

6

Financial Highlights & Analysis

TSMC's gross profit margin was 54.4% in 2023.

6.1 Financial Highlights

6.1.1 Condensed Balance Sheet

Condensed Balance Sheet from 2019 to 2023 (Consolidated)

Unit: NT\$ thousands

Item	Year	2019	2020	2021	2022	2023
Current Assets		822,613,914	1,092,185,308	1,607,072,907	2,052,896,744	2,194,032,910
Long-term Investments		30,172,039	27,728,208	29,384,701	68,927,920	129,442,117
Property, Plant and Equipment		1,352,377,405	1,555,589,120	1,975,118,704	2,693,836,970	3,064,474,984
Right-of-use Assets		17,232,402	27,728,382	32,734,537	41,914,136	40,424,830
Intangible Assets		20,653,028	25,768,179	26,821,697	25,999,155	22,766,744
Other Assets (Note 1)		21,756,244	31,712,208	54,370,909	81,203,953	81,229,630
Total Assets		2,264,805,032	2,760,711,405	3,725,503,455	4,964,778,878	5,532,371,215
Current Liabilities						
Before Distribution		590,735,701	617,151,048	739,503,358	944,226,817	913,583,316
After Distribution		655,561,652	681,976,999	810,811,904	1,015,535,363	1,004,345,564 (Note 2)
Noncurrent Liabilities		51,973,905	292,938,358	815,266,892	1,060,063,194	1,135,525,052
Total Liabilities						
Before Distribution		642,709,606	910,089,406	1,554,770,250	2,004,290,011	2,049,108,368
After Distribution		707,535,557	974,915,357	1,626,078,796	2,075,598,557	2,139,870,616 (Note 2)
Equity Attributable to Shareholders of the Parent						
Capital Stock		259,303,805	259,303,805	259,303,805	259,303,805	259,320,710
Capital Surplus		56,339,709	56,347,243	64,761,602	69,330,328	69,876,381
Retained Earnings						
Before Distribution		1,333,334,979	1,588,686,081	1,906,829,661	2,637,524,688	3,158,030,792
After Distribution		1,268,509,028	1,523,860,130	1,835,521,115	2,566,216,142	3,067,268,544 (Note 2)
Others		(27,568,369)	(54,679,873)	(62,608,515)	(20,505,626)	(28,314,256)
Equity Attributable to Shareholders of the Parent						
Before Distribution		1,621,410,124	1,849,657,256	2,168,286,553	2,945,653,195	3,458,913,627
After Distribution		1,556,584,173	1,784,831,305	2,096,978,007	2,874,344,649	3,368,151,379 (Note 2)
Noncontrolling Interests		685,302	964,743	2,446,652	14,835,672	24,349,220
Total Equity						
Before Distribution		1,622,095,426	1,850,621,999	2,170,733,205	2,960,488,867	3,483,262,847
After Distribution		1,557,269,475	1,785,796,048	2,099,424,659	2,889,180,321 (Note 2)	3,392,500,599 (Note 2)

Note 1: Other assets consist of deferred income tax assets, refundable deposits, and other noncurrent assets.

Note 2: The amount was approved by Board of Directors on February 6, 2024.

Condensed Balance Sheet from 2019 to 2023 (Unconsolidated)

Unit: NT\$ thousands

Item	Year	2019	2020	2021	2022	2023
Current Assets		355,118,125	580,949,248	783,205,937	1,118,550,389	1,185,788,564
Long-term Investments		559,380,999	565,432,338	603,640,944	728,961,910	1,095,656,042
Property, Plant and Equipment		1,310,900,634	1,511,784,556	1,889,970,529	2,432,675,050	2,453,465,322
Right-of-use Assets		15,030,020	25,184,827	30,123,052	39,051,427	37,872,705
Intangible Assets		16,271,444	21,733,597	22,910,400	21,456,104	17,684,064
Other Assets (Note 1)		18,774,850	28,420,547	48,644,283	81,724,184	83,612,587
Total Assets		2,275,476,072	2,733,505,113	3,378,495,145	4,422,419,064	4,874,079,284
Current Liabilities						
Before Distribution		605,540,547	680,529,735	704,833,370	899,245,600	763,602,324
After Distribution		670,366,498	745,355,686	776,141,916	970,554,146	854,364,572 (Note 2)
Noncurrent Liabilities		48,525,401	203,318,122	505,375,222	577,520,269	651,563,333
Total Liabilities						
Before Distribution		654,065,948	883,847,857	1,210,208,592	1,476,765,869	1,415,165,657
After Distribution		718,891,899	948,673,808	1,281,517,138	1,548,074,415	1,505,927,905 (Note 2)
Equity						
Capital Stock		259,303,805	259,303,805	259,303,805	259,303,805	259,320,710
Capital Surplus		56,339,709	56,347,243	64,761,602	69,330,328	69,876,381
Retained Earnings						
Before Distribution		1,333,334,979	1,588,686,081	1,906,829,661	2,637,524,688	3,158,030,792
After Distribution		1,268,509,028	1,523,860,130	1,835,521,115	2,566,216,142	3,067,268,544 (Note 2)
Others		(27,568,369)	(54,679,873)	(62,608,515)	(20,505,626)	(28,314,256)
Total Equity						
Before Distribution		1,621,410,124	1,849,657,256	2,168,286,553	2,945,653,195	3,458,913,627
After Distribution		1,556,584,173	1,784,831,305	2,096,978,007	2,874,344,649	3,368,151,379 (Note 2)

Note 1: Other assets consist of deferred income tax assets, refundable deposits, and other noncurrent assets.

Note 2: The amount was approved by Board of Directors on February 6, 2024.

6.1.2 Condensed Statement of Comprehensive Income

Condensed Statement of Comprehensive Income from 2019 to 2023 (Consolidated)

Unit: NT\$ thousands (Except EPS: NT\$)

Item	Year	2019	2020	2021	2022	2023
Net Revenue		1,069,985,448	1,339,254,811	1,587,415,037	2,263,891,292	2,161,735,841
Gross Profit		492,701,896	711,130,120	819,537,266	1,348,354,806	1,175,110,628
Income from Operations		372,701,090	566,783,698	649,980,897	1,121,278,851	921,465,606
Non-operating Income and Expenses		17,144,246	17,993,482	13,145,417	22,911,867	57,705,718
Income before Income Tax		389,845,336	584,777,180	663,126,314	1,144,190,718	979,171,324
Net Income		345,343,809	518,158,082	597,073,134	1,016,900,515	837,767,517
Other Comprehensive Income (Loss) for the Year, Net of Income Tax		(11,823,562)	(30,321,802)	(7,619,456)	42,430,165	(8,813,644)
Total Comprehensive Income for the Year		333,520,247	487,836,280	589,453,678	1,059,330,680	828,953,873
Net Income Attributable to:						
Shareholders of the Parent		345,263,668	517,885,387	596,540,013	1,016,530,249	838,497,664
Noncontrolling Interests		80,141	272,695	533,121	370,266	(730,147)
Total Comprehensive Income Attributable to:						
Shareholders of the Parent		333,440,460	487,563,478	588,918,059	1,059,124,890	830,509,542
Noncontrolling Interests		79,787	272,802	535,619	205,790	(1,555,669)
Basic/Diluted Earnings Per Share (Note)		13.32	19.97	23.01	39.20	32.34

Note: Based on weighted average shares and diluted weighted average shares outstanding in each year.

Condensed Statement of Comprehensive Income from 2019 to 2023(Unconsolidated)

Unit: NT\$ thousands (Except EPS: NT\$)

Item	Year	2019	2020	2021	2022	2023
Net Revenue		1,059,646,793	1,314,793,013	1,574,745,881	2,252,320,561	2,153,285,095
Gross Profit		480,143,141	682,004,023	788,629,037	1,300,392,888	1,130,624,931
Income from Operations		365,923,992	543,465,507	629,632,836	1,090,746,689	907,372,855
Non-operating Income and Expenses		22,821,227	39,153,435	30,869,355	49,927,127	70,398,381
Income before Income Tax		388,745,219	582,618,942	660,502,191	1,140,673,816	977,771,236
Net Income		345,263,668	517,885,387	596,540,013	1,016,530,249	838,497,664
Other Comprehensive Income (Loss) for the Year, Net of Income Tax		(11,823,208)	(30,321,909)	(7,621,954)	42,594,641	(7,988,122)
Total Comprehensive Income for the Year		333,440,460	487,563,478	588,918,059	1,059,124,890	830,509,542
Basic/Diluted Earnings Per Share (Note)		13.32	19.97	23.01	39.20	32.34

Note: Based on weighted average shares and diluted weighted average shares outstanding in each year.

6.1.3 Financial Analysis

Financial Analysis from 2019 to 2023 (Consolidated)

		2019	2020	2021	2022	2023
Capital Structure Analysis	Debt Ratio (%)	28.38	32.97	41.73	40.37	37.04
	Long-term Fund to Property, Plant and Equipment (%)	123.79	137.80	151.18	149.25	150.72
Liquidity Analysis	Current Ratio (%)	139.25	176.97	217.32	217.42	240.16
	Quick Ratio (%)	124.92	154.35	190.61	193.65	212.46
	Times Interest Earned (Times)	120.92	281.95	123.48	80.18	54.08
Operating Performance Analysis	Average Collection Turnover (Times)	7.95	9.35	9.20	10.52	9.96
	Days Sales Outstanding	45.91	39.04	39.67	34.70	36.65
	Average Inventory Turnover (Times)	6.20	5.70	4.65	4.42	4.18
	Average Inventory Turnover (Days)	58.87	64.04	78.49	82.58	87.32
	Average Payment Turnover (Times)	15.48	15.45	17.10	17.40	17.34
	Property, Plant and Equipment Turnover (Times)	0.88	0.92	0.90	0.97	0.75
Total Assets Turnover (Times)		0.49	0.53	0.49	0.52	0.41
Profitability Analysis	Return on Total Assets (%)	15.99	20.69	18.56	23.64	16.14
	Return on Equity attributable to Shareholders of the Parent (%)	20.94	29.84	29.69	39.76	26.18
	Operating Income to Paid-in Capital Ratio (%)	143.73	218.58	250.66	432.42	355.34
	Pre-tax Income to Paid-in Capital Ratio (%)	150.34	225.52	255.73	441.25	377.59
	Net Margin (%)	32.28	38.69	37.61	44.92	38.75
	Basic Earnings Per Share (NT\$)	13.32	19.97	23.01	39.20	32.34
	Diluted Earnings Per Share (NT\$)	13.32	19.97	23.01	39.20	32.34
Cash Flow	Cash Flow Ratio (%)	104.13	133.30	150.39	170.57	135.94
	Cash Flow Adequacy Ratio (%)	106.60	100.74	97.84	101.82	100.63
	Cash Flow Reinvestment Ratio (%)	8.45	11.24	13.56	17.25	10.84
Leverage	Operating Leverage	2.41	1.97	2.05	1.77	2.03
	Financial Leverage	1.01	1.00	1.01	1.01	1.01
	Advanced Technologies (7-nanometer and below) Percentage of Wafer Sales (%)	27	41	50	53	58
	Sales Growth (%)	3.73	25.17	18.53	42.61	-4.51
	Net Income Growth (%)	-1.67	50.00	15.19	70.40	-17.51

Analysis of deviation of 2023 vs. 2022 over 20%:

1. Times interest earned decreased by 33% mainly due to increase in interest expenses.
2. Property, Plant and Equipment Turnover (Times) decreased by 23% mainly due to increase in average Property, Plant and Equipment.
3. Total Assets Turnover (Times) decreased by 21% mainly due to increase in average total assets.
4. Return on Total Assets decreased by 32% mainly due to increase in average total assets and decrease in net income.
5. Return on Equity attributable to Shareholders of the Parent decreased by 34% mainly due to increase in average Equity attributable to Shareholders of the Parent and decrease in net income.
6. Cash Flow Ratio decreased by 20% as a result of decrease in cash generated by operating activities.
7. Cash Flow Reinvestment Ratio decreased by 37% as a result of decrease in cash generated by operating activities.

* Glossary

1. Capital Structure Analysis

- (1) Debt Ratio = Total Liabilities / Total Assets
- (2) Long-term Fund to Property, Plant and Equipment Ratio = (Shareholders' Equity + Noncurrent Liabilities) / Net Property, Plant and Equipment

2. Liquidity Analysis

- (1) Current Ratio = Current Assets / Current Liabilities
- (2) Quick Ratio = (Current Assets - Inventories - Prepaid Expenses) / Current Liabilities
- (3) Times Interest Earned = Earnings before Interest and Taxes / Interest Expenses

3. Operating Performance Analysis

- (1) Average Collection Turnover = Net Sales / Average Trade Receivables (including Accounts Receivable and Notes Receivable originated from operation)
- (2) Days Sales Outstanding = 365 / Average Collection Turnover
- (3) Average Inventory Turnover = Cost of Sales / Average Inventory
- (4) Average Inventory Turnover Days = 365 / Average Inventory Turnover
- (5) Average Payment Turnover = Cost of Sales / Average Trade Payables (including Accounts Payable and Notes Payable originated from operation)
- (6) Property, Plant and Equipment Turnover = Net Sales / Average Net Property, Plant and Equipment
- (7) Total Assets Turnover = Net Sales / Average Total Assets

4. Profitability Analysis

- (1) Return on Total Assets = (Net Income + Interest Expenses * (1 - Effective Tax Rate)) / Average Total Assets
- (2) Return on Equity Attributable to Shareholders of the Parent = Net Income Attributable to Shareholders of the Parent / Average Equity Attributable to Shareholders of the Parent
- (3) Operating Income to Paid-in Capital Ratio = Operating Income / Paid-in Capital
- (4) Pre-tax Income to Paid-in Capital Ratio = Income before Tax / Paid-in Capital
- (5) Net Margin = Net Income / Net Sales
- (6) Earnings Per Share = (Net Income Attributable to Shareholders of the Parent - Preferred Stock Dividend) / Weighted Average Number of Shares Outstanding

5. Cash Flow

- (1) Cash Flow Ratio = Net Cash Provided by Operating Activities / Current Liabilities
- (2) Cash Flow Adequacy Ratio = Five-year Sum of Cash from Operations / Five-year Sum of Capital Expenditures, Inventory Additions, and Cash Dividend
- (3) Cash Flow Reinvestment Ratio = (Cash Provided by Operating Activities - Cash Dividends) / (Gross Property, Plant and Equipment + Long-term Investments + Other Noncurrent Assets + Working Capital)

6. Leverage

- (1) Operating Leverage = (Net Sales - Variable Cost) / Income from Operations
- (2) Financial Leverage = Income from Operations / (Income from Operations - Interest Expenses)

Financial Analysis from 2019 to 2023 (Unconsolidated)

		2019	2020	2021	2022	2023
Capital Structure Analysis	Debt Ratio (%)	28.74	32.33	35.82	33.39	29.03
	Long-term Fund to Property, Plant and Equipment Ratio (%)	127.39	135.80	141.47	144.83	167.54
Liquidity Analysis	Current Ratio (%)	58.64	85.37	111.12	124.39	155.29
	Quick Ratio (%)	45.81	65.93	84.33	100.95	123.93
	Times Interest Earned (Times)	122.80	330.85	261.58	277.57	183.38
Operating Performance Analysis	Average Collection Turnover (Times)	8.32	9.80	9.80	11.28	10.65
	Days Sales Outstanding	43.88	37.24	37.23	32.35	34.26
	Average Inventory Turnover (Times)	6.65	6.13	4.98	4.84	4.58
	Average Inventory Turnover Days	54.91	59.58	73.23	75.43	79.69
	Average Payment Turnover (Times)	15.10	14.89	17.06	17.68	17.55
	Property, Plant and Equipment Turnover (Times)	0.91	0.93	0.93	1.04	0.88
	Total Assets Turnover (Times)	0.49	0.52	0.52	0.58	0.46
Profitability Analysis	Return on Total Assets (%)	16.00	20.74	19.59	26.14	18.12
	Return on Equity (%)	20.94	29.84	29.69	39.76	26.18
	Operating Income to Paid-in Capital Ratio (%)	141.12	209.59	242.82	420.64	349.90
	Pre-tax Income to Paid-in Capital Ratio (%)	149.92	224.69	254.72	439.90	377.05
	Net Margin (%)	32.58	39.39	37.88	45.13	38.94
	Basic Earnings Per Share (NT\$)	13.32	19.97	23.01	39.20	32.34
	Diluted Earnings Per Share (NT\$)	13.32	19.97	23.01	39.20	32.34
Cash Flow	Cash Flow Ratio (%)	98.00	114.56	153.79	173.41	158.12
	Cash Flow Adequacy Ratio (%)	106.59	99.88	97.62	104.90	108.97
	Cash Flow Reinvestment Ratio (%)	8.23	10.93	14.20	18.23	11.39
Leverage	Operating Leverage	2.46	2.04	2.11	1.81	2.07
	Financial Leverage	1.01	1.00	1.00	1.00	1.01

Analysis of deviation of 2023 vs. 2022 over 20%:

1. Current Ratio increased by 25% mainly due to decrease in Current Liability.
2. Quick Ratio increased by 23% mainly due to decrease in Current Liability.
3. Times interest earned decreased by 34% mainly due to increase in interest expenses.
4. Return on Total Assets Turnover (Times) decreased by 20% mainly due to increase in average total assets.
5. Return on Total Assets decreased by 31% mainly due to increase in average total assets and decrease in net income.
6. Return on Equity decreased by 34% mainly due to increase in average equity and decrease in net income.
7. Cash Flow Reinvestment Ratio decreased by 38% as a result of decrease in cash generated by operating activities.

* Glossary

1. Capital Structure Analysis
 - (1) Debt Ratio = Total Liabilities / Total Assets
 - (2) Long-term Fund to Property, Plant and Equipment Ratio = (Shareholders' Equity + Noncurrent Liabilities) / Net Property, Plant and Equipment
2. Liquidity Analysis
 - (1) Current Ratio = Current Assets / Current Liabilities
 - (2) Quick Ratio = (Current Assets - Inventories - Prepaid Expenses) / Current Liabilities
 - (3) Times Interest Earned = Earnings before Interest and Taxes / Interest Expenses
3. Operating Performance Analysis
 - (1) Average Collection Turnover = Net Sales / Average Trade Receivables(including Accounts Receivable and Notes Receivable originated from operation)
 - (2) Days Sales Outstanding = 365 / Average Collection Turnover
 - (3) Average Inventory Turnover = Cost of Sales / Average Inventory
 - (4) Average Inventory Turnover Days = 365 / Average Inventory Turnover
 - (5) Average Payment Turnover = Cost of Sales / Average Trade Payables(including Accounts Payable and Notes Payable originated from operation)
 - (6) Property, Plant and Equipment Turnover = Net Sales / Average Net Property, Plant and Equipment
 - (7) Total Assets Turnover = Net Sales / Average Total Assets
4. Profitability Analysis
 - (1) Return on Total Assets = (Net Income + Interest Expenses * (1 - Effective Tax Rate)) / Average Total Assets
 - (2) Return on Equity = Net Income / Average Shareholders' Equity
 - (3) Operating Income to Paid-in Capital Ratio = Operating Income / Paid-in Capital
 - (4) Pre-tax Income to Paid-in Capital Ratio = Income before Tax / Paid-in Capital
 - (5) Net Margin = Net Income / Net Sales
 - (6) Earnings Per Share = (Net Income - Preferred Stock Dividend) / Weighted Average Number of Shares Outstanding
5. Cash Flow
 - (1) Cash Flow Ratio = Net Cash Provided by Operating Activities / Current Liabilities
 - (2) Cash Flow Adequacy Ratio = Five-year Sum of Cash from Operations / Five-year Sum of Capital Expenditures, Inventory Additions, and Cash Dividend
 - (3) Cash Flow Reinvestment Ratio = (Cash Provided by Operating Activities - Cash Dividends) / (Gross Property, Plant and Equipment + Long-term Investments + Other Noncurrent Assets + Working Capital)
6. Leverage
 - (1) Operating Leverage = (Net Sales - Variable Cost) / Income from Operations
 - (2) Financial Leverage = Income from Operations / (Income from Operations - Interest Expenses)

6.1.4 Auditors' Opinions from 2019 to 2023

Year	CPA	Audit Opinion
2019	Mei Yen Chiang, Yu-Feng Huang	An Unmodified Opinion
2020	Mei Yen Chiang, Yu-Feng Huang	An Unmodified Opinion
2021	Mei Yen Chiang, Shang Chih Lin	An Unmodified Opinion
2022	Mei Yen Chiang, Shang Chih Lin	An Unmodified Opinion
2023	Shih-Tsung Wu, Shang Chih Lin	An Unmodified Opinion

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6.1.5 Audit and Risk Committee's Review Report

The Board of Directors has prepared the Company's 2023 Business Report, Financial Statements, and proposal for allocation of quarterly earnings. The CPA firm of Deloitte & Touche was retained to audit TSMC's Financial Statements and has issued an audit report relating to the Financial Statements. The Business Report, Financial Statements, and quarterly earnings allocation proposal have been reviewed and determined to be correct and accurate by the Audit and Risk Committee members of Taiwan Semiconductor Manufacturing Company Limited. According to relevant requirements of the Securities and Exchange Act and the Company Law, we hereby submit this report.

Taiwan Semiconductor Manufacturing Company Limited

Chairman of the Audit and Risk Committee: Sir Peter L. Bonfield



February 6, 2024

6.1.6 Financial Difficulties

The Company should disclose the financial impact to the Company if the Company and its affiliated companies have incurred any financial or cash flow difficulties in 2022 and as of the date of this Annual Report: None.

6.1.7 Consolidated Financial Statements and Independent Auditors' Report along with Parent Company Only Financial Statements and Independent Auditors' Report

Please refer to Annual Report section (II), Financial Statements.

6.2 Financial Status and Operating Results

6.2.1 Financial Status

Consolidated

Unit: NT\$ thousands

Item	2023	2022	Difference	%
Current Assets	2,194,032,910	2,052,896,744	141,136,166	7%
Long-term Investments (Note 1)	129,442,117	68,927,920	60,514,197	88%
Property, Plant and Equipment	3,064,474,984	2,693,836,970	370,638,014	14%
Right-of-use Assets	40,424,830	41,914,136	(1,489,306)	-4%
Intangible Assets	22,766,744	25,999,155	(3,232,411)	-12%
Other Assets (Note 2)	81,229,630	81,203,953	25,677	0%
Total Assets	5,532,371,215	4,964,778,878	567,592,337	11%
Current Liabilities	913,583,316	944,226,817	(30,643,501)	-3%
Noncurrent Liabilities	1,135,525,052	1,060,063,194	75,461,858	7%
Total Liabilities	2,049,108,368	2,004,290,011	44,818,357	2%
Capital Stock	259,320,710	259,303,805	16,905	0%
Capital Surplus	69,876,381	69,330,328	546,053	1%
Retained Earnings	3,158,030,792	2,637,524,688	520,506,104	20%
Others Equity	(28,314,256)	(20,505,626)	(7,808,630)	-38%
Equity Attributable to Shareholders of the Parent	3,458,913,627	2,945,653,195	513,260,432	17%
Total Equity	3,483,262,847	2,960,488,867	522,773,980	18%

Note 1: Long-term investments consist of noncurrent financial assets at fair value through profit and loss, noncurrent financial assets at fair value through other comprehensive income, noncurrent financial assets at amortized cost, and investments accounted for using equity method.

Note 2: Other assets consist of deferred income tax assets, refundable deposits, and other noncurrent assets.

• Analysis of Deviation over 20%

Increase in Long-term Investments: The increase was mainly due to increase in financial assets at amortized cost and noncurrent financial assets at fair value through profit and loss.

Increase in Retained Earnings: The increase was mainly due to net income of 2023, partially offset by distribution of earnings.

Decrease in Others Equity: The decrease was mainly due to currency exchange loss arising from translation of foreign operations in 2023.

• Major Impact on Financial Position

The above deviations had no major impact on TSMC's financial position.

• Future Plan on Financial Position: Not applicable.

Unconsolidated

Unit: NT\$ thousands

Item	2023	2022	Difference	%
Current Assets	1,185,788,564	1,118,550,389	67,238,175	6%
Long-term Investments (Note 1)	1,095,656,042	728,961,910	366,694,132	50%
Property, Plant and Equipment	2,453,465,322	2,432,675,050	20,790,272	1%
Right-of-use Assets	37,872,705	39,051,427	(1,178,722)	-3%
Intangible Assets	17,684,064	21,456,104	(3,772,040)	-18%
Other Assets (Note 2)	83,612,587	81,724,184	1,888,403	2%
Total Assets	4,874,079,284	4,422,419,064	451,660,220	10%
Current Liabilities	763,602,324	899,245,600	(135,643,276)	-15%
Noncurrent Liabilities	651,563,333	577,520,269	74,043,064	13%
Total Liabilities	1,415,165,657	1,476,765,869	(61,600,212)	-4%
Capital Stock	259,320,710	259,303,805	16,905	0%
Capital Surplus	69,876,381	69,330,328	546,053	1%
Retained Earnings	3,158,030,792	2,637,524,688	520,506,104	20%
Others	(28,314,256)	(20,505,626)	(7,808,630)	-38%
Total Equity	3,458,913,627	2,945,653,195	513,260,432	17%

Note 1: Long-term investments consist of noncurrent financial assets at fair value through other comprehensive income, and investments accounted for using equity method.

Note 2: Other assets consist of deferred income tax assets, refundable deposits, and other noncurrent assets.

• Analysis of Deviation over 20%

Increase in Long-term Investments: The increase was mainly due to increase in investments accounted for using equity method.

Increase in Retained Earnings: The increase was mainly due to net income of 2023, partially offset by distribution of earnings.

Decrease in Others Equity: The decrease was mainly due to currency exchange loss arising from translation of foreign operations in 2023.

• Major Impact on Financial Position

The above deviations had no major impact on TSMC's financial position.

• Future Plan on Financial Position: Not applicable.

6.2.2 Financial Performance

Consolidated

Unit: NT\$ thousands

Item	2023	2022	Difference	%
Net Revenue	2,161,735,841	2,263,891,292	(102,155,451)	-5%
Cost of Revenue	986,625,213	915,536,486	71,088,727	8%
Gross Profit	1,175,110,628	1,348,354,806	(173,244,178)	-13%
Operating Expenses	253,833,716	226,707,552	27,126,164	12%
Other Operating Income and Expenses, Net	188,694	(368,403)	557,097	NM
Income from Operations	921,465,606	1,121,278,851	(199,813,245)	-18%
Non-operating Income and Expenses	57,705,718	22,911,867	34,793,851	152%
Income before Income Tax	979,171,324	1,144,190,718	(165,019,394)	-14%
Income Tax Expenses	141,403,807	127,290,203	14,113,604	11%
Net Income	837,767,517	1,016,900,515	(179,132,998)	-18%
Other Comprehensive Gain (Loss), Net of Income Tax	(8,813,644)	42,430,165	(51,243,809)	-121%
Total Comprehensive Income for the Year	828,953,873	1,059,330,680	(230,376,807)	-22%
Total Net Income Attributable to Shareholders of the Parent	838,497,664	1,016,530,249	(178,032,585)	-18%
Total Comprehensive Income Attributable to Shareholders of the Parent	830,509,542	1,059,124,890	(228,615,348)	-22%

● Analysis of Deviation over 20%

Increase in other Operating Income and Expenses, Net: The increase was mainly due to a net gain on disposal of property, plant and equipment in 2023.

Increase in Non-operating Income and Expenses: The increase was mainly due to higher interest income in 2023.

Decrease in Other Comprehensive Gain (Loss), Net of Income Tax: The decrease was mainly due to increase in currency exchange loss arising from translation of foreign operations in 2023.

Decrease in Total Comprehensive Income for the Year and Total Comprehensive Income Attributable to Shareholders of the Parent: The decrease was mainly due to lower net income in 2023.

● Sales Volume Forecast and Related Information

For additional details, please refer to "1. Letter to Shareholders".

● Major Impact on Financial Performance

The above deviations had no major impact on TSMC's financial performance.

● Future Plan on Financial Performance: Not applicable.

Unconsolidated

Unit: NT\$ thousands

Item	2023	2022	Difference	%
Net Revenue	2,153,285,095	2,252,320,561	(99,035,466)	-4%
Cost of Revenue	1,022,660,164	951,927,673	70,732,491	7%
Gross Profit	1,130,624,931	1,300,392,888	(169,767,957)	-13%
Operating Expenses	223,733,531	209,637,924	14,095,607	7%
Other Operating Income and Expenses, Net	481,455	(8,275)	489,730	NM
Income from Operations	907,372,855	1,090,746,689	(183,373,834)	-17%
Non-operating Income and Expenses	70,398,381	49,927,127	20,471,254	41%
Income before Income Tax	977,771,236	1,140,673,816	(162,902,580)	-14%
Income Tax Expenses	139,273,572	124,143,567	15,130,005	12%
Net Income	838,497,664	1,016,530,249	(178,032,585)	-18%
Other Comprehensive Gain (Loss), Net of Income Tax	(7,988,122)	42,594,641	(50,582,763)	-119%
Total Comprehensive Income for the Year	830,509,542	1,059,124,890	(228,615,348)	-22%

● Analysis of Deviation over 20%

Increase in other Operating Income and Expenses, Net: The increase was mainly due to a net gain on disposal of property, plant and equipment in 2023.

Increase in Non-operating Income and Expenses: The increase was mainly due to higher interest income and share of profits of subsidiaries and associates in 2023.

Decrease in Other Comprehensive Gain (Loss), Net of Income Tax: The decrease was mainly due to increase in currency exchange loss arising from translation of foreign operations in 2023.

Decrease in Total Comprehensive Income for the Year: The decrease was mainly due to lower net income in 2023.

● Sales Volume Forecast and Related Information

For additional details, please refer to "1. Letter to Shareholders".

● Major Impact on Financial Performance

The above deviations had no major impact on TSMC's financial performance.

● Future Plan on Financial Performance: Not applicable.

6.2.3 Cash Flow

Consolidated

Unit: NT\$ thousands

Cash Balance 12/31/2022	Net Cash Provided by Operating Activities in 2023	Net Cash Used in Investing Activities in 2023	Net Cash Generated by Financing Activities in 2023	Effect of Exchange Rate Changes on Cash and Cash Equivalents in 2023	Cash Balance 12/31/2023	Remedy for Liquidity Shortfall	
						Investment Plan	Financing Plan
1,342,814,083	1,241,967,347	(906,120,596)	(204,894,252)	(8,338,829)	1,465,427,753	None	None

• Analysis of Cash Flow

NT\$1,242.0 billion net cash generated by operating activities: mainly include net income, along with depreciation and amortization expenses.

NT\$906.1 billion net cash used in investing activities: primarily for capital expenditures.

NT\$204.9 billion net cash used in financing activities: mainly for cash dividend payment, partially offset by issuance of corporate bonds.

• Remedial Actions for Liquidity Shortfall

As a result of positive operating cash flows and cash on-hand, remedial actions are not required.

• Cash Flow Projection for Next Year: Not applicable.

Unconsolidated

Unit: NT\$ thousands

Cash Balance 12/31/2022	Net Cash Provided by Operating Activities in 2023	Net Cash Used in Investing Activities in 2023	Net Cash Used in Financing Activities in 2023	Cash Balance 12/31/2023	Remedy for Liquidity Shortfall	
					Investment Plan	Financing Plan
628,875,897	1,207,082,903	(588,128,653)	(529,126,435)	718,703,712	None	None

• Analysis of Cash Flow

NT\$1,207.1 billion net cash generated by operating activities: mainly include net income, along with depreciation and amortization expenses.

NT\$588.1 billion net cash used in investing activities: primarily for capital expenditures.

NT\$529.1 billion net cash used in financing activities: mainly for investment in subsidiaries and cash dividend payment, partially offset by issuance of corporate bonds and hedges of net investments in foreign operations.

• Remedial Actions for Liquidity Shortfall

As a result of positive operating cash flows and cash on-hand, remedial actions are not required.

• Cash Flow Projection for Next Year: Not applicable.

6.2.4 Recent Years Major Capital Expenditures and Impact on Financial and Business

Unit: NT\$ thousands

Plan	Actual or Planned Source of Capital	Total Amount for 2023 and 2022	Actual Use of Capital	
			2023	2022
Production Facilities, R&D and Production Equipment	Cash flow generated from operations and issuance of corporate bonds	2,010,767,157	938,456,321	1,072,310,836
Others	Cash flow generated from operations	21,721,798	11,360,504	10,361,294
Total		2,032,488,955	949,816,825	1,082,672,130

Based on capital expenditures listed above, TSMC's annual production capacity increased by approximately 0.8 million 12-inch equivalent wafers in 2023.

6.2.5 Long-term Equity Investment Policy and Results

TSMC's long-term equity investments, accounted for using the equity method, were all made for strategic purposes. In 2023, the gains from these investments amounted to NT\$4,655,098 thousand on a consolidated basis, down from the previous year mainly due to decreases in product demand. In the future, TSMC's long-term equity investments, accounted for using the equity method, will continue to focus on strategic purposes through prudent assessments.

6.3 Risk Management

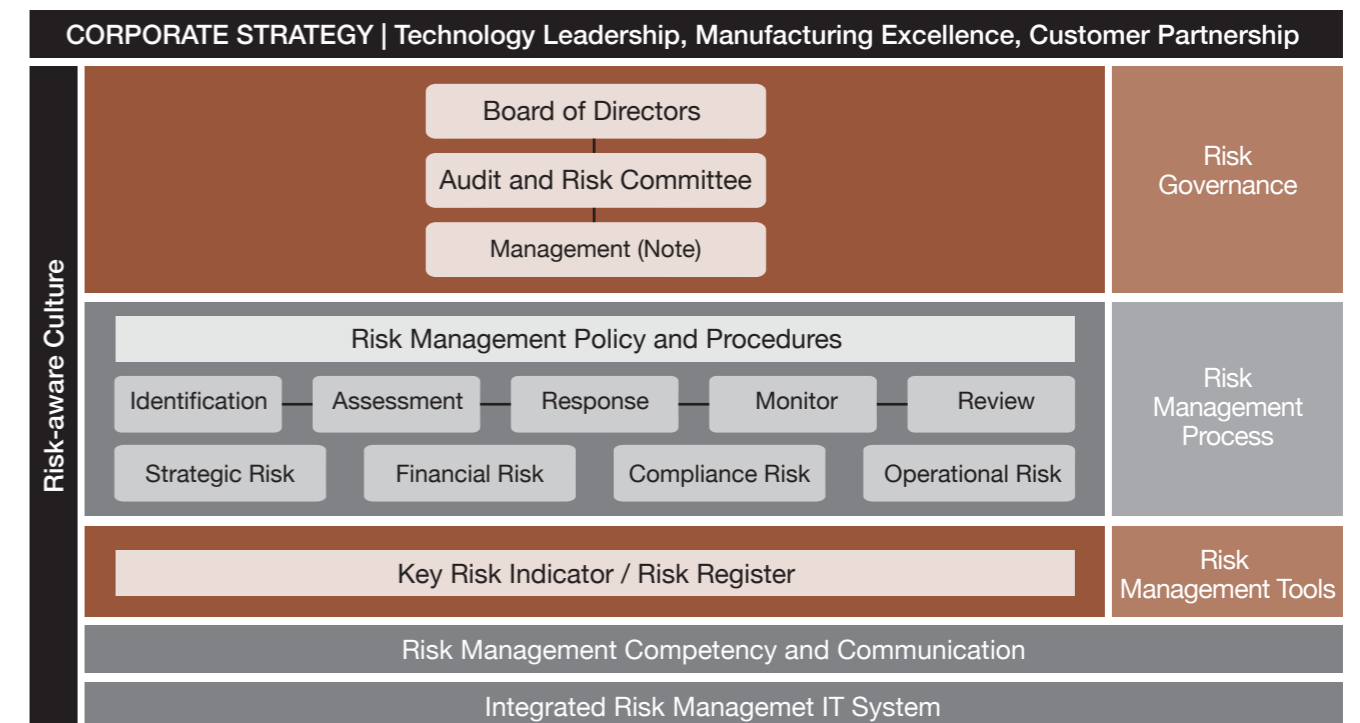
6.3.1 Risk Management Overview

Risk Management Policy and Framework

TSMC adopts a balanced risk-reward approach to risk management to optimize business returns while considering the holistic impact on corporate sustainability. TSMC's risk management policy, approved by the Board of Directors and signed by the Chairman, affirms the commitment to proactive and robust risk management system in assisting TSMC in making well-considered, risk-based decisions that fulfill the corporate vision and deliver sustainable value to TSMC and its stakeholders.

Adhering closely to the ISO 31000: 2018 Risk Management System and the Committee of Sponsoring Organizations of the Treadway Commission (COSO)'s Enterprise Risk Management – Integrated Framework, TSMC's enterprise risk management (ERM) framework was established to provide a systematic approach to risk management. It outlines the risk governance structure, the management process that integrates business operations, and tools that facilitate the monitoring of risks, as well as a formalized training and communication program in building risk competency and fostering a risk-aware culture, to assist the management in making informed risk-based decisions while implementing business strategies.

• Enterprise Risk Management Framework



Note: Includes the Risk Management Steering Committee, Risk Management Executive Council, Risk Management Taskforces, Central Crisis Command Center and Crisis Management Team

Risk Appetite and Risk Management Scope

TSMC has defined its risk appetite in statements that outline the nature and extent of risks that TSMC is willing to take in pursuit of its business goals:

- Risk taken should be carefully evaluated, commensurate with rewards and be in line with the Company’s strategic, investment, financial and corporate objectives.
- Risk considerations are an integral part of business operations and managed within the risk tolerance (risk indicators) of the divisions, of relevant functional units and of the Company itself.
- The Company will not invest or participate in any business activities that exceed its risk tolerance. Specifically, the Company does not safety related breaches or lapses, non-compliance with laws and regulations, or illegal acts such as fraud, bribery and corruption.

Following a five-step risk management process – identification, assessment, response, monitoring and review, risks assessments are performed by key functional units to form an enterprise-level risk map and mitigation plans, which are presented to the Audit and Risk Committee. This process is supported by ongoing education and awareness efforts in fostering a risk-aware culture and building risk competencies. TSMC recognizes that its systems and processes provide reasonable but not absolute assurance and hence continually strives to improve its ability to manage and respond to risks and opportunities that remain relevant and effective.

• TSMC’s Key Risks

Strategic Risks	Operational Risks
<ul style="list-style-type: none"> • Industry developments • Changes in technology • Decrease in demand and average selling price • Competition • Investment and capacity expansion 	<ul style="list-style-type: none"> • Natural and man-made disasters • Project management, construction of new fabs • Sales concentration • Purchasing concentration • Intellectual property rights • Mergers and acquisitions • IT security • Recruiting quality personnel • Future R&D plans and expected R&D spending • Change in corporate reputation and impact on the Company’s crisis management • Change in management
Financial Risks	
<ul style="list-style-type: none"> • Economic risks including interest rate fluctuation, foreign exchange volatility, inflation, and amendments to tax regulations or implementation of new tax laws • External financing • High-risk or highly leveraged investments; lending, endorsements, and guarantees for other parties; and financial derivative transactions • Impairment charges 	
Compliance Risks	
<ul style="list-style-type: none"> • Changes in the government policies and regulatory environment • Litigation and non-litigation matters • Non-compliance with export control, environmental and climate change related laws, regulations and accords, and failure to timely obtain requisite approvals necessary for conducting business 	

Risk Management Governance Structure

Risk management at TSMC involves both the Board of Directors and management in an effort to embed sound risk management practices in business decisions and operations across the Company. The Board of Directors is responsible for the governance of risk and has authorized the Audit and Risk Committee to review TSMC’s ERM framework. At the managerial level, risk management governance structure includes Risk Management Steering Committee, Risk Management Executive Council, taskforces and the risk management division.

Assisting the Audit and Risk Committee in establishing and overseeing a proactive and effective risk management system, the risk management division works with each function and fab in applying the ERM framework to assess and mitigate risks throughout TSMC by monitoring, implementing risk related policies and guidelines, as well as taking initiatives to support the implementation of ERM framework. Every six months, the risk management division reports to the Audit and Risk Committee on TSMC’s key risks and mitigation efforts. The Audit and Risk Committee’s chairperson then reports to the Board of Directors on the current risk profile and risk mitigation measures being taken.

• Risk Management Governance Structure



Risk management is a responsibility shared by both management and employees. All employees are required to be competent and accountable for managing risks related to their area of responsibility with clear risk ownership. TSMC Risk Management Academy is set up with the aim to equip and raise risk competencies for all levels of employees, including Board of Directors and management in support of an effective risk-aware culture embedding risk management as part of performance appraisal process promotes risk accountability and ownership. The roles and responsibilities of the risk management governance structure are defined as below:

Risk Management Steering Committee

- Advises the Board in determining overall risk appetite, tolerance, strategy and resource allocation, taking into account current and prospective macroeconomic, technological, regulatory, environmental and social developments and trends.
- Reviews and oversees the applicability and performances of the risk management framework, policy and procedures.
- Provides advice and assurance to the Board by adopting a holistic view of the key risks that TSMC is exposed to and approves the prioritization of risk mitigations.
- Sets the tone toward risk management from the top, provides sponsorship to initiatives and activities to nurture the desired risk culture, awareness and capabilities of effectively and sufficiently managing key risks and new type of risks, including clarifying risk ownership.

- Ensures that risk management is incorporated into strategic business development and operational planning, day-to-day management and decision making.
- Advises the Board on proposed transactions to address strategic risks and capitalize on opportunities.

Risk Management Executive Council

- Identifies potential and emerging risks that may impact TSMC in achieving its objectives and/or the continued effectiveness and efficiency of its business operations.
- Conducts risk assessments, defines mitigation plans, including incident management plans, provides sponsorship and allocates sufficient resources to enable timely and effective mitigation.
- Leads and drives cross-functional taskforces, meetings or other activities to ensure that risks are adequately and effectively mitigated, including collaboration with risk management division and various other parties.
- Defines key risk indicators (KRIs) to proactively monitor risk dynamics and respond in a timely and effective manner.
- Builds a risk-aware culture and raises risk competency in fabs and divisions, including but not limited to training, exercises and continuous improvements.
- Defines and facilitates action plans based on root cause analysis to prevent reoccurrences of major incidents, high-risk events and major findings raised from internal and external reviews.
- Reports to the risk management steering committee on the progress, effectiveness, and lessons learned, and implements the decisions made by the committee.

Risk Management Taskforce

- Identifies and assesses potential risks and threats that may prevent TSMC from achieving its business objectives and deploys appropriate mitigation measures.
- Plans and executes risk prevention and mitigation in accordance with various scenarios.
- Organizes and/or participates in cross-functional meetings, in addressing risks that span multiple disciplines or divisions/fabs.
- Participates in the implementation and execution of risk management initiatives and activities.
- Reviews the investigation of major incidents, high-risk events and major findings raised from internal and external checks for division. Monitors the effectiveness of action plans.

Risk Management Division

- Assists the Board in establishing and overseeing a proactive and effective mechanism of risk management and business continuity, including risk appetite and tolerance, risk strategy and management framework, policy, and procedures.
- Strengthens risk culture, awareness, and risk management capabilities through continuous trainings, communications and awareness programs.
- Identifies and analyzes the sources and categories of risks to the Company and regularly reviews their relevance.
- Facilitates risk management committees and risk owners in the implementation of risk management activities and initiatives to identify and manage risks, including the review of mitigation plans, business continuity, crisis and incident management plans; reviews the effectiveness of risk management activities through documented reports, management discussions and meetings.
- Coordinates cross-department and cross-functional interaction and communication of risk management operations and decisions, including implementing decisions of Risk Management Steering Committee.
- Consults with management, consultants and peers on best practices and standards for continuous improvement and benchmarking.
- Prepares reports to stakeholders that may be required from time to time by regulators, government agencies, insurers/brokers and customers, including an annual report on the implementation of Company's risk management system.

Crisis Management and Business Continuity Management

TSMC is committed to maintaining operational resilience and business continuity by following standards that enable the Company to respond effectively to business disruption. The Company is cognizant of the major risks of natural and man-made disasters, including earthquakes, flooding, typhoons, droughts, tsunamis, sandstorms, wildfires, volcanic eruptions, fire, gas/chemical leakage, pandemic, cyberattacks, supply chain disruption, geopolitical tension, sabotage, failure of critical facilities and equipment, and shortages in the supply of utilities, such as water, electricity and natural gas that could disrupt operations.

To mitigate the operational impact of crisis events, the risk management division implements pre-crisis risk assessment, response procedures and recovery plans. Exercises and drills are also conducted to validate emergency responses, crisis management, business continuity plans to enhance operational

preparedness. In major incidents or crisis events, the crisis management guidelines are followed. The Central Crisis Command Centre (C4), headed by the CEO and comprised of senior executives across key functions, provides guidance and decision-making to ensure a constant readiness-to-respond capability, including timely responses and communication to key stakeholders.

6.3.2 Strategic Risks

Risks Associated with Changes in Technology and Industry

• Industry Developments

The electronics industries and semiconductor market are cyclical and subject to significant and often rapid fluctuations in product demand, which could impact TSMC's semiconductor foundry business. Variations in customer order levels may result in volatility in the Company's revenue and earnings.

From time to time, the electronics and semiconductor industries have experienced significant and occasionally prolonged periods of downturns and overcapacity. Because TSMC is, and will continue to be, dependent on the demand of electronics and semiconductor companies for its services, periods of downturns and overcapacity in the general electronics and semiconductor industries could lead to reduced demand for overall semiconductor foundry services, including TSMC's services. If TSMC is not able to take appropriate actions, such as reducing its costs to sufficiently offset declines in demand, the Company's revenue, margins and earnings will likely suffer during periods of downturns and overcapacity.

• Changes in Technology

The semiconductor industry and its technologies are constantly changing. TSMC competes by developing process technologies using increasingly advanced nodes and manufacturing products with more functions. The Company also competes by developing new derivative technologies. If TSMC does not anticipate these changes in technologies and rapidly develop new and innovative technologies, or if the Company's competitors unforeseeably gain sudden access to additional technologies, TSMC may not be able to provide foundry services on competitive terms. For example, the global surge in the development of artificial intelligence (AI) has had a significant impact on customer demand for advanced semiconductor chips and the market dynamics in TSMC's industry; thus, TSMC's ability to continuously develop relevant

technologies, products and services to meet these customer needs will be critical for the Company to effectively compete in this space. TSMC also believes that the effective use of AI in its internal operations is important to its long-term success. As the AI technologies are rapidly evolving, if TSMC is unable to deploy new AI technologies in its internal operations as effectively as its competitors, it may hurt the Company's competitive position. In addition, TSMC's customers have significantly decreased the time in which their products or services are launched into the market. If TSMC is unable to meet these shorter product time-to-market, it risks losing these customers. These factors have also been intensified by the shift of the global technology market to consumer driven products, such as smartphones, and increasing competition and concentration of customers (all further discussed among these risk factors).

Also, the uncertainty and instability inherent in advanced technologies impose challenges for achieving expected product quality and product yield. If TSMC fails to maintain quality, it may result in loss of revenue and additional cost, as well as loss of business or customer trust. If TSMC is unable to overcome the above factors, it may become less competitive and its revenue may decline significantly.

Regarding the response measures for the above-mentioned risks, please refer to "2.2.4 TSMC Position, Differentiation and Strategy" on page 19-21 of this Annual Report.

• IT Security

Even though TSMC has established a comprehensive internet and computing security network, the Company cannot guarantee that its computing systems which control or maintain vital corporate functions, such as manufacturing operations and enterprise accounting, would be completely immune to crippling cyberattacks. In the event of a serious cyberattack, TSMC's systems may lose important corporate data or its production lines may be shut down pending the resolution of such attack. Major cyberattacks could also lead to loss or divulgence of trade secrets and other sensitive information, such as proprietary information of its customers and other stakeholders and personal information of its employees. While TSMC seeks to continuously review and assess its cybersecurity policies and procedures to ensure their adequacy and effectiveness, it can't guarantee that it will not be susceptible to new and emerging risks and attacks in the evolving landscape of cybersecurity threats. For example, as

AI continues to evolve, cyber-attackers could also use AI to develop malicious codes and sophisticated phishing attempts.

Malicious hackers may also try to introduce computer viruses, corrupted software or ransomware into TSMC's network systems to disrupt its operations, blackmail the Company to regain control of its computing systems, or spy on it for sensitive information. These attacks may result in TSMC having to pay damages for its delayed or disrupted orders or incur significant expenses in implementing remedial and improvement measures to further enhance its cybersecurity network, and may also expose the Company to significant legal liabilities arising from or related to legal proceedings or regulatory investigations associated with such breaches.

TSMC has experienced in the past, and may in the future be subject to attacks by malicious software. TSMC has implemented and continually updated rigorous cybersecurity measures to prevent and minimize harm caused by such attacks. Such measures include establishing advanced portable virus scanning tools and new fab tool virus scanning including internal computer scanning to protect fab equipment, strengthening GIGAFAB® network architecture and network controls to prevent computer viruses from spreading among tools and fabs, installing advanced malware defense solutions for critical computers, building a defense shield in the Cloud, including new Cloud solution architecture to secure internet access, and enhancing Cloud solutions and public website security policy and framework, adopting advanced solutions against distributed denial-of-service attacks, introducing new technology for data protection, enhancing and certifying office computer security compliance, improving email phishing defense and implementing employee awareness testing. TSMC also established an integrated and automatic security operation platform, enabled the automation of cybersecurity event detection and response, enhanced internal security assessment automation, conducted external red team testing and practiced responses to ransomware attacks. For supply chain risk reduction, through collaboration, TSMC helps major suppliers improve their security, shares best practices at industry security events, and conducts supplier security onsite audits. Moreover, TSMC has collaborated with the Semiconductor Equipment and Materials Institute (SEMI) to set up a Semiconductor Cybersecurity Committee to promote security standards (SEMI E187) as well as security assessment methodology for improving the resilience of the semiconductor supply chain, an action that was recognized by a 2023 SEMI International

Standards award. While these ongoing enhancements further improve Company's cybersecurity defense solutions, there can be no assurance that the Company is immune to cyberattacks.

In addition, TSMC employs certain third-party service providers for itself and its affiliates worldwide with whom it needs to share highly sensitive and confidential information to enable them to provide the relevant services. While TSMC requires such third-party service providers to strictly fulfill the confidentiality and/or internet security requirements in its service agreements with them, there is no assurance that each of them will comply with such obligations. Moreover, such third-party service providers may also be susceptible to cyberattacks. If TSMC or its service providers are not able to timely resolve the respective technical difficulties caused by such cyberattacks, or ensure the integrity and availability of its data (and data belonging to its customers and other third parties) or maintain control of its or its service providers' computing systems, the Company's commitments to its customers and other stakeholders may be materially impaired and its results of operations, financial condition, prospects and reputation may also be materially and adversely affected.

Risks Associated with Decrease in Demand and Average Selling Price

A vast majority of the Company's revenue is derived from customers who use TSMC's products in high performance computing ("HPC"), smartphones, IoT, automotive, and digital consumer electronics. Any deterioration in or a slowdown in the growth of such end markets resulting in a substantial decrease in the demand for overall global semiconductor foundry services, including TSMC's products and services, could adversely affect the Company's revenue. Further, semiconductor manufacturing facilities require substantial investment to construct and are largely fixed cost assets once they are in operation. Because the Company owns most of its manufacturing capacities, a significant portion of its operating costs is fixed. In general, these costs do not decline when customer demand or TSMC's capacity utilization rates drop, and thus declines in customer demand, among other factors, may significantly decrease TSMC's margins. Conversely, as product demand rises and factory utilization increases, the fixed costs are spread over increased output, which can improve TSMC's margins. In addition, the historical trend of declining average selling prices ("ASP") of end-use applications places downward pressure on the prices of the components that go into such applications. Decreases in the ASP of end

use applications may increase pricing pressure on components produced by us, which, in turn, may negatively impact the Company's revenue, margin and earnings.

Risks Associated with Competition

The competition in the semiconductor foundry industry is fierce. The Company competes with other foundry service providers, as well as a number of integrated device manufacturers. Some of these companies may have access to more advanced or different technologies than TSMC. Other companies may have greater financial and other resources than TSMC, such as the possibility of receiving direct or indirect government subsidies, economic stimulus funds, or other incentives that may be unavailable to TSMC. The governments of the United States, China, Europe, South Korea and Japan provide various incentive programs to promote developments of their domestic semiconductor industries, such as the Creating Helpful Incentives to Produce Semiconductors and Science Act of 2022 (the "U.S. CHIPS Act"), which provides financial incentives to incentivize the development of U.S. semiconductor industry. Although governments in certain of the countries or regions where TSMC is currently expanding or planning to expand its production capacity have extended or may in the future extend certain financial incentives to the Company, there is no assurance that TSMC will be able to receive such financial incentives at the levels TSMC anticipates or at all. Additionally, any financial incentives the Company receives may be subject to conditions imposed by the grantors, such as restrictions on the expansion of facilities in foreign countries of concern and on joint research and technology licensing efforts with foreign entities of concern on any technology or product that raises national security concerns, or the grantors could seek to recover any funds provided to TSMC, or cancel, reduce or deny TSMC's requested subsidies or grants in the future. This could materially increase TSMC's costs or otherwise adversely affect its operations.

Moreover, the Company's competitors may, from time to time, also decide to undertake aggressive pricing initiatives in one or several technology nodes. The Company's competitors may also compete for its customers who seek to diversify their supply chains. These competitive activities may decrease TSMC's customer base, TSMC's pricing, or both. If TSMC is unable to compete effectively with such competitors on technology, manufacturing capacity, product quality, supply chain diversification and resilience, and customer satisfaction, it risks losing customers or business to such contenders.

Risks Associated with Changes in the Government Policies and Regulatory Environment

TSMC management closely monitors all domestic and foreign governmental policies and regulations that might impact TSMC's business and financial operations. During 2023 and as of the date of this Annual Report, the following changes or developments in governmental policies and regulations may influence the Company's business operations:

The manufacturing, assembling and testing of TSMC's products require the use of chemicals and materials that are subject to environmental, climate related, health and safety laws and regulations issued worldwide as well as international accords such as the Paris Agreement. Climate change related laws or regulations currently are too indefinite for the Company to assess the impact on our future financial condition with any degree of reasonable certainty. For example, the Taiwan "Greenhouse Gas Reduction and Management Act", which became effective on July 1, 2015, was amended and was renamed as "Climate Change Response Act". The amendments became effective in February 2023, which set a goal of reaching net-zero emissions in Taiwan by 2050 and also established a carbon fee system to collect carbon fees on direct and indirect emissions from emitters whose emissions reach certain thresholds. The government will start collecting carbon fees from 2025 but the rate for such fees has yet to be determined by the relevant authorities. We could be required to pay any incurred carbon fees since our emission levels exceed applicable thresholds pursuant to the current regulatory requirements, which will result in increased operating costs for us and affect us financially to a certain extent. We expect to see more of its relevant regulations promulgated by the regulators in the future. Also, the R.O.C. legislative authority is reviewing, at all times, various environmental issues to develop laws and regulations relating to environmental protection and climate related changes. The impact of such laws and regulations, as well as of the carbon fee, is indeterminable at the moment. It is not expected that other governmental policies or regulatory changes would materially impact TSMC's operations or financial condition.

6.3.3 Operational Risks

Natural and Man-Made Disaster

TSMC is committed to maintaining operational resilience in accordance with business continuity management standards that equips it with the capability to respond effectively to business disruption. Disruptions caused by natural and

man-made disasters, including earthquakes, flooding, typhoons, droughts, tsunamis, sandstorms, wildfires, volcanic eruptions, fire, gas/chemical leakage, pandemic, supply chain disruption, geopolitical tensions, cyberattacks, sabotage, failure of critical facilities and equipment, shortages in the supply of utilities, such as water, electricity and natural gas, etc., could interrupt TSMC's operations.

Most of TSMC's production facilities, as well as those of many of its suppliers, customers and upstream providers of complementary semiconductor manufacturing services, are located in areas susceptible to natural disasters and may face potential shortages of electricity and/or water, which could cause interruptions to TSMC's operations.

Thus, if one or more natural disasters result in a prolonged disruption to TSMC's operations or those of its customers or suppliers, or if any of its fabs or vendor facilities were to be damaged or cease operations as a result of an unforeseen disruptive event, it could reduce TSMC's manufacturing capacity and cause the loss of important customers and thereby have an adverse, material impact on its operational and financial performance.

To cope with possible droughts resulted from severe climate change, TSMC implemented manufacturing process water saving, as well as building up industrial water recycling plants, using household water and cooperating with government to mitigate water shortage risk. As part of TSMC's business continuity plans, measures taken include water conservation measures, use of alternative water sources. Close monitoring of water situation including stress testing and exercises are carried out to validate our response plan.

TSMC has occasionally suffered power outages, dips or surges caused by difficulties encountered by its electricity supplier or other power consumers on the same power grid. Some of these incidents have resulted in interruptions to TSMC's operations. Such outages, shortages or interruptions in electricity supply could further be exacerbated by changes in the energy policy of the governments. If TSMC is unable to secure reliable and uninterrupted supply of electricity to power its manufacturing fabs, its ability to fill customers' orders would be jeopardized. Moreover, TSMC has encountered and may continue to encounter increases in the prices of utilities. For example, effective from April 1, 2024, TSMC is subject to a higher electricity tariff rate in Taiwan, which is estimated to increase by 25%, as compared to the tariff rate applicable to

the Company in 2023. The increased prices for electricity could increase TSMC's manufacturing costs and therefore adversely impact TSMC's financial results.

If such events were to occur over prolonged periods of time, TSMC's operations and financial performance may be materially adversely affected. Moreover, TSMC's future capacity expansions in Taiwan and elsewhere could be curtailed by utility shortages.

TSMC has further strengthened its business continuity management, which includes periodic risk assessments and mitigations, and the establishment of taskforces before emergency events. The taskforces define emergency response, crisis communication, recovery plans and preventative measures based on the thorough analysis of derivative effects and alternative solutions to ensure the impacts of people injury, business interruption, finance are minimized. TSMC reviews periodically its business continuity plans and refines them to reflect exercise results and implementation. In response to the impact of the earthquakes that occurs in Taiwan, TSMC continues to improve its earthquake emergency response, tool anchorage and seismic isolation facilities, and readiness for tool salvage and production recovery. These improvements have been integrated into new fab design. TSMC's business continuity procedures were further enhanced through close reference to ISO 22301 business continuity management system (BCMS).

TSMC maintains a comprehensive risk management system dedicated to human safety, the conservation of natural resources and the protection of property. In order to cope effectively with emergencies and natural disasters, management at each facility has developed comprehensive plans and procedures that focus on risk prevention, emergency response, crisis management and business continuity. All TSMC manufacturing fabs have been ISO 14001 certified (environmental management) and ISO 45001 certified (occupational health and safety management). All manufacturing fabs in Taiwan have also been TOSHMS (Taiwan Occupational Safety and Health Management System) certified. New fabs will also attain the above certifications within 18 months after acquiring factory registration certification.

TSMC and many of its suppliers use flammable and toxic materials in their manufacturing processes and are therefore subject to risks that cannot be completely eliminated arising from explosion, fire, or environmental influences. Although

TSMC maintains multiple layers of risk prevention and protection, as well as fire and casualty insurance, TSMC's risk management and insurance coverage may not always be sufficient to cover all of its potential losses. If any of TSMC's fabs or vendor facilities were to be damaged or cease operations as a result of an explosion, fire or environmental causes, it could reduce the TSMC's manufacturing capacity leading to the loss of important sales and customers and have a negative impact on TSMC's financial performance. In addition to periodic fire-protection inspections and firefighting drills, TSMC has also carried out a corporate-wide fire risk mitigation project focused on managerial and hardware improvements.

TSMC continues to monitor key disruptive threats to its business operations and adapt the plans to ensure operational resilience.

Risks Associated with Capacity Expansion

TSMC performs long-term market demand forecasts for its products and services to manage its overall capacity. Based on its market demand forecasts, the Company has continued to add capacity to meet market needs for its products and services, including in Taiwan, in Arizona, U.S., in Nanjing, China, in Kumamoto, Japan and in Dresden, Germany.

Implementing these capacity expansion plans will increase its costs, and the increases may be substantial. For example, the Company would need to build new facilities, purchase additional equipment and hire and train personnel to operate the new equipment. If TSMC does not increase its net revenue accordingly, its financial performance may be adversely affected by these increased costs.

In addition, market conditions are dynamic and TSMC's market demand forecasts may change significantly at any time. During periods of decreased demand, certain manufacturing lines or tools in some of the Company's manufacturing facilities may be suspended or shut down temporarily. However, if demand subsequently increases rapidly over a short period of time, TSMC may not be able to restore the capacity in a timely manner to take advantage of the upturn. In such circumstances, its financial performance and competitiveness may be adversely affected.

In order to mitigate the risk associated with capacity expansion, TSMC continuously watches for changes in market conditions and works closely with its customers. When market demand is not as expected, the Company tries to adjust its capacity

plans in a timely manner to reduce the impact on its financial performance.

Risks Associated with Construction of New Fabs

The Company has multiple expansion projects that are currently underway, including the design and construction of new fabs worldwide. Global expansion has required and will continue to require considerable managerial, financial and other resources. The Company expects to face particular challenges in global expansion and operations, including but not limited to:

- higher costs associated with construction of new fabs, establishing supply chains for various materials in different overseas locations, the impact on the Company's ability to sustain its current level of productivity and manufacturing efficiency provided by its ecosystem of interconnected semiconductor fabs, employees and suppliers in the R.O.C., and recruiting and retaining talent in various overseas locations;
- labor shortages, interruptions in the supply chains for various materials, and construction issues, which could substantially delay the completion of the Company's expansion projects, and could further result in substantial additional costs or failure to meet its capacity expansion plans;
- disruptions to the Company's operations caused by natural or man-made disasters, including earthquakes, flooding, typhoons, droughts, tsunamis, sandstorms, wildfires, volcanic eruptions, fire, gas/chemical leakage, pandemic, supply chain disruption, geopolitical tensions, sabotage, failure of critical facilities and equipment and shortages in the supply of utilities, such as water, electricity, and natural gas, etc.;
- scarcity of industrial-use land, which could limit the Company's future expansion of operations;
- compliance with applicable foreign laws and regulations, and the risk of penalties if the Company's practices are deemed not to be in compliance;
- challenges in managing information technology infrastructure in multiple locations and across different systems and risks of our information technology infrastructure succumbing to cyberattacks by third parties worldwide;
- adverse changes relating to government grants or other government incentives;
- challenges in creating an inclusive workplace in new sites to embrace the cultural differences and managing the operation over large geographic distances;
- limited or insufficient intellectual property protection or difficulties enforcing the Company's rights to intellectual property; and
- exposure to different tax jurisdictions and potential adverse tax consequences.

If TSMC is unable to overcome the above challenges, the Company's business, financial condition and results of operations could be adversely affected.

Risks Associated with Sales Concentration

Over the years, the Company's customer profile and the nature of the Company's customers' business have changed dramatically. While TSMC generates revenue from hundreds of customers worldwide, TSMC's ten largest customers in 2021, 2022 and 2023 accounted for approximately, 71%, 68% and 70% of TSMC's net revenue in the respective year. TSMC's largest customer in 2021, 2022 and 2023 accounted for 26%, 23% and 25% of the Company's net revenue in the respective year. TSMC's second largest customer in 2021, 2022 and 2023 accounted for 10%, less than 10% and 11% of TSMC's net revenue in the respective year.

A more concentrated customer base will subject TSMC's revenue to seasonal demand fluctuations from the Company's large customers, and cause different seasonal patterns in the Company's business. This customer concentration results in part from the changing dynamics of the electronics industry with the structural shift to mobile and high performance computing (HPC) 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, TSMC has seen changes in the nature of its customers' business models in response to this new business model paradigm. For example, there is a growing trend among system companies designing their own semiconductors and working directly with the semiconductor foundries, which makes their products and services more marketable in a changing consumer market.

Also, since the global semiconductor industry has become increasingly competitive, some of TSMC's customers have engaged in industry consolidations in order to remain competitive. Such consolidations have taken the form of mergers and acquisitions. If more of TSMC's major customers consolidate, this will further decrease the overall number of the Company's customer pool. In addition, regulatory restrictions, such as export controls directed at TSMC's major customers, could impact the Company's ability to supply products to those customers or reduce those customers' demand for TSMC's products and services and thus impact their business operations.

The loss of, or significant curtailment of purchases by, one or more of the Company's top customers including curtailments

due to increased competitive pressures, industry consolidation, changes in applicable regulatory restrictions, product designs, manufacturing sourcing or outsourcing policies or practices of these customers, the timing of customer inventory adjustments, or changes in its major customers' business models, may adversely affect TSMC's results of operations and financial condition.

Risks Associated with Purchasing Concentration

• Raw Materials

TSMC's production operations require that it obtain adequate supplies of raw materials, such as silicon wafers, gases, chemicals and photoresist, on a timely basis and at commercially reasonable prices. In the past, shortages in the supply of some materials, whether by specific suppliers or by the semiconductor industry generally, have resulted in occasional industry-wide price adjustments and delivery delays. Moreover, major natural disasters, trade barriers and political or economic turmoil, including military conflicts and inflation, occurring within the country of origin of such raw materials may also significantly disrupt the availability of such raw materials or increase their prices. Also, since TSMC procures some of its raw materials from sole-sourced suppliers, there is a risk that the Company's needs for such raw materials may not be met or that back-up supplies may not be readily available. Importation and domestic production limitations may also limit the Company's ability to obtain adequate supplies of raw materials as well as materials of the necessary quality. In addition, recent trade tensions could result in increased prices or even unavailability of raw materials due to tariffs, export control or other non-tariff barriers. TSMC's revenue and earnings could decline if it is 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. To reduce the supply chain risk and to manage costs effectively, TSMC commits resources toward developing new supply sources and developing a future capacity plan with qualified raw material suppliers. Furthermore, the Company continually encourages its suppliers to reduce their supply chain risk by decentralizing production plants to improve their cost competitiveness and to support TSMC global demands in a timely fashion.

TSMC not only operates world-class manufacturing process and facilities but needs sufficient world-class high-quality raw materials. As a result, TSMC engages early and extensively with primary suppliers on managing quality and capacity issues so as to be prepared for any unexpected need to ramp up or curtail

production. To streamline supply chain risk, the Company communicates early on with major material suppliers regarding quality and capacity topics and has formed a dedicated team for supplier plant onsite or remote audits to extend supply chain best practices to its upstream suppliers. In addition, in response to the rapid increase or decrease in production capacity of new products, TSMC has continued to improve its inventory monitoring system to achieve more accurate demand forecasts and ensure that the supply chain maintains sufficient inventory levels. The Company also performs supply chain risk assessments to ensure that critical suppliers meet various standards in labor, ethics, environmental, safety and health (ESH) practices and business continuity plans (BCPs).

• Equipment

The Company's operations and ongoing expansion plans depend on its ability to obtain necessary equipment and related services available from a limited number of suppliers. As a result, TSMC may encounter the situation of limited supply and/or long delivery cycles. To better manage its supply chain, the Company evaluates and projects delivery lead times to minimize the impact of supply chain risks on operating costs. TSMC has also implemented various collaborative business models and risk management contingencies with suppliers to ensure supply and shorten the procurement lead time. To enhance its sourcing capabilities for its global sites, the company has also taken steps to strengthen its understanding of local regulations, policies, and supply chains. However, if TSMC is unable to acquire in a timely manner the equipment and parts it needs, it may fail to successfully implement capacity expansion plans and exploit time sensitive business opportunities. Additionally, ongoing trade tensions could result in increased prices for, or even unavailability of, key equipment, through delay or denial of necessary export licenses, adoption of additional export control measures and other tariff or non-tariff barriers. If TSMC is unable to obtain equipment in a timely fashion to fulfill its customers' demand for technology and production capacity, or unable to do so at a reasonable cost, its financial condition and results of operations could be negatively impacted.

Risks Associated with Intellectual Property Rights

The Company's ability to compete successfully and to achieve future growth depends in part on the continued strength of its intellectual property portfolio. While the Company actively enforces and protects our intellectual property rights, there can be no assurance that its efforts will be adequate to prevent the misappropriation or improper use of its proprietary

technologies, software, trade secrets or know-how. Also, the Company cannot assure you that, as its business or business models expand into new areas, it will be able to develop independently the technologies, patents, software, trade secrets or know-how necessary to conduct its business or that it can do so without unknowingly infringing the intellectual property rights of others. As a result, the Company may have to rely on, to a certain degree, licensed technologies and patent licenses from others. To the extent that the Company relies on licenses from others, there can be no assurance that it will be able to obtain any or all of the necessary licenses in the future on terms it considers reasonable or at all. The lack of necessary licenses could expose the Company to claims for damages and/or injunctions from third parties, as well as claims for indemnification by its customers in instances where it has contractually agreed to indemnify its customers against damages resulting from infringement claims.

The Company has received, from time to time, communications from third parties, including non-practicing entities and semiconductor companies, asserting that TSMC's technologies, its manufacturing processes, or the design IPs of the semiconductors made by TSMC or the use of those semiconductors by its customers may infringe their patents or other intellectual property rights. Because of the nature of the industry, its market position, and the expansion of its manufacturing operations outside of Taiwan, the Company may receive an increased number of such communications in the future. The assertions made and lawsuits initiated by litigious, well-funded, non-practicing entities are particularly aggressive in their monetary demand and in seeking court-issued injunctions. Such lawsuits and assertions may increase TSMC's cost of doing business and may potentially be extremely disruptive if these asserting entities succeed in blocking the trade of products made and services offered by TSMC. Also, with the expansion of its manufacturing operations into certain non-R.O.C jurisdictions, it has faced increased challenges in managing risks of intellectual property misappropriation. Despite our efforts to adopt robust measures to mitigate the risk of intellectual property misappropriation in such new jurisdictions, we cannot guarantee that the protection measures we adopted will be sufficient to prevent us from potential infringements by others, or at all.

If the Company fails to obtain or maintain certain technologies or intellectual property licenses or fails to prevent our intellectual property from being misappropriated and, if litigation relating to alleged intellectual property matters

occurs, it could: (1) prevent the Company from manufacturing particular products or selling particular services or applying particular technologies; and (2) reduce our ability to compete effectively against entities benefiting from our misappropriated intellectual property, which could reduce its opportunities to generate revenue.

The Company has taken related measures to minimize potential loss of shareholder value arising from intellectual property claims and litigation filed against it. These measures include: strategically obtaining licenses from certain semiconductor and other technology companies as needed; timely securing intellectual property rights originating within and outside of TSMC for defensive and/or offensive protection of TSMC technology and business; and aggressively defending against baseless litigation.

Risks Associated with Litigious and Non-litigious Matters

As is the case with many companies in the semiconductor industry, the Company has received from time to time communications from third parties asserting that its technologies, its manufacturing processes, or the design of the semiconductors made by TSMC or the use of those semiconductors by its customers may infringe upon their patents or other intellectual property rights. These assertions have at times resulted in litigation by or against the Company and settlement payments by the Company. Irrespective of the validity of these claims, the Company could incur significant costs in the defense thereof or could suffer adverse effects on its operations. The Company is also subject to antitrust compliance requirements and scrutiny by governmental regulators in multiple jurisdictions. Any adverse results of such proceeding or other similar proceedings that may arise in those jurisdictions could harm TSMC's business and distract its management, and thereby have a material adverse effect on its results of operations or prospects, and subject the Company to potential significant legal liability.

Currently, TSMC's material legal proceeding is as follows:

In September 2022, Daedalus Prime LLC ("Daedalus") filed complaints in the U.S. International Trade Commission ("ITC") and the U.S. District Court for the Eastern District of Texas alleging that TSMC, TSMC North America, and other companies infringe four U.S. patents. The ITC instituted an investigation in October 2022. In June 2023, Daedalus dropped two of the asserted patents in the ITC. Also in June 2023, Daedalus filed another complaint in the Eastern District

of Texas alleging that TSMC infringes five U.S. patents. In September 2023, the ITC granted the parties' joint motion to suspend the procedural schedule while the parties finalize the settlement agreement and then request termination of the ITC Investigation and related litigations. In October 2023, the parties jointly requested the ITC to terminate the investigation and Eastern District of Texas to dismiss the related litigations. In November 2023, the ITC investigation was terminated and the related litigations in the Eastern District of Texas were dismissed.

Other than the matter described above, as of the date of this Annual Report, TSMC is not currently a party to any other material legal proceedings.

Risks Associated with Mergers and Acquisitions

In 2023 and as of the date of this Annual Report, TSMC had not conducted any merger or acquisition.

Risks Associated with Recruiting Quality Personnel

TSMC relies on the continued services and contributions of its management team, as well as skilled technical and professional personnel. The Company's business could suffer from the inability to fulfill personnel needs with high quality professionals in a timely fashion caused by the loss of personnel, talent shortages, illegal talent poaching, immigration controls, or related changes in market demand for our products and services. Since there is fierce competition for talent recruitment, the Company cannot ensure timely fulfillment of its personnel demand.

In order to reduce the risk of talent recruitment, TSMC encourages job rotation and employs an on-the-job training and certification system. In this way, employees can continuously learn and enhance their work efficiency and effectiveness in the workplace. Moreover, TSMC creates multiple recruitment channels and continues to hire diverse top-notch, talented professionals from Taiwan and overseas. At the same time, the Company continues to expand industry-academic cooperation to meet outstanding talent at an early phase to recruit them in the future.

Future R&D Plans and Expected R&D Spending

For additional details, see "5.2.7 Future R&D Plans" on page 104-105 of this Annual Report.

Changes in Corporate Reputation and Impact on the Company's Crisis Management

TSMC has established an excellent reputation worldwide based on its core values of integrity, commitment, innovation and customer trust. The Company's positive image also reflects outstanding operations, rigorous corporate governance and dedication to sustainable responsibility by serving as a good corporate citizen. TSMC continues to pursue innovation in economic, environmental and social dimensions.

In 2023, TSMC was honored with numerous awards and citations for achievements in various areas including operations, corporate governance, patents, profit growth, investor relations, environmental protection, and corporate sustainability. The Company was selected as a part of the Dow Jones Sustainability World Index for the 23rd consecutive year. TSMC won first place in *CommonWealth* magazine's inaugural Talent Sustainability award and in the Taiwan Institute for Sustainable Energy's *Corporate Sustainability* award for 2023. The Company was recognized as a Taiwan Top Ten Sustainability Exemplary in the Corporate Sustainability report, and for Climate Leadership, Circular Economy Leadership, Supply Chain Management, Sustainable Water Management and Information Security Leadership. The Carbon Disclosure Project chose TSMC as a Supplier Engagement Leader in 2022, ranking in the top 5% of the Taiwan Stock Exchange corporate governance evaluation. The Company was named a member of *Fortune's* 2023 World's Most Admired Companies and the *Fortune* Global 500; *Forbes's* World's Largest Technology Companies in 2023; PricewaterhouseCoopers' Global Top 100 Companies by market capitalization; and the 2023 Carbon Clean 200™ list issued by the media research company Corporate Knights and the non-profit As You Sow organization. TSMC was honored to be a part of the World Benchmarking Alliance's SDG2000, the 2,000 Most Influential Companies, and included in Morgan Stanley Capital International's All Country World Index ESG Leaders, while being ranked AAA by MSCI Research in its ESG Indexes.

To promote sustainability, TSMC's ESG Steering Committee, led by Chairman Dr. Mark Liu, presented the fourth TSMC ESG Award in 2023, honoring internal organizations and divisions for tangible achievements in the Company's five ESG strategic directions: drive green manufacturing, build a responsible supply chain, create a diverse and inclusive workplace, develop talent, and care for the disadvantaged. At the same time, this

award presentation encouraged all employees to propose new ideas for sustainability to be assessed for feasibility and potential incorporation in the Company's implementation plans. Compared to 1,880 sustainability proposals in the third year, the fourth annual ESG Award generated 3,166 innovative ideas, adding new energy to the Company's culture of sustainability.

Mindful of its global reputation, TSMC employs numerous preventative measures to address potential risks from earthquakes, fires, IT service disruption, yield loss, cyberattacks, supply chain disruption, pandemics, environmental events, and utility supply disruption. TSMC practices crisis management, implements recovery measures to deal with possible crisis events, maintains a crisis command center for control guidelines, and prepares emergency response procedures to ensure timely and prompt responses during a crisis. TSMC also performs regular exercises for crisis scenarios to ensure that crisis management procedures are comprehensive and valid. In 2023, TSMC received a rating of Low ESG Risk from the Sustainalytics ESG Risk Ratings.

TSMC's environment, safety and health committee holds monthly meetings to coordinate with relevant departments in each fab to conduct emergency response drills and continuously improve their notification and operational procedures to ensure clear channels of communication to stakeholders if a crisis arises, with the public relations division serving as the designated gateway for external communications.

In 2023, the Board of TSMC took steps to enhance its corporate governance by expanding and strengthening the functions and responsibilities of its committees. The "Audit Committee" was renamed as the "Audit and Risk Committee" to assist the Board in overseeing the quality and integrity of accounting, auditing, reporting, financial control practices, and risk management structure. TSMC also deepened the risk management mechanisms of its overseas subsidiaries by conducting risk management and business continuity management workshops and incident commander trainings. Business continuity plans are also rehearsed and validated through regular exercises to ensure timely and effective responses. These efforts aim to fortify operational resilience and raise risk awareness of operational preparedness across TSMC's global footprint.

If the above-mentioned crisis occurs, relevant personnel at TSMC's headquarters and global operating locations can deploy comprehensive emergency response measures to eliminate or minimize the impact on personnel safety, environment, property and operations. Responders also involve the public relations division from initial stage to ensure timely, clear and consistent external communication regarding the situation.

Risks Associated with Change in Management

In 2023 and as of the date of this Annual Report, there were no such risks for TSMC.

Risks Regarding Non-Compliance with Export Control, Environmental and Climate Change Related Laws, Regulations and Accords, and Failure to Timely Obtain Requisite Approvals Necessary for Conducting Business

Because TSMC engages in manufacturing activities in multiple jurisdictions and conducts business with its customers located worldwide, such activities are subject to a myriad of governmental regulations. For example, the manufacturing, assembling and testing of TSMC's products require the use of equipment that is subject to export control laws and regulations, as well as metals, chemicals, and materials that are subject to environmental, climate-related, health and safety, and humanitarian forced labor prohibition and conflict-free sourcing laws, regulations and guidelines issued worldwide. The Company's failure to comply with any such laws or regulations, as amended from time to time, and its failure to comply with any information and document sharing requests from the relevant authorities in a timely manner could result in:

- significant penalties and legal liabilities, such as the denial of import or export permits or third party private lawsuits, criminal or administrative proceedings;
- the temporary or permanent suspension of production of the affected products;
- the temporary or permanent inability to procure or use certain production critical chemicals or materials;
- unfavorable alterations in TSMC's manufacturing, fabrication and assembly and test processes;
- challenges from its customers that place TSMC at a significant competitive disadvantage, such as loss of actual or potential sales contracts in case the Company is unable to satisfy the applicable legal standard or customer requirement;
- restrictions on TSMC's operations or sales;

- loss of tax benefits, including termination of current tax incentives, disqualification of tax credit application and repayment of the tax benefits that the Company is not entitled to; and
- damages to TSMC's goodwill and reputation.

Complying with applicable laws and regulations, such as environmental and climate related laws and regulations, could also require TSMC, among other things, to do the following: (1) purchase, use or install remedial equipment; (2) implement remedial programs such as climate change mitigation programs and air pollution reduction plans; (3) modify its product designs and manufacturing processes, or incur other significant expenses such as paying any incurred carbon fees if the Company's emission levels exceed applicable thresholds, and obtaining renewable energy sources, renewable energy certificates or carbon credits, substitute raw materials or chemicals that may cost more or be less available for the Company's operations.

TSMC's inability to timely obtain approvals necessary for the conduct of its business could impair its operational and financial results. For example, if the Company is unable to timely obtain environmental related approvals needed to undertake the development and construction of a new fab or expansion project, then such inability may delay, limit, or increase the cost of its expansion plans that could also in turn adversely affect its business and operational results. In light of increased public interest in environmental issues, TSMC's operations and expansion plans may be adversely affected or delayed in response to public concern and social environmental pressures even if the Company complies with all applicable laws and regulations.

TSMC believes that climate change should be regarded as a significant corporate risk that must be managed to improve competitiveness. For TSMC's climate change related risks and control measures, see the "Climate Change and Energy Management" section under "7.2.1 Environmental Protection" on page 158-159 of this Annual Report.

6.3.4 Financial Risks

Economic Risks

Any future systemic political, economic or financial crisis or market volatility, including but not limited to interest rate and foreign exchange rate fluctuations, inflation or deflation or changes in economic, fiscal and monetary policies in

major economies, could cause revenue or profits for the semiconductor industry as a whole to decline dramatically. If the economic conditions or financial conditions of the Company's customers were to deteriorate, the demand for its products and services may decrease and additional accounting related allowances may be required, which could reduce TSMC's operating and net income.

• Interest Rate Fluctuation

TSMC is exposed to interest rate risks primarily in relation to its investment portfolio and outstanding debt. Changes in interest rates affect the interest earned on the Company's cash and cash equivalents and fixed income securities, the fair value of those securities, as well as the interest paid on its debt.

The objective of TSMC's investment policy is to achieve a return that will allow the Company to preserve principal and support liquidity requirements. The policy generally requires the Company to invest in investment grade securities and limits the amount of credit exposure to any one issuer. The majority of TSMC's fixed income investments are fixed-rate securities, which are classified as financial assets at fair value through other comprehensive income ("FVTOCI") or amortized cost. For those fixed income investments classified as financial assets at FVTOCI, changes in their fair value are recognized through other comprehensive income; for those classified as financial assets at amortized cost, changes in their fair value are not reflected in asset values unless the assets are sold.

TSMC has entered and may in the future enter into interest rate derivatives to partially hedge interest rate risk on its fixed income investments and anticipated debt issuance. However, these hedges can offset only a limited portion of the financial impact from movements in interest rates.

The majority of TSMC's debt is fixed-rate and measured at amortized cost and, as such, changes in interest rates would not affect future cash flows or the carrying amount.

• Foreign Exchange Volatility

Substantially all of TSMC's sales are denominated in U.S. dollars and over half of its capital expenditures are denominated in currencies other than the NT dollar, primarily in U.S. dollars, Euros and Japanese yen. As a result, any significant fluctuations to its disadvantage in the exchange rate of the NT dollar against such currencies, in particular a weakening of the U.S. dollar against the NT dollar, would have an adverse impact on the Company's revenue and operating profit as expressed in NT

dollars. For example, every one percent depreciation of the U.S. dollar against the NT dollar would result in an approximately 0.4 percentage point decrease in the Company's operating margin based on its 2023 results.

Conversely, if the U.S. dollar appreciates significantly versus other major currencies, the demand for the products and services of TSMC's customers and for its goods and services will likely decrease, which will negatively affect the Company's revenue.

TSMC uses foreign currency derivatives contracts, such as currency forwards or currency swaps, and non-derivative financial instruments, such as foreign currency denominated debts, to protect against currency exchange rate risks associated with non-NT dollar-denominated assets and liabilities, investments in foreign subsidiaries, and certain forecasted transactions. These hedges reduce, but do not entirely eliminate, the effect of foreign currency exchange rate movements on its assets and liabilities.

Fluctuations in the exchange rate between the U.S. dollar and the NT dollar may affect the U.S. dollar value of the Company's common shares and the market price of the Company's American Depositary Shares (ADSs) as well as any cash dividends paid in NT dollars on TSMC's common shares represented by ADSs.

• Inflation

TSMC is subject to the effects of inflation through increases in the cost of items such as raw materials and equipment used to produce its products, wage expenses and employee benefits, electricity costs, and costs in relation to construction of fabs. Although TSMC does not believe that inflation has had a material impact on its financial position or results of operations to date, a high inflation in the future may have an adverse effect on the Company's ability to maintain current levels of profit margin if the selling prices of its products and services do not increase with these increased costs.

Amendments to Tax Regulations or Implementation of New Tax Laws

Any amendments to existing tax regulations or the implementation of any new tax laws in the jurisdictions in which TSMC operates its business may have an adverse effect on its net income.

While the Company is subject to tax laws and regulations in various jurisdictions in which it operates or conducts business, TSMC's principal operations are in the R.O.C. and it is exposed primarily to taxes levied by the R.O.C. government. The R.O.C. Controlled Foreign Company ("CFC") rules enacted in 2016 have been implemented since January 1, 2023, pursuant to which, certain profits retained at a CFC located in a low-tax jurisdiction would be taxable at its parent company in Taiwan. On the other hand, effective from January 1, 2023, the R.O.C. Statute for Industrial Innovation was amended such that eligible companies that develop innovative technologies domestically and possess leading position in global supply chain may claim investment tax credit of 25% on qualified R&D expenditure and 5% on procurement of machinery/equipment for advanced processes over a fiscal year. The Company is eligible for these new incentives pursuant to the R.O.C. Statute for Industrial Innovation. Further, changes in the tax laws of foreign jurisdictions could arise as a result of the base erosion and profit shifting (BEPS) project that was undertaken by the Organization for Economic Cooperation and Development (OECD). These changes may increase tax uncertainty and have an adverse effect on TSMC's operating results.

In order to control tax risk, the Company closely monitors all domestic and foreign governmental policies and regulations that might impact its financial operations. TSMC has established risk management procedures to collect information, analyze potential tax implications, and develop countermeasures.

Risks Associated with External Financing

In times of market instability, sufficient external financing may not be available to the Company on a timely basis, on commercially reasonable terms to the Company, or at all. If sufficient external financing is not available when TSMC needs such financing to meet its capital requirements, the Company may be forced to curtail its expansion, modify plans or delay the deployment of new or expanded services until it obtains such financing.

Risks Associated with High-Risk/Highly Leveraged Investments; Lending, Endorsements, and Guarantees for Other Parties; and Financial Derivative Transactions

In 2023 and as of the date of this Annual Report, TSMC made no high-risk or highly leveraged financial investments. All financial derivative transactions engaged by TSMC were strictly for hedging and not for trading or speculative purposes. All guarantees and intercompany loans provided by TSMC and

its subsidiaries were solely for TSMC and/or its wholly-owned subsidiaries. All guarantees and intercompany loans were in compliance with relevant rules and regulations.

To manage risks of various financial transactions, TSMC has established internal control policies and procedures based on sound financial and business practices, all in compliance with the relevant rules and regulations issued by the R.O.C. Financial Supervisory Commission. TSMC's policies and procedures include Procedures for Financial Derivatives Transactions, Procedures for Lending Funds to Other Parties, Procedures for Acquisition or Disposal of Assets, and Procedures for Endorsement and Guarantee.

Risks Associated with Impairment Charges

Under Taiwan-IFRSs, TSMC is required to evaluate its tangible assets, right-of-use 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, TSMC is required to record an impairment charge. TSMC is 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 the Company's net income.

The determination of an impairment charge at any given time is mainly based on the projected results of operations over several years subsequent to that time. Consequently, an impairment charge is more likely to occur during a period when the Company's operating results are otherwise already depressed. See "Note 5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION AND UNCERTAINTY" in Annual Report section (II), Financial Statements for a discussion of how TSMC assesses if an impairment charge is required and, if so, how the amount is determined.

6.3.5 Other Risks

Potential Impact and Risks Associated with Sales of Significant Numbers of Shares by TSMC's Directors, and/or Shareholders Who Own 10% or More of TSMC's Total Outstanding Shares

The value of TSMC shareholders' investment may be reduced by possible future sales of TSMC shares owned by major shareholders.

As of the date of this Annual Report, no single shareholder owned 10% or more of TSMC's total outstanding shares.

Risks of Trade Policies

As TSMC's revenue is primarily derived from sales to major economies in the world (please refer to "2.2.4 TSMC Position, Differentiation and Strategy" on page 19-21 of this annual report), any changes in the trade policies (such as the increase of tariffs on certain products, the implementation of import and export controls, and the adoption of other trade barriers) of such major economies can affect the sales of TSMC or its customers and thereby affect TSMC's operating results.

In 2020, the U.S. tightened its export control measures against Huawei Technology Co. Ltd. and its affiliates (collectively, "Huawei"). To comply with relevant laws and regulations, TSMC has discontinued shipment of products to Huawei since September 2020. Since February 2022, there have been expansive sanctions and export controls imposed by several countries and regions against Russia, including certain individuals and entities, in connection with the military conflict in Ukraine. In October 2022 and October 2023, the U.S. adopted additional export controls over specified countries (including China) under the U.S. Export Administration Regulations ("U.S. EAR") on certain advanced computing integrated circuits ("ICs"), computer commodities that contain such ICs, and certain semiconductor manufacturing items, as well as controls on transactions involving items for supercomputer and semiconductor manufacturing end-uses. The new controls add new license requirements for items subject to the U.S. EAR where the items are destined to a semiconductor fabrication facility in China that fabricates ICs meeting specified advanced node parameters as well as for U.S. persons' activities supporting such facility or semiconductor manufacturing items. In October 2022, the Company secured a one-year general authorization from the U.S. government, which allows TSMC to maintain the Company's fab's operations in Nanjing, China. This general authorization has been renewed and extended to be effective until May 31, 2024. TSMC is also applying for a Validated End-User (the "VEU") authorization for its Nanjing fab, which, once obtained, would be a permanent authorization that allows the Company to receive exports of eligible items from the U.S. without separate licenses. However, there is no assurance that TSMC will be able to obtain the VEU authorization for our Nanjing fab or that the obtained general authorization will not be terminated in the future. On the other hand, measures adopted by an affected country to counteract the impact of another country's actions or regulations could lead to significant legal liability to multinational corporations

including our own. For example, in January 2021, China adopted a blocking statute that, among other matters, entitles Chinese entities incurring damages from a multinational's compliance with foreign laws to seek civil remedies.

Imposition of trade barriers, including protectionist measures, sanctions and import and export controls (including without limitation the export control measures mentioned in the foregoing paragraph), could increase TSMC's manufacturing costs, limit TSMC's access to certain supplies, make TSMC's pricing less competitive, and impact the sales of TSMC or its customers. In 2023 and as of the date of this annual report, our current results of operations have not been materially affected. Nevertheless, depending on future developments of global trade tensions, such relevant regulations, rules, or measures may have an adverse impact on the Company's business and operations, and TSMC may incur significant legal liability and financial losses as a result.

TSMC continues to monitor the recent shifts in trade policies and measures among the relevant major economies and will take corresponding responsive actions in accordance with subsequent developments.