999 and 2000 to hedge foreign-currency denominated receivables or payables, identifiable foreign currency purchase commitments, and interest rate fluctuations. The strategy is to hedge most of the market price risks. Certain information on these contracts is as follows:

a. Outstanding forward exchange contracts as of December 31, 1999 and 2000:

<u>1999</u>	<u>Currency to Be Received</u>	<u>Amount</u>	<u>Currency to Pay</u>	<u>Amount</u>	<u>Maturity</u>	<u>Fair Value</u>
Buy	US\$	US\$ 25.0	JPY	JPY 2,856.3	Jul. 2000	NT\$ 760.9
Buy	JPY	JPY 1,916.8	US\$	US\$ 19.0	Feb. to Aug. 2000	NT\$ 598.1
Buy	NLG	NLG 65.1	US\$	US\$ 31.6	Mar. to Sep. 2000	NT\$ 947.7
Sell	US\$	US\$ 81.4	JPY	JPY 8,331.0	Jan. to Jul. 2000	NT\$ 2,555.8
Sell	US\$	US\$ 16.0	NLG	NLG 34.7	Jan. 2000	NT\$ 500.5
Sell	US\$	US\$ 30.0	NT\$	NT\$ 947.9	Jan. 2000	NT\$ 941.8
<u>2000</u>						
Buy	US\$	US\$ 60.0	NT\$	NT\$1,989.0	Jan. 2001	NT\$ 1,979.0
Buy	EUR	EUR 29.0	US\$	US\$ 24.7	Jan. to Sep. 2001	NT\$ 895.8
Buy	JPY	JPY 42.8	US\$	US\$ 0.4	Jan. 2001	NT\$ 12.4
Sell	EUR	EUR 116.0	US\$	US\$ 107.0	Jan. to Feb. 2001	NT\$ 3,583.0
Sell	JPY	JPY 17,605.7	US\$	US\$ 156.9	Jan. 2001	NT\$ 5,100.4
Sell	NT\$	NT\$ 12,032.5	US\$	US\$ 365.0	Jan. to Dec. 2001	NT\$ 12,105.5

As of December 31, 1999 and 2000, receivables from forward exchange contracts (shown in the balance sheets as part of "Other current assets" account) aggregate about NT\$22.1 and NT\$119.2, respectively and payables from forward exchange contracts (shown in the balance sheets as part of "Other current liabilities" account) aggregate about NT\$147.3 and NT\$180.3, respectively. Net exchange gains for the years ended December 31, 1999 and 2000 were NT\$105.9 and NT\$266.4, respectively.

The net assets, liabilities and purchase commitments that have been hedged by the above forward exchange contracts are as follows:

	<u>1999</u>	<u>2000</u>
Accounts receivable	US\$ 375.7	US\$ 813.7
Payable to contractors and equipment supplier	US\$ 151.4	US\$ 571.3
	-	JPY 21,237.7
	-	EUR 62.5
Guarantee deposits	US\$ 764.8	-
Commitments for purchase of properties	JPY 1,916.8	-
	NLG 65.1	-

b. Interest rate swaps

The Company has entered into interest rate swap transactions to hedge exposure to rising interest rates on its floating rate for long-term bank borrowings. These transactions are summarized as follows:

<u>Contract Date</u>	<u>Period</u>	<u>Amount</u> NT\$
April 28, 1998	May 21, 1998 to May 21, 2003	2,000.0
April 29, 1998	May 21, 1998 to May 21, 2003	1,000.0

June 26, 1998	June 26, 1998 to June 26, 2003	1,000.0
June 26, 1998	July 6, 1998 to July 6, 2003	1,000.0

Interest expense from those contracts in 1999 and 2000 were NT\$112.2 and NT\$113.7, respectively

c. Options contracts

The Company has entered into foreign currency option contracts to hedge risks of exchange rate fluctuations arising from its anticipated U.S. dollar cash receipts from its export sales or Japanese Yen obligations related to its importation of materials and machinery and equipment.

Outstanding option contracts as of December 31, 1999 and 2000 were as follows:

<u>Contract</u>	<u>Currency</u>	<u>Contract Amount (Thousands)</u>	<u>Fair Value</u>	<u>Strike Price</u>	<u>Maturity</u>
<u>1999</u>					
Call option written	US\$	US\$ 100.0	\$ 3.9	0.9785~0.9940(US\$/EUR)	Jan. 2000
Call option written	US\$	US\$ 60.0	3.0	106.6(US\$/JPY)	Jan. 2000
<u>2000</u>					
Put option written	EUR	EUR 525.5	(\$189.7)	0.8870~0.9680(US\$/EUR)	May 2001
Call option written	US\$	US\$ 203.5	( 264.9)	107.77~110.5(US\$/JPY)	Mar. 2001
Call option written	US\$	US\$ 20.0	( 1.5)	32.42(US\$/NTD)	Jan. 2001
Put option bought	US\$	US\$ 15.0	0.0	110~110.5(US\$/JPY)	Feb. 2001

d. Transaction risk

- 1) Credit risk: the banks with which the Company has entered into the above contracts are reputable and, therefore, the Company is not expected to be exposed to significant credit risks.
- 2) Market price risk: All derivative financial instruments are for hedging receivables or payables denominated in foreign currencies, identifiable foreign currency purchase commitments and interest rate fluctuations. Gains or losses from forward exchange contracts are likely to be offset by gains or losses from receivables and payables. Deferred gains or losses from forward exchange contracts will be included in the measurement of the related transaction when the hedged transaction occurs. Interest rate risks are also controlled as the expected cost of capital is fixed. Thus, market price risks from exchange rate and interest rate fluctuations are minimal.
- 3) Liquidity and cash flow: The purpose of forward exchange contracts is to limit the Company's exposure to loss resulting from adverse fluctuations in assets and liabilities denominated in foreign currency. Interest rate swap transactions result in adjustments for interest only.

Although these derivative contracts on a standalone basis expose the Company to market price risks associated with foreign currency exchange rate fluctuations, it is

the intention of the Company that these contracts reduce its overall exposure to such fluctuations.

The estimated fair values of the Company's financial instruments are as follows:

	<u>December 31, 1999</u>		<u>December 31, 2000</u>	
	Carrying/ Notional		Carrying/ Notional	
	<u>Amount</u>	<u>Fair Value</u>	<u>Amount</u>	<u>Fair Value</u>
<u>Non-derivative financial instruments</u>	NT\$	NT\$	NT\$	NT\$
<u>Assets</u>				
Cash and cash equivalents	29,517.7	29,517.7	38,840.2	38,840.2
Pledged time deposits	3,161.0	3,161.0	-	-
Short-term investments	965.4	965.4	2,351.6	2,351.6
Receivables - net	13,322.0	13,322.0	27,055.5	27,055.5
Receivable from related party	340.9	340.9	948.7	948.7
Long-term investments	16,164.7	28,181.2	9,814.3	14,353.7
Refundable deposits	59.4	59.4	979.1	979.1
<u>Liabilities</u>				
Short-term bank borrowings	5,026.6	5,026.6	3,833.8	3,833.8
Commercial paper payable	94.8	94.8	-	-
Accounts payable	3,273.9	3,273.9	8,507.8	8,507.8
Payable to related parties	1,036.4	1,036.4	2,606.3	2,606.3
Payable to contractors and equipment supplier	12,593.7	12,593.7	25,550.3	25,550.3
Long-term bank borrowings (including current portion)	22,748.9	22,748.9	23,393.8	23,393.8
Long-term bonds payable	20,000.0	20,222.6	29,000.0	29,035.8
Guarantee deposits	5,185.4	5,185.4	7,086.4	7,086.4
<u>Derivative financial instruments</u>				
Foreign currency forward contracts				
Hedging assets/liabilities				
-Buy	2,372.2	2,306.6	2,820.2	2,887.1
-Sell	3,998.7	3,998.1	20,820.3	20,788.8
Option	6.9	6.9	-	( 456.1)
Interest rate swaps	7.4	205.4	1.6	234.0

Fair values of financial instruments were determined as follows:

- (1) Short-term financial instruments – carrying values.
- (2) Short-term investments – market values.
- (3) Long-term investments – market value for listed companies and net equity value for the others.
- (4) Refundable deposits and guarantees deposits – carrying values.
- (5) Long-term liabilities – based on forecasted cash flows discounted at interest rates of similar long-term liabilities. Long-term bonds payable is discounted at

present value. Fair values of other long-term liabilities are also their carrying values as they use floating interest rates.

- (6) Derivative financial instruments – based on outright forward rates and interest rate in each contract.

The fair values of non-financial instruments were not included in the fair values disclosed above. Accordingly, the sum of the fair values of the financial instruments listed above are not equal to the fair value of the Company.

## 23. SEGMENT INFORMATION

- a. The Company engages mainly in one industry, namely, integrated circuits and other semiconductor devices.
- b. Geographic information

	<u>Overseas</u> NT\$	<u>Taiwan</u> NT\$	Adjustments and <u>Elimination</u> NT\$	<u>Consolidated</u> NT\$
<u>1998</u>				
Sales to unaffiliated customers	227.9	50,296.6	-	50,524.5
Transfers between geographic areas	<u>640.6</u>	<u>38.5</u>	( <u>679.1</u> )	-
Total sales	<u>868.5</u>	<u>50,335.1</u>	( <u>679.1</u> )	<u>50,524.5</u>
Income from operations	( <u>2,393.1</u> )	<u>14,698.6</u>		12,305.5
Non-operating income				2,082.1
Non-operating expenses				( <u>3,332.4</u> )
Income before income tax				<u>11,055.2</u>
Identifiable assets	<u>26,958.8</u>	<u>131,842.6</u>		158,801.4
Long-term investments	<u>1,043.7</u>	<u>5,615.4</u>		<u>6,659.1</u>
Total assets				<u>165,460.5</u>
<u>1999</u>				
Sales to unaffiliated customers	5,193.0	71,112.1	-	76,305.1
Transfers between geographic areas	<u>975.5</u>	<u>4,696.2</u>	( <u>5,671.7</u> )	-
Total sales	<u>6,168.5</u>	<u>75,808.3</u>	( <u>5,671.7</u> )	<u>76,305.1</u>
Income from operations	( <u>1,086.6</u> )	<u>23,356.6</u>		22,270.0
Non-operating income				1,682.3

Non-operating expenses				( <u>3,324.0</u> )
Income before income tax				<u>20,628.3</u>
Identifiable assets	<u>34,807.9</u>	<u>185,054.1</u>	( 591.2 )	219,270.8
Long-term investments	<u>1,329.0</u>	<u>14,835.7</u>		<u>16,164.7</u>
Total assets				<u>235,435.5</u>
<u>2000</u>				
Sales to unaffiliated customers	-	166,197.6	-	166,197.6
Transfers between geographic areas	<u>14,451.2</u>	<u>30.8</u>	( <u>14,482.0</u> )	<u>-</u>
Total sales	<u>14,451.2</u>	<u>166,228.4</u>	( <u>14,482.0</u> )	<u>166,197.6</u>
Income from operations	<u>755.1</u>	<u>60,539.6</u>		61,294.7
Non-operating income				6,227.9
Non-operating expenses				( <u>3,621.1</u> )
Income before income tax				<u>63,901.5</u>
Identifiable assets	<u>64,659.7</u>	<u>320,273.3</u>	( 23,861.4 )	361,071.6
Long-term investments	<u>2,152.2</u>	<u>7,662.2</u>		<u>9,814.4</u>
Total assets				<u>370,886.0</u>

c. Gross export sales

<u>Area</u>	<u>Year Ended December 31</u>		
	<u>1998</u>	<u>1999</u>	<u>2000</u>
	NT\$	NT\$	NT\$
U.S.A.	26,666.7	38,418.4	81,656.0
Asia	9,667.5	16,744.9	42,907.0
Europe	<u>3,595.8</u>	<u>4,778.6</u>	<u>11,360.5</u>
	<u>39,930.0</u>	<u>59,941.9</u>	<u>135,923.5</u>

The export sales information is presented by billed regions.

d. Gross sales to major customers

<u>Customers</u>	<u>Year Ended December 31</u>					
	<u>1998</u>		<u>1999</u>		<u>2000</u>	
	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>
	NT\$		NT\$	NT\$		
Altera	2,719.5	5.3	4,744.4	6.1	15,675.9	9.3
ANALOG	-	-	3,941.6	5.1	11,816.8	7.0
NVIDIA	2,628.1	5.1	4,647.9	6.0	10,307.2	6.1
ATI	-	-	4,777.5	6.2	7,005.3	4.1

Philips	3,422.1	6.6	2,864.1	3.7	5,289.9	3.1
3DFX	3,045.5	5.9	1,473.9	1.9	1,531.6	0.9

## 24. SUMMARY OF SIGNIFICANT DIFFERENCES BETWEEN ACCOUNTING PRINCIPLES FOLLOWED BY THE COMPANY AND GENERALLY ACCEPTED ACCOUNTING PRINCIPLES IN THE UNITED STATES

The accompanying financial statements have been prepared in accordance with generally accepted accounting principles in the Republic of China ("ROC GAAP"), which differ in the following respects from generally accepted accounting principles in the United States ("U.S. GAAP"):

### a. Pension benefits

U.S. Financial Accounting Standards (FAS) 87, "Accounting for Pensions", was effective no later than the beginning of the first period for which an U.S. GAAP reconciliation is required for foreign issuers. A portion of the unrecognized net transition obligation at the adoption date is to be allocated directly to equity. The adoption date for the Company was the beginning of 1993. ROC SFAS 18, which is similar in many respects to FAS 87, was effective in 1996 for listed companies. However, certain expenses that comply with ROC SFAS 18 are different from FAS 87.

### b. Marketable securities

Under ROC GAAP, marketable equity securities are carried at the lower of aggregate cost or market, and debt securities at cost. Under U.S. FAS 115, "Accounting for Certain Investments in Debt and Equity Securities", except for debt securities classified as "held-to-maturity securities", investments in marketable debt and equity securities, other than those recorded on the equity method, should be reported at fair value.

### c. Bonuses to employees, directors and supervisors

According to ROC regulations and the Articles of Incorporation of TSMC, a portion of distributable earnings should be set aside as bonuses to employees, directors and supervisors. Bonuses to directors and supervisors are always paid in cash. However, bonuses to employees may be granted in cash or stock or both. All of these appropriations, including stock bonuses which are valued at par value of NT\$10, are charged against retained earnings under ROC GAAP, after such appropriations are formally approved by the shareholders in the following year. Under U.S. GAAP, such bonuses are charged to income currently in the year earned. Stock issued as part of these bonuses is recorded at fair market value. Since the amount and form of such bonuses are not finally determinable until the shareholders' meeting in the subsequent year, the total amount of the aforementioned bonuses is initially accrued based on management's estimate regarding the amount to be paid based on the Company's Articles of Incorporation. Any difference between the initially accrued amount and the fair market value of the bonuses settled by the issuance of shares is recognized in the year of approval by shareholders.

d. Technologies transferred in payment of capital stock

The employees contributed, as payment to their subscription in the shares of stock of the Company, technologies related to the testing and packaging of integrated circuits at an agreed valuation of NT\$270.0. Under ROC GAAP, such technology transfers in payment of capital stock are recorded as intangible asset, and amortized by systematic charges to income over the periods estimated to be benefited. As permitted under ROC GAAP, the Company uses 5 years amortization period. Under U.S. GAAP, the technology contribution can not be recognized due to there was no fair value for the technology. Therefore, the carrying value of the technology has been adjusted to zero under the U. S. GAAP, and the relevant shares issued to those employees were recorded upon the fair value of stock as deferred compensation cost. The deferred compensation cost was amortized by 3 years, which is the period that employees are restricted to sell the stocks since the date they start working for the Company.

e. Impairment of long-lived assets

U.S. FAS 121 requires entities to perform separate calculations for assets to be held and used to determine whether recognition of an impairment loss is required, and if so, to measure the impairment. If the sum of expected future cash flows, undiscounted and without interest charges, is less than an asset's carrying value, an impairment loss is recognized; if the sum of the expected future cash flows is greater than an asset's carrying value, an impairment loss cannot be recognized. Measurement of an impairment loss is based on the fair value of the asset. U.S. FAS 121 also generally requires long-lived assets and certain identifiable intangible to be disposed of to be reported at the lower of the carrying value or fair value less cost to sell. Based on an assessment by the Company of the potential impact of U.S. FAS 121, there is no impairment loss as of December 31, 1998 and 1999 for the Company. However, impairment losses of investees as of December 31, 1998, 1999 and 2000 are recognized and the related investment losses and tax effects are accounted for in the U.S. GAAP reconciliation. ROC GAAP does not allow the write-down of assets which are currently in use.

f. Derivative financial instruments

Under ROC GAAP, there are no specific rules related to accounting for derivative financial instruments, nor criteria for hedge accounting. Therefore, companies have flexibility in choosing when to recognize derivative financial instruments and when to follows hedge accounting versus fair value accounting for such instruments. U.S. GAAP contains detailed rules as to when hedge accounting is appropriate. Thus, little flexibility exists in accounting for derivative transactions. As a consequence, certain derivative contracts are marked to fair value through income for U.S. GAAP.

g. Treasury stocks

Under U.S. GAAP, when a subsidiary holds its parent's stocks as investments, the stocks should be treated as treasury stocks in the consolidated balance sheet as a reduction in shareholders' equity. Under ROC GAAP, such treatment is not required; the treasury stocks are treated as an asset.

h. Stock-based compensation

The Company has elected to follow Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" ("APB Opinion No. 25"), and complies with the disclosure provisions of Statement of Financial Accounting Standards No. 123, Accounting for Stock-based Compensation" measured based on the difference, if any, between the fair value of the Company's stock and the exercise price on the date of the grant.

i. Goodwill

See footnote 2 (I) for ROC GAAP policies and accounting for goodwill. For U.S GAAP, all goodwill must be capitalized and amortized over its useful life. For TSMC's purposes, generally 5 years is used (e.g. for TASMIC acquisition in 2000).

j. Preferred stock subject to mandatory redemption is classified outside shareholders' equity under US GAAP, but included in shareholders' equity under ROC GAAP.

The following reconciles net income and shareholders' equity under ROC GAAP as reported in the consolidated financial statements to the approximate net income and shareholders' equity amounts determined under U.S. GAAP, giving effect to adjustments for the differences listed above.

	Year Ended December 31			
	1998	1999	2000	
	NT\$	NT\$	NT\$	U.S.\$
<u>Net income</u>				
Net income based on ROC GAAP	<u>14,389.2</u>	<u>23,527.0</u>	<u>65,106.2</u>	<u>1,962.8</u>
Adjustments:				
Pension expenses	46.8	2.9	21.3	0.6
Marketable securities	( 53.3 )	1,209.3	2,092.6	63.1
Bonuses to employees:				
Accrual	( 1,242.7 )	( 1,936.4 )	( 5,258.7 )	( 158.5 )
Adjustment to fair market value	( 11,279.5 )	( 8,414.5 )	( 23,290.1 )	( 702.1 )
Derivative financial instruments	-	( 9.7 )	( 434.1 )	( 13.1 )
Equity investments	( 577.1 )	( 405.0 )	135.8	4.1
Amortization of goodwill	-	-	( 5,395.5 )	( 162.7 )
Technology transfer in payment of capital stocks	4.5	54.0	54.0	1.6
Amortization of compensation cost	( 35.8 )	( 143.3 )	( 143.3 )	( 4.3 )
Gain on sales of treasury stock	-	-	( 230.0 )	( 6.9 )
Impairment loss	-	-	( 10,916.1 )	( 329.1 )
Income tax	( <u>2.8</u> )	( <u>0.2</u> )	( <u>1.7</u> )	( <u>0.1</u> )
Net decrease in net income	( <u>13,139.9</u> )	( <u>9,642.9</u> )	( <u>43,365.8</u> )	( <u>1,307.4</u> )
Approximate - net income				

based on U.S. GAAP	<u>1,249.3</u>	<u>13,884.1</u>	<u>21,740.4</u>	<u>655.4</u>
Earnings per common share	<u>0.13</u>	<u>1.34</u>	<u>1.91</u>	
Number of weighted average shares outstanding under U.S. GAAP	<u>9,859,728,019</u>	<u>10,383,480,760</u>	<u>11,400,881,900</u>	
Pro forma net income per ADS	<u>0.63</u>	<u>6.69</u>	<u>9.53</u>	

	December 31		
	1999	2000	
	NT\$	NT\$	U.S.\$
<u>Shareholders' equity</u>			
Shareholders' equity based on ROC GAAP	<u>152,570.5</u>	<u>261,753.7</u>	<u>7,891.3</u>
Adjustments:			
Pension benefits	( 70.4 )	( 49.1 )	( 1.5 )
Restatement of marketable securities to market			
Trading	1,212.4	3,305.0	99.6
Available-for-sale	383.5	40.2	1.2
Unrealized gain on long-term investments from an investee	1,590.5	( 14.0 )	( 0.4 )
Bonuses to employees, directors and supervisors	( 1,936.4 )	( 5,258.7 )	( 158.5 )
Effects of the above adjustments on equity investments	( 978.3 )	( 842.5 )	( 25.4 )
Derivatives financial instrument	( 9.7 )	( 443.8 )	( 13.4 )
Reclassification to treasury stocks	( 572.5 )	( 1,285.8 )	( 38.8 )
Goodwill	-	46,817.2	1,411.4
Technology transfer in payment of capital stocks	( 211.5 )	( 157.5 )	( 4.7 )
Impairment loss	-	( 10,916.1 )	( 329.1 )
Effect of above U.S. GAAP adjustments on income tax	( 0.8 )	( 2.5 )	( 0.1 )
Mandatorily redeemable preferred stock	<u>-</u>	<u>( 13,000.0 )</u>	<u>( 391.9 )</u>
Net decrease in shareholders' equity	<u>( 593.2 )</u>	<u>18,192.4</u>	<u>548.4</u>
Approximate shareholders' equity based on U.S. GAAP	<u>151,977.3</u>	<u>279,946.1</u>	<u>8,439.7</u>

Changes in shareholders' equity based on  
U.S. GAAP:

Balance, beginning of year	94,293.2	151,977.3	4,581.8
Unrealized holding gain (loss) of marketable securities classified as available for sale			
TSMC	33.3	-	-
Investee	1,590.5	( 14.0 )	( 0.4 )
Reversal of unrealized gain on long-term investments	-	( 1,933.8 )	( 58.4 )
Net income for year	13,884.1	21,740.4	655.4
Adjustment for common shares issued as bonuses to employees, directors and supervisors	9,519.0	25,011.3	754.0
Translation adjustment for subsidiaries	( 362.7 )	740.1	22.3
Adjustment from changes in ownership percentage of investees	127.0	-	-

Purchases of treasury stocks	( 382.4 )	( 975.4 )	( 29.4 )
Amortization of deferred compensation cost	143.3	143.3	4.3
Proceeds from sales of treasury stock	-	492.1	14.9
Issuance of capital stock	20,618.0	26,204.6	790.0
Issuance of capital stock for the acquisition of TSMC	-	56,560.2	1,705.2
Conversion of foreign bonds	<u>12,514.0</u>	<u>-</u>	<u>-</u>
Balance, end of year	<u>151,977.3</u>	<u>279,946.1</u>	<u>8,439.7</u>

A reconciliation of the significant balance sheet accounts to the approximate amounts determined under U.S. GAAP is as follows:

	<u>December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
<u>Short-term investments</u>		
As reported	965.4	2,351.6
U.S. GAAP adjustments		
Restatement of investments to fair value	1,212.4	3,305.0
Purchases of treasury stocks	( 572.5 )	( 1,285.8 )
As adjusted	<u>1,605.3</u>	<u>4,370.8</u>
<u>Long-term investments</u>		
As reported	16,164.7	9,814.3
U.S. GAAP adjustments		
Equity investments	( 978.3 )	( 842.5 )
Unrealized holding gain of marketable securities classified as available for sale		
- TSMC	383.5	40.2
- Investee	<u>1,590.5</u>	( 14.0 )
As adjusted	<u>17,160.4</u>	<u>8,998.0</u>
<u>Properties - net</u>		
As reported	150,059.9	244,747.9
U.S. GAAP adjustments		
Impairment loss	<u>-</u>	( 10,916.1 )
As adjusted	<u>150,059.9</u>	<u>233,831.8</u>
<u>Deferred income tax</u>		
As reported	9,623.3	14,807.8
U.S. GAAP adjustments		
Effect of U.S. GAAP adjustments on deferred income tax	( 0.8 )	( 2.5 )
As adjusted	<u>9,622.5</u>	<u>14,805.3</u>

Deferred charge - net

As reported	2,380.8	3,335.7
U.S. GAAP adjustments		
Technology transfer in payment of capital stock	( <u>211.5</u> )	( <u>157.5</u> )
As adjusted	<u>2,169.3</u>	<u>3,178.2</u>

Goodwill

As reported	-	11,531.0
U.S. GAAP adjustments		
Goodwill	<u>-</u>	<u>46,817.2</u>
As adjusted	<u>-</u>	<u>58,348.2</u>

Current liabilities

As reported	26,390.4	47,425.0
U.S. GAAP adjustments		
- Financial instrument	9.7	443.8
- Bonuses to employees, directors and supervisors	<u>1,936.4</u>	<u>5,258.7</u>
As adjusted	<u>28,336.5</u>	<u>53,127.5</u>

Accrued pension cost

As reported	1,013.8	1,511.3
U.S. GAAP adjustments - pension expenses	<u>70.4</u>	<u>49.1</u>
As adjusted	<u>1,084.2</u>	<u>1,560.4</u>

As a result of the adjustments presented above, the approximate amounts of total assets based on U.S. GAAP are NT\$236,858.8 and NT\$407,830.0 as of December 31, 1999 and 2000, respectively.

25. ADDITIONAL DISCLOSURES REQUIRED BY U.S. GAAP

The Company is required by SEC Staff Accounting Bulletin No. 74, disclosure of the impact that recently issued accounting standards will have on the financial Statements of the registrant when adopted in a future period, to make certain disclosures about recently issued accounting standards.

In June 1998, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 133, accounting for derivative instruments and hedging activities. The Company has not yet quantified the impacts of adopting Statement 133 on the financial statements and has not determined the timing of or method of adoption of Statement 133. However, the Statement could increase volatility in earnings and other comprehensive income. The adoption of Statement 133 will not be effective until 2001.

In December 31, 1999 The SEC Staff Accounting Bulletin No. 101 "Revenue Recognition" was issued. According to SAB No. 101, revenue should be recognized when all of the following conditions are met: (i) persuasive evidence of an arrangement exists; (ii) delivery has occurred or services have been rendered; (iii) the price is fixed or determinable and (iv) collectibility is reasonable assured. The Company's revenue recognition accounting policies fully comply with SAB No. 101.

a. Marketable securities

At December 31, 2000, certain investments carried at cost under ROC GAAP were restated for purposes of U.S. GAAP presentation:

	<u>Carrying Value</u>	<u>Fair Value</u>
	NT\$	NT\$
Long-term investments available for sale (Note 8)	32.1	72.3

b. Pension

	<u>December 31</u>	
	<u>1999</u>	<u>2000</u>
	NT\$	NT\$
Actuarial present value of benefit obligations		
Vested benefit obligation	-	-
Accumulated benefit obligation	( 428.3 )	( 763.9 )
Projected benefit obligation	( 1,403.6 )	( 2,313.9 )
Plan assets at fair value	<u>371.0</u>	<u>684.0</u>
Projected benefit obligation in excess of plan assets	( 1,032.6 )	( 1,629.9 )
Unrecognized net transition obligation	81.5	76.1
Unrecognized net loss	( 117.5 )	( 4.8 )
Unfunded accrued pension cost	( <u>1,068.6</u> )	( <u>1,558.6</u> )
Accrued pension cost		
Balance, beginning of year	<u>822.0</u>	<u>1,068.6</u>
Net periodic pension cost		
Service cost	248.4	376.7
Interest cost	78.9	91.2
Expected return on assets	( 18.5 )	( 32.6 )
Amortization of unrecognized net transition obligation	<u>1.6</u>	<u>11.4</u>
Net periodic pension cost	310.4	446.7
Contributions and accruals	( <u>313.3</u> )	( <u>468.1</u> )
Pension cost difference	( <u>2.9</u> )	( <u>21.4</u> )
Accruals	<u>249.5</u>	<u>511.4</u>
Balance, end of year	<u><u>1,068.6</u></u>	<u><u>1,558.6</u></u>

Assumptions used in actuarial calculations:

Discount rate	6.5%	6.0%
Long-term salary increase	6.0%	6.0%
Expected long-term rate of return on plan assets	6.5%	6.0%

c. Income taxes benefit

	<u>Year Ended December 31</u>		
	<u>1998</u>	<u>1999</u>	<u>2000</u>
	NT\$	NT\$	NT\$
Income tax current payable	( 575.6)	( 88.5)	( 27.2)
Deferred income tax	3,121.2	2,383.5	1,003.7
Adjustment of prior years' income taxes	( <u>230.0</u> )	<u>87.6</u>	<u>189.7</u>
Income tax benefit	<u><u>2,315.6</u></u>	<u><u>2,382.6</u></u>	<u><u>1,166.2</u></u>

Reconciliation between the income tax calculated on pretax financial statement income based on the statutory tax rate and the income tax benefit which conforms to U.S. GAAP is as follows:

	<u>Year Ended December 31</u>		
	<u>1998</u>	<u>1999</u>	<u>2000</u>
	NT\$	NT\$	NT\$
Income tax on pretax income at statutory rate	( 255.4)	( 2,819.0)	( 7,077.9)
Permanent differences	( 1,091.1)	1,364.6	2,060.2
Tax credits	3,892.1	5,052.9	7,761.0
Valuation allowance	-	( 1,303.5)	( 1,678.8)
Adjustment of prior year's taxes	( 230.0)	87.6	189.7
Assessed additional income tax on the unappropriated earnings	<u>-</u>	<u>-</u>	( <u>88.0</u> )
Income tax benefit	<u><u>2,315.6</u></u>	<u><u>2,382.6</u></u>	<u><u>1,166.2</u></u>

The roll-forward of deferred income tax is as follows:

	NT\$
Balance as of January 1, 1999	7,141.6
Investment tax credit	3,929.0
Loss carry forward	811.0
Depreciation expenses	( 290.4)
Others	17.2
Valuation allowance	( <u>1,985.9</u> )
Balance as of December 31, 1999	9,622.5
Investment tax credit	9,914.7
Loss carry forward	( 981.1)
Depreciation expenses	( 552.3)

Others	20.7
Valuation allowance	( <u>3,219.2</u> )
Balance as of December 31, 2000	<u>14,805.3</u>

d. Employee stock option plan

TSMC has elected to follow U.S. APB Opinion No. 25, "Accounting for Stock Issued to Employees," in accounting for WaferTech's option plan. Under APB No. 25, because the exercise price of WaferTech's option rights exceeds the market value of the underlying ownership interests on the date of grant, no compensation expense is recognized in TSMC's financial statements. TSMC under U.S. GAAP has computed for pro forma disclosure purposes the fair value of each option grant, as defined by U.S. Statement of Financial Accounting Standards No. 123, "Stock-Based Compensation" (SFAS 123), using the Black-Scholes option pricing model with the following assumptions:

	<u>1999</u>	<u>2000</u>
Risk free interest rate	7.00%	7.00%
Expected dividend yield	0	0
Expected lives	5 years	4 years

As WaferTech is not publicly traded, a volatility factor was not utilized in the pricing computation.

For purposes of pro forma disclosure, the estimated fair values of the options are amortized to expense over the option rights' vesting periods. Had TSMC recorded compensation costs based on the estimated grant date fair value, as defined by SFAS 123, TSMC's net income under U.S. GAAP would have been reduced to the pro forma amounts below for the periods ended December 31, 1999 and 2000.

	<u>1999</u>	<u>2000</u>	<u>2000</u>
	NT\$	NT\$	U.S.\$
U.S. GAAP			
Net income of TSMC as reported	13,884.1	21,740.4	655.4
Pro forma net income - TSMC	13,876.7	21,919.5	660.8
Pro forma income per share	1.34	1.92	0.06
Pro forma income per ADS	6.68	9.61	0.29

The pro forma amounts reflect compensation expense related to 1998 and 1999 option grants only. In future years, the annual compensation expense will increase if options are granted in those future years.

e. Statement of comprehensive income

	Statement of Comprehensive Income			
	Year Ended December 31			
	1998	1999	2000	2000
	NT\$	NT\$	NT\$	U.S.\$
Current earnings based on U.S. GAAP	<u>1,249.3</u>	<u>13,884.1</u>	<u>21,740.4</u>	<u>655.4</u>
Other comprehensive income, net of tax :				
Unrealized holding gain (loss) of marketable securities classified as available for sale				
- TSMC	( 578.5 )	33.3	-	-
- Investee	-	1,590.5	( 14.0 )	( 0.4 )
Reversal of unrealized gain of marketable securities classified as available for sale	-	-	( 1,933.8 )	( 58.4 )
Translation adjustment on subsidiaries	( <u>625.4</u> )	( <u>362.7</u> )	<u>740.1</u>	<u>22.3</u>
	( <u>1,203.9</u> )	<u>1,261.1</u>	( <u>1,207.7</u> )	( <u>36.5</u> )
Comprehensive Income	<u><u>45.4</u></u>	<u><u>15,145.2</u></u>	<u><u>20,532.7</u></u>	<u><u>618.9</u></u>