

UNITED MICROELECTRONICS CORP  
Form 20-F  
June 25, 2003  
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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

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**FORM 20-F**

(Mark One)

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, 2002*.

or

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 \_\_\_\_\_

(Exact Name of Registrant as Specified in Its Charter)

## United Microelectronics Corporation

(Translation of Registrant's Name Into English)

## Taiwan, Republic of China

(Jurisdiction of Incorporation or Organization)

## No. 3 Li-Hsin Road II, Science-Based Industrial Park,

## Hsinchu, Taiwan, ROC

(Address of Principal Executive Offices)

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

Title of Each Class

Name of Each Exchange On Which Registered

None

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

**Common Shares, par value NT\$10 per share**

(Title of Class)

(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.

15,238,578,646 Common Shares

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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

**(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS.)**

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Section 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.

Yes  No

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**UNITED MICROELECTRONICS CORPORATION**

**FORM 20-F ANNUAL REPORT**

**FISCAL YEAR ENDED DECEMBER 31, 2002**

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**SUPPLEMENTAL INFORMATION**

As more fully described in this annual report, United Integrated Circuits Corporation, a subsidiary, and United Semiconductor Corporation, United Silicon Incorporated and UTEK Semiconductor Corporation, our affiliates, were merged into United Microelectronics in January 2000. Capacity utilization rate and wafer output data, which do not require any intercompany eliminations, are presented where indicated on a combined basis in this annual report, which means that we have aggregated the capacity utilization rate and wafer output data of United Microelectronics and UTEK Semiconductor Corporation, United Silicon Incorporated, United Semiconductor Corporation and, for 1998, United Integrated Circuits Corporation. Unless otherwise indicated in this annual report, our operational data is presented on a consolidated basis, which represents the consolidated data of United Microelectronics and its consolidated subsidiaries.

The references to United Microelectronics, we, us, our and our company in this annual report refer to the combined entity, and if the reference to a time prior to the merger, refer to the combined entity as if the merger had then already occurred. The references to United Semiconductor, United Silicon, United Integrated Circuits, UTEK Semiconductor, UMCJ and UMCi are to United Semiconductor Corporation, United Silicon Incorporated, United Integrated Circuits Corporation, UTEK Semiconductor Corporation (formerly Holtek Semiconductor), UMC JAPAN (formerly Nippon Foundry Inc.) and UMCi Pte Ltd, respectively. The references to Taiwan and ROC refer to Taiwan, Republic of China. The references to shares and common shares refer to our common shares, par value NT\$10 per share, and ADSs refers to our American depository shares, each of which represents five of our common shares. The ADSs are issued under the Deposit Agreement, dated as of September 21, 2000, among United Microelectronics Corporation, Citibank N.A. and the holders and beneficial owners from time to time of American Depositary Receipts issued thereunder. ROC GAAP means the generally accepted accounting principles of the ROC and US GAAP means the generally accepted accounting principles of the United States. Any discrepancies in any table between totals and sums of the amounts listed are due to rounding.

United Microelectronics Corporation publishes its financial statements in New Taiwan dollars, the lawful currency of the ROC. In this annual report, NT\$ and NT dollars mean New Taiwan dollars, \$, US\$ and U.S. dollars mean United States dollars, ¥ means Japanese Yen, DEM means German Marks and EUR means Euro.

**FORWARD-LOOKING STATEMENTS IN THIS ANNUAL REPORT**

**MAY NOT BE REALIZED**

Our disclosure and analysis in this annual report contain or incorporate by reference some forward-looking statements. Our forward-looking statements contain information regarding, among other things, our financial condition, future expansion plans and business strategy. We have based these forward-looking statements on our current expectations and projections about future events. You can identify these statements by the fact that they do not relate strictly to historical or current facts. Although we believe that these expectations and projections are reasonable, such forward-looking statements are inherently subject to risks, uncertainties and assumptions about us, including, among other things:

our dependence on frequent introduction of new services and technologies based on the latest developments;

the intensely competitive semiconductor, personal computer and communication industries and markets;

risks associated with international global business activities;

our dependence on key personnel;

natural disasters, such as earthquakes and droughts, which are beyond our control;

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general economic and political conditions, including those related to the semiconductor, personal computer and communication industries;

possible disruptions in commercial activities caused by natural and human induced disasters, including terrorist activity and armed conflict, that may reduce end-user purchases relative to expectations and orders;

fluctuations in foreign currency exchange rates;

additional disclosures we make in our previous and future Form 20-F annual reports and Form 6-K periodic reports to the SEC; and

those other risks identified in Item 3. Key Information D. Risk Factors of this annual report.

The words anticipate, believe, estimate, expect, intend, plan and similar expressions, as they relate to us, are intended to identify a number of risks that could affect our business in these forward-looking statements. We undertake no obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise. In light of these risks, uncertainties and assumptions, the forward-looking events discussed in this annual report might not occur and our actual results could differ materially from those anticipated in these forward-looking statements.



**Table of Contents****GLOSSARY**

ASIC	Application Specific Integrated Circuit. A custom-designed integrated circuit that performs specific functions which 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	IC fabrication technology that produces both bipolar transistors and CMOS transistors and combines 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 hundreds of times per second or else it will fade away.
Digital signal processor	A type of integrated circuit that processes and manipulates digital information after it has been converted from an analog source.
8-inch wafer equivalents	Standard unit describing the equivalent amount of 8-inch wafers produced after conversion. Figures of 8-inch wafer equivalents are derived by converting the number of wafers of all dimensions (e.g., 6-inch, 8-inch, 12-inch) into their equivalent figures for 8-inch wafers. 100 6-inch wafers are equivalent to 56.25 8-inch wafers. 100 12-inch wafers are equivalent to 225 8-inch wafers. Used to quantify levels of wafer production for purposes of comparison.
Flash memory	A type of non-volatile memory that is erasable and reprogrammable. 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.
Interconnect	The conductive path that is made from copper or aluminum is required to achieve connection from one circuit element to other circuit elements within a circuit.
Logic device	A device that contains digital integrated circuits that process, rather than store, information.
Low-k dielectric insulation	In the higher layers of the integrated circuit, insulating material is used to separate interconnect layers. A low dielectric constant ( $k$ ) is desired in the insulator in order to minimize parasitic capacitance, which acts as a drag on system performance, or clock speed. At the 0.13-micron node, for clock

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	speeds above 1 GHz, low-k dielectrics are necessary.
Mask	A piece of glass on which an integrated circuit 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.
Memory	A group of integrated circuits that a computer uses to store data and programs, such as ROM, RAM, DRAM and SRAM.
Micron	A unit of spatial measurement that is one millionth of a meter.
Nanometer	A unit of spatial measurement that is one billionth of a meter.
Nonvolatile memory	Memory products which retain their data content without the need for constant power supply.
PC	Personal computer.
RAM	Random Access Memory. A type of volatile memory, forming the main memory of a computer where applications and files are run.
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. 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 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.
SOI	Silicon-On-Insulator. A composite structure consisting of an active layer of silicon deposited on an insulating material. The insulator can be sapphire, silicon dioxide, silicon nitride, or even an insulating form of silicon itself. The ICs subsequently deposited in the active silicon layer can have advantages of radiation hardness, speed, and high-temperature operation.
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 the wafer at a time allows the light to be focused more strongly which gives better resolution of the circuitry design.
System-on-a-chip	A chip that incorporates functions currently performed by several chips on a cost-effective basis.
Transistor	An individual circuit that can amplify or switch electric current. This is the

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	building block of all integrated circuits.
Volatile memory	Memory products which lose their data content when the power supply is switched off.
Wafer	Thin, round, flat piece of silicon that is the base of most integrated circuits.

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**PART I**

**ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS**

Not applicable.

**ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE**

Not applicable.

**ITEM 3. KEY INFORMATION**

**A. Selected Financial Data**

The selected balance sheet data as of December 31, 2001 and 2002 and the selected statements of income and cash flow data for the years ended December 31, 2000, 2001 and 2002, have been derived from our audited consolidated financial statements included elsewhere in this annual report. The selected balance sheet data as of December 31, 1998, 1999 and 2000, and the selected statements of income and cash flow data for the year ended December 31, 1998 and 1999 have been derived from our audited consolidated financial statements, which are not included in this annual report.

Our financial statements have been prepared and presented in accordance with generally accepted accounting principles in the ROC, or ROC GAAP, which differ in many material respects from generally accepted accounting principles in the US, or US GAAP. For a discussion of these differences, see note 28 to our audited consolidated financial statements included elsewhere in this annual report. Some of the statement of income, cash flow and balance sheet data items have been reconciled to US GAAP and are set forth below. The summary financial data set forth below should be read in conjunction with Item 5. Operating and Financial Review and Prospects and our financial statements and the notes to those statements included elsewhere in this annual report.

United Microelectronics completed a merger on January 3, 2000 with one subsidiary and three affiliates that were not consolidated in prior periods. Therefore, the historical information for periods prior to January 1, 2000 is not comparable to the information for 2000 and subsequent periods.

Income before income tax and minority interest is inclusive of income recognized on pre-acquired business operations. These amounts, NT\$19 million, nil and NT\$29 million for 2000, 2001 and 2002, respectively, were removed through an adjustment to minority interest.



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	Year ended December 31,					
	1998	1999	2000	2001	2002	
	NT\$	NT\$	NT\$	NT\$	NT\$	US\$
<b>(in millions, except per share and per ADS data)</b>						
<b>Consolidated Statement of Income Data:</b>						
<b>ROC GAAP</b>						
Net operating revenues	18,760	33,735	115,609	69,817	75,425	2,173
Costs of goods sold	14,556	24,828	57,411	60,568	62,887	1,812
Gross profit	4,204	8,907	58,198	9,249	12,538	361
Operating expenses:						
Sales and marketing	299	407	1,153	2,276	1,527	44
General and administrative	1,618	1,288	3,196	4,425	3,531	102
Research and development	1,934	3,131	6,306	8,960	7,368	212
Total operating expenses	3,851	4,826	10,655	15,661	12,426	358
Operating income (loss)	353	4,081	47,543	(6,412)	112	3
Net non-operating income (expense)	3,589	18,178	4,786	(154)	6,904	199
Income (loss) before income tax and minority interest	3,942	22,259	52,329	(6,566)	7,016	202
Income tax (expense) benefit	455	(829)	91	3,040	(271)	(8)
Minority interest (income) loss	10	(10,932)	(1,640)	369	327	10
Net income (loss)	4,407	10,498	50,780	(3,157)	7,072	204
Earnings (loss) per share basic and diluted(1)	0.44	1.01	3.49	(0.21)	0.48	0.01
Shares used in earning per share calculation:						
Basic	9,962	10,341	14,546	14,921	14,753	14,753
Diluted(2)	9,962	10,341	14,546	14,921	14,945	14,945
Earnings (loss) per ADS basic and diluted	2.20	5.05	17.45	(1.05)	2.40	0.07
<b>U.S. GAAP</b>						
Net (loss) income	(69)	4,747	27,134	(23,247)	294	8
(Loss) earnings per share:						
Basic & diluted	(0.01)	0.48	1.91	(1.58)	0.02	
Shares used in (loss) earnings per share calculation:						
Basic	9,609	9,974	14,179	14,671	14,655	14,655
Diluted(2)	9,609	9,974	14,179	14,671	14,729	14,729
(Loss) earnings per ADS:						
Basic & diluted	(0.05)	2.40	9.55	(7.90)	0.10	

As of December 31,

	1998	1999	2000	2001	2002	
	NT\$	NT\$	NT\$	NT\$	NT\$	US\$

**Consolidated Balance Sheet Data:****ROC GAAP**

Current assets	36,349	39,382	96,760	100,787	110,922	3,197
Long-term investment	35,812	59,565	39,515	40,757	38,673	1,115
Property, plant and equipment	25,426	43,720	163,415	169,121	167,077	4,815
Total assets	100,068	148,369	309,789	320,694	327,029	9,424
Current liabilities	8,880	24,650	42,107	34,524	29,147	840
Long-term debt (excluding current portion)	18,765	10,695	35,534	54,695	62,321	1,796
Total liabilities	27,996	35,852	80,687	91,778	93,581	2,697
Stockholders' equity	71,952	102,620	219,948	213,322	217,424	6,266

**U.S. GAAP**

Cash and cash equivalents	20,564	24,728	60,350	57,826	54,219	1,563
Working capital(3)	28,496	13,945	51,212	66,837	72,505	2,089
Total assets	96,466	145,621	421,738	456,879	442,645	12,756
Stockholders' equity	67,891	89,877	326,985	349,492	334,025	9,626

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	Year ended December 31,					
	1998	1999	2000	2001	2002	
	NT\$	NT\$	NT\$	NT\$	NT\$	US\$
(in millions, except percentages and per share data)						
<b>Other Consolidation Data:</b>						
<b>ROC GAAP</b>						
Cash flow:						
Depreciation	4,733	6,386	24,403	34,390	36,568	1,054
Capital expenditure	6,868	19,047	83,483	43,051	35,978	1,037
Cash provided by operating activities	7,368	10,977	68,077	40,187	30,527	880
Cash used in investing activities	(10,657)	(20,837)	(73,683)	(43,257)	(30,458)	(878)
Cash provided by financing activities	10,688	9,486	41,411	18,184	3,162	91
Net cash flow	7,372	4	35,668	14,434	3,979	115
Gross profit margin	22.4%	26.4%	50.3%	13.2%	16.6%	16.6%
Operating profit (loss) margin	1.9%	12.1%	41.1%	(9.2)%	0.1%	0.1%
Net profit (loss) margin	23.5%	31.1%	43.9%	(4.5)%	9.4%	9.4%
Capacity utilization rate (on a combined basis for 1998 and 1999; and on an actual basis for 2000, 2001 and 2002)(4)	85.5%	92.6%	100.0%	46.6%	65.2%	65.2%
Dividends declared per share(5)	0.29	0.15	0.20	0.15	0.15	0.004
<b>U.S. GAAP</b>						
Cash flow:						
Depreciation	4,743	6,392	24,406	34,395	36,572	1,054
Capital expenditure.	6,883	19,048	83,501	43,054	36,008	1,038
Cash provided by operating activities	7,234	11,188	67,977	39,785	30,506	879
Cash used in investing activities	(12,532)	(17,082)	(73,516)	(60,259)	(38,035)	(1,096)
Cash provided by financing activities	10,837	9,685	41,388	18,617	3,162	91
Net cash flow	5,524	4,164	35,622	(2,524)	(3,607)	(104)
Gross profit margin	12.3%	23.2%	44.1%	5.9%	8.2%	8.2%
Operating (loss) profit margin	(14.7)%	6.3%	24.5%	(34.7)%	(11.0)%	(11.0)%
Net (loss) profit margin	(0.4)%	14.1%	23.5%	(33.3)%	0.4%	0.4%

- (1) Earnings (loss) per share is calculated by dividing net income by the weighted average number of shares outstanding during the year.
- (2) Diluted securities include convertible bonds and employee stock options.
- (3) Working capital equals current assets minus current liabilities.
- (4) Capacity utilization rate, on a combined basis, includes our consolidated subsidiaries as well as United Semiconductor, United Silicon and UTEK Semiconductor in 1998 and 1999.
- (5) Dividends declared per share are in connection with earnings and accumulated capital surplus.



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In portions of this annual report, we have translated New Taiwan dollar amounts into U.S. dollars for the convenience of readers. The rate we used for the translations was NT\$34.70 = US\$1.00, which was the noon buying rate announced by the Federal Reserve Bank of New York on December 31, 2002. The translation does not mean that New Taiwan dollars could actually be converted into U.S. dollars at that rate. The following table shows the noon buying rates for New Taiwan dollars expressed in New Taiwan dollar per US\$1.00.

<u>Year Ended December 31,</u>	<u>Average (of Month- End Rates)</u>	<u>High</u>	<u>Low</u>	<u>At Period-End</u>
1997	29.056	33.250	27.340	32.800
1998	33.498	35.000	32.050	32.270
1999	32.281	33.400	31.390	31.390
2000	31.366	33.250	30.350	33.170
2001	33.911	35.130	32.230	35.000
2002	34.526	35.160	32.850	34.700
November	34.673	34.820	34.460	34.760
December	34.799	34.890	34.700	34.700
2003				
January	34.571	34.760	34.400	34.610
February	34.734	34.819	34.610	34.780
March	34.721	34.800	34.580	34.750
April	34.824	34.980	34.790	34.850
May (through May 15)	34.714	34.850	34.650	34.650

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### **B. Capitalization and Indebtedness**

Not applicable.

### **C. Reasons for the Offer and Use of Proceeds**

Not applicable.

### **D. Risk Factors**

*Our business and operations are subject to various risks, many of which are beyond our control. If any of the risks described below actually occurs, our business, financial condition or results of operations could be seriously harmed.*

#### **Risks Related to Our Financial Condition and Business**

*The cyclical nature of the semiconductor industry and periodic overcapacity make us particularly vulnerable to economic downturns as illustrated by our operating results since 2001.*

The semiconductor industry has historically been highly cyclical and, at various times, has experienced significant downturns characterized by production overcapacity, reduced product demand, rapid erosion of average selling prices and fluctuations in end-user demand. Historically, companies in the semiconductor industry have expanded aggressively during periods of increased demand in order to generate the capacity needed to meet expected demand in the future. If actual demand does not increase or declines, or if companies in the industry expand too aggressively in light of the actual increase in demand, the industry will generally experience a period in which industry-wide capacity exceeds demand. For this reason, periods of overcapacity in the semiconductor industry have historically followed periods of increased demand.

The semiconductor industry has experienced a downturn since late 2000. Our capacity utilization rate decreased from 100% in 2000 to 47% in 2001, due to rapidly deteriorating demand for our products and services, mainly from our customers in the communication sector, but increased to 65% in 2002 as a result of a rising demand from the consumer electronics and wireless communication businesses. We believe that our operating results in 2001 and 2002 reflect the continued uncertainty in the global economy, conservative corporate information technology spending and low visibility with respect to end market demand. In addition, our average selling price declined approximately 7% between 2001 and 2002, mainly due to the substantial pricing pressure. Future downturns in the semiconductor industry may be severe and could seriously harm our business.

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

Our revenues, expenses and results of operations have varied significantly in the past and may fluctuate significantly from quarter to quarter in the future due to a number of factors, many of which are beyond our control. Our business and operations have at times in the past been negatively affected by, and are expected to continue to be subject to the risk of, the following factors:

changes in general economic and business conditions, including those directly and indirectly related to the aftermath of terrorist attacks in the United States on September 11, 2001

recent military actions against Iraq by the United States and its allies;

the cyclical nature of both the semiconductor industry and the markets served by our customers;

our customers' adjustments in their inventory;

the loss of a key customer or the postponement of orders from a key customer;

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the rescheduling and cancellation of large orders;

our ability to obtain equipment, raw materials, electricity, water and other required utilities on a timely and economic basis;

outbreaks of contagious diseases, including severe acute respiratory syndrome, or SARS;

environmental events, such as fires and earthquakes, or industrial accidents; and

technological changes.

Due to the factors noted above and other risks discussed in this section, many of which are beyond our control, you should not rely on quarter-to-quarter comparisons to predict our future performance. Unfavorable changes in any of the above factors may seriously harm our business, financial condition and results of operations. In addition, our operating results may be below the expectations of public market analysts and investors in some future periods. In this event, the price of the shares or ADSs may underperform or fall.

*The recent outbreak of severe acute respiratory syndrome, or SARS, in several economies in Asia, including Taiwan, and several other Asian countries, may materially and adversely affect our business and results of operations.*

Beginning March 2003, several economies in Asia, including China, Hong Kong, Singapore and Taiwan have been severely affected by the outbreak of SARS, a highly contagious form of atypical pneumonia. SARS has caused, and is expected to continue to cause, severe damages to trade and tourism industries as well as on the economies and financial markets of the affected countries, including Taiwan. So far the SARS outbreak has not caused a negative significance on our manufacturing yields or sales volume. However, its effect for our future results remains uncertain. In addition, any economic downturn as a result of the SARS outbreak may have an adverse effect on consumer confidence, and may in turn result in a decrease in the demand for our products and services. Recognizing the growing concern regarding the outbreak of SARS and the possible effect it may have on our business, we have taken several proactive steps to bring this risk to a minimum extent. For example, we are currently prohibiting business related travel by our employees to SARS infected areas outside of Taiwan. We plan to implement additional measures if SARS does not cease or continues to spread in the future. If any of our employees is suspected to have contracted SARS, we may under certain circumstances be required to quarantine such employee and the affected areas of our premises. As a result, we may have to temporarily suspend part of or all of our operations.

*Our business may be harmed by changes in general economic and business conditions resulting from events or factors beyond our control.*

The terrorist attacks in the United States on September 11, 2001, in Indonesia on October 12, 2002 and in Saudi Arabia on May 13, 2003 may have long-term effects on world economies and markets. In addition, in early 2003, the United States and its allies completed military operations against Iraq, and the global reactions to these military operations are still being formulated. Concerns about the war and possible acts of terrorism directed against the United States and its interests as well as political tensions in other areas of the world, have affected and will likely to affect the global economy and consumer confidence.

Any economic downturn resulting from any of the events described above may reduce the demand for our products and services and negatively impact our results of operations. We cannot guarantee that our business will not be substantially affected by similar events in the future. The

impact and future effects of these events are currently uncertain, and we are unable to predict the future impact they may have on our business and operations, the international markets in which we operate and the global economy in general.

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*A decrease in demand for or selling prices of communication applications, consumer electronics and personal computers may decrease the demand for our services and reduce our margins.*

Our customers generally use the semiconductors produced in our fabs in a wide variety of applications. We derive a significant percentage of our operating revenues from customers who use our manufacturing services to make semiconductors for communication applications, consumer electronics and personal computers. Our products for communication, consumer electronics, computer, memory and other applications generated 31.3%, 30.8%, 27.3%, 8.9% and 1.7%, respectively, of our net operating revenues in 2002. The communication applications and personal computer markets have experienced a sudden and substantial market downturn and inventory correction since late 2000. This downturn resulted in a reduced demand for our services, hence lower revenues and incurrence of losses. Any significant decrease in the demand for communication applications or personal computers may further decrease the demand for our services. In addition, if the average selling prices of communication applications or personal computers decline significantly, we will be pressured to further reduce our selling prices, which may reduce our revenues and therefore reduce our margins significantly. As demonstrated by the downturn since late 2000 in demand for high technology products, market conditions can change rapidly, without apparent warning or advance notice. In such instances, our customers will experience inventory buildup and/or difficulties in selling their products, and in turn, will reduce or cancel orders for wafers from us. While these downturns are to be expected in the semiconductor business, their timing, severity and recovery cannot be predicted accurately or at all in advance. When they occur, our business, profitability and price of the shares and ADSs are likely to suffer.

*If the demand for foundry services continues to slow down, we may lose customers and our revenues could significantly decline.*

The demand for third-party foundry services by integrated device manufacturers, system companies and fabless design companies has decreased in recent years, in part because many integrated device manufacturers have returned to manufacturing their semiconductor products internally in order to maintain their equipment utilization rates. The recent slowdown in demand has resulted in a lower rate of investment return than we originally planned. Our revenues were negatively affected in 2001 and 2002 due to reductions in orders from integrated device manufacturer customers and, if such trend continues, our future revenues could continue to decline.

*Any problem in the semiconductor outsourcing infrastructure can adversely affect our net operating revenues and profitability.*

Many of our customers depend on third parties to provide mask tooling, assembly and test services. If these customers cannot timely obtain these services on reasonable terms, they may not order any foundry services from us. This may significantly reduce our net operating revenues and negatively affect our profitability.

*We may be unable to implement new technology as it becomes available, which may result in our loss of customers and market share.*

The semiconductor industry is developing rapidly and the related technology is constantly evolving. If we do not anticipate the technology evolution and rapidly adopt new and innovative technology, we may not be able to produce sufficiently advanced products at competitive prices. There is a risk that our competitors may adopt new technology before we do, resulting in our loss of market share. If we do not continue to produce the most advanced products at competitive prices, our customers may use the services of our competitors instead of our services, which may cause our net operating revenues to decline unless we can replace lost customers with new customers.

*If we lose the support of our technology partners, we may be unable to provide leading technology to our customers.*

Enhancing our manufacturing process technologies is critical to our ability to provide services for our customers. We intend to continue to advance our process technologies through internal research and development and alliances with other companies. Although we have an internal research and development team focused on developing new semiconductor manufacturing process technologies, we are dependent on our technology partners to advance our portfolio of process technologies. We currently have technology joint development arrangements with

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Infineon and patent cross-licensing agreements with several companies, including Agere Systems Inc., Harris, Hitachi, IBM, Motorola and Texas Instruments. We also depend upon mask and equipment vendors to supply our technology development teams with the masks and equipment needed to continuously develop more advanced processing technologies. If we are unable to continue any of our joint development arrangements, patent cross-licensing agreements, research and development alliances and other agreements, on mutually beneficial economic terms, if we re-evaluate the technological and economic benefits of such relationships, if we are unable to enter into new technology alliances with other leading semiconductor suppliers or if we fail to secure masks and equipment from our vendors in a timely manner sufficient to support our ongoing technology development, we may lose important customers because we are unable to continue providing our customers with leading edge mass-producible process technologies.

*If we cannot compete successfully in our industry, our business may suffer.*

The worldwide semiconductor foundry industry is highly competitive. We compete with dedicated foundry service providers such as Taiwan Semiconductor Manufacturing Company Limited and, to a lesser extent, Chartered Semiconductor Manufacturing Ltd., as well as the foundry operation services of some integrated device manufacturers such as IBM. Integrated device manufacturers principally manufacture and sell their own proprietary semiconductor products, but may also offer foundry service. New competitors such as Silerra Malaysia Sdn. Bhd., 1st Silicon (Malaysia) Sdn. Bhd., Semiconductor Manufacturing International (Shanghai) Corporation and Grace Semiconductor Manufacturing Corp. have initiated efforts to develop substantial new foundry capacity. New entrants in the foundry business are likely to initiate a trend of competitive pricing and create potential overcapacity in legacy technology. Some of our competitors have greater access to capital and substantially greater production, research and development, marketing 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 can.

The principal elements of competition in the wafer foundry market include:

technical competence;

production speed and cycle time;

time-to-market;

research and development quality;

available capacity;

manufacturing yields;

customer service;

price;



management expertise; and

strategic alliances.

Our ability to compete successfully also depends on factors partially outside of our control, including product availability and industry and general economic trends. If we cannot compete successfully in our industry, our business may suffer.

***If we are unable to continuously improve our manufacturing yields, maintain high capacity utilization and optimize the technology mix of our silicon wafer production, our profit margin may substantially decline.***

Our ability to maintain our profitability depends, in part, on our ability to:

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maintain our capacity utilization, that is, the wafer-out quantity of eight-inch equivalent wafers divided by estimated total eight-inch equivalent capacity in a specified period. The estimated capacity numbers may differ depending upon equipment delivery schedules, pace of migration to more advanced process technologies and other factors affecting production ramp-ups;

maintain or improve our manufacturing yield, that is, the percentage of usable manufactured devices on a wafer; and

optimize the technology mix of our production, that is, the relative number of wafers manufactured utilizing different process technologies.

Our manufacturing yields directly affect our ability to attract and retain customers, as well as the price of our services. Our capacity utilization affects our operating results because a large percentage of our operating costs are fixed. As a result of a market downturn beginning in late 2000, our capacity utilization rate, which was 100% in 2000, decreased to 47% in 2001, but increased to 65% in 2002. Our technology mix affects utilization of our equipment and process technologies, which can affect our margins. If we are unable to continuously improve our manufacturing yields, maintain high capacity utilization or optimize the technology mix of our wafer production, our profit margin may substantially decline.

***If we are unable to obtain the financing necessary to fund the substantial capital expenditures we expect to incur, we may not be able to implement our planned growth.***

Our business and the nature of our industry require us to make substantial capital expenditures leading to a high level of fixed costs. We expect to incur significant capital expenditures in connection with our growth plans. These capital expenditures will be made in advance of any additional sales to be generated by new or upgraded fabs as a result of these expenditures. Given the fixed cost nature of our business, we have in the past incurred, and may in the future incur, operating losses if our revenues do not adequately offset our capital expenditures. Additionally, our actual expenditures may exceed our planned expenditures for a variety of reasons, including changes in:

our growth plan;

our process technology;

market conditions;

interest rates;

exchange rate fluctuations; and

prices of equipment.

We cannot assure you that additional financing will be available on satisfactory terms, if at all. If adequate funds are not available on satisfactory terms, we may be forced to curtail our expansion plans or delay the deployment of our services, which could result in a loss of customers and limit the growth of our business.

***We depend on a small number of customers for a significant portion of our net operating revenues and a loss of some of these customers would result in the loss of a significant portion of our net operating revenues.***

We have been largely dependent on a small number of customers for a substantial portion of our business. For 2002, our top ten end customers accounted for 53.2% of our net operating revenues. MediaTek and Xilinx, in particular, each accounted for over 10% of our net operating revenues in 2002. We expect that we will continue to be dependent upon a relatively limited number of customers for a significant portion of our net operating revenues. We cannot assure you that our net operating revenues generated from these customers, individually or in the aggregate, will reach or exceed historical levels in any future period. Loss or cancellation of business from

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significant changes in scheduled deliveries to, or decreases in the prices of services sold to, any of these customers could significantly reduce our net operating revenues.

***Our customers generally do not place purchase orders far in advance, which makes it difficult for us to predict our future revenues, adjust production costs and allocate capacity efficiently on a timely basis.***

Our customers generally do not place purchase orders far in advance, usually two months before shipment. In addition, due to the cyclical nature of the semiconductor industry, our customers' purchase orders have varied significantly from period to period. As a result, we do not typically operate with any significant backlog. The lack of significant backlog makes it difficult for us to forecast our revenues in future periods. Moreover, our expense levels are based in part on our expectations of future revenues and we may be unable to adjust costs in a timely manner to compensate for revenue shortfalls. We expect that in the future our net operating revenues in any quarter will continue to be substantially dependent upon purchase orders received in that quarter.

***We face significant risks, and will incur substantial costs, in connection with our planned joint ventures to construct and operate new fabs in Singapore.***

In March 2001, we entered into a foundry venture agreement with EDB Investments Pte Ltd and Infineon, relating to the formation of UMCi Pte Ltd, a joint venture in Singapore to construct and operate a 12-inch wafer fab in Singapore's Pasir Ris Wafer Fab Park. The facilities of UMCi are expected to employ advanced process technologies, ranging from 0.13 micron to 65-nanometer. Under the terms of the foundry venture agreement, we expect to invest up to US\$630 million in UMCi. UMCi began to install equipment in January 2003, and plans to start pilot production by the end of 2003 for the interconnect copper layers of line qualification. Due to the sluggish economy during the past two years, the progress on the construction and capacity expansion of UMCi fab is currently behind the original schedule. We have not guaranteed to pay any amounts owed by UMCi to any institution extending the external financing and do not plan to do so in the future. As of March 31, 2003, we had invested US\$161 million in UMCi and held a 49.74% equity interest in UMCi. In addition, through a voting rights and proxies agreement with Infineon and UMCi, we have voting control over an additional 15% of the ordinary shares of UMCi. Currently, our directors Robert H.C. Tsao, John Hsuan, Peter Chang and Chris Chi are directors of UMCi, and together constitute a majority of the board of directors of UMCi.

In January 2002, we entered into agreements with AMD (i) to conduct joint development of 90-nanometer and 65-nanometer process technologies, (ii) to form AU Pte. Ltd., a joint venture to construct, own and operate a 12-inch fab in Singapore, and (iii) to establish a foundry relationship covering a significant portion of AMD's semiconductor fabrication needs. Subsequently, both parties reached an agreement to discontinue the joint technology development aspect of our cooperation. However, the plan to construct the 12-inch fab under the joint venture remains under consideration, and we will continue to offer foundry services to AMD in response to its fabrication needs. As of the date of this filing, neither we nor AMD has invested any capital in this joint venture.

We have not previously had any commercial manufacturing operations in Singapore. Doing business in Singapore involves risks related to infrastructure, changes in local laws and economic and political conditions. We have chosen to locate our planned fabs in Singapore in part to take advantage of economic incentives provided under the laws and policies of Singapore. Changes in these or other laws or policies or in the political or economic conditions in Singapore or the surrounding region could have an adverse effect on UMCi's business. In addition, due to the high cost of constructing and purchasing equipment for this new fab in Singapore, we expect that our operations in Singapore could incur significant cash outflows over the next few years. Once a fab is in operation at acceptable capacity and yield rates, it can provide significant cash inflows. However, prior to such time, it may incur significant losses due largely to significant depreciation and amortization expenses, which are not expected to be offset by a significant amount of revenues prior to the completion of the ramp up process. If UMCi fails to achieve sufficient volumes of production at or above acceptable yield rates, if we fail to transfer and ramp up our technology in a timely manner, or if costs exceed expectations, our equity interest in UMCi could result in substantial investment losses which may negatively affect our income or loss.



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***Our inability to obtain, preserve and defend 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 at 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. The semiconductor industry, because of the complexity of the technology used and the multitude of patents, copyrights and other overlapping intellectual property rights, 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 hurt our reputation as a technology leader in our industry and prevent us from manufacturing particular products or applying particular technologies, which could reduce opportunities to generate revenues.

***If we lose one or more of our key personnel without adequate replacements, our operations and business will suffer.***

Our future success to a large extent depends on the continued service of our Chairman and key executive officers. We do not carry key person insurance on any of our personnel. If we lose the services of any of our Chairman and key executive officers, it could be difficult to find and integrate replacement personnel in a short period of time, which could harm our operations and the growth of our business.

***We may have difficulty attracting and retaining skilled employees, who are critical to our future success.***

The success of our business depends upon attracting and retaining experienced executives, engineers and other employees to implement our strategy. The competition for skilled employees is intense. We expect demand for personnel in Taiwan to increase in the future as new wafer fabrication facilities and other businesses are established in Taiwan. We do not have long-term employment contracts with any of our employees. If we were unable to retain our existing personnel or attract, assimilate and retain new experienced personnel in the future, it could seriously disrupt our operations and delay or restrict the growth of our business.

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*Our transactions with affiliates and shareholders may hurt our profitability and competitive position.*

We have provided foundry services to several of our affiliates and shareholders. These transactions were conducted on an arm's-length basis. Other than capacity commitments to our former foundry venture partners, we currently do not provide any preferential treatment to any of these affiliates and shareholders. However, we may in the future reserve or allocate our production capacity to these companies if there is a shortage of foundry services in the market to enable these companies to maintain their operations and/or to protect our investments in them. This reservation or allocation may reduce our capacity available for our other customers, which may discourage other customers from using our services. This may hurt our profitability and competitive position.

*The differences between ROC and US accounting standards affect the amount of our net income.*

Our financial statements are prepared under generally accepted accounting principles in the ROC, or ROC GAAP, which differ in certain significant respects from generally accepted accounting principles in the United States, or US GAAP. For example, ROC GAAP does not require the recognition of the market value of our shares distributed as bonuses to our employees in the calculation of net income. As a result, our net income (loss) in 2000, 2001 and 2002 under US GAAP was NT\$27,134 million, NT\$(23,247 million) and NT\$294 million (US\$8 million), respectively, as compared to net income (loss) under ROC GAAP of NT\$50,780 million, NT\$(3,157 million) and NT\$7,072 million (US\$204 million) in 2000, 2001 and 2002, respectively. For a discussion of these differences, see note 28 to our audited consolidated financial statements included elsewhere in this annual report.

## **Risks Relating to Manufacturing**

*Our manufacturing processes are highly complex, costly and potentially vulnerable to impurities and other disruptions that can significantly increase our costs and delay product shipments to our customers.*

Our manufacturing processes are highly complex, require advanced and costly equipment and are continuously being modified to improve manufacturing yields and product performance. Impurities or other difficulties in the manufacturing process or defects with respect to equipment or supporting facilities can lower manufacturing yields, interrupt production or result in losses of products in process. As system complexity has increased and process technology has become more advanced, manufacturing tolerances have been reduced and requirements for precision have become even more demanding. Although we have been enhancing our manufacturing capabilities and efficiency, from time to time we have experienced production difficulties that have caused delivery delays and quality control problems, as is common in the semiconductor industry. In the past we have encountered the following problems:

capacity constraints due to changes in product mix or the delayed delivery of equipment critical to our production, including steppers and chemical stations;

construction delays during expansions of our clean rooms and other facilities;

difficulties in increasing production at new and existing facilities;



difficulties in upgrading or expanding existing facilities;

changing or upgrading our process technologies; and

raw materials shortages and impurities.

We cannot guarantee you that we will be able to increase our manufacturing capacity and efficiency in the future to the same extent as in the past.

In addition, the Taiwan government is currently building a high-speed railway system, which would pass near the Tainan Science-Based Industrial Park where our new 12-inch fab, Fab 12A, is located. Trains on this system are expected to begin running as early as in mid 2005. Once these trains begin running, they would emit microvibrations

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that some experts predict could interfere with the operation of lithography equipment used for wafer production in Fab 12A, which is close to the affected area. Although we do not believe that such microvibrations may cause serious direct harm to our operations, they could cause our yield rates at this fab to decline and our costs of producing 12-inch wafers to increase, which could negatively affect our results of operations.

*We may have difficulty in ramping up production in accordance with our schedule, which could cause delays in product deliveries and decreases in manufacturing yields.*

As is common in the semiconductor industry, we have from time to time experienced difficulties in ramping up production at new or existing facilities or effecting transitions to new manufacturing processes. As a result, we have suffered delays in product deliveries or reduced manufacturing yields. We may encounter similar difficulties in connection with:

the ramping up of Fab 12A;

the ramping up of UMCi in connection with our joint venture with EDB Investments and Infineon;

the migration to more advanced process technologies, such as 90-nanometer process technology; and

the adoption of new materials, such as the low-k dielectric materials, in our manufacturing processes.

Because we are one of the earliest semiconductor manufacturers in the world to construct 12-inch fabs, we may be subject to risks relating to the construction, ramping up and operation of these facilities. In addition, we cannot assure you that Pasir Ris Wafer Fab Park, the site of UMCi, will be able to provide infrastructure, engineering and other supporting staff and raw material supply comparable to that of the Hsinchu Science-Based Industrial Park, where most of our existing fabs are located. In the future, we might face construction delays, interruptions, infrastructure failure and delays in upgrading or expanding existing facilities, or changing our process technologies, which might adversely affect our ability to ramp up production in accordance with our schedule. Our failure to ramp up our production on a timely basis could delay the time required to recover our investments and seriously affect our profitability.

*If we are unable to obtain raw materials and equipment in a timely manner, our production schedules could be delayed and we may lose customers.*

We depend on our suppliers of raw materials. To maintain competitive manufacturing operations, we must obtain from our suppliers, in a timely manner, sufficient quantities of quality materials at acceptable prices. Although we source our raw materials from several suppliers, a small number of these suppliers account for a substantial amount of our supply of raw materials because of the consistent quality of these suppliers wafers. For example, in 2002, we purchased a majority of our 8-inch raw silicon wafers from two suppliers, Shin-Etsu Handotai and Taisil Electronic Materials Corporation. We do not have long-term contracts with most of our suppliers. From time to time, vendors have extended lead times or limited the supply of required materials to us because of capacity constraints. Consequently, from time to time, we have experienced difficulty in obtaining the quantities of raw materials we need on a timely basis.

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In addition, from time to time we may reject materials that do not meet our specifications, resulting in declines in output or manufacturing yields. We cannot assure you that we will be able to obtain sufficient quantities of raw materials and other supplies in a timely manner. If the supply of materials is substantially diminished or if there are significant increases in the costs of raw materials, we may be forced to incur additional costs to acquire sufficient quantities of raw materials to sustain our operations, which may increase our marginal costs and reduce profitability.

We also depend on a limited number of manufacturers and vendors that make and maintain the complex equipment we use in our manufacturing processes. We also rely on these manufacturers and vendors to improve our technology to meet our customers' demands as technology improves. In periods of unpredictable and highly diversified market demand, the lead times from order to delivery of this equipment can be as long as 6 to 12 months. If there are delays in the delivery of equipment or if there are increases in the cost of equipment, it could cause us to

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delay our introduction of new manufacturing capacity or technologies and delay product deliveries, which may result in the loss of customers and revenues.

*We may be 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 may therefore be subject to the risk of loss arising from fires. The risk of fire associated with these materials cannot be completely eliminated. In 1997, United Integrated Circuits, which was merged into our company in January 2000, suffered extensive fire damages which completely destroyed its fab. We maintain insurance policies to reduce losses caused by fire, including business interruption insurance. While we believe that our insurance coverage for damage to our property and disruption of our business due to fire is consistent with semiconductor industry practice, because our insurance coverage is subject to deductibles and generally only provides coverage in an amount up to the total book value of the assets insured, our insurance coverage may not be 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 temporarily reduce manufacturing capacity and reduce revenues.

*We and many of our customers and suppliers are vulnerable to natural disasters and other events outside of our control, which may seriously disrupt our operations.*

Most of our assets and many of our customers and suppliers are located in the Hsinchu Science-Based Industrial Park. We and these customers and suppliers are dependent on the infrastructure supporting the Park. Our and their operations depend on the ability to avoid damages from earthquakes, floods, droughts, power losses and similar events that affect the Park. The occurrence of any of these events could interrupt our services and cause severe damages to wafers in process. For instance, our operations stopped completely for five days in September 1999 largely because of power outage caused by a severe earthquake. After the stoppage, we spent several days to ramp up to full operations. Shortages or suspension of power supplies to the Hsinchu Science-Based Industrial Park have occasionally occurred, and have disrupted our operations. In addition, the Hsinchu area experienced a severe drought in 2001 and is likely to experience other droughts in the future. If a drought does occur and the authorities are unable to source water from alternative sources in sufficient quantity, we may be required to temporarily shut down or substantially reduce the operations of our fabs located in the Hsinchu Science-Based Industrial Park, which would seriously affect our operations.

*If we violate environmental regulations, our operations may be delayed or interrupted and our business could suffer.*

We are always subject to environmental regulations and a failure or a claim that we have failed to comply with these environmental regulations could cause delays in our production and capacity expansion and affect our public image, either of which could harm our business. In addition, as environmental regulations are becoming more comprehensive and stringent, we may incur a growing amount of capital expenditures in technology innovation and materials substitution in order to comply with such regulations, which may adversely affect our results of operations.

## **Political, Economic and Regulatory Risks**

*We face substantial political risks associated with doing business in Taiwan, particularly due to the tense relationship between Taiwan and China.*

Our principal executive offices and substantially all our assets are located in Taiwan and most of our net operating revenues are derived from our operations in Taiwan. Accordingly, our business and results of operations and the market price of our shares and ADSs may be affected by changes in Taiwan governmental policies, taxation, inflation or interest rates and by social instability and diplomatic and social developments in or affecting Taiwan which are outside of our control. Taiwan, as part of the Republic of China, has a unique international political status. The People's Republic of China asserts sovereignty over mainland China and Taiwan and does not recognize the legitimacy of the Taiwan government. Although significant economic and cultural relations have been established during recent years between Taiwan and the People's Republic of China, the government in mainland China has

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indicated that it may use military force to gain control over Taiwan if Taiwan declares independence or indefinitely delays progress towards unification as well as if any foreign power interferes in Taiwan's affairs. The People's Republic of China has threatened to take hostile actions toward Taiwan if Taiwan does not officially endorse the People's Republic of China's one China policy. Relations between Taiwan and the People's Republic of China and other factors affecting the political or economic conditions of Taiwan could substantially impact our business and the market price and the liquidity of our shares and ADSs.

***Our business depends on the support of the ROC government, and a decrease in this support may increase our labor costs and decrease our net income after tax.***

The ROC government has been very supportive of technology companies such as United Microelectronics. For instance, the ROC's labor laws and regulations do not require employees of semiconductor companies, including our company, to be unionized, and permit these employees to work shifts of 10 hours each day on a two days on, two days off basis. We cannot assure you, however, that these labor laws and regulations will not change in the future. In the event that the ROC government requires our employees to be unionized or decreases the number of hours our employees may work in a given day, our labor costs may increase significantly which could result in lower margins.

We, like many ROC technology companies, have benefited from substantial tax incentives provided by the ROC government. In 2002, such incentives resulted in a tax credit in the amount of NT\$1,041 million (US\$30 million). If these incentives are curtailed or eliminated, our net income after tax may decrease substantially.

***The trading price of the shares and ADSs may be adversely affected by the general activities of the Taiwan Stock Exchange and US stock exchanges, the trading price of our shares, increases in interest rates and the economic performance of Taiwan.***

Our shares are listed on the Taiwan Stock Exchange. The trading price of our ADSs may be affected by the trading price of our shares on the Taiwan Stock Exchange and the economic performance of Taiwan. The Taiwan Stock Exchange is smaller and, as a market, more volatile than the securities markets in the United States and a number of 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 decade, the Taiwan Stock Exchange Index peaked at 10,393.59 in February 2000 and subsequently fell to a low of 3,411.68 in September 2001. On March 13, 2000, the Taiwan Stock Exchange Index experienced a 618-point drop, which represented the single largest decrease in the Taiwan Stock Exchange Index in its history. During 2002, the Taiwan Stock Exchange Index peaked at 6,484.93 on April 22, 2002, and reached a low of 3,845.76 on October 11, 2002. On May 15, 2003, the Taiwan Stock Exchange Index closed at 4,331.24, and the daily closing value of our shares was NT\$20.9 per share. The Taiwan Stock Exchange is particularly volatile during times of political instability, such as when relations between Taiwan and the People's Republic of China are strained. Moreover, the Taiwan Stock Exchange has experienced problems such as market manipulation, insider trading and payment defaults, and the government of Taiwan has from time to time intervened in the stock market by purchasing stocks listed on the Taiwan Stock Exchange. The recurrence of these or similar problems could decrease the market price and liquidity of the shares and ADSs.

From September 19, 2000, the commencement date of the listing of our ADSs on the New York Stock Exchange, to May 15, 2003, daily reported closing prices of our ADSs ranged from US\$15.19 per ADS to US\$2.93 per ADS. The market price of the ADSs may also be affected by general trading activities on the US stock exchanges, which recently have experienced significant price volatility with respect to shares of technology companies. Fluctuation in interest rates and other general economic conditions may also have an effect on the market price of the ADSs.

*Currency fluctuations could increase our costs relative to our revenues, which could adversely affect our profitability.*

Over half of our net operating revenues are denominated in currencies other than New Taiwan dollars, primarily US dollars and Japanese Yen. On the other hand, over half of our costs of direct labor, raw materials and overhead are incurred in New Taiwan dollars. Although we hedge a portion of the resulting net foreign exchange position through the use of forward exchange contracts, we are still affected by fluctuations in exchange rates among the US

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dollar, the Japanese Yen, the New Taiwan dollar and other currencies. Any significant fluctuation in exchange rates may be harmful to our financial condition. In addition, fluctuations in the exchange rate between the US dollar and the New Taiwan dollar will affect the US dollar value of the ADSs and the US dollar value of any cash dividends we pay, which could have a corresponding effect on the market price of the ADSs.

### **Risks Related to the Shares and ADSs and Our Trading Markets**

*We may be required to make large open market purchases of our shares pursuant to the terms of our Zero Coupon Convertible Bonds due 2004, which could adversely affect our financial condition and the market value of the shares and ADSs.*

We offered our Zero Coupon Convertible Bonds due 2004 in December 2001. The shares, which will underlie the ADSs into which our Zero Coupon Convertible Bonds due 2004 are convertible, are currently held by us as treasury shares. As of the date of the offering of our Zero Coupon Convertible Bonds due 2004, we had 129.035 million authorized shares held by us as treasury shares for delivery upon the conversion of our Zero Coupon Convertible Bonds due 2004 into shares or for deposit into our ADS program, which number we believe is sufficient for delivery as prescribed by the indenture dated December 12, 2001 governing our Zero Coupon Convertible Bonds due 2004 upon exercise of all conversion rights with respect to all of our Zero Coupon Convertible Bonds due 2004. If more than 129.035 million shares are required to be delivered by us in connection with the exercise of all conversion rights or conversion rights associated with any other bonds to be issued by us, we may make open market purchases of our shares or, to the extent future changes to ROC laws and regulations permit, issue new shares in order for the delivery of sufficient numbers of shares to holders of our Zero Coupon Convertible Bonds due 2004 or for deposit into our ADS program, as the case may be, upon conversion at the time when a holder of our Zero Coupon Convertible Bonds due 2004 exercises its conversion rights.

We are not allowed under ROC law to pay dividends on our treasury shares. Under the terms of the indenture, from time to time and at our discretion, we may make open market purchases of our shares or, to the extent future changes to ROC laws and regulations permit, issue new shares to offset the dilutive effects caused by certain events that result in adjustments to the conversion price of our Zero Coupon Convertible Bonds due 2004 under the indenture on the number of shares we will be obligated to deliver to holders of our Zero Coupon Convertible Bonds due 2004 or for deposit into our ADS program, as the case may be, upon conversion at the time when a holder of our Zero Coupon Convertible Bonds due 2004 exercises its conversion rights.

We may have to spend significant amounts of capital, and any such purchases may occur at prices exceeding the conversion price of our Zero Coupon Convertible Bonds due 2004 in effect at such time, which could adversely affect our financial condition and the price of the shares and ADSs.

*Restrictions on the ability to deposit shares into our ADS program may adversely affect the liquidity and price of the ADSs.*

The ability to deposit shares into our ADS program is restricted by ROC law. Under current ROC law, no person or entity, including you and us, may deposit shares into our ADS program without specific approval of the Securities and Futures Commission of the ROC except for the deposit of the shares into our ADS program and for the issuance of additional ADSs in connection with:

- (1) distribution of share dividends or free distribution of our shares;



- (2) exercise of the preemptive rights of ADS holders applicable to the shares evidenced by ADSs in the event of capital increases for cash; or
- (3) purchases of our shares in the domestic market in Taiwan by the investor directly or through the depositary and delivery of such shares to the custodian for deposit into our ADS program, subject to the following conditions: (a) the depositary may accept deposit of those shares and issue the corresponding number of ADSs with regard to such deposit only if the total number of ADSs outstanding after the deposit does not exceed the number of ADSs previously approved by the

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Securities and Futures Commission of the ROC, plus any ADSs issued pursuant to the events described in (1) and (2) above; and (b) this deposit may only be made to the extent previously issued ADSs have been cancelled and the corresponding shares which are withdrawn from our ADS facility by holders have been sold in the domestic market in Taiwan.

Such limitations will not apply to the shares deliverable in the form of ADSs immediately upon conversion of our Zero Coupon Convertible Bonds due 2004, for which such Securities and Futures Commission approval has already been obtained. As a result of the limited ability to deposit shares into our ADS program, the prevailing market price of our ADSs on the New York Stock Exchange may differ from the prevailing market price of the equivalent number of our shares on the Taiwan Stock Exchange.

*Holders of our ADSs will not have the same voting rights as the holders of our shares, which may affect the value of your investment.*

Except as described in this annual report and in the deposit agreement, holders of our ADSs will not be able to exercise voting rights attaching to the shares evidenced by our ADSs on an individual basis. Holders of our ADSs will appoint the depository or its nominee as their representative to exercise the voting rights attaching to the shares represented by the ADSs. The voting rights attaching to the shares evidenced by our ADSs must be exercised as to all matters brought to a vote of shareholders collectively in the same manner.

If holders of at least 51% of the ADSs outstanding at the relevant record date instruct the depository to vote in the same manner regarding a resolution, including election of directors and/or supervisors, the depository will appoint our Chairman, or his designee, to represent the ADS holders at the shareholders' meetings and to vote the shares represented by the ADSs outstanding in the manner so instructed. If by the relevant record date the depository has not received instructions from holders of ADSs holding at least 51% of the ADSs to vote in the same manner for any resolution, then the holders will be deemed to have instructed the depository to authorize and appoint our Chairman, or his designee, to vote all the shares represented by ADSs at his sole discretion, which may not be in your interest.

*The rights of holders of our ADSs to participate in our rights offerings may be limited, which may cause dilution to their holdings.*

We may from time to time distribute rights to our shareholders, including rights to acquire our securities. Under the deposit agreement, the depository will not offer those rights to ADS holders unless both the rights and the underlying securities to be distributed to ADS holders are either registered under the Securities Act or exempt from registration under the Securities Act. We are under no obligation to file a registration statement with respect to any such rights or underlying securities or to endeavor to cause such a registration statement to be declared effective. Accordingly, holders of our ADSs may be unable to participate in our rights offerings and may experience dilution in their holdings.

*Our public shareholders may have more difficulty protecting their interests than they would as shareholders of a US corporation.*

Our corporate affairs are governed by our articles of incorporation and by laws governing ROC corporations. The rights of our shareholders to bring shareholders' suits against us or our board of directors under ROC law are much more limited than those of the shareholders of US corporations. Therefore, our public shareholders may have more difficulty protecting their interests in connection with actions taken by our management, members of our board of directors or controlling shareholders than they would as shareholders of a US corporation. Please refer to Item 10. Additional Information B. Memorandum and Articles of Association Rights to Bring Shareholders' Suits included elsewhere in this annual report for a detailed discussion of the rights of our shareholders to bring legal actions against us or our directors under ROC law.



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*Holders of our ADSs will be required to appoint several local agents in Taiwan if they withdraw shares from our ADS program and become our shareholders, which may make ownership burdensome.*

Non-ROC persons wishing to withdraw shares represented by their ADSs from our ADS program and hold our shares represented by those ADSs are required under current ROC laws and regulations to appoint an agent, who also serves as a tax guarantor, in Taiwan for filing tax returns and making tax payments on their behalf. A tax guarantor must meet certain qualifications set by the Ministry of Finance of the ROC and, upon appointment, becomes a guarantor of the holder's ROC tax obligations. Holders wishing to repatriate profits derived from the sale of shares received upon the withdrawal of shares or cash dividends or interest derived from any such shares, will be generally required to submit evidence of appointment of a tax agent and the approval of the appointment by the ROC tax authorities. We cannot assure you that you will be able to appoint and obtain approval for a tax agent in a timely manner.

Under ROC law and regulations, citizens of the People's Republic of China are not permitted to hold our shares or withdraw shares represented by ADSs from our ADS program.

In addition, under current ROC law, holders of our ADSs who elect to withdraw our shares will be required to appoint a local agent in Taiwan to, among other things, open a securities trading account with a local securities brokerage firm, remit funds and exercise shareholders' rights. They must also appoint a local bank to act as custodian for handling confirmation and settlement of trades, safekeeping of securities and cash proceeds and reporting and declaration of information. Without this local agent, the custodian and the opening of the trading account, they will not be able to hold, sell or otherwise transfer our shares on the Taiwan Stock Exchange.

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**Table of Contents****ITEM 4. INFORMATION ON THE COMPANY****A. History and Development of the Company**

Our legal and commercial name is United Microelectronics Corporation, commonly known as UMC. We were incorporated under the ROC Company Law as a company limited by shares in 1980 and our shares were listed on the Taiwan Stock Exchange in 1985. Our principal executive office is located at No. 3 Li-Hsin Road II, Science-Based Industrial Park, Hsinchu, Taiwan, Republic of China, and our telephone number is 886-3-578-2258. Our Internet Web site address is *www.umc.com*. The information on our Web site is not part of this annual report. Our ADSs have been listed on the New York Stock Exchange under the symbol UMC since September 19, 2000.

We are one of the world's largest independent semiconductor foundries and a leader in semiconductor manufacturing process technologies. Our primary business is the manufacture, or fabrication, of semiconductors, sometimes called chips or integrated circuits, for others. Using our own proprietary processes and techniques, we make chips to the design specifications of our many customers. Our company maintains a diversified customer base across industries, including communication, consumer electronics, computer and memory, while continuing to focus on manufacturing for high growth, large volume applications, including networking, telecommunications, Internet, multimedia, personal computers and graphics. We generate a significant amount of our operating revenues from customers who are in the communication, consumer electronics and computer industries. We also manufacture several semiconductor memory products based on our customers' specifications. Our products for communication, consumer electronics, computer, memory and other applications generated 31.3%, 30.8%, 27.3%, 8.9% and 1.7%, respectively, of our net operating revenues for 2002. We focus on the development of leading mass-producible manufacturing process technologies. We were among the first in the foundry industry to go into commercial operation with such advanced capabilities as producing integrated circuits with line widths of 0.25, 0.18 and 0.15 micron. Moreover, we have developed our own 0.13 micron and 90-nanometer process technologies with both fluoridated silicon glass, or FSG, and low-k dielectric insulation as well as copper metal wiring layers. Our 0.18 micron and below technologies have contributed to approximately 26.7% of our total net operating revenues in 2002, compared to 18% in 2001. We believe such technologies will better serve the needs of advanced customer chip designs with high performance and low power consumption. We set up a special development team in early 2002 with the primary focus on the 65-nanometer technology. In addition, our other development teams have been developing technologies including silicon on insulator, or SOI, strained silicon devices and advanced modules such as high-k dielectric insulator, raised source and drain and advanced optical proximity correction, or OPC. We believe our superior process technologies enable us to offer our customers significant performance, lead time, cost and other competitive advantages.

We provide high quality service based on our performance. We address our customers' needs using our advanced technology and proven methodology to achieve fast cycle times, high yields, production flexibility and close customer communication. For example, we select and configure our clean rooms and equipment, and develop our processes, to maximize flexibility in meeting and adapting to rapidly changing customer and industry needs. As a result, our cycle times, or the period from customer order to wafer delivery, and our responsiveness to customer request changes are among the fastest in the dedicated foundry industry. Our design service team actively cooperates with the customers and vendors of libraries, cells and intellectual property offerings to identify early in the product cycle the offerings needed by our customers and to ensure that these coordinated offerings are available to our customers in silicon verified form in a streamlined and easy to utilize manner. This enables a timely delivery of service offerings from the earliest times in the customer design cycle, resulting in shorter time-to-volume production. We also provide high quality service and engineering infrastructure. We provide our customers with real-time Internet access to their confidential production data, resulting in superior communication and efficiency.

Our production capacity is comparable to that of the largest companies in the semiconductor industry, and we believe our leading edge and high volume capability is a major competitive advantage. We have expanded our operations in Taiwan over the past several years. In 2002, we began volume production of 12-inch wafers at Fab 12A, our new 12-inch fab in Taiwan. Fab 12A currently has a monthly capacity of 8,000 12-inch wafers, equivalent to a monthly capacity of 18,000 8-inch wafers. We also have a controlling interest in UMCJ, formerly known as Nippon Foundry Inc., the first dedicated foundry in Japan, which owns one 8-inch fab in Japan. Our interest in UMCJ gives our company proximity to some of the largest integrated device manufacturers in the world, such as



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Sony Corporation, and allows our company to offer them local outsourcing of semiconductor production. In March 2001, we entered into a foundry venture agreement with EDB Investments Pte Ltd, the investment arm of the Singapore Economic Development Board, and Infineon Technologies AG to form UMCi Pte Ltd, or UMCi, a joint venture to construct and operate a 12-inch fab in Singapore's Pasir Ris Wafer Fab Park. The facilities of UMCi are expected to employ advanced process technologies, ranging from 0.13 micron to 65-nanometer process technology. UMCi began to install equipment in January 2003, and plans to start pilot production by the end of 2003 for the interconnect copper layers of line qualification.

Our technology and service have attracted three dominant types of foundry industry customers: fabless design companies, integrated device manufacturers and system companies. Fabless design companies design, develop and distribute proprietary semiconductor products, but do not maintain internal manufacturing capacity. Instead, these companies depend on outside manufacturing sources. Integrated device manufacturers, in contrast, traditionally integrated all functions—manufacturing as well as design, development, sales and distribution. System companies design and develop integrated circuits to be components within their end or intermediate products and generally do not maintain internal manufacturing capacity. For example, system companies market and sell cellular telephones and/or Internet appliances into which they incorporate semiconductor products.

Our primary end customers, in terms of our sales revenues, include premier integrated device manufacturers, such as Advanced Micro Devices, Inc., or AMD, Infineon, Philips (VLSI), Sony Corporation, STMicroelectronics Inc. and Texas Instruments; top line system companies, such as Ericsson Microelectronics AB; and leading fabless design companies, such as ATI Technologies Inc., or ATI, Conexant Systems Inc., MediaTek Inc., Novatek Microelectronics Corp., Ltd., Qualcomm Incorporated, Realtek Semiconductor Corp. and Xilinx, Inc. For the year ended December 31, 2002, our company's top ten end customers accounted for 53.2% of our net operating revenues. We believe our success in attracting these end customers is a direct result of our commitment to high quality service and our intense focus on customer needs and performance.

## **Our Strategy**

To maintain and enhance our position as a market leader, we have adopted a business strategy with a focus on a partnership business model, designed to accommodate our customers' business objectives and needs and to promote their interests as our partners. We believe that our success and profitability are inseparable from the success of our customers. The goal in this business model is to create a network of partnerships or alliances among system and integrated device manufacturers, intellectual property and design houses, as well as foundry companies. We believe that our partners and we will benefit from the synergy generated through such long-term partnerships or alliances and the added value to be shared among the partners. The key elements of our strategy are:

***Build up Customer-focused Partnership Business Model.*** We focus on building partnership relationships with our customers, and we strive to help our customers achieve their objectives through intimate cooperation. Unlike the traditional buy-and-sell relationship between a foundry and its customer, we believe our partnership business model will help us understand our customers' requirements, and accordingly better accommodate our customers' needs in a number of ways such as customized processing and services which optimize the entire value chain (not just the foundry portion) and intellectual property-related support. We believe that this business model will enable us to deliver our service offerings to our customers at the earliest time our customers require for their design cycle, resulting in shorter time-to-market and time-to-volume production. Furthermore, we believe we will render more cost-effective services by focusing our research and development expenditures on the specific requirements of our customers. We believe our partnership business model will help us not only survive a market downturn, but also achieve a better competitive position.

***Continue to Focus on High Growth Applications and Customers.*** We believe one measure of a successful foundry company is the quality of its customers. We focus our sales and marketing on customers who are established or emerging leaders in industries with high growth potential.

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Our customers include industry leaders such as AMD, ATI, Ericsson, Infineon, MediaTek, Oki, Realtek, SanDisk, Sharp, Sony, STMicroelectronics, Texas Instruments and Xilinx. We seek to maintain and expand our relationships with these companies. We strive to demonstrate to these customers the superiority and flexibility of our manufacturing, technology and service capabilities and to provide them with production and design assistance. We are also making efforts to further diversify our customer portfolio in actively pursuing customers in the personal computer and graphics area in order



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to maintain a balanced exposure to different applications. We believe these efforts strengthen our relationships with our customers and enhance our reputation in the semiconductor industry as a leading foundry service provider.

***Maintain Our Leading Position in Mass-Produced Semiconductor Technology and Selectively Pursue Strategic Investments in New Technologies.*** We believe that maintaining and enhancing our leadership in mass-producible semiconductor manufacturing technologies is critical to attracting and retaining customers. Our reputation for technological excellence has attracted both established and emerging leaders in the semiconductor and system industries who work closely with us on technology development. In addition, we believe our superior processing expertise has enabled us to provide flexible production schedules to meet our customers' particular needs. We plan to continue to build internal research and development expertise, to focus on process development and to establish alliances with leading semiconductor companies to accelerate access to next generation technologies. We pioneered the use of copper interconnect metallurgies for the dedicated foundry industry. These copper interconnect metallurgies allow higher conductivity and lower power consumption than traditional aluminum interconnects. In 2002, we began volume production using our advanced 0.13 micron copper technology. Our extensive experience in the 0.13 micron process technology has helped smooth our transition to 90-nanometer pilot production. Many of the materials and techniques, including copper interconnects and low-k dielectric materials, that were first used in connection with the 0.13 micron technology also apply to the 90-nanometer node. Our 90-nanometer process marks further advance in our technology achievements, incorporating up to 9 copper metal layers, triple gate oxide and other advanced features. We believe our progress in the development of 90-nanometer manufacturing technology will benefit our customers in the fields of computer, communication, consumer electronics and others with special preferences in certain aspects of the products, such as the ultimate performance, density and power consumption.

We also recognize every company has limited resources and that the foundry industry is ever-evolving. Accordingly, we believe we should invest in new research and development technology intelligently and in a cost-effective manner to achieve the ultimate output of the resulting technology. In doing so, we balance (i) the rate of return of our research and development and (ii) the importance of developing a technology at the right time to enhance our competitive edge without unduly diluting our profitability. We intend to avoid investments in technologies that do not present a commercial potential for immediate mass production. We believe that to develop the earliest and most advanced semiconductor technology without regard to its potential for near term mass production may prove costly to our operations, while in the meantime, not strengthening our competitive position. We perceive a benefit to defer investment in the premature equipment needed to claim the earliest advanced technology and instead to purchase a more advanced and less expensive version of equipment from vendors who design such equipment based on pre-production lessons learned from the earliest technology.

***Maintain Scale and Capacity Capabilities to Meet Customer Requirements, with a Focus on 12-inch Wafer Facilities for Future Expansion.*** We believe that maintaining our foundry capacity with advanced technology and facilities is critical to the maintenance of our industry leadership. Our production capacity is currently among the largest of all semiconductor foundries in the world. We intend to increase our 12-inch wafer production capacity to meet the needs of our customers and to fully capitalize on the expected growth of our industry. Our future capacity expansion plans will focus on 12-inch wafer facilities in order to maintain our technology leadership. 12-inch wafers offer manufacturing advantages over 8-inch wafers because of the greater number of chips on each wafer. In addition, 12-inch wafer facilities present a more cost-effective solution in achieving an economic scale of production. We intend to carefully monitor current market conditions in order to optimize the timing of our capital spending. In 2002, we began volume production at Fab 12A, in Tainan, Taiwan. In addition, we have begun installing equipment into our UMCi fab, a 12-inch fab joint venture with EDB Investments and Infineon. Our Fab 12A is expected to employ advanced 0.18 micron to 90-nanometer process technologies, while the UMCi fab is expected to employ advanced 0.13 micron to 65-nanometer process technology. Although we currently do not have any investments in the People's Republic of China, we are currently evaluating opportunities to expand our wafer fabrication business into the People's Republic of China. Our initial budget for purchases of semiconductor manufacturing equipment for 2003 is approximately US\$500 million. Our efforts in increasing our production capacity raised our total production capacity from approximately 175,000 8-inch wafer equivalents per month in December 1999 to approximately 257,000 8-inch wafer equivalents per month in December 2002. Our annual total production capacity reached 2,978,000 8-inch wafer equivalents in 2002.

**Table of Contents****B. Business Overview****Manufacturing**

To maintain a leading position in the foundry business, we have placed great emphasis on achieving and maintaining a high standard of manufacturing quality. As a result, we seek to design and implement manufacturing processes that produce consistent, high manufacturing yields to enable our customers to estimate, with reasonable certainty, how many wafers they need to order from us. In addition, we continuously seek to enhance our production capacity and process technologies, two important factors that characterize a foundry's manufacturing capability. Our large production capacity and advanced process technologies enable us to provide our customers with volume production and flexible and quick-to-market manufacturing services. All of our fabs operate 24 hours per day, seven days per week. Substantially all maintenance at each of the fabs is performed concurrently with production.

The following table sets forth operational data of each of our manufacturing facilities.

	<b>Fab 6A</b>	<b>Fab 8AB(1)</b>	<b>Fab 8C</b>	<b>Fab 8D(2)</b>	<b>Fab 8E</b>	<b>Fab 8F</b>	<b>Fab 12A</b>	<b>UMCJ</b>	<b>UMCi</b>
Commercial production commenced	1989	1995 for the module formerly named Fab 8A; 1996 for the module formerly named Fab 8B	1998	2000	1998	2000	2002	1996	(3)
Estimated current full capacity(4)(5)(6)	29,000 wafers per month	72,000 wafers per month	28,000 wafers per month	19,000 wafers per month	31,000 wafers per month	30,000 wafers per month	18,000 wafers per month	30,000 wafers per month	
Wafer size	6-inch (150mm)	8-inch (200mm)	8-inch (200mm)	8-inch (200mm)	8-inch (200mm)	8-inch (200mm)	12-inch (300mm)	8-inch (200mm)	12-inch (300 mm)
Clean room(7)	4,850 sq. meters Class-10	12,430 sq. meters Class-0.1	7,850 sq. meters Class-0.1	10,170 sq. meters SMIF	12,300 sq. meters Class-0.1	11,740 sq. meters SMIF	40,704 sq. meters SMIF	7,543 sq. meters Class-0.1	20,000 sq. meters SMIF

(1) Consists of two modules, formerly named Fab 8A and Fab 8B, respectively.

(2) Also referred to as Central R&D Fab, or CRD Fab.

(3) Planned to start pilot production by the end of 2003 for the interconnect copper layers of line qualification.

(4) As of December 31, 2002.

(5) Measured in 8-inch equivalents.

(6) The capacity of a fab is determined 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.

(7) Class-10 means a standard of air purity under which the amount of dust is limited to fewer than ten particles of 0.1 micron or greater per cubic foot of air. Class-0.1 means a standard of air purity under which the amount of dust is limited to fewer than 0.1 particle of dust per cubic foot of air. SMIF is an advanced system, which isolates and keeps clean the manufacturing environment surrounding integrated circuits produced, rather than the entire plant. Manufacturers generally guarantee an SMIF environment to have less than one particle of

0.1 micron or greater per cubic foot of air.

In the fourth quarter of 2000, we completed construction of Fab 12A in Tainan, Taiwan and began volume production at this 12-inch fab in 2002. Fab 12A currently has a capacity of 8,000 12-inch wafers per month, equivalent to 18,000 8-inch wafers per month.

In March 2001, we entered into a foundry venture agreement with EDB Investments and Infineon, relating to the formation of UMCi, a joint venture in Singapore to construct and operate a 12-inch fab in Singapore's Pasir Ris Wafer Fab Park. UMCi began to install equipment in January 2003, and plans to start pilot production by the end of 2003 for the interconnect copper layers of line qualification. When completed for commercial production, we expect that this fab will have a production capacity of 40,000 12-inch wafers per month.

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The following table sets forth the size and primary use of our facilities and whether such facilities, including land and buildings, are owned or leased. All land in the Hsinchu and Tainan Science-Based Industrial Parks is leased from the ROC government.

<b>Location</b>	<b>Size (Land/ Building)</b>	<b>Primary Use</b>	<b>Owned or Leased (Land/Building)</b>
Fab 6A, No. 10, Innovation Rd. I, Hsinchu Science-Based Industrial Park	27,898/34,981  (in square meters)	6-inch wafer production	Leased (expires in February 2007)/Owned
Fab 8AB(1), No. 3 Li-Hsin Rd. II, Hsinchu Science-Based Industrial Park	62,114/81,751	8-inch wafer production	Leased (expires in March 2014)/Owned
Fab 8C, No. 6, Li-Hsin Rd. III, Hsinchu Science-Based Industrial Park	9,007/28,984	8-inch wafer production	Leased (expires in March 2016)/Owned
Fab 8D(2), No. 8, Li-Hsin Rd. III, Hsinchu Science-Based Industrial Park	9,089/29,181	8-inch wafer production	Leased (expires in March 2016)/Owned
Fab 8E, No. 17, Li-Hsin Rd., Hsinchu Science-Based Industrial Park	35,000/74,067	8-inch wafer production	Leased (expires in February 2016)/Owned
Fab 8F, No. 3, Li-Hsin Rd. VI, Hsinchu Science-Based Industrial Park	24,180/65,744	8-inch wafer production	Leased (expires in February 2018)/Owned
Fab 12A, No. 18, Nan-Ke Rd. II, Tainan Science-Based Industrial Park	56,000/165,607	12-inch wafer production	Leased (expires in October 2017)/Owned
United Tower, No. 3, Li-Hsin Rd. II, Hsinchu	5,737/85,224	Administration office	Leased (expires in March 2014)/Owned

Science-Based Industrial Park

Tunhwa South Rd. Office, 166/2,221 Administration office Owned/Owned

3F, No. 76, Sec. 2, Tunhwa South Rd.,

Taipei

Testing Building, 10,762/17,573 Leased to several companies Owned/Owned

No.1, Chin-Shan, St. 7,

Hsinchu

- 
- (1) Consists of two modules, formerly named Fab 8A and Fab 8B, respectively.
  - (2) Also referred to as Central R&D Fab, or CRD Fab.

***Process Technology***

Process technologies are the set of specifications and parameters that we implement for manufacturing the critical dimensions of the patterned features of the circuitry of semiconductors. Our process technologies are currently among the most advanced in the foundry industry. These advanced technologies have enabled us to provide flexible production schedules to meet our customers' particular needs.

The continued enhancement of our process technologies has enabled us to manufacture semiconductor devices with smaller geometries, allowing us to produce more dice on a given wafer. For example, in 1997 we became one of the first foundries to produce semiconductor products using 0.25 micron process technology, and in 1999 we were among the first foundries to offer 0.18 micron process services. In addition, we pioneered the use of copper

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interconnect metallurgies for the dedicated foundry industry. These copper interconnect metallurgies allow better reliability and higher conductivity than traditional aluminum interconnects. We began volume production using 0.13 micron process technology in 2002. Our extensive experience in the 0.13 micron process technology has helped smooth our transition to 90-nanometer pilot production. Many of the materials and techniques, including copper interconnects and low-k dielectric materials, that were first used in connection with the 0.13 micron process technology also apply to the 90-nanometer node. Our 90-nanometer process marks further advance in our technology achievements, incorporating up to 9 copper metal layers, triple gate oxide and other advanced features. We believe our progress in the development of 90-nanometer process technology will benefit our customers in the fields of computer, communication, consumer electronics, and others with special preferences in certain aspects of the products, such as the ultimate performance, density and power consumption.

The table below sets forth our actual process technology range, categorized by line widths, or the minimum physical dimensions of the transistor gate of integrated circuits in production by each fab, for 2002, and the estimated annual full capacity of each fab, actual total annual output and capacity utilization rates for 2000, 2001 and 2002:

<b>Fab</b>	<b>Year ended</b>	<b>Year ended December 31,</b>		
	<b>December 31,</b>			
	<b>2002</b>			
	<b>Range of Process</b>			
	<b>Technologies</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
		<b>(in thousands of 8-inch wafer equivalents, except</b>		
	<b>(in microns)</b>	<b>percentages)</b>		
5A(1)		33		
6A	3.5 to 0.5	348	345	349
8AB(2)	0.5 to 0.25	926	943	853
8C	0.35 to 0.15	416	460	355
8D(3)	0.25 to 0.09	94	290	214
8E	0.5 to 0.18	373	474	376
8F	0.25 to 0.15	139	351	312
12A	0.18 to 0.13		22	119
UMCJ	0.5 to 0.18	256	370	400
Total estimated capacity		2,585	3,255	2,978
Total output (actual)		2,589	1,518	1,941
Capacity utilization		100.0%	46.6%	65.2%

- (1) A 5-inch fab sold in the second quarter of 2000.
- (2) Consists of two modules, formerly named Fab 8A and Fab 8B, respectively.
- (3) Also referred to as Central R&D Fab, or CRD Fab.

The table below sets forth a breakdown of number and percentage of wafer output by process technologies for 2000, 2001 and 2002. We began commercial operation of our 0.13 micron and 0.15 micron process technologies in the first quarter of 2002 and the fourth quarter of 2000, respectively.

**Year ended December 31,**

Technology	2000		2001		2002	
(in microns)	(in thousands of 8-inch wafer equivalents, except percentages)					
0.13					27	1.4%
0.15	1	0.0%	15	1.0%	75	3.9
0.18	206	8.0	142	9.4	247	12.7
0.25	634	24.5	411	27.0	429	22.1
0.35	1,106	42.7	528	34.8	735	37.9
0.50 or higher	642	24.8	422	27.8	428	22.0
Total	2,589	100.0%	1,518	100.0%	1,941	100.0%

We primarily manufacture semiconductors using CMOS process. CMOS is the most widely used process technology because it requires lower power than other technologies and allows dense placement of components onto

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a single semiconductor. The low power consumption and high density characteristics of the CMOS process allow the continued development of high performance semiconductors that are smaller and faster. We also manufacture semiconductors using BiCMOS technology, which combines bipolar's attribute of high speed with the high density and lower power consumption of CMOS.

In response to the growing trend in the market for system-on-chip, or SOC, products, we have started to develop system integration technologies such as embedded memory macro, RF and mixed-signal processes, in order to accommodate the need of SOC designers.

### ***Capacity***

The fabs in Taiwan we own directly are named Fab 6A, Fab 8AB, Fab 8C, Fab 8D, Fab 8E and Fab 8F, all of which are located in the Hsinchu Science-Based Industrial Park in Taiwan, and Fab 12A, which is located in the Tainan Science-Based Industrial Park in Taiwan. Fab 8AB consists of two modules, formerly named as Fab 8A and Fab 8B, respectively. We also have a controlling interest in UMCJ, which owns one 8-inch fab in Japan. In early 2002, our previously named Fab 8D was combined with our research and development division. Therefore, we now also refer to such fab as Central R&D Fab, or CRD Fab. Fab 6A commenced production in 1989 and Fab 8A (currently part of Fab 8AB) commenced production in 1995. In 1995, we established three foundry ventures with 11 leading fabless design companies, including Xilinx, Trident and Alliance, to establish state-of-the-art 8-inch fabs. We owned an approximately 40% equity interest in each of these foundry ventures. Assisted by capital contributions made by our partners, we were able to expand our capacity quickly while reducing our capital risk. Three of our fabs, a fab formerly named Fab 8B (currently part of Fab 8AB), Fab 8C and Fab 8D, were established under these foundry ventures and began commercial production in 1996, 1998 and 2000, respectively. The commencement of commercial operations of Fab 8D was delayed because of a fire in 1997 that substantially damaged the fab. In 1998, we obtained management control over UTEK Semiconductor, a publicly listed company in Taiwan, which operated an 8-inch fab that was later renamed Fab 8E, to further increase our capacity. Our capacity increased further in the first quarter of 1999 when we acquired an approximate 52.3% in equity interest and management control of UMCJ.

Our future expansion plans will focus primarily on 12-inch wafer facilities in order to maintain our technology leadership. Although we currently do not have any plan to expand our 8-inch capacity, we may from time to time evaluate all expansion opportunities that we believe will benefit our shareholders, including acquisition of other company's existing facilities, potentially including 8-inch equipment and/or an 8-inch fab. In the fourth quarter of 2000, we completed construction of Fab 12A, a 12-inch fab in Tainan, Taiwan. We began volume production of 12-inch wafers at Fab 12A in 2002. Fab 12A currently has a capacity of 8,000 12-inch wafers per month, equivalent to 18,000 8-inch wafers per month. In addition, we entered into a foundry venture agreement with EDB Investments and Infineon to form UMCi to construct and operate a 12-inch fab in Singapore's Pasir Ris Wafer Fab Park. The facilities of UMCi are expected to employ advanced process technologies, ranging from 0.13 micron to 65-nanometer. UMCi began to install equipment in January 2003, and plans to start pilot production by the end of 2003 for the interconnect copper layers of line qualification. When completed for commercial production, we expect that this fab will have a production capacity of 40,000 12-inch wafers per month.

We have endeavored to maintain and enhance our capacity utilization rates. Periodic industry downturns, such as the downturn we experienced since late 2000, have had a material adverse effect on our and industry-wide utilization rates. However, we believe that our improved production efficiencies and greater diversification of customer base and product mix reduce our susceptibility to such impact.

### ***Equipment***

Because the effectiveness and efficiency of our manufacturing processes greatly depend on the quality and technology of our equipment, our policy is to purchase equipment that can fully utilize our existing and anticipated next-generation process technologies. The principal equipment



we use to manufacture semiconductor devices are steppers, cleaners and track equipment, inspection equipment, etchers, furnaces, wet stations, strippers, implanters, sputters, CVD equipment, probers and testers. Other than an immaterial amount of equipment we lease for the use of our fabs in Taiwan, we own all of our equipment.

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Our policy on equipment purchases is to purchase from a small number of qualified vendors to assure consistency. Due to this policy, our equipment is mostly of consistent quality and capable of delivering similar performance.

In implementing our capacity expansion and technology advancement plans, we expect to make a number of purchases of equipment required to provide foundry services. Some of the equipment is available from a limited number of vendors and/or is manufactured in relatively limited quantities, and some equipment has only recently been developed. We believe that our relationships with equipment suppliers are good and that we can leverage our position as a major purchaser of semiconductor manufacturing equipment to purchase equipment on better terms, including shorter lead times, than many other foundries.

Although we have not in the past experienced any material problems in procuring the latest generation equipment on a timely basis, the expansion of fabrication facilities planned or announced by us and other semiconductor companies may put additional pressure on the supply of advanced equipment and maintenance services for such equipment. In periods of unpredictable and highly diversified market demand, the lead times from order to delivery of such equipment can be as long as 6 to 12 months. We seek to manage this process through early reservation of appropriate delivery slots and constant communications with our suppliers as well as by utilizing our good relationships with the vendors.

### ***Raw Materials***

Our manufacturing processes use many raw materials, primarily silicon wafers, chemicals, gases and various types of precious sputtering targets. These raw materials, with the exception of wafers, are generally available from several suppliers. Our policy with respect to raw material purchases, similar to that for equipment purchases, is to procure materials from a small number of qualified vendors who we believe produce high quality materials. We generally do not have any long-term supply contracts with our vendors.

Our general inventory policy is to maintain sufficient stock of each principal raw material for two-weeks' production and rolling forecasts of near-term requirements received from customers. In addition, we have agreements with several key material suppliers under which they hold similar levels of inventory in their warehouses for our use. However, we are not under any obligation to purchase raw material inventory that is held by our vendors for our benefit until we actually order it. We typically work with our vendors to forecast our raw material requirements on a quarterly basis, with indicative pricing generally set on a quarterly basis. The actual purchase price is generally determined based on the prevailing market conditions. In the past, prices of our principal raw materials have not been volatile to a material degree. Although we have not experienced any shortage of raw materials that had a material effect on our operations, and supplies of raw materials we use currently are adequate, shortages could occur in various critical materials due to interruption of supply or an increase in industry demand.

The most important raw material used in our production processes is silicon wafer, which is the basic raw material from which integrated circuits are made. The principal suppliers for our wafers are Taisil, Shin-Etsu Handotai, or SEH, Komatsu Ltd. of Japan and MEMC Electronic Materials of Germany. We have in the past obtained and believe that we will continue to be able to obtain a sufficient supply of silicon wafers. We believe that we have close working relationships with our wafer suppliers. Based on such long-term relationships, we believe that these major suppliers will use their best efforts to accommodate our demand.

We use a large amount of water in our manufacturing process. We obtain water supplies from government-owned entities and recycle approximately 90% of the water that we use in production. We also use substantial amounts of dual loop electricity supplied by Taiwan Power Corporation and Hsin Yu Energy Development Corporation in the manufacturing process. We maintain back-up generators that are capable of providing adequate amounts of electricity to maintain the required air pressure in our clean rooms in case of power interruptions. In the meantime, we have chosen the more reliable uninterruptible power supply, or UPS, to cover power deficiency. During the past several years, we

believe these new devices have effectively prevented business interruption losses caused by power outages and emergency situations.

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### ***Quality Control***

We believe that our advanced process technologies and reputation for high quality and reliable services and products have been important factors in attracting and retaining leading international and domestic semiconductor companies as customers.

Our process technologies and fabrication facilities have been qualified by customers after satisfying stringent quality and reliability standards. Generally our customers, in addition to conducting their own product qualifications, will perform on-site fab audits. These audits normally address quality management, documentation control, procurement and material incoming inspection, process and material control, product final inspection, calibration and certification training systems. These audits include both data/record review and physical fabrication area tours for verification of conformity to specifications and procedures. If the audit findings are satisfactory, then the fab facility is termed qualified for proceeding with further product qualification and later mass production. Most of our established customers, including AMD, ATI, Conexant, Ericsson, Infineon, Motorola, Philips (VLSI), Qualcomm, Sharp, STMicroelectronics, Trident, Xilinx and 3Com, have audited our fabrication facilities and our fabs have successfully passed their qualification requirements.

Our policy is to implement quality control measures to ensure high production yields at our facilities and production of reliable products for our customers. We test and monitor quality of raw materials, process and products at various stages in the manufacturing process before shipment to customers. Reliability assurance also includes in-process wafer level reliability monitoring as well as packaged level reliability compliance check.

In addition, we maintain a Quality and Reliability Assurance Division in Taiwan with 313 engineers, technicians and other staff as of April 30, 2003. This division is responsible for incoming materials quality inspection, in process quality audit, outgoing product quality inspection, quality system and standards maintenance, reliability assurance, reliability engineering and customer satisfaction.

All our Taiwan based fabs are QS-9000 certified and also registered under the Year 2000 version of ISO9001. QS-9000 sets the criteria for developing a fundamental quality management system. It focuses on continuous improvement, defect prevention and the reduction of variation and waste. The Year 2000 version of ISO9001 emphasizes customer satisfaction and resource management.

### **Our Services and Products**

We primarily engage in wafer fabrication for foundry customers. To optimize fabrication services for our customers, we work closely with them as they finalize circuit design and contract for the preparation of masks to be used in the manufacturing process. We also offer our customers turnkey services by providing them with subcontracted assembly and test services. We believe that this ability to deliver a variety of foundry services in addition to wafer fabrication enables us to accommodate the needs of a full array of integrated device manufacturers, system companies and fabless design customers with different in-house capabilities.

Wafer manufacturing requires many distinct and intricate steps. Each step in the manufacturing process must be completed with precision in order for finished semiconductor devices to work as intended. The processes require taking raw wafers and turning them into finished semiconductor devices generally through five steps: circuit design, mask tooling, wafer fabrication, assembly and test. The services we offer to our customers in each of these five steps are described below.

*Circuit Design.* At this initial design stage, our engineers generally work with our customers to ensure that their designs can be successfully and cost-effectively manufactured in our facilities. We have assisted an increasing number of our customers in the design process by providing them with access to our partners' electronic design analysis tools, intellectual property and design services as well as by providing them with custom embedded memory macro-cells. In our Silicon Shuttle program, we offer customers and intellectual property providers early access to actual silicon samples with their desired intellectual property and content in order to enable early and rapid use of our advanced technologies. The Silicon Shuttle program is a multi-chip test wafer program that allows silicon verification of intellectual property elements. In the Silicon Shuttle program, several different vendors can test their

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intellectual property using a single mask set, greatly reducing the cost of silicon verification for us and the participating vendors. The high cost of masks for advanced processes makes this program attractive to intellectual property vendors. ARM Limited, Artisan Components, MIPS Technologies International, Monolithic System Technology and Virtual Silicon Technologies have utilized our Silicon Shuttle program. In our ASIC Plus program, we coordinate with leading suppliers of intellectual property, design and ASIC services to ensure their offerings are available to our customers in an integrated, easy to use manner which matches customers' need to our technologies.

*Mask Tooling.* Our engineers generally assist our customers to design and/or obtain masks that are optimized for our advanced process technologies and equipment. Actual mask production is usually provided by independent third parties specializing in mask tooling.

*Wafer Fabrication.* As described above, our manufacturing service provides all aspects of the wafer fabrication process by utilizing a full range of advanced process technologies, including 0.15 and 0.13 micron technology and copper interconnect technology. We have also made a significant progress in developing the advanced 90-nanometer and the SOC process technologies. We have been shipping customer products based on our 90-nanometer logic process since late March, 2003. During the wafer fabrication process, we perform procedures in which a photosensitive material is deposited on the wafer and exposed to light through the mask to form transistors and other circuit elements comprising a semiconductor. The unwanted material is then etched away, leaving only the desired circuit pattern on the wafer. As part of our wafer fabrication services, we also offer wafer probing services, which test, or probe, individual die on the processed wafers and identify dice that fail to meet required standards. We prefer to conduct wafer probing internally to obtain speedier and more accurate data on manufacturing yield rates.

*Assembly and Test.* We offer our customers turnkey services by providing the option to purchase finished semiconductor products that have been assembled and tested. We outsource assembly and test services to leading local assembly and test service providers, including Siliconware Precision Industries Co., Ltd. and Advanced Semiconductor Engineering Inc. in Taiwan. After final testing, the semiconductors are shipped to our customers' designated locations.

**Customers and Markets**

Our primary end customers consist of fabless design companies, integrated device manufacturers and system companies. Fabless design companies, including leading firms such as ATI, Conexant, MediaTek, Novatek, Qualcomm, Realtek, and Xilinx, have historically accounted for a majority of our revenues. We also provide our services to integrated device manufacturers, such as AMD, Infineon, Philips (VLSI), Sony, STMicroelectronics and Texas Instruments, and system companies, such as Ericsson Microelectronics. The following table presents the percentages of our net operating revenues, by types of customers during the last three years:

	Year ended December 31,		
	2000	2001	2002
<b>Customer Type</b>			
Fabless design companies	68.9%	69.7%	74.0%
Integrated device manufacturers	26.5	28.3	25.6
System companies	4.6	2.0	0.4
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

We categorize sales geographically based on the country or region in which the end customer is headquartered. When we initially began repositioning our operations as a pure foundry in 1995, a majority of our revenues had been derived from customers based in Taiwan, in part due to Taiwan's fast growing electronics industry. Since 1995, partly due to our ventures with leading US fabless design companies, as well as our increasing marketing efforts in the United States, an increasing number of US fabless design companies, integrated device manufacturers and system companies have been using our services. The following table presents a geographic breakdown of our net operating revenues, during the last three years:

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	Year ended December 31,		
	2000	2001	2002
<b>Region</b>			
North America	43.9%	37.3%	35.1%
Asia (excluding Japan)	31.2	35.6	43.2
Europe	20.0	19.3	14.1
Japan	4.9	7.8	7.6
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Although we are not dependent on any single customer, a significant portion of our net operating revenues have been generated from sales to a few customers. Our top ten end customers accounted for approximately 53.2% of our net operating revenues in 2002. MediaTek and Xilinx, in particular, each accounted for more than 10% of our net operating revenues in 2002. We believe our success in attracting these end customers is a direct result of our commitment to high quality service and our intense focus on customer needs and performance.

Our customers use our products for a variety of applications, mainly communication, consumer electronics and computer. Our products for communication, consumer electronics, computer, memory and other applications generated approximately 31.3%, 30.8%, 27.3%, 8.9% and 1.7%, respectively, of our net operating revenues in 2002.

We focus on providing a high level of customer service in order to attract customers and maintain their ongoing loyalty. Our culture emphasizes responsiveness to customer needs with a focus on flexibility, speed and accuracy throughout our manufacturing and delivery processes. Our customer-oriented approach is especially evident in two prime functional areas of customer interaction: customer design development and manufacturing services. We believe that our large production capacity and advanced process technology enable us to provide better customer service than many other foundries through shorter turn-around time, greater manufacturing flexibility and higher manufacturing yields.

We seek to interact closely with customers throughout the design development and prototyping process. Our internal design support team actively cooperates with our customers and vendors of libraries, cells and intellectual property offerings to identify the offerings needed by our customers and to ensure that these coordinated offerings are available to our customers in silicon verified form in a streamlined and easy to utilize manner. This enables a timely delivery of service offerings from the earliest times in the customer design cycle, resulting in shorter time-to-volume production. We have entered into alliances with several leading intellectual property vendors, such as Artisan Components, Faraday Technology Corporation, Monolithic System Technology, Inc., Virage Logic Corporation and Virtual Silicon Technology.

After a design moves into manufacturing production, we continue to provide ongoing customer support through all phases of the manufacturing process. The local account manager teams with a dedicated customer service representative, drawing upon marketing and customer engineering support teams at the factory as required.

In 1996, we introduced our original on-line service, through which we provided our customers secure access via the Internet to critical manufacturing data, including process step location, start date, estimated ship-out date and quantity as their products move through our fabs. In October 2000, we officially launched our web-based customer information service system, known as My UMC, which gives our customers easy access to our foundry services by providing a total online supply chain solution. My UMC offers 24-hour access to detailed account information such as manufacturing, engineering and design information through each customer's own customized start page. Some of the features available to



customers through My UMC include:

viewing the status of orders from the start of production to the final shipping stages;

viewing design layouts to shorten customers' tape out time;

gathering and downloading data for design purposes; and

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accessing online and in real-time the same manufacturing data used by our fab engineers.

My UMC provides our customers with a level of information previously enjoyed only by integrated device manufacturers that conducted each step of the manufacturing and material procurement processes internally.

We are also currently in various stages of implementing a number of electronic business projects to enhance our ability to provide online business services to our customers. These projects include:

giving customers access to information and interactive tools on our website;

creating direct system-to-system links over the Internet which will permit our customers to electronically place orders directly with us; and

providing customers with design supports through our help desk and providing customer IP/Library information.

We price our products on a per die or per wafer basis, taking into account the complexity of the technology, the prevailing market conditions, the order size, the cycle time, the strength and history of our relationship with the customer and our capacity utilization. Our main sales office is located in Taiwan, which is in charge of our sales activities in Asia. Our sales in Europe are currently made through United Microelectronics (Europe) BV, a wholly-owned subsidiary of our company based in Amsterdam. Our sales in North America are made through UMC Group (USA), our subsidiary located in Sunnyvale, California.

We designate a portion of our wafer manufacturing capacity to some of our customers primarily under two types of agreements: reciprocal commitment agreements and deposit agreements. In a reciprocal commitment agreement, the customer agrees to pay for, and we agree to supply, a specified capacity at a specified time in the future. In a deposit agreement, the customer makes in advance a cash deposit for an option on a specified capacity at our fabs for a similar period of time. Option deposits are credited to wafer purchase prices as shipments are made. If this customer does not use the specified capacity, it will forfeit the deposit but, in certain circumstances and with our permission, the customer may arrange for a substitute customer to utilize such capacity. We are also obligated in some cases to make available capacity to customers under other types of agreements, such as our capacity commitment arrangement with our venture partners as well as with Infineon in connection with our technological alliance.

We advertise in trade journals, organize technology seminars, hold a variety of regional and international sales conferences and attend a number of industry trade fairs to promote our products and services. We also publish a bi-monthly corporate newsletter for our customers.

## **Competition**

The worldwide semiconductor foundry industry is highly competitive, particularly during periods of overcapacity and inventory correction. We compete internationally and domestically with dedicated foundry service providers as well as with integrated device manufacturers and final-product manufacturers which have in-house manufacturing capacity or foundry operations. Some of our competitors have substantially greater production, financial, research and development and marketing resources than us. As a result, these companies may be able to compete

more aggressively over a longer period of time than we can. In addition, several new dedicated foundries have commenced operations and compete directly with us. Any significant increase in competition may erode our profit margins and weaken our earnings.

We believe that our primary competitors in the foundry services market are Taiwan Semiconductor Manufacturing Company Limited and Chartered Semiconductor Manufacturing Ltd., as well as the foundry operation services of some integrated device manufacturers such as IBM. New competitors such as Silterra Malaysia Sdn. Bhd., 1<sup>st</sup> Silicon (Malaysia) Sdn. Bhd., Semiconductor Manufacturing International (Shanghai) Corporation and Grace Semiconductor Manufacturing Corp. have initiated efforts to develop substantial new foundry capacity, although much of such capacity involves less cost-effective production than the 12-inch fabs for

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which we possess technical know-how. New entrants in the foundry business are likely to initiate a trend of competitive pricing and create potential overcapacity in legacy technology. The principal elements of competition in the semiconductor foundry industry include technical competence, production speed and cycle time, time-to-market, research and development quality, available capacity, manufacturing yields, customer service and price. We believe that we compete favorably with other foundries on each of these elements, particularly our technical competence and research and development capabilities.

## **Intellectual Property**

Our success depends in part on our ability to obtain patents, licenses and other intellectual property rights covering our production processes and activities. To that end, we have acquired certain patents and patent licenses and intend to continue to seek patents on our production processes. In 2002, we filed 444 patent applications worldwide, 176 of which were filed in the United States. Of the applications filed in the United States, 276 were issued by the end of 2002.

Our ability to compete also depends on our ability to operate without infringing the proprietary rights of others. The semiconductor industry is generally characterized by frequent litigation regarding patent and other intellectual property rights. As is the case with many companies in the semiconductor industry, we have from time to time received communications from third parties asserting patents that cover certain of our technologies and alleging infringement of certain intellectual property rights of others. We expect that we will receive similar communications in the future. Irrespective of the validity or the successful assertion of such claims, we could incur significant costs and devote significant management resources to the defense of these claims, which could seriously harm our company. There is no material litigation involving assertion of such claims currently pending against us.

In order to minimize our risks from claims based on our manufacture of semiconductor devices or end-use products whose designs infringe on others' intellectual property rights, we in general accept orders only from companies that we believe enjoy satisfactory reputation and for products that are not identified as risky for potential infringement claims. Furthermore, we obtain indemnification rights from customers. We also generally obtain indemnification rights from equipment vendors to hold us harmless from any losses resulting from any suit or proceedings brought against our company involving allegation of infringement of intellectual property rights on account of our use of the equipment supplied by them.

We have entered into various patent cross-licenses, joint development or research and development alliances with major technology companies, including a number of leading international semiconductor companies such as Agere Systems, IBM, Infineon, Motorola and Texas Instruments. We may choose to renew our present licenses or to obtain additional technology licenses in the future.

## **Environmental Matters**

The semiconductor production process generates gaseous wastes, liquid wastes, waste water and other industrial wastes in various stages of the manufacturing process. We have installed various types of anti-pollution equipment in our fabrication facilities to reduce, treat and, where feasible, recycle the wastes generated in our manufacturing process. We receive assistance with disposal of industrial waste from the Hsinchu Science-Based Industrial Park Administration Bureau and Southern Taiwan Science-Based Industrial Park Administration. Our operations are subject to regulation and periodic monitoring by Taiwan's Environmental Protection Administration and local environmental protection authorities.

We believe that we have adopted anti-pollution measures for the effective maintenance of environmental protection standards consistent with the practice of the semiconductor industry in Taiwan. In 2002, we spent approximately NT\$230 million for pollution control equipment, approximately NT\$60 million for waste disposal and approximately NT\$15 million for environmental monitoring. We also believe that we are in compliance in all material respects with applicable environmental laws and regulations.

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### **Environmental, Safety and Health Management Systems**

We have implemented extensive environmental, safety and health management systems. These systems enable our operations to identify applicable environmental, safety and health regulations, assist in evaluating compliance status and timely establish loss preventive and control measures. The systems we implemented in all our fabs in Taiwan have been certified as meeting the ISO 14001 and OHSAS 18001 standards. ISO 14001 consists of a set of standards that provide guidance to the management of organizations to achieve an effective environmental management system. Programs are established at manufacturing locations to ensure that all accidental spills and discharges are properly addressed. OHSAS 18001 is a recognizable occupational health and safety management system standard, which may be applied to assess and certify our management systems. Our goal in implementing ISO 14001 and OHSAS 18001 systems is to continuously improve our environmental, health and safety management.

### **Litigation**

As is the case with many companies in the semiconductor industry, we have from time to time received notices alleging infringement of intellectual property rights of others and breach of warranties. We investigate and evaluate each of these notices. Except as described below, we are not currently involved in material litigation or other proceedings.

On December 4, 2000, we filed a complaint against Silicon Integrated Systems, or SiS, in the United States District Court for the Northern District of California with respect to certain intellectual property matters. In January 2001, we filed a petition with the United States International Trade Commission, or ITC, alleging further matters against SiS. On March 12, 2003, we and SiS entered a final settlement in respect of the district court and ITC proceedings, and pursuant to that final settlement, filed requests for dismissals of the pending proceedings. Those requests have been granted, and we and SiS have agreed to a Master Cross License Agreement on terms which require payment of compensation to UMC for the use of our intellectual property.

In 1997, Oak Technology Inc. filed a lawsuit against us in the US District Court for the Northern District of California, and initiated a companion administrative law proceeding before the US International Trade Commission. Both actions claim patent infringement regarding certain types of CD-ROM controllers, and the District Court case also claims that we breached a settlement we entered into with Oak Technology in connection with the same technology. The District Court case was stayed pending an outcome in the US International Trade Commission case. The US International Trade Commission Administrative Law Judge found there was no infringement by us, and in September 1999, the US International Trade Commission affirmed this finding. Oak Technology appealed the US International Trade Commission's order on non-infringement to the Court of Appeals for the Federal Circuit, which then unanimously affirmed the US International Trade Commission's order in May 2001. Based on the Federal Circuit's opinion and on a covenant not to sue filed by Oak, the declaratory judgment patent counterclaims were dismissed from the district court case. However, Oak also seeks damages in excess of US\$750 million on its breach of contract and other claims. Although we believe that Oak's claims are without merit, we intend to vigorously defend the suit and pursue our counterclaims.

### **Risk Management**

As our management believes that management of risks involved in our manufacturing processes is an integral part of our management process and essential to our smooth and safe operation and production, we have endeavored to implement risk management strategies that are pioneering in the semiconductor industry. In 1998, we established our risk management division to comprehensively plan for and respond to emergencies and disasters. This division is now managed by a team of experienced risk management personnel.

We have been working closely with internationally renowned risk consultants in various fields to identify, analyze, and evaluate the risks commonly found in the semiconductor industry. These consultants include EQE International Inc. and VEC International Corp. in the area of seismic protection, Environmental and Occupational Risk Management, Inc., or EORM, in the area of equipment safety management and American International Underwriters, Ltd., or AIU, or Marsh Risk Consulting, or MRC, in the area of loss control audit. We believe our risk evaluation process will enable us to avoid or mitigate potential losses, and accordingly protect our company

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values. In 2001, based on the recommendation of EQE International Inc. and Vibration Engineering Consultants, we completed our seismic protection improvement projects. In 2002, we achieved a number of risk management goals. Firstly, in order to minimize the business interruption risk, we established and maintained comprehensive and integrated business continuity management protocols, covering aspects such as emergency response, crisis management and disaster recovery program. Secondly, we have implemented a new chemical and process risk evaluation procedure to ensure that all potential hazards with respect to new chemicals or processes are eliminated or mitigated. For similar purposes, we have also established a SEMI S2 evaluation procedure in connection with critical process tools and supporting equipment in all our fabs. Furthermore, we completed a special risk management project with regard to sprinkler replacement in two of our fabs, with the help from the voluntary replacement program provided by Central Sprinkler Company. Finally, in order to reduce potential losses during a power outage, we have built our own emergency power supply system with the capacity to serve more than 60% of our production capacity.

## **Insurance**

We maintain industrial all risk insurance for our buildings, facilities, equipment and inventories. The insurance for fabs and their equipment covers physical damage and business interruption losses up to their respective policy limits except for exclusions as defined in the policy. We also maintain public liability insurance for losses to third parties arising from our business operations. We believe that our insurance coverage is adequate to cover all major types of losses relevant to the semiconductor industry practice. However, significant damage to any of our production facilities, whether as a result of fire or other causes, could seriously harm our business.

## **Capital Expenditures**

For 2002, our principal capital expenditures, on an acquisition basis, consisted of the purchase of equipment of NT\$29,732 million (US\$857 million) and the purchase of land and buildings of NT\$2,552 million (US\$74 million). Our initial budget for purchases of semiconductor manufacturing equipment for 2003 is approximately US\$500 million on an unconsolidated basis. We may adjust the amount of our capital expenditures upward or downward based on cash flow from operations, the progress of our capital projects, market conditions, and our anticipation of future business outlook.

## **Our Investments**

In the past, we focused our investments in the IC-related business, which we believed would advance our technologies, enhance our service and strengthen our strategic alliance relationships. Pursuant to new investment guidelines, we plan to maintain our shareholdings in Unimicron Technology Corp., Faraday Technology Corp. and Silicon Integrated Systems because of these three companies' strategic importance to our future operations and expansion. Depending on the market conditions, we intend to gradually reduce our other investments through secondary equity offerings, exchangeable bond offerings and other measures available to our company. For example, we sold 80 million shares of AU Optronics Corp. in April 2002 in Taiwan and issued in May 2002 US\$235 million exchangeable bonds due 2007, which are exchangeable, at the option of the bondholders, into the shares or American depository shares of AU Optronics. In early June 2002, we also sold 25 million AU Optronics shares in the form of AU Optronics ADSs in connection with the U.S. initial public offering of AU Optronics. In addition, on April 2, 2002, we transferred to Hitachi all our equity interest in Trecenti, a joint venture with Hitachi to build and operate a 12-inch fab in Japan.

Unimicron Technology Corp., formerly known as World Wiser Electronics Incorporated, and a Taiwan-based manufacturer of printed circuit boards and high density interconnections, was established in January 1980. We held a 37.95% stake in Unimicron Technology Corp. as of September 30, 2001. Unimicron Technology Corp., Bestmult Industry Co. and UniMicron Technology Co. completed the merger of the three companies on October 31, 2001. Unimicron Technology Corp. was the surviving corporate entity and is expected to be one of the top three



printed circuit board manufacturing companies in Taiwan. As of March 31, 2003, we held 36.28% in Unimicron Technology. We were a founding investor in Faraday Technology, a company that offers advanced intellectual property and libraries to our foundry customers.

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In connection with the settlement of our litigations with Silicon Integrated Systems, SiS, we and SiS agreed in late 2002 to enter into a broad scope of cooperation, including, among other things, exchange of process patents, production support and our board representation in SiS. To further strengthen our relationship with SiS, we have also decided to invest in SiS. As of March 31, 2003, we held 16.18% of SiS outstanding share capital. In addition, our representatives currently hold three out of seven board seats of SiS, and John Hsuan, our chief executive officer and vice chairman, is the chairman of SiS.

The table below sets forth the principal business activities engaged in by our main affiliates that are not our consolidated subsidiaries, the dates of our initial investments in these companies and our ownership percentage and carrying amount of investments as of March 31, 2003.

Name	Principal Business Activities	Date of Initial Investments	Ownership	Carrying
				Amount of Investments
				(in NT\$ millions)
Fortune Venture Capital Corporation	Venture capital	September 1993	99.99	2,991
Unimicron Technology Corp.	Manufacture of circuit boards	January 1990	36.28	4,630
Silicon Integrated Systems	IC design and manufacture	December 2002	16.18	5,601

**Enforceability of Judgments in Taiwan**

We are a company limited by shares incorporated under the ROC Company Law. Most of our assets and most of our directors, supervisors and executive officers and experts named in the registration statement are located in Taiwan. As a result, it may be difficult for you to enforce judgments obtained outside Taiwan upon us or such persons in Taiwan.

We have been advised by our ROC counsel that any judgment obtained against us in any court outside the ROC arising out of or relating to the ADSs will not be enforced by ROC courts without further review of the merits only if any of the following situations shall apply to such final judgment:

the court rendering the judgment does not have jurisdiction over the subject matter according to ROC law;

the judgment is contrary to the public order or good morals of the ROC;

the judgment was rendered by default, except where we were personally served within the jurisdiction of the court rendering the judgment or where process was served on us with judicial assistance of the ROC; or

judgments of ROC courts are not recognized and enforceable in the jurisdiction of the court rendering the judgment on a reciprocal basis.

**C. Organizational Structure**

In January 2000, we completed a merger in which United Integrated Circuits, a subsidiary, and UTEK Semiconductor, United Silicon and United Semiconductor, our affiliates, were merged into United Microelectronics. Immediately prior to the merger, United Microelectronics and its consolidated subsidiaries owned approximately 61.6%, 12.5%, 38.8% and 42.5% of these entities, respectively, and had management control over each of them. We believe this merger has enhanced efficiencies, improved coordination and flexibility, minimized redundancies and achieved consistency in pricing. As a result of the merger, United Microelectronics has been consolidating the business and operations of these companies for financial reporting purposes since January 3, 2000, except for United Integrated Circuits, which has been consolidated since January 1, 1999.

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The following diagram shows our corporate structure immediately prior to our consolidation:

- 
- (1) This fab was combined with the fab previously named Fab 8B to become our Fab 8AB. █ equity ownership
- (2) Renamed Fab 8B in the merger. This fab was combined with the fab previously named Fab 8A to become our Fab 8AB. █ fabs owned and operated
- (3) Renamed Fab 8C in the merger.
- (4) Renamed Fab 8D in the merger. In January 2002, this fab was combined with our research and development division, and is now also referred to as Central R&D Fab or CRD Fab.
- (5) Renamed 5A, which was sold in the second quarter of 2000.
- (6) Renamed Fab 8E in the merger.
- (7) Renamed UMC JAPAN in November 2001.

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The following diagram shows our corporate structure as of March 31, 2003:

(1) Consists of two modules, formerly named Fab 8A and Fab 8B, respectively.

(2) In January 2002, this fab was combined with our research and development division. Therefore, this fab is now also referred to as Central R&D Fab or CRD Fab.

— equity ownership

— fabs owned and operated

**D. Property, Plants and Equipment**

Please refer to B. Business Overview Manufacturing for a discussion of our property, plants and equipment.

**ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS**

*Unless stated otherwise, the discussion and analysis of our financial condition and results of operations in this section apply to our financial information as prepared in accordance with ROC GAAP. You should read the following discussion of our financial condition and results of operations together with the consolidated financial statements and the notes to such statements included in this annual report. ROC GAAP varies in certain significant respects from US GAAP. These differences and their effects on our financial statements are described in note 28 to our audited consolidated financial statements included in this annual report.*

*For the convenience of readers, NT dollar amounts used in this section for, and as of, the year ended December 31, 2002 have been translated into US dollar amounts using US\$1.00=NT\$34.70, the noon buying rate of the Federal Reserve Bank of New York on December 31, 2002. The US dollar translation appears in parentheses next to the relevant NT dollar amount.*

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### Overview

We are one of the world's leading independent semiconductor foundries, providing comprehensive wafer fabrication services and technologies to our customers based on their designs. We manage our business and measure our results of operations based on a single industry segment.

We have expanded our production capacity over the past several years, increasing our monthly capacity from 175,000 8-inch wafer equivalents in December 1999 on a combined basis to approximately 257,000 8-inch wafer equivalents in December 2002 on an actual basis. Our annual total production capacity reached 2,978,000 8-inch wafer equivalents in 2002. As a result of this increase in capacity, we have benefited from larger economies of scale. The larger economies of scale when capacity utilization rate is high have better enabled us to reduce our per unit production cost, which improves margins. However, when capacity utilization rate is low, this increased capacity has led to higher per unit production cost and decreased margins.

To significantly expand our manufacturing capacity while reducing the amount of capital expenditures required to undertake the expansion, in 1995 we invested in three foundry companies, United Semiconductor, United Silicon and United Integrated Circuits, together with a total of eleven international fabless design companies. We made an aggregate of NT\$2,401 million, NT\$5,583 million, NT\$7,614 million, NT\$2,023 million and NT\$3,614 million of capital contributions to these three companies in 1995, 1996, 1997, 1998 and 1999, respectively, representing a total capital investment of NT\$21,235 million as of December 31, 1999. In return for our capital investment, we initially held approximately 40% of each of these companies' equity interest. In 1999 we increased our shareholding in United Integrated Circuits from 43% to 62% through purchase of equity interests from some of our partners. Our investments in these foundries have provided us with three additional 8-inch fabs. In addition, through these investment relationships we were also able to secure large amounts of orders from these partners and diversify our customer base, which further lowered our investment risk.

We have also acquired two unprofitable integrated device manufacturers and transformed them into dedicated foundries. In 1998, we purchased for NT\$425 million approximately 2% of the equity interest of UTEK Semiconductor, a publicly listed company in Taiwan, which operated one 8-inch fab and one 5-inch fab. In addition, in the first quarter of 1999, we acquired a 52.3% equity interest in UMCJ, formerly known as Nippon Foundry Inc., a publicly listed company in Japan, for NT\$2,598 million. UMCJ operates one 8-inch fab in Japan.

In April 2000, we sold our Fab 5A with inventory and facilities and transferred related process technology know-how for approximately NT\$1.6 billion. We sold Fab 5A to enhance our profitability as this fab had been less profitable than our other fabs due to its use of and reliance on older technology. We recognized disposal gain and technology transfer revenues which totaled NT\$581 million for this transaction in 2000.

To minimize redundancies and pricing inconsistencies associated with operating through five separate companies, on January 3, 2000, United Microelectronics completed a merger in which each of UTEK Semiconductor, United Semiconductor, United Silicon and United Integrated Circuits was merged into United Microelectronics. The total purchase price of the merger was valued at approximately NT\$42,543 million. In this section, we refer to these transactions as the merger and, unless otherwise specified, the historical financial data discussed herein refers to United Microelectronics' consolidated financial data.

In March 2001, we entered into a foundry venture agreement with EDB Investments and Infineon, relating to the formation of UMCi, to construct and operate a 12-inch fab in Singapore's Pasir Ris Wafer Fab Park. The facilities of UMCi are expected to employ advanced 0.13 micron to 65-nanometer process technologies. UMCi began to install equipment in January 2003, and plans to start pilot production by the end of 2003 for the interconnect copper layers of line qualification. When completed for commercial production, we expect that this fab will have a production capacity of 40,000 12-inch wafers per month. The expected total capital expenditure for this foundry venture is approximately

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US\$3.6 billion, which is expected to be financed by equity contributions, external sources of financing, government grants and, to a lesser extent, cash generated from operations. As of March 31, 2003, we had invested US\$161 million in UMCi and held a 49.74% equity interest in UMCi. In addition, through a voting rights and proxies agreement with Infineon and UMCi, we have voting control over an additional 15% of the ordinary shares of UMCi. Currently, our directors Robert H.C. Tsao, John Hsuan, Peter Chang and Chris Chi are directors of UMCi, and together constitute a majority of the board of directors of UMCi.

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In February 2000, we formed Trecenti Technologies, Inc., a joint venture with Hitachi to build and operate a 12-inch fab in Japan. Under the joint venture agreement, we held a 40% equity interest in Trecenti and had the right to use half of Trecenti's 12-inch fab's capacity. As of February 28, 2002, we and Hitachi agreed to discontinue the joint venture. We transferred all our 40% equity interest in Trecenti to Hitachi on April 2, 2002 and recognized a gain of NT\$1,397 million (US\$40 million) in 2002 in connection with the sale of Trecenti shares. Under our agreement with Hitachi concerning the transfer of our Trecenti shares, we surrender our rights to use capacity in Trecenti and have no further obligations to invest in the Trecenti facility.

We closed our licensed product division in August 2001. In the past, through our licensed product division, we manufactured and distributed semiconductor devices, primarily memory products in final packaged form, based on designs that we licensed from our customers. We closed our licensed product division primarily to prevent losses in the memory market and, to a lesser extent, to avoid competing with our memory customers. The losses associated with the closure of our licensed product division have been totally accounted for and should not affect our income in the future.

## **Cyclicality of the Semiconductor Industry**

As the semiconductor industry is highly cyclical, revenues varied significantly over this period. It can take several years to plan and construct a fab and bring it to operations. Therefore, during periods of favorable market conditions, semiconductor manufacturers often begin building new fabs in response to anticipated demand growth for semiconductors. In addition, after commencement of commercial operations, fabs can increase production volumes rapidly. As a result, large amounts of semiconductor manufacturing capacity typically become available during the same time period. Absent a proportional growth in demand, this increase in supply often results in semiconductor manufacturing overcapacity, which has led to sharp drops in semiconductor prices and significant capacity underutilization.

Between 1999 and 2000, as global semiconductor demand experienced substantial growth, our average selling price of semiconductor wafers and devices during that period increased. In connection with this increase in demand and selling price, several semiconductor manufacturers, including our company, announced plans to significantly expand production capacities. However, the semiconductor industry has experienced a downturn since late 2000, which resulted in overcapacity, excess inventory and reduced demand. Such industry downturn had substantially slowed down those expansion plans. Our capacity utilization rate, which was 100% in 2000, decreased to 47% in 2001, due to rapidly deteriorating demand, mainly from our customers in the communication sector. As the worldwide semiconductor industry began to stabilize, our capacity utilization rate increased to 65% in 2002 due to increased demand from the consumer electronics and wireless communication businesses. We believe that our results in 2001 and 2002 reflect the ongoing uncertainty in the global economy, conservative corporate information technology spending and low visibility with respect to end market demand.

## **Pricing**

We price our products on either a per die or a per wafer basis, taking into account the complexity of the technology, the prevailing market conditions, the order size, the cycle time, the strength and history of our relationship with the customer and our capacity utilization. Because semiconductor wafer prices tend to fluctuate frequently, we in general review our pricing on a quarterly basis. As a majority of our costs and expenses are fixed or semi-fixed, fluctuations in our products' average selling prices historically have had a substantial impact on our margins. Our average selling price declined approximately 7% from 2001 to 2002, mainly due to substantial pricing pressure.

We believe that our current level of pricing is comparable to that of other leading foundries in each respective geometry. We believe that our ability to provide a wide range of advanced foundry services and process technologies as well as large manufacturing capacity will enable us to



compete effectively with other leading foundries at a comparable price level.

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### **Capacity Utilization Rates**

Our operating results are characterized by relatively high fixed costs. In 2000, 2001 and 2002, approximately 78.2%, 82.5% and 85.8%, respectively, of our manufacturing costs mainly consisted of depreciation, indirect material costs, amortization of license fees and indirect labor costs. If we increase our utilization rates, our costs would be allocated over a larger number of units, which generally leads to lower unit costs. As a result, our capacity utilization rates can significantly affect our margins. Our utilization rates have varied from period to period to reflect our production capacity and market demand. The utilization rate of our operations was 100%, 47% and 65% in 2000, 2001 and 2002, respectively. The utilization rate decline in 2001 was due to rapidly deteriorating demand, mainly from our customers in the communication sector. The increase in our utilization rate in 2002 was due to the slight upturn of the semiconductor industry in response to an increase in output of the consumer electronics and wireless communication industries. Utilization rates can also be affected by efficiency in production facility and product flow management. Other factors affecting utilization rates are the complexity and mix of the wafers produced, overall industry conditions, the level of customer orders, mechanical failure, disruption of operations due to expansion of operations, relocation of equipment or disruption of power supply and fire or natural disaster.

Our production capacity 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. Because these factors include subjective elements, our measurement of capacity utilization rates may not be comparable to those of our competitors.

### **Change in Product Mix and Technology Migration**

Because the price of wafers processed with different technologies varies significantly, the mix of wafers that we produce is among the primary factors that affect our revenues and profitability. The value of a wafer is determined principally by the complexity of the processing technology used to produce the wafer. Production of devices with higher levels of functionality and greater system-level integration requires more manufacturing steps and generally commands higher wafer prices. The increase in price generally has more than offset associated increases in production cost once an appropriate economy of scale is reached.

Prices for wafers of a given level of technology generally decline over the processing technology life cycle. As a result, we have continuously been migrating to increasingly sophisticated technologies to maintain the same level of profitability. For instance, we are among the first foundries to produce chips using 0.13 micron technology. In addition, we and Infineon are jointly developing 90-nanometer copper interconnect process technologies in 2003. These types of technology migration require continuous capital and research and development investment. Because developing and acquiring advanced technologies involve substantial capital investment, we expect to continue to spend a substantial amount of capital on upgrading our technologies.

### **Manufacturing Yields**

Manufacturing yield per wafer is measured by the number of functional dice on that wafer over the maximum number of dice that can be produced on that wafer. A small portion of our products is priced on a per die basis, and our high manufacturing yields have assisted us in achieving higher margins. In addition, with respect to products that are priced on a per wafer basis, we believe that our ability to deliver high manufacturing yields generally has allowed us to either charge higher prices per wafer or attract higher order volumes, resulting in higher margins.

We continuously upgrade our process technologies. At the beginning of each technological upgrade, the manufacturing yield utilizing the new technology is generally lower, sometimes substantially lower, than the yield under the current technology. The yield is generally improved through the expertise and cooperation of our research and development personnel and process engineers, as well as equipment and at times raw material suppliers. Our policy is to offer customers new process technologies as soon as the new technologies have passed our internal reliability tests.

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### **Investments**

In addition to making investments to enhance our capacity, technology, and service, we have also made a significant number of strategic investments in other entities. See Item 4. Information on this Company Our Investments. Most of these investments were made to either improve our market position or strengthen relationships with our major shareholders. A significant portion of these investments is currently held by Hsun Chieh, an investment company that was 99.97% owned by United Microelectronics as of March 31, 2003. In addition, we formed UMC Capital Corporation in April 2001 for the purpose of making investments in semiconductor-related startup companies. As of March 31, 2003, the paid-in capital of UMC Capital amounted to US\$30 million.

Substantially all of our investments are long-term investments, a significant portion of which was in foundry-related companies including fabless design customers, raw material suppliers and intellectual property vendors. In addition, we also invest in nonfoundry-related business, such as Mega Financial Holding Company. In recent years, we have from time to time disposed of our long-term investments for financial, strategic or other purposes. However, we plan to maintain our shareholdings in Unimicron Technology Corp., Faraday Technology Corp. and Silicon Integrated Systems because of our strategic considerations. Depending on the market conditions, we intend to gradually reduce our other investments through all measures available to our company. For example, we sold 80 million shares of AU Optronics Corp. in April 2002 in Taiwan and issued US\$235 million exchangeable bonds due 2007 in the second quarter of 2002, which are exchangeable, at the option of the bondholders, into the shares or American depositary shares of, AU Optronics. In early June 2002, we also sold 25 million AU Optronics shares in the form of AU Optronics ADSs in connection with the U.S. initial public offering of AU Optronics. In addition, in April 2002, we transferred to Hitachi all our 40% equity interest in Trecenti and recognized a gain of NT\$1,397 million (US\$40 million) in 2002 in connection with the sale. Gains from disposal of our long-term investments in 2002, which were offset by our investment losses in the same year, were NT\$7,541 million (US\$217 million).

### **Treasury Share Programs**

On December 22, 2000, we announced a plan, which was not binding on us, to buy back up to 400 million of our shares on the Taiwan Stock Exchange at a price range of NT\$32 to NT\$78 per share between December 27, 2000 and February 26, 2001. As of February 26, 2001, we had purchased 37 million of our shares under this plan at an average purchase price of NT\$45.88 per share.

On February 26, 2001, we announced a plan, which was not binding on us, to buy back up to 400 million of our shares on the Taiwan Stock Exchange between March 1, 2001 and April 30, 2001. We did not buy back any of our shares during that period.

On July 31, 2001, we announced a plan, which was not binding on us, to buy back up to 130 million of our shares on the Taiwan Stock Exchange at a price range of NT\$28 to NT\$63 per share between August 1, 2001 and September 30, 2001. As of September 30, 2001, we had purchased 129 million of our shares under this plan at an average purchase price of NT\$33.81 per share.

On February 19, 2002, we announced a plan, which was not binding on us, to buy back up to 100 million of our shares on the Taiwan Stock Exchange at a price range of NT\$31 to NT\$71 per share between February 20, 2002 and April 19, 2002. As of April 19, 2002, we had purchased 49.11 million of our shares under this plan at an average purchase price of NT\$44.35 per share.

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On August 9, 2002, we announced a plan which was not binding on us, to buy back up to 20.69 million of our shares on the Taiwan Stock Exchange at a price range of NT\$21 to NT\$54 per share between August 12, 2002 and October 11, 2002. As of October 11, 2002, we had purchased 20.69 million of our shares under this plan at an average purchase price of NT\$27.16 per share.

In addition, on March 4, 2003, we announced a plan which was not binding on us, to buy back up to 500 million of our shares on the Taiwan Stock Exchange at a price range of NT\$13.8 to NT\$31.0 per share between March 5,

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2003 and May 4, 2003. As of May 4, 2003, we had purchased approximately 99.2 million shares under this plan at an average purchase price of NT\$20.74 per share.

## **Critical Accounting Policies**

### *General*

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements included in the annual report, which have been prepared in accordance with ROC GAAP. ROC GAAP varies in certain significant respects from US GAAP. These differences and their effects on our financial statements are described in note 28 to our audited consolidated financial statements included in this annual report. The preparation of our audited consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We evaluate our estimates on an on-going basis and base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances; the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies involve significant judgments and estimates used in the preparation of our audited consolidated financial statements.

### *Revenue Recognition*

Revenue is recognized when title and liability for risk of loss or damage to the products have been transferred to the customers usually upon shipment. In the same year sales are recognized, we also make accruals for sales discounts and returns taking into consideration customers complaints and historical experience. As the allowances are accrued based on management's estimates and judgment, reported revenues may differ due to changes in the estimates.

### *Accounts Receivable and Allowance for Doubtful Accounts*

The allowance for doubtful accounts is provided based on the evaluation of collectibility and aging analysis of accounts and on management's judgment. In circumstances where the ability of a specific customer to meet its financial obligations is in doubt, a specific allowance will be provided. A considerable amount of judgment is required in assessing the ultimate realization of these receivables including the current credit-worthiness and the past collection history of each customer. If the financial conditions of our customers were to worsen, additional allowances may be required. A deterioration of economic conditions either in ROC or in other major overseas markets may contribute to the deterioration of financial conditions of our customers, resulting in an impairment of their ability to make payments. The allowances for doubtful accounts accounted for 1.6% and 0.9% of our accounts receivables, respectively, as of December 31, 2001 and 2002.

### *Inventory*

Inventories are recorded at cost when acquired and stated at the lower of aggregate cost, based on the weighted average method, or market value at the balance sheet date. The market values of raw materials and supplies are determined on the basis of replacement cost while net realizable values determined by the average selling price of the most recent periods are used as market values of work-in-process and finished goods. In addition, allowances for obsolete and slow-moving inventories are determined by analyzing the age of inventories and estimated future sales, among other things.

*Deferred Taxes*

We recognize all existing future tax benefits principally from investment tax credits as deferred tax assets. A valuation allowance is then recorded to reduce our deferred tax assets to the amount that we believe will more likely than not be realized. The assessment of the valuation allowance involves subjective assumptions and estimates as it

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principally depends on the estimation of future taxable income and ongoing prudent and feasible tax planning strategies. If future taxable income is lower than expected due to future market conditions or other reasons or in the event we determine that we will not be able to realize all or part of our net deferred tax assets in the future, an adjustment to our deferred tax assets valuation allowance may be required with the adjusting amount charged to income in this period. Likewise, should we determine that we would be able to realize our deferred tax assets in the future in excess of our net recorded amount, an adjustment to our deferred tax assets valuation allowance would increase income in this period.

### *Goodwill Impairment*

Under US GAAP, we have performed the required goodwill impairment test during the year as required by Statement of Financial Accounting Standard (SFAS) No. 142, Goodwill and Other Intangible Assets. No impairment was identified for the year. In assessing the recoverability of our goodwill, we have to make assumptions regarding estimated future cash flows and other factors to determine the fair value of the respective assets. If these estimates and the related assumptions change the fair value of these assets in the future, we may need to record impairment charges accordingly. We will make regular impairment tests on an annual basis in the future. If events occur or circumstances change between annual tests that would more likely than not affect the recoverability of the goodwill, such as a significant adverse change in the business climate, an unanticipated competition, or a significant decline in our market capitalization in relation to net book value, we will perform additional interim tests and impairment loss will be recorded when required.

### *Impairment of Long-lived Assets*

Under US GAAP, as required by SFAS No.144, Accounting for the Impairment or Disposal of Long-Lived Assets, we review our long-lived assets that are held and used for impairment whenever events or changes in circumstances indicate that the carrying amount of the long-lived assets might not be recoverable. In other words, we will assess the need for any impairment write-down only if information indicates that an impairment might exist. Such information may include a significant decrease in market value of long-lived assets or a significant deterioration of market conditions such that the carrying value of long-lived assets may not be recovered through future cash flows. No impairment indicators were noted for the year. However, if future information indicates a potential impairment and we determine that the estimated future undiscounted cash flows are less than the carrying value of the assets, an impairment loss will be recognized. The estimates of future cash flows will be based on the estimated useful life, cash flow generating capacity, physical output capacity and other assumptions of the use of our long-lived assets.

### *Pensions*

We have significant pension benefit costs and liabilities that are developed from actuarial valuations. Inherent in these valuations are key assumptions including discount rates and expected return on plan assets. We consider current market conditions, including changes in interest rates, in selecting these assumptions. Changes in the related pension costs or liabilities may occur in the future in addition to changes resulting from fluctuations in our related headcount due to changes in assumptions. A decrease of 0.75% point in the discount rate and expected return on plan assets respectively would increase the total pension expense by approximately NT\$102 million in 2002.

### *Valuation of Marketable Securities and Long-term Investments*



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Under ROC GAAP, we classify marketable securities as trading or long-term investments depending on management's intent to hold the security for long-term purposes. Long-term investments are in public and non-public entities and trading securities are in public entities or mutual funds with a readily determinable market value. We periodically evaluate long-term investments based on market prices, if available, cash flows, other impairment indicators and sales price of stock to third parties and record impairment adjustments as required. Trading securities are stated at the lower of aggregate cost or market value.

Under US GAAP, marketable securities are classified as available for sale securities and changes in market value thereof are recorded in other comprehensive income. We periodically evaluate the carrying value of these

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securities and record a charge against earnings to the extent that any decline in the value of a security below cost is determined to be other than temporary.

### *Embedded Derivatives*

Under US GAAP, the derivative instruments embedded in our first exchangeable bond issued in May 2002 and in our investments in three convertible bonds are bifurcated and separately accounted for under SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. The exchange and conversion options bifurcated were accounted for as freestanding instruments with the changes in fair value included in earnings. The fair value of the options is measured using the Black-Scholes option pricing model, which requires us to make subjective assumptions such as expected volatility of the stock over the option's life and expected life of the option, among other things. In determining the input assumptions, we take historical trends and data together with judgment of professionals and objective expectation of the management into consideration. Because the model is quite sensitive to changes in the input assumptions, different fair value estimates may result depending on different assessment of the required inputs.

### *Employee Stock Options*

As we have issued our employee stock options during the year, pro forma information regarding net income and earnings per share is required by SFAS No. 123, Accounting for Stock-Based Compensation under US GAAP. The pro forma net income is determined as if the fair value of our employee stock options was included as compensation expense for the year. In estimating the fair value of the stock options, the Black-Scholes option pricing model is used as well. As discussed in the preceding paragraph, the use of the valuation model requires the input of subjective assumptions. In assessing the required inputs, we use historical records wherever available such as past dividend yields and historical volatility. Since this is our first issue of employee stock options, we do not have actual experience when employees could be expected to exercise their options. As such, we use mid-points for the estimation of expected life of options. As discussed above, different assessments of the input assumptions may lead to different fair value estimates, which in turn may affect our pro forma net income disclosed as compensation expense.

## **A. Operating Results**

### *Consolidation*

Unlike US GAAP, ROC GAAP does not require us to consolidate subsidiaries whose assets and operating revenues are less than 10% of our non-consolidated assets and operating revenues, respectively. See note 2 to our audited consolidated financial statements. As a result, our consolidated financial statements prepared under ROC GAAP do not include the financial results of Fortune Venture Capital Corporation, United MicroMachining Corporation and United Foundry Services Inc. for 2000; Fortune Venture Capital Corporation, United Foundry Services Inc. and UMC Capital Corporation for 2001; and Fortune Venture Capital Corporation, United Foundry Services Inc., UMC Capital Corporation and United Microelectronics Corp. (Samoa) for 2002, each of which is a consolidated subsidiary under US GAAP. In the aggregate, these subsidiaries had net operating revenues equal to approximately nil of our consolidated revenues for each of the year ended December 31, 2000, 2001 and 2002.

### *Net operating revenues*

We generate our net operating revenues primarily from fabricating semiconductor devices. We also derive a small portion of our net operating revenues from wafer probe services that we perform internally as well as mask tooling services and assembly and test services that we subcontract out.

*Costs of goods sold*

Our costs of goods sold consist principally of:

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overhead, including depreciation and maintenance of production equipment, indirect labor costs, indirect material costs, supplies, utilities and royalties;

wafer costs;

direct labor costs; and

service charges paid to subcontractors for mask tooling, assembly and test services.

Due to the increasing expenditures related to the purchase of equipment and the construction of new fabs, our total depreciation expenses have increased from NT\$24,403 million in 2000 to NT\$34,390 million in 2001 and to NT\$36,568 million (US\$1,054 million) in 2002.

### ***Operating expenses***

Our operating expenses consist of the following:

*Sales and marketing expenses.* Sales and marketing expenses consist primarily of salaries and related personnel expenses, wafer sample costs, intellectual property development expenses and related marketing expenses. Wafer samples are actual silicon samples of our customers' early design ideas made with our most advanced processes and provided to those customers.

*General and administrative expenses.* General and administrative expenses consist primarily of salaries for our administrative, finance and human resource personnel, fees for professional services, and cost of computer and communication systems to support our operations. We have incurred additional expenses associated with being a US public company since September 2000, including costs of directors' and officers' insurance and increased legal and accounting fees.

*Research and development expenses.* Research and development expenses consist primarily of salaries and related costs for process and technology research and development, technology license fees allocated to research and development and depreciation and maintenance on the equipment used in our research and development efforts.

### ***Non-operating income and expenses***

Our non-operating income principally consists of:

interest income, which has been primarily derived from time deposits; and

gain on disposal of investments, which has been primarily derived from our disposal of long-term investments.

Our non-operating expenses principally consist of:

interest expenses, which have been primarily derived from long-term debt; and

investment loss, which has been primarily derived from net losses of the investee companies.

***Taxation***

Based on our status as a company engaged in the semiconductor business in Taiwan, we have been granted exemptions from income taxes in Taiwan with respect to income attributable to capital increases for the purpose of purchasing equipment related to the semiconductor business for a period of four years following each such capital increase. This tax exemption resulted in tax savings of approximately NT\$3,890 million, nil and nil in 2000, 2001

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and 2002, respectively. As of January 30, 2001, the administrative regulations of the Hsinchu Science-Based Industrial Park revoked the preferential tax rate of 20%. Our current tax rate is 25%, the same rate applicable to companies outside the Industrial Park.

We also benefit from other tax incentives generally available to technology companies in Taiwan, including tax credits applicable against corporate income tax that range from 25% to 50% of the amount of certain research and development and employee training expenses and 5% to 20% of the amount of investment in certain qualified equipment and technology. These tax incentives resulted in tax savings of approximately NT\$4,493 million, NT\$1,834 million and nil in 2000, 2001 and 2002, respectively.

After taking into account of the tax exemptions and tax incentives discussed above, we recorded NT\$91 million and NT\$3,040 million of income tax benefit in 2000 and 2001, respectively. We recorded NT\$271 million (US\$8 million) tax expenses in 2002 and our effective income tax rate in 2002 is 3.86%.

As a result of the merger, losses carried forward of the merged entities, which totaled approximately NT\$795 million as of December 31, 1999, were eliminated. However, subject to ROC law, we will be entitled to tax credits which were previously available to the merged entities.

In 1997, the ROC Income Tax Law was amended to integrate corporate income tax and shareholder dividend tax to eliminate the double taxation effect for resident shareholders of Taiwan companies. Under the amendment, all retained earnings generated from January 1, 1998 and not distributed to shareholders as dividends in the following year will be assessed a 10% retained earnings tax. See Item 10. Additional Information E. Taxation ROC Tax Considerations Dividends. As a result, if we do not distribute all of our annual retained earnings generated after January 1, 1998 as either cash and/or stock dividends in the following year, these earnings will be subject to the 10% retained earnings tax.

**Comparisons of Results of Operations**

The following table sets forth some of our results of operations data as a percentage of our net operating revenues for the periods indicated.

	<b>Year ended December 31,</b>		
	<b>2000</b>	<b>2001</b>	<b>2002</b>
Net operating revenues	100.0%	100.0%	100.0%
Costs of goods sold	49.7	86.8	83.4
Gross profit	50.3	13.2	16.6
Operating expenses:			
Sales and marketing	1.0	3.3	2.0
General and administrative	2.8	6.3	4.7
Research and development	5.4	12.8	9.8
Operating income (loss)	41.1	(9.2)	0.1
Net non-operating income (expense)	4.2	(0.2)	9.2

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Income (loss) before income tax and minority interest	45.3	(9.4)	9.3
Income tax (expense) benefit	0.1	4.4	(0.3)
Minority interest (income) loss	(1.5)	0.5	0.4
Net income (loss)	43.9	(4.5)	9.4

*2001 compared with 2002*

**Net operating revenues.** Net operating revenues increased by 8.0% from NT\$69,817 million for 2001 to NT\$75,425million (US\$2,173million) for 2002, primarily as a result of the rise in sales quantities. Although our average selling price of wafers declined by 6.9% on a consolidated basis, the number of wafers sold rose by 15.2% in 2002.

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**Cost of goods sold.** Cost of goods sold increased by 3.8% from NT\$60,568 million for 2001 to NT\$62,887 million (US\$1,812 million) for 2002. The marginal increase in cost of goods sold, compared to the magnitude of the increase in net operating revenues, contributed to the improvement in utilization rate from 47% in 2001 to 65% in 2002, and resulted in lower cost per unit sold.

**Gross profit and gross margin.** Gross profit increased by 35.6% from NT\$9,249 million for 2001 to NT\$12,538 million (US\$361 million) for 2002. Gross margin increased from 13.2% for 2001 to 16.6% for 2002. The increase in gross margin was due to lower cost per unit, as a result of larger production and sales volumes and higher utilization rate.

**Operating income (loss) and operating margin.** We generated an operating loss of NT\$6,412 million for 2001 compared to an operating income of NT\$112 million (US\$3 million) for 2002. Our operating margin was 9.2% and 0.1%, respectively, for these two years. Operating expenses decreased by 20.7% from NT\$15,661 million for 2001 to NT\$12,426 million (US\$358 million) for 2002.

### *Sales and marketing expenses*

Our sales and marketing expenses decreased by 32.9% from NT\$2,276 million for 2001 to NT\$1,527 million (US\$44 million) for 2002. The decrease in sales and marketing expenses was mainly due to the decrease in sample expenses.

Our sales and marketing expenses as a percentage of our net operating revenues decreased from 3.3% for 2001 to 2.0% for 2002.

### *General and administrative expenses*

Our general and administrative expenses decreased by 20.2% from NT\$4,425 million for 2001 to NT\$3,531 million (US\$102 million) for 2002 largely due to the decrease of Fab12A start-up costs in 2002. Fab12A start-up costs were classified as general and administrative expenses before Fab12A started volume production in June 2002.

Our general and administrative expenses as a percentage of our net operating revenues decreased from 6.3% for 2001 to 4.7% for 2002.

### *Research and development expenses*

Our research and development expenses decreased by 17.8% from NT\$8,960 million for 2001 to NT\$7,368 million (US\$212 million) for 2002. The decrease in research and development expenses resulted primarily from a decrease in expenses related to the joint development project with IBM due to the early completion of the project.



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Our research and development expenses as a percentage of our net operating revenues decreased from 12.8% for 2001 to 9.8% for 2002.

The increase in operating margin is largely due to the increase in gross margin, and the decreases in sales and marketing expenses, general and administrative expenses and research and development expenses, as percentages of our net operating revenues.

***Net non-operating income (expense).*** Net non-operating results increased from a net non-operating expense of NT\$154 million for 2001 to a net non-operating income of NT\$6,904 million (US\$199 million) for 2002 mainly due to an increase in gain on disposal of investments and a decrease in investment loss. Gain on disposal of investments increased from NT\$2,347 million for 2001 to NT\$8,473 million (US\$244 million) for 2002 mainly due to disposal of our investments in AU Optronics Corp., MediaTek and Trecenti. Investment loss decreased from NT\$1,828 million for 2001 to NT\$932 million (US\$27 million) for 2002, primarily due to a decrease in the recognition of net operating losses of Trecenti and AU Optronics Corp. We transferred all our 40% equity interest in Trecenti to Hitachi in April 2002 and stopped recognizing the operating losses with respect to Trecenti accordingly. In addition, we changed our accounting method for our investment in AU Optronics Corp. from the equity method to lower cost

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or market value method and need not recognize operating losses with respect to AU Optronics Corp. for 2002 since we were not able to exercise significant influence over AU Optronics Corp. starting from the third quarter of 2001.

**Net income.** Due to the factors described above, we incurred a net loss of NT\$3,157 million for 2001, compared to a net income of NT\$7,072 million (US\$204 million) for 2002.

### ***2000 compared with 2001***

**Net operating revenues.** Net operating revenues decreased by 39.6% from NT\$115,609 million for 2000 to NT\$69,817 million for 2001. The decrease in net operating revenues was due primarily to a significant decrease in wafer shipments resulting from the reduced demand for our products and services and to changes in the product mix demanded by our customers.

**Cost of goods sold.** Cost of goods sold increased by 5.5% from NT\$57,411 million for 2000 to NT\$60,568 million for 2001. The increase in cost of goods sold for 2001 was primarily due to the increase in overhead costs resulting from the expansion of production capacity. In addition, manufacturing costs, including overhead costs, increased as a percentage of net operating revenues primarily due to the decrease in capacity utilization rate.

**Gross profit and gross margin.** Gross profit decreased by 84.1% from NT\$58,198 million for 2000 to NT\$9,249 million for 2001. Gross margin decreased from 50.3% for 2000 to 13.2% for 2001. The decrease in gross margin was due to the decrease in unit production volume, which resulted in a decrease in capacity utilization rates and higher cost per unit.

**Operating income and operating margin.** We generated an operating income of NT\$47,543 million for 2000 compared to a loss of NT\$6,412 million for 2001. Our operating margin were 41.1% and 9.2%, respectively, for these two periods. Operating expenses increased by 47.0% from NT\$10,655 million for 2000 to NT\$15,661 million for 2001.

### ***Sales and marketing expenses.***

Our sales and marketing expenses increased by 97.4% from NT\$1,153 million for 2000 to NT\$2,276 million for 2001. The increase in sales and marketing expenses was due to increases in sample expenses.

Our sales and marketing expenses as a percentage of our net operating revenues increased from 1.0% for 2000 to 3.3% for 2001.

### ***General and administrative expenses***

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Our general and administrative expenses increased by 38.5% from NT\$3,196 million for 2000 to NT\$4,425 million for 2001. The increase in general and administrative expenses was largely due to the start-up costs associated with the ramp-up of Fab 12A, which was partially offset by reductions in expenses for maintenance, recruitment and other general corporate affairs between the two periods.

Our general and administrative expenses as a percentage of our net operating revenues increased from 2.8% for 2000 to 6.3% for 2001.

### *Research and development expenses*

Our research and development expenses increased by 42.1% from NT\$6,306 million for 2000 to NT\$8,960 million for 2001. The increase in research and development expenses was due primarily to increasing expenses incurred in connection with our research and development for 0.18, 0.15 and 0.13 micron process technologies consumption of research and development related materials for 2001 and the depreciation of NT dollars against US dollars between the two periods. Our research and development expenses as a percentage of our net operating revenues increased from 5.4% for 2000 to 12.8% for 2001.

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The decrease in operating margin was largely due to the decrease in gross margin and increases in sales and marketing expenses, general and administrative expenses and research and development expenses as percentages of net operating revenues.

**Net non-operating income (expense).** Net non-operating results decreased from a net non-operating income of NT\$4,786 million for 2000 to a net non-operating expense of NT\$154 million for 2001 mainly due to decreases in investment income and exchange gain, partially offset by an increase in gain on disposal of investments. Exchange gain decreased from NT\$2,922 million for 2000 to NT\$648 million for 2001. Gain on disposal of investments increased from NT\$588 million for 2000 to NT\$2,347 million for 2001 mainly due to the disposal of MediaTek and Novatek Microelectronics in each of their initial public offerings in 2001.

Investment income decreased from NT\$1,726 million for 2000 to a loss of NT\$1,828 million for 2001, due largely to the net operating losses of several of our equity investees, primarily Trecenti and Unipac Optoelectronics Corporation, which was merged into AU Optronics Corp. in September 2001.

**Net income.** Net income decreased by 106.2% from NT\$50,780 million for 2000 to a loss of NT\$3,157 million for 2001. This decrease in net income was mainly due to the decrease in operating income.

## **B. Liquidity and Capital Resources**

The foundry business is highly capital intensive. Our development over the past three years has required significant investments. Additional expansion for the future generally will continue to require significant cash for acquisition of plant and equipment to support increased capacities, particularly for the production of 12-inch wafers, although our expansion program will be adjusted from time to time to reflect market conditions. In addition, the semiconductor industry has historically experienced rapid changes in technology. To maintain competitiveness at the same capacity, we are required to make adequate investments in plant and equipment. In addition to our need for liquidity to support the large fixed costs of capacity expansion and the upgrading of our existing plants and equipment for new technologies, as we ramp up production of new plant capacity, we require significant working capital to support purchases of raw materials for our production and to cover variable operating costs such as salaries until production yields provide sufficiently positive margins for a fabrication facility to produce operating cash flows.

We have financed our substantial capital expenditure requirements from cash flows from operations as well as from bank borrowings, the issuance of bonds and equity-linked securities denominated in NT dollars and US dollars and the proceeds from our ADS offering in September 2000. We incurred capital expenditures of NT\$83,483 million, NT\$43,051 million and NT\$35,978 million (US\$1,037 million) in 2000, 2001 and 2002, respectively, requiring a significant amount of funding from financing activities. Once a fab is in operation at acceptable capacity and yield rates, it can provide significant cash flows. Cash flows significantly exceed operating income reflecting the significant non-cash depreciation expense. We generated cash flows from operations of NT\$68,077 million, NT\$40,187 million and NT\$30,527 million (US\$880 million) in 2000, 2001 and 2002, respectively.

As of December 31, 2002, we had NT\$80,883 million (US\$2,331 million) of cash and cash equivalents and NT\$2,526 million (US\$73 million) of marketable securities.

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Our operating activities generated cash of NT\$30,527 million (US\$880 million) for 2002. Cash generated from our operating activities for 2002 was primarily attributable to add-back of non-cash items, such as depreciation and amortization in the amount of NT\$38,267 million (US\$1,103 million).

Net cash used in our investment activities was NT\$30,458 million (US\$878 million) for 2002. In 2002, we used cash of NT\$35,978 million (US\$1,037 million) to purchase equipment primarily used at our fabs.

Net cash provided by our financing activities was NT\$3,162 million (US\$91 million) for 2002. For financing activities for 2002, we received cash of NT\$13,097 million (US\$377 million) from the issuance of exchangeable bonds and the issuance of zero coupon convertible bonds by UMCJ. We also repaid long-term loans of NT\$10,047 million (US\$290 million) in cash in 2002.

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Our outstanding short-term loans were NT\$1,179 million (US\$34 million) as of December 31, 2002. We had total availability under existing short-term lines of credit, which can be drawn in NT dollars, US dollars, Japanese Yen and/or German Marks at our discretion, of NT\$21,815 million (US\$628.7 million) as of December 31, 2002. All of our short-term loans are revolving facilities with terms of six months or one year, which may be extended for terms of six months or one year each with lender consent. The weighted average annual effective interest rate under these facilities ranged between 1.6% and 2.02% as of December 31, 2002. Our obligations under our short-term loans are unsecured.

We had total availability under existing unused letters of credit for the import of machinery of NT\$76 million (US\$2 million) as of December 31, 2002.

We had long-term loans of NT\$12,880 million (US\$371 million) in the aggregate as of December 31, 2002. The interest rates of these long-term borrowings are variable rates and ranged between 0.95% and 3.35% per year as of December 31, 2002.

We had bonds payable of NT\$49,441 million (US\$1,425 million) in the aggregate as of December 31, 2002.

We have pledged a substantial portion of our assets with a carrying value of NT\$24,524 million (US\$707 million) as of December 31, 2002 to secure our obligations under the long-term loans.

As of December 31, 2002, our outstanding long-term liabilities primarily consisted of:

NT\$13,990 million secured bank loans, which are repayable in installments with the last payment on May 14, 2009;

NT\$5,531 million unsecured bank loans, which are repayable in installments with the last payment on June 5, 2005;

NT\$2,850 million 5.6% secured bonds due April 27, 2005; these bonds are repayable in seven equal semi-annual installments from April 27, 2002;

NT\$15 billion unsecured domestic bonds consisting of two tranches: NT\$7.5 billion 5.1850% unsecured bonds due April 2006 and NT\$7.5 billion 5.2850% unsecured bonds due April 2008;

NT\$10 billion unsecured domestic bonds consisting of two tranches: NT\$5 billion 3.420% unsecured bonds due October 2004 and NT\$5 billion 3.520% unsecured bonds due October 2006;

US\$302.4 million zero coupon convertible bonds due on March 1, 2004.

The US\$302.4 million Zero Coupon Convertible Bonds due 2004 were issued in December 2001 to purchase raw materials abroad and for general corporate purposes. These bonds, which are scheduled to mature on March 1, 2004, are convertible into our shares at an initial conversion price of NT\$80.76 per share beginning on January 22, 2002 or into our ADSs at an initial conversion price of US\$11.718 per ADS at

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the option of the bondholders beginning on January 29, 2002, and are redeemable by us under certain circumstances on or any time after June 13, 2003 and prior to February 20, 2004. The conversion price since price adjustment effective on August 11, 2002 has been NT\$69.60 per share, or US\$10.098 per ADS. As of April 30, 2003, none of the holders of our Zero Coupon Convertible Bonds due 2004 had exercised conversion rights to receive our shares or our ADSs.

US\$235 million zero coupon exchangeable bonds due on May 10, 2007.

We issued US\$235 million Zero Coupon Exchangeable Bonds due 2007 in May 2002. The proceeds of this offering have been used to purchase equipment for Fab 8D. These bonds, which are scheduled to mature on May 10, 2007, are, at the option of the bondholders, exchangeable into common shares or American depositary shares of AU Optronics Corp. at an initial exchange price of NT\$59.34 per AU Optronics share beginning on June 19, 2002, and are redeemable by us under certain circumstances on or any time after August 10, 2002 and prior to May 10, 2007.

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The current exchange price is NT\$58.25 per share. As of April 30, 2003, none of the holders of our Zero Coupon Exchangeable Bonds due 2007 had exercised redemption rights to receive shares or ADSs of AU Optronics Corp.

We plan to issue unsecured domestic bonds in the aggregate amount of NT\$15 billion by the end of June 2003. These bonds will include two tranches: NT\$7.5 billion unsecured bonds due May 2008 with interest rates of 4.00% *minus* 12 month US dollar LIBOR rates but at the minimum of 0%, and NT\$7.5 billion unsecured bonds due May 2010 with interest rates of 4.3% *minus* 12 month US dollar LIBOR rates but at the minimum of 0%.

Among the long-term loans, the current portion due within one year was NT\$6,642 million (US\$191 million) as of December 31, 2002. Among the bonds, the current portion due within one year was NT\$1,140 million (US\$33 million).

Set forth below are the aggregate amounts, as of December 31, 2002, of our future cash payment obligations under our existing debt arrangements on a consolidated basis.

<u>Contractual Obligations</u>	<b>Payments Due By Period</b>				
	<b>Total</b>	<b>Less Than 1 Year</b>	<b>1-3 Years</b>	<b>4-5 Years</b>	<b>After 5 Years</b>
	(consolidated) (in NT\$ millions)				
Long-term debt(1)					
Secured long-term loans	13,990	4,429	8,528	913	120
Unsecured long-term loans	5,531	2,212	3,319		
Secured bonds	2,850	1,140	1,710		
Unsecured bonds	25,000		19,750	5,250	
Capital lease obligations(2)	37	18	19		
Operating leases(3)	3,105	208	414	323	2,160
Other long-term obligations(4)	7,593	2,522	2,595	2,476	
<b>Total contractual cash obligations</b>	<b>58,106</b>	<b>10,529</b>	<b>36,335</b>	<b>8,962</b>	<b>2,280</b>

- (1) Excludes our payment obligations under the convertible bonds and exchangeable bonds due to the number of bondholders that will elect conversion or early redemption of their bonds within the periods specified above cannot be determined.
- (2) Represents our obligations to make lease payments for equipment.
- (3) Represents our obligations to make lease payments to use the land on which our fabs are located, primarily in the Hsinchu Science-Based Industrial Park and the Tainan Science-Based Industrial Park in Taiwan and Pasir Ris Wafer Fab Park in Singapore.
- (4) Represents intellectual properties and royalties payable under our technology license agreements. The amounts of payments due under these agreements are determined based on fixed contract amounts.

We held several cash deposits with a total amount of approximately NT\$6,854 million as of December 31, 2002. The repayment in full, including any accrued interest, of these deposits is subject to the non-occurrence of one or more credit events, which are referenced to the entities fulfillment of their own obligations as well as repayment of their corporate bonds. Upon the occurrence of one or more of such credit events, we may receive nil or less than the full amount of these deposits and any payment received may be delayed due to the occurrence of certain events. The underlying reference entities are summarized as follows:



Principal amount in original currency	Reference entities
US\$30 million	Fubon Holding Co., Ltd., or Fubon, Cathay Financial Holding Co., Ltd., or
US\$25 million	Cathay Financial and our company
US\$20 million	Siliconware Precision Industries Co., Ltd., or Siliconware
US\$19 million	China Development Financial Holding Corporation
US\$15 million	King Yuan Electronics Co., Ltd.
US\$10 million	Cathay Financial
US\$6.5 million	Fubon, Cathay Financial and our company
US\$5 million	Unimicron Technology Corp.
US\$5 million	Gigabyte Technology Co., Ltd.
US\$5 million	Stark Technology, Inc.
US\$5 million	Compal Electronics, Inc. and our company
US\$5 million	Fubon Holding, Siliconware and our company

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US\$5 million	Our company
US\$5 million	BENQ Corporation
¥4 billion	UMCJ
¥1 billion	Nikon Corporation

We have entered into several construction contracts for the expansion of our factory space. As of December 31, 2002, these construction contracts amounted to NT\$10,340 million (US\$298 million) with an un-accrued portion of the contracts of NT\$4,755 million (US\$137 million). We have entered into several wafer-processing contracts with our main customers. Under the terms of these contracts, we will guarantee processing capacity, while our customers will make deposits to us.

For 2002, we spent approximately NT\$32,284 million (US\$930 million) primarily to purchase 8-inch and 12-inch wafer processing equipment and other equipment for research and development purposes. Our initial budget for purchases of semiconductor manufacturing equipment for 2003 is approximately US\$500 million on an unconsolidated basis. We may adjust the amount of our capital expenditures upward or downward based on the progress of our capital projects, market conditions and our anticipation of future business outlook.

We believe that our existing cash and cash equivalents and short-term investments, will be sufficient to meet our working capital and capital expenditure requirements at least through the end of 2003. We also expect to fund a portion of our capital requirements in 2003 through the cash provided by operating activities. Due to rapid changes in technology in the semiconductor industry, however, we have frequent demand for investment in new manufacturing technologies. We cannot assure you that we will be able to raise additional capital, should that become necessary, on terms acceptable to us or at all. If financing is not available on terms acceptable to us, management intends to reduce expenditures so as to delay the need for additional financing. To the extent that we do not generate sufficient cash flows from our operations to meet our cash requirements, we may rely on external borrowings and securities offerings to finance our working capital needs or our future expansion plans. The sale of additional equity or equity-linked securities may result in additional dilution to our shareholders. Our ability to meet our working capital needs from cash flow from operations will be affected by the demand for our products and change in our product mix, which in turn may be adversely affected by several factors. Many of these factors are outside of our control, such as economic downturns and declines in the average selling prices of our products. The average selling prices of our products have been subjected to downward pressure in the past and are reasonably likely to be subject to further downward pressure in the future. We have not historically relied, and we do not plan to rely in the foreseeable future, on off-balance sheet financing arrangements to finance our operations or expansion.

**Transactions with Related Parties**

Our transactions with related parties have been conducted on arm's length terms. See Item 7. Major Shareholders and Related Party Transactions B. Related Party Transactions and note 20 to our audited consolidated financial statements included in this annual report.

**Inflation**

We do not believe that inflation in Taiwan has had a material impact on our results of operations. Inflation in Taiwan was approximately 1.26%, -0.01% and -0.20% in 2000, 2001 and 2002, respectively.

**US GAAP Reconciliation**

Our consolidated financial statements are prepared in accordance with ROC GAAP, which differs in certain material respects from US GAAP. Such differences include methods of consolidation and methods for measuring the amounts shown in the financial statements, as well as additional disclosures required by US GAAP. Please see note 28 to our audited financial statements, included in this annual report, for further discussion and quantification of these differences. The following table sets forth a comparison of our net income and stockholders' equity in accordance with ROC GAAP and US GAAP for the periods indicated.

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	Year ended December 31,			
	2000	2001	2002	
	NT\$	NT\$ (in millions)	NT\$	US\$
<b>Net income (loss)</b>				
Net income (loss), ROC GAAP	50,780	(3,157)	7,072	204
US GAAP adjustments:				
Compensation	(9,340)	(4,526)	(7,349)	(212)
Investment in marketable securities	(311)	(2,989)	(319)	(9)
Gain on technology know-how contributed to foundry venture investee	829			
Equity investments:				
Compensation	(1,084)	(1,489)	(471)	(13)
Net income variance between US GAAP and ROC GAAP	(1,020)	(299)	(126)	(4)
Adjustments due to change in interest of investee companies for convertible bonds	563	796	449	13
Embedded derivatives			1,752	50
Convertible/Exchangeable bonds			(691)	(20)
Income tax effect	(1,000)	700	(23)	(1)
Consolidated goodwill amortization	(12,283)	(12,283)		
Net income (loss), US GAAP	27,134	(23,247)	294	8

	As of December 31,			
	2000	2001	2002	
	NT\$	NT\$ (in millions)	NT\$	US\$
<b>Stockholders equity</b>				
Total stockholders equity, ROC GAAP	219,948	213,322	217,424	6,266
Compensation	(2,576)		67	2
Equity investments				
Net income variance between US GAAP and ROC GAAP	(296)	(618)	(592)	(17)
Stockholders equity variance between US GAAP and ROC GAAP	382	448	1,560	45
Change in fair value of marketable securities	(446)	37,020	14,963	431
Treasury stock	(462)	(176)	(8)	
Unamortized goodwill due to acquisition	110,552	98,268	98,268	2,832
Adjustments due to change in interest of investee companies for convertible bonds	883	1,528	1,605	46
Embedded derivatives			1,752	50
Convertible/Exchangeable bonds			(691)	(20)
Income tax effect	(1,000)	(300)	(323)	(9)
Stockholders equity, US GAAP	326,985	349,492	334,025	9,626

The principal differences between ROC GAAP and US GAAP as they relate to our results of operations are the treatment of: (1) compensation expenses pertaining to stock bonuses to employees, and (2) embedded derivatives.

*Compensation Expenses*

Under our articles of incorporation, we are required, under certain circumstances, to allocate a certain portion of annual net income to employee bonuses. See Item 10. Additional Information B. Memorandum and Articles of Association Dividends and Distributions elsewhere in this annual report. We paid employee bonuses in 2000, 2001 and 2002 in the form of shares and expect to pay employee bonuses in future periods in the form of shares. The number of 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 shares by the par value of the 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 are required to charge the market value of the employee bonus shares to compensation expense in the period to which they relate, correspondingly reducing our net income and earnings per share calculated in accordance with US GAAP. Under US GAAP, the compensation expense is initially accrued when services are rendered and both the number of shares to be issued and the price per share are known. Since the actual amount of the compensation is subject to shareholders' approval and only determinable at the annual shareholders' meeting, which is generally held after the issuance of our financial statements, we will make the accrual in accordance with the number of shares to be issued

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under our articles of incorporation, valuing by the closing price at the balance sheet date. When bonuses are approved by the shareholders in the subsequent year, which normally occurs during the second fiscal quarter, an additional compensation expense is recorded for the difference between the amount initially accrued and the fair market value of the shares actually granted to employees. In addition, since such adjustment for compensation expense for the purpose of US GAAP reconciliation is made in the second quarter of each fiscal year and the major amount of the adjustment is charged to the results for this 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.

The amounts charged to employee compensation expense, including certain distributions to directors and supervisors, under US GAAP in respect of the bonus distribution in 2000, 2001 and 2002 were NT\$9,340 million, NT\$4,526 million and NT\$7,349 million (US\$212 million), respectively, representing an aggregate of 399 million shares. Compensation expense accrued, before allocation to inventories, under US GAAP in 2000, 2001 and 2002, for the anticipated 2001, 2002 and 2003 bonus distribution, respectively, was NT\$3,863 million, nil and NT\$830 million (US\$24 million), respectively. The amounts chargeable to income under US GAAP in 2002 in respect of the portion of the 2001 bonus distribution paid in the form of our shares, were NT\$6,592 million, and that in future periods such amounts will continue to be substantial. Net income and earnings per share amounts calculated in accordance with ROC GAAP and US GAAP will differ accordingly. See note 28 to our consolidated financial statements.

*Embedded derivatives*

Under US GAAP, as prescribed by SFAS No.133, *Accounting for Derivative Instruments and Hedging Activities*, the derivative instruments embedded in our exchangeable bonds issued in May 2002 and in our investments in three convertible bonds are bifurcated and separately accounted for since the economic characteristics and risks of the embedded derivative instruments and the host contracts are not clearly and closely related, and the contracts that embody both the embedded derivative instruments and the host contracts are not remeasured at fair value with changes in fair value reported in earnings. As a result, the exchange and conversion options embedded were bifurcated and accounted for as freestanding derivative instruments and the changes in fair value were included in earnings of the year accordingly. See Note 28 to our consolidated financial statements.

In addition to some of the factors that affect results of operations as discussed above, the principal differences between ROC GAAP and US GAAP as they relate to our stockholders' equity are the treatment of: (1) marketable securities, (2) income tax and (3) consolidated goodwill as discussed below.

*Marketable Securities*

Under ROC GAAP, marketable securities are carried at the lower of aggregate cost or market value. The unrealized loss resulting from the decline in market value of investments that are held for short-term investment purposes is charged to current year's earnings while unrealized loss resulting from the decline in market value of investments that are held for long-term purposes is deducted from the stockholders' equity. Under US GAAP, debt securities that we have the positive intent and ability to hold to maturity are classified as held-to-maturity securities and reported at amortized cost. Debt and equity securities that are bought and traded for short-term profit are classified as trading securities and reported at fair value, with unrealized gains and losses included in earnings. Debt and equity securities not classified as either held-to-maturity or trading securities are classified as available-for-sale securities and reported at fair value, with unrealized gains and losses excluded from earnings and reported in a separate component of stockholders' equity. See note 28 to our consolidated financial statements.

*Income Tax*

Undistributed earnings generated after 1997 are subject to a 10% tax in compliance with the Income Tax Law of the ROC. Under ROC GAAP the 10% tax on undistributed earnings is recorded as an expense at the time shareholders resolve that our earnings shall be retained. Under US GAAP, we would measure our income tax expense, including the tax effects of temporary differences, using the tax rate that includes the tax on undistributed earnings.

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### *Consolidated Goodwill*

Under ROC GAAP, the fair value of the net assets received is deemed to be the value of the consideration for the acquisition of the remaining interests in United Semiconductor, United Silicon, UTEK Semiconductor and United Integrated Circuits and is reflected in the common stock and capital reserve in the balance sheet. We estimated the fair value of the net assets acquired through two valuation models, a profitability and net worth model and a discounted cash flow model. We also used other considerations such as the valuation of current operations, synergies, technical knowledge and future prospects. Under US GAAP, the acquisition was accounted for using the purchase method of accounting and the purchase price is determined using the market value of the shares exchanged. The difference between the fair value of the shares exchanged and the fair value of the net assets acquired creates goodwill. Goodwill was amortized on a straight-line basis over ten years up to January 1, 2002. Upon the first adoption of SFAS No. 141 Business Combinations & SFAS No. 142 Goodwill and Other Intangible Assets on January 1, 2002, the goodwill ceased to be amortized and is subject to impairment test only. See Recent Accounting Pronouncements.

### *Recent Accounting Pronouncements*

In June 2001, the Financial Accounting Standard Board (FASB) issued SFAS No. 141, Business Combinations, and SFAS No. 142, Goodwill and Other Intangible Assets. SFAS No. 141 requires that the purchase method of accounting be used for all business combinations initiated after June 30, 2001 as well as all purchase method business combinations completed after June 30, 2001. SFAS No. 141 also specifies criteria intangible assets acquired in a purchase method business combination must meet to be recognized and reported apart from goodwill, noting that any purchase price allocable to an assembled workforce may not be accounted for separately.

SFAS No. 142 requires that goodwill and intangible assets with indefinite useful lives no longer be amortized, but instead be tested for impairment at least annually in accordance with the provisions of SFAS No. 142. SFAS No. 142 also requires that intangible assets with estimable useful lives be amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment in accordance with SFAS No. 144, Accounting for the Impairment or Disposal of Long-lived Assets.

We adopted SFAS No. 141 & 142 on January 1, 2002. Upon adoption, we did not identify additional intangible assets related to previous acquisitions and the goodwill created from the acquisition of the remaining interests in United Semiconductor, United Silicon, UTEK Semiconductor and United Integrated Circuits prior to June 30, 2001 as well as those created from the acquisition of an equity investee were no longer to be amortized but instead subject to impairment test annually or when indication of impairment is noted. Similarly, the goodwill created upon conversion of convertible bonds ceased to be amortized. The annual goodwill impairment test performed did not result in the recognition of any impairment loss as of December 31, 2002.

In June 2001, the FASB issued SFAS No. 143, Accounting for Asset Retirement Obligations, which addresses financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. The standard applies to legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, development and (or) normal use of the asset.

SFAS No. 143 requires that the fair value of a liability for an asset retirement obligation be recognized in the period in which it is incurred if a reasonable estimate of fair value can be made. The fair value of the liability is added to the carrying amount of the associated asset and this additional carrying amount is depreciated over the life of the asset. The liability is accreted at the end of each period through charges to operating expense. If the obligation is settled for other than the carrying amount of the liability, we will recognize a gain or loss on settlement. We are currently evaluating the effect that implementation of the new standard will have on our financial position, results of operations, and cash



flows.

In August 2001, the FASB issued SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, which supersedes SFAS No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of*. SFAS No. 144 retains the fundamental provisions of SFAS No. 121 for

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recognition and measurement of the impairment of long-lived assets to be held and used and measurement of long-lived assets to be disposed of by sale. SFAS No. 144 addresses certain implementation issues related to SFAS No. 121. This Statement also supersedes the accounting and reporting provisions of APB Opinion No. 30, Reporting the Results of Operations Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions, for segments of a business to be disposed of. SFAS No. 144 retains the basic provisions of APB Opinion No. 30 for the presentation of discontinued operations in the income statement but broadens that presentation to include a component of an entity, rather than a segment of a business. The adoption of SFAS No. 144 on January 1, 2002 did not have any material effect on our financial position or results of operations.

In June 2002, the FASB issued SFAS No. 146 Accounting for Costs Associated with Exit or Disposal Activities. The Statement represents the second and final phase of the FASB's project on accounting for the impairment or disposal of long-lived assets and for obligations associated with exit or disposal activities. We do not expect the adoption of SFAS No. 146 in January 2003 to have a material effect on our financial position or results of operations.

During the year ended December 31, 2002, the FASB has issued SFAS No. 145, Rescission of FASB Statements No. 4, 44 and 64, Amendment of FASB Statement No. 13, and Technical Corrections, SFAS No. 147 Acquisition of Certain Financial Institutions and SFAS No. 148 Accounting for Stock-Based Compensation-Transition and Disclosure. These Statements were effective for our company during the year ended December 31, 2002 and did not have any material effect on our earnings or financial position for the year then ended.

In November 2002, the FASB issued Interpretation No. 45, Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others (FIN45). FIN45 requires certain guarantees to be recorded at fair value, which is different from the general current practice of recording a liability only when a loss is probable and reasonably estimable, as those terms are defined in SFAS No. 5, Accounting for Contingencies. FIN45 also requires a guarantor to make significant new disclosures for virtually all guarantees even if the likelihood of the guarantor's having to make payments under the guarantee is remote. The disclosure requirements of FIN45 are effective for financial statements of interim or annual periods ending after December 15, 2002.

The initial recognition and initial measurement provisions of FIN45 are applicable on a prospective basis to guarantees issued or modified after December 31, 2002. We believe that the adoption of the standard will not have a material impact on our financial statements.

In January 2003, the FASB issued Interpretation No. 46, Consolidation of Variable Interest Entities, an Interpretation of Accounting Research Bulletin (ARB) No. 51, or the Interpretation. The Interpretation introduces a new consolidation model, the variable interests model, which determines control (and consolidation) based on potential variability in gains and losses of the entity being evaluated for consolidation. We are currently evaluating the effect that implementation of the new standard will have on our financial position, results of operations, and cash flows.

### **C. Research, Development, Patents and Licenses, Etc.**

The semiconductor industry is characterized by rapid changes in technology, frequently resulting in obsolescence of process technologies and products. As a result, effective research and development is essential to our success. We invested approximately NT\$6,306 million, NT\$8,960 million and NT\$7,368 million (US\$212 million) in 2000, 2001 and 2002, respectively, in research and development, which represented 5.4%, 12.8% and 9.8%, respectively, of net operating revenues for such periods. We believe that our continuous spending on research and development will help us maintain our position as a technological leader in the foundry industry. As of April 30, 2003, we employed 356 professionals in our research and development division, 18% of whom hold Ph.D degrees.

Our current research and development activities seek to upgrade and integrate manufacturing technologies and processes, as well as to develop embedded memory technologies, including DRAM, SRAM, 1T-SRAM and nonvolatile memories, and advanced device technologies, including SOI and strained silicon. Although we emphasize firm-wide participation in the research and development process, we maintain a central research and

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development team primarily responsible for developing cost-effective technologies that can serve the manufacturing needs of our customers. Monetary incentives are provided to our employees if projects result in successful patents. A substantial portion of our research and development activities are undertaken in cooperation with our customers and equipment vendors.

To further enhance our research and development capability, in January 2000 we became the first non-US member of Semiconductor Research Corporation, or SRC, a leading research institute for semiconductor technologies. We, as an active participant in every SRC program, have been working with member companies in conducting fundamental research in semiconductor technologies. The current membership of SRC comprises leading technology companies such as IBM, Intel, Texas Instruments, AMD and Motorola.

**D. Trend Information**

Please refer to Overview for a discussion of the most significant recent trends in our production, sales, costs and selling prices. In addition, please refer to discussions included in this Item for a discussion of known trends, uncertainties, demands, commitments or events that we believe are reasonably likely to have a material effect on our net operating revenues, income from continuing operations, profitability, liquidity or capital resources, or that would cause reported financial information not necessarily to be indicative of future operating results or financial condition.

**E. Off-Balance Sheet Arrangements**

As of December 31, 2002, we had off-balance sheet outstanding letters of credit of NT\$76 million (US\$2 million). See note 22 to our audited consolidated financial statements included in this annual report.

We have, from time to time, entered into interest rate swap and cap agreements to manage our interest rate risks on our floating rate debt instruments and foreign currency forward contracts to hedge our existing assets and liabilities denominated in foreign currencies and identifiable foreign currency purchase commitments. We do not engage in trading activities involving non-exchange traded contracts. See Item 11. Quantitative and Qualitative Disclosure about Market Risk.

**ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES**

**A. Directors and Senior Management**

The following table sets forth information with respect to all of our directors, supervisors and executive officers as of March 31, 2003.

Name	Age	Position	Years With United
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			<u>Microelectronics</u>
Robert H.C. Tsao	56	Chairman; Director	22
John Hsuan	51	Vice Chairman; Chief Executive Officer;	21
		Director	
Peter Chang	57	Director (Representative of Hsun Chieh	11
		Investment Co.); President	
Peter J. Courture	49	Director (Representative of Chuin Li	19
		Investment Co.); Chief Strategic Officer	
Hong-Jen Wu	51	Director (Representative of Chuin Tsie	23
		Investment Co.); Business Group President	
Tsing-Yuan Hwang	54	Director (Representative of Hsun Chieh	8
		Investment Co.)	
		61	

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Name	Age	Position	Years With United Microelectronics
Ching-Chang Wen	53	Director (Representative of Chuin Tsie Investment Co.); Business Group President	5
Fu-Tai Liou	50	Director (Representative of Shieh Li Investment Co.); Business Group President	6
Stan Hung	43	Director (Representative of Shieh Li Investment Co.); Business Group President	12
Chris Chi	52	Director (Representative of Chuin Li Investment Co.); Chief Financial Officer	6
Mao-Chung Lin	71	Supervisor	14
Jack K.C. Wang	56	Supervisor	8
Tzyy Jang Tseng	53	Supervisor (Representative of Hsun Chieh Investment Co.)	1

**Robert H.C. Tsao** became our Chairman in June 2001. Mr. Tsao was also our Chairman from 1991 to April 2000. Mr. Tsao received a Master's degree in Management Science from the National Chiao-Tung University of Taiwan in 1972. Before joining United Microelectronics in 1981, Mr. Tsao was the Vice Chairman of Electronics Research & Service Organization from 1979 to 1981. Mr. Tsao is also a director of Unimicron Technology Corp., Faraday Technology Corp. and TECO Electric and Machinery Company, Ltd.

**John Hsuan** is our Vice Chairmen, a director and our Chief Executive Officer, and was our Chairman from April 2000 to May 2001. Mr. Hsuan received a Bachelor's degree in Electrical Engineering from the National Chiao-Tung University of Taiwan in 1973. Before joining us in 1982, Mr. Hsuan was a manager of Electronics Research & Service Organization from 1977 to 1982.

**Peter Chang** is the representative of Hsun Chieh Investment Co., a director, and our President. Mr. Chang graduated from the University of Texas at Austin in 1971 with a Master's degree in Electrical Engineering. Prior to becoming a director and the CEO of our company in 1999, Mr. Chang served as the President of United Semiconductor from 1996 to 1999.

**Peter J. Courture** is the representative of Chuin Li Investment Co., a director, and has served as our Chief Strategic Officer since 2000, our General Counsel since 1993, and our chief counsel since 1983. Mr. Courture received a Bachelor's degree in Economics from Yale College in 1976 and a J.D. degree from Stanford Law School in 1979. Prior to joining United Microelectronics, Mr. Courture was a partner of the Silicon Valley law firm of Wilson Sonsini Goodrich & Rosati. Although Mr. Courture is not an employee of United Microelectronics, he is a member of our senior executive team, and receives incentive-based compensation from us for this role. Mr. Courture is also a director and President of UMC Capital Corporation, our wholly owned subsidiary in the United States.

**Hong-Jen Wu** is the representative of Chuin Tsie Investment Co., a director, and is also a Business Group President. Mr. Wu received a Bachelor's degree in Chemical Engineering from the National Taiwan University in 1976. Prior to joining United Microelectronics in 1980, Mr. Wu was a Senior Engineer at Taiwan General Equipment Corp.

**Tsing-Yuan Hwang** is the representative of Hsun Chieh Investment Co., a director. Mr. Hwang received a Bachelor's degree from the Japan University in 1982. Mr. Hwang is also the Chief Representative of Daiwa Institute of Research Ltd. in Taiwan.

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**Ching-Chang Wen** is the representative of Chuin Tsie Investment Co., a director, and is also a Business Group President. He received a Ph.D. degree in Electrical Engineering from the University of Pennsylvania in 1979. Prior to joining United Microelectronics in 1996, Dr. Wen served as Vice President of Winbond Electronics Corp.

**Fu-Tai Liou** is the representative of Shieh Li Investment Co., a director and is also a Business Group President. Dr. Liou received a Ph.D. degree in Material Science and Engineering from the State University of New York at Stony Brook in 1979. Prior to joining United Microelectronics in 1997, Dr. Liou was the Vice President of SGS-Thompson.

**Stan Hung** is the representative of Shieh Li Investment Co., a director, and has served as our Chief Financial Officer since 1999. Mr. Hung received a Bachelor's degree in Accounting from TamKang University in Taiwan in 1982. Prior to joining United Microelectronics in 1991, Mr. Hung was a Manager at Unipac Optoelectronics Corporation.

**Chris Chi** is the representative of Chuin Li Investment Co., a director and has served as our Chief Manufacturing Officer since 2003. Mr. Chi received a Master's degree from the University of California at Los Angeles. Prior to joining United Microelectronics in 1997, Mr. Chi was the Senior Vice President of Chartered Semiconductor Manufacturing Ltd.

**Mao-Chung Lin** is a supervisor. Mr. Lin received a Bachelor's degree in Business Administration from the National Taiwan University in 1955. Mr. Lin is also the President and Chief Executive Officer of Sunrox International, Inc.

**Jack K. C. Wang** is a supervisor. Mr. Wang received a Bachelor's degree from the Culture University in Taiwan in 1955. Mr. Wang is also the Chairman of Sen Dah Investment Co., Ltd.

**Tzyy Jang Tseng**, a supervisor, is the representative of Hsun Chieh Investment Co. Mr. Tseng received a Master's degree in physics from the National Tsing Hua University of Taiwan. Mr. Tseng is also the Chairman and President of Unimicron Technology Corp., Chairman of Subtron Technology Co., Ltd., Chairman of Plato Electronic (H.K.) Ltd. and Executive Director of the Taiwan Printed Circuit Association.

**B. Compensation**

The aggregate compensation paid in 2002, including an aggregate bonus of 2 million shares, to our directors, supervisors and executive officers, was approximately NT\$15.54 million (US\$0.45 million). The number of shares distributed as employee bonus was calculated by dividing the total nominal amount of the bonus by NT\$10, the per share par value of our shares, rather than their market value. The market value of our shares is currently substantially higher than par value. The following table sets forth total compensation paid to each of our directors and supervisors in their respective capacities in 2002.

Name	Capacity	Total Compensation  (in NT\$ thousands)
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Robert H.C. Tsao John Hsuan	Chairman; Director Vice Chairman; Chief Executive Officer;	636 <sup>(1)</sup>
Peter Chang	Director Director (Representative of Hsun Chieh	14,906 <sup>(2)</sup>
Peter J. Courture	Investment Co.) Director (Representative of Chuin Li	0 <sup>(3)(4)</sup>
Hong-Jen Wu	Investment Co.) Director (Representative of Chuin Tsie	0 <sup>(3)(4)</sup>
Tsing-Yuan Hwang	Investment Co.) Director (Representative of Hsun Chieh	0 <sup>(3)(4)</sup>
Ching-Chang Wen	Investment Co.) Director (Representative of Chuin Tsie	0 <sup>(3)(4)</sup>
	Investment Co.)	0 <sup>(3)(4)</sup>

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Fu-Tai Liou	Director (Representative of Shieh Li	
	Investment Co.)	0 <sub>(3)(4)</sub>
Stan Hung	Director (Representative of Shieh Li	
	Investment Co.); Chief Financial Officer	0 <sub>(3)(4)</sub>
Chris Chi	Director (Representative of Chuin Li	
	Investment Co.)	0 <sub>(3)(4)</sub>
Mao-Chung Lin	Supervisor	0 <sub>(4)</sub>
Jack K.C. Wang	Supervisor	0 <sub>(4)</sub>
Tzyy Jang Tseng	Supervisor (Representative of Hsun Chieh	
	Investment Co.)	0 <sub>(3)(4)</sub>

- 
- (1) Representing cost of providing transportation and lodging.
  - (2) Representing cost of providing transportation, lodging and salary.
  - (3) Paid to legal entity for which individual served as representative.
  - (4) Our directors and supervisors received no compensation in 2002 due to our operating loss in 2001.

**C. Board Practices**

All of our directors and supervisors were elected in May 2001 for a term of three years. Neither we nor any of our subsidiaries has entered into a contract with any of our directors and supervisors by which our directors or supervisors are expected to receive benefits upon termination of their employment.

The Sarbanes-Oxley Act of 2002 directs the Securities and Exchange Commission to require U.S. national securities exchanges, such as the New York Stock Exchange, and national securities associations to adopt rules that prohibit the listing of any security of an issuer that is not in compliance with the relevant audit committee requirements set forth in such act. We do not currently have an audit committee or an audit committee financial expert. We intend, however, to fully comply with all applicable rules and regulations and New York Stock Exchange listing requirements regarding the need for, and composition of, an audit committee, and SEC rules and regulations and New York Stock Exchange listing requirements regarding audit committee financial experts. The Securities and Exchange Commission adopted final rules relating to the audit committee requirements on April 9, 2003. The related New York Stock Exchange listing requirements for non-U.S. issuers are required to be adopted and come into effect by July 31, 2005.

**D. Employees**

As of April 30, 2003, we had 8,649 employees, which included 3,803 engineers, 4,311 technicians and 535 clerical staff performing administrative functions at our plants in Taiwan. 30 of these employees were seconded to the UMCJ facilities in Japan and 10 of these employees were seconded to UMCi in Singapore. We have in the past implemented, and may in the future evaluate the need to implement, labor redundancy plans based on the work performance of our employees.

Employee salaries are reviewed annually. Salaries are adjusted based on industry standards, inflation and individual performance. As an incentive, additional bonuses in cash may be paid at the discretion of management based on the performance of individuals. In addition, except

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under certain circumstances, ROC law requires us to reserve between 10% to 15% of any offerings of our new shares for employees subscription.

Our employees participate in our profit distribution pursuant to our articles of incorporation. Employees are entitled to receive additional bonuses based on a certain percentage of our allocable surplus income. The amount allocated for employees in 2002 in relation to retained earnings in 2001 totaled NT\$1,711 million, all of which were paid in the form of shares. The number of shares issued as employee share bonus is calculated by valuing the shares at their par value, or NT\$10 per share, rather than their fair market value. Accordingly, the value of the shares received by employees is significantly more than the cash amount employees would receive if the employee share bonus was paid in cash. See Items 5. Operating and Financial Review and Prospects US GAAP Reconciliation.

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Our employees are not covered by any collective bargaining agreements. We believe we have a good relationship with our employees.

**E. Employee Stock Options Plan**

According to our Employee Stock Options Plan, options may be granted to our full-time regular employees, including those of our domestic and overseas subsidiaries, for purchase of up to an aggregate of 1,000,000,000 of our common shares. The exercise price for the options would be the closing price of our common shares on the Taiwan Stock Exchange on the day the options are granted, while the expiration date for such options is 6 years from the date of its issuance. We granted 939,000,000 and 61,000,000 options to acquire our common shares under our Employee Stock Options Plan in October 2002 and January 2003, respectively.

According to our Employee Stock Options Plan, an option holder may exercise an increasing portion of his or her options in time starting two years after the grant of the options. According to the vesting schedule, 50%, 75% and 100% of such option holder's options shall vest two, three and four years after the grant of the options, respectively. Upon a voluntary termination or termination in accordance with the ROC Labor Law, the option holder shall exercise his or her vested options within 30 days, subject to exceptions provided therein, and after the termination otherwise such options shall terminate. If termination was due to death, the heirs of such option holder have one year starting from the date of the death to exercise his or her vested options. If termination was due to retirement or occupational casualty, the option holder or his or her heirs may exercise all his or her options within certain period as provided. The options are generally not transferable or pledgeable by the option holders.

The following table sets forth stock options paid to each of our Chairman and our senior officers as of May 31, 2003.

Name	Title	Units Granted	Unit granted/total outstanding shares (%)
Robert H.C. Tsao	Chairman	10,000,000	0.06
John Hsuan	Chief Executive Officer	10,000,000	0.06
Peter Chang	President	10,000,000	0.06
Hong-Jen Wu	Business Group President	10,000,000	0.06
Ching-Chang Wen	Business Group President	10,000,000	0.06
Chris Chi	Chief Manufacturing Officer	10,000,000	0.06
Fu-Tai Liou	Business Group President	10,000,000	0.06
Stan Hung	Chief Financial Officer	10,000,000	0.06
W. Y. Chen	Vice President	8,000,000	0.05
Henry Liu	Vice President	8,000,000	0.05

**F. Share Ownership**

Each of our directors, supervisors and executive officers holds shares and/or ADSs of United Microelectronics, either directly for their own account or indirectly as the representative of another legal entity on our board of directors. As of December 31, 2002, none of our directors, supervisors or executive officers held, for their own account, 1% or more of our outstanding shares. As of April 11, 2003, Hsun Chieh Investment Co. held approximately 484 million of our shares (representing approximately 3.13% of our issued shares).

**ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS**

**A. Major Shareholders**

The following table sets forth information known to us with respect to the beneficial ownership of our shares as of April 11, 2003 by (1) each shareholder known by us to beneficially own more than 2% of our shares and (2) all

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directors, supervisors and executive officers as a group. Beneficial ownership is determined in accordance with SEC rules.

Name of Beneficial Owner	As of April 11, 2003		As of April 5, 2002	As of May 30, 2001	Immediately After Our Merger	Immediately Prior to Our Merger
	Number of shares beneficially owned on record	Percentage of shares beneficially owned	Percentage of shares beneficially owned	Percentage of shares beneficially owned	Percentage of shares beneficially owned	Percentage of shares beneficially owned
Hsun Chieh Investment Co., Ltd.(1)	484,045,453	3.13	3.16	3.2	3.4	2.5
The government of the ROC(2)	371,044,884	2.40	3.45	5.8	(3)	(3)
Xilinx, Inc.	352,666,664	2.28	2.30	2.3	2.5	0
Directors, supervisors and executive	1,311,604,094	8.48	8.55	9.3	11.4	12.6

(1) 99.97% owned by United Microelectronics as of May 31, 2003.

(2) Owned through several governmental agencies and corporations controlled by the government. In March 2002, one of such governmental agencies, the National Financial Stabilization Fund, sold all of our shares it owned through a secondary public offering of 47,537,780 American depositary shares of our company, representing 237,688,900 of our shares.

(3) The percentage of shares beneficially owned by the government of the ROC is not available.

None of our major shareholders have different voting rights from those of our other shareholders.

To the best of our knowledge, we are not directly or indirectly controlled by another corporation, by any foreign government or by any other natural or legal person severally or jointly.

For information regarding our shares held or beneficially owned by persons in the United States, see Item 9. The Offer and Listing Market Price Information for Our American Depositary Shares in this annual report.

**B. Related Party Transactions****Related Party Transactions Policies**

We from time to time have engaged in a variety of transactions with our affiliates. We generally conduct transactions with our affiliates on an arm's-length basis. The sales and purchase prices with related parties were determined through negotiation, generally based on market price. The prices of acquisition or disposal of buildings and facilities with related parties were determined by fair market value, endorsed by an independent professional appraisal company.

**United Microelectronics (Europe) BV**

We engaged United Microelectronics (Europe) BV to distribute our products in Europe on a direct sales basis. United Microelectronics (Europe) BV became our wholly-owned subsidiary in mid May 2002. Sales through this company totaled NT\$11,922 million and NT\$6,039 million for 2000 and 2001, respectively.

**United Microelectronics Co., Ltd.**

United Microelectronics Co., Ltd., which was previously controlled by Robert H.C. Tsao, our Chairman, and John Hsuan, one of our directors, and was sold to third party and renamed Microcomp Ltd. in May 2001. Prior to such sale, we engaged United Microelectronics Co., Ltd. and later Microcomp Ltd. and its subsidiaries to distribute our products in Hong Kong on a direct sales basis. Sales through this company totaled NT\$697 million for 2000.

**Fabless Design Customers**

In 1997, United Microelectronics made initial investments as a founding shareholder in several fabless design companies, including AMIC Technology Inc., AMIC Technology (Taiwan) Inc., Broadmedia Inc. (which was merged into Archtek Telecom Corporation, a non-fabless-design company, in December 2002), DAVICOM Semiconductor (Taiwan), Inc., Integrated Telecom Express Inc., Integrated Technology Express Inc., MediaTek Inc.

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and Novatek Microelectronics Corp., and received a majority interest in AMIC Technology Inc. and minority interests in the other companies. After the establishment of these companies, United Microelectronics sold in 1997 its semiconductor design equipment and related assets to these companies at the fair market value of these assets. In December 2000, United Microelectronics sold all of its shares of AMIC Technology Inc. to AMIC Technology (Taiwan), Inc. The following table shows our aggregate ownership interest in each of these companies as of December 31, 2002.

<u>Name</u>	<u>Ownership %</u>
Integrated Telecom Express Inc.	28.35
MediaTek Inc.	13.21
Novatek Microelectronics Corp.	25.83
Davicom Semiconductor, Inc.	22.96
AMIC Technology (Taiwan), Inc.	26.45
Integrated Technology Express Inc.	24.58

In addition, we provide foundry services to these fabless design companies at arm's-length prices and terms. We derived NT\$9,949 million, NT\$6,398 million and NT\$13,816 million (US\$398 million) of our net operating revenues in 2000, 2001 and 2002, from the provision of our foundry services to these fabless design companies.

**Chiao Tung Bank**

Chiao Tung Bank became a wholly-owned subsidiary of Mega Financial Holding Company in 2002. As of December 31, 2002, we had a 1.35% aggregate equity interest in Mega Financial Holding Company, including the 0.52% equity interest held by Hsun Chieh. We received our shareholding in Mega Financial Holding Company as a result of Chiao Tung Bank's becoming a wholly-owned subsidiary of Mega Financial Holding Company. We have appointed Robert H.C. Tsao, member of our board of directors, to serve on the board of directors, and Stan Hung, also a member of our board of directors, to serve as a supervisor, of Mega Financial Holding Company. Chiao Tung Bank is one of our primary lenders. As of December 31, 2002, a total amount of NT\$868 million of loans extended by Chiao Tung Bank to us remained outstanding.

**Industrial Bank of Taiwan Corp.**

We are one of the major shareholders of Industrial Bank of Taiwan Corp. We had a 5% equity interest in Industrial Bank of Taiwan as of December 31, 2002. Industrial Bank of Taiwan is one of our primary lenders. As of December 31, 2002 a total amount of NT\$783 million of loans extended by Industrial Bank of Taiwan to us remained outstanding.

**C. Interests of Experts and Counsel**

Not applicable.



**ITEM 8. FINANCIAL INFORMATION**

**A. Consolidated Statements and Other Financial Information**

Please refer to Item 18 for a list of all financial statements filed as part of this annual report on Form 20-F.

Except as described in Item 4. Information on the Company Litigation, we are not currently involved in material litigation or other proceedings that may have, or have had in recent past, significant effects on our financial position or profitability.

As for our policy on dividend distributions, see Item 10. Additional Information B. Memorandum and Articles of Association Dividends and Distributions. The following table sets forth the cash dividends per share

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and stock dividends per share as a percentage of shares outstanding paid during each of the years indicated in respect of shares outstanding at the end of each such year, except as otherwise noted.

	Cash dividend per share	Stock dividend per share <sup>(1)</sup>	Total number of shares issued as stock dividend	Number of outstanding shares at year end
	(NT\$)	(NT\$)		
1995	0.5	5.0	417,459,806	1,343,478,004
1996		9.3	1,237,236,274	2,752,551,663
1997		3.0	868,629,276	4,117,758,265
1998		2.9	1,199,052,940	5,480,221,725
1999		1.5	834,140,790	6,638,054,462
2000		2.0	1,809,853,716	11,439,016,900
2001		1.5	1,715,104,035	13,169,235,416
2002		1.5	1,968,018,212	15,238,578,646

- (1) We declare stock dividends in a NT dollar amount per share, but we pay the dividends to our shareholders in the form of shares. The amount of shares distributed to each shareholder is calculated by multiplying the dividend declared by the number of shares held by the given shareholder, divided by the par value of NT\$10 per share. Fractional shares are not issued but are paid in cash.

**B. Significant Changes**

Other than those changes disclosed below, we have not experienced any significant changes since the date of the annual financial statements for the year ended December 31, 2002.

The semiconductor industry has experienced a downturn since late 2000. Our capacity utilization rate in 2001 was 47%, compared to 100% in 2000, due to rapidly deteriorating demand, mainly from our customers in the communication sector. Our capacity utilization rate improved to 65% in 2002 due to increased demand from the consumer electronics and wireless communication businesses. Our unconsolidated net operating revenues for the three months ended March 31, 2003 were NT\$17,899 million. Our unconsolidated net operating revenues for the three months ended March 31, 2003 are not necessarily indicative of the results that may be expected for any subsequent period.

In connection with the settlement of our litigations with Silicon Integrated Systems, or SiS, we and SiS agreed in late 2002 to enter into a broad scope of cooperation, including, among other things, exchange of process patents, production support and our board representation in SiS. To further strengthen our relationship with SiS, we have also decided to invest in SiS. As of March 31, 2003, we held 16.18% of SiS outstanding share capital. In addition, our representatives currently hold three out of seven board seats of SiS, and John Hsuan, our vice chairman, is the chairman of SiS.

SiS is an independent design manufacturer, that is, a company engaging in design and manufacture of semiconductor devices. SiS owns and operates an 8-inch fab in Taiwan. For the past two years, although SiS's own fab was able to manufacture a significant portion of the semiconductor products it designs, it from time to time outsourced to other companies when the market demand exceeded its fabrication capacity. Under our settlement of the legal proceedings with SiS, SiS agreed to engage us as its sole external provider of integrated circuit manufacturing or foundry services for integrated circuits designed with 0.18 micron and smaller feature sizes.

**ITEM 9. THE OFFER AND LISTING**

**A. Offer and Listing Details**

Not applicable.

**Table of Contents****B. Plan of Distribution**

Not applicable.

**C. Markets****Market Price Information for Our Shares**

Our shares have been listed on the Taiwan Stock Exchange since July 1985. There is no public market outside Taiwan for our shares. The table below shows, 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 shares. The closing price for our shares on the Taiwan Stock Exchange on May 15, 2003 was NT\$20.9 per share.

	Closing Price Per Share(1)		Average Daily
	High	Low	Trading Volume
	NT\$	NT\$	(in thousands of shares)
1997	168.00	38.00	72,067.35
1998	93.00	30.10	48,894.69
1999	112.00	38.90	85,330.90
2000	125.00	43.80	61,290.64
2001	59.50	23.40	73,567.45
2002			
First Quarter	55.00	41.00	95,998.59
Second Quarter	58.00	39.00	63,629.87
Third Quarter	44.00	23.00	66,403.64
Fourth Quarter	28.50	19.70	81,581.18
2003			
First Quarter			
January	23.80	21.10	79,736.47
February	20.80	19.30	67,598.51
March	21.90	19.20	71,524.17
Second Quarter			
April	21.70	19.30	68,651.97
May (through May 15)	20.90	19.90	51,955.52

Source: Bloomberg; Taiwan Stock Exchange.

(1) As reported.

**Market Price Information for Our American Depositary Shares**

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Our ADSs have been listed on the New York Stock Exchange under the symbol UMC since September 19, 2000. The outstanding ADSs are identified by the CUSIP number 910873 20 7. The table below shows, for the periods indicated, the high and low closing prices and the average daily volume of trading activity on the New York Stock Exchange for our ADSs. The closing price for our ADSs on the New York Stock Exchange on May 15, 2003 was US\$3.6 per ADS. Each of our ADSs represents the right to receive five shares.

	Closing Price		Average ADS Daily Trading Volume
	Per ADS(1)		
	High	Low	
	US\$	US\$	
2000			
September (from September 19)	15.19	11.81	4,652,143
Fourth Quarter	14.06	7.06	1,777,236
2001			
	12.50	4.25	2,706,535
2002			
First Quarter	10.70	7.37	3,761,822
Second Quarter	11.50	7.10	3,764,555
Third Quarter	8.03	3.50	3,712,541
Fourth Quarter	4.88	2.93	3,299,679
2003			

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	Closing Price		Average ADS Daily Trading Volume
	Per ADS(1)		
	High	Low	
	US\$	US\$	
First Quarter			
January	3.90	3.03	3,167,942
February	3.40	2.93	2,988,695
March	3.69	2.98	2,956,904
Second Quarter			
April	3.58	3.06	3,647,386
May (through May 15)	3.66	3.20	3,655,336

Source: NYSE.

(1) As reported.

As of May 31, 2003, a total of 868,467,235 ADSs and 15,139,383,646 of our shares were outstanding, which includes shares and related ADSs in respect of a stock dividend and employee bonus shares distributed in August 2002. These figures do not include the 149.7 million treasury shares underlying the ADSs to be issued upon the conversion of our Zero Coupon Convertible Bonds due 2004. With certain limited exceptions, holders of shares that are not ROC persons are required to hold these shares through a brokerage or custodial account in the ROC. As of April 10, 2003, 868,467,235 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 April 10, 2003, 173,693,447 ADSs, representing these 868,467,235 shares, were held of record by Cede & Co. and 26 other U.S. persons. We have no further information as to shares held, or beneficially owned, by U.S. persons.

**D. Selling Shareholders**

Not applicable.

**E. Dilution**

Not applicable.

**F. Expenses of the Issue**

Not applicable.

**ITEM 10. ADDITIONAL INFORMATION**

**A. Share Capital**

Not applicable.

**B. Memorandum and Articles of Association**

*The following statements summarize the material elements of our capital structure and the more important rights and privileges of shareholders conferred by ROC law and our articles of incorporation.*

**Objects and Purpose**

The scope of business of United Microelectronics as set forth in Article 2 of our articles of incorporation, includes (i) integrated circuits; (ii) semiconductor parts and components; (iii) parts and components of microcomputers, microprocessors, peripheral support and system products; (iv) parts and components of semiconductor systems products; (v) testing and packaging of integrated circuits; (vi) mask production research and development, design, production sales, promotion and after sale services related to our business; and (vii) export/import trade related to our business.

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**Table of Contents****Directors**

The ROC Company Law and our articles of incorporation provide that our board of directors is elected by shareholders and is responsible for the management of our business. Our board of directors is composed of 10 directors. The Chairman of our board is elected by our directors. The Chairman presides at all meetings of our board of directors, and also has the authority to represent our company. The term of office for our directors is three years, and our directors are elected by our shareholders by means of cumulative voting. The next election for all of the directors and supervisors is expected to be held in 2004. In addition, our articles of incorporation provide that our shareholders also elect three supervisors whose duties include, among other things, investigating our business and financial condition, inspecting our corporate records, calling our shareholders' meetings, representing us in negotiations with our directors and notifying, when appropriate, our board of directors to cease acting in contravention of applicable law or regulation or in contravention of our articles of incorporation. The supervisors cannot concurrently serve as our directors or officers or employees. Pursuant to the ROC Company Law, a person may serve as our director or supervisor in his or her personal capacity or as the representative of another legal entity. A legal entity that owns our shares may be elected as a director or supervisor, in which case a natural person must be designated to act as the legal entity's representative. A legal entity that is our shareholder may designate its representative to be elected as our director or supervisor on its behalf. In the event several representatives are designated by the same legal entity, any or all of them may be elected. 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 such legal entity, and the replacement director or supervisor may serve the remainder of the term of office of the replaced director or supervisor. Currently, eight of our directors and one of our supervisors are representatives of other legal entities, as shown in Item 6. Directors, Senior Management and Employees A. Directors and Senior Management . Our articles of incorporation provides that our directors and supervisors in the aggregate shall own no less than 5% and 0.5%, respectively, of our issued and outstanding shares.

**Shares**

As of December 31, 2002, our authorized share capital was NT\$220 billion, divided into 22 billion shares, of which 15,474,845,646 shares were issued and 15,238,578,646 shares were outstanding. All shares presently issued are fully paid and in registered form, and existing shareholders are not subject to any capital calls. As of March 31, 2002, United Microelectronics had no outstanding convertible bonds, warrants or options on our shares, except for (i) our US\$302.4 million Zero Coupon Convertible Bonds due 2004, which are convertible at the option of each bondholder into our shares or ADSs, and (ii) 939,000,000 and 61,000,000 options we granted to our employees under our Employee Stock Options Plan as discussed below.

According to our Employee Stock Options Plan, options may be granted to our full-time regular employees, including those of our domestic and overseas subsidiaries, for purchase of up to an aggregate of 1,000,000,000 of our common shares. We granted 939,000,000 and 61,000,000 options to acquire our common shares under the plan in October 2002 and January 2003, respectively. According to the plan, an option holder may exercise an increasing portion of his or her options in time starting two years after the grant of the options. According to the vesting schedule, 50%, 75% and 100% of such option holder's options shall vest two, three and four years after the grant of the options, respectively.

**New Shares and Preemptive Rights**

New shares may only be issued with the prior approval of our board of directors. If our issuance of any new shares will result in any change in our authorized share capital, we are required under ROC law to amend our articles of incorporation and obtain approval of our shareholders in a shareholders' meeting. We must also obtain the approval of, or submit a registration with, the Securities and Futures Commission and the Hsinchu Science-Based Industrial Park Administration. According to the ROC Company Law, when a company issues capital stock for cash, 10% to 15% of the issue must be offered to its employees. In addition, if a listed company intends to offer new shares for cash, at least 10% of the issue must also be offered to the public. This percentage can be increased by a resolution passed at a shareholders' meeting, which will reduce the number of new shares in which existing shareholders may have preemptive rights. Unless the percentage of the shares offered to the public is



increased by a resolution, existing shareholders of the company have a preemptive right to acquire the remaining 75% to 80% of the issue in proportion to their existing shareholdings. According to the Corporate Merger and Acquisition Act of

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the ROC, as effective on February 8, 2002, if new shares issued by our company are solely for the purpose of acquisition or spin-off, the above-mentioned restrictions, including the employee stock ownership plan, the preemptive rights of the existing shareholders and the publicity requirement of a listed company, to such issuance of new shares may not be applied.

## **Shareholders**

We only recognize persons registered in our register as our shareholders. We may set a record date and close our register of shareholders for specified periods to determine which shareholders are entitled to various rights pertaining to our shares.

## **Transfer of Shares**

Shares in registered form are transferred in book-entry form or by endorsement and delivery of the related share certificates. Transferees must have their names and addresses registered on our register in order to assert shareholder's rights against us. Our shareholders are required to file their respective specimen seals with our share registrar, SinoPac Securities Corp. Under current ROC Company Law, a public company, such as our company, may issue individual share certificates, one master certificate or no certificate at all to evidence common shares. Our articles of incorporation, as amended on June 9, 2003, provide that we, upon acceptance of the application from the Taiwan Securities Central Depository Co., Ltd., or TSCDC, may issue a large face value share certificate in exchange for every thousand shares in the custody of TSCDC, or issue one master certificate for all newly issued shares. If our shares are issued in one master certificate, the shares will be deposited for the custody of TSCDC, and the transfer of these shares will be carried out through the book-entry system maintained by TSCDC.

## **Shareholders Meetings**

We are required to hold an annual ordinary shareholders' meeting once every calendar year within six months from the end of each calendar year. Our board of directors may convene an extraordinary meeting whenever the directors deem necessary, and they must do so if requested in writing by shareholders holding no less than 3% of our paid-in share capital who have held these shares for more than a year. In addition, any of our supervisors may convene a shareholders' meeting if our board of directors do not or cannot convene a shareholders' meeting and when such a meeting is necessary for the benefit of the shareholders. At least 15 days advance written notice must be given of every extraordinary shareholders' meeting and at least 30 days advance written notice must be given of every annual ordinary shareholders' meeting. Unless otherwise required by law or by our articles of incorporation, voting for an ordinary resolution requires an affirmative vote of a simple majority of those present. A distribution of cash dividends would be an example of an ordinary resolution. The ROC Company Law also provides that in order to approve certain major corporate actions, including any amendment of our articles of incorporation, dissolution, merger or spin-off, the transfer of all or an essential part of the business or assets, accept all of the business or assets of any other company which would have a significant impact in our operations, removing directors or the distribution of dividend in stock form, a special resolution may be adopted by the holders of at least two-thirds of our shares represented at a meeting of shareholders at which holders of at least a majority of our issued and outstanding shares are present. However, if we are the controlling company and hold no less than 90% of our subordinate company's outstanding shares, our merger with the subordinate company can be approved by a board resolution adopted by majority consent at a meeting with two-thirds of our directors present without shareholders' approval. In addition, according to the Corporate Merger and Acquisition Act of the ROC, if a company intends to transfer all or an essential part of its business or assets to its wholly-owned subsidiary, subject to the qualifications set forth in the said act, such transaction only needs to be approved by majority board resolution rather than super majority vote by the shareholder's meeting as required by the ROC Company Law.

## **Voting Rights**

Except for treasury shares, each share is generally entitled to one vote. Except as otherwise provided by law or our articles of incorporation, a resolution can be adopted by the holders of a simple majority of the total issued and outstanding shares represented at a shareholders' meeting. The quorum for a shareholders' meeting to discuss the ordinary resolutions is a majority of the total issued and outstanding shares. The election of directors and supervisors by our shareholders may be conducted by means of cumulative voting or other voting mechanisms adopted in our

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articles of incorporation. In all other matters, a shareholder must cast all his or her votes in the same manner when voting on any of these matters.

Our shareholders may be represented at an ordinary or extraordinary shareholders' meeting by proxy if a valid proxy form is delivered to us five days before the commencement of the ordinary or extraordinary shareholders' meeting. Voting rights attached to our shares exercised by our shareholders' proxy are subject to the proxy regulation promulgated by the ROC Securities and Futures Commission.

Any shareholder who has a personal interest in a matter to be discussed at our shareholders' meeting, the outcome of which may impair our interests, shall not vote or exercise voting rights on behalf of another shareholder on such matter.

You generally will not be able to exercise voting rights on the shares underlying your ADSs on an individual basis.

## **Dividends and Distributions**

We are not allowed under ROC law to pay dividends on our treasury shares. We may distribute dividends on our issued and outstanding shares if we have earnings. Before distributing a dividend to shareholders, we must recover any past losses, pay all outstanding taxes and set aside a legal reserve equivalent to 10% of our net income until our legal reserve equals our paid-in capital.

At an annual ordinary shareholders' meeting, our board of directors submits to the shareholders for their approval proposals for the distribution of dividends or the making of any other distribution to shareholders from our net income or reserves for the preceding fiscal year. Dividends are paid to shareholders proportionately. Dividends may be distributed either in cash or in shares or a combination of cash and shares, as determined by the shareholders at such meeting.

Our articles of incorporation provide that we may distribute 0.1% of our earnings after:

payment of all taxes and dues;

deduction of any past losses; and

allocation of 10% of our net income as a legal reserve

as remuneration to directors and supervisors.

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The amount of no less than 5% of the residual amount after the distribution of the items illustrated above, plus any undistributed earnings from previous years, shall be distributed as bonus to employees in the form of new shares. Employees eligible for such distribution may include certain qualified employees from our subordinate companies and the qualification of such employees is to be determined by our board of directors. The remaining amount may be distributed according to the distribution plan proposed by our board of directors based on our dividend policy, and submitted to the shareholders meeting for approval.

Our articles of incorporation further provide that at least 50% of the dividends to our shareholders, if any, must be paid in the form of stock dividends. Accordingly, no more than 50% of the dividends can be paid in the form of cash.

In addition to permitting dividends to be paid out of net income, we are permitted under the ROC Company Law to make distributions to our shareholders of additional shares by capitalizing reserves, including the legal reserve and capital surplus of premiums from issuing stock and earnings from gifts received if we do not have losses. However, the capitalized portion payable out of our legal reserve is limited to 50% of the total accumulated legal reserve, and is payable only if and to the extent the accumulated legal reserve exceeds 50% of our paid-in capital.

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For information as to ROC taxes on dividends and distributions, see E. Taxation ROC Tax Considerations.

### **Acquisition of Our Common Shares by Us**

An ROC company may not acquire its own common shares, except under certain exceptions provided in the ROC Company Law or the ROC Securities and Exchange Law. Under the new amendments to the ROC Company Law, which took effect on November 14, 2001, a company may purchase up to 5% of its issued common shares for transfer to employees in accordance with a resolution of its board of directors, passed by a majority vote, at a meeting with at least two-thirds of the directors present.

Under Article 28-2, an amendment to the Securities and Exchange Law, which took effect on July 21, 2000, we may, by a board resolution adopted by majority consent at a meeting with two-thirds of our directors present, purchase up to 10% of our issued shares on the Taiwan Stock Exchange or by a tender offer, in accordance with the procedures prescribed by the Securities and Futures Commission, for the following purposes:

to transfer shares to our employees;

to transfer upon conversion of bonds with warrants, preferred shares with warrants, convertible bonds, convertible preferred shares or certificates of warrants issued by us; and

if necessary, to maintain our credit and our shareholders' equity; provided that the shares so purchased shall be cancelled thereafter.

On February 20, 2002, we started to purchase 49,114,000 of our common shares at an approximate aggregate price of NT\$2.18 billion for transfer to our employees as permitted by the ROC Company Law. For two months since August 12, 2002, we had also purchased 20,693,000 of our common shares at an approximate aggregate price of NT\$562 million to accommodate the conversion of the Zero Coupon Convertible Bonds due 2004 we issued in December 2001. On March 4, 2003, our board of directors passed a resolution to purchase up to 500 million of our common shares, which is approximately 3.23% of our issued shares on the date thereof, at the maximum aggregate price of NT\$15.5 billion for transfer to our employees as permitted by the ROC Company Law. The period of execution is from March 5, 2003 through May 4, 2003. As of May 4, 2003, we purchased 99,195,000 shares of our common shares pursuant to our board resolutions dated March 4, 2003, at the price of NT\$20.74 per share (for the approximate aggregate price of NT\$2,057 million). The shares we purchased since February 20, 2002 consisted of 1.09% of our issued common shares.

In addition, we may not spend more than the aggregate amount of the retained earnings, the premium from issuing stock and the realized portion of the capital reserve to purchase our shares.

We may not pledge or hypothecate any purchased shares. In addition, we may not exercise any shareholders' rights attaching to such shares. In the event that we purchase our shares on the Taiwan Stock Exchange, our affiliates, directors, supervisors, managers and their respective spouses and minor children and/or nominees are prohibited from selling any of our shares during the period in which we purchase our shares.

In addition to the share purchase restriction, the recently amended Company Law provides that our subsidiaries may not acquire our shares or the shares of our majority-owned subsidiaries if the majority of the outstanding voting shares or paid-in capital of such subsidiary is directly or indirectly held by us.

### **Liquidation Rights**

In a liquidation, you will be entitled to participate in any surplus assets after payment of all debts, liquidation expenses and taxes.

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### **Rights to Bring Shareholders' Suits**

Under the ROC Company Law, a shareholder may bring suit against us in the following events:

within 30 days from the date on which a shareholders' resolution is adopted, a shareholder may file a lawsuit to annul a shareholders' resolution if the procedure for convening a shareholders' meeting or the method of resolution violates any law or regulation or our articles of incorporation. However, if the court is of the opinion that such violation is not material and does not affect the result of the resolution, the court may reject the shareholder's claim.

if the substance of a resolution adopted at a shareholders' meeting contradicts any applicable law or regulation or our articles of incorporation, a shareholder may bring a suit to determine the validity of such resolution.

Shareholders may bring suit against our directors and supervisors under the following circumstances:

Shareholders who have continuously held 3% or more of our issued shares for a period of one year or longer may request in writing that a supervisor institute an action against a director on our behalf. In case the supervisor fails to institute an action within 30 days after receiving such request, the shareholders may institute an action on our behalf. In the event shareholders institute an action, a court may, upon application of the defendant, order such shareholders to furnish appropriate security.

Shareholders who hold more than 3% or more of our total issued shares may institute an action with a court to remove a director of ours who has materially violated the applicable laws or our articles of incorporation or has materially damaged the interests of our company if a resolution for removal on such grounds has first been voted on and rejected by our shareholders and such suit is filed within 30 days of such shareholders vote.

In the event that any director, supervisor, manager or shareholder holding more than 10% of our shares or any respective spouses or minor children and/or nominees of any of them sells shares within six months after acquisition of such shares, or repurchases the shares within six months after the sale, we may claim for recovery of any profits realized from the sale and purchase. If our board of directors or our supervisors fail to claim for recovery, any shareholder may request our board of directors or our supervisors to exercise the right of claim within 30 days. After such 30-day period, such requesting shareholder shall have the right to claim such recovery on our behalf. Our directors and supervisors shall be jointly and severally liable for damages suffered by us as a result of their failure to exercise the right of claim.

### **Other Rights of Shareholders**

Under the ROC Company Law, dissenting shareholders are entitled to appraisal rights in the event of a spin-off or a merger and various other major corporate actions. Dissenting shareholders may request us to redeem all their shares at a fair price to be determined by mutual agreement. If no agreement can be reached, the valuation will be determined by a court. Subject to applicable law, dissenting shareholders may, among other things, exercise their appraisal rights by notifying us before the related shareholders' meeting and/or by raising and registering their dissent at the shareholders' meeting.



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One or more shareholders who have held more than 3% of the issued and outstanding shares for more than one year may require our board of directors to call an extraordinary shareholders meeting by sending a written request to our board of directors.

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### **Financial Statements**

For a period of at least ten days before our annual shareholders' meeting, we must make available our annual financial statements at our principal offices in Hsinchu, Taiwan and our share registrar in Taipei for our shareholders' inspection.

### **Transfer Restrictions**

Our directors, supervisors, managers and shareholders holding more than 10% of our shares are required to report any changes in their shareholding to us on a monthly basis. In addition, the number of shares that they can sell or transfer on the Taiwan Stock Exchange on a daily basis is limited by ROC law. Further, they may sell or transfer our shares on the Taiwan Stock Exchange only after reporting to the Securities and Futures Commission at least three days before the transfer, provided that such reporting is not required if the number of shares transferred does not exceed 10,000.

### **C. Material Contracts**

*The following are summaries of our material contracts entered into over the past 2 years. However, these summaries may not contain all the information important to you. For more complete information, you should read the entire agreements, which have been included as exhibits to this annual report or incorporated into this annual report by reference to our Registration Statement on Form F-1 (File No. 33-12444) filed with the Commission on August 28, 2000, as amended.*

### **Lease Agreements**

For a summary of our material leases, see Item 4. Information on the Company Manufacturing.

### **Foundry Venture Agreement, entered into as of March 30, 2001, amongst United Microelectronics Corporation, Infineon Technologies, AG, EDB Investments Pte Ltd and UMCi Pte Ltd**

In March 2001, we entered into a foundry venture agreement with EDB Investments and Infineon relating to the formation of UMCi, a joint venture in Singapore formed for the purpose of constructing, owning and operating a 12-inch fab in Singapore's Pasir Ris Wafer Fab Park. Under the terms of the foundry venture agreement, we expect to invest up to US\$630 million in UMCi. The expected total capital expenditure for the joint venture is approximately US\$3.6 billion. As of March 31, 2003, we had invested \$161 million in UMCi and held a 49.74% equity interest in UMCi.

### **D. Exchange Controls**

## **Foreign Investment and Exchange Controls in Taiwan**

*We have extracted from publicly available documents the information presented in this section. Please note that citizens of the People's Republic of China and entities organized in the People's Republic of China are subject to special ROC laws, rules and regulations, which are not discussed in this section.*

### **General**

Historically, foreign investments in the securities market of Taiwan were restricted. However, commencing in 1983, the Taiwan government has from time to time enacted legislation and adopted regulations to make foreign investment in the Taiwan securities market possible. Initially, only overseas investment trust funds of authorized securities investment trust enterprises established in Taiwan were permitted to invest in the Taiwan securities market. Since January 1, 1991, qualified foreign institutional investors are allowed to make investments in the Taiwan public securities market. Since March 1, 1996, non-resident foreign institutional and individual investors, called "general foreign investors", are permitted to make direct investments in the Taiwan public securities market.

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### **Foreign Ownership Limitations**

Foreign ownership of the issued share capital in a Taiwan Stock Exchange-listed company or an Over-the-Counter Securities Exchange-quoted company has been limited to 50% in the past. Since December 30, 2000, the 50% limit has been lifted. Foreign investors who are qualified to hold investments in the securities market of Taiwan by virtue of being one of the permissible categories of entities or individuals (i.e., qualified foreign institutional investors (the QFII), general foreign investors and certain overseas investment trust funds as described below) can now hold such investments without any foreign ownership percentage limitations, unless the law has imposed restrictions otherwise.

Capital remitted into Taiwan under the foreign investment guidelines may be repatriated at any time without the approval of the Securities and Futures Commission (the ROC SFC). Capital gains and income on investments may also be repatriated at any time.

### **Qualified Foreign Institutional Investors**

The Executive Yuan, the cabinet of the ROC government, has approved guidelines for direct investment in ROC securities listed on the Taiwan Stock Exchange, GrTai Securities Market or emerging stocks or other ROC securities approved by the ROC SFC by certain qualified foreign institutional investors that have applied for and received approvals from the ROC SFC and, if applicable, the Central Bank of China (the CBC). Qualified foreign institutional investors include:

1. banks that hold securities assets of at least US\$100 million;
2. insurance companies that hold securities assets of at least US\$100 million;
3. fund management companies

fund management companies that manage securities assets of at least US\$100 million;

foreign subsidiary of a domestic securities investment trust in which subsidiary the domestic securities investment trust has a shareholding of more than 50%; provided that the funds to be used to invest in the domestic securities do not and shall not come from (a) Taiwan, (b) such foreign subsidiary's own capital or (c) the mainland China areas.

4. securities firms

securities firms that have a net worth of at least US\$50 million;

a foreign securities firm of which a Taiwan securities firm owns at least 50% of its shareholding (the Joint Venture Company), or a foreign securities firm which is a wholly-owned subsidiary of such Joint Venture Company;

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a foreign securities firm which is a wholly-owned subsidiary of a Taiwan securities firm ( Foreign Subsidiary ) or which is a joint venture of which such Foreign Subsidiary owns at least 50% of its shareholding;

foreign 100% government-owned investment institutions;

pension funds;

mutual funds, unit trusts or investment trusts that have assets of at least US\$100 million;

trust companies that hold securities assets under trust of at least US\$100 million;

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academic or charitable institutions whose memorandum/articles of incorporation state that their own internal funds may be used in investments and the management of the investments shall be delegated to outside managers; and

any other institutional investors which hold securities assets of at least US\$100 million.

In addition, QFIIs are allowed to engage in New Taiwan Dollar interest rate derivatives products (including forward rate agreement, interest rate swap, and interest rate options) up to the amount of underlying positions in government bonds, term deposits and money market instruments.

Each QFII wishing to invest directly in the Taiwan securities market is required to apply for an investment permit from the Securities and Futures Commission. If the investment amount exceeds US\$50 million, an approval from the Central Bank of China is also required. If it is the first time a QFII files its application with the ROC SFC for the investment in ROC securities market, the application documentation to the Securities and Futures Commission shall include:

the appointment of a local agent and custodian;

proof of eligibility;

a copy of the custodian contract; and

other documentation required by the ROC SFC.

In addition, pursuant to a letter issued by the Securities and Futures Commission, dated November 13, 2001, Chinese translations of documents made in foreign languages are not required any longer.

The consularisation/notarisation of the Certificate of Incorporation/Registration (COI/COR, or equivalent document) is no longer required. However, the QFII applicant has to make a declaration that the above document provided is a true copy and agree that any false declaration/document will be subject to competent authorities' penalty.

Generally, qualified foreign institutional investors who receive a permit may invest up to US\$3 billion and are required to remit the full amount into Taiwan within two years of receiving the investment permit. Capital remitted into Taiwan by qualified foreign institutional investors may be repatriated at any time without the approval of the Securities and Futures Commission. Capital gains and income on investments may also be repatriated at any time.

## **General Foreign Investors**

General foreign investors may generally invest in R.O.C. securities, as such term is defined in the Regulations Governing Investment in Securities by Overseas Chinese and Foreign Nationals, up to a limit of US\$50 million if they are institutional investors and US\$5 million if they

are individual investors after obtaining approval issued by Taiwan Stock Exchange.

**Foreign Investment Approval**

Other than:

qualified foreign institutional investors;

general foreign investors; and

investors in overseas convertible bonds and depositary receipts,

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foreign investors (both institutional and individual) who wish to make direct investments in the shares of Taiwan companies are required to submit a foreign investment approval application to the Investment Commission of the Ministry of Economic Affairs of Taiwan or other government authority and enjoy benefits granted under the Regulations Governing Investments by Foreigners. The Investment Commission or other government authority reviews each foreign investment approval application and approves or disapproves the application after consultation with other governmental agencies. Any non-Taiwan person possessing a foreign investment approval may repatriate annual net profits and interests attributable to an approved investment. Investment capital and capital gains attributable to the investment may be repatriated with approval of the Investment Commission or other government authority.

In addition to the general restrictions against direct investments by foreign investors in ROC companies, foreign investors are currently prohibited from investing in certain prohibited industries in Taiwan under the Negative List. The prohibition of the Negative List is absolute in the absence of a specific exemption from the application of the Negative List. The prohibition on direct foreign investment in the prohibited industries is absolute in the absence of a specific exemption from the application of the Negative List. Under the Negative List, some other industries are restricted so that foreign investors may directly invest only up to a specified level and with the specific approval of the relevant authority responsible for enforcing the legislation of which the Negative List is intended to implement. Our business is not a restricted industry under the Negative List.

## **Exchange Controls**

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

Aside from trade-related foreign exchange transactions, Taiwan companies and residents may remit to and from Taiwan foreign currencies of up to US\$50 million (or its equivalent) and US\$5 million, (or its equivalent) respectively in each calendar year. These limits apply to remittance involving a conversion between NT dollars and US dollars or other foreign currencies. A requirement is also imposed on all private enterprises to register all medium and long-term foreign debt with the CBC.

In addition, foreign currency earned from or needed to be paid for direct investment or portfolio investments, which are approved by the competent authorities, may be retained or sold by the investors or purchased freely from the designated bank.

Aside from the transactions discussed above, a foreign person without an alien resident card or an unrecognized foreign entity may remit to and from Taiwan foreign currencies of up to US\$100,000 per remittance without obtaining prior approval or permit if required documentation is provided to Taiwan authorities. This limit applies only to remittance involving a conversion between NT dollars and US dollars or other foreign currencies.

## **Depository Receipts**



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In April 1992, the Securities and Futures Commission began allowing Taiwan companies listed on the Taiwan Stock Exchange to sponsor the issuance and sale of depositary receipts evidencing depositary shares. Approvals for these issuances are still required. In December 1994, the Ministry of Finance began allowing companies whose shares are traded on the Over-the-Counter Securities Exchange to sponsor the issuance and sale of depositary receipts evidencing depositary shares.

A holder of depositary shares wishing to withdraw common shares underlying depositary shares is required to appoint a qualified local agent to perform services in connection with the withdrawal from the depositary receipt facility. In addition, the withdrawing holder is also required to appoint a custodian bank to hold the securities in safekeeping, make confirmations, settle trades and report all relevant information. Without making this appointment

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and the opening of accounts, the withdrawing holder would be unable to subsequently sell the common shares withdrawn from a depositary receipt facility on both the Taiwan Stock Exchange and the Over-the-Counter Exchange. The withdrawing holder is also generally required to appoint a tax agent who also serves as guarantor for the withdrawing holder's ROC tax payment obligations. The tax guarantor must meet certain qualifications set by the Ministry of Finance. Under current ROC law, repatriation of profits by a non-Taiwan withdrawing holder is subject to the submission of evidence of the appointment of a tax agent to, and the approval by, the tax authority or submission of tax clearance certificates as 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 will not exceed the amount, as applicable, 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 the transfer of tax-deferred dividend shares.

Commencing three months after the issuance of a depositary share, a holder of the depositary share may request the depositary issuing the depositary share to cause the underlying common shares to be sold in Taiwan or to withdraw the common shares and deliver the common shares to the holder. Such three month period will not apply to depositary shares issued upon deposit of secondary market shares, treasury shares or other existing shares. A citizen of the People's Republic of China is not permitted to withdraw and hold our common shares.

No deposits of shares may be made in a depositary receipt facility and no depositary receipts may be issued against deposits without specific Securities and Futures Commission approval, unless they are:

- (1) stock dividends,
- (2) free distributions of common shares;
- (3) due to the exercise by a holder of his or her preemptive rights in the event of capital increases for cash; or
- (4) due to the direct purchase of shares or purchase through the depositary in the domestic market or delivery of shares to the custodian for deposit in the depositary receipt facility. In this event, and subject to the acceptance of the depositary the total number of depositary receipts outstanding after an issuance cannot exceed the number of issued depositary shares previously approved by the Securities and Futures Commission in connection with the offering plus any depositary shares issued pursuant to the events described in (1), (2) and (3) above. These issuances may only be made to the extent previously issued depositary shares have been cancelled and the corresponding common shares which are withdrawn from our the depositary facility by holders of depositary shares have been sold in the domestic market in Taiwan.

A depositary may convert New Taiwan dollars from the proceeds of the sale of common shares or cash distributions received into other currencies, including US dollars. A depositary must obtain foreign exchange approval from the Central Bank of China on a payment-by-payment basis for conversion into New Taiwan dollars of subscription payments for rights offerings or conversion into foreign currencies from the proceeds from the sale of subscription rights for new common shares. It is expected that the Central Bank of China will grant this approval as a routine matter.

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A holder of depositary shares may convert NT dollars into other currencies from proceeds from the sale of any underlying common shares. Proceeds from the sale of the underlying common shares withdrawn from the depositary receipt facility may be used for reinvestment in securities listed on both the Taiwan Stock Exchange and the Over-

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the-Counter Exchange, provided that the investor designates a local securities firm or financial institution as agent to open an NT dollar bank account in advance.

## **E. Taxation**

### **ROC Tax Considerations**

The following summarizes the principal ROC tax consequences of owning and disposing of the ADSs and shares to a holder of ADSs or shares that is not a resident of Taiwan. An individual holder will be considered as not a resident of Taiwan for the purposes of this section if he or she is not physically present in Taiwan for 183 days or more during any calendar year, except if the individual holder has both ROC and non-ROC nationalities and has a registered address in the ROC. An entity holder will be considered as not a resident of Taiwan if it is organized under the laws of a jurisdiction other than Taiwan and has no fixed place of business or other permanent establishment in Taiwan. Prospective purchasers of ADSs should consult their own tax advisors concerning the tax consequences of owning ADSs or shares in Taiwan and any other relevant taxing jurisdiction to which they are subject.

### ***Dividends***

Dividends, whether in cash or shares, declared by us out of retained earnings and paid out to a holder that is not a Taiwan resident in respect of shares represented by ADSs are subject to ROC withholding tax at the time of distribution. The current rate of withholding for non-residents is 30% for a non-resident individual and 25% for a non-resident entity of the amount of the distribution in the case of cash dividends or of the par value of the shares distributed in the case of stock dividends. However, the rate of withholding is 20% if the non-resident holder obtains foreign investment approval pursuant to Statute for Foreigner's Investment or Statute for Overseas Chinese's Investment. Under current practice adopted by tax authorities, a 20% withholding rate is applied to a non-resident ADS holder without requiring the holder to apply for or obtain foreign investment approval. As discussed in the section "Tax Reform" below, certain of our retained earnings will be subject to a 10% undistributed retained earnings tax. To the extent dividends are paid out of retained earnings which have been subject to the retained earnings tax, the amount of such tax will be used by us to offset a non-resident's withholding tax liability on such dividend. Consequently, the effective rate of withholding on dividends paid out of retained earnings previously subject to the retained earnings tax may be less than 20%. There is no withholding tax with respect to stock dividends declared out of our capital reserve.

### ***Capital Gains***

Under current ROC law, gains realized on ROC securities transactions are exempt from income tax. In addition, transfers of ADSs by non-resident holders are not regarded as sales of Taiwan securities and, as a result, any gains derived therefrom are currently not subject to ROC income tax.

### ***Securities Transaction Tax***

The ROC government imposes a securities transaction tax that will apply to sales of shares, but not sales of ADSs. The transaction tax, which is payable by the seller, is generally levied on sales of shares at the rate of 0.3% of the sales proceeds. Withdrawals of our shares from our depositary facility are not subject to ROC security transaction tax.

*Preemptive Rights*

Distribution of statutory preemptive rights for shares in compliance with the ROC Company Law is not subject to ROC tax. Proceeds derived from sales of statutory preemptive rights evidenced by securities by a non-resident holder may be subject to the Taiwan securities transaction tax, currently at the rate of 0.3% of the gross amount received. Proceeds derived from sales of statutory preemptive rights which are not evidenced by securities are subject to capital gains tax at the rate of (1) 25% of the gains realized for non-ROC entity holders and (2) 35% of the

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gains realized for non-ROC individual holders. Subject to compliance with the ROC law, we have the sole discretion to determine whether statutory preemptive rights are evidenced by securities or not.

### ***Estate Taxation and Gift Tax***

ROC estate tax is payable on any property within Taiwan of a deceased individual who is a non-resident individual and ROC gift tax is payable on any property located within Taiwan 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, the shares will be deemed located in Taiwan irrespective of the location of the owner. It is unclear whether a holder of ADSs will be considered to own shares for this purpose.

### ***Tax Treaties***

At present, Taiwan has income tax treaties with Indonesia, Singapore, Australia, New Zealand, Gambia, Swaziland, Malaysia, Vietnam, Macedonia, the Netherlands, South Africa and the United Kingdom. It is unclear whether a non-ROC holder will be considered to own shares for the purposes of such treaties. Accordingly, a holder of ADSs who is otherwise entitled to the benefit of a treaty should consult its own tax advisors concerning eligibility for benefits under the treaty with respect to the ADSs.

### ***Tax Reform***

In order to increase Taiwan's competitiveness, an amendment to the ROC Income Tax law was enacted on January 1, 1998, to integrate the corporate income tax and the shareholder dividend tax with the aim of eliminating the double taxation effect for resident shareholders of Taiwanese corporations.

Under this amendment, a 10% retained earnings tax will be imposed on a company for its after-tax earnings generated after January 1, 1998 which are not distributed in the following year. The retained earnings tax so paid will further reduce the retained earnings available for future distribution. When the company declares dividends out of those retained earnings, up to a maximum amount of 10% of the declared dividends will be credited against the 20% withholding tax imposed on the non-resident holders of its shares.

### **U.S. Federal Income Tax Considerations For U.S. Persons**

The following is a summary of the material U.S. federal income tax consequences for beneficial owners of our shares or ADSs that purchase such shares or ADSs in connection with this offering, that hold the shares or ADSs as capital assets, and that are U.S. holders that are not citizens of the ROC, do not have a permanent establishment in the ROC and are not physically present in the ROC for 183 days or more within a calendar year. You are a U.S. holder if you are:

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a citizen or resident of the United States;

a corporation or partnership created or organized in or under the laws of the United States or any political subdivision thereof;

an estate the income of which is subject to U.S. federal income taxation regardless of its source;

a trust that is subject to the primary supervision of a court within the United States and one or more U.S. persons have authority to control all substantial decisions of the trust; or

a trust that has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

This summary is based on current law, which is subject to change, perhaps retroactively. It is for general purposes only and you should not consider it to be tax advice. In addition, it is based in part on representations by

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the depository and assumes that each obligation under the deposit agreement and any related agreement will be performed in accordance with its terms. This summary does not represent a detailed description of all the U.S. federal income tax consequences to you in light of your particular circumstances. In addition, it does not represent a detailed description of the U.S. federal income tax consequences applicable to you if you are subject to special treatment under the U.S. federal income tax laws including if you are:

a dealer in securities or currencies;

a trader in securities if you elect to use a mark-to-market method of accounting for your securities holdings;

a financial institution or an insurance company;

a tax-exempt organization;

a regulated investment company;

a real estate investment trust;

a person liable for alternative minimum tax;

a person holding shares as part of a hedging, integrated or conversion transaction, constructive sale or straddle;

a person owning, actually or constructively, 10% or more of our voting stock; or

a U.S. holder whose functional currency is not the United States dollar.

We cannot assure you that a later change in law will not alter significantly the tax considerations that we describe in this summary.

If a partnership holds our shares or ADSs, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. If you are a partner of a partnership holding our shares or ADSs, you should consult your tax advisor.

You should consult your own tax advisor concerning the particular U.S. federal income tax consequences to you of the ownership and disposition of the shares or ADSs, as well as the consequences to you arising under the laws of any other taxing jurisdiction.

In general, for U.S. federal income tax purposes, a U.S. person who is the beneficial owner of an ADS will be treated as the owner of the shares underlying its ADS. However, the U.S. Treasury has expressed concerns that parties involved in transactions in which depository shares are pre-released may be taking actions that are inconsistent with the claiming of foreign tax credits by the holders of ADSs. Accordingly, the



analysis of the creditability of ROC taxes described below could be affected by future actions that may be taken by the U.S. Treasury. Deposits or withdrawals of shares by U.S. holders for ADSs generally will not be subject to U.S. federal income tax.

*Taxation of Dividends*

Except as discussed below with respect to the passive foreign investment company rules, the amount of distributions (including net amounts withheld in respect of ROC withholding taxes) you receive on your shares or ADSs (other than certain pro rata distributions of shares to all shareholders) will generally be treated as dividend income to you if the distributions are made from our current and accumulated earnings and profits as calculated according to U.S. federal income tax principles. In determining the net amounts withheld in respect of ROC taxes, any reduction in the amount withheld on account of a ROC credit in respect of the 10% retained earnings tax imposed on us is not considered a withholding tax and will not be treated as distributed to you or creditable by you against your U.S. federal income tax. Such income will be includible in your gross income as ordinary income on the day you actually or constructively receive it, which in the case of an ADS will be the date actually or

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constructively received by the depository. The amount of any distribution of property other than cash will be the fair market value of such property on the date it is distributed. You will not be entitled to claim a dividend received deduction with respect to distributions you receive from us.

With respect to U.S. holders who are individuals, certain dividends received from a foreign corporation before January 1, 2009, on shares (or ADSs backed by such shares) that are readily tradable on an established securities market in the United States may be subject to reduced rates of taxation. We believe that our ADSs, which are listed on the New York Stock Exchange, are readily tradable on an established securities market in the United States. There can be no assurance that our ADSs will continue to be readily tradable on an established securities market in later years (or that our shares will be readily tradable on an established securities market in any given year). Individuals that do not meet a minimum holding period requirement during which they are not protected from the risk of loss or that elect to treat the dividend income as investment income pursuant to section 163(d)(4) of the Internal Revenue Code will not be eligible for the reduced rates of taxation regardless of the trading status of our shares or ADSs. Holders should consult their own tax advisors regarding the application of these rules given their particular circumstances.

The amount of any dividend paid in NT dollars will equal the US dollar value of the NT dollars you receive, calculated by reference to the exchange rate in effect on the date you actually or constructively receive the dividend, which in the case of an ADS will be the date actually or constructively received by the depository, regardless of whether the NT dollars are actually converted into US dollars. If the NT dollars received as a dividend are not converted into US dollars on the date of receipt, you will have a basis in the NT dollars equal to their US dollar value on the date of receipt. Any gain or loss you realize if you subsequently sell or otherwise dispose of the NT dollars will be ordinary income or loss from sources within the United States for foreign tax credit limitation purposes.

Subject to certain limitations under the Internal Revenue Code, you may be entitled to a credit or deduction against your U.S. federal income taxes for the net amount of any ROC taxes that are withheld from dividend distributions made to you. The election to receive a credit or deduction must be made annually, and applies to all foreign taxes for the applicable tax year. The limitation on foreign taxes eligible for credit is calculated separately with respect to specific classes of income. For this purpose, dividends we pay with respect to shares or ADS will generally be considered passive income or, for certain holders, financial services income. You may be subject to special rules if your foreign source income during the taxable year consists entirely of qualified passive income and if you have US\$300 or less, or US\$600 or less if you file a joint return, of creditable foreign taxes which you have paid or accrued during the taxable year. Furthermore, you will not be allowed a foreign tax credit for foreign taxes imposed on dividends paid on shares or ADSs if you (1) have held shares or ADSs for less than a specified minimum period during which you are not protected from risk of loss, (2) are obligated to make payments related to the dividends or (3) hold the shares or ADSs in arrangements in which your expected economic profit, after non-U.S. taxes, is insubstantial compared to the foreign tax credit generated. The rules governing the foreign tax credit are complex. We therefore urge you to consult your tax advisor regarding the availability of the foreign tax credit under your particular circumstances.

To the extent that the amount of any distribution you receive exceeds our current and accumulated earnings and profits for a taxable year, the distribution will first be treated as a tax-free return of capital, causing a reduction in your adjusted basis in the shares or ADSs and thereby increasing the amount of gain, or decreasing the amount of loss, you will recognize on a subsequent disposition of the shares or ADSs. The balance in excess of adjusted basis, if any, will be taxable to you as capital gain recognized on a sale or exchange.

It is possible that pro rata distributions of shares to all shareholders may be made in a manner that is not subject to U.S. federal income tax. In the event that such distributions are tax-free, the basis of any new shares so received will be determined by allocating the U.S. holder's basis in the old shares between the old shares and the new shares, based on their relative fair market values on the date of distribution. For U.S. tax purposes, any such tax-free share distribution and any distributions in excess of current and accumulated earnings and profits and distributions of shares generally would not result in foreign source income to you. Consequently, you may not be able to use the foreign tax credit associated with any ROC withholding tax imposed on such distributions unless you can use the credit against U.S. tax due on other foreign source income in the appropriate category for foreign tax credit purposes. You should consult your own tax advisors regarding all aspects of the foreign tax credit.

*Taxation of Capital Gains*

Except as discussed below with respect to the passive foreign investment company rules, when you sell or otherwise dispose of your shares or ADSs, you will recognize capital gain or loss in an amount equal to the difference between the US dollar value of the amount realized for the shares or ADSs and your basis in the shares or ADSs, determined in US dollars. If you are an individual, and the shares or ADSs being sold or otherwise disposed of are capital assets that you have held for more than one year, your gain recognized will be taxed at a maximum rate of 15%. Your ability to deduct capital losses is subject to limitations. Any gain or loss you recognize will generally be treated as U.S. source gain or loss.

If you pay any ROC securities transaction tax, such tax is not treated as an income tax for U.S. federal income tax purposes, and therefore will not be a creditable foreign tax for U.S. federal income tax purposes. However,

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subject to limitations under the Internal Revenue Code, such tax may be deductible. You are urged to consult your tax advisors regarding the U.S. federal income tax consequences of these taxes.

### ***Passive Foreign Investment Company***

Based on the projected composition of our income and valuation of our assets, including goodwill, we do not expect to be a passive foreign investment company for 2003 and do not expect to become one in the future, although there can be no assurance in this regard.

In general, a company is considered a passive foreign investment company for any taxable year if either:

at least 75% of its gross income is passive income, which is income derived from certain dividends, interest, royalties, rents, annuities or property transactions; or

at least 50% of the value of its assets is attributable to assets that produce or are held for the production of passive income.

The 50% of value test is based on the average of the value of our assets for each quarter during the taxable year. If we own at least 25% by value of another company's stock, we will be treated, for purposes of the passive foreign investment company rules, as owning our proportionate share of the assets and receiving our proportionate share of the income of that company.

In determining that we do not expect to be a passive foreign investment company, we are relying on our projected capital expenditure plans and projected revenues for the current year and for future years. In addition, our determination is based on a current valuation of our assets, including goodwill. In calculating goodwill, we have valued our total assets based on our total market value, which is based on the market value of our shares and is subject to change. In addition, we have made a number of assumptions regarding the allocation of goodwill to active and passive assets. We believe our valuation approach is reasonable. However, it is possible that the Internal Revenue Service will challenge the valuation or allocation of our goodwill, which may also result in us being classified as a passive foreign investment company.

In addition, the determination of whether we are a passive foreign investment company is made annually. Accordingly, it is possible that we may become a passive foreign investment company in the current or any future taxable year due to changes in our asset or income composition. Because we have valued our goodwill based on the market value of our shares, a decrease in the price of our shares may result in our becoming a passive foreign investment company.

If we are a passive foreign investment company for any taxable year during which you hold shares or ADSs, you will be subject to special tax rules with respect to any excess distribution that you receive and any gain you realize from a sale or other disposition (including a pledge) of shares or ADSs. Distributions you receive in a taxable year that are greater than 125% of the average annual distributions you received during the shorter of the three preceding taxable years or your holding period for shares or ADSs will be treated as excess distributions. Under these special tax rules:

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the excess distribution or gain will be allocated ratably over your holding period for shares or ADSs;

the amount allocated to the current taxable year, and any taxable year prior to the first taxable year in which we were a passive foreign investment company, will be treated as ordinary income; and

the amount allocated to each other year will be subject to tax at the highest tax rate in effect for that year and the interest charge generally applicable to underpayments of tax will be imposed on the resulting tax attributable to each such year.

If you hold shares or ADSs in any year in which we are a passive foreign investment company, you are required to file Internal Revenue Service Form 8621.

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In certain circumstances, a U.S. holder, in lieu of being subject to the passive foreign investment company rules discussed above, may make an election to include gain on the stock of a passive foreign investment company as ordinary income under a mark-to-market method provided that such stock is regularly traded on a qualified exchange. Under this method, any difference between the stock's fair market value and its adjusted basis at the end of the year is accounted for by either an inclusion in income or a deduction from income. Under current law, the mark-to-market election may be available to you because the ADSs will be listed on the New York Stock Exchange, which constitutes a qualified exchange as designated in the Internal Revenue Code, although there can be no assurance that the ADSs will be regularly traded. You should also note that it is intended that only the ADSs and not the shares will be listed on the New York Stock Exchange. Our shares are listed on the Taiwan Stock Exchange, which must meet certain trading, listing, financial disclosure and other requirements to be treated as a qualified exchange under applicable U.S. Treasury regulations for purposes of the mark-to-market election, and no assurance can be given that the shares will be regularly traded for purposes of the mark-to-market election.

If you make an effective mark-to-market election, you will include in income each year as ordinary income the excess of the fair market value of your passive foreign investment company shares or ADSs at the end of the year over your adjusted tax basis in the shares. You will be entitled to deduct as an ordinary loss each year the excess of your adjusted tax basis in the shares or ADSs over their fair market value at the end of the year, but only to the extent of the net amount previously included in income as a result of the mark-to-market election.

Your adjusted tax basis in passive foreign investment company shares or ADSs will be increased by the amount of any income inclusion and decreased by the amount of any deductions under the mark-to-market rules. If you make a mark-to-market election it will be effective for the taxable year for which the election is made and all subsequent taxable years unless the shares or ADSs cease to be passive foreign investment company stock that is regularly traded on a qualified exchange or the Internal Revenue Service consents to the revocation of the election. You should consult your tax advisor about the availability of the mark-to-market election, and whether making the election would be advisable in your particular circumstances.

Alternatively, a U.S. holder of shares or ADSs in a passive foreign investment company can sometimes avoid the rules described above by electing to treat the company as a qualified electing fund under section 1295 of the Internal Revenue Code. This option is not available to you because we do not intend to comply with the requirements necessary to permit you to make this election.

U.S. holders who are individuals will not be eligible for reduced rates of taxation on any dividends received from us prior to January 1, 2009, if we are a passive foreign investment company in the taxable year in which such dividends are paid or in the preceding taxable year.

You should consult your own tax advisors concerning the U.S. federal income tax consequences of holding shares or ADSs if we are considered a passive foreign investment company in any taxable year.

### ***Information Reporting and Backup Withholding***

In general, unless you are an exempt recipient such as a corporation, information reporting will apply to dividends in respect of the shares or ADSs and to the proceeds from the sale of your shares or ADSs paid within the United States (and in some cases, outside of the United States). Additionally, if you fail to provide your taxpayer identification number, or fail either to report in full dividend and interest income or to make the necessary certifications, you will be subject to backup withholding.

Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against your U.S. federal income tax liability, provided you furnish the required information to the Internal Revenue Service.

***Inheritance and Gift Tax***

The ROC imposes an estate tax on a decedent who owns shares, and possibly ADSs, even if the decedent was not a citizen or resident of the ROC. See ROC Tax Considerations. The amount of any inheritance tax paid to the ROC may be eligible for credit against the amount of U.S. federal estate tax imposed on your estate. You should consult your personal tax advisors to determine whether and to what extent you may be entitled to such credit.

Under present law, a comparable U.S. tax credit for foreign gift taxes (such as those imposed by the ROC) is not available.

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### **F. Dividends and Paying Agents**

Not applicable.

### **G. Statement by Experts**

Not applicable.

### **H. Documents on Display**

We have filed this annual report on Form 20-F, including exhibits, with the SEC. As allowed by the SEC, in Item 19 of this annual report, we incorporate by reference certain information we filed with the SEC. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this annual report.

You may read and copy this annual report, including the exhibits incorporated by reference in this annual report, at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549 and at the SEC's regional offices in New York, New York and Chicago, Illinois. You can also request copies of this annual report, including the exhibits incorporated by reference in this annual report, upon payment of a duplicating fee, by writing information on the operation of the SEC's Public Reference Room.

The SEC also maintains a website at [www.sec.gov](http://www.sec.gov) that contains reports, proxy statements and other information regarding registrants that file electronically with the SEC. Our annual report and some of the other information submitted by us to the SEC may be accessed through this web site.

### **I. Subsidiary Information**

Not applicable.

## **ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Market risk is the risk of loss related to adverse changes in market prices, including interest rates and foreign exchange rates, of financial instruments. We are exposed to various types of market risks, including changes in interest rates and foreign currency exchange rates, in the normal course of business.



We use financial instruments, including variable rate debt and swap, cap and forward contracts, to manage risks associated with our interest rate and foreign currency exposures through a controlled program of risk management in accordance with established policies. These policies are reviewed and approved by our board of directors. Our treasury operations are subject to internal audit on a regular basis. We do not hold or issue derivative financial instruments for trading purposes.

Since export sales are primarily conducted in US dollars, we had US dollar-denominated accounts receivables of US\$312 million at December 31, 2002. We also had Japanese Yen-denominated accounts receivable of ¥6,606 million attributable to our Japanese operations. We had US dollar- and Japanese Yen-denominated accounts payable of US\$204 million and ¥13,849 million.

At December 31, 2002, we had US dollar-, Japanese Yen- and Euro-denominated savings accounts of US\$44 million, ¥2,076 million and EUR 0.8 million, respectively. We also had certificates of deposit denominated in US dollars, Japanese Yen, EUR and NT dollars of US\$636 million, ¥33,600 million, EUR 29 million and NT\$35,781 million, respectively.

Our primary market risk exposures relate to interest rate movements on borrowings and exchange rate movements on foreign currency denominated capital expenditures relating to equipment used in manufacturing processes (including photo etching and chemical vapor deposition) and purchased primarily from Japan and the

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United States. The fair value of forward exchange contracts and interest rate swap, and cap agreements has been determined by obtaining the estimated amount from our bankers that would be received/(paid) to terminate the contracts.

**Interest rate risk**

Our major market risk exposure is changing interest rates. Our exposure to market risk for changes in interest rates relates primarily to our long-term debt obligations. We primarily enter into debt obligations to support general corporate purposes including capital expenditures and working capital needs. We use interest rate swaps and caps from time to time to modify our exposure to interest rate movements and reduce borrowing costs. Interest rate swaps and caps limit the risks of fluctuating interest rates by allowing us to convert a portion of the interest on our borrowings from a variable rate to a fixed rate.

The table below provides information as of December 31, 2002 about our financial instruments that are sensitive to changes in interest rates, including debt obligations and certain assets. For debt obligations, the table presents principal cash flows and related weighted average interest rates by expected maturity dates. The information is presented in the currencies in which the instruments are denominated.

	Expected Maturity Dates					Total	Fair Value
	2003	2004	2005	2006	2007 and thereafter		
(in millions, except percentages)							
<b>Certificates of Deposit:</b>							
Fixed rate (US\$)	636					636	636
Average interest rate	2.3%					2.3%	2.3%
Fixed rate (JP¥)	33,600					33,600	33,600
Average interest rate	0.195%					0.195%	0.195%
Fixed rate (NT\$)	35,781					35,781	35,781
Average interest rate	1.798%					1.798%	1.798%
Fixed rate (EUR)	29					29	29
Average interest rate	2.807%					2.807%	2.807%
<b>Unsecured short-term loans:</b>							
Variable rate (US\$)	30.5					30.5	30.5
Average interest rate	1.95%					1.95%	1.95%
Variable rate (JP¥)							
Average interest rate							
Variable rate (NT\$)	100					100	100
Average interest rate	1.6%					1.6%	1.6%
<b>Secured short-term loans:</b>							
Variable rate (US\$)							
Average interest rate							
<b>Bonds:</b>							
Unsecured (NT\$)		7,250	2,250	10,250	5,250	25,000	25,000
Fixed rate		3.3912-5.2850%	5.1195-5.2850%	3.3912-5.2850%	5.1195-5.285%	3.3912-5.285%	3.3912-5.285%
Unsecured convertible (US\$)	0	302,400			235,000	537,400	537,400
Fixed rate		1.675%			0%	0-1.675%	0-1.675%
Unsecured (JP¥)					13,150	13,150	13,150
Fixed rate					0%	0%	0%
Secured (NT\$)	1,140	1,140	570			2,850	2,850

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Fixed rate	5.60%	5.60%	5.60%		5.60%	5.60%
<b>Secured long-term loans:</b>						
Variable rate (US\$)	46	38	16		100	100
Average interest rate (1)	2.305%	2.555%	2.555%		2.305%	2.305%
Variable rate (NT\$)	2,813	2,813	2,150	1,688	1,033	10,497
Average interest rate	3.000%	3.250%	3.250%	3.500%	3.750%	3.000%
Variable rate (JP¥)						
<b>Unsecured long-term loans:</b>						
Variable rate (JP¥)(2)	7,500	7,500	3,750		18,750	18,750
Average interest rate	1.07833%	0.965%	0.965%		1.010332%	1.010332%

- (1) Six month LIBOR settled semi-annually (1.38% at December 31, 2002)  
(2) Three month TIBOR settled quarterly (1.078330% at December 31, 2002)

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***Foreign currency risk***

Although the majority of our transactions are in NT dollars, some transactions are based in other currencies. The primary currencies to which we are exposed are the US dollar and the Japanese Yen. We have in the past and may in the future enter into short-term, forward exchange contracts to hedge the impact of foreign currency fluctuations on certain underlying assets, liabilities, and firm commitments for operating expenses and capital expenditures denominated in US dollars. The purpose of entering into these hedges is to minimize the impact of foreign currency fluctuations on the results of operations. Gains and losses on foreign currency contracts and foreign currency denominated liabilities are recorded in the period of the exchange rate changes. The contracts have maturity dates that do not exceed three months.

As of December 31, 2002, United Microelectronics had no outstanding foreign currency forward contracts.

**ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES**

Not applicable.

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**PART II**

**ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES**

None of these events occurred in any of fiscal 2000, 2001 and 2002.

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

Not applicable.

**ITEM 15. CONTROLS AND PROCEDURES**

Within 90 days prior to the date of this annual report, an evaluation has been carried out under the supervision and with the participation of our management, including our chief executive officer and our chief financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined under Rules 13a-14(c) and 15d-14(c) promulgated under the Securities Exchange Act of 1934, as amended (the Exchange Act ). Based on that evaluation, our chief executive officer and chief financial officer have concluded that our disclosure controls and procedures are effective in ensuring that material information required to be disclosed in this annual report is recorded, processed, summarized and reported to them for assessment, and required disclosure is made within the time period specified in the rules and forms of the Securities and Exchange Commission.

There have been no significant changes in our internal controls or in other factors that could significantly affect the internal controls subsequent to the date of their evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

**ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT**

Not applicable.

**ITEM 16B. CODE OF ETHICS**

Not applicable.

**ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

Not applicable.

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**PART III**

**ITEM 17. FINANCIAL STATEMENTS**

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

**ITEM 18. FINANCIAL STATEMENTS**

*The following is a list of the audited financial statements and reports of independent accountants included in this annual report beginning on page F-1.*

**INDEX TO THE FINANCIAL STATEMENTS**

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Reports of Independent Auditors	F-2
Consolidated Balance Sheets at December 31, 2001 and 2002	F-3
Consolidated Statements of Operations for each of the three years in the period ended December 31, 2000, 2001 and 2002	F-4
Consolidated Statements of Changes in Stockholders' Equity for each of the three years in the period ended December 31, 2000, 2001 and 2002	F-5
Consolidated Statements of Cash Flows for each of the three years in the period ended December 31, 2000, 2001 and 2002	F-8
Notes to the Consolidated Financial Statements	F-10
Independent Auditor's Report of UMC (Group) USA by PricewaterhouseCoopers LLP (1)	
Independent Auditor's Report of Nippon Foundry Inc. by ChuoAoyama Audit Corporation (2)	

- 
- (1) Incorporated by reference to p. F-71 of the Registrant's Annual Report on Form 20-F (File No. 1-15128) for the fiscal year ended December 31, 2000, filed with the SEC on June 28, 2001.
  - (2) Incorporated by reference to p. F-72 of the Registrant's Annual Report on Form 20-F (File No. 1-15128) for the fiscal year ended December 31, 2000, filed with the SEC on June 28, 2001.

**Table of Contents****ITEM 19. EXHIBITS****Exhibit**

<b>Number</b>	<b>Description of Exhibits</b>
*1.1	Articles of Incorporation of the Company as last amended on June 9, 2003 (English Translation)
2.1	Form of Deposit Agreement among the Company, and Holders and Beneficial Owners of American Depositary Shares issued thereunder, including the form of American Depositary Shares (1)
4.1	Merger Agreement among UMC, United Semiconductor, United Silicon, United Integrated Circuits and UTEK Semiconductor (in Chinese with English translation) (2)
4.2	Lease Agreement with Hsinchu Science-Based Industrial Park Administration in relation to government-owned land located at Hsinchu Science-Based Industrial Park, Ko-Kuan Section, No. 20- 22, Hsinchu, Taiwan, ROC, the site of Fab 6A (in Chinese with English summary translation) (3)
4.3	Lease Agreement with Hsinchu Science-Based Industrial Park Administration in relation to government-owned land located at Hsinchu Science-Based Industrial Park, third section of first phase, Hsinchu, Taiwan, ROC, the site of Fab 8AB and United Tower (in Chinese with English summary translation) (4)
4.4	Lease Agreement with Hsinchu Science-Based Industrial Park Administration in relation to government-owned land located at Hsinchu Science-Based Industrial Park, third section of first phase, Hsinchu, Taiwan, ROC, the site of Fab 8C (in Chinese with English summary translation) (5)
4.5	Lease Agreement with Hsinchu Science-Based Industrial Park Administration in relation to government-owned land located at Hsinchu Science-Based Industrial Park, third section of first phase, Hsinchu, Taiwan, ROC, the site of Fab 8D (in Chinese with English summary translation) (6)
4.6	Lease Agreement with Hsinchu Science-Based Industrial Park Administration in relation to government-owned land located at Hsinchu Science-Based Industrial Park, third section of second phase, Hsinchu, Taiwan, ROC, the site of Fab 8E (in Chinese with English summary translation) (7)
4.7	Lease Agreement with Hsinchu Science-Based Industrial Park Administration in relation to government-owned land located at Hsinchu Science-Based Industrial Park, Gin-Shan section, Hsinchu, Taiwan, ROC, the site of Fab 8F (in Chinese with English summary translation) (8)
4.8	Lease Agreement with Tainan Science-Based Industrial Park Administration in relation to government-owned land located at Tainan Science-Based Industrial Park, Tainan, Taiwan, ROC, the site of Fab 12A (in Chinese with English summary translation) (9)
4.9	Foundry Venture Agreement, entered into as of 30 March 2001, among United Microelectronics Corporation, Infineon Technologies, AG, EDB Investments Pte Ltd and UMCi Pte Ltd (10)
*8.1	List of Significant Subsidiaries of United Microelectronics Corporation
*12.1	Certifications of our Chief Executive Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
*12.2	Certifications of our Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Does not contain portions for which confidential treatment has been requested.

\* filed herewith.

- (1) Incorporated by reference to Exhibit (a) to the Registrant's Registration Statement on Form F-6 (File No. 333-13796) filed with the Commission on August 6, 2001.
- (2) Incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form F-1 (File No. 333-12444) filed with the Commission on August 28, 2000, as amended.
- (3) Incorporated by reference to Exhibit 10.6 to the Registrant's Registration Statement on Form F-1 (File No. 333-12444) filed with the Commission on August 28, 2000, as amended.
- (4) Incorporated by reference to Exhibit 10.7 to the Registrant's Registration Statement on Form F-1 (File No. 333-12444) filed with the Commission on August 28, 2000, as amended.



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- (5) Incorporated by reference to Exhibit 10.8 to the Registrant's Registration Statement on Form F-1 (File No. 333-12444) filed with the Commission on August 28, 2000, as amended.
- (6) Incorporated by reference to Exhibit 10.9 to the Registrant's Registration Statement on Form F-1 (File No. 333-12444) filed with the Commission on August 28, 2000, as amended.
- (7) Incorporated by reference to Exhibit 10.10 to the Registrant's Registration Statement on Form F-1 (File No. 333-12444) filed with the Commission on August 28, 2000, as amended.

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- (8) Incorporated by reference to Exhibit 10.11 to the Registrant's Registration Statement on Form F-1 (File No. 333-12444) filed with the Commission on August 28, 2000, as amended.
- (9) Incorporated by reference to Exhibit 10.12 to the Registrant's Registration Statement on Form F-1 (File No. 333-12444) filed with the Commission on August 28, 2000, as amended.
- (10) Incorporated by reference to Exhibit 10.13 to the Registrant's Annual Report on Form 20-F (File No. 1-15128) for the fiscal year ended December 31, 2000, filed with the Commission on June 28, 2001.



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**CERTIFICATION OF OUR CHIEF EXECUTIVE OFFICER**

I, John Hsuan, certify that:

I have reviewed this annual report on Form 20-F of United Microelectronics Corporation;

Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:

- a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
- b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the Evaluation Date); and
- c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):

- a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
- b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

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The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: June 25, 2003

By: /s/ John Hsuan

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Name: John Hsuan  
Title: Chief Executive Officer

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**CERTIFICATION OF OUR CHIEF FINANCIAL OFFICER**

I, Stan Hung, certify that:

I have reviewed this annual report on Form 20-F of United Microelectronics Corporation;

Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:

- a) designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
- b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the Evaluation Date); and
- c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):

- a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
- b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

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The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: June 25, 2003

By: /s/ Stan Hung

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Name: Stan Hung  
Title: Chief Financial Officer

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**United Microelectronics Corporation and Subsidiaries**

**Consolidated Financial Statements as of December 31, 2000, 2001 and 2002**

**Together with Independent Auditor's Report**

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**REPORT OF INDEPENDENT AUDITORS**

To the Board of Directors and Shareholders of

United Microelectronics Corporation

We have audited the accompanying consolidated balance sheets of United Microelectronics Corporation and subsidiaries as of December 31, 2001 and 2002, and the related consolidated statements of operations, changes in stockholders' equity and cash flows for the years ended December 31, 2000, 2001 and 2002. 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 did not audit the financial statements of UMC Group (USA), a wholly-owned subsidiary, and UMC Japan, a 51.47% owned subsidiary, whose statements reflect total assets of NT\$10,171 million and NT\$25,759 million, respectively, as of December 31, 2000, and total revenues of NT\$43,491 million and NT\$10,542 million, respectively, for the year then ended. Those statements were audited by other auditors whose reports have been furnished to us, and our opinion, insofar as it relates to the amounts included for UMC Group (USA) and UMC Japan, is based solely on the reports of the other auditors.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audits 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 and the reports of the other auditors provide a reasonable basis for our opinion.

In our opinion, based on our audits and the reports of other auditors, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of United Microelectronics Corporation and subsidiaries as of December 31, 2001 and 2002 and the consolidated results of their operations and their cash flows for the years ended December 31, 2000, 2001 and 2002, in conformity with accounting principles generally accepted in the Republic of China.

Accounting principles generally accepted in the Republic of China vary in certain significant respects from accounting principles generally accepted in the United States. The application of accounting principles generally accepted in the United States would have affected the consolidated stockholders' equity and financial position as of December 31, 2001 and 2002, and the consolidated results of operations for the years ended December 31, 2000, 2001 and 2002, to the extent summarized in Note 28 to the consolidated financial statements.

DIWAN, ERNST & YOUNG

CERTIFIED PUBLIC ACCOUNTANTS

/s/ Diwan, Ernst & Young

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Taipei, Taiwan

Republic of China

January 16, 2003



**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****CONSOLIDATED BALANCE SHEETS**

(Expressed in thousands)

	Notes	As of December 31,		
		2001	2002	
		NT\$	NT\$	US\$
<b>Assets</b>				
Current assets:				
Cash and cash equivalents	2, 4	76,904,068	80,883,408	2,330,934
Marketable securities, net	2, 5	1,286,434	2,526,365	72,806
Notes receivable	6	215,692	85,371	2,460
Accounts receivable, net	2, 7, 21	8,887,600	12,001,652	345,869
Inventories, net	2, 8	5,717,203	8,440,005	243,228
Other current assets		7,775,543	6,985,376	201,308
<b>Total current assets</b>		<b>100,786,540</b>	<b>110,922,177</b>	<b>3,196,605</b>
Long-term investments	2, 9	40,756,678	38,673,496	1,114,510
Property, plant and equipment, net	2, 10, 21	169,121,168	167,076,910	4,814,896
Deferred charges	2	3,685,581	3,564,721	102,730
Deferred tax assets	2, 18	4,371,231	5,232,928	150,805
Other assets		1,708,359	1,558,655	44,918
Restricted deposits	21	264,700		
<b>Total assets</b>		<b>320,694,257</b>	<b>327,028,887</b>	<b>9,424,464</b>
<b>Liabilities and Stockholders' Equity</b>				
Current liabilities:				
Short-term loans	11, 21	753,450	1,178,800	33,971
Notes and accounts payable		15,433,730	13,697,183	394,731
Income tax payable	2	219,877	284,678	8,204
Accrued expenses		5,678,713	4,032,474	116,210
Current portion of long-term debts	12, 13, 21	9,720,178	7,781,598	224,254
Current portion of capacity deposits	22	2,512,536	1,917,096	55,248
Other current liabilities		205,721	255,584	7,365
<b>Total current liabilities</b>		<b>34,524,205</b>	<b>29,147,413</b>	<b>839,983</b>
Long-term liabilities:				
Bonds payable	2, 12	38,450,511	49,441,484	1,424,827
Long-term loans	13, 21	16,244,823	12,879,512	371,167
Capacity deposits and other deposits	22	865,546	2,698	78
Other long-term liabilities		1,692,451	2,109,409	60,790
<b>Total long-term liabilities</b>		<b>57,253,331</b>	<b>64,433,103</b>	<b>1,856,862</b>
<b>Total liabilities</b>		<b>91,777,536</b>	<b>93,580,516</b>	<b>2,696,845</b>
Minority interests		15,594,468	16,023,886	461,784

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Stockholders' equity:				
Capital stock	15	133,356,954	154,748,456	4,459,610
Capital reserve	2	82,115,682	81,875,491	2,359,524
Retained earnings	17	34,152,379	20,004,054	576,486
Unrealized loss on long-term investments	2	(470,931)	(1,349,248)	(38,883)
Cumulative translation adjustment	2	(160,470)	728,851	21,004
Treasury stock	2, 3, 16	(35,671,361)	(38,583,119)	(1,111,906)
		<u>                    </u>	<u>                    </u>	<u>                    </u>
Total stockholders' equity		213,322,253	217,424,485	6,265,835
		<u>                    </u>	<u>                    </u>	<u>                    </u>
Total liabilities and stockholders' equity		320,694,257	327,028,887	9,424,464
		<u>                    </u>	<u>                    </u>	<u>                    </u>

The accompanying notes are an integral part of these consolidated financial statements

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF OPERATIONS**

(Expressed in thousands, except per share data)

	Notes	For the year ended December 31,			
		2000	2001	2002	
		NT\$	NT\$	NT\$	US\$
Net operating revenues	2	115,609,339	69,816,799	75,425,356	2,173,641
Costs of goods sold		(57,411,045)	(60,567,909)	(62,887,302)	(1,812,314)
<b>Gross profit</b>		<b>58,198,294</b>	<b>9,248,890</b>	<b>12,538,054</b>	<b>361,327</b>
<b>Operating expenses:</b>					
Sales and marketing		(1,153,160)	(2,275,884)	(1,526,907)	(44,003)
General and administrative		(3,195,464)	(4,425,568)	(3,530,756)	(101,751)
Research and development	2	(6,306,273)	(8,959,691)	(7,368,133)	(212,338)
		(10,654,897)	(15,661,143)	(12,425,796)	(358,092)
<b>Operating income (loss)</b>		<b>47,543,397</b>	<b>(6,412,253)</b>	<b>112,258</b>	<b>3,235</b>
<b>Non-operating income:</b>					
Interest revenue		2,018,926	2,487,485	1,644,100	47,380
Investment income, net	2	1,726,345			
Gain on disposal of investments, net		588,202	2,347,219	8,473,213	244,185
Gain on disposal of property, plant and equipment	2	372,938	186,013	66,236	1,909
Gain on foreign currency exchange, net	2	2,922,412	648,169		
Other income		826,581	601,414	701,815	20,225
		8,455,404	6,270,300	10,885,364	313,699
<b>Non-operating expenses:</b>					
Interest expenses	10	(2,367,401)	(2,525,937)	(1,455,374)	(41,942)
Investment loss, net	2		(1,828,341)	(931,756)	(26,852)
Loss on disposal of property, plant and equipment	2	(273,238)	(231,536)	(45,814)	(1,320)
Loss on foreign currency exchange, net	2			(103,703)	(2,988)
Other losses		(1,029,004)	(1,838,270)	(1,444,727)	(41,635)
		(3,669,643)	(6,424,084)	(3,981,374)	(114,737)
<b>Income (loss) before income taxes and minority interests</b>		<b>52,329,158</b>	<b>(6,566,037)</b>	<b>7,016,248</b>	<b>202,197</b>
Income tax benefit (expense)	2, 18	91,062	3,039,989	(270,731)	(7,802)
Minority interests (income) loss	2	(1,639,842)	368,746	326,515	9,410
<b>Net income (loss)</b>		<b>50,780,378</b>	<b>(3,157,302)</b>	<b>7,072,032</b>	<b>203,805</b>
Earnings (loss) per share basic and diluted (in dollars)	2, 19	3.49	(0.21)	0.48	

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Shares used in per share calculation basic	14,545,699	14,920,842	14,753,187
Shares used in per share calculation diluted	14,545,699	14,920,842	14,944,510
Pro forma information on earnings as if unconsolidated subsidiaries investment in the Company is not treated as treasury stock			
Net income			7,072,032
Earnings per share basic and diluted (in dollars)	19		0.48

The accompanying notes are an integral part of these consolidated financial statements

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## UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS EQUITY

(Expressed in thousands)

	Capital Stock		Retained Earnings			Unrealized
						Loss on
	Common		Capital	Legal	Unappropriated	Long-term
	Stock	Shares	Reserve	Reserve	Earnings	Investments
	NT\$		NT\$	NT\$	NT\$	NT\$
Balance at January 1, 2000	66,549,966	6,654,997	36,836,033	4,579,516	11,130,347	(319,448)
New shares issued due to merger on January 3, 2000	23,836,503	2,383,650	17,152,454			
Appropriation of 1999 retained earnings						
Legal reserve				1,045,718	(1,045,718)	
Stock dividends	9,049,268	904,927			(9,049,268)	
Directors and supervisors remuneration					(95,737)	
Employees bonus	786,893	78,689			(786,893)	
Capitalization of capital reserve	9,049,269	904,927	(9,049,269)			
Purchase of treasury stock						
Net income for 2000					50,780,378	
Gain on disposal of property, plant and equipment			170,473		(170,473)	
Gain on disposal of property, plant and equipment from investees			2,715		(2,715)	
Conversion of convertible bonds issued	942,620	94,262	2,486,512			
Adjustment of capital reserve accounted for under equity method			547,377			
Changes in unrealized loss on long-term investments						(1,194,849)
Changes in unrealized loss on long-term investments of investees						(750,982)
Shares issued for American Depository Shares	4,500,000	450,000	34,014,773			
Changes in cumulative translation adjustment						
Treasury stock due to consolidation						
Balance at December 31, 2000	114,714,519	11,471,452	82,161,068	5,625,234	50,759,921	(2,265,279)

				Cumulative		
				Translation	Treasury	
				Adjustment	Stock	Total
				NT\$	NT\$	NT\$
Balance at January 1, 2000				535,234	(16,691,822)	102,619,826

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New shares issued due to merger on January 3, 2000	(1,083)		40,987,874
Appropriation of 1999 retained earnings			
Legal reserve			
Stock dividends			
Directors and supervisors remuneration			(95,737)
Employees bonus			
Capitalization of capital reserve			
Purchase of treasury stock		(1,479,064)	(1,479,064)
Net income for 2000			50,780,378
Gain on disposal of property, plant and equipment			
Gain on disposal of property, plant and equipment from investees			
Conversion of convertible bonds issued			3,429,132
Adjustment of capital reserve accounted for under equity method			547,377
Changes in unrealized loss on long-term investments			(1,194,849)
Changes in unrealized loss on long-term investments of investees			(750,982)
Shares issued for American Depository Shares			38,514,773
Changes in cumulative translation adjustment	(509,949)		(509,949)
Treasury stock due to consolidation		(12,900,832)	(12,900,832)
Balance at December 31, 2000	24,202	(31,071,718)	219,947,947

The accompanying notes are an integral part of these consolidated financial statements



**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS EQUITY (Continued)**

(Expressed in thousands)

	Capital Stock		Retained Earnings			
			Capital	Special	Legal	Unappropriated
	Common	Shares	Reserve	Reserve	Reserve	Earnings
	Stock		Reserve	Reserve	Reserve	Earnings
	NT\$		NT\$	NT\$	NT\$	NT\$
Balance at January 1, 2001	114,714,519	11,471,452	82,161,068		5,625,234	50,759,921
Purchase of treasury stock						
Net loss for 2001						(3,157,302)
Appropriation of 2000 retained earnings						
Legal reserve					5,060,991	(5,060,991)
Special reserve				2,242,284		(2,242,284)
Stock dividends	17,151,040	1,715,104				(17,151,040)
Directors and supervisors remuneration						(433,039)
Employees bonus	1,491,395	149,139				(1,491,395)
Issuance cost adjustment for American Depository Shares			147,086			
Changes in unrealized loss on long-term investments						
Changes in unrealized loss on long-term investments of investees						
Adjustment of capital reserve accounted for under equity method			(192,472)			
Changes in cumulative translation adjustment						
Balance at December 31, 2001	133,356,954	13,335,695	82,115,682	2,242,284	10,686,225	21,223,870

	Unrealized Loss on Long-term Investments	Cumulative Translation Adjustment	Treasury Stock	Total
	NT\$	NT\$	NT\$	NT\$
Balance at January 1, 2001	(2,265,279)	24,202	(31,071,718)	219,947,947
Purchase of treasury stock			(4,599,643)	(4,599,643)
Net loss for 2001				(3,157,302)
Appropriation of 2000 retained earnings				
Legal reserve				
Special reserve				
Stock dividends				
Directors and supervisors remuneration				(433,039)
Employees bonus				
Issuance cost adjustment for American Depository Shares				147,086

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Changes in unrealized loss on long-term investments	1,514,297			1,514,297
Changes in unrealized loss on long-term investments of investees	280,051			280,051
Adjustment of capital reserve accounted for under equity method				(192,472)
Changes in cumulative translation adjustment		(184,672)		(184,672)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Balance at December 31, 2001	(470,931)	(160,470)	(35,671,361)	213,322,253
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>

The accompanying notes are an integral part of these consolidated financial statements

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS EQUITY (Continued)**

(Expressed in thousands)

	Capital Stock		Retained Earnings			
	Common		Capital	Special	Legal	Unappropriated
	Stock	Shares	Reserve	Reserve	Reserve	Earnings
	NT\$		NT\$	NT\$	NT\$	NT\$
Balance at January 1, 2002	133,356,954	13,335,695	82,115,682	2,242,284	10,686,225	21,223,870
Purchase of treasury stock						
Treasury stock held by unconsolidated subsidiaries						
Net income for 2002						7,072,032
Appropriation of 2001 retained earnings						
Special reserve				(1,610,302)		1,610,302
Stock dividends	19,680,182	1,968,018				(19,680,182)
Employees' bonus	1,711,320	171,132				(1,711,320)
Changes in unrealized loss on long-term investments of investees						
Gain on disposal of property, plant and equipment adjusted from capital reserve			(170,473)			170,473
Investees' gain on disposal of property, plant and equipment adjusted from capital reserve			(672)			672
Adjustment of capital reserve accounted for under equity method			(69,046)			
Changes in cumulative translation adjustment						
Balance at December 31, 2002 (in NT\$)	154,748,456	15,474,845	81,875,491	631,982	10,686,225	8,685,847
Balance at December 31, 2002 (in US\$)	4,459,610		2,359,524	18,213	307,960	250,313

**Unrealized**

	Loss on	Cumulative	Treasury Stock	Total
	Long-term	Translation		
	Investments	Adjustment		
	NT\$	NT\$		
Balance at January 1, 2002	(470,931)	(160,470)	(35,671,361)	213,322,253
Purchase of treasury stock			(2,739,918)	(2,739,918)
Treasury stock held by unconsolidated subsidiaries			(171,840)	(171,840)
Net income for 2002				7,072,032

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Appropriation of 2001 retained earnings				
Special reserve				
Stock dividends				
Employees' bonus				
Changes in unrealized loss on long-term investments of investees	(878,317)		(878,317)	
Gain on disposal of property, plant and equipment adjusted from capital reserve				
Investees' gain on disposal of property, plant and equipment adjusted from capital reserve				
Adjustment of capital reserve accounted for under equity method			(69,046)	
Changes in cumulative translation adjustment		889,321		889,321
		<u>          </u>	<u>          </u>	<u>          </u>
Balance at December 31, 2002 (in NT\$)	(1,349,248)	728,851	(38,583,119)	217,424,485
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Balance at December 31, 2002 (in US\$)	(38,883)	21,004	(1,111,906)	6,265,835
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>

The accompanying notes are an integral part of these consolidated financial statements

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CASH FLOWS**

(Expressed in thousands)

	For the year ended December 31,			
	2000	2001	2002	
	NT\$	NT\$	NT\$	US\$
Cash flows from operating activities:				
Net income (loss)	50,780,378	(3,157,302)	7,072,032	203,805
Adjustments to reconcile net income (loss) to net cash provided by operating activities:				
Minority interests income (loss)	1,639,842	(368,746)	(326,515)	(9,410)
Depreciation	24,403,320	34,390,192	36,567,535	1,053,819
Amortization	1,176,713	1,877,551	1,699,766	48,985
Provision (reversal) for bad debts expense	52,940	(108,892)	(66,512)	(1,917)
Loss on decline in market value of marketable securities			10,806	311
Provision for inventory loss	610,327	1,529,823	955,074	27,524
Cash dividends received under equity method	18,900	227,025	156,820	4,519
Long-term investment (income) loss accounted for under equity method	(2,077,487)	1,554,402	(230,600)	(6,646)
Impairment loss of long-term investments	414,560	535,890	1,408,565	40,593
Gain on disposal of investments	(588,202)	(2,347,219)	(8,473,213)	(244,185)
(Gain) loss on disposal of property, plant and equipment	(37,903)	73,683	30,532	880
Exchange loss (gain) on long-term loans		431,142	(145,671)	(4,198)
Forfeited interest on converted bonds	74,313			
Patent rights return		(93,990)		
Gain on reacquisition of bonds			(256,204)	(7,383)
Changes in assets and liabilities:				
Notes receivable	1,394,574	261,920	217,922	6,280
Accounts receivable	(7,426,562)	11,341,957	(3,380,836)	(97,430)
Inventories	(6,428,624)	3,493,492	(3,638,525)	(104,857)
Other current assets	(1,180,410)	(1,784,024)	(57,474)	(1,656)
Deferred tax assets	(7,239)	(3,394,095)	125,072	3,604
Notes and accounts payable	(1,075,912)	(4,229,047)	444,129	12,799
Income tax payable	(18,625)	(754,950)	283,728	8,177
Accrued expenses	2,667,916	689,462	(1,373,026)	(39,568)
Other current liabilities	269,347	(693,509)	2,674	77
Compensation interest payable	(11,494)	4,415	78,977	2,276
Other long-term liabilities	342,934	471,411	450,060	12,970
Capacity deposits	3,083,578	236,902	(1,028,162)	(29,630)
Net cash provided by operating activities	68,077,184	40,187,493	30,526,954	879,739
Cash flows from investing activities:				
Decrease (increase) in marketable securities, net	1,838,352	(1,256,567)	(839,551)	(24,194)
(Increase) decrease in restricted deposits	(2,580,724)	2,660,800		
Acquisition of long-term investments	(10,041,492)	(4,417,786)	(4,627,478)	(133,357)
Proceeds from disposal of long-term investments	1,723,271	4,878,280	12,385,637	356,935
Withdrawal of prepayments for long-term investments	1,000,000	1,772		

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Acquisition of property, plant and equipment	(83,482,670)	(43,050,831)	(35,977,747)	(1,036,823)
Proceeds from disposal of property, plant and equipment	1,509,680	544,099	333,180	9,602
Cash proceeds from merger	19,162,146			
Acquisition of subsidiaries			(65,988)	(1,902)
Increase in deferred charges	(2,579,618)	(2,409,062)	(1,695,110)	(48,850)
(Increase) decrease in other assets	(231,642)	(207,749)	29,293	844
	<u>                    </u>	<u>                    </u>	<u>                    </u>	<u>                    </u>
Net cash used in investing activities	(73,682,697)	(43,257,044)	(30,457,764)	(877,745)
	<u>                    </u>	<u>                    </u>	<u>                    </u>	<u>                    </u>

The accompanying notes are an integral part of these consolidated financial statements

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CASH FLOWS (Continued)**

(Expressed in thousands)

	For the year ended December 31,			
	2000	2001	2002	
	NT\$	NT\$	NT\$	US\$
Cash flows from financing activities:				
(Decrease) increase in short-term loans, net	(7,111,095)	(3,243,955)	388,100	11,184
Proceeds from long-term loans	9,423,941	5,185,910	4,425,000	127,522
Repayment of long-term loans	(6,681,765)	(21,427,663)	(10,047,079)	(289,541)
Proceeds from bonds issued	6,896,000	35,596,096	13,097,062	377,437
Proceeds from issuance of American Depository Shares	38,514,773			
Redemption of bonds	(33,015)		(1,140,000)	(32,853)
Reacquisition of bonds			(879,100)	(25,334)
Cash payment for fraction of one share arising from bonds conversion	(4)			
Proceeds from minority shareholders on stock issuance of subsidiaries	1,976,031	7,106,287	194,341	5,600
Purchase of treasury stock	(1,479,064)	(4,599,643)	(2,877,190)	(82,916)
Increase in deposits-in, net	608	361	1,152	33
Directors and supervisors remuneration paid	(95,737)	(433,039)		
Net cash provided by financing activities	41,410,673	18,184,354	3,162,286	91,132
Effect of exchange rate changes on cash and cash equivalents	(137,522)	(680,808)	747,864	21,552
Net increase in cash and cash equivalents	35,667,638	14,433,995	3,979,340	114,678
Cash and cash equivalents at beginning of year	26,802,435	62,470,073	76,904,068	2,216,256
Cash and cash equivalents at end of year	62,470,073	76,904,068	80,883,408	2,330,934
Supplemental disclosures of cash flow information:				
Cash paid for interest (excluding interest capitalized)	2,155,932	2,189,369	1,446,326	41,681
Cash paid for income tax	436,766	1,196,418	198,036	5,707
Investing activities partially paid by cash:				
Acquisition of property, plant and equipment	86,325,850	41,541,665	32,284,302	930,384
Add: Payable at beginning of year	7,099,954	13,991,449	12,482,283	359,720
Add: Increase on payable from merger	4,048,315			
Less: Payable at end of year	(13,991,449)	(12,482,283)	(8,788,838)	(253,281)
Cash paid	83,482,670	43,050,831	35,977,747	1,036,823
Investing and financing activities partially affecting cash flows:				
New shares issued due to merger	23,836,503			
Elimination of book value of United Microelectronics investment in the merged companies	23,227,738			

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Capital reserve increased due to merger	17,152,454			
Net assets, excluding cash, increased due to merged companies	(45,054,549)			
Cash increased due to merger	19,162,146			
Financing activities not affecting cash flows:				
Convertible bonds (at par value) converted into common stock and certificates exchangeable for common stocks	7,255,492			

The accompanying notes are an integral part of these consolidated financial statements



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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. History and Organization**

United Microelectronics Corporation ( the Company ) was incorporated in May 1980 and commenced operations in April 1982. The Company s major business activity is the dedicated full service semiconductor wafer foundry. The Company provides a variety of services to fit individual customer s needs, including intellectual property, embedded IC design, design verification, mask tooling, wafer fabrication, testing, etc. The Company s common shares were publicly listed on the Taiwan Stock Exchange in July 1985 and its American Depository Shares ( ADSs ) were listed on the New York Stock Exchange in September of 2000.

United Microelectronics Corporation, United Integrated Circuits Corporation ( United Integrated Circuits ), United Silicon Incorporated ( United Silicon ), United Semiconductor Corporation ( United Semiconductor ) and UTEK Semiconductor Corporation ( UTEK Semiconductor ) were merged into one publicly traded entity, the Company, on January 3, 2000.

**2. Summary of Significant Accounting Policies**

**Principles of Consolidation**

The consolidated financial statements include the accounts of the Company and certain majority owned (50% or more) subsidiaries (hereinafter referred to collectively as the Group ) in accordance with the requirements of ROC Statement of Financial Accounting Standard ( ROC SFAS ) No.7 and the regulations of the Taiwan Securities and Futures Commission ( Taiwan SFC ). All intercompany accounts and transactions have been eliminated in the consolidated financial statements.

Pursuant to ROC SFAS NO.7 and the regulations of the SFC, if the total assets and operating revenues of a subsidiary are less than 10% of the non-consolidated total assets and operating revenues of the Company, respectively, the subsidiary s financial statements may, at the option of the Company, not be consolidated. Irrespective of the above test, when the total combined assets or operating revenues of all such non-consolidated subsidiaries constitute up to 30% of the Company s non-consolidated total assets or operating revenues, then each individual subsidiary with total assets or operating revenues up to 3% of the Company s non-consolidated total assets or operating revenues has to be included in the consolidation. Such subsidiaries are included in the consolidated financial statements thereafter, unless the percentage of the combined total assets or operating revenues for all such subsidiaries becomes less than 20% of the Company s respective unconsolidated amount.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The consolidated financial statements include the financial statements of the Company and the following subsidiaries:

Hsun Chieh Investment Co., Ltd. ( Hsun Chieh ), incorporated on December 31, 1999, was created for the purpose of merging the following six companies as of that date: Hung Tien Investment Corporation ( Hung Tien ), Ta Lien Investment Corporation ( Ta Lien ), Hung Lien Investment Corporation ( Hung Lien ), Tung Hsin Investment Corporation, Hsun Chieh Corporation and Holtek Investment Corporation. The Company owned 99.97% of interest in Hsun Chieh as of December 31, 2001 and 2002, respectively. Hsun Chieh was consolidated for the years ended December 31, 2000, 2001 and 2002.

Nippon Foundry Inc. ( Nippon Foundry ) was incorporated in May 1984 in Japan and is in the business of manufacturing semiconductor products. During the year 2001, Nippon Foundry was renamed to UMC Japan ( UMCJ ). The Group owned 51.51% and 51.47% of interest in UMCJ as of December 31, 2001 and 2002, respectively.

UMC Group (USA) ( UMC-USA ) was incorporated on August 5, 1997, and is engaged in the business of sales of semiconductor products and providing related foundry services. The Company owned 100% of interest in UMC-USA as of December 31, 2001 and 2002.

UMCi Pte. Ltd. ( UMCi ) was incorporated in January 2001. The Company held a 49.82% equity interest in UMCi as of December 31, 2001 and 2002. In accordance with the Foundry Venture Agreement with other shareholders of UMCi, the Company obtained the controlling influence over UMCi's decisions on its operations, personnel, and financial policies since incorporation. Therefore, UMCi has been included in the consolidation despite an equity interest of less than 50% since the year ended December 31, 2001.

United Microelectronics (Europe) B.V. ( UMC BV ) was incorporated on May 23, 1989 and is engaged in the business of sales of semiconductor products and providing related foundry services. The Company acquired a 100% interest in UMC BV on May 15, 2002 and since then, UMC BV became a wholly-owned subsidiary of the Company.

United Microdisplay Optonics Corp. ( UMO ) was incorporated on September 11, 2002 and is engaged in the business of manufacturing and sales of chips for Liquid Crystal On Silicon ( LCOS ). The Company owned an 85% equity interest in UMO as of December 31, 2002 and was consolidated as well.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Fortune Venture Capital Corporation, United MicroMachining Corporation and United Foundry Service, Inc. were excluded from consolidation in accordance with the aforementioned exclusion rules for the year ended December 31, 2000. Fortune Venture Capital Corporation, United Foundry Services, Inc. and UMC Capital Corporation were excluded from consolidation in accordance with the aforementioned exclusion rules for the year ended December 31, 2001. Fortune Venture Capital Corporation, United Foundry Services, Inc., UMC Capital Corporation and United Microelectronics Corp. (Samoa) were excluded from consolidation in accordance with the aforementioned exclusion rules for the year ended December 31, 2002.

**Use of Estimates**

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. Actual results could differ significantly from those estimates.

**Translation of Foreign Currency Transactions**

The accounts of the Company are maintained in New Taiwan dollars, the functional currency. Transactions denominated in foreign currencies are translated into New Taiwan dollars at the exchange rates prevailing on the transaction dates. Receivables, other monetary assets, and liabilities denominated in foreign currencies are translated into New Taiwan dollars at the exchange rates prevailing at the balance sheet date. Exchange gains or losses are included in the current year's results. The financial statements of foreign subsidiaries and investees are translated into New Taiwan dollars using the spot rates as of each financial statement date for asset and liability accounts, average exchange rates for profit and loss accounts and historical exchange rates for equity accounts. The cumulative translation effects for subsidiaries and investees using functional currencies other than the New Taiwan dollars are included in the cumulative translation adjustment in stockholders' equity.

**Convenience Translation into US Dollars**

The Company prepares its financial statements in New Taiwan ( NT ) dollars, its reporting currency. The United States ( US ) dollar amounts disclosed in the financial statements as of December 31, 2002, are presented solely for the convenience of the readers and were translated at the Federal Reserve noon buying rate of NT\$34.70 to US\$1.00 in effect on December 31, 2002. Such translation amounts are unaudited and it should not be construed that the NT dollar amounts represent, or have been, or could be, converted into US dollars at that or any other rate.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**Derivative Financial Instruments**

Hedging instruments are accounted for on a net accrual basis in accordance with the contractual interest rate or foreign exchange rate. Other derivative instruments are carried at fair value on the balance sheet date with any changes in unrealized gain or loss charged or credited to earnings for the year.

**Cash Equivalents**

Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and with maturity dates that do not present significant risks or changes in value resulting from changes in interest rates.

**Marketable Securities**

Marketable securities are recorded at cost when acquired and are stated at the lower of aggregate cost or market value at the balance sheet date. The market value of listed debt and equity securities or closed-end funds is determined by the average closing price during the last month of the fiscal year. The market value for open-ended funds is determined by their equity per unit at the balance sheet date. The amount by which aggregate cost exceeds market value is reported as a loss in the current year. In subsequent periods, recoveries of market value are recognized as a gain to the extent that the market value does not exceed the original aggregate cost of the investment.

**Allowance for Doubtful Accounts**

The allowance for doubtful accounts is provided based on management's judgment and on the evaluation of collectibility and aging analysis of accounts and other receivables.

**Inventories**

Inventories are recorded at cost when acquired and stated at the lower of aggregate cost, based on the weighted average method, or market value at the balance sheet date. The market values of raw materials and supplies are determined on the basis of replacement cost while the work in process and finished goods are determined by net realizable values. An allowance for loss on decline in market value and obsolescence is

provided, when necessary.

**Long-term Investments**

Long-term investments are recorded at cost when acquired. Investments acquired by contribution of technological know-how are credited to deferred credits among affiliates, which will be amortized to income over a period of five years.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Investments in less than 20% owned listed companies where significant influence on operational decisions of the investees does not reside with the Group, are accounted for by the lower of aggregate cost or market value method. The unrealized loss resulting from the decline in market value of investments that are held for long-term investment purposes is deducted from the stockholders' equity. The Group's investments in less than 20% owned unlisted companies are accounted for under the cost method, unless an other than temporary impairment is evident, in which case they are written down to fair value as a new cost basis.

Investment income or loss from investments in both listed and unlisted companies is accounted for under the equity method provided that the Group owns at least 20% of the outstanding voting shares of the investees and has significant influence on operational decisions of the investees. The difference of the acquisition cost and the underlying equity in the investee's net assets is amortized over five years.

Unrealized intercompany gains and losses are eliminated under the equity method. Profit from sales of depreciable assets between the investee and the Company is amortized and recognized based on the assets' economic service lives. Profit from other types of intercompany transactions is recognized when realized. The increase in the Group's proportionate share in the net assets of its investee resulting from its subscription to additional shares of stock, issued by such investee, at the rate not proportionate to its existing equity ownership in such investee, is credited to a capital reserve account. Any decrease in the Group's proportionate share in the net assets of investee is debited against the existing balance of the similar capital reserve account, where the credit balance can only be offset to zero. If any excess amount exists, it will be debited against unappropriated retained earnings.

**Property, Plant and Equipment**

Property, plant and equipment are stated at cost. Interest incurred on loans used to finance the construction of property, plant and equipment is capitalized and depreciated accordingly.

Depreciation is provided on the straight-line basis using the economic service lives of the assets less any salvage value. When the economic service lives are completed, property, plant and equipment, which are still in use, are depreciated over the newly estimated remaining useful lives of the salvage value. The economic service lives of the property, plant and equipment are as follows: buildings 3 to 55 years; machinery and equipment 5 years; transportation equipment 2 to 5 years; furniture and fixtures 2 to 20 years; leased assets and leasehold improvements the lease period, or economic service lives, whichever is shorter.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Maintenance and repairs are charged to expense as incurred. Significant renewals and improvements are treated as capital expenditures and are depreciated accordingly. When property, plant and equipment are disposed of, their original cost and accumulated depreciation are written off and the related gain, net of income tax, is included in the income statement and subsequently transferred to capital reserve in the same year. However, according to amendments in ROC Company Law, such transfer of gain to capital reserve shall no longer be required with effect on January 1, 2001. The accumulated gain transferred in prior years can be transferred back from the capital reserve and be treated as a one-time increase in retained earnings subject to shareholders' approval.

**Deferred Charges**

Deferred charges are stated at cost and amortized on a straight-line basis as follows: intellectual property and technology license fee - the term of contract or economic lives of the related technology, software - 3 years; facilities use rights - 15 years; bond issuance costs - over the life of the bonds; patents - over economic service lives; and acquired technological know-how - over the estimated useful life of the know-how.

At each balance sheet date, the Group assesses whether there is any indication of impairment other than temporary. If any such indication exists, the recoverable amount is estimated and provision for impairment losses is provided accordingly.

**Convertible and Exchangeable Bonds**

The excess of the stated redemption price over the par value is accrued as compensation interest payable over the redemption period, using the effective interest method.

When convertible bondholders exercise their conversion rights, the book value of bonds is credited to common stock at an amount equal to the par value of the common stock and the excess is credited to capital reserve; no gain or loss is recognized on bond conversion.

When exchangeable bondholders exercise their rights to exchange for the reference shares, the book value of bonds is to be offset with the book value of the investment in reference shares and the related stockholder's equities accounts, with the difference recognized as gain or loss on disposal of investments.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**Pension Plan**

The Group has funded defined benefit pension plans covering regular employees. The net pension cost is computed based on an actuarial valuation in accordance with the provision of ROC SFAS No. 18, which requires consideration of pension cost components such as service cost, interest cost, expected return on plan assets and amortization of net obligation at transition. The unrecognized net asset or obligation at transition is amortized on a straight-line basis over 15 years. The pension fund is managed by an independently administered pension fund association.

**Capital Reserve**

The following shall accrue as capital reserve: (1) any premiums on capital stock; (2) the net appraisal surplus of each fiscal year; (3) any gain on disposal of assets (not applicable for 2001 and after); (4) the fair market value of assets received from a merged company in excess of assumed liabilities and payment for shares held by shareholders of the merged company; (5) any donated surplus; and (6) change in an equity investee's capital structure. Capital reserve shall be exclusively used to cover accumulated deficits when the legal reserve is insufficient to cover the deficits or distribution of stock dividends.

**Income Tax**

Provision for income tax includes deferred tax resulting from temporary differences and investment tax credits. Deferred tax assets and liabilities are recognized for the expected tax consequences of temporary differences between the tax bases of assets and liabilities and their reported amounts in the financial statements using enacted tax rates and laws that will be in effect when the difference is expected to reverse. Valuation allowance on deferred tax assets is provided to the extent that it is more likely than not that the tax benefits will not be realized. The Group recognized the tax benefit from the tax credit incurred in the year equipment is acquired, or the year the expenditure arises from research and development.

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

**Revenue Recognition**

Revenue is recognized when title and liability for risk of loss or damage to the products have been transferred to customers usually upon shipment. Sales return and allowances taken into consideration of customers' complaint and past experience are accrued in the same year of sales.



The connected cost is to be deducted from the total cost of goods sold.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**Research and Development**

Costs incurred by the Group in research and development activities are expensed as incurred.

**Minority Interests**

Minority interests in the income statement includes interest in the earnings or losses of less than wholly-owned subsidiaries and the pre-acquisition earnings or losses of companies acquired during the year that the Group was not entitled to recognize.

**Earnings Per Share**

Earnings per share is calculated according to the ROC SFAS No.24. Basic earnings per share is computed by dividing net income by weighted average number of shares outstanding during the year. Diluted earnings per share is calculated by taking basic earnings per share into consideration plus additional common shares that would have been outstanding if the dilutive share equivalents had been issued. The net income would also be adjusted for the interest derived from any underlying dilutive share equivalents. The weighted-average outstanding shares are restated for stock dividends and bonus share issues.

**Certain Risks and Uncertainties**

The Group is engaged in the foundry business of manufacturing semiconductor products and sells its products primarily in Taiwan, Asia, North America and Europe, generally without requiring collateral. The Group's products are concentrated in the semiconductor industry, which is highly competitive and rapidly changing, and its inventories are subject to rapid technological obsolescence. While the Group has programs to minimize the required inventories on hand and considers technological obsolescence in estimating required allowances to reduce amounts to fair market value, such estimates could change in the future. Significant technological changes in the industry could affect operating results adversely.

**Treasury Stock**

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Under ROC SFAS No. 30, treasury stock is accounted for under the cost method. Cost of treasury stock is shown as a deduction to stockholders equity, while gain or loss of selling treasury stock is treated as adjustment to capital reserves.

The Company's stock held by its subsidiaries is also treated as treasury stock in the Company's stand-alone account since January 1, 2002.

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****3. Accounting Changes**

On September 1, 2001, UNIPAC Optoelectronics Corp. ( UNIPAC ) was merged into Acer Display Technology Inc. which was the surviving corporate entity and was renamed AU Optronics Corp. As the Group has lost its significant influence over the investee, the investment was then accounted for under the lower of cost or market value method. Similarly, upon the listing of MediaTek Incorporation on the Taiwan Stock Exchange in 2001, the Group lost its significant influence over MediaTek and therefore, the investment in MediaTek was accounted for under the lower of cost or market value method since then. Prior to these transactions, the Group's investments in UNIPAC and MediaTek Incorporation were accounted for by equity method.

Prior to January 1, 2002, treasury stock held by the Company's subsidiaries was accounted for in the consolidation level only. Since January 1, 2002, the Company has adopted ROC SFAS No. 30 to further include the Company's stock held by its subsidiaries as treasury stock in the Company's stand-alone account. This adoption has decreased the amount of long-term investment and stockholder's equity in the consolidated balance sheet by NT\$172 million, respectively, representing the treasury stock held by an unconsolidated subsidiary. The net impact caused by the accounting changes is considered insignificant.

**4. Cash and Cash Equivalents**

	<b>As of December 31,</b>	
	<b>2001</b>	<b>2002</b>
	<b>NT\$ 000</b>	<b>NT\$ 000</b>
Cash:		
Cash on hand	4,050	4,849
Checking and savings accounts	19,837,524	2,415,088
Certificates of deposit	47,070,856	69,116,470
Subtotal	66,912,430	71,536,407
Cash equivalents:		
Commercial paper	9,991,638	9,347,001
Total	76,904,068	80,883,408

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****5. Marketable Securities, Net**

	<b>As of December 31,</b>	
	<b>2001</b>	<b>2002</b>
	<b>NT\$ 000</b>	<b>NT\$ 000</b>
Mutual funds	1,003,900	
Listed equity securities	242,634	35,423
Convertible bonds	39,900	2,501,748
Subtotal	1,286,434	2,537,171
Less: Allowance for loss on decline in market value		(10,806)
Net	1,286,434	\$ 2,526,365

**6. Notes Receivable**

	<b>As of December 31,</b>	
	<b>2001</b>	<b>2002</b>
	<b>NT\$ 000</b>	<b>NT\$ 000</b>
Notes receivable	215,692	85,371

**7. Accounts Receivable, Net**

	<b>As of December 31,</b>	
	<b>2001</b>	<b>2002</b>
	<b>NT\$ 000</b>	<b>NT\$ 000</b>
Accounts receivable	9,484,042	12,785,534
Less: Allowance for sales returns and discounts	(448,037)	(666,095)

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Less: Allowance for doubtful accounts	(148,405)	(117,787)
Net	8,887,600	12,001,652

Please refer to Note 21 for accounts receivable pledged as collateral.

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****8. Inventories, Net**

	<b>As of December 31,</b>	
	<b>2001</b>	<b>2002</b>
	<b>NT\$ 000</b>	<b>NT\$ 000</b>
Raw materials	219,166	269,519
Supplies and spare parts	1,206,801	1,434,987
Work in process	3,863,899	6,489,834
Finished goods	1,284,206	660,562
Subtotal	6,574,072	8,854,902
Less: Allowance for loss on decline in market value and obsolescence	(856,869)	(414,897)
Net	5,717,203	8,440,005

(1) The insurance coverage for inventories was sufficient as of December 31, 2001 and 2002, respectively.

(2) Inventories were not pledged.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****9. Long-term Investments**

Details of long-term investments are as follows:

Invested Company	As of December 31,			
	2001		2002	
	Percentage of Ownership or Voting Rights	Amount	Percentage of Ownership or Voting Rights	Amount
		NT\$ 000		NT\$ 000
<b>Investments accounted for under the equity method:</b>				
UMC Capital Corporation	100.00	338,228	100.00	1,007,444
United Foundry Service, Inc.	100.00	78,226	100.00	82,960
United Microelectronics Corp. (Samoa)			100.00	7,114
Fortune Venture Capital Corporation	99.99	3,413,388	99.99	3,115,317
Pacific Venture Capital Co., Ltd.	49.99	351,420	49.99	316,270
Afa Technologies Inc.			47.30	23,650
Star Semiconductor Corp.			46.82	22,030
DuPont Photomasks Taiwan Ltd.	46.32	1,093,113	45.51	1,145,403
Unitech Capital Inc.			42.00	731,255
Unimicron Technology Corp. (formerly known as World Wiser Electronics Incorporated) (Note A)	36.87	4,283,241	36.28	4,542,159
VistaPoint, Inc.			35.65	34,224
UC Fund II	35.45	161,225	35.45	174,264
Accelerated Communications, Inc.			33.33	100,000
RiRa Electronics, Inc.	31.50	30,322	32.50	59,232
United Radiotek Incorporation	26.90	13,450	29.37	29,185
Archtek Telecom Corporation			26.49	
Novatek Microelectronics Corp.	26.82	1,019,532	25.83	1,193,740
Holtek Semiconductor Inc.	28.76	555,441	25.61	568,554
Faraday Technology Corp.	26.68	1,686,448	25.61	1,776,389
Integrated Technology Express Inc.	28.78	330,522	24.58	309,672
Applied Component Technology Corporation	31.00	154,821	23.66	91,581
Harvatek Corp.	26.14	179,295	21.99	277,203
High Bandwidth Access, Inc.	11.92	19,191	20.13	82,934
Integrated Telecom Express, Inc. (Note B)	18.99	818,348	18.97	652,747
Patentop, Ltd. (Note B)	18.00	20,963	18.00	16,543
Advance Materials Corporation (Note B)	15.78	183,209	15.78	169,836
AMIC Technology (Taiwan), Inc. (Note B)	13.62	37,120	13.62	53,225
SerComm Corporation (Note B)	7.81	58,619	11.48	159,465
Plato Electronics (Cayman) Limited	24.50	657,858		



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Trecenti Technologies, Inc.	40.00	1,789,838	
Broadmedia, Inc.	39.28		
		<u>                    </u>	<u>                    </u>
Subtotal		17,273,818	16,742,396
		<u>                    </u>	<u>                    </u>

Note A: Investment in UniMicron Technology Corp. was previously accounted for under the equity method. As of October 31, 2001, UniMicron Technology Corp. was merged into World Wiser Electronics Incorporated which is the surviving corporate entity and renamed as Unimicron Technology Corp.

Note B: For 2002, significant influence was exercised by the Group over the investees, therefore, equity method applied.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Invested Company	As of December 31,			
	2001		2002	
	Percentage of Ownership or Voting Rights	Amount	Percentage of Ownership or Voting Rights	Amount
<b>Investments accounted for under the cost method or the lower of cost or market value method:</b>				
Aptos Corp. (Note C)	26.07	104,861	26.07	104,861
Pacific United Technology, L.P. (Note C)	25.00	34,600	25.00	34,600
Elite Flash Storage Technology Inc.	19.50	19,500	19.50	19,500
Giga Solution Technology Co., Ltd.	19.44	105,000	19.44	105,000
Vialta, Inc.		1,248,457	17.80	1,248,457
PixTech, Inc.	17.63	561,080	17.63	
Kits On Line Technology Corp.	16.41	38,656	16.41	38,656
InComm Technologies Co., Ltd.	16.00	44,480	16.00	44,480
Everglory Resource Technology Co., Ltd.	19.03	74,000	15.14	74,000
Enovation Group Inc.	14.34	73,807	14.34	11,809
MediaTek Incorporation (Note D)	15.17	1,339,839	13.21	1,213,655
Smart Idea Holding Limited			11.88	205,069
Integrated Photonics, Inc.	11.46	6,244	11.46	
AU Optronics Corp. (Note D and E)	18.86	8,317,535	11.37	6,758,766
Sino-Aerospace Investment Corp.	11.11	25,748	11.11	
Subtron Technology Co., Ltd.	11.02	339,000	11.02	339,000
Ayuttha Technology Corp.			11.00	16,500
Golden Technology Venture Capital Investment Corp.	10.67	80,000	10.67	80,000
NCTU Spring I Technology Venture Capital Investment Corp.	10.06	43,482	10.06	43,482
Pacific Technology Partners, L. P.	9.85	104,755	9.85	208,256
RF Integration Corporation	4.51	98,610	9.76	98,610
TECO Nanotech Co., Ltd.	9.26	167,602	9.26	
Ascend Semiconductor Corp.	9.00	36,000	9.00	14,400
Union Technology Corp.	15.00	18,000	9.00	18,000
Fortune Semiconductor Corporation	5.13	40,000	8.72	71,500
United Industrial Gases Co., Ltd.	8.52	146,250	8.44	146,250
ProSys Technology Integration, Inc.	6.70	18,000	6.70	4,258
NCTU Spring Venture Capital Co., Ltd.	6.28	20,000	6.28	20,000
Advanced Microelectronic Products, Inc.	5.50	126,000	5.50	126,000
Cosmos Technology Venture Capital Investment Corp.	5.03	40,000	5.03	40,000
Industrial Bank of Taiwan Corp.	5.00	1,150,000	5.00	1,150,000
Parawin Venture Capital Corp.			5.00	50,000
Coretronic Corp.	5.49	276,192	4.59	276,192

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Invested Company	As of December 31,			
	2001		2002	
	Percentage of Ownership or Voting Rights	Amount	Percentage of Ownership or Voting Rights	Amount
Silicon Integrated Systems Corp.			4.46	1,267,580
Taiwan Asia Pacific Venture Fund	4.15	29,295	4.15	29,295
TECO Electric & Machinery Co., Ltd.	3.94	1,535,895	4.02	1,535,298
IBT Venture Co.	3.81	90,000	3.81	90,000
Prokia Technology Co., Ltd.	3.13	48,000	3.13	48,000
Hantek Technology Co., Ltd.	3.14	42,330	2.70	42,330
Sheng-Hua Venture Capital Corp.	2.50	50,000	2.50	50,000
Pixart Imaging Inc.	2.00	10,000	1.95	10,140
SAMPO Corporation	2.95	443,598	1.73	224,044
Largan Optoelectronics, Co., Ltd.	1.96	102,380	1.45	79,989
Mega Financial Holding Company	4.98	4,991,630	1.35	4,991,630
Premier Image Technology Corporation	0.70	27,964	0.64	27,964
Ingenus Corp.	0.65	29,812	0.62	29,812
Lattice Semiconductor Corporation			0.44	65,740
King Yuan Electronics Co., Ltd.	0.37	70,000	0.35	70,000
Averlogic Corporation			0.22	1,600
Amkor Technology, Inc.	0.09	99,541	0.13	101,696
LightCross, Inc.		206,880		206,880
Linden Technologies, Inc.		92,385		92,385
Aurora Systems, Inc.		72,226		72,226
Chip Express Corporation				68,198
ForteMedia, Inc.		65,000		65,000
ChinaYES InfoMedia (Cayman), Inc.		63,146		63,146
Alpha and Omega Semiconductor, Inc.		46,883		46,883
SandCraft, Inc.		43,063		43,063
VenGlobal Capital Fund III, L.P.		33,195		33,195
Primarion, Inc.		31,800		38,816
Formerica International Holding, Inc.		30,898		30,898
Triscend Corp.		17,409		17,409
Broadcom Communications		7,092		7,092
Netlogic Microsystems, Inc.		3,195		3,195
Tonbu, Inc.		428,767		
NetEmpower Software Technologies, Inc.		92,388		
Octillion Communications, Inc.		65,740		
Epogy Communication, Inc.		49,704		
AEM Technology, Inc.		28,715		
The Supply, Inc.				
Stark Technology Inc.	0.19	1,824		
National Venture Capital Corp.	11.09	60,000		

Subtotal	<u>23,708,453</u>	<u>22,014,805</u>
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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

	As of December 31,			
	2001		2002	
	Percentage of Ownership or Voting Rights	Amount	Percentage of Ownership or Voting Rights	Amount
<u>Invested Company</u>				
Others:				
Golf Club Membership Card		60,000		60,000
Morgan Stanley Repackage Bond				873,000
Subtotal		60,000		933,000
Prepaid long-term investments:				
Ascend Semiconductor Corp.				30,036
Ayuttha Technology Corp.				24,450
Subtotal				54,486
Cumulative translation adjustment		183,710		209,339
Allowance for loss on decline in market value		(469,303)		(1,108,690)
Treasury stock held by unconsolidated subsidiaries				(171,840)
Total		\$ 40,756,678		\$ 38,673,496

Note C: As the Group was not able to exercise significant influence over the investees, the investments were accounted for under the cost method.

Note D: Starting from the third quarter of 2001, the Group was unable to exercise significant influence over AU Optronics Corp. and MediaTek Incorporation's operations, personnel and financial policies. Accordingly, the Group changed its method of accounting for its investments in AU Optronics Corp. and MediaTek Incorporation from the equity method to lower of aggregate cost or market value method.

Note E: Among the shares held by the Group in AU Optronics Corp., approximately 139,770 thousand shares with the book value of NT\$2,075 million was utilized as reference shares for the Group's zero couple exchangeable bonds issued in May 2002.

Note F: The long-term investments were not pledged.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****10. Property, Plant and Equipment**

	As of December 31, 2001		
	Accumulated		
	Cost	Depreciation	Book Value
	NT\$ 000	NT\$ 000	NT\$ 000
Land	1,854,306		1,854,306
Buildings	15,458,094	(3,399,963)	12,058,131
Machinery and equipment	214,158,546	(90,988,564)	123,169,982
Furniture and fixtures	1,785,562	(893,914)	891,648
Leasehold improvements	93,535	(44,800)	48,735
Construction in progress and prepaid equipment	31,098,366		31,098,366
	<u>264,448,409</u>	<u>(95,327,241)</u>	<u>169,121,168</u>

  

	As of December 31, 2002		
	Accumulated		
	Cost	Depreciation	Book Value
	NT\$ 000	NT\$ 000	NT\$ 000
Land	1,796,419		1,796,419
Buildings	16,985,813	(3,849,351)	13,136,462
Machinery and equipment	254,010,057	(126,402,766)	127,607,291
Furniture and fixtures	2,424,267	(1,161,371)	1,262,896
Leasehold improvements	86,319	(47,985)	38,334
Construction in progress and prepaid equipment	23,235,508		23,235,508
	<u>298,538,383</u>	<u>(131,461,473)</u>	<u>167,076,910</u>

(1) Depreciation expense of NT\$24,403 million, NT\$34,390 million and NT\$36,568 million was incurred for each of the three years ended December 31, 2000, 2001 and 2002, respectively.

(2) Total capitalized interest amounted to NT\$813 million, NT\$204 million and NT\$551 million for each of the three years ended December 31, 2000, 2001 and 2002, respectively.

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- (3) The insurance coverage for property, plant and equipment was sufficient as of December 31, 2001 and 2002, respectively.
- (4) Please refer to Note 21 for property, plant and equipment pledged as collateral.

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****11. Short-term Loans**

	As of December 31,	
	2001	2002
	NT\$ 000	NT\$ 000
Unsecured bank loans	403,050	1,178,800
Secured bank loans	350,400	
<b>Total</b>	<b>753,450</b>	<b>1,178,800</b>
<b>Interest rates</b>	<b>0.59% - 9.50%</b>	<b>1.60% - 2.02%</b>

(1) The Group's unused short-term lines of credits amounted to NT\$20,272 million and NT\$17,538 million as of December 31, 2001 and 2002, respectively.

(2) Please refer to Note 21 for assets pledged for short-term loans.

**12. Bonds Payable**

	As of December 31,	
	2001	2002
	NT\$ 000	NT\$ 000
Secured domestic bonds payable	3,990,000	2,850,001
Unsecured domestic bonds payable	25,000,000	25,000,000
Euro convertible bonds payable	10,596,096	14,465,390
Exchangeable bonds payable		8,182,700
Compensation interest payable	4,415	83,392
<b>Subtotal</b>	<b>39,590,511</b>	<b>50,581,483</b>
Less: Current portion	(1,140,000)	(1,139,999)
<b>Net</b>	<b>38,450,511</b>	<b>49,441,484</b>



- 
- (1) On April 27, 2000, the Company issued five-year secured bond amounting to NT\$3,990 million with stated interest rate of 5.6%. The bonds are repayable in installments every six months from April 27, 2002 to April 27, 2005.
  
  - (2) During the period from April 16 to April 27, 2001, the Company issued five-year and seven-year unsecured bonds totaling NT\$15,000 million, with face value of NT\$7,500 million, and stated interest rates of 5.1850% through 5.1195% and 5.2850% through 5.2170%, respectively. The five-year bonds and seven-year bonds are repayable starting from April 2004 to April 2006 and April 2006 to April 2008, respectively, both in three yearly installments at the rates of 30%, 30% and 40%.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

- (3) During the period from October 2 to October 15, 2001, the Company issued three-year and five-year unsecured bonds totaling NT\$10,000 million, each with face value of NT\$5,000 million, and with stated interest rates of 3.3912% through 3.420% and 3.4896% through 3.520%, respectively. The three-year bonds and five-year bonds are repayable in October 2004 and October 2006, respectively, upon the maturity of the bonds.
- (4) On December 12, 2001, the Company issued zero coupon convertible bonds amounting to US\$302.4 million on the Luxembourg Stock Exchange ( LSE ). The terms and conditions of the bonds are as follows:
- a. Final Redemption

Unless previously redeemed, repurchased, cancelled or converted, the bonds will be redeemed at 101.675% of their principal amount on March 1, 2004.

- b. Redemption at the Option of the Company

The Company may redeem all, but not some only, of the bonds, subject to giving no less than 30 nor more than 60 days advance notice, at the early redemption amount, provided that:

- (a) On or at any time after June 13, 2003, the closing price of the ADSs on the New York Stock Exchange or other applicable securities exchange on which the ADSs are listed on any ADS trading day for 20 out of 30 consecutive ADS trading days ending at any time within the period of five ADS trading days prior to the date of the redemption notice shall have been at least 130% of the conversion price or last adjusted conversion price, as the case may be, on each such day, or
- (b) At any time prior to maturity at least 90% in principal amount of the bonds have already been redeemed, repurchased, cancelled or converted.

- c. Conversion Period

- (a) In respect of the shares, on or after January 22, 2002 up to and including February 20, 2004 or
- (b) In respect of the ADSs, on or after the later of January 22, 2002 and the date on which the shelf registration statement covering resales of certain ADSs issuable upon conversion of the bonds has been declared effective by the US SEC, up to and including February 20, 2004.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

d. Conversion Price

The conversion price

- (a) In respect of the Shares, will be NT\$69.60 per Share, and
- (b) In respect of the ADSs, will be US\$10.098 per ADS.  
The applicable conversion price will be subject to adjustment for, among other things, subdivision or consolidation of Shares, including Shares represented by ADSs, bonus issues, right issues, distributions of cash and stock dividends and other dilutive events.

(5) On May 10, 2002, the Company issued a LSE listed zero coupon exchangeable bonds exchangeable for common shares of AU Optronics, Corp. ( AU ) with an aggregate principal amount of US\$235 million. The terms and conditions of the bonds are as follows:

a. Final Redemption

Unless previously redeemed, exchanged or purchased and cancelled, the bonds will be redeemed at their principal amounts in US dollars on May 10, 2007.

b. Redemption at the Option of the Company

The Company may redeem the bonds, in whole or in part, in principal amount thereof, on or after August 10, 2002 and prior to May 10, 2007 at their principal amount, if the market price of the AU common shares, translated into US dollars at the prevailing exchange rate, for a period of 20 consecutive Trading Days, the last of which occurs not more than 10 days prior to the date upon which notice of such redemption is published, is at least 120% of the Exchange Price then in effect translated into US dollars at the rate of NT\$34.645=US\$1.00.

The Company may also redeem the bonds, in whole, but not in part, at their principal amount if at least 90% in principal amount of the bonds has already been exchanged, redeemed or purchased and cancelled.

c. Redemption at the Option of Bondholders

The Company will, at the option of the holders, redeem such bonds on February 10, 2005 at its principal amount.

d. Tax Redemption

The Company may redeem all, but not part, of the bond, at any time at their principal amount in US dollars, in the event of certain changes in the ROC's tax rules which would require the Company to gross up for payments of principal, or to gross up for payments of interest or premium, if any, at a rate exceeding 20%.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

e. Exchange

Subject to prior permitted redemption and as otherwise provided in the offering, the bonds are exchangeable at any time on or after June 19, 2002 and prior to April 10, 2007, into AU shares or AU ADSs at an exchange price of NT\$58.25 per share, determined on the basis of a fixed exchange rate of NT\$34.645=US\$1.00; provided however, that if the exercise date falls within five business days from the beginning of, and during, any closed period, the right of the exchanging holder of the bonds to vote with respect to the shares it receives will be subject to certain restriction.

The Exchange Price will be subject to adjustment upon the occurrence of certain events including free distribution of AU common shares by AU; subdivision, consolidation or reclassification of AU common shares, distribution of stock dividends by AU, right issues and other dilutive events.

(6) On March 25, 2002, the Company's subsidiary UMCJ issued LSE listed zero coupon convertible bonds with an aggregate principal amount of (Yen)17,000 million and the issue price was set at 101.75% of the principal amount. The terms and conditions of the bonds are as follows.

a. Final Redemption

Unless previously converted, purchased and cancelled or redeemed, the bonds will be redeemed on March 26, 2007 at 100% of their principal amount.

b. Early Redemptions

(a) On or at any time after March 25, 2005, UMCJ may redeem all but not some of the bonds if the last selling price of the shares reported on the OTC Market in Japan is at least 120% of the conversion price then in effect for at least 20 out of 30 consecutive trading days ending on the trading day immediately prior to the date of the notice of redemption; or the principal amount that have not been redeemed, repurchased and cancelled or converted is equal to or less than 10% of original aggregate principal amount.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

- (b) In case of a Corporate Split or Share Exchange/ Share Transfer, UMCJ may redeem all but not some of the bonds on or prior to the effective date of the transaction, subject to giving no less than 30 nor more than 60 days notice at the redemption amount, provided that UMCJ is not able to ensure holders of the bonds to be able to convert them into shares of stock and other securities and property which they would have received had the bonds been converted into shares immediately prior to the transaction or if such supplemental indenture is objected by holders of bonds of at least a majority in principal amount.
- (c) If a change in who controls UMCJ occurs, holders of the bonds will be able to require UMCJ to redeem their bonds on the date that is 85 days after the change of control occurs.

## c. Conversion Period

At any time on or after May 3, 2002 to and including March 19, 2007.

## d. Conversion Price

The conversion price was set at (Yen)400,000 per share and may be adjusted for subdivision or consolidation of shares, rights issues, distribution of cash and stock dividends and other dilutive events.

**13. Long-term Loans**

	As of December 31,	
	2001	2002
	NT\$ 000	NT\$ 000
Secured long-term loans	21,802,126	13,989,861
Unsecured long-term loans	3,022,875	5,531,250
Less: Current portion	(8,580,178)	(6,641,599)
Net	16,244,823	12,879,512
Interest rates	1.55% - 5.34%	0.95% - 3.35%

(1) The above long-term loans will be repaid by installments with the last payment on May 14, 2009.

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- (2) The Group's long-term loans denominated in foreign currency amounted to US\$176 million, (Yen)18,423 million and US\$100 million, (Yen)18,750 million as of December 31, 2001 and 2002, respectively.
- (3) Assets pledged as collateral to secure these loans are detailed in Note 21, Assets Pledged as Collateral.

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

(4) As of December 31, 2002, long-term loans payments that will become due during the next five years are (NT\$ 000):

January 1, 2003 - December 31, 2003	6,641,599
January 1, 2004 - December 31, 2004	6,354,682
January 1, 2005 - December 31, 2005	3,804,140
January 1, 2006 - December 31, 2006	1,687,612
January 1, 2007 - December 31, 2007	668,078
January 1, 2008 & thereafter	365,000
<b>Total</b>	<b>19,521,111</b>

**14. Pension Plan and Net Pension Cost**

The following tables set forth the actuarial assumptions, funded status and amounts recognized for the Group's defined benefit pension plans:

	For the year ended December 31,						
	2000		2001		2002		
	The Company	UMCJ	The Company	UMCJ	The Company	UMO	UMCJ
Discount rate	6.00%	3.00%	4.50%	2.00%	4.00%	4.00%	2.00%
Rate of compensation increase	6.00%	3.71%	6.50%	3.71%	5.50%	6.00%	3.71%
Expected return on plan assets	6.00%	4.62%	4.50%	1.00%	3.25%	3.25%	1.00%

	As of December 31,	
	2001	2002
	NT\$ 000	NT\$ 000
Change in benefit obligation during the year:		
Projected benefit obligation at January 1	(2,549,107)	(2,637,063)
Service cost	(375,812)	(427,082)
Interest cost	(142,885)	(110,230)
Benefits paid	7,881	9,379
Gain (loss) on projected benefit obligation	422,860	(119,325)
Transition obligation		(3,006)



Projected benefit obligation at year end	<u>(2,637,063)</u>	<u>(3,287,327)</u>
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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

	<b>As of December 31,</b>	
	<b>2001</b>	<b>2002</b>
	<b>NT\$ 000</b>	<b>NT\$ 000</b>
Change in pension assets during the year:		
Fair value of plan assets at January 1	693,559	824,092
Actual return on plan assets	22,096	16,250
Employer contributions	130,615	143,477
Benefits paid	(7,881)	(9,379)
Others	(14,297)	16,618
	<u>824,092</u>	<u>991,058</u>

	<b>As of December 31,</b>	
	<b>2001</b>	<b>2002</b>
	<b>NT\$ 000</b>	<b>NT\$ 000</b>
Funded status at year end:		
Fair value of plan assets	824,092	991,058
Projected benefit obligation	(2,637,063)	(3,287,327)
	<u>(1,812,971)</u>	<u>(2,296,269)</u>
Funded status	(1,812,971)	(2,296,269)
Unrecognized transition obligation	326,000	296,565
Unrecognized net actuarial loss	63,354	160,577
Accrued pension payable	(89,760)	(127,706)
Intangible assets	(74,946)	(63,953)
Others	(2,699)	
	<u>(1,591,022)</u>	<u>(2,030,786)</u>

	<b>For the year ended December 31,</b>		
	<b>2000</b>	<b>2001</b>	<b>2002</b>
	<b>NT\$ 000</b>	<b>NT\$ 000</b>	<b>NT\$ 000</b>
Components of net periodic cost for the year:			
Service cost	413,264	375,812	427,082
Interest cost	115,600	142,885	110,230
Expected return on plan assets	(34,870)	(38,335)	(30,258)

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Recognition of transition asset	39,367	38,523	39,537
Recognition of actuarial loss	13,636	11,433	6,129
	<u>          </u>	<u>          </u>	<u>          </u>
Net periodic cost	546,997	530,318	552,720
	<u>          </u>	<u>          </u>	<u>          </u>

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**15. Capital Stock**

- (1) As recommended by the board of directors and approved by the shareholders meeting on May 30, 2001, the Company issued 1,864,243,516 new shares from the capitalization of retained earnings of NT\$17,151 million and employees bonus of NT\$1,491 million with the effective date on July 21, 2001.
- (2) As recommended by the board of directors and approved by the shareholders meeting on June 3, 2002, the Company issued 2,139,150,230 new shares from the capitalization of retained earnings of NT\$19,680 million and employees bonus of NT\$1,711 million. The effective date of the issuance was on August 11, 2002.
- (3) As of December 31, 2002, 22,000,000,000 common shares were authorized to be issued and 15,474,845,646 common shares were issued, each at par of NT\$10.
- (4) The Company has issued 173,693 thousand ADSs as of December 31, 2002. The number of common shares represented by the ADSs is 868,467 thousand shares.
- (5) On September 11, 2002, the Company was authorized by the relevant government authorities to issue Employee Stock Options. The total number of options to be granted under the plan is one billion units, with each unit entitling the optionee to subscribe for one share of the Company's common stock. Settlement upon the exercise of the stock options will be made through the issuance of new shares by the Company. The grant period for options is six years and an optionee may exercise his/her options in accordance with certain schedules as prescribed by the plan starting from two years after the grant. The total number of option units outstanding as of December 31, 2002 was 928,059 thousand units and the exercise price for the options is NT\$20 per share.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****16. Treasury Stock**

The Company bought back its own shares from the open market during the years ended December 31, 2001 and 2002. Details of the treasury stock transactions are as follows:

<u>Purpose</u>	Shares bought during the year		As of December 31,
	ended December 31, 2001	2002	2002
	(In thousand shares)		
For transfer to employees	4,990	49,114	86,539
For conversion of the convertible bonds into shares	129,035	20,693	149,728
<b>Total Shares</b>	<b>134,025</b>	<b>69,807</b>	<b>236,267</b>

According to Stock Exchange Regulations of Taiwan, total shares of treasury stock shall not exceed 10% of the Company's stock issued. Total purchase amount shall not exceed the sum of retained earnings and capital reserve-premiums and realized capital reserve. The Company's treasury stock possession did not, at any time during 2002, violate the regulation stated above. As of December 31, 2002, the Company held 236,267 thousand shares of treasury stock, which amounted to NT\$8,819 million.

Treasury stock shall not be pledged, nor does it possess voting rights or receive dividends, in compliance with Stock Exchange Regulations of Taiwan.

**17. Retained Earnings**

In accordance with the Company's Articles of Incorporation, current year's earnings, if any, shall be distributed in the following order:

- (1) Payment of all taxes and dues;
- (2) Offset prior years' operating losses;

- (3) Set aside 10% of the remaining amount after deducting items (1) and (2) as legal reserve;
- (4) Set aside 0.1% of the remaining amount after deducting items (1), (2) and (3) as directors and supervisors remuneration;
- (5) After deducting items (1), (2) and (3) above from the current year's earnings, any portion of the remaining amount together with the prior years unappropriated earnings is to be allocated as follows: no less than 5% as employees bonus which will be settled through issuance of new shares of the Company; and
- (6) The distribution of the remaining portion, if any, will be recommended by the board of directors and approved by the shareholders meeting.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The Company's Articles of Incorporation further provides that at least 50% of the dividends to the Company's shareholders, if any, must be paid in the form of stock dividends. Accordingly, no more than 50% of the dividends can be paid in the form of cash.

The appropriation of 2002 retained earnings has not yet been recommended by the board of directors as of the date of the Report of Independent Auditors. Information on board of directors' recommendations and shareholders' approvals can be obtained from the Market Observation Post System on the website of Taiwan Stock Exchange Corporation.

Details of the settlement of 2001 employees' bonus and remuneration of directors and supervisors are as follows:

		<b>For the year ended December 31, 2001</b>		
		<b>As approved by the shareholders' meeting</b>	<b>As recommended by the board of directors</b>	<b>Differences</b>
1.	Settlement of employees' bonus by issuance of new shares			
	a. Number of shares (in thousands)	171,132	171,132	
	b. Amount (in thousands)	NT\$ 1,711,320	NT\$ 1,711,320	
	c. Percentage on total number of outstanding shares at end of year	1.30%	1.30%	
2.	Remuneration of directors and supervisors			
3.	Effect on earnings per share before retroactive adjustments			
	a. Original basic and diluted loss per share	NT\$ (0.24)	NT\$ (0.24)	
	b. Revised basic and diluted loss per share taking into consideration the employees' bonus	NT\$ (0.37)	NT\$ (0.37)	

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****18. Income Tax**

Reconciliation between the income tax expense (benefit) and the income tax calculated on pre-tax financial income based on the statutory tax rate is as follows:

	For the year ended December 31,		
	2000	2001	2002
	NT\$ 000	NT\$ 000	NT\$ 000
Tax on pre-tax income (loss) at statutory tax rate	13,082,290	(1,641,509)	1,663,022
Reduction in tax rate for technology park companies	(2,527,904)		
Variation in statutory tax rates for non-technology park companies and oversea entities	335,723	(227,044)	166,997
Change in tax rate		(1,142,582)	
Tax exemption due to 4-year tax holiday	(3,889,913)		
Investment (income) loss	(1,126,984)	300,371	55,445
Gain on disposal of investments	(95,689)	(558,838)	(1,602,035)
Change in valuation allowance against tax credit	1,171,575	6,861,925	2,957,538
Increase in investment tax credit	(6,459,674)	(8,842,305)	(3,999,022)
Change in valuation allowance against loss carry-forward	(1,410,160)		(224,994)
Estimated 10% corporate income tax on un-appropriated earnings		1,909,261	46,705
Adjustment of prior year's tax expense	(136,744)	201,480	37,916
Tax on interest income separately taxed	30,342	21,688	12,062
Other permanent differences	936,076	77,564	1,157,097
<b>Income tax (benefit) expense</b>	<b>(91,062)</b>	<b>(3,039,989)</b>	<b>270,731</b>



**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Net current deferred tax assets are included in other current assets as of December 31, 2001 and 2002. Significant components of deferred tax assets and liabilities were as follows:

	As of December 31,	
	2001	2002
	NT\$ 000	NT\$ 000
Deferred tax assets		
Investment tax credit	18,626,824	22,625,846
Loss carry-forward	3,846,362	4,315,169
Allowance on sales returns and discounts	112,009	135,077
Allowance for loss on obsolescence of inventories	214,217	101,584
Pension	352,229	469,056
Organization Cost	30,382	509
Others	317,680	224,112
<b>Total deferred tax assets</b>	<b>23,499,703</b>	<b>27,871,353</b>
Valuation allowance	(10,932,530)	(14,037,226)
<b>Net deferred tax assets</b>	<b>12,567,173</b>	<b>13,834,127</b>
Deferred tax liabilities		
Depreciation	4,195,274	5,282,085
Other	45,801	324,542
<b>Total deferred tax liabilities</b>	<b>4,241,075</b>	<b>5,606,627</b>
<b>Total net deferred tax assets</b>	<b>8,326,098</b>	<b>8,227,500</b>
Net deferred tax assets current	3,954,867	2,994,572
Net deferred tax assets noncurrent	4,371,231	5,232,928
<b>Total net deferred tax assets</b>	<b>8,326,098</b>	<b>8,227,500</b>

The Company's income tax returns through the year 1999 have been assessed and approved by the Tax Authority except that of 1998.

The Company is located in the Hsin-Chu Science-Based Industrial Park (HSIP). In order for business operations to be eligible to locate in the HSIP, the operations must be high technology related manufacturing activities. Based on the HSIP regulations, a preferential income tax rate of

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20%, instead of 25% applicable to other business entities located in Taiwan, is imposed on profits generated from HSIP business operations through the year 2000. Starting from 2001, the preferential income tax rate of 20% is no longer available to HSIP business operations and the standard tax rate of 25% is applied.

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Pursuant to the Statute for the Establishment and Administration of Science-Based Industrial Park, the Company was granted several four-year income tax exemption periods with respect to income derived from expansion of operations located in Hsin Chu Science-Based Industrial Park. The starting date of the exemption period attributable to the expansion in 1999 was not yet been elected by the Company. The other exemption periods will expire in December of 2007.

An enterprise earns an investment tax credit for the amount invested in emerging, important and strategic industries, production equipment, research and development expenditure, employee training expenditure and other related costs. This credit may be applied over a period of five years.

As of December 31, 2002, the Group's unused investment tax credit is as follows:

<u>Expiration Year</u>	<u>Investment tax credits</u>
	<u>NT\$ 000</u>
2002	3,280,896
2003	3,974,393
2004	5,899,913
2005	3,493,821
2006	5,976,823
	<u>22,625,846</u>

Under the rules of the Income Tax Law, operating loss can be carried forward for five years. As of December 31, 2002, the unutilized accumulative loss brought forward amounted to NT\$16,402 million, which will expire in 2006 and 2007.

The new Taiwan imputation tax system requires that any undistributed current earnings, on tax basis of a company derived on or after January 1, 1998 be subject to an additional 10% corporate income tax if the earnings are not distributed before a specific time. This 10% additional tax on undistributed earnings paid by the company can be used as tax credit by shareholders, including foreign shareholders, against the withholding tax on dividends. In addition, the domestic shareholders can claim a proportionate share in the company's corporate income tax as tax credit against its individual income tax liability effective 1998.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The ending balance of unappropriated earnings available for 2002 appropriation amounted to NT\$23,005 million, of which NT\$64 million was earned prior to January 1, 1998.

As of December 31, 2002, the balance of imputation credit account ( ICA ) was NT\$90 million. The actual creditable ratio for the appropriation of 2000 and 2001 retained earnings was 1.04% and 1.79%, respectively.

**19. Earnings Per Share (shares expressed in thousands)**

	For the year ended December 31,		
	2000	2001	2002
	NT\$ 000	NT\$ 000	NT\$ 000
Net income (loss)	50,780,378	(3,157,302)	7,072,032
Effect of dilution:			
Convertible bonds		3,311	59,233
Adjusted net income (loss) assuming dilution	50,780,378	(3,153,991)	7,131,265
Weighted average outstanding common shares	10,754,127	12,829,615	14,753,187
Effect of dilution:			
Employee stock options			41,590
Convertible bonds			149,733
Adjusted weighted average common shares assuming dilution	10,754,127	12,829,615	14,944,510
Retroactively adjusted weighted average outstanding common shares	14,545,699	14,920,842	
Retroactively adjusted weighted average outstanding common shares assuming dilution	14,545,699	14,920,842	
Earnings (loss) per share (in dollars) basic and diluted	3.49	(0.21)	0.48

According to financial guidelines issued in 2000, the Company's stock held by its subsidiaries are to be considered as treasury stock effective from 2002. According to ROC SFAS No.30, Accounting for Treasury Stock, the calculation of basic earnings per share for the year ended December 31, 2001 is not required to be adjusted retroactively the Company's stock held by subsidiaries.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Pro forma information on earnings as if the Company's unconsolidated subsidiary Fortune Venture's investment in the Company is not treated as treasury stock is set out as follows:

	For the year ended December 31, 2002	
	Basic	Diluted
	NT\$ 000 (shares expressed in thousands)	NT\$ 000
Net income	\$7,072,032	\$7,131,265
Outstanding weighted average shares at beginning	12,748,327	12,748,327
Stock dividends and employees' bonus at 16.30%	2,077,977	2,077,977
Weighted average treasury stock	(55,284)	(55,284)
Weighted average employee stock options accounted for under treasury stock method		41,590
Weighted average shares assume converted from convertible bonds		149,733
Outstanding weighted average shares	14,771,020	14,962,343
Earnings per share		
Net income (in dollars)	\$0.48	\$0.48

**20. Related Party Transactions**

Name of Related Parties	Relationship
AMIC Technology (Taiwan), Inc. (AMIC-Taiwan)	Investee company
Unimicron Technology Corp. (UTC)	Investee company
Holtek Semiconductor Inc. (Holtek)	Investee company
United Microelectronics (Europe) B.V. (UMC BV) (Note)	Investee company
MediaTek Incorporation (MediaTek)	The Company is its supervisor
Chiao Tung Bank (Chiao Tung)	The Company is its parent company's director and supervisor
Industrial Bank of Taiwan Corp. (IBT)	The Company is its major shareholder
Shin-Etsu Handotia Taiwan Co., Ltd. (Shin-Etsu)	The Company's investee is its director
Infineon Technologies, Asia Pacific Pte Ltd. (ITAP)	Affiliated company of UMCi

Note: UMC BV was a related party of the Group in the prior years since the Company's Chairman is a director of UMC BV. On May 15, 2002, the Company has acquired 100% interest in UMC BV and has included it in consolidation accordingly.



**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****Significant transactions with related parties:****(1) Operating revenues**

	For the year ended December 31,					
	2000		2001		2002	
	Amount	Percentage	Amount	Percentage	Amount	Percentage
	NT\$ 000		NT\$ 000	NT\$ 000		
MediaTek	4,938,704	4	3,776,580	6	9,637,752	13
UMC BV	11,922,113	11	6,038,583	9		
Others	11,856,181	10	5,249,313	7	6,682,023	9
<b>Total</b>	<b>28,716,998</b>	<b>25</b>	<b>15,064,476</b>	<b>22</b>	<b>16,319,775</b>	<b>22</b>

The sales to the above related parties were dealt with in the ordinary course of business with the sales price made in the way similar to the sales to third-party customers. The collection period for overseas sales was net 45~60 days for the related parties and third-party customers, while the terms for domestic sales were month-end 30~60 days for both the related parties as well as the third-party customers.

**(2) Purchases**

	For the year ended December 31,					
	2000		2001		2002	
	Amount	Percentage	Amount	Percentage	Amount	Percentage
	NT\$ 000		NT\$ 000	NT\$ 000		
Shin-Etsu	2,530,281	5	1,805,200	11	2,273,128	14
Others	1,455,213	3	255,872	2	219,235	1
<b>Total</b>	<b>3,985,494</b>	<b>8</b>	<b>2,061,072</b>	<b>13</b>	<b>2,492,363</b>	<b>15</b>



The purchases from the above related parties were dealt with in the ordinary course of business similar to those from third-party suppliers. The payment terms for purchase from overseas were net 30~60 days for the related parties and third-party suppliers, respectively, while the terms for domestic purchase were month-end 30~60 days and month-end 30~90 days for the related parties and third-party suppliers, respectively.

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****(3) Notes receivable**

	As of December 31,			
	2001		2002	
	Amount	Percentage	Amount	Percentage
	NT\$ 000		NT\$ 000	
Holtek	77,843	36		
Others	24,168	11	2,370	3
<b>Total</b>	<b>102,011</b>	<b>47</b>	<b>2,370</b>	<b>3</b>

**(4) Accounts receivable, net**

	As of December 31,			
	2001		2002	
	Amount	Percentage	Amount	Percentage
	NT\$ 000		NT\$ 000	
MediaTek	1,046,372	12	1,431,362	12
Others	1,100,888	12	1,291,185	11
<b>Subtotal</b>	<b>2,147,260</b>	<b>24</b>	<b>2,722,547</b>	<b>23</b>
Less: Allowance for sales returns and discounts	(290,832)	(3)	(451,009)	(4)
Less: Allowance for doubtful accounts	(95,540)	(1)	(70,493)	(1)
<b>Net</b>	<b>1,760,888</b>	<b>20</b>	<b>2,201,045</b>	<b>18</b>

**(5) Other current assets**

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	As of December 31,			
	2001		2002	
	Amount	Percentage	Amount	Percentage
	NT\$ 000		NT\$ 000	
ITAP	1,922,207	63	1,910,268	60
Others	28,095	1		
	1,950,302	64	1,910,268	60
Less: Allowance for doubtful accounts	(705)			
Net	1,949,597	64	1,910,268	60

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****(6) Accounts payable**

	As of December 31,			
	2001		2002	
	Amount	Percentage	Amount	Percentage
	NT\$ 000		NT\$ 000	
Shin-Estu	455,749	16	375,116	8
Others	34,678	1	23,565	
<b>Total</b>	<b>490,427</b>	<b>17</b>	<b>398,681</b>	<b>8</b>

**(7) Loans**

	For the year ended December 31, 2001				
	Maximum balance		Ending	Interest	
	Amount	Month	balance	Interest rate	expense
	NT\$ 000		NT\$ 000		NT\$ 000
Chiao Tung	4,091,316	January	1,224,575	4.00%-7.00%	221,359
IBT	998,750	January	998,750	3.94%-6.42%	54,582
			<b>2,223,325</b>		<b>275,941</b>

	For the year ended December 31, 2002				
	Maximum balance		Ending	Interest	
	Amount	Month	balance	Interest rate	expense
	NT\$ 000		NT\$ 000		NT\$ 000

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Chiao Tung	1,224,575	January	868,195	2.07%-4.00%	32,717
IBT	998,750	January	783,296	2.89%-3.94%	16,216
			<u>1,651,491</u>		<u>48,933</u>

**(8) Disposal of long-term investments**

	Item	For the year ended December 31, 2000	
		Amount	Loss
		NT\$ 000	NT\$ 000
AMIC-Taiwan	Common stocks of AMIC Technology Inc.	<u>135,000</u>	<u>80,517</u>

The Group had no significant disposal of long-term investments to related parties for the years ended December 31, 2001 and 2002.

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The Group had no significant disposal of property, plant and equipment to related parties for the years ended December 31, 2000 and 2002.

		For the year ended December 31, 2001	
Item		Amount	Gain
		NT\$ 000	NT\$ 000
Holtek	Building and facilities	173,250	31,468

**(10) Other significant related parties transactions**

		For the year ended December 31,		
Item		2000	2001	2002
		NT\$ 000	NT\$ 000	NT\$ 000
UTC	Processing expenditures	299,239	92,170	1,257
Others	Service charges and processing expenditures, etc.	174,611	156,863	361,292
		473,850	249,033	362,549

  

		For the year ended December 31,		
Item		2000	2001	2002
		NT\$ 000	NT\$ 000	NT\$ 000
Others	Facility revenues, etc.	109,696	115,959	99,279

**21. Assets Pledged as Collateral**

As of December 31, 2001 and 2002, the following assets have been pledged as collateral against certain obligations of the Group.

<b>Assets Pledged</b>	<b>Book Value</b>		<b>Purpose of collateral</b>
	<b>As of December 31,</b>		
	<b>2001</b>	<b>2002</b>	
	<b>NT\$ 000</b>	<b>NT\$ 000</b>	
Accounts receivable, net	2,798,906		Short-term loans
Restricted deposits	264,700		Long-term loans
Land	614,544	452,916	Long-term loans
Buildings	6,126,811	2,533,152	Long-term loans
Machinery and equipment	33,513,570	21,537,463	Long-term and short-term loans
<b>Total</b>	<b>43,318,531</b>	<b>24,523,531</b>	

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**22. Commitments and Contingencies**

- (1) The Group's unused letters of credit for imports of machinery were approximately NT\$76 million as of December 31, 2002.
- (2) The Group has entered into contracts, amounted to approximately NT\$15.6 billion, with third parties for rights to use patents registered by the third parties. The contract period was from 1995 to 2011. Royalty payables for the consecutive 5 years starting from 2003 through 2007 are approximately NT\$2.5 billion, NT\$1.3 billion, NT\$1.3 billion, NT\$1.2 billion, and NT\$1.3 billion, respectively.
- (3) The Group has signed several construction contracts for the expansion of factory space. As of December 31, 2002, these construction contracts amounted to approximately NT\$10.3 billion and the unaccrued portion of the contracts was approximately NT\$4.8 billion.
- (4) On October 27, 1997, Oak Technology Inc. ( Oak ) filed a complaint seeking a damage of US\$750 million in the Northern District of California alleging that the Company breached a Settlement Agreement entered on July 31, 1997 with respect to a settlement of a dispute between the Company and Oak concerning certain CD ROM controller products made by the Company and a patent owned by Oak. The Company denied Oak's allegations and on December 24, 1997, filed its answer and affirmative defenses refuting Oak's claims. Based on the allegations that it is Oak which has breached the Settlement, the Company simultaneously filed a counterclaim against Oak, seeking damages and a return of the millions paid to Oak under the Settlement. In addition, the Company further seeks a declaration that the Oak patent is invalid and/or unenforceable. Though Oak filed a complaint later with the International Trade Commission ( ITC ) repeating the allegations made in the District Court, both the ITC and the Court of Appeals for the Federal Circuit issued a ruling affirming that there was no infringement and no violation.

Oak filed enforceable commitments that it would no longer seek recoveries in connection with the Oak patent and accordingly, the District Court concluded there was no longer dispute between Oak and the Company on the patent and the Company's claim for a declaration of invalidity and unenforceability will be dismissed. The Company intends to continue to defend these matters vigorously. Furthermore, the management does not believe the Oak complaints will have any material adverse impact on the Company's operations and/or financial performance.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

- (5) The Group entered into several operating lease contracts. Future minimum lease payments under those leases with original maturities, which extend for more than one year as of December 31, 2002, are as follows:

<u>For the year ended</u>	<u>Amount</u>
	(NT\$ 000)
December 31, 2003	207,633
December 31, 2004	211,732
December 31, 2005	202,364
December 31, 2006	168,738
December 31, 2007	154,116
January 1, 2008 and thereafter	2,160,103
<b>Total</b>	<b>3,104,686</b>

- (6) The Group entered into several wafer-processing contracts with its main clients. According to the contracts, the Group shall guarantee processing capacity, while the clients make deposits to the Group. In case the clients' orders do not meet the capacity guaranteed, the clients need to pay the Group penalties.
- (7) The Company entered into two three-year purchase agreements in January 2000 that committed the Company to purchase at least 75% of its 8-inch wafer consumption from two of its suppliers for the contract period.
- (8) As a condition precedent to the making of the loan contemplated by a US\$600 million Amortizing Term Loan Facility Agreement among UMCi, a subsidiary of the Company, and several financial institutions, the Company has provided a letter of undertaking to the financial institutions and Citicorp Investment Bank (Singapore) Ltd, the facility agent, to undertake that
- a. The Company shall continue to own and control, directly or indirectly, a minimum of 40% of the total issued and outstanding shares of UMCi. The Company shall also provide technical support to UMCi and maintain management control with no less than half seats of the board of directors.
  - b. The Company shall take necessary actions to ensure UMCi to have at least US\$600 million of issued and paid-in capital in cash by December 31, 2003, to make investments necessary to complete the 12-inch Fab Plant on time, and to meet all the obligations under the Facility Agreement.

**23. Significant Disaster Loss**

None.





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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**24. Significant Subsequent Event**

- (1) The Company has granted 61 million in units of employee stock options on January 3, 2003 with an exercise price of NT\$22.5 per share.
- (2) After the special shareholders meeting of Silicon Integrated Systems Corp. on January 14, 2003, the Company has held three seats of the board of directors. Silicon Integrated Systems Corp. is an investment of the Company accounted for under the cost method as of December 31, 2002.

**25. Certain comparative amounts have been reclassified to conform with the current year's presentation.**

**26. Financial Instruments**

- (1) The Group uses derivative financial instruments to manage its exposure to market risks associated with foreign currency exchange rate and interest rate fluctuations.

There were no derivative financial instruments outstanding as of December 31, 2001 and 2002 except for a forward exchange contract entered into by UMCJ in December 2001 as disclosed below.

- (2) UMCJ, a subsidiary of the Company, entered into foreign currency forward exchange contract with certain bank on December 17, 2001. The major information is as follows:
  - a. Purposes: to manage certain risks arising from adverse fluctuations in foreign currency exchange rates.
  - b. Notional amount and contract period:

**As of December 31, 2001:**

<u>Notional amount</u>	<u>Contract period</u>
US\$3 million	January 4, 2002 - January 31, 2002

- c. Terms and characteristics of the forward exchange:
  - (a) Term: UMCJ agrees to purchase US\$3 million using the contracted forward rate in USD/(Yen) 127.77 during the contract period.
  - (b) Credit risk: There is no significant credit risk with respect to the above transaction because the bank has good global standing.
  - (c) Market risk: The market risk is low due to the nature of the forward exchange.

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****(3) Non-derivative financial instruments**

The carrying value and fair value (and methodologies used in estimating the fair value) of the Group's financial instruments at December 31, 2001 and 2002 were as follows:

	As of December 31, 2001		As of December 31, 2002	
	Carrying Value	Fair Value	Carrying Value	Fair Value
	NT\$ 000	NT\$ 000	NT\$ 000	NT\$ 000
<b>Financial assets</b>				
Assets with carrying value approximating fair value	86,007,360	86,007,360	92,970,431	92,970,431
Marketable securities	1,286,434	1,461,610	2,526,365	2,542,241
Long-term investments	40,756,678	82,879,283	38,673,496	35,479,778

	As of December 31, 2001		As of December 31, 2002	
	Carrying Value	Fair Value	Carrying Value	Fair Value
	NT\$ 000	NT\$ 000	NT\$ 000	NT\$ 000
<b>Financial liabilities</b>				
Liabilities with carrying value approximating fair value	22,085,770	22,085,770	19,193,135	19,193,135
Bonds payable	39,590,511	41,805,353	50,581,483	51,137,649
Long-term loans	24,825,001	24,825,001	19,521,111	19,521,111

The carrying amounts of cash and cash equivalents, notes receivable, accounts receivable, short-term loans, notes payable, accounts payable, income tax payable and accrued expenses approximate fair value because of their short maturities.

The fair value of marketable securities, long-term investments and bonds payable is based on the quoted market value. If the market values of marketable securities and long-term investments are unavailable, net assets of the investee companies are used as fair value.

The carrying value of long-term loans approximates the fair value as the loans bear floating rates.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****27. Segment Information**

(1) Operations in different industries

The Group operates principally in one industry. The Group's major business activity is the dedicated full services semiconductor wafer foundry.

(2) Operations in different geographic areas

	For the year ended December 31,					
	2000		2001		2002	
	Net operating revenues	Long-lived assets	Net operating revenues	Long-lived assets	Net operating revenues	Long-lived assets
	NT\$ 000	NT\$ 000	NT\$ 000	NT\$ 000	NT\$ 000	NT\$ 000
Taiwan	29,331,178	154,190,745	20,205,163	157,851,031	29,735,077	148,650,597
Asia, excluding Taiwan	13,328,814	11,585,225	9,170,626	15,015,062	8,919,717	22,088,806
North America	50,452,837	123,529	26,394,408	120,366	28,393,289	66,722
Europe and others	22,496,510		14,046,602		8,377,273	27,898
	<b>115,609,339</b>	<b>165,899,499</b>	<b>69,816,799</b>	<b>172,986,459</b>	<b>75,425,356</b>	<b>170,834,023</b>

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****28. US GAAP Reconciliation**

The accompanying consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the Republic of China ( ROC GAAP ), which differ in certain material respects from generally accepted accounting principles in the United States ( US GAAP ). Such differences include methods of consolidation and methods for measuring the amounts shown in the financial statements, as well as additional disclosures required by US GAAP. Material GAAP differences are as follows:

**(1) Compensation**

	For the year ended December 31,		
	2000	2001	2002
	NT\$ 000	NT\$ 000	NT\$ 000
<b>Net income impact of compensation adjustments</b>			
US GAAP adjustments:			
Remuneration to directors	(433,039)		(6,365)
Employee bonuses			
Accrual	(3,429,670)		(823,702)
Adjustment to fair market value	(6,764,918)	(3,238,647)	(6,592,188)
Total employee bonuses	(10,194,588)	(3,238,647)	(7,415,890)
Allocation to inventories, net of allocations to inventories in prior period and sold in current period	1,287,138	(1,287,138)	73,338
Total net income adjustment relating to compensation	(9,340,489)	(4,525,785)	(7,348,917)

	As of December 31,	
	2001	2002
	NT\$ 000	NT\$ 000
<b>Stockholders' equity impact of compensation adjustments</b>		
US GAAP adjustments:		
Remuneration to directors		(6,365)
Employee bonuses		73,338

Total stockholders' equity adjustment relating to compensation	66,973
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Remuneration to Directors The Company's Articles of Incorporation requires a cash remuneration payment to its directors. Under ROC GAAP, such payments are charged directly to retained earnings in the period shareholders approve such payment.

Under US GAAP, such cash payments should be recorded as compensation expense in the period when services are rendered. The difference between US GAAP and ROC GAAP in this area would result in adjustments to net income and stockholders' equity as shown in the above schedules.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**Employee Bonuses** Certain employees of the Company are entitled to bonuses in accordance with provisions of the Company's Articles of Incorporation. Employee bonuses are determined as discussed in Note 17. Under ROC GAAP, such bonuses are appropriated from retained earnings in the period shareholders' approval is obtained. If such employee bonuses are settled through the issuance of stock, the amount charged against retained earnings is based on the par value of the common shares issued.

Under US GAAP, employee bonus expense is initially accrued when services are rendered and both the number of shares to be issued and the price per share are known. When bonuses are approved by the shareholders in the subsequent year, an additional compensation expense is recorded for the difference between the amount initially recorded and the fair market value of shares granted to employees. The difference between US GAAP and ROC GAAP in this area would result in adjustments to net income and stockholders' equity as shown in the above schedules. In addition, there is also a reclassification from retained earnings to capital reserve of NT\$24,128 million, NT\$27,367 million and NT\$ 29,305 million at December 31, 2000, 2001 and 2002.

**(2) Equity Investments Net income variance between US GAAP and ROC GAAP**

The Group's proportionate share of the income (loss) from an equity investee may differ if the equity investee's net income (loss) under ROC GAAP differs from US GAAP. The differences between ROC GAAP and US GAAP for the equity investees include accounting for compensation, technological know-how and investment in marketable securities, etc.

**(3) Marketable Securities and Long-term Investments**

Under ROC GAAP, marketable securities are carried at the lower of aggregate cost or market value. Under US GAAP Statement of Financial Accounting Standards, ( SFAS ) 115, Accounting for Certain Investments in Debt and Equity Securities, debt and equity securities that have readily determinable fair values are to be classified as either trading, available-for-sale or held-to-maturity securities. Debt securities that the Group has the positive intent and ability to hold to maturity are classified as held-to-maturity securities and reported at amortized cost. Debt and equity securities that are bought and traded for short-term profit are classified as trading securities and reported at fair value, with unrealized gains and losses included in earnings. Debt and equity securities not classified as either held-to-maturity or trading securities are classified as available-for-sale securities and reported at fair value, with unrealized gains and losses excluded from earnings and reported in a separate component of stockholders' equity.

The Group holds marketable securities that are mainly classified as trading securities. The portion of trading gains and losses for the years ended December 31, 2000, 2001 and 2002 on trading securities still held at each of the respective balance sheet dates were NT\$0, NT\$19,868 and NT\$1,771,439 respectively.





**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The Group holds long-term investments in equity securities that are classified as available-for-sale securities. Information on sales of available-for-sale equity securities for the years ended December 31, 2000, 2001 and 2002 are as follows:

	<b>Proceeds from sales</b>	<b>Gross realized gains</b>	<b>Gross realized losses</b>
	<b>NT\$ 000</b>	<b>NT\$ 000</b>	<b>NT\$ 000</b>
For the year ended December 31, 2000	1,755,924	488,748	62,887
For the year ended December 31, 2001	2,743,503	1,987,304	137,178
For the year ended December 31, 2002	8,530,551	6,520,197	264

Information on available-for-sale equity securities still held at each balance sheet date is as follows:

	<b>Fair Value</b>	<b>Total unrealized gains</b>	<b>Total unrealized losses</b>	<b>Net unrealized gains (losses)</b>
	<b>NT\$ 000</b>	<b>NT\$ 000</b>	<b>NT\$ 000</b>	<b>NT\$ 000</b>
As of December 31, 2001	54,485,301	40,367,986	(313,750)	40,054,236
As of December 31, 2002	35,127,937	19,322,091	(574,484)	18,747,607

The Group did not transfer any available-for-sale securities to trading securities for the years ended December 31, 2000, 2001 and 2002. The amount of gains (losses) reclassified from accumulated other comprehensive income into earnings on available-for-sale securities were NT\$46,229, NT\$169,049, and NT\$5,034,105 for the years ended December 31, 2000, 2001 and 2002, respectively.

Under ROC GAAP, if an investor company invests in equity securities that are traded in an open market and uses the cost method for valuation purposes, then an investor company shall recognize losses if evidence suggests that the value of an investment has been impaired and it is unlikely that the stock price will recover. The new cost of the long-term investment is the book value after recognizing the losses. Under US GAAP, for individual securities classified as either available-for-sale or held-to-maturity, an enterprise shall determine whether a decline in fair value below the amortized cost basis is other than temporary. If the decline in fair value is judged to be other than temporary, the cost basis of the individual security shall be written down to fair value as a new cost basis and the amount of the write-down shall be included in earnings. The new cost basis shall not be changed for subsequent recoveries in fair value. Subsequent increases in the fair value of available-for-sale securities shall be included in the other comprehensive income.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The Group has written down NT\$415 million, NT\$536 million and NT\$1,409 million under ROC GAAP against certain available-for-sale securities for the years ended December 31, 2000, 2001 and 2002. For US GAAP purpose, the Group further wrote down an additional NT\$296 million, NT\$3,305 million and NT\$781 million for the years ended December 31, 2000, 2001 and 2002. Among the NT\$1,409 million recognized under ROC GAAP for the year ended December 31, 2002, NT\$432 million had already been written down under US GAAP for the year ended December 31, 2001, which therefore has led to an increase in net income under US GAAP for the year ended December 31, 2002.

Under ROC GAAP, equity investments where a company has an ownership interest of at least 20% are generally required to be accounted for under the equity method. However, when there is evidence indicating that the investor company does not have significant influence over the equity investee, despite an ownership interest of 20% or more, the investor company should not account for the equity investee under equity method. On the contrary, when there is evidence indicating that the investor company has significant influence over the equity investee's operating and financial policies, despite an ownership interest of less than 20%, the investor company will account for the equity investee under equity method. Under US GAAP, the Group is required to use the equity method of accounting for an investment in common stock when the investment in voting stock gives it the ability to exercise significant influence over operating and financial policies of an investee. An investment (direct or indirect) of 20% or more of the voting stock of an investee leads to a presumption that in the absence of evidence to the contrary an investor has the ability to exercise significant influence over an investee. There were no significant differences between ROC GAAP and US GAAP on balance sheets as of December 31, 2001 and 2002 and on income statements for the three years ended December 31, 2000, 2001 and 2002.

**(4) Treasury Stock and Gain on Disposal of Treasury Stock**

Under ROC GAAP, when the Group's equity investee sells the Company's stock it recognizes the gain or loss in its statement of operations. Under US GAAP, the Group's equity in income (loss) of an investee is adjusted to eliminate the Company's proportionate share of any such gains or losses. Further, the Company's stock owned by an investee is proportionately deducted from the investment as treasury stock.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(5) Technological Know-how**

The Group entered into three joint ventures from 1995 through 1996. Both the Group and the joint venture partner contributed cash to the joint ventures. In addition, the Group contributed technological know-how to the joint ventures for shares of the joint venture companies. The technological know-how contributed has not been recognized on the Group's balance sheet, as these were internally generated intangible assets with no carrying value. Both parties mutually agreed to the value of this transferred technological know-how before the transfer of shares.

Under ROC GAAP, the Group recognized the cash contributed as the initial cost of the investment. The difference between the proportionate share of the net assets in the joint venture and the cash contributed is amortized to income over the estimated useful life of the technological know-how, which is the source of this difference. Further, under ROC GAAP, the joint venture recognized a value for the technological know-how as an intangible asset contributed, which is the cause of the difference between the proportionate share of the net assets and the cash contributed.

Under US GAAP, the investor initially records its joint venture investment at cost, representing the amount of cash contributed and/or net book value of non-cash assets contributed. The joint venture normally records cash investments at the amount contributed, the non-cash assets at fair value and intangible assets at the predecessor basis, which is normally zero. The difference between the proportionate share of the net assets in the joint venture and the cost of the investments is amortized to income over a period of five years. The joint venture does not recognize value for the technological know-how contributed, thus causing a difference with ROC GAAP.

This practice only applies to entities that are being consolidated or accounted for under the equity method.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(6) Convertible and Exchangeable Bonds**

**Convertible Bonds**

When convertible securities are issued, ROC GAAP does not recognize or account for any beneficial conversion feature embedded in the securities. Under US GAAP, as prescribed in the Emerging Issues Task Force ( EITF ) Topic D-60, as amended by EITF 98-5, Accounting for the Issuance of Convertible Preferred Stock and Debt Securities with a Non-detachable Conversion Feature, such beneficial conversion features should be recognized and measured by allocating a portion of the proceeds equal to the intrinsic value of that feature to capital reserve. That amount should be calculated at the issuance date as the difference between the conversion price and the fair value of the common stock, multiplied by the number of shares into which the security is convertible (intrinsic value). As a result, a bond discount is recognized by allocating a portion of the proceeds equal to the intrinsic value of that feature to capital reserve. The Group recognized interest expense of NT\$1,274 million from February 1994, the date of issuance of the bonds, to May 1994, the date of first conversion, relating to a NT\$1.5 billion bond. The Group also recognized interest expense of NT\$6,086 million from June 1994, the date of issuance of the bonds, to May 1996, the date of first conversion, relating to an US\$160 million bond.

The Group recognized interest expense of approximately NT\$800 million from May 10, 2000, the date of issuance of the bonds, to June 1, 2000, the date of first conversion, related to its (Yen) 10 billion bond.

In addition, according to EITF 85-17, the Group recognized an imputed interest expense together with a compensation interest of NT\$570 million in total for the year ended December 31, 2002, relating to the US\$302.4 million zero coupon convertible bonds issued on December 12, 2001.

When a subsidiary or investee (the Issuer ) issues convertible bonds to other parties, including the parent or investor, and bonds are converted into shares of the Issuer, the parent s or investor s ownership in the Issuer may decrease. Also, the parent s or investor s ownership in the Issuer may increase upon conversion. Under ROC GAAP, this decrease or increase is treated as a one-time decrease or increase to capital reserve and /or retained earnings.

Under US GAAP, a decrease in ownership is recognized as a gain or loss in the income statement upon conversion, as long as the value of the proceeds can be objectively determined and the realization of the gain is reasonably assured at the time of conversion. Under US GAAP, for the years ended December 31, 2000, 2001 and 2002, approximately NT\$141 million, nil and NT\$9.5 million were reclassified from capital reserve to a gain in the income statement relating to these transactions.

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Further under US GAAP, an increase in ownership is treated as a purchase of additional shares and the difference between the total cost of the investment and the proportionate share of the fair value net assets is first allocated to identifiable tangible and intangible assets and the remaining unallocated amounts to goodwill, which was amortized over their respective estimated useful lives up to January 1, 2002. Upon the first adoption of the SFAS No.141, Business Combination and SFAS No.142, Goodwill and Other Intangible Assets by the Group on January 1, 2002, goodwill created from acquisition is no longer to be amortized. Under US GAAP, for the year ended December 31, 2000, the Group capitalized goodwill of NT\$468.3 million related to a subsidiary's convertible bond, with NT\$49.4 million, NT\$93.7 million, and nil being amortized in the income statement for the years ended December 31, 2000, 2001, and 2002, respectively. Further, upon conversion of an equity investment's bond, which increased the Group's ownership, the difference of NT\$519 million between the total cost of the investment and proportionate share of the fair value net assets was being amortized over 5 years, which accounted for NT\$54.8 million and NT\$103.9 million for the years ended December 31, 2000 and 2001, respectively. Again, due to the first adoption of SFAS No.141 & 142 on January 1, 2002, no amortization was made for the year ended December 31, 2002. Details of the new accounting treatment on goodwill are set out in the footnote Adoption of SFAS No.141 & 142 in the Additional US GAAP Disclosures.

During the year ended December 31, 2002, the Group has invested a total amount of NT\$2,502 million in three convertible bonds. Under the SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities, an embedded derivative instrument shall be separated from the host contract and accounted for as a derivative instrument pursuant to the statement if a) the economic characteristics and risks of the embedded derivative instrument are not clearly and closely related to the economic characteristics and risks of the host contract, b) the contract that embodies both the embedded derivative instrument and the host contract is not remeasured at fair value with changes in fair value reported in earnings as they occur and c) a separate instrument with the same terms as the embedded derivative instrument would be a derivative instrument subject to the requirements of SFAS No. 133. For an available-for-sale convertible debt securities, the conversion option embedded must be separated from the debt host contract and accounted for as a derivative instrument provided that the conversion option would, as a freestanding instrument, be a derivative instrument subject to the requirement of SFAS No. 133 since the embedded conversion option satisfied the above three criteria. As a result, the embedded option contracts in the convertible bonds with the initial amount of NT\$104 million in total at date of purchase were separated from the debt host contracts and were accounted for as trading securities reporting at fair value, with unrealized loss of NT\$25 million included in earnings for the year ended December 31, 2002. On the other hand, the debt host contracts with the initial amount of NT\$2,397 million were classified as available-for-sale securities, with an unrealized gain of NT\$46 million reported in other comprehensive income.

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**Exchangeable Bonds**

Bonds that are exchangeable into common stock of a third party is an expansion on the concept of convertible bonds.

Under ROC GAAP, when exchangeable bondholders exercise their rights to exchange for the reference shares, the book value of bonds is to be offset with the book value of the investment in the reference shares together with the related stockholder's equities, with the difference recognized as gain or loss on disposal of investments.

Under US GAAP, as prescribed by SFAS No.133 and discussed above, the exchangeable feature within exchangeable bonds is an embedded equity derivative within a debt instrument that satisfies the three criteria which requires it to be bifurcated and separately accounted for. The fair value of the exchangeable option feature of the Group's first exchangeable bonds issued in May 2002 was measured as NT\$2,025 million as at the date of issuance, which resulted to a reclassification from the bond value to financial instrument liability under US GAAP, accordingly. As of December 31, 2002, the fair value of the option has decreased by NT\$1,752 million, resulting in a gain being recognized for the year ended December 31, 2002 under US GAAP.

**(7) Principle of Acquisition under the Purchase Method**

Under ROC GAAP, the fair value of the net assets received is deemed to be the value of the consideration for the acquisition of the remaining interests in United Semiconductor, United Silicon, UTEK Semiconductor and United Integrated Circuits and is reflected in the common stock and capital reserve in the balance sheet. The Group estimated the fair value of the net assets acquired through two valuation models, profitability and net worth model, and a discounted cash flows model. They also used other considerations such as the valuation of current operations, synergies, technical knowledge and future prospects. Under US GAAP, the acquisition was accounted for using the purchase method of accounting and the purchase price was determined using the market value of the shares exchanged. The difference between the fair value of the shares exchanged and the fair value of the net assets acquired creates goodwill. Goodwill was amortized on a straight-line basis over ten years. Upon the adoption of SFAS No.141 & 142 on January 1, 2002 by the Group, the goodwill ceased to be amortized and is subject to impairment test only. The details of the adoption of SFAS No.141 & 142 are set out in the Additional US GAAP Disclosures. The purchase price under US GAAP was determined based on the average closing market price of the Company's stock on the five trading days beginning two days before June 16, 1999, the first day of trading after the announcement of the acquisition to determine the fair values of the shares exchanged.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The purchase price was allocated to the tangible and intangible assets and liabilities acquired based on their estimated fair values at January 3, 2000, as follows (in NT\$ millions):

Current assets	\$ 38,188
Other assets	47,673
Liabilities	(43,318)
Goodwill	122,835
	<hr/>
Purchase price	<u>\$ 165,378</u>

As of January 1, 2002, the carrying value of the unamortized balance of the goodwill was measured as NT\$98,268 million.

**(8) Earnings Per Share**

Under ROC GAAP, basic earnings per share are calculated by dividing net income by the weighted average number of shares outstanding during the year. Diluted earnings per share is calculated by taking basic earnings per share into consideration plus additional common shares that would have been outstanding if the dilutive share equivalents had been issued. The net income would also be adjusted for the interest derived from any underlying dilutive share equivalents. The weighted-average outstanding shares are restated for stock dividends issued and shares issued for employee bonuses, as described under (1) Compensation above.

Under US GAAP, basic earnings per share is calculated by dividing net income by the weighted average number of shares outstanding during the year. Diluted earnings per share are calculated by taking into consideration additional common shares that would have been outstanding if the dilutive share equivalents had been issued. The net income would also be adjusted for the interest derived from any underlying dilutive share equivalents.

**(9) Tax Effect of US GAAP Adjustments**

Undistributed earnings generated after 1997 are subject to a 10% tax in compliance with the Income Tax Law of the ROC. Under ROC GAAP, the 10% tax on undistributed earnings is recorded as an expense at the time shareholders resolve that its earnings shall be retained. Under US GAAP, the Group would measure its income tax expense, including the tax effects of temporary differences, using the tax rate that includes the tax on undistributed earnings.





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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(10) Principles of Consolidation**

Under ROC GAAP, certain 50% or more owned subsidiaries are not consolidated if they meet specific exclusion rules detailed in the accounting policies footnote. Under US GAAP, the Company consolidates those subsidiaries which are excluded from consolidation under ROC GAAP due to the exclusion rules (Fortune Venture Capital Corporation, UMC Capital Corporation, United Microelectronics Corp. (Samoa), and United Foundry Services, Inc.) The net income and stockholders' equity variances between US GAAP and ROC GAAP for those entities are included in the adjustment for equity investments.

**(11) Stock Dividends**

Under ROC GAAP, stock dividends are recorded at par with a charge to retained earnings. Under US GAAP, if the ratio of distribution is less than 25 percent of the same class of shares outstanding, the fair value of the shares issued should be charged to retained earnings. The accumulative effect of these dividends would have decreased retained earnings and increased capital reserve for the years ended December 31, 2000, 2001 and 2002 by approximately NT\$127,880 million, NT\$187,416 million and NT\$243,546 million, respectively.

**(12) Gain on Disposal of Fixed Assets**

Under ROC GAAP, gains and losses from the disposal of fixed assets are both recognized in the statement of operations, with gains reclassified from retained earnings to capital reserve. However, according to amendments in ROC Company Law, such transfer of gains to capital reserve shall no longer be required with effect on January 1, 2001. Under US GAAP, the reclassification of the gain from retained earnings is not permitted. The effect of this gain would have increased retained earnings and decreased capital reserve for the years ended December 31, 2000 by NT\$173 million. According to the new amendments in ROC Company Law, such gains transferred to capital reserve in previous years can be reclassified to retained earnings subject to shareholder's approval. An amount of NT\$171 million was then transferred from capital reserve to retained earnings during the year ended December 31, 2002 under ROC GAAP.

**(13) Gross Profit**

Inventory loss provision, gain from disposal of property, plant and equipment, and gain from foreign currency exchange were presented below the operating income subtotal in the statement of operations as permitted under ROC GAAP. Under US GAAP, the inventory loss provision is included in the determination of gross profit. Further, the inventory loss provision, gain from disposal of property, plant and equipment, and gain from foreign currency exchange are included in the determination of operating income.



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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**(14) Reclassification of Certificates of Deposit**

Under ROC GAAP, cash and cash equivalents include certificates of deposit. Under US GAAP, cash equivalents are short-term, highly liquid investments that are readily convertible to cash with original maturities of three months or less. Thus, certificates of deposit with original maturities of greater than three months are classified as cash equivalents under ROC GAAP but should be included in marketable securities for trading purpose under US GAAP.

**(15) Employee Stock Options**

The Group has elected to follow Accounting Principles Board Opinion No. 25, Accounting for Stock Issued to Employees (APB 25) and related interpretations in accounting for its employee stock options because, as discussed below, the alternative fair value accounting provided for under SFAS No. 123, Accounting for Stock-Based Compensation, requires use of option valuation models that were not developed for use in valuing employee stock options. Under APB 25, because the exercise price of the Company's employee stock options equals the market price of the underlying stock on the date of grant, no compensation expense is recognized for the Company.

On September 11, 2002, the Company was authorized to issue Employee Stock Options. The total number of options to be granted under the plan is one billion units, with each unit entitling the optionee to subscribe for one share of the Company's common stock. The grant period for options is six years and an optionee may exercise his/her options starting from two years after the grant: employees may exercise up to 50% of the options after two years, up to 75% after three years and up to 100% after four years. The total number of option units outstanding as of December 31, 2002 was 928,059 thousand units and the exercise price for the options is NT\$20 per share.

Pro forma information regarding net income and earnings per share is required by SFAS No. 123, and has been determined as if the Group had accounted for its employee stock options under the fair value method of that Statement. The fair value for these options was estimated at the date of grant using a Black-Scholes option pricing model with the following weighted-average assumptions, respectively: risk-free interest rate of 1.98%; dividend yields of 22.63%; volatility factors of the expected market price of the Company's common stock of 0.54; and a weighted-average expected life of the option of 4.4 years.

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options which have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions including the expected stock price volatility. Because the Group's employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its employee stock options.



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## UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

For purposes of pro forma disclosures, the estimated fair value of the options is amortized to expense over the options' vesting period. The Group's pro forma information follows (in thousands except for earnings per share information):

	For the year ended December 31,			
	2000	2001	2002	
	NT\$ 000	NT\$ 000	NT\$ 000	US\$ 000
Net income, as reported under US GAAP	27,133,811	(23,246,991)	293,653	8,463
Add: Stock-based employee compensation expense included in reported net income, net of related tax effects			5,387	155
Deduct: Total stock-based employee compensation expense determined under fair value based method for all awards, net of related tax effects	(170,382)	(284,663)	(398,583)	(11,487)
<b>Pro forma net income</b>	<b>26,963,429</b>	<b>(23,531,654)</b>	<b>(99,543)</b>	<b>(2,869)</b>
<b>Earnings (loss) per share (in dollars):</b>				
Basic and diluted as reported	1.91	(1.58)	0.02	
Basic and diluted pro forma	1.90	(1.60)	(0.01)	

The pro forma net income effect for the year ended December 31, 2000 and 2001 is mainly attributable to the employee stock options issued by a subsidiary of the Company.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

A summary of the Company's stock option activity, and related information for the years ended December 31, 2002 follows:

	2002	
	Options (in thousands)	Weighted-Average Exercise Price
Outstanding beginning of year		
Granted	939,000	NT\$ 20
Exercised		
Forfeited	(10,941)	20
Outstanding end of year	928,059	20
Exercisable at end of year		
Weighted-average fair value of options granted during the year	NT\$ 1.07	

Exercise price for options outstanding as of December 31, 2002 is NT\$20. The weighted-average remaining contractual life of those options is 5.8 years.

**(16) Summarized financial information**

Summarized financial information for equity investees is as follows:

	As of December 31,		
	2001	2002	
	NT\$ 000	NT\$ 000	US\$ 000
Current assets	31,945,226	33,313,560	960,045
Noncurrent assets	28,490,053	26,004,109	749,398
Current liabilities	14,219,013	11,641,482	335,489
Noncurrent liabilities	3,700,242	5,396,573	155,521

For the year ended December 31,

	2000	2001	2002	
	NT\$ 000	NT\$ 000	NT\$ 000	US\$ 000
Net sales	58,418,686	32,824,736	38,718,123	1,115,796
Gross profit	16,886,102	4,521,406	8,728,242	251,534
Net income (loss)	729,303	(5,411,366)	(147,825)	(4,260)

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****Reconciliation of Consolidated Net Income**

	For the year ended December 31,			
	2000	2001	2002	
	NT\$ 000	NT\$ 000	NT\$ 000	US\$ 000
Net income (loss), ROC GAAP	50,780,378	(3,157,302)	7,072,032	203,805
US GAAP adjustments:				
(1) Compensation	(9,340,489)	(4,525,785)	(7,348,917)	(211,784)
(2) Equity investments:				
(1) Compensation	(1,083,503)	(1,488,490)	(471,136)	(13,577)
(3) Marketable securities	(491,032)	45,989	(64,049)	(1,846)
(5) Technological know-how	23,344	22,928	22,527	649
(6) Convertible bonds	(414,886)			
(4) Treasury stock	(20,547)	(10,557)		
Other	(116,852)	(356,933)	(85,114)	(2,453)
(3) Investment (loss) income	(15,242)	315,737	30,477	879
(3) Impairment loss in marketable securities	(295,869)	(3,304,929)	(349,177)	(10,063)
(5) Gain on technological know-how contributed to foundry venture investee	828,698			
(6) Adjustments due to change in interest of investee companies	563,311	795,851	449,365	12,950
(6) Embedded derivatives			1,752,039	50,491
(6) Convertible/Exchangeable bonds			(691,394)	(19,925)
(7) Consolidated goodwill amortization	(12,283,500)	(12,283,500)		
(9) Income tax effect	(1,000,000)	700,000	(23,000)	(663)
Net income (loss), US GAAP	27,133,811	(23,246,991)	293,653	8,463
(8) Basic and diluted earnings/(loss) per share under US GAAP (in dollars)	1.91	(1.58)	0.02	
Weighted-average number of shares outstanding basic (in thousands)	14,179,447	14,671,293	14,655,247	
Weighted-average number of shares outstanding diluted (in thousands)	14,179,447	14,671,293	14,729,188	
Other comprehensive loss, ROC GAAP	(2,241,077)	(631,401)	(620,397)	(17,879)
(3) Marketable securities available for sale	225,636	40,750,908	20,147,099	580,608
Translation adjustments	3,254	59,085	(478)	(14)
Other comprehensive (loss) income, US GAAP	(2,012,187)	40,178,592	19,526,224	562,715

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****Reconciliation of Gross Profits**

	For the year ended December 31,			
	2000	2001	2002	
	NT\$ 000	NT\$ 000	NT\$ 000	US\$ 000
Gross profit, ROC GAAP	58,198,294	9,248,890	12,538,054	361,327
(1) Compensation	(6,526,306)	(3,434,607)	(5,415,162)	(156,056)
(13) Inventory loss provision	(610,327)	(1,529,823)	(955,074)	(27,524)
Consolidation of unconsolidated subsidiaries	(78,753)	(136,676)		
Gross profit, US GAAP	50,982,908	4,147,784	6,167,818	177,747

**Reconciliation of Operating Revenues**

	For the year ended December 31,			
	2000	2001	2002	
	NT\$ 000	NT\$ 000	NT\$ 000	US\$ 000
Operating income (loss), ROC GAAP	47,543,397	(6,412,253)	112,258	3,235
(1) Compensation	(9,340,489)	(4,525,785)	(7,348,917)	(211,784)
(7) Consolidated goodwill amortization	(12,332,937)	(12,377,169)		
(13) Inventory loss provision	(610,327)	(1,529,823)	(955,074)	(27,524)
(13) Gain on disposal of property, plant and equipment	99,700	(45,523)	14,403	415
(13) Foreign currency exchange gain	2,920,585	664,794	(104,243)	(3,004)
Consolidation of unconsolidated subsidiaries	(4,516)	2,480	(24,890)	(717)
Operating income (loss), US GAAP	28,275,413	(24,223,279)	(8,306,463)	(239,379)

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****Reconciliation of Consolidated Stockholders' Equity**

	As of December 31,		
	2001	2002	
	NT\$ 000	NT\$ 000	US\$ 000
Total stockholders' equity, ROC GAAP	213,322,253	217,424,485	6,265,835
(1) Compensation		66,973	1,930
(2) Equity investments:			
(1) Compensation	(157,231)	(127,980)	(3,688)
(3) Marketable securities - trading	81,634	24,788	714
(3) Marketable securities - available for sale	443,030	1,560,602	44,974
(5) Technological know-how	(57,398)	(33,867)	(976)
Translation adjustments	5,019	(464)	(13)
Other	(485,030)	(455,226)	(13,119)
(3) Change in fair value of marketable securities	40,325,522	18,617,474	536,526
(3) Impairment loss on marketable securities	(3,304,929)	(3,654,106)	(105,306)
(4) Treasury stock	(176,221)	(8,024)	(231)
(6) Adjustments due to change in interest of investee companies	1,527,584	1,604,517	46,240
(6) Convertible/ Exchangeable bonds		(691,394)	(19,925)
(6) Embedded derivatives		1,752,039	50,491
(7) Unamortized goodwill due to acquisition	98,268,000	98,268,000	2,831,931
(9) Income tax effect	(300,000)	(323,000)	(9,308)
Stockholders' equity, US GAAP	349,492,233	334,024,817	9,626,075

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****Movements in Stockholders' Equity in Accordance with US GAAP**

	As of December 31,			
	2000	2001	2002	
	NT\$ 000	NT\$ 000	NT\$ 000	US\$ 000
Balance at January 1,	89,876,907	326,985,321	349,492,233	10,071,822
(1) Compensation	7,551,811	6,668,317	7,415,890	213,713
(2) Adjustment of capital reserve and retained earnings accounted for under equity method	1,842,027	1,395,559	197,989	5,706
(3) Change in fair value of marketable securities - the Company	(599,340)	41,167,526	(20,936,211)	(603,349)
(3) Change in fair value of marketable securities - equity investees	(2,544,912)	1,152,094	(545,915)	(15,732)
Common stock for the conversion of convertible bonds issued	3,429,132			
Adjustment due to change in ownership of investee companies	2,521,277	(344,213)	20,981	605
(4) Treasury stock	(5,159,240)	(4,599,643)	(2,743,561)	(79,065)
(4) Capital reserve from gain on disposal of treasury stock	20,547	296,018		
Cumulative translation adjustment on foreign long-term investment	(507,778)	(128,841)	829,758	23,912
(5) Adjustment due to technological know-how contributed to a joint venture investee	1,082,349			
(7) Issue new shares for the shares swapped regarding to the merger-par value	23,836,503			
(7) Capital reserve due to merger	139,987,454			
Shares issued for American Depository Shares	38,514,773	147,086		
Net income (loss)	27,133,811	(23,246,991)	293,653	8,463
<b>Balance at end of the year</b>	<b>326,985,321</b>	<b>349,492,233</b>	<b>334,024,817</b>	<b>9,626,075</b>

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Summarized US GAAP balance sheet and income statement information is presented below:

	As of December 31,		
	2001	2002	
	NT\$ 000	NT\$ 000	US\$ 000
Current assets	101,376,483	102,492,091	2,953,662
Noncurrent assets	355,502,958	340,152,950	9,802,679
Current liabilities	34,538,996	29,987,400	864,190
Noncurrent liabilities	57,253,331	62,608,692	1,804,285
Minority interests	15,594,881	16,024,132	461,791

	For the year ended December 31,			
	2000	2001	2002	
	NT\$ 000	NT\$ 000	NT\$ 000	US\$ 000
Net operating revenues	115,616,117	69,816,030	75,425,356	2,173,641
Cost of goods sold	(64,633,209)	(65,668,246)	(69,257,538)	(1,995,894)
Operating income (loss)	28,275,413	(24,223,279)	(8,306,463)	(239,379)
Net income (loss)	27,133,811	(23,246,991)	293,653	8,463

A reconciliation of the significant balance sheet accounts under ROC GAAP to the amounts determined under US GAAP is as follows:

	As of December 31,		
	2001	2002	
	NT\$ 000	NT\$ 000	US\$ 000
Cash and cash equivalents:			
As reported under ROC GAAP	76,904,068	80,883,408	2,330,934
Consolidation of unconsolidated subsidiaries	564,450	864,733	24,920
Reclassification to marketable securities	(19,642,617)	(27,529,070)	(793,345)
As adjusted under US GAAP	57,825,901	54,219,071	1,562,509
Marketable Securities, trading:			
Reported as marketable securities under ROC GAAP	1,286,434	2,526,365	72,806

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Reclassification from cash & cash equivalents	19,642,617	21,548,110	620,983
Reclassification to marketable securities, available-for-sale		(2,397,448)	(69,091)
Change in fair value of marketable securities	19,868	50,074	1,443
	<u>          </u>	<u>          </u>	<u>          </u>
As adjusted under US GAAP	20,948,919	21,727,101	626,141
	<u>          </u>	<u>          </u>	<u>          </u>

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**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

	As of December 31,		
	2001	2002	
	NT\$ 000	NT\$ 000	US\$ 000
Represented by:			
Trading securities - current	20,948,919	20,680,374	595,976
Trading securities - noncurrent		1,046,727	30,165
	<u>20,948,919</u>	<u>21,727,101</u>	<u>626,141</u>
Long-term Investments:			
As reported under ROC GAAP	40,756,678	38,673,496	1,114,510
Consolidation of unconsolidated subsidiaries	(573,844)	(833,683)	(24,026)
Equity investments compensation	(157,231)	(127,980)	(3,688)
Change in fair value of marketable securities	40,305,654	18,567,400	535,083
Impairment loss in marketable securities	(3,304,929)	(3,654,106)	(105,306)
Treasury stock	(176,221)	(8,024)	(231)
Reclassification from ROC GAAP marketable securities		2,397,448	69,091
Reclassification to held-to-maturity securities		(873,000)	(25,158)
Equity investments	1,189,663	2,375,037	68,445
	<u>78,039,770</u>	<u>56,516,588</u>	<u>1,628,720</u>
Marketable Securities, held-to-maturity			
As reported under ROC GAAP			
Reclassification from long-term investments		873,000	25,158
Reclassification from cash and cash equivalents		5,980,960	172,362
		<u>6,853,960</u>	<u>197,520</u>
Other Assets:			
As reported under ROC GAAP	1,708,359	1,558,655	44,918
Consolidation of unconsolidated subsidiaries	2,756	1,184	34
	<u>1,711,115</u>	<u>1,559,839</u>	<u>44,952</u>
Goodwill:			
As reported under ROC GAAP			
Goodwill upon conversion of convertible bonds	325,302	325,302	9,375
Goodwill due to acquisition	98,268,000	98,268,000	2,831,931
	<u>98,593,302</u>	<u>98,593,302</u>	<u>2,841,306</u>





**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

	As of December 31,		
	2001	2002	
	NT\$ 000	NT\$ 000	US\$ 000
<b>Accrued Expenses:</b>			
As reported under ROC GAAP	5,678,713	4,032,474	116,210
Consolidation of unconsolidated subsidiaries	(3,051)	1,575	45
Accrued interest for convertible bonds		490,545	14,137
Compensation		6,365	183
	<u>5,675,662</u>	<u>4,530,959</u>	<u>130,575</u>
<b>As adjusted under US GAAP</b>			
	<u>5,675,662</u>	<u>4,530,959</u>	<u>130,575</u>
<b>Financial Instrument Liabilities:</b>			
As reported under ROC GAAP			
Bifurcated exchangeable feature in exchangeable bonds		273,221	7,874
		<u>273,221</u>	<u>7,874</u>
<b>As adjusted under US GAAP</b>			
		<u>273,221</u>	<u>7,874</u>
<b>Minority Interests:</b>			
As reported under ROC GAAP	15,594,468	16,023,886	461,784
Consolidation of unconsolidated subsidiaries	349	319	9
Others	64	(73)	(2)
	<u>15,594,881</u>	<u>16,024,132</u>	<u>461,791</u>
<b>As adjusted under US GAAP</b>			
	<u>15,594,881</u>	<u>16,024,132</u>	<u>461,791</u>

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****Cash Flows Information**

	For the year ended December 31,			
	2000	2001	2002	
	NT\$ 000	NT\$ 000	NT\$ 000	US\$ 000
Cash flows from operating activities, ROC GAAP	68,077,184	40,187,493	30,526,954	879,739
Payments made for directors remuneration	(95,737)	(433,039)		
Difference due to principles in consolidation	(4,327)	31,012	(20,765)	(598)
Cash flows from operating activities, US GAAP	67,977,120	39,785,466	30,506,189	879,141
Cash flows from investing activities, ROC GAAP	(73,682,697)	(43,257,044)	(30,457,764)	(877,745)
Net effect of certificates of deposit reclassified to marketable securities	66,175	(17,431,532)	(7,886,453)	(227,275)
Difference due to principles in consolidation	100,628	429,379	309,704	8,925
Cash flows from investing activities, US GAAP	(73,515,894)	(60,259,197)	(38,034,513)	(1,096,095)
Cash flows from financing activities, ROC GAAP	41,410,673	18,184,354	3,162,286	91,132
Payments made for directors remuneration	95,737	433,039		
Difference due to principles in consolidation	(118,900)			
Cash flows from financing activities, US GAAP	41,387,510	18,617,393	3,162,286	91,132
Foreign exchange effect, ROC GAAP	(137,522)	(680,808)	747,864	21,552
Difference due to principles in consolidation	(88,799)	12,762	11,344	327
Foreign exchange effect, US GAAP	(226,321)	(668,046)	759,208	21,879
Net increase in cash and cash equivalents, ROC GAAP	35,667,638	14,433,995	3,979,340	114,678
Net effect of certificates of deposit reclassified to marketable securities	66,175	(17,431,532)	(7,886,453)	(227,275)
Difference due to principles in consolidation	(111,398)	473,153	300,283	8,654
Net increase (decrease) in cash and cash equivalents, US GAAP	35,622,415	(2,524,384)	(3,606,830)	(103,943)
Cash and cash equivalents at beginning of year, US GAAP	24,727,870	60,350,285	57,825,901	1,666,452
Cash and cash equivalents at end of year, US GAAP	60,350,285	57,825,901	54,219,071	1,562,509

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**UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**Concentration of credit risk**

The Group designs, develops, manufactures and markets a variety of semiconductor products. Financial instruments that potentially subject the Group to significant concentrations of credit risk consist principally of cash and cash equivalents and trade accounts and notes receivable. The Group limits its exposure to credit loss by depositing its cash and cash equivalents with high credit quality financial institutions. The Group's revenues and trade accounts and notes receivable are derived primarily from the sale of production foundry wafers, including memory and logic products and wafers. For the years ended December 31, 2001 and 2002, the Group distributes its products on a global basis but mainly to customers in North America (37.81% and 37.64%, respectively), Asia (42.07% and 51.25%, respectively,) and Europe and others (20.12% and 11.11%, respectively). The Group's sales are primarily denominated in currencies other than NT Dollars, primarily US Dollars. One customer's revenue represented 11% of the consolidated revenue for the year ended December 31, 2001 while two customers' revenue represented 12% and 13%, respectively, of the consolidated revenue for the year ended December 31, 2002. The Group routinely assesses the financial strength of substantially all customers. For significant domestic sales the Group also requires certain collateral to mitigate the credit risk.

**Adoption of SFAS No.141 and 142**

In June 2001, the Financial Accounting Standard Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 141, Business Combinations, and SFAS No. 142, Goodwill and Other Intangible Assets. SFAS No. 141 requires that the purchase method of accounting be used for all business combinations initiated after June 30, 2001 as well as all purchase method business combinations completed after June 30, 2001. SFAS No. 141 also specifies criteria intangible assets acquired in a purchase method business combination must meet to be recognized and reported apart from goodwill, noting that any purchase price allocable to an assembled workforce may not be accounted for separately. SFAS No. 142 requires that goodwill and intangible assets with indefinite useful lives should no longer be amortized, but instead be tested for impairment at least annually in accordance with the provisions of SFAS No. 142. SFAS No. 142 also requires that intangible assets with estimable useful lives be amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment in accordance with SFAS No. 144, Accounting for the Impairment or Disposal of Long-lived Assets.

The Group adopted SFAS No.141 & 142 on January 1, 2002. Upon adoption, the Group did not identify additional intangible assets related to previous acquisitions and the goodwill created from the acquisition of the remaining interests in United Semiconductor, United Silicon, UTEK Semiconductor and United Integrated Circuits prior to June 30, 2001 as well as those created from the acquisition of an equity investee were no longer to be amortized but instead subject to impairment test annually or when indication of impairment is noted. Similarly, the goodwill created upon conversion of convertible bonds ceased to be amortized. The annual goodwill impairment test performed by the Group did not result in the recognition of any impairment loss as of December 31, 2002.

**Table of Contents****UNITED MICROELECTRONICS CORPORATION AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

As of January 1, 2002, the unamortized goodwill amounted to NT\$98,593 million, and unamortized equity-method goodwill (included in long-term investment) amounted to NT\$526 million. The information on net income exclusive of amortization expense related to the above mentioned goodwill is presented as follows:

	<b>For the year ended December 31,</b>			
	<b>2000</b>	<b>2001</b>	<b>2002</b>	
	<b>NT\$ 000</b>	<b>NT\$ 000</b>	<b>NT\$ 000</b>	<b>US\$ 000</b>
Net income (loss) as reported under US GAAP	27,133,811	(23,246,991)	293,653	8,463
Add back: amortization of goodwill	12,332,937	12,377,169		
Add back: amortization of equity-method goodwill	131,758	180,811		
Adjusted net income	39,598,506	(10,689,011)	293,653	8,463