

TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD

Form 6-K

March 15, 2013

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 6-K

REPORT OF FOREIGN PRIVATE ISSUER

PURSUANT TO RULE 13A-16 OR 15D-16

UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the Month of March 2013

Commission File Number 1-14700

Taiwan Semiconductor Manufacturing
Company Ltd.

(Translation of registrant's name into English)

No. 8, Li-Hsin Rd. 6,

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Hsinchu Science Park,

Taiwan

(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F. Form 20-F ☒ Form 40-F ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ☐

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Taiwan Semiconductor Manufacturing Company Ltd.

Date: March 15, 2013

By: /s/ Lora Ho

Name: Lora Ho

Title: Senior Vice President & Chief Financial Officer

TSMC Announces 2012 Fiscal Year-End Results

Hsinchu, Taiwan, R.O.C. March 15, 2013 Taiwan Semiconductor Manufacturing Company Ltd. (TSMC) (TAIEX: 2330, NYSE: TSM), announced today the audited consolidated results for the fiscal year ended 2012.

SELECTED FINANCIAL DATA

The selected income statement data, cash flow data and other financial data for the years ended December 31, 2008, 2009, 2010, 2011 and 2012, and the selected balance sheet data as of December 31, 2008, 2009, 2010, 2011 and 2012, set forth below, are derived from our audited consolidated financial statements (not included herein). The consolidated financial statements have been prepared and presented in accordance with accounting principles generally accepted (GAAP or R.O.C. GAAP) in the Republic of China (R.O.C. or Taiwan), which differ in some material respects from accounting principles generally accepted in the United States of America (U.S. GAAP).

	Year ended and as of December 31					
	2008	2009	2010	2011	2012	2012
	NT\$	NT\$	NT\$	NT\$	NT\$	US\$
	(in millions, except for percentages and earnings per share)					
Income Statement Data:						
R.O.C. GAAP						
Net sales	333,158	295,742	419,538	427,081	506,249	17,427
Cost of sales	(191,408)	(166,413)	(212,484)	(232,938)	(262,629)	(9,041)
Gross profit before affiliates elimination	141,750	129,329	207,054	194,143	243,620	8,386
Unrealized gross profit from affiliates				(74)	(25)	(1)
Gross profit	141,750	129,329	207,054	194,069	243,595	8,385
Operating expenses	(37,315)	(37,367)	(47,879)	(52,512)	(62,538)	(2,152)
Income from operations	104,435	91,962	159,175	141,557	181,057	6,233
Non-operating income and gains	10,822	5,654	13,136	5,359	6,782	233
Non-operating expenses and losses	(3,785)	(2,153)	(2,041)	(1,768)	(6,285)	(216)
Income before income tax	111,472	95,463	170,270	145,148	181,554	6,250
Income tax expense	(10,949)	(5,997)	(7,988)	(10,695)	(15,590)	(537)
Net income	100,523	89,466	162,282	134,453	165,964	5,713
Net income attributable to minority interests	(590)	(248)	(677)	(252)	195	7
Net income attributable to shareholders of the parent	99,933	89,218	161,605	134,201	166,159	5,720
Basic earnings per share ⁽¹⁾	3.84	3.45	6.24	5.18	6.41	0.22
Diluted earnings per share ⁽¹⁾	3.81	3.44	6.23	5.18	6.41	0.22
Basic weighted average shares outstanding ⁽¹⁾	26,039	25,836	25,906	25,914	25,921	25,921
Diluted weighted average shares outstanding ⁽¹⁾	26,234	25,912	25,920	25,925	25,928	25,928
U.S. GAAP						
Net sales	334,340	296,109	419,988	427,488	506,745	17,444
Cost of sales	(203,734)	(167,122)	(212,771)	(232,989)	(262,717)	(9,044)
Gross profit before affiliates elimination	130,606	128,987	207,217	194,499	244,028	8,400
Unrealized gross profit from affiliates				(74)	(25)	(1)
Gross profit	130,606	128,987	207,217	194,425	244,003	8,399
Operating expenses	(44,424)	(37,627)	(48,434)	(52,405)	(63,046)	(2,170)
Income from operations	86,182	91,360	158,783	142,020	180,957	6,229
Income before income tax	91,884	94,253	170,088	149,238	181,081	6,233
Income tax expense	(10,062)	(4,960)	(5,768)	(12,135)	(22,426)	(772)
Net income	81,822	89,293	164,320	137,103	158,655	5,461

	Year ended and as of December 31					
	2008	2009	2010	2011	2012	2012
	NT\$	NT\$	NT\$	NT\$	NT\$	US\$
	(in millions, except for percentages and earnings per share)					
Net income attributable to shareholders of the parent	81,473	89,102	163,639	136,873	158,850	5,468
Basic earnings per share ⁽¹⁾	3.15	3.45	6.32	5.28	6.13	0.21
Diluted earnings per share ⁽¹⁾	3.13	3.44	6.31	5.28	6.13	0.21
Basic weighted average shares outstanding ⁽¹⁾	25,826	25,836	25,906	25,914	25,921	25,921
Diluted weighted average shares outstanding ⁽¹⁾	26,021	25,912	25,920	25,925	25,928	25,928

Balance Sheet Data:**R.O.C. GAAP**

Working capital	195,812	180,671	138,328	108,253	109,853	3,782
Long-term investments	39,982	37,845	39,776	34,459	65,786	2,265
Properties	243,645	273,675	388,444	490,375	617,529	21,257
Goodwill	6,044	5,931	5,705	5,694	5,524	190
Total assets	558,917	594,696	718,929	774,265	955,035	32,876
Long-term bank borrowing	1,420	579	302	1,588	1,359	47
Long-term bonds payable	4,500	4,500	4,500	18,000	80,000	2,754
Guarantee deposits in and other liabilities ⁽²⁾	15,817	11,436	12,231	5,627	5,486	189
Total liabilities	78,544	95,648	140,224	142,221	229,281	7,893
Capital stock	256,254	259,027	259,101	259,162	259,245	8,924
Cash dividend on common shares	76,881	76,876	77,708	77,730	77,749	2,676
Shareholders' equity attributable to shareholders of the parent	476,377	495,083	574,145	629,594	723,198	24,895
Minority interests in subsidiaries	3,996	3,965	4,560	2,450	2,556	88

U.S. GAAP

Goodwill	47,028	46,825	46,419	46,399	46,093	1,587
Total assets	599,484	635,275	759,266	818,774	999,076	34,392
Total liabilities	84,424	99,278	144,109	147,161	241,660	8,319
Capital stock	256,254	259,027	259,101	259,162	259,245	8,924
Shareholders' equity attributable to common shareholders of the parent	511,089	532,043	610,597	669,163	754,860	25,985
Noncontrolling interests in subsidiaries	3,971	3,954	4,560	2,450	2,556	88

	Year ended and as of December 31					
	2008	2009	2010	2011	2012	2012
	NT\$	NT\$	NT\$	NT\$	NT\$	US\$
	(in millions, except for percentages and operating data)					

Other Financial Data:**R.O.C. GAAP**

Gross margin	42%	44%	49%	45%	48%	48%
Operating margin	31%	31%	38%	33%	36%	36%
Net margin	30%	30%	39%	31%	33%	33%
Capital expenditures	59,223	87,785	186,944	213,963	246,137	8,473
Depreciation and amortization	81,512	80,815	87,810	107,682	131,349	4,521
Cash provided by operating activities	221,494	159,966	229,476	247,587	289,064	9,951
Cash used in investing activities	(8,042)	(96,468)	(202,086)	(182,523)	(273,196)	(9,404)
Cash used in financing activities	(115,393)	(85,471)	(48,638)	(67,858)	(13,811)	(475)
Net cash inflow (outflow)	99,628	(23,338)	(23,389)	(4,415)	(61)	(2)

Operating Data:

Wafer (200mm equivalent) shipment ⁽³⁾	8,467	7,737	11,860	12,549	14,044	14,044
Billing Utilization Rate ⁽⁴⁾	88%	75%	101%	91%	91%	91%

(1) Retroactively adjusted for stock dividends for earning year 2008.

(2) Consists of other long-term payables, obligations under capital leases and total other liabilities.

(3) In thousands.

(4)

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Billing Utilization Rate is equal to annual wafer shipment divided by annual capacity. Capacity includes wafers committed by Vanguard and SSMC.

RISKS RELATED TO OUR BUSINESS

Any global systemic political, economic and financial crisis or catastrophic natural disasters (as well as the indirect effects flowing therefrom) could negatively affect our business, results of operations, and financial condition.

In recent times, several major systemic economic and financial crises and natural disasters negatively affected global business, banking and financial sectors, including the semiconductor industry and markets. These types of crises cause turmoil in global markets that often result in declines in electronic products sales from which we generate our income through our goods and services. In addition, these crises may cause a number of indirect effects such as undermining the ability of our customers to remain competitive vis-à-vis the financial and economic challenges created by insolvent countries and companies still struggling to survive in the wake of these crises. For example, there could be in the future knock-on effects from these types of crises on our business, including significant decreases in orders from our customers; insolvency of key suppliers resulting in product delays; inability of customers to obtain credit to finance purchases of our products; customer insolvencies; and counterparty failures negatively impacting our treasury operations. Any future systemic political, economic or financial crisis or catastrophic natural disaster (as well as the indirect effects flowing from these crises or disasters) could cause revenues for the semiconductor industry as a whole to decline dramatically, and if the economic conditions or financial condition of our customers were to deteriorate, additional accounting related allowances may be required in the future and such additional allowances could increase our operating expenses and therefore reduce our operating income and net income. Thus, any future global economic crisis or catastrophic natural disaster (and their indirect effects) could materially and adversely affect our results of operations.

Since we are dependent on the highly cyclical semiconductor and electronics industries, which have experienced significant and sometimes prolonged periods of downturns and overcapacity, our revenues, earnings and margins may fluctuate significantly.

The electronics industries and semiconductor market have historically been cyclical and subject to significant and often rapid increases and decreases in product demand. Our semiconductor foundry business is affected by market conditions in such highly cyclical electronics and semiconductor industries. Most of our customers operate in these industries. Variations in order levels from our customers result in volatility in our revenues and earnings. From time to time, the electronics and semiconductor industries have experienced significant and sometimes prolonged periods of downturns and overcapacity. Any systemic economic, political, or financial crisis, such as the one that occurred in 2008-2009, could create significant volatility and uncertainty within the electronics and semiconductor industries which may disrupt traditional notions of cyclicalities within such industries. As such, the nature, extent and scope of such periods of downturns and overcapacity may vary drastically in accordance with the degree of volatility of market demand. Because we are, and will continue to be, dependent on the requirements of electronics and semiconductor companies for our services, periods of downturns and overcapacity in the general electronics and semiconductor industries lead to reduced demand for overall semiconductor foundry services, including our services. If we cannot take appropriate actions such as reducing our costs to sufficiently offset declines in demand, our revenues, margin and earnings will suffer during periods of downturns and overcapacity. Furthermore, due to the increasingly complex technological nature of our products and services and the ever uncertain global economic environment, we may need to provide higher accounting provisions on potential sales returns and allowances by our customers that may adversely affect the results of our operations.

Decreases in demand and average selling prices for products that contain semiconductors may adversely affect demand for our products and may result in a decrease in our revenues and earnings.

A vast majority of our sales revenue is derived from customers who use our services in communication devices, personal computers, consumer electronics products and industrial/standard products. Any decrease in the demand for any one of these products may decrease the demand for such other products as well as overall global semiconductor foundry services, including our services and may adversely affect our revenues. Further, because we own most of our manufacturing capacities, a significant portion of our operating costs is fixed. In general, these costs do not decline when customer demand or our capacity utilization rates drop, and thus declines in customer demand, among other factors, may significantly decrease our margins. Conversely, as product demand rises and factory utilization increases, the fixed costs are spread over increased output, which can improve our margins. In addition, the historical and current trend of declining average selling prices (or ASP) of end use applications places downward pressure on the prices of the components that go into such applications. If the ASP of end use applications continues decreasing, the pricing pressure on components produced by us may lead to a reduction of our revenues, margin and earnings.

In light of the rise of new foundry service providers worldwide, if we are unable to compete effectively in the highly competitive foundry segment of the semiconductor industry, we may lose customers and our profit margin and earnings may decrease.

The markets for our foundry services are highly competitive both in Taiwan and internationally. We compete with other foundry service providers, as well as integrated device manufacturers. Some of these companies may have access to more advanced technologies and greater financial and other resources than us, such as the possibility of receiving direct or indirect government bailout/economic stimulus funds or other incentives that may be unavailable to us. Our competition may, from time to time, also decide to undertake aggressive pricing initiatives in one or more technology nodes. Increases in these competitive activities may decrease our customer base, or our ASP, or both.

Over the past few years, we have seen the rise of certain firms with the capability of providing foundry services. These firms are committed to attract our customers. If we are unable to compete with these new competitors with better technologies and manufacturing capacity and capabilities, we risk losing customers to these new contenders.

If we are unable to remain a technological leader in the semiconductor industry or if we are unable to timely respond to fast-changing semiconductor market dynamics, we may become less competitive.

The semiconductor industry and its technologies are constantly changing. We compete by developing process technologies using increasingly advanced nodes and on manufacturing products with more functions. We also compete by developing new derivative technologies. If we do not anticipate these changes in technologies and rapidly develop new and innovative technologies, or our competitors unforeseeably gain sudden access to additional technologies, we may not be able to provide foundry services on competitive terms. In addition, our customers have significantly decreased the time in which their products or services are launched into the market. If we are unable to meet these shorter product time-to-market, we risk losing these customers. These challenges also place greater demands on our research and development capabilities. If we are unable to innovate new technologies that meet the demands of our customers, our revenues may decline significantly. Although we have concentrated on maintaining a competitive edge in research and development, if we fail to achieve advances in technologies or processes, or to obtain access to advanced technologies or processes developed by others, we may become less competitive.

If we are unable to manage our capacity and the streamlining of our production facilities effectively, our competitiveness may be weakened.

We perform regular long term market demand forecasts to estimate market and general economic conditions for our products and services. Based upon these estimates, we manage our overall capacity in accordance with market demand. Because market conditions may vary significantly and unexpectedly, our market demand forecast may change significantly at any time. Further, since certain manufacturing lines or tools in some of our manufacturing facilities may be suspended or shut down temporarily during periods of decreased demand, we may not be able to ramp up in a timely manner during periods of increased demand. During periods of continued decline in demand, our operating facilities may not be able to absorb and complete in a timely manner outstanding orders re-directed from shuttered facilities. Based on demand forecasts, we have been adding capacity to our 300mm wafer fabs in the Hsinchu Science Park, Southern Taiwan Science Park and Central Taiwan Science Park. Total monthly capacity for 300mm wafer fabs was increased from 244,600 wafers as of December 31, 2010 to 290,100 wafers as of December 31, 2011 and to 366,800 wafers as of December 31, 2012. Expansion and modification of our production facilities will, among other factors, increase our costs. For example, we will need to purchase additional equipment, train personnel to operate the new equipment or hire additional personnel. If we do not increase our net sales accordingly, in order to offset these higher costs, our financial performance may be adversely affected.

We may not be able to implement our planned growth or development if we are unable to obtain sufficient financial resources to meet our future capital requirements.

Capital requirements are difficult to plan in the highly dynamic, cyclical and rapidly changing semiconductor industry. From time to time and increasingly so for the foreseeable next few years, we will continue to need significant capital to fund our operations and manage our capacity in accordance with market demand. Our continued ability to obtain sufficient external financing is subject to a variety of uncertainties, including:

our future financial condition, results of operations and cash flow;

general market conditions for financing activities;

market conditions for financing activities of semiconductor companies; and

social, economic, financial, political and other conditions in Taiwan and elsewhere.

Sufficient external financing may not be available to us on a timely basis, on reasonable market terms, or at all. As a result, we may be forced to curtail our expansion and modification plans or delay the deployment of new or expanded services until we obtain such financing.

We may not be able to implement our planned growth and development or maintain our leading position if we are unable to recruit and retain qualified executives, managers and skilled technical and service personnel.

We depend on the continued services and contributions of our executive officers and skilled technical and other personnel. Our business could suffer if we lose, for whatever reasons, the services and contributions of some of these personnel and we cannot adequately replace them. We may be required to increase or reduce the number of employees in connection with any business expansion or contraction, in accordance with market demand for our products and services. Since there is intense competition for the recruitment of these personnel, we cannot ensure that we will be able to fulfill our personnel requirements in a timely manner during an economic upturn.

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

Our operations and ongoing expansion plans depend on our ability to obtain an appropriate amount of equipment and related services from a limited number of suppliers in a market that is characterized from time to time by limited supply and long delivery cycles. During such times, supplier-specific or industry-wide lead times for delivery can be as long as six months or more. To better manage our supply chain, we have implemented various business models and risk management contingencies with suppliers to shorten the procurement lead time. We also provide our projected demand for various items to many of our equipment suppliers to help them plan their production in advance. We have purchased used tools and continue to seek opportunities to acquire relevant used tools. Further, the growing complexities especially in next-generation lithographic technologies may delay the timely availability of the equipments and parts needed to exploit time sensitive business opportunities and also increase the market price for such equipment and parts. If we are unable to obtain equipment in a timely manner to fulfill our customers orders, or at a reasonable cost, our financial condition and results of operations could be negatively impacted.

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

Our production operations require that we obtain adequate supplies of raw materials, such as silicon wafers, gases, chemicals, and photoresist, on a timely basis. In the past, shortages in the supply of some materials, whether by specific vendors or by the semiconductor industry generally, have resulted in occasional industry-wide price adjustments and delivery delays. Also, since we procure some of our raw materials from sole-source suppliers, there is a risk that our need for such raw materials may not be met when needed or that back-up supplies may not be readily available. Our revenue and earnings could decline if we are unable to obtain adequate supplies of the necessary raw materials in a timely manner or if there are significant increases in the costs of raw materials that we cannot pass on to our customers.

If the Ministry of Economic Affairs uses a substantial portion of our production capacity, we will not be able to service our other customers.

According to our agreement with the Industrial Technology Research Institute of Taiwan, or ITRI, the Ministry of Economic Affairs of the R.O.C., or an entity designated by the Ministry of Economic Affairs, has an option to purchase up to 35% of certain of our capacity, if our outstanding commitments to our customers are not prejudiced. Although the Ministry of Economic Affairs has never exercised this option, if this option is exercised to any significant degree during tight market conditions, we may not be able to provide services to all of our other customers unless we are able to increase our capacity accordingly or outsource such increased demand in a timely manner.

Any inability to obtain, preserve and defend our technologies and intellectual property rights and third-party licenses could harm our competitive position.

Our ability to compete successfully and to achieve future growth will depend in part on the continued strength of our intellectual property portfolio. While we actively enforce and protect our intellectual property rights, there can be no assurance that our efforts will be adequate to prevent the misappropriation or improper use of our proprietary technologies, trade secrets, software or know-how. Also, we cannot assure you that, as our business or business models expand into new areas, or otherwise, we will be able to develop independently the technologies, trade secrets, patents, software or know-how necessary to conduct our business or that we can do so without unknowingly infringing the intellectual property rights of others. As a result, we may have to rely increasingly on licensed technologies and patent licenses from others. To the extent that we rely on licenses from others, there can be no assurance that we will be able to obtain any or all of the necessary licenses in the future on terms we consider reasonable or at all. The lack of necessary licenses could expose us to claims for damages and/or injunctions from third parties, as well as claims for indemnification by our customers in instances where we have contractually agreed to indemnify our customers against damages resulting from infringement claims.

We have received, from time-to-time, communications from third parties asserting that our technologies, manufacturing processes, the design of the integrated circuits made by us or the use by our customers of semiconductors made by us may infringe upon their patents or other intellectual property rights. Because of the nature of the industry, we may continue to receive such communications in the future. In some instances, these disputes have resulted in litigation. Recently, there has been a notable increase in the number of claims or lawsuits initiated by certain litigious, non-practicing entities and these non-practicing entities are also becoming more aggressive in their monetary demands and requests for court-issued injunctions. Such lawsuits or claims may increase our cost of doing business and may potentially be extremely disruptive if the plaintiffs succeed in blocking the trade of our products and services. If we fail to obtain or maintain certain government, technologies or intellectual property licenses and, if litigation relating to alleged intellectual property matters occurs, it could prevent us from manufacturing or selling particular products or applying particular technologies, which could reduce our opportunities to generate revenues.

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

We and many of our suppliers use highly combustible and toxic materials in our manufacturing processes and are therefore subject to the risk of loss arising from explosion, fire, or environmental influences which cannot be completely eliminated. Although we maintain many overlapping risk prevention and protection systems, as well as comprehensive fire and casualty insurance, including insurance for loss of property and loss of profit resulting from business interruption, our risk management and insurance coverage may not be sufficient to cover all of our potential losses. If any of our fabs or vendor facilities were to be damaged, or cease operations as a result of an explosion, fire, or environmental influences, it could reduce our manufacturing capacity and may cause us to lose important customers, thereby having a potentially adverse and material impact on our financial performance.

Any impairment charges may have a material adverse effect on our net income.

Under R.O.C. GAAP and U.S. GAAP, we are required to evaluate our investments, long-lived assets and intangible assets for impairment whenever triggering events or changes in circumstances indicate that the asset may be impaired. If certain criteria are met, we are required to record an impairment charge. We are also required under R.O.C. GAAP and U.S. GAAP to evaluate goodwill for impairment at least on an annual basis or more frequently whenever triggering events or changes in circumstances indicate that goodwill may be impaired and the carrying value may not be recoverable. For example, we hold certain investments in publicly listed companies, some of which have incurred certain impairment charges as discussed further in our financial statements.

We currently are not able to estimate the extent or timing of any impairment charge for future years. Any impairment charge required may have a material adverse effect on our net income.

The determination of an impairment charge at any given time is based significantly on our expected results of operations over a number of years subsequent to that time. As a result, an impairment charge is more likely to occur during a period when our operating results are otherwise already depressed. See Management's Discussion and Analysis of Financial Condition and Results of Operations Critical Accounting Policies for a discussion of how we assess if an impairment charge is required and, if so, how the amount is determined.

Having one or more large customers that account for a significant percentage of our revenues may render us vulnerable to the loss of or significant curtailment of purchases by one or more large customers that could in turn adversely affect our results of operations.

Over the years, our customer profile and the nature of our customers' business have changed dramatically. While we generate revenue from hundreds of customers worldwide, our ten largest customers accounted for approximately 54%, 56% and 59% of our net sales in 2010, 2011 and 2012, respectively. Our largest customer accounted for 9%, 14% and 17% of our net sales in 2010, 2011 and 2012, respectively. This customer concentration results in part from the changing dynamics of the electronics industry with the structural shift to mobile devices and applications and software that provide the content for such devices. There are only a limited number of customers who are successfully exploiting this new business model paradigm. Also, in order to respond to the new business model paradigm, we have seen the nature of our customers' business model changes. For example, there is a growing trend toward the rise of system houses that operate in a manner which make their products and services more marketable in a changing consumer market. The loss of, or significant curtailment of purchases by, one or more of our top customers, including curtailments due to increased competitive pressures, industrial consolidation, a change in their designs, or change in their manufacturing sourcing policies or practices of these customers, or the timing of customer or distributor inventory adjustments, or change in our major customers' business models may adversely affect our results of operations and financial condition.

Any failure to achieve and maintain effective internal controls could have a material adverse effect on our business and results of operations.

Effective internal controls are necessary for us to provide reasonable assurance with respect to our financial reports and to effectively prevent fraud. If we cannot provide reasonable assurance with respect to our financial reports and effectively prevent fraud and corruption, our reputation and results of operations could be harmed.

We are required to comply with various R.O.C. and U.S. laws and regulations on internal controls. For example, pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, we are required to furnish a report by management on our internal control over financial reporting, including management's assessment of the effectiveness of our internal control over financial reporting. Moreover, R.O.C. law requires us to establish internal control systems that would reasonably ensure the effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations. We are also required under R.O.C. law to file an internal control declaration within four months of the end of each fiscal year.

Internal controls may not prevent or detect misstatements because of their inherent limitations, including the possibility of human error, the circumvention or overriding of controls, fraud or corruption. Therefore, even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. In addition, projections of any evaluation of effectiveness of internal controls to future periods are subject to the risk that the internal controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. If we fail to maintain the adequacy of our internal controls, including any failure to implement required new or improved controls, or if we experience difficulties in their implementation, our business and operating results could be harmed, we could fail to meet our reporting obligations, and there could be a material adverse effect on the market price of our common shares and ADSs.

Our global manufacturing, design and sales activities subject us to risks associated with legal, political, economic or other conditions or developments in various jurisdictions, including in particular the R.O.C., which could negatively affect our business and financial status and therefore the market value of your investment.

Our principal executive officers and our principal production facilities are located in the R.O.C., and a substantial majority of our net revenues are derived from our operations in the R.O.C. In addition, we have operations worldwide and a significant percentage of our revenue comes from sales to locations outside the R.O.C. Operating in the R.O.C. and overseas exposes us to changes in policies and laws, as well as the general political and economic conditions, security risks, health conditions and possible disruptions in transportation networks, in the various countries in which we operate, which could result in an adverse effect on our business operations in such countries and our results of operations as well as the market price and the liquidity of our ADSs and common shares.

For example, even though the R.O.C. and the PRC have co-existed for the past 63 years and significant economic and cultural relations have been established during that time, the financial markets have viewed certain past developments in relations between the two sides as occasions to depress general market prices of the securities of Taiwanese companies, including our own. In addition, the R.O.C. government has not lifted some trade and investment restrictions imposed on Taiwanese companies on the amount and types of certain investments that can be made in Mainland China. In addition to the above factors, future expansions of our operations in Taiwan will likely be handicapped by the limited availability of commercial-use land, industrial-quantities of natural resources such as water (needed for our foundry processes) and experienced human resources.

Our operational results could also be materially and adversely affected by natural disasters or interruptions in the supply of utilities (such as water or electricity), in the locations in which we, our customers or our suppliers operate.

The apparent frequency and severity of natural disasters has increased recently. We have manufacturing and other operations in locations subject to natural disasters, such as severe weather, flooding, earthquakes and tsunamis, as well as interruptions or shortages in the supply of utilities, such as water and electricity, which could disrupt operations. We have operations in earthquake-prone locations and any major natural disaster occurring in any such locations may cause severe disruptions to our business operations and financial performance. In addition, our suppliers and customers also have operations in such locations. For example, most of our production facilities, as well as those of many of our suppliers and customers and upstream providers of complementary semiconductor manufacturing services, are located in Taiwan and Japan, which are susceptible to earthquakes, tsunamis, flooding, typhoons, and droughts from time to time. In addition, we have sometimes suffered power outages in Taiwan caused by difficulties encountered by our electricity supplier, the Taiwan Power Company, or other power consumers on the same power grid, which have resulted in interruptions to our production schedule. While our business continuity management and emergency response plans are intended to prevent or minimize losses in the future, there is no assurance that the measures will fully eliminate the losses or the insurance will fully cover any losses. One or more natural disasters or interruptions to the supply of utilities that results in a prolonged disruption to our operations, or the operations of our customers or suppliers, may adversely affect the results of our operations and financial conditions.

Our failure to comply with applicable environmental and climate related laws and regulations, as well as international accords to which we are subject, could also harm our business and operational results.

The manufacturing, assembling and testing of our products require the use of chemicals and materials that are subject to environmental, climate-related, and health and safety laws and regulations issued worldwide. Although we may be eligible for various exemptions and/or extensions of time for compliance, our failure to comply with any of these applicable laws or regulations could result in:

significant penalties and legal liabilities, such as the denial of import permits;

the temporary or permanent suspension of production of the affected products;

unfavorable alterations in our manufacturing, fabrication and assembly and test processes; and

restrictions on our operations or sales.

Existing and future environmental and climate related laws and regulations as well as applicable international accords to which we are subject, could also require us, among other things, to do the following: (a) purchase, use or install expensive pollution control, reduction or remediation equipment; (b) implement climate change mitigation programs and abatement or reduction of greenhouse gas emissions programs, or carbon credit trading programs; (c) modify our product designs and manufacturing processes, or incur other significant expenses associated with such laws and regulations such as obtaining substitute raw materials or chemicals that may cost more or be less available for our operations. It is still unclear whether such necessary actions would affect the reliability or efficiency of our products and services.

Any of the above contingencies resulting from the actual and potential impact of local or international laws and regulations, as well as international accords on environmental or climate change, could harm our business and operational results by increasing our expenses or requiring us to alter our manufacturing and assembly and test processes.

Climate change, other environmental concerns and green initiatives also present other commercial challenges, economic risks and physical risks that could harm our operational results or affect the manner in which we conduct our business.

Increasing climate change and environmental concerns could affect the results of our operations if any of our customers request that we exceed any standard(s) set for environmentally compliant products and services. For example, we have been working on an on-going basis with our suppliers, customers, and several industry consortia to develop and provide products that are compliant with the EU RoHS (European Union Restriction of Hazardous Substances) Directive. Even though we are entitled to rely on various exemptions under RoHS, some of our customers might request that we provide products that exceed the legal standard set by RoHS without using any of the exemptions still permitted under RoHS. If we are unable to offer such products or offer products that are compliant, but are not as reliable due to the lack of reasonably available alternative technologies or materials, we may lose market share to our competitors.

Further, energy costs in general could increase significantly due to climate change and other regulations. Therefore, our energy costs may increase significantly if utility or power companies pass on their costs, either fully or partially, such as those associated with carbon taxes, emission caps and carbon credit trading programs.

In order to mitigate risks resulting from climate change, we continue to actively carry out energy conservation measures, implement voluntary perfluorinated compounds (PFCs) emission reduction projects and conduct greenhouse gas inventories verification every year. Since 2005, we have publicly disclosed climate change information every year through participation in the annual survey conducted by the nonprofit carbon disclosure project, which includes greenhouse gas emission and reduction information for all of our fabs.

Adverse fluctuations in exchange rates could decrease our operating margin.

Over one-half of our capital expenditures and manufacturing costs are denominated in currencies other than NT dollars, primarily in U.S. dollars, Japanese yen and Euros. In 2012, more than 90% of our sales were denominated in U.S. dollars and currencies other than NT dollars. Therefore, any significant fluctuation to our disadvantage in such exchange rates would have an adverse effect on our financial condition. For example, during the period from September 1, 2010 to December 30, 2010, the U.S. dollar depreciated 8.9% against the NT dollar, which had a negative impact on our results of operations. Specifically, based on our 2012 results, every 1% depreciation of the U.S. dollar against the NT dollar exchange rate may result in approximately 0.4 percentage point decrease in our operating margin. In addition, fluctuations in the exchange rate between the U.S. dollar and the NT dollar may affect the U.S. dollar value of our common shares and the market price of the ADSs and of any cash dividends paid in NT dollars on our common shares represented by ADSs. See Management's Discussion and Analysis of Financial Condition and Results of Operations Market Risks for a further discussion on the possible impact of other market factors on our results of operations.

Fluctuations in inflationary and deflationary market expectations could negatively affect costs of and demand for our products and services, which may harm our financial results.

The world economy is becoming more vulnerable to sudden unexpected fluctuations in inflationary and deflationary market expectations and conditions. For example, certain structural changes that resulted from the global financial crisis in 2008-2009 and EU sovereign debt crises, such as highly accommodative monetary policies by major central banks worldwide, may cause variations in the expectation of inflation or deflation. Both high inflation and deflation adversely affect an economy, at both the macro and micro levels, by reducing economic efficiency, disrupting saving and investment decisions and reducing the efficiency of the market prices as a mechanism to allocate resources. Such fluctuations may negatively affect the costs of our operations and the business operations of our customers who may be forced to plan their purchases of our goods and services within an uncertain macro and micro economy. Therefore, the demand for our products and services could unexpectedly fluctuate severely in accordance with market and consumer expectations of inflation or deflation. Please see Management's Discussion and Analysis of Financial Condition and Results of Operations Inflation & Deflation for a further discussion.

Amendments to existing tax regulations or new tax legislation in the R.O.C. may have an adverse effect on our net income.

While we are subject to tax laws and regulations in various jurisdictions in which we operate or conduct business, our principal operations are conducted in the R.O.C. and we are exposed primarily to taxes levied by the government of the R.O.C. In August 2012, the R.O.C. government amended the alternative minimum tax, or AMT, rate for business entities from 10% to 12% effective from January 1, 2013. As a result of this change, and changes in the various tax credit incentives and exemptions available to us, we anticipate our effective tax rate for 2013 will be 14.0%, an increase from 8.7% in 2012, which is anticipated to negatively affect our net income in 2013. See Management's Discussion and Analysis of Financial Condition and Results of Operations Taxation for a further discussion of significant tax regulation changes.

If certain of our strategic investments fail to achieve their respective forecasted returns or objectives, we may suffer financial losses that may materially lower our profit margin and distributable earnings.

From time to time, we have made or will make a series of strategic investments that serve two major purposes. Firstly, some of our major strategic investments were (or will be) made to help us open new sources of revenues and innovate alternative business models that target to generate additional shareholders' value going forward in the future. For example, in order to help us grow into next generation business areas, we have invested to develop potential businesses in solid state lighting, solar power and other renewable sources of energy. We believe these investments into these areas will generate new sources of revenues as the transition into consuming cleaner sources of power is generally expected gradually. For further information on these investments, please see Related Party Transactions. Secondly, some of our significant strategic investments were (or will be) made to help us grow our existing business by augmenting key technology development. For example, to accelerate the development of next-generation lithographic technology, in August 2012, TSMC joined the ASML Holding N.V. Customer Co-Investment Program (along with other major technology firms). The program's scope includes development of extreme ultraviolet (EUV) lithography technology and 450-millimeter (450mm) lithography tools. Under the agreement with ASML Holding N.V. (ASML), TSMC invested EUR838 million to acquire 5% of ASML's equity and has committed EUR277 million to be spread over five years, to ASML's research and development program. We are exposed to share price fluctuations arising from investments in ASML, especially when our equity investment is subject to a lock-up period of 2.5 years. In the future, we may make more strategic investments in various forms, whether through stock purchases, assets purchases, licensing of major intellectual property rights, joint investments or research and development projects, outright mergers and acquisitions, private equity transactions or receiving investments from a consortium of large institutional, public or private investors, etc. Any such investment will incur risks, which may result in losses if not carefully managed. Any such loss resulting from such investments may result in significant impairment charges, lower profit margin and ultimately lower distributable earnings.

Our historical financial statements were prepared in conformity with R.O.C. GAAP and starting from January 1, 2013, under IFRSs; our 2012 consolidated financial statements that will be prepared as a comparative period for our 2013 IFRS financial statements may be materially different from the accompanied 2012 consolidated financial statements under R.O.C. GAAP.

Starting in 2013, our financial statements will be prepared in accordance with International Financial Reporting Standards, International Accounting Standards, and relevant Interpretations (collectively, IFRSs) as issued by International Accounting Standards Board (IASB) and IFRSs as endorsed for use in R.O.C. Since the transition date to IFRSs was January 1, 2012, our 2012 consolidated financial statements that will be prepared as a comparative period for our 2013 IFRS financial statements may be materially different from the accompanied 2012 consolidated financial statements under R.O.C. GAAP.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

We manufacture a variety of semiconductors based on designs provided by our customers. Our business model is commonly called a dedicated semiconductor foundry. The foundry segment of the semiconductor industry as a whole experienced rapid growth over the last 26 years since our inception. As the leader of the foundry segment of the semiconductor industry, our net sales and net income were NT\$419,538 million and NT\$161,605 million in 2010, NT\$427,081 million and NT\$134,201 million in 2011, and NT\$506,249 million (US\$17,427 million) and NT\$166,159 million (US\$5,720 million) in 2012, respectively. The sales in 2011 increased slightly by 1.8% from 2010, mainly due to growth in customer demand and more favorable product mix, partially offset by the effect of U.S. dollar depreciation. Our sales in 2012 increased by 18.5% from 2011, mainly due to continuous growth in customer demand and increase in sales of our 28-nanometer products, which commanded a higher selling price.

The principal source of our revenue is wafer fabrication, which accounted for approximately 91% of our net sales in 2012. The rest of our net sales were derived from design, mask making, and testing and assembly services. Factors that significantly impact our revenue include:

the worldwide demand and capacity supply for semiconductor products;

pricing;

capacity utilization;

availability of raw materials and supplies;

technology migration; and

fluctuation in foreign currency exchange rate.

Though equally important, three of the above factors are discussed as follows:

Pricing. We establish pricing levels for specific periods of time with our customers, usually subject to adjustment during the course of that period to take into account market developments and other factors. Not all prices are subject to such adjustments though. We believe that our large capacity, flexible manufacturing capabilities, focus on customer service and ability to deliver high yields in a timely manner have contributed to our ability to obtain premium pricing for our wafer production.

Production Capacity. We currently own and operate our semiconductor manufacturing facilities, the aggregate production capacity for which had been expanded from 1,036,871 200mm equivalent wafers per month as of the end of 2010 to 1,163,708 200mm equivalent wafers per month as of the end of 2011 and 1,356,409 200mm equivalent wafers per month as of the end of 2012.

Technology Migration. Our operations utilize a variety of process technologies, ranging from mainstream process technologies of 0.5 micron or above circuit resolutions to advanced process technologies of 28-nanometer circuit resolutions. The table below presents a breakdown of wafer sales by circuit resolution during the last three years:

Resolution	Year ended December 31		
	2010	2011	2012
	Percentage of total wafer revenue ⁽¹⁾	Percentage of total wafer revenue ⁽¹⁾	Percentage of total wafer revenue ⁽¹⁾
28-nanometer		1%	12%
40/45-nanometer	17%	26%	27%
65-nanometer	29%	29%	23%
90-nanometer	14%	9%	9%
0.11/0.13 micron	12%	8%	6%
0.15 micron	4%	6%	4%
0.18 micron	13%	12%	11%
0.25 micron	4%	4%	4%
0.35 micron	4%	3%	2%
≥0.5 micron	3%	2%	2%
Total	100%	100%	100%

- (1) Percentages represent wafer revenue by technology as a percentage of total revenue from wafer sales, which exclude revenue associated with design, mask making, probing, and testing and assembly services. Total wafer revenue excludes sales returns and allowances.

Critical Accounting Policies

Summarized below are our accounting policies that we believe are important to the portrayal of our financial results and also involve the need for management to make estimates about the effect of matters that are uncertain in nature. Actual results may differ from these estimates, judgments and assumptions. Certain accounting policies are particularly critical because of their significance to our reported financial results and the possibility that future events may differ significantly from the conditions and assumptions underlying the estimates used and judgments made by our management in preparing our financial statements.

Revenue Recognition. We recognize revenue when evidence of an arrangement exists, the rewards of ownership and significant risk of the goods have been transferred to the buyer, price is fixed or determinable, and the collectability is reasonably assured. We record a provision for estimated future returns and other allowances in the same period the related revenue is recorded. Provision for estimated sales returns and other allowances is generally made and adjusted at a specific percentage based on historical experience, our management's judgment, and any known factors that would significantly affect the allowance, and our management periodically reviews the adequacy of the percentage used. However, because of the inherent nature of estimates, actual returns and allowances could be different from our estimates. If the actual returns are greater than our estimated amount, we could be required to record an additional provision, which would have a negative impact on our recorded revenue and gross margin.

As of December 31, 2010, 2011 and 2012, the amount recorded as sales returns and allowances in the accompanying consolidated statements of income was NT\$12,093 million, NT\$3,410 million and NT\$7,187 million (US\$247 million), respectively, representing 2.8%, 0.8% and 1.4% of our gross sales for the years ended December 31, 2010, 2011 and 2012. The decline in discount percentages for 2011 from 2010 reflected lower level of sales incentives and product related issues. The discount percentage returned to 1.4% in 2012 with stabilized product yield and sales incentives.

Allowance for Doubtful Accounts. We determine provision for doubtful accounts by examining our historical collection experience and current trends in the credit quality of our customers as well as our internal credit policies. If economic conditions or financial conditions of our customers deteriorate, additional allowance may be required in the future and such additional allowance would increase our operating expenses and therefore reduce our operating income and net income.

Prior to January 1, 2011, we recorded provision for doubtful accounts based on a percentage of accounts receivable due from our customers. Effective on January 1, 2011, we evaluate for indication of impairment of accounts receivable based on an individual and collective basis at the end of each reporting period according to the third revision of Statement of Financial Accounting Standards (SFAS) No. 34. When objective evidence indicates that the estimated future cash flow of accounts receivable decreases as a result of one or more events that occurred after the initial recognition of the accounts receivable, such accounts receivable are deemed to be impaired.

Because of the short average collection period, the amount of the impairment loss recognized is the difference between the carrying amount of accounts receivable and estimated future cash flows without considering the discounting effect. Changes in the carrying amount of the allowance account are recognized as bad debt expense which is recorded in the operating expenses - general and administrative. When accounts receivable are considered uncollectable, the amount is written off against the allowance account.

As of December 31, 2011 and 2012, the allowance set aside for doubtful receivables was NT\$491 million and NT\$480 million (US\$17 million), respectively, representing 1.1% and 0.8% of our gross notes and accounts receivables as of those dates.

Inventory valuation. Inventories are stated at the lower of cost or net realizable value for finished goods, work-in-progress, raw materials, supplies and spare parts. Inventory write-downs are made on an item-by-item basis, except where it may be appropriate to group similar or related items.

A significant amount of our manufacturing costs are fixed because our extensive manufacturing facilities (which provide us such large production capacity) require substantial investment to construct and are largely fixed-cost assets once they become operational. When the capacity utilization increases, the fixed manufacturing costs are spread over a larger amount of output, which would lower the inventory cost per unit thereby improving our gross margin.

We evaluate our ending inventory based on standard cost under normal capacity utilization, and reduce the carrying value of our inventory when the actual capacity utilization is higher than normal capacity utilization. No adjustment is made to the carrying value of inventory when the actual capacity utilization is at or lower than normal capacity utilization. Normal capacity utilization is established based on historic loadings compared to total available capacity in our wafer manufacturing fabs.

Due to rapid technology changes, we also evaluate our ending inventory and reduce the carrying value of inventory for estimated obsolescence and unmarketable inventory by an amount that is the difference between the cost of the inventory and the net realizable value. The net realizable value of the inventory is mainly determined based on assumptions of future demand within a specific time horizon, which is generally 180 days or less.

Valuation allowance for deferred tax asset. When we have net operating loss carry forwards, investment tax credits or temporary differences in the amount of tax recorded for tax purposes and accounting purposes, we may be able to reduce the amount of tax that we would otherwise be required to pay in future periods. We recognize all existing future tax benefits arising from these tax attributes as deferred tax assets and then establish a valuation allowance equal to the extent, if any, that it is more likely than not that such deferred tax assets will not be realized. We record an income tax benefit or expense when there is a net change in our total deferred tax assets and liabilities in a period. The ultimate realization of the deferred tax assets depends upon the generation of future taxable income during the periods in which the net operating losses and temporary differences become deductible or the investment tax credits may be utilized. Specifically, our valuation allowance is impacted by our expected future revenue growth and profitability, tax holidays, Alternative Minimum Tax, 10% tax imposed on unappropriated earnings and the amount of tax credits that can be utilized within the statutory period. In determining the amount of valuation allowance for deferred tax assets as of December 31, 2012, we considered past performance, the general outlook of the semiconductor industry, business conditions, future taxable income and prudent and feasible tax planning strategies.

Because the determination of the amount of valuation allowance is based, in part, on our forecast of future profitability, it is inherently uncertain and subjective. Changes in market conditions and our assumptions may cause the actual future profitability to differ materially from our current expectation, which may require us to increase or decrease the amount of valuation allowance that we have recorded.

As of December 31, 2011 and 2012, the ending balances for valuation allowance were NT\$13,531 million and NT\$6,671 million (US\$230 million), respectively, representing 50.3% and 34.3% of gross deferred tax assets as of those dates. In 2012, we evaluated our future profitability, the effect of Alternative Minimum Tax and the applicable year of the profits generated from projects exempt from income tax for a five-year period. Based on such evaluation, our income tax payable is anticipated to increase and we will utilize available investment tax credits as an offset against income taxes. Since more investment tax credits can be utilized, the valuation allowance has been adjusted down in 2012 accordingly.

Valuation of long-lived assets and intangible assets. We assess the impairment of long-lived assets and intangible assets whenever triggering events or changes in circumstances indicate that the asset may be impaired and carrying value may not be recoverable. Our long-lived assets subject to this evaluation include property, plant and equipment and amortizable intangible assets. Factors we consider important which could trigger an impairment review include, but are not limited to, the following:

significant under performance relative to historical or projected future operating results;

significant changes in the manner of our use of the acquired assets or our overall business strategy; and

significant unfavorable industry or economic trends.

When we determine that the carrying value of intangible assets and other long-lived assets may not be recoverable based upon the existence of one or more of the above indicators of impairment, we measure any impairment for long-lived assets based on a projected future cash flow. If the long-lived or intangible assets are determined to be impaired, we recognize an impairment loss through a charge to our operating results to the extent the present value of discounted cash flows attributable to the assets are less than their carrying value. Such cash flow analysis includes assumptions about expected future economic and market conditions, the applicable discount rate, and the future revenue generation from the use or disposition of the assets. We also perform a periodic review to identify assets that are no longer used and are not expected to be used in future periods. An impairment charge is recorded to the extent, if any, that the carrying amount of the idle assets exceeds their fair value. Under R.O.C. GAAP, if the recoverable amount increases in a future period, the amount previously recognized as impairment will be reversed and recognized as a gain. However, the adjusted amount may not exceed the carrying amount that would have been determined, net of depreciation, as if no impairment loss had been recognized. Under U.S. GAAP, the reversal of impairment charges is prohibited.

The process of evaluating the potential impairment of long-lived assets requires significant judgment. We are required to review for impairment groups of assets related to the lowest level of identifiable independent cash flows. Due to our asset usage model and the interchangeable nature of our semiconductor manufacturing capacity, we must make subjective judgments in determining the independent cash flows that can be related to specific asset groups. In addition, because we must make subjective judgments regarding the remaining useful lives of assets and the expected future revenue and expenses associated with the assets, changes in these estimates based on changed economic conditions or business strategies could result in material impairment charges in future periods. Our projection for future cash flow is generally less during periods of reduced earnings. As a result, an impairment charge is more likely to occur during a period when our operating results are already otherwise depressed.

For purposes of evaluating the recoverability of long-lived assets, assets purchased for use in the business but subsequently determined to have no future economic benefits are written down to their fair value and recorded as either idle assets or assets held for disposition. In 2010, 2011 and 2012, an impairment loss for idle assets of NT\$0.3 million, NT\$98 million and NT\$445 million (US\$15 million) was recorded, respectively. As of December 31, 2011 and 2012, net long-lived assets and intangible assets amounted to NT\$495,542 million and NT\$622,965 million (US\$21,445 million), respectively.

Goodwill. Goodwill is recorded when the purchase price paid for an acquisition exceeds the estimated fair value of the net identified tangible and intangible assets acquired. Under U.S. GAAP, and effective on January 1, 2005 under R.O.C. GAAP, we assess the impairment of goodwill on an annual basis, or more frequently whenever triggering events or changes in circumstances indicate that goodwill may be impaired and carrying value may not be recoverable. Moreover, effective on January 1, 2006, goodwill is no longer amortizable under R.O.C. GAAP. Factors we consider important which could trigger an impairment review include, without limitation, the following:

significant decline in our stock price for a sustained period; and

significant decline in our market capitalization relative to net book value.

Application of the goodwill impairment test is also highly subjective and requires significant judgment, including the identification of cash generating units, assigning assets and liabilities to the relevant cash generating units, assigning goodwill to the relevant cash generating units, and determining the fair value of the relevant cash generating units. Our assessment of fair value is based upon a cash flow analysis that includes assumptions about expected future operating performance, such as revenue growth rates and operating margins, risk-adjusted discount rates, future economic and market conditions, and determination of appropriate market comparables. Under R.O.C. GAAP, the fair value of the cash generating units is compared to the associated carrying value including goodwill. On the other hand, under U.S. GAAP, the fair value of the reporting units is compared to the associated carrying value including goodwill.

Under R.O.C. GAAP, goodwill recorded from the acquisition of TSMC-Acer and WaferTech is evaluated for impairment on an annual basis. Based on our most recent evaluation, the fair value calculated by discounting projected cash flow in five years was higher than the associated carrying value. As a result, we did not record any impairment charge under R.O.C. GAAP. Under U.S. GAAP, goodwill recorded from the acquisition of TSMC-Acer and WaferTech is evaluated for impairment on an annual basis. Based on our most recent evaluation, the fair value calculated by using the discounted cash flow method was higher than the associated carrying value. As a result, we did not record any impairment charge under U.S. GAAP either.

As of December 31, 2011 and 2012, goodwill amounted to NT\$5,694 million and NT\$5,524 million (US\$190 million), respectively, under R.O.C. GAAP. The change in the NT dollar amount of goodwill was due to changes in the exchange rate between NT dollar and U.S. dollar.

Valuation of investments accounted for using the equity method. We assess the impairment of investments accounted for using the equity method whenever triggering events or changes in circumstances indicate that an investment may be impaired and carrying value may not be recoverable. We measure the impairment based on a projected future cash flow of the investees, the underlying assumptions for which had been formulated by such investees' internal management team, taking into account market conditions for the industries which the investees operate in to ensure the reasonableness of such assumptions. If an investment is determined to be impaired, we recognize an impairment loss through a charge to our operating results to the extent the present value of discounted cash flows attributable to the investee is less than the carrying value of the investment.

In 2012, an impairment loss of NT\$1,187 million (US\$41 million) was recorded. No impairment loss was recorded in 2010 and 2011. As of December 31, 2011 and 2012, investments accounted for using the equity method amounted to NT\$24,900 million and NT\$23,430 million (US\$807 million), respectively.

Accounting for investments in private and publicly-traded securities. We hold equity interests in companies, some of which are publicly traded and have highly volatile share prices. We also hold investments in debt securities, such as corporate bonds, government bonds, and so on. We review all of our investments for impairment on a quarterly basis and record an impairment charge when we believe an investment has experienced an other-than-temporary decline in value. Determining whether an other-than-temporary decline in value of the investment has occurred is highly subjective. Such evaluation is dependent on the specific facts and circumstances. Factors we consider include, but are not limited to, the following: the market value of the security in relation to its cost basis, the duration of the decline in value, the financial condition of the investees and our intent and ability to retain the investment for a sufficient period of time to allow for recovery in the market value of the investment. Impairment reviews with respect to private security investments also require significant judgment. Factors indicative of an other-than-temporary decline in value include recurring operating losses, credit defaults and subsequent rounds of financing at valuation below the cost basis of the investment.

We have experienced declines in the value of certain privately held investments and publicly traded securities and recorded impairment loss of NT\$160 million, NT\$266 million and NT\$3,045 million (US\$105 million) in 2010, 2011 and 2012, respectively. While we have recognized all declines that are currently believed to be other-than-temporary as a charge to income, adverse changes in market conditions or poor operating results of underlying investments could result in further losses in future periods.

Results of Operations

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

	For the year ended December 31		
	2010	2011	2012
Net sales	100.0%	100.0%	100.0%
Cost of sales	(50.6)%	(54.6)%	(51.9)%
Gross profit	49.4%	45.4%	48.1%
Operating expenses			
Research and development	(7.1)%	(7.9)%	(8.0)%
General and administrative	(3.1)%	(3.3)%	(3.4)%
Sales and marketing	(1.3)%	(1.1)%	(0.9)%
Total operating expenses	(11.5)%	(12.3)%	(12.3)%
Income from operations	37.9%	33.1%	35.8%
Non-operating income and gains	3.2%	1.3%	1.3%
Non-operating expenses and losses	(0.5)%	(0.4)%	(1.2)%
Income before income tax	40.6%	34.0%	35.9%
Income tax expense	(1.9)%	(2.5)%	(3.1)%
Net income	38.7%	31.5%	32.8%
Net income attributable to minority interests	(0.2)%	(0.1)%	(0.0)%
Net income attributable to shareholders of the parent	38.5%	31.4%	32.8%

Year to Year Comparisons

Net Sales and Gross Margin

	For the year ended December 31					% Change from 2011
	2010	2011	% Change from 2010	2012		
	NT\$	NT\$		NT\$	US\$	
	(in millions)			(in millions)		
Net sales	419,538	427,081	1.8%	506,249	17,427	18.5%
Cost of sales	(212,484)	(232,938)	9.6%	(262,629)	(9,041)	12.7%
Gross profit before affiliates elimination	207,054	194,143	(6.2)%	243,620	8,386	25.5%
Unrealized gross profit from affiliates		(74)		(25)	(1)	
Gross profit	207,054	194,069	(6.3)%	243,595	8,385	25.5%
Gross margin percentage	49.4%	45.4%		48.1%	48.1%	

Net Sales

Our net sales in 2012 increased by 18.5% from 2011, which was largely attributable to continuous growth in customer demand, resulting in a 11.9% increase in wafer shipment. We shipped approximately 14.0 million 200mm equivalent wafers in 2012 compared to 12.5 million in 2011. In addition, sales of our 28-nanometer products, which commanded a higher selling price, also increased to 12% of our total wafer sales in 2012 compared to 1% in 2011.

Our net sales in 2011 increased by 1.8% from 2010, which was mainly attributable to the growth in customer demand. The overall wafer shipments increased by 5.8%, from 11,860 thousand 200mm equivalent wafers in 2010 to 12,549 thousand 200mm equivalent wafers in 2011. Furthermore, we had a more favorable product mix in 2011 as the portion of wafer sales from 65 nanometer and below circuit resolutions reached 56% compared to 46% in 2010. However, as a significant portion of our sales were denominated in U.S. dollars, our net sales in 2011 were negatively impacted by a stronger weighted average NT dollar against U.S. dollar, which appreciated against the U.S. dollar by 6.7% to NT\$29.367 to US\$1.00 in 2011 from NT\$31.491 to US\$1.00 in 2010.

Gross Margin

Our gross margin fluctuates with the level of capacity utilization, price change and product mix, among other factors. In 2012, our gross margin increased to 48.1% of net sales from 45.4% of net sales in 2011. The higher margin in 2012 was primarily due to higher capacity utilization and cost reductions, which contributed favorably to our gross margin by 5.5 and 2.8 percentage points, respectively, partially offset by price decline and higher portion of wafer sales in 28-nanometer technology bearing lower than corporate average margins at initial production stage, which negatively impacted our gross margin by 5.3 percentage points.

In 2011, our gross margin decreased to 45.4% of net sales from 49.4% of net sales in 2010. The lower margin in 2011 was primarily due to lower capacity utilization as we increased our capacity in 2011, price decline and a stronger NT dollar against the U.S. dollar, which negatively impacted our gross margin by 7.1, 2.8 and 2.4 percentage points, respectively, offset in part by cost improvements and others which contributed favorably to a 8.3 percentage points increase in the gross margin.

Operating Expenses

	For the year ended December 31					% Change from 2011
	2010	2011	% Change from 2010	2012		
	NT\$ (in millions)	NT\$ (in millions)		NT\$ (in millions)	US\$	
Research and development	29,707	33,830	13.9%	40,402	1,391	19.4%
General and administrative	12,804	14,164	10.6%	17,638	607	24.5%
Sales and marketing	5,368	4,518	(15.8)%	4,498	154	(0.4)%
Total operating expenses	47,879	52,512	9.7%	62,538	2,152	19.1%
Percentage of net sales	11.5%	12.3%		12.3%	12.3%	
Income from operations	159,175	141,557	(11.1)%	181,057	6,233	27.9%
Operating Margin	37.9%	33.1%		35.8%	35.8%	

Operating expenses increased by NT\$10,026 million in 2012, or 19.1%, from NT\$52,512 million in 2011, after an increase in operating expenses by NT\$4,633 million in 2011, or 9.7%, from NT\$47,879 million in 2010.

Research and Development Expenses

We remain strongly committed to being the leader in developing advanced process technologies. We believe that continued investments in process technologies are essential for us to remain competitive in the markets we serve. Research and development expenditures increased by NT\$6,572 million in 2012, or 19.4%, from 2011, mainly due to a higher level of research activities for 20-nanometer technologies and higher employee profit sharing expenses and bonuses. In 2011, research and development expenditures increased by NT\$4,123 million, or 13.9%, from 2010, mainly due to higher spending in developing 20-nanometer technology, partially offset by lower employee profit sharing expenses and bonuses. We plan to continue to invest significant amounts in research and development in 2013.

General and Administrative, Sales and Marketing Expenses

General and administrative, sales and marketing expenses in 2012 increased by NT\$3,454 million, or 18.5% from 2011, due to an increase in general and administrative expenses by NT\$3,474 million, or 24.5%, and a decrease of sales and marketing expenses by NT\$20 million, or 0.4%. The net increase was primarily due to higher opening expenses for ramping up 28-nanometer capacity.

General and administrative, sales and marketing expenses in 2011 increased by NT\$510 million, or 2.8% from 2010, due to an increase in general and administrative expenses by NT\$1,360 million, or 10.6%, and a decrease of sales and marketing expenses by NT\$850 million, or 15.8%. The net increase was primarily due to higher opening expenses for Fab15 (Phase I) and Fab10 (Phase II), partially offset by lower employee profit sharing expenses and bonus in 2011.

Non-Operating Income and Expenses

	For the year ended December 31					% Change from 2011
	2010	2011	% Change from 2010	2012		
	NT\$	NT\$		NT\$	US\$	
	(in millions)	(in millions)		(in millions)		
Non-operating income and gains	13,136	5,359	(59.2)%	6,782	233	26.6%
Non-operating expenses and losses	(2,041)	(1,768)	(13.4)%	(6,285)	(216)	255.5%
Net non-operating income (expenses)	11,095	3,591	(67.6)%	497	17	(86.2)%

Net non-operating income in 2012 decreased by NT\$3,094 million, or 86.2% from NT\$3,591 million in 2011 primarily due to a NT\$3,966 million increase in loss on impairment of financial assets, resulting from valuation of our equity securities (please refer to Valuation of investments accounted for using the equity method and Accounting for investments in private and publicly-traded securities under critical accounting policies section), partially offset by a NT\$1,131 million increase in equity in earnings of equity method investees reflecting their better operating results in 2012.

Net non-operating income in 2011 decreased by NT\$7,504 million, or 67.6% from NT\$11,095 million in 2010 primarily due to a NT\$5,993 million decrease in settlement income from SMIC as we received less settlement payment in cash and absence of receipt of SMIC shares in 2011 pursuant to the settlement agreement. In addition, equity in earnings of equity method investees declined by NT\$1,400 million as a result of weakened operating performance of such equity method investees in 2011.

Income Tax Benefit (Expense)

	For the year ended December 31					% Change from 2011
	2010	2011	% Change from 2010	2012		
	NT\$ (in millions)	NT\$ (in millions)		NT\$ (in millions)	US\$	
Income tax expense	(7,988)	(10,695)	33.9%	(15,590)	537	45.8%
Net income attributable to shareholders of the parent	161,605	134,201	(17.0)%	166,159	5,720	23.8%
Net margin	38.5%	31.4%		32.8%	32.8%	

Income tax expenses increased by NT\$4,895 million in 2012, or 45.8%, from 2011. The increase was mainly due to higher taxable income and higher tax rate as a result of expired exemption period for part of Fab12 (Phase II).

Income tax expenses increased by NT\$2,707 million in 2011, or 33.9%, from 2010. The increase was mainly related to increase in tax on unappropriated earnings as a result of higher unappropriated earnings in 2011 compared to 2010.

Liquidity and Capital Resources

Our sources of liquidity include cash flow from operations, cash and cash equivalents, short-term investments, and revolving credit facilities provided by multiple banks. Issuance of corporate bonds is another source of fund.

Our primary source of liquidity is cash flow from operations. Cash flow from operations for 2012 was NT\$289,064 million (US\$9,951 million), an increase of NT\$41,477 million from 2011.

Our cash, cash equivalents and current investments in financial instruments amounted to NT\$150,918 million (US\$5,195 million) as of December 31, 2012, approximately flat compared to NT\$150,622 million as of December 31, 2011. The current investments in financial instruments primarily consist of publicly-traded stocks, corporate bonds, and money market funds.

As of December 31, 2012, we also had an aggregate unused short-term credit lines of approximately NT\$53,422 million (US\$1,839 million) and an aggregate unused long-term credit lines of approximately NT\$1,335 million (US\$46 million).

We believe that our cash generated from operations, cash and cash equivalents, short-term investments, ability to access capital market and revolving credit facilities will be sufficient to fund our working capital needs, capital expenditures, dividend payments and other business requirements associated with existing operations over the next 12 months.

	For the year ended December 31			
	2010	2011	2012	
	NT\$ (in millions)	NT\$ (in millions)	NT\$ (in millions)	US\$
Net cash provided by operating activities	229,476	247,587	289,064	9,951
Net cash used in investing activities	(202,086)	(182,523)	(273,196)	(9,404)
Net cash used in financing activities	(48,638)	(67,858)	(13,811)	(475)
Net decrease in cash	(23,389)	(4,415)	(61)	(2)

Cash and cash equivalents decreased by NT\$61 million in 2012, following a decrease of NT\$4,415 million in 2011, or 3.0%, from 2010.

Operating Activities

In 2012, we generated NT\$289,064 million (US\$9,951 million) net cash from operating activities, as compared to NT\$247,587 million and NT\$229,476 million in 2011 and 2010, respectively. In 2012, net cash generated from operating activities increased primarily due to an increase of NT\$31,958 million in net income and an increase of NT\$23,668 million in non-cash depreciation and amortization expenses, partially offset by change in working capital and others of NT\$14,149 million.

In 2011, net cash generated from operating activities increased primarily due to an increase of NT\$19,872 million in non-cash depreciation and amortization expenses, the absence of non-cash gain of NT\$4,434 million from SMIC shares received as litigation compensation and from change in inventories and notes and accounts receivables, partially offset by a decrease of NT\$27,404 million in net income.

In 2012, depreciation and amortization expenses were NT\$131,349 million (US\$4,521 million), as compared to NT\$107,682 million and NT\$87,810 million in 2011 and 2010, respectively. Higher depreciation and amortization expenses in 2012 and 2011 were mainly attributable to expansion of production capacity in advanced technologies.

Investing Activities

In 2012, net cash used in investing activities was NT\$273,196 million (US\$9,404 million), as compared to NT\$182,523 million and NT\$202,086 million in 2011 and 2010, respectively. The increase in 2012 was primarily due to higher net purchase of investment in financial assets and higher spending on capital expenditures during the year. Net purchase of investment in financial assets in 2012 primarily included our investment of EUR838 million to acquire 5% of ASML's equity. The decrease in 2011 was primarily due to lower investment in financial assets, higher disposal or redemption of investment in financial assets, lower refundable deposits and the absence of new investment in equity method investees, partially offset by higher spending on capital expenditures during the year.

Capital expenditures in 2012 were primarily related to:

adding production capacity to 300mm wafer fabs;

developing process technologies including 20-nanometer node and below;

expanding buildings/facilities for Fab 12, Fab 14 and Fab 15;

other research and development projects;

capacity expansion for mask and backend operations; and

solar and solid state lighting businesses.

Prior to 2012, our capital expenditures were funded by our operating cash flow. Starting 2012, our capital expenditures were partially funded by the issuance of corporate bonds. The capital expenditures for 2013 are also expected to be funded in similar ways.

Financing Activities

In 2012, net cash used in financing activities was NT\$13,811 million (US\$475 million), as compared to NT\$67,858 million and NT\$48,638 million in 2011 and 2010, respectively. Net cash used in financing activities in 2012 decreased primarily due to proceeds from issuance of corporate bonds amounting to NT\$62,000 million in 2012 compared to NT\$18,000 million in 2011, the change from NT\$5,287 million cash used to repay short-term loans in 2011 to NT\$8,788 million cash provided by short-term loans in 2012, partially offset by repayment of corporate bonds of NT\$4,500 million during the year. In 2011, net cash used in financing activities increased primarily due to the change from NT\$31,214 million cash provided by short-term loans in 2010 to NT\$5,287 million cash used to repay short-term loans in 2011 and the higher repayment of other long-term liabilities of NT\$2,526 million, partially offset by the proceeds from issuance of corporate bonds amounting to

NT\$18,000 million and increase in long-term debts of NT\$2,250 million.

As of December 31, 2012, our short-term loans were NT\$34,715 million (US\$1,195 million), and our aggregate long-term debt was NT\$81,488 million (US\$2,805 million) of which NT\$128 million (US\$4 million) was classified as current. The short-term loans were denominated in U.S. dollars. The purpose of the short-term loans was mainly to naturally hedge a portion of our receivables. As a substantial portion of our receivables was denominated in U.S. dollars, we use short-term loans denominated in U.S. dollars to naturally hedge the fluctuation of foreign exchanges rates. The long-term debt primarily included NT\$80,000 million of the long-term corporate bonds with fixed interest rates ranging from 1.28% to 1.63%.

Cash Requirements

The following table sets forth the maturity of our long-term debt (bank loans and bonds) outstanding as of December 31, 2012:

	Long-term debt (in NT\$ millions)
During 2013	128
During 2014	588
During 2015	137
During 2016	11,125
During 2017 and thereafter	69,510

The following table sets forth information on our material contractually obligated payments for the periods indicated as of December 31, 2012:

Contractual Obligations	Total	Payments Due by Period			
		Less than 1 Year	1-3 Years	4-5 Years	More than 5 Years
		(in NT\$ millions)			
Short-Term Loans ⁽¹⁾	34,715	34,715			
Long-Term Debt ⁽²⁾	81,488	128	725	43,735	36,900
Capital Lease Obligations ⁽³⁾	865	27	54	54	730
Operating Leases	7,394	694	1,290	1,188	4,222
Other Payments ⁽⁴⁾	11,602	2,564	4,182	4,856	
Capital Purchase or Other Purchase Obligations ⁽⁵⁾	77,310	75,234	2,076		
Total Contractual Cash Obligations⁽⁶⁾	213,374	113,362	8,327	49,833	41,852

- (1) The maximum amount and average amount of short-term loans outstanding during the year ended December 31, 2012 were NT\$35,875 million and NT\$32,383 million, respectively.
- (2) Includes bank loans payable and corporate bonds payable but excludes relevant interest payments.
- (3) Capital lease obligations represent our commitment for leases of property.
- (4) Other payments represent payables for acquisition of property, plant and equipment, payables for software and system design costs, payables for technology transfer, and our commitment of EUR277 million to ASML's research and development programs from 2013 to 2017.
- (5) Represents commitments for construction or purchase of equipment, raw material and other property or services. These commitments are not recorded on our balance sheet as of December 31, 2012, as we have not received related goods or taken title of the property.
- (6) Minimum pension funding requirement is not included since such amounts have not been determined. We made pension contributions of approximately NT\$221 million in 2012 and estimate that we will contribute approximately NT\$226 million to the pension fund in 2013.

During 2012, we entered into derivative financial instruments transactions to manage exposures related to foreign-currency denominated receivables or payables and interest rate fluctuations. As of December 31, 2012, we anticipated our cash requirements in 2013 for outstanding forward exchange agreements and cross currency swaps of approximately NT\$11,135 million and US\$309 million with our expected cash receipts of approximately JPY130 million, US\$58 million, NT\$8,384 million and EUR246 million and RMB125 million.

Generally, we do not provide letters of credit to, or guarantees for any entity other than our consolidated subsidiaries.

Significant amount of capital is required to build, expand, and upgrade our production facilities and equipment. Our capital expenditures for 2013 are expected to be approximately US\$9 billion, which, depending on market conditions, may be adjusted later.

U.S. GAAP Reconciliation. Our consolidated financial statements are prepared in accordance with R.O.C. GAAP, which differs in certain material aspects from U.S. GAAP. The following table sets forth a comparison of our net income and shareholders' equity in accordance with R.O.C. GAAP and U.S. GAAP for the periods indicated:

	For the year ended December 31			
	2010 NT\$	2011 NT\$	2012 NT\$	US\$
	(in millions)			
Net income attributable to the shareholders of the parent in accordance with:				
R.O.C. GAAP	161,605	134,201	166,159	5,720
U.S. GAAP	163,639	136,873	158,850	5,468
Shareholders' equity attributable to the shareholders of the parent in accordance with:				
R.O.C. GAAP	574,145	629,594	723,198	24,895
U.S. GAAP	610,597	669,163	754,860	25,985

Differences between R.O.C. GAAP and U.S. GAAP that have a material effect on our net income and shareholders' equity as reported under R.O.C. GAAP include compensation expense pertaining to stock bonuses to employees, recognition of and subsequent accounting for goodwill, 10% tax imposed on unappropriated earnings, stock-based compensation and deconsolidation of investees.

Starting in 2013, our financial statements will be prepared in accordance with International Financial Reporting Standards, International Accounting Standards, and relevant Interpretations (collectively, "IFRSs") as issued by International Accounting Standards Board ("IASB") and IFRSs as endorsed for use in R.O.C. Since the transition date to IFRSs was January 1, 2012, our 2012 consolidated financial statements under IFRSs may be materially different from the accompanied 2012 consolidated financial statements under R.O.C. GAAP.

Taxation. In 2010, the R.O.C. government reduced the corporate income tax rate from 25% to 17% effective from 2010. In the same year, the Statute for Industries Innovation was passed to replace the Statute for Upgrading Industries in tax incentives. Under the new statute, the tax credit rate for research and development expenditure was reduced from 30% to 15%, and the 7% tax credit incentive for purchased equipment and the five-year tax exemption were terminated.

We are eligible for five-year tax holidays for income generated from construction and capacity expansions of production facilities according to the regulation under the Statute for Upgrading Industries of the R.O.C. The exemption period may begin at any time within five years, as applicable, following the completion of a construction or expansion of production facilities. The Statute for Upgrading Industries expired at the end of 2009. However, under the Grandfather Clause, we can continue to enjoy five-year tax holidays if the relevant investment plans were approved by R.O.C. tax authority before the expiration of the Statute. Pursuant to the Grandfather Clause, we commenced the exemption period for part of Fab 14 (Phase III), part of Fab 12 (Phase III) and others in 2010; part of Fab 12 (Phase IV), part of Fab 14 (Phase III and IV) in 2011. The aggregate tax benefits of such exemption periods in 2010, 2011 and 2012 were NT\$17,410 million, NT\$13,832 million and NT\$9,830 million (US\$338 million), respectively.

Under regulations promulgated under the R.O.C. Statute for Industries Innovation, we were eligible for a tax credit for specified percentages of research and development expenditures. The tax credit rate of research and development expenditures is 15% during the period from 2010 to 2019.

The R.O.C. government enacted the R.O.C. Alternative Minimum Tax Act (AMT Act) which became effective on January 1, 2006. The alternative minimum tax (AMT) imposed under the R.O.C. AMT Act is a supplemental tax which is payable if the income tax payable pursuant to the R.O.C. Income Tax Act is below the minimum amount prescribed under the R.O.C. AMT Act. The taxable income for calculating the AMT includes most income that is exempted from income tax under various legislations, such as tax holidays and investment tax credits. In August 2012, the AMT rate for business entities was amended from 10% to 12% effective January 1, 2013. However, the R.O.C. AMT Act grandfathered certain tax exemptions and tax credits granted prior to the enactment of the R.O.C. AMT. We have evaluated the impact from the amendments and adjusted deferred tax assets with the resulting differences recorded as income tax expense in 2012.

In consideration of the above tax credit incentives, five-year tax exemption, amended AMT rate and other relevant factors, we expect our effective tax rate for 2013 to be around 14%.

Off-Balance Sheet Arrangements. There are no off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material to investors.

Inflation & Deflation. During 2012, neither inflation nor deflation had a material impact on our operations, or the business operations of our customers and suppliers. However, in light of the uncertain global economic outlook and the fluctuating global oil price, we cannot assure that there will be no significant variations in the future, which may have a material impact on our results of operations. Further, the recent lifting of price limits by the Taiwan government on oil and electricity prices may have additional inflationary effects. As such, there is a likelihood of increased energy taxes, oil, electricity and water prices that may occur in Taiwan, and thus far there is no indication as to whether these increased cost would be material to our business operations.

Market Risks

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

Interest Rate Risk. We are exposed to interest rate risks, primarily related to borrowings for general corporate purposes.

The table below presents annual principal amounts due and related weighted average implied forward interest rates by year of maturity for our debt obligations outstanding as of December 31, 2012.

	As of December 31, 2012						As of		
	Expected Maturity Dates						December 31, 2011		
	2013	2014	2015	2016	2017 and thereafter	Total	Aggregate Fair Value	Total	Aggregate Fair Value
Long-term debt (in millions)									
NT\$ denominated debt									
Variable rate	NT\$ 128	NT\$ 588	NT\$ 137	NT\$ 625	NT\$ 10	NT\$ 1,488	NT\$ 1,488	NT\$ 1,650	NT\$ 1,650
Average interest rate	1.25%	1.60%	1.47%	1.56%	1.70%	1.54%(2)		1.52%(2)	
Fixed rate				NT\$ 10,500	NT\$ 69,500	NT\$ 80,000	NT\$ 80,343 ⁽¹⁾	NT\$ 22,500	NT\$ 22,597 ⁽¹⁾
Average interest rate				1.40%	1.38%	1.39%(2)		1.80%(2)	
Interest rate swaps (in millions)									
Variable to fixed rate								NT\$ 80	NT\$ (0)
Average pay fixed rate								1.38%	

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- (1) Represents the then quoted market price.
- (2) Average interest rates under Total are the weighted average interest rates of each year for loans outstanding.

Foreign Currency Risk. Substantial portions of our revenues and expenses are denominated in currencies other than NT dollar. As a result, as of December 31, 2012, the majority of our receivables and payables were denominated in currencies other than NT dollar, primarily in U.S. dollar, Euro and Japanese Yen. To protect against reductions in value and the volatility of future cash flows caused by changes in foreign exchange rates, we utilize foreign currency denominated debts and offsetting derivatives, including currency forward contracts and cross currency swaps, to hedge our currency exposure. These hedging transactions help to reduce partially, but do not eliminate, the impact of foreign currency exchange rate movements. Based on a sensitivity analysis performed on our financial position as of December 31, 2012, a hypothetical, unfavorable 10% movement in the levels of foreign currency exchange rates relative to the NT dollar, after taking into account hedges and offsetting positions, would have increased our net unrealized losses by NT\$887 million.

Our policy is to account for the unrealized gains or losses of these hedging contracts on a mark-to-market rate basis through profit or loss. These derivative financial instruments are required under R.O.C. Statement of Financial Accounting Standards No. 34 Financial Instruments: Recognition and Measurement to be recognized at fair market value on the balance sheet.

The table below presents our outstanding financial derivative transactions as of December 31, 2012. These contracts all had a maturity date of not more than 12 months.

Forward Exchange Agreements

(in millions)	As of December 31, 2012						As of		
	Expected Maturity Dates						December 31, 2011		
	2013	2014	2015	2016	2017	Aggregate			
				hereafter	and	Fair			
					Total	Value ⁽¹⁾	Total		Fair
									Value ⁽¹⁾
(Sell US\$/Buy NT\$) Contract amount	US\$ 13.7				US\$ 13.7	NT\$ 0.4	US\$ 16.9	NT\$ (1.4)	
Average contractual exchange rate (against NT\$ dollars)	29.07				29.07		30.18		
(Sell NT\$/Buy JPY) Contract amount	NT\$ 44.1				NT\$ 44.1	NT\$ (0.4)			
Average contractual exchange rate (against NT\$ dollars)	0.34				0.34				
(Sell RMB/Buy US\$) Contract amount							RMB 1,118.7	NT\$ (10.9)	
Average contractual exchange rate (against RMB)							6.32		
(Sell EUR/Buy US\$) Contract amount									
Average contractual exchange rate (against US\$ dollars)									
(Sell EUR/Buy NT\$) Contract amount							EUR 38.6	NT\$ 14.9	
Average contractual exchange rate (against NT\$ dollars)							39.59		

Forward Exchange Agreements

(in millions)	As of December 31, 2012 Expected Maturity Dates						As of December 31, 2011		
	2013	2014	2015	2016	2017 and thereafter	Total	Aggregate Fair Value ⁽¹⁾	Total	Aggregate Fair Value ⁽¹⁾
(Sell US\$/Buy EUR) Contract amount								US\$ 2.1	NT\$ (0.9)
Average contractual exchange rate (against US\$ dollars)								1.31	
(Sell US\$/Buy JPY) Contract amount								US\$ 3.3	NT\$ 0.1
Average contractual exchange rate (against Japanese Yen)								77.92	
(Sell NT\$/Buy US\$) Contract amount	NT\$ 590					NT\$ 590	NT\$ (0.2)	NT\$ 163.5	NT\$ (0.1)
Average contractual exchange rate (against NT\$ dollars)	28.94					28.94		30.28	
(Sell US\$/Buy RMB) Contract amount	US\$ 20					US\$ 20	NT\$ (7.7)		
Average contractual exchange rate (against Japanese Yen)	6.24					6.24			
(Sell NT\$/Buy EUR) Contract amount	NT\$ 9,417					NT\$ 9,417	NT\$ 34.3		
Average contractual exchange rate (against NT\$ dollars)	38.28					38.28			

Cross Currency Swap

(in millions)	As of December 31, 2012 Expected Maturity Dates						As of December 31, 2011	
	2012	2013	2014	2015	2016 onward	Total	Aggregate Fair Value ⁽¹⁾	Total
(Sell NT\$/Buy US\$) Contract amount	NT\$1,083.1					NT\$1,083.1	NT\$ (0.7)	NT\$ 420.4
Range of interest rate paid	0%					0%		0%
Range of interest rate received	0.06%					0.06%		0.48%
(Sell US\$/Buy NT\$) Contract amount	US\$275					US\$275	NT\$ (1.8)	
Range of interest rate paid	0.14%~0.17%					0.14%~0.17%		
Range of interest rate received	0%					0%		

⁽¹⁾ Fair value represents the amount of the receivable from or payable to the counter-parties if the contracts were terminated on the balance sheet date.

Other Market Risk. In addition to our interests in VIS, SSMC, VisEra, Mcube, GUC and Motech, we have made investments in equity securities including convertible bonds issued by private companies related to semiconductor and other technology industries mostly through a number of investment funds. As of December 31, 2012, the aggregate carrying value of these investments on our balance sheet was NT\$3,605 million (US\$124 million). As of December 31, 2012, approximately NT\$2,976 million (US\$102 million) of this amount in venture capital investments was made through InveStar Semiconductor Development Fund, and InveStar Semiconductor Development Fund (II), our two 97.1% owned subsidiaries, Emerging Alliance Fund L.P., VentureTech Alliance Fund II, and VentureTech Alliance Fund III, our 99.5%, 98.0% and 99.0% respectively owned subsidiaries. The carrying value of these investments in private companies and in the investment funds are subject to fluctuation based on many factors such as prevailing market conditions. Moreover, because most of the investments are unlisted securities, the fair market value may be significantly different from our carrying value. Upon any subsequent sale of our investments, we may not be able to realize our carrying value as of December 31, 2012 or any subsequent date. As of December 31, 2012, we also had investments in the amount of NT\$46,219 million (US\$1,591 million), of which, NT\$41,162 million (US\$1,417 million) was classified as available-for-sale which predominantly consists of our investment in ASML shares with a carrying value of NT\$38,751 million (US\$1,334 million) and NT\$5,057 million (US\$174 million) was classified as held-to-maturity. We have experienced declines in the value of certain investments and recorded an impairment loss of NT\$3,045 million (US\$105 million) in 2012. As of December 31, 2012, our net unrealized gain related to bonds and publicly traded stocks was NT\$7,973 million (US\$274 million).

RECENT DEVELOPMENTS

TSMC Sales Report (Consolidated)

The tables below set forth net sales data that have been prepared in accordance with the International Financial Reporting Standards (IFRS) as issued by International Accounting Standards Board. All other financial information in this report are, unless otherwise indicated or required by context, prepared and presented in accordance with R.O.C. GAAP.

(Unit: NT\$ million)

Period	January 2013	December 2012	M-o-M Increase (Decrease) %	January 2012	Y-o-Y Increase (Decrease) %
Net Sales	47,439	37,154	27.7	34,606	37.1

* Year 2013 and 2012 figures have not been audited or reviewed by our independent auditor.

* January and December 2012 figures have been recalculated based on IFRS.

On a consolidated basis, net sales for January 2013 were approximately \$47.44 billion, an increase of 27.7 percent from December 2012 and an increase of 37.1 percent over January 2012.

Period	February 2013	January 2013	M-o-M Increase (Decrease) %	February 2012	Y-o-Y Increase (Decrease) %
Net Sales	41,182	47,439	(13.2)	33,893	21.5

* Year 2013 and 2012 figures have not been audited or reviewed by our independent auditor.

* February 2012 figure has been recalculated based on IFRS.

On a consolidated basis, net sales for February 2013 were approximately NT\$41.18 billion, a decrease of 13.2 percent from January 2013 and an increase of 21.5 percent over February 2012. Revenues for January through February 2013 totaled NT\$88.62 billion, an increase of 29.4 percent compared to the same period in 2012.

Issuance of NT Denominated Bonds

In January and February of 2013, we issued NT\$45 billion (US\$1.5 billion) of NT denominated bonds. The bonds have interest rates ranging from 1.23% to 1.50% and maturities ranging from 2018 to 2023. We expect to use the proceeds from these bonds to finance the Company's capacity expansion.

Forward-Looking Statements

Certain statement in this press release may constitute forward-looking statements within the meaning of U.S. securities laws, including without limitation statements about the business outlook, forecast business plans and growth strategies of TSMC. Forward-looking statements include all statements that are not historical facts and can be identified by the use of forward-looking terminology such as the words anticipates, believes, expects, may, will, would, should, seeks, intends, plans, estimates, or the negative of any thereof or other variations thereof or comparable terminology, or by discussions of strategy or intentions. These statements are based upon the Company's current expectations and assumptions and are not guarantees of future actions or performance. These statements are inherently subject to risks and uncertainties that could cause actual results to differ from those anticipated, projected, or implied. Actual results or actions may differ materially from which is expressed or forecasted. Certain factors that could cause actual results to differ include unforeseen developments in the Company's business or industry, changes in law or regulations and other factors described in the Company's filings with Securities and Exchange Commission. As a result, these statements speak only as of the date they were made and the Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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