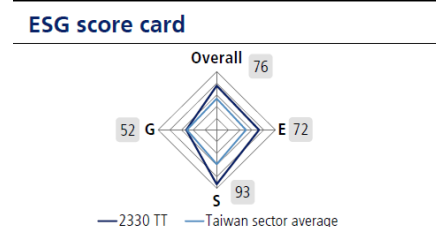


TSMC (2330.TW/2330 TT)

Margin guidance an upside surprise

FTSE4Good TIP Taiwan ESG Index stock				
Outperform · Maintained				
Price as of July 18 (NT\$)	1,005			
12M target price (NT\$)	1,290			
Previous target price (NT\$)	1,270			
Revised up (%)	1.6			
Upside (%)	28.4			
Key message				
1. Guidance roughly in line, margin outlook a beat.				
2. AI still a key driver; CoWoS supply-demand imbalance through 2025F.				
3. N3 & N2 demand better than expected.				
4. 2Q24 margin beat on more favorable forex.				
Trading data				
Mkt cap (NT\$bn/US\$m)	26,063 / 800,773			
Outstanding shares (mn)	25,934			
Foreign ownership (mn)	19,216			
3M avg. daily trading (mn)	32.77			
52-week trading range (NT\$)	519 – 1,080			
Performance				
	3M	6M	12M	
Absolute (%)	25	70.9	73	
Relative (%)	9.7	35.1	37.2	
Quarterly EPS				
NT\$	1Q	2Q	3Q	4Q
2023	7.98A	7.01A	8.14A	9.21A
2024	8.70A	9.56F	11.61F	11.81F
2025	10.85F	11.55F	14.23F	14.93F
ESG score card				
				

Quarterly EPS				
NT\$	1Q	2Q	3Q	4Q
2023	7.98A	7.01A	8.14A	9.21A
2024	8.70A	9.56F	11.61F	11.81F
2025	10.85F	11.55F	14.23F	14.93F



Event

TSMC held its 2Q24 earnings conference today (July 18). In general, 2Q24 results beat our forecasts and consensus, and 3Q24F gross margin guidance was an upside surprise. The company raised full-year sales guidance and narrowed its capex guidance range for 2024F, both in line with our expectations.

Impact

Guidance roughly in line, margin outlook a beat. TSMC guides 3Q24F sales of NT\$728-754bn (US\$22.4-23.2bn), up 8-12% QoQ, slightly below our estimate of 10-14% QoQ, though we believe the guidance is conservative and that there is room to beat. This rationale is supported by management raising 2024F sales growth guidance from 20-25% YoY to above 25% YoY. Meanwhile, TSMC narrowed full-year capex range from US\$28-32bn to US\$30-32bn. Both sales and capex guidance revisions were in line with our expectation of 25-30% sales growth and estimated capex of US\$31bn. However, gross margin guidance of 53.5-55.5% in 3Q24F was an upside surprise (vs. consensus of 51.5-52.5%) considering N3 ramp up will likely dilute gross margin. Judging by the guidance, the dilution will be much less than our forecast or will be offset by a better utilization rate.

AI still a key driver; CoWoS supply-demand imbalance through 2025F. In light of strong demand from AI accelerator (GPU), TSMC expects that CoWoS supply-demand imbalance will continue through 2025F and that supply tightness is likely to ease until 2026F. It also expects its CoWoS capacity to likely double again next year, much higher than consensus of 75-85% YoY. In addition, CoWoS price hikes and the launch of CoWoS-L have pushed up CoWoS gross margin close to the corporate average. Moreover, the company expects the launch of AI on edge (device) will increase silicon content (or die size) by at least 10% due to increased functionalities. While AI may not be able to drive global PC/ smartphone shipment growth, TSMC believes it will likely shorten the replacement cycle.

N3 & N2 demand better than expected. With strong demand for N3 technologies and AI-related applications, and even for N2, TSMC plans to increase prices to reflect value and inflated costs in 2025F, with price negotiations with clients so far on track. We forecast TSMC will raise ASP by 3-7% for N3, N4 and N5 next year. The volume of N2 product tape-outs will be much greater than those of N3 and N5 in the first two years, implying N2 revenue contribution in 2026F (year 2) will be greater than that of N3 and N5 at the same stage. Also, we believe N2 margin dilution may end sooner than for N3 (from 10-12 quarters back to the historical average of 8-10 quarters).

Valuation & Action

To factor in better margin guidance, we slightly revise up our 2024-25F EPS forecasts by 3.8% and 2.0% to NT\$41.67 and NT\$51.56, versus consensus of NT\$39.92 and NT\$50.76. We adjust our target price from NT\$1,270 to NT\$1,290, still based on 25x 2025F EPS. We recommend investors accumulate the shares on the recent pullback. Maintain Outperform.

Risks

Global macro and geopolitical uncertainties; prolonged inventory correction.

Key financials and valuations

	Dec-21A	Dec-22A	Dec-23A	Dec-24F	Dec-25F
Revenue (NT\$m)	1,587,415	2,263,891	2,161,736	2,797,827	3,354,954
Gross profit (NT\$m)	819,537	1,348,355	1,175,111	1,492,123	1,836,672
Operating profit (NT\$m)	649,981	1,121,279	921,088	1,200,084	1,500,727
Net profit (NT\$m)	596,540	1,016,530	838,498	1,080,554	1,336,796
EPS (NT\$)	23.01	39.20	32.34	41.67	51.56
Cash DPS (NT\$)	11.00	11.00	13.00	16.00	18.00
EPS growth (%)	15.2	70.4	(17.5)	28.9	23.7
PE (x)	43.7	25.6	31.1	24.1	19.5
PB (x)	12.0	8.8	7.5	6.2	5.1
EV/EBITDA (x)	23.7	16.1	17.0	12.8	10.6
Net debt to equity (%)	Net cash	Net cash	Net cash	Net cash	Net cash
Dividend yield (%)	1.1	1.1	1.3	1.6	1.8
Return on average equity (%)	29.7	39.8	26.2	28.1	28.5

Source: Company data, KGI Research estimates

Figure 1: Breakdown of 2Q24 results & 3Q24 forecast revisions vs. consensus

NT\$m	2Q24							3Q24F						
	Actual	KGI forecast	Diff. (%)	QoQ (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	QoQ (%)	YoY (%)	Consensus	Diff. (%)
Revenue	673,510	673,537	(0.0)	13.6	40.1	654,631	2.9	754,219	763,116	(1.2)	12.0	38.0	730,698	3.2
Gross profit	358,125	348,127	2.9	13.9	37.6	344,971	3.8	409,870	386,419	6.1	14.4	38.2	384,303	6.7
Operating profit	286,556	272,085	5.3	15.1	41.9	272,753	5.1	330,300	305,911	8.0	15.3	45.0	306,440	7.8
Net profit	247,845	235,119	5.4	9.9	36.3	234,384	5.7	301,047	278,707	8.0	21.5	42.7	276,672	8.8
EPS (NT\$)	9.56	9.07	5.4	9.9	36.3	9.07	5.4	11.61	10.75	8.0	21.5	42.7	10.70	8.5
Gross margin (%)	53.2	51.7	1.5 ppts	0.1 ppts	(0.9)ppts	52.7	0.5 ppts	54.3	50.6	3.7 ppts	1.2 ppts	0.1 ppts	52.6	1.7 ppts
OP margin (%)	42.5	40.4	2.2 ppts	0.5 ppts	0.5 ppts	41.7	0.9 ppts	43.8	40.1	3.7 ppts	1.2 ppts	2.1 ppts	41.9	1.9 ppts
Net margin (%)	36.8	34.9	1.9 ppts	(1.2)ppts	(1.0)ppts	35.8	1.0 ppts	39.9	36.5	3.4 ppts	3.1 ppts	1.3 ppts	37.9	2.1 ppts

Source: Company data, Bloomberg, KGI Research estimates

2Q24 margin beat on more favorable forex. 2Q24 gross margin came in at 53.2%, up 0.1ppts QoQ and down 0.9ppts YoY, 1.5ppts and 0.2ppts above our estimate and the higher end of guidance range, mainly due to increased operating leverage and a more favorable forex. EPS was NT\$9.56, up 9.9% QoQ and 36.3% YoY, also ahead of our forecast and consensus of NT\$9.07, which we attribute to better-than-expected margin performance due to increased operating leverage. Considering the negative impact of the April 3 earthquake, N5 and N3 tools conversion and higher electricity costs (+25%) in 2Q24, we see the margin result as an upside surprise.

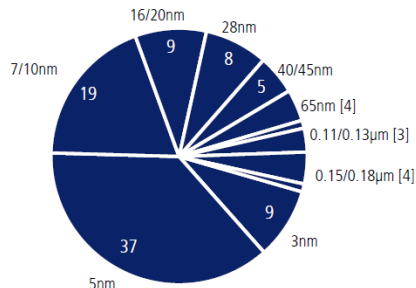
Figure 2: Breakdown of 2024-25 forecast revisions vs. consensus

NT\$m	2024F						2025F					
	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)
Revenue	2,797,827	2,812,596	(0.5)	29.4	2,763,152	1.3	3,354,954	3,380,724	(0.8)	19.9	3,389,259	(1.0)
Gross profit	1,492,123	1,455,194	2.5	27.0	1,457,038	2.4	1,836,672	1,814,141	1.2	23.1	1,840,978	(0.2)
Operating profit	1,200,084	1,157,176	3.7	30.3	1,160,441	3.4	1,500,727	1,475,617	1.7	25.1	1,499,656	0.1
Net profit	1,080,554	1,040,615	3.8	28.9	1,034,311	4.5	1,336,796	1,310,390	2.0	23.7	1,328,863	0.6
EPS (NT\$)	41.67	40.13	3.8	28.9	39.92	4.4	51.56	50.54	2.0	23.7	50.76	1.6
Gross margin (%)	53.3	52.1	1.2 ppts	(1.0)ppts	52.7	0.6 ppts	54.7	53.3	1.4 ppts	1.4 ppts	54.3	0.4 ppts
OP margin (%)	42.9	41.5	1.4 ppts	0.3 ppts	42.0	0.9 ppts	44.7	43.3	1.4 ppts	1.8 ppts	44.2	0.5 ppts
Net margin (%)	38.6	36.7	1.9 ppts	(0.2)ppts	37.4	1.2 ppts	39.8	37.9	2.0 ppts	1.2 ppts	39.2	0.6 ppts

Source: Bloomberg, KGI Research estimates

Figure 3: 1Q24 sales mix by process node

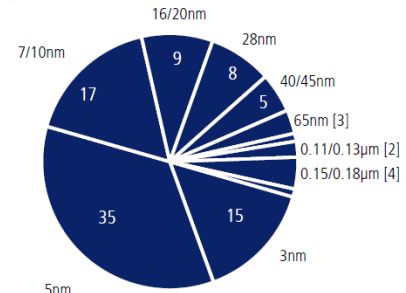
Sales breakdown, percent



Source: Company data, KGI Research

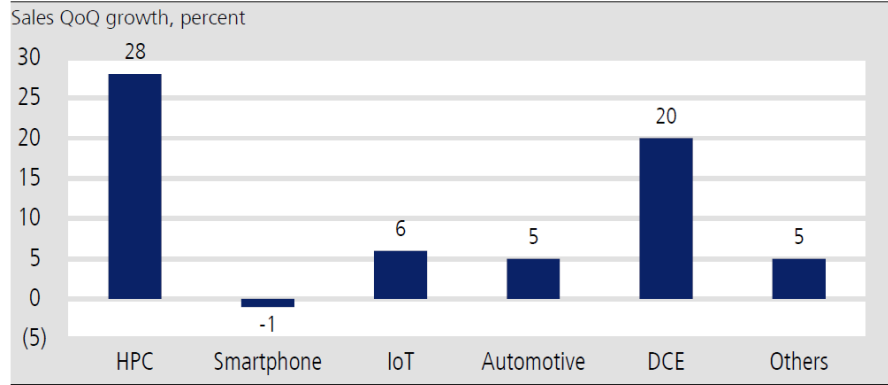
Figure 4: 2Q24 sales mix by process node

Sales breakdown, percent



Source: Company data, KGI Research

Figure 5: 2Q24 sales QoQ growth by applications



Source: Company data, KGI Research

Figure 6: Company profile

Taiwan Semiconductor Manufacturing Company (TSMC), the world's largest dedicated semiconductor foundry, has increased its market share in recent years. Capacity exceeded 16mn 8-inch equivalent wafers in 2013. TSMC operates six advanced 300mm wafer fabs, six 8-inch wafer fabs and one 6-inch wafer fab, and is building a new 300mm wafer fab. The company provides the following services: wafer manufacturing, wafer probing, assembly and testing, mask production and design services.

Source: Company data, KGI Research

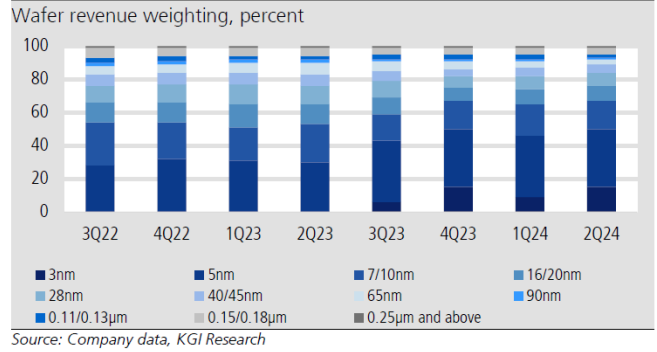
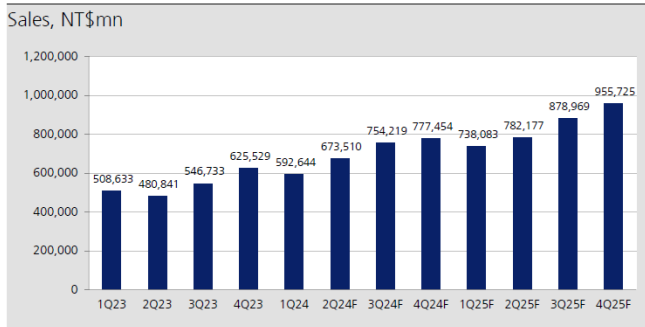
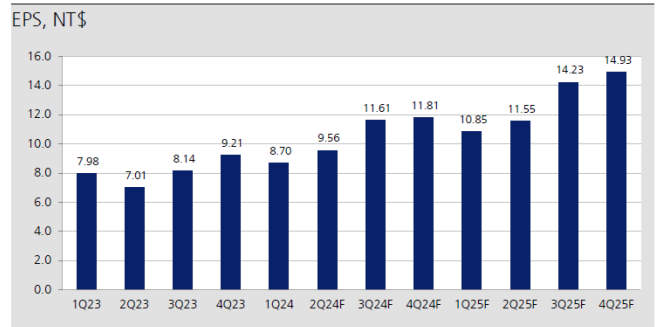
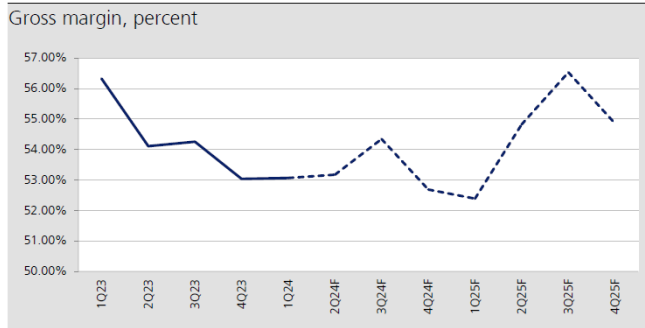
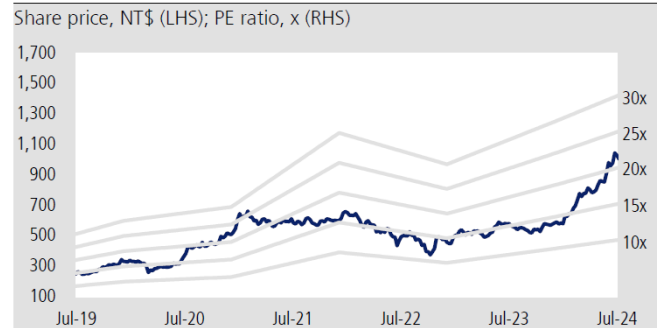
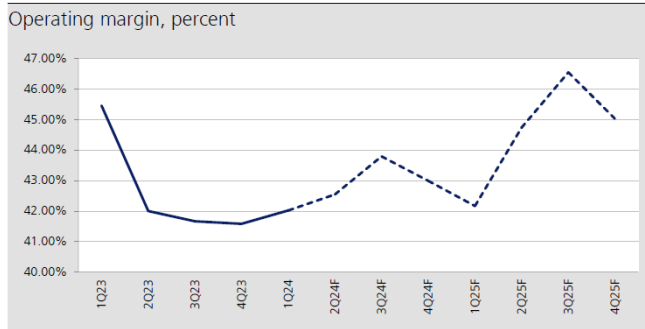
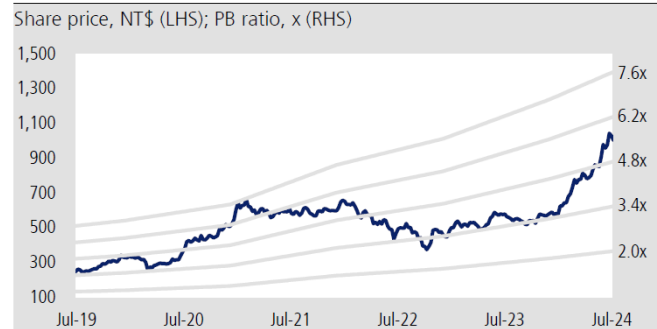
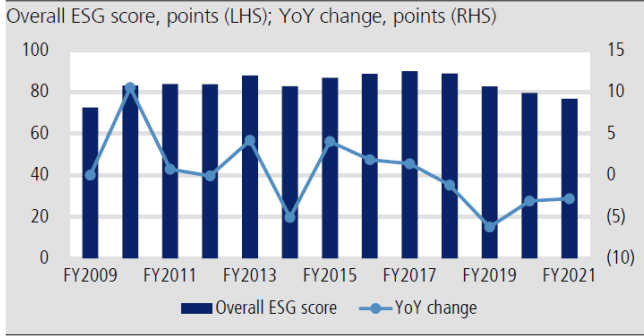
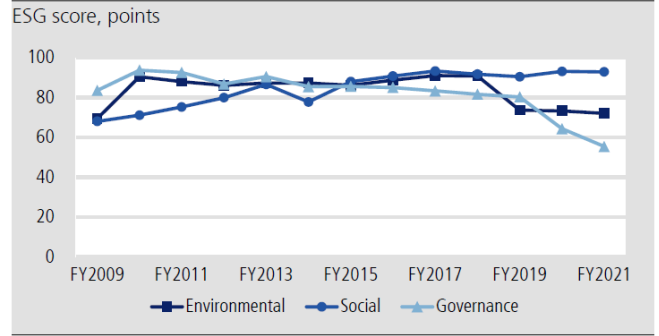
Figure 7: TSMC's wafer revenue by node

Figure 8: Sales

Figure 9: EPS

Figure 10: Gross Margin

Figure 11: 12M forward PE band

Figure 12: Operating Margin

Figure 13: 12M forward PB band


Figure 14: Overall ESG score



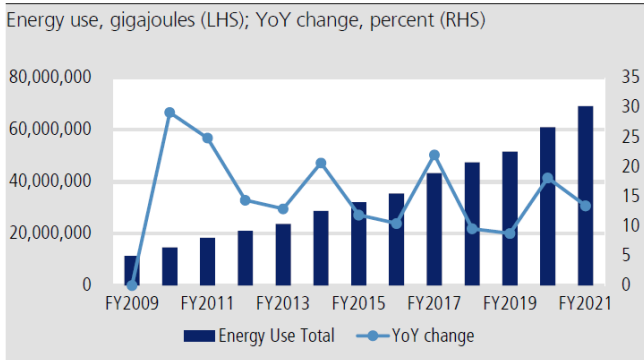
Source: Refinitiv, Company data

Figure 15: ESG score by category



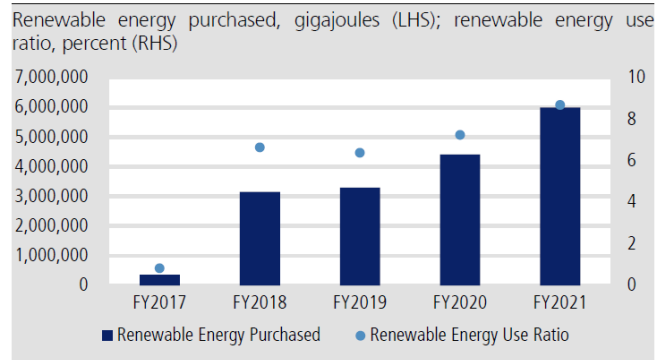
Source: Refinitiv, Company data

Figure 16: Energy use



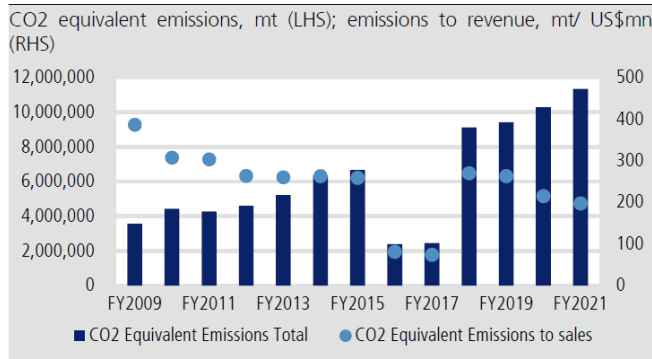
Source: Refinitiv, Company data

Figure 17: Renewable energy



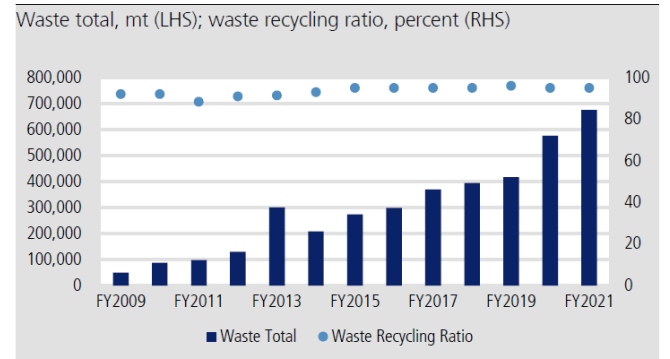
Source: Refinitiv, Company data

Figure 18: CO2 equivalent emissions



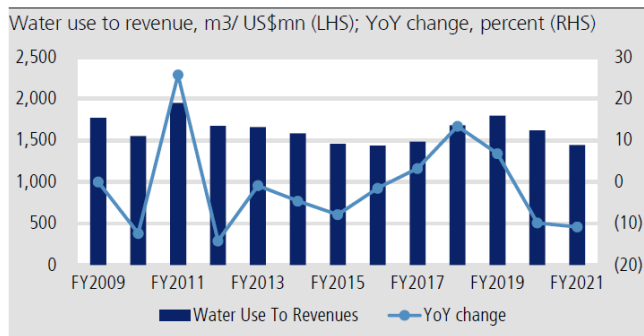
Source: Refinitiv, Company data

Figure 19: Waste total



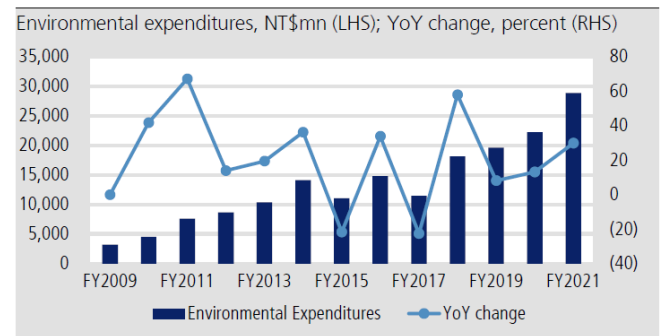
Source: Refinitiv, Company data

Figure 20: Water use to revenue



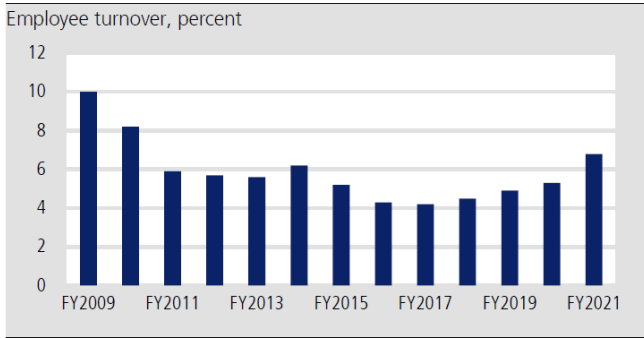
Source: Refinitiv, Company data

Figure 21: Environmental expenditures



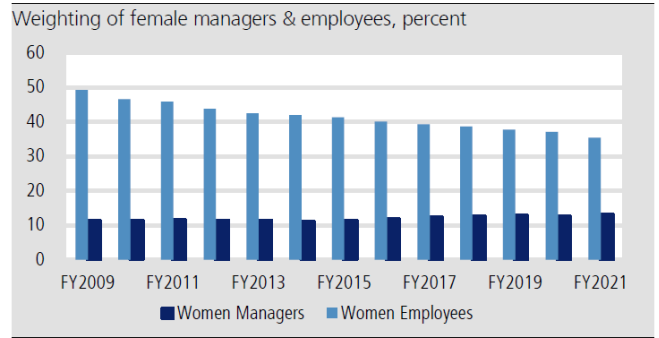
Source: Refinitiv, Company data

Figure 22: Employee turnover



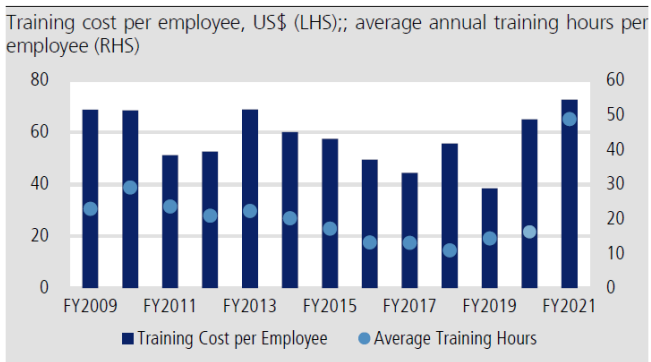
Source: Refinitiv, Company data

Figure 23: Gender diversification



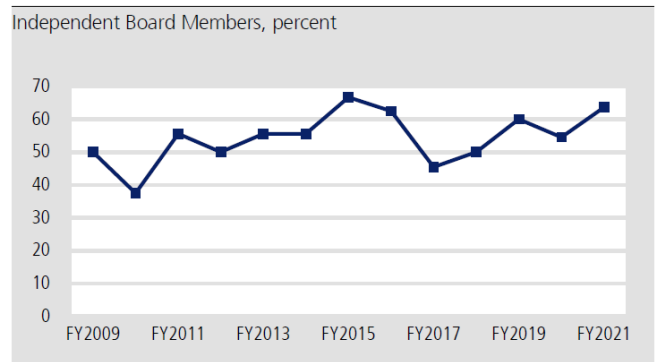
Source: Refinitiv, Company data

Figure 24: Employee training



Source: Refinitiv, Company data

Figure 25: Independent Board Members



Source: Refinitiv, Company data

ESG chart definition

Item	Definition	Remarks
Energy use	Total direct and indirect energy consumption in gigajoules. - the total amount of energy that has been consumed within the boundaries of the company's operations - total energy use = total direct energy consumption + indirect energy consumption - purchased energy and produced energy are included in total energy use - for utilities, transmission/ grid loss as part of its business activities is considered as total energy consumed and data does not consider electricity produced to answer energy use (utility company produces to sell) - for utilities, raw materials such as coal, gas or nuclear used in the production of energy are not considered under 'total energy use'	
Renewable energy purchased	Total primary renewable energy purchased in gigajoules. - energy consumed by the company from various sources and among the purchased energy, how much energy is renewable in nature (solar, wind, hydro, biomass, geothermal) are in scope - if there is no evidence that renewable energy is produced by the company, then we consider the reported energy figure as renewable energy purchased	
Renewable energy use ratio	Renewable energy to total energy used	
CO2 equivalent emissions	Direct CO2 and CO2 equivalent emissions in metric tons. - direct emissions from sources that are owned or controlled by the company (scope 1 emissions) - following gases are relevant: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorinated compound (PFCS), sulfur hexafluoride (SF6), nitrogen trifluoride (NF3)	
CO2 equivalent emissions to sales	Direct CO2 and CO2 equivalent emissions (metric tons) to sales (NT\$m) - direct emissions from sources that are owned or controlled by the company (scope 1 emissions) - following gases are relevant: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorinated compound (PFCS), sulfur hexafluoride (SF6), nitrogen trifluoride (NF3)	
Waste total	Total amount of waste produced in metric tons. - total waste = non-hazardous waste + hazardous waste - only solid waste is taken into consideration, exceptionally if liquid waste is reported in metric tons, then we do the summation to derive total including liquid waste - for sectors like mining, oil & gas, waste generation like tailings, waste rock, coal and fly ash are also considered	
Waste recycling ratio	The waste recycling ratio as reported by the company. - waste recycling ratio = waste recycled/total waste*100 - waste to energy or waste incinerated with energy recovery are considered as waste recycled - waste recovered via composting is considered as recycled waste	
Water withdrawal total	Total water withdrawal in cubic meters. - the total volume of water withdrawn from any water source that was either withdrawn directly by the reporting organization or through intermediaries such as water utilities - different sources of water like wells, town/utility/municipal water, river water, and surface water are considered	
Environmental expenditures	Total amount of environmental expenditures. - all environmental investment & expenditures for environmental protection or to prevent, reduce, control environmental aspects, impacts, and hazards. It also includes disposal, treatment, sanitation, and clean-up expenditures	
Turnover of employees	Percentage of employee turnover. - includes employees who left the company for any reason (voluntary or involuntary), such as resignations, retirement, natural departure/death, medical incapacitation, redundancy, layoffs, restructuring, dismissal, retrenchment or end of a fixed-term contract - employees turnover rate = (employees leaving/average number of employees)*100 - where the average number of employees = (employees at the end of the current year + employees at the end of the previous year)/2 - employees at the end of the current fiscal year = employees at the end of the previous fiscal year + new employees - employees leaving	
Women managers	Percentage of women managers. - percentage of women managers among total managers of the company - if there is a breakdown by category in percentage, such as top, senior, middle, and junior management, then we consider the percentage of middle women managers - percentage of women managers = number of women managers/total number of managers*100	
Women employees	Percentage of women employees. - percentage of women employees to the total number of employees of the company - percentage of women employees = number of women/total number of employees*100	
Training hours total	Total training hours performed by all employees. - consider only employee training hours - includes all types of training given to general employees (such as health & safety, environmental, emergency response, skills & career development training) - if the value is given in days, multiply by 8, assuming that 1 day = 8 hours worked	
Training hours per employee	Training hours per employee per year	

Source: Refinitiv, KGI Research

Income statement

	Quarterly								Annually		
	Mar-24A	Jun-24F	Sep-24F	Dec-24F	Mar-25F	Jun-25F	Sep-25F	Dec-25F	Dec-23A	Dec-24F	Dec-25F
Income statement (NT\$m)											
Revenue	592,644	673,510	754,219	777,454	738,083	782,177	878,969	955,725	2,161,736	2,797,827	3,354,954
Cost of goods sold	(278,139)	(315,385)	(344,349)	(367,832)	(351,417)	(353,378)	(382,037)	(431,450)	(986,625)	(1,305,704)	(1,518,282)
Gross profit	314,505	358,125	409,870	409,622	386,666	428,800	496,932	524,275	1,175,111	1,492,123	1,836,672
Operating expenses	(65,487)	(71,569)	(79,570)	(75,413)	(75,432)	(78,843)	(87,721)	(93,948)	(254,022)	(292,039)	(335,944)
Operating profit	249,018	286,556	330,300	334,209	311,234	349,956	409,211	430,327	921,088	1,200,084	1,500,727
Depreciation of fixed assets	(156,697)	(171,819)	(194,771)	(173,920)	(182,785)	(190,193)	(197,601)	(192,045)	(522,933)	(697,207)	(762,624)
Amortisation of intangible assets	(2,326)	(3,379)	(4,151)	(3,321)	(3,637)	(3,741)	(4,212)	(3,667)	(9,258)	(13,178)	(15,257)
EBITDA	408,041	461,754	529,223	511,450	497,656	543,890	611,023	626,039	1,453,279	1,910,469	2,278,609
Interest income	19,359	21,039	21,039	21,039	21,039	21,039	21,039	21,039	60,294	82,477	84,157
Investment income	950	1,152	1,200	1,200	1,200	1,200	1,200	1,200	5,119	4,502	4,800
Other non-op income	0	262	-	-	-	-	-	-	16	262	-
Non-operating income	20,309	22,453	22,239	22,239	22,239	22,239	22,239	22,239	65,429	87,241	88,957
Interest expense	(2,698)	(2,698)	(2,698)	(2,698)	(2,698)	(2,698)	(2,698)	(2,698)	(11,999)	(10,793)	(10,793)
Investment loss	-	-	-	-	-	-	-	-	-	-	-
Other non-op expenses	(86)	-	-	-	-	-	-	-	4,276	(86)	-
Non-operating expenses	(2,784)	(2,698)	(2,698)	(2,698)	(2,698)	(2,698)	(2,698)	(2,698)	(7,723)	(10,879)	(10,793)
Pre-tax profit	266,543	306,311	349,841	353,750	330,775	369,497	428,752	449,868	978,794	1,276,446	1,578,891
Current taxation	(41,322)	(58,649)	(48,978)	(47,756)	(49,616)	(70,204)	(60,025)	(62,982)	(141,404)	(196,705)	(242,827)
Minorities	264	183	183	183	183	183	183	183	730	813	732
Normalised net profit	225,485	247,845	301,047	306,177	281,341	299,476	368,910	387,069	838,120	1,080,554	1,336,796
Extraordinary items	(0)	-	-	-	-	-	-	-	377	-	-
Net profit	225,485	247,845	301,047	306,177	281,341	299,476	368,910	387,069	838,498	1,080,554	1,336,796
EPS (NT\$)	8.70	9.56	11.61	11.81	10.85	11.55	14.23	14.93	32.34	41.67	51.56
Margins (%)											
Gross profit margin	53.1	53.2	54.3	52.7	52.4	54.8	56.5	54.9	54.4	53.3	54.7
Operating margin	42.0	42.5	43.8	43.0	42.2	44.7	46.6	45.0	42.6	42.9	44.7
EBITDA margin	68.9	68.6	70.2	65.8	67.4	69.5	69.5	65.5	67.2	68.3	67.9
Pretax profit margin	45.0	45.5	46.4	45.5	44.8	47.2	48.8	47.1	45.3	45.6	47.1
Net profit margin	38.0	36.8	39.9	39.4	38.1	38.3	42.0	40.5	38.8	38.6	39.8
Sequential growth (%)											
Revenue growth	(5.3)	13.6	12.0	3.1	(5.1)	6.0	12.4	8.7			
Gross profit growth	(5.2)	13.9	14.4	(0.1)	(5.6)	10.9	15.9	5.5			
Operating profit growth	(4.3)	15.1	15.3	1.2	(6.9)	12.4	16.9	5.2			
EBITDA growth	(0.7)	13.2	14.6	(3.4)	(2.7)	9.3	12.3	2.5			
Pretax profit growth	(4.2)	14.9	14.2	1.1	(6.5)	11.7	16.0	4.9			
Net profit growth	(5.5)	9.9	21.5	1.7	(8.1)	6.4	23.2	4.9			
YoY growth (%)											
Revenue growth	16.5	40.1	38.0	24.3	24.5	16.1	16.5	22.9	(4.5)	29.4	19.9
Gross profit growth	9.8	37.6	38.2	23.5	22.9	19.7	21.2	28.0	(12.8)	27.0	23.1
Operating profit growth	7.7	41.9	45.0	28.5	25.0	22.1	23.9	28.8	(17.9)	30.3	25.1
EBITDA growth	19.5	41.7	41.1	24.5	22.0	17.8	15.5	22.4	(6.8)	31.5	19.3
Pretax profit growth	9.1	42.7	44.8	27.2	24.1	20.6	22.6	27.2	(14.5)	30.4	23.7
Net profit growth	8.9	36.3	42.7	28.3	24.8	20.8	22.5	26.4	(17.5)	28.9	23.7

Source: Company data, KGI Research estimates

Balance sheet

NTSmn	Dec-21A	Dec-22A	Dec-23A	Dec-24F	Dec-25F
Total assets	3,725,503	4,964,779	5,532,371	6,511,681	7,465,712
Current assets	1,607,073	2,052,897	2,194,033	2,858,765	3,423,346
Cash & ST securities	1,188,456	1,561,486	1,687,644	2,162,597	2,600,096
Inventory	193,102	221,149	250,997	329,397	386,368
Accounts receivable	198,301	231,340	201,938	305,763	375,874
Other current assets	27,214	38,922	53,453	61,008	61,008
Non-current assets	2,118,431	2,911,882	3,338,338	3,652,916	4,042,366
LT investments	29,385	68,928	129,442	142,021	146,821
Net fixed assets	1,975,119	2,693,837	3,064,475	3,366,089	3,750,738
Other assets	113,927	149,117	144,421	144,807	144,807
Total liabilities	1,554,770	2,004,290	2,049,108	2,250,180	2,282,283
Current liabilities	739,503	944,227	913,583	1,154,185	1,186,288
Accounts payable	48,723	56,522	57,293	92,348	108,320
Interest bearing ST liabilities	119,488	19,314	9,293	12,500	12,500
Other current liabilities	571,293	868,391	846,997	1,049,337	1,065,468
Non-current liabilities	815,267	1,060,063	1,135,525	1,095,995	1,095,995
Long-term debt	613,380	839,096	918,283	944,230	944,230
Other L-T liabilities	181,123	191,203	188,560	130,434	130,434
Total equity	2,170,733	2,960,489	3,483,263	4,261,501	5,183,429
Share capital	259,304	259,304	259,321	259,336	259,336
Retained earnings reserve	1,536,379	2,323,223	2,846,884	3,901,240	4,823,168
Minority interests	2,447	14,836	24,349	29,984	29,984
Preferred shareholders funds	-	-	-	-	-

Key ratios

	Dec-21A	Dec-22A	Dec-23A	Dec-24F	Dec-25F
Growth					
Revenue growth	18.5%	42.6%	(4.5%)	29.4%	19.9%
Operating profit growth	14.7%	72.5%	(17.9%)	30.3%	25.1%
EBITDA growth	19.4%	45.3%	(6.8%)	31.5%	19.3%
Net profit growth	15.2%	70.4%	(17.5%)	28.9%	23.7%
EPS growth	15.2%	70.4%	(17.5%)	28.9%	23.7%
Profitability					
Gross profit margin	51.6%	59.6%	54.4%	53.3%	54.7%
Operating margin	40.9%	49.5%	42.6%	42.9%	44.7%
EBITDA margin	67.6%	68.8%	67.2%	68.3%	67.9%
Net profit margin	37.6%	44.9%	38.8%	38.6%	39.8%
Return on average assets	18.4%	23.4%	16.0%	17.9%	19.1%
Return on average equity	29.7%	39.8%	26.2%	28.1%	28.5%
Stability					
Gross debt to equity	33.8%	29.0%	26.6%	22.5%	18.5%
Net debt to equity	Net cash	Net cash	Net cash	Net cash	Net cash
Interest coverage (x)	123.5	98.4	82.6	119.3	147.3
Interest & ST debt coverage (x)	0.8	1.0	1.0	1.0	1.0
Cash flow interest coverage(x)	205.4	137.1	103.5	166.9	186.7
Cash flow/int. & ST debt (x)	8.9	51.8	58.3	77.3	86.5
Current ratio (x)	2.2	2.2	2.4	2.5	2.9
Quick ratio (x)	1.9	1.9	2.1	2.2	2.6
Net debt (NT\$m)	(332,122)	(484,404)	(537,852)	(981,406)	(1,418,905)
Per share data					
EPS (NT\$)	23.01	39.20	32.34	41.67	51.56
CFPS (NT\$)	42.89	62.12	47.90	69.46	77.71
BVPS (NT\$)	83.62	113.60	133.38	163.19	198.75
Adj BVPS (NT\$)	83.62	113.60	133.40	163.19	198.75
SPS (NT\$)	61.22	87.31	83.37	107.90	129.39
EBITDA/share (NT\$)	41.36	60.11	56.05	73.68	87.88
Cash DPS (NT\$)	11.00	11.00	13.00	16.00	18.00
Activity					
Sales / avg assets	0.49	0.52	0.41	0.46	0.48
Days receivable	45.6	37.3	34.1	40.0	40.9
Days inventory	91.8	88.2	92.9	92.3	92.9
Days payable	23.2	22.5	21.2	25.9	26.0
Cash cycle	114.2	102.9	105.8	106.4	107.7

Source: Company data, KGI Research estimates

Profit & loss

NTSmn	Dec-21A	Dec-22A	Dec-23A	Dec-24F	Dec-25F
Revenue	1,587,415	2,263,891	2,161,736	2,797,827	3,354,954
Cost of goods sold	(767,878)	(915,536)	(986,625)	(1,305,704)	(1,518,282)
Gross profit	819,537	1,348,355	1,175,111	1,492,123	1,836,672
Operating expenses	(169,556)	(227,076)	(254,022)	(292,039)	(335,944)
Operating profit	649,981	1,121,279	921,088	1,200,084	1,500,727
Non-operating income	12,285	31,168	65,429	87,241	88,957
Interest income	5,709	22,422	60,294	82,477	84,157
Investment income	5,965	8,065	5,119	4,502	4,800
Other non-op income	611	681	16	262	-
Non-operating expenses	860	(8,256)	(7,723)	(10,879)	(10,793)
Interest expense	(5,414)	(11,750)	(11,999)	(10,793)	(10,793)
Investment loss	-	-	-	-	-
Other non-op expenses	6,275	3,494	4,276	(86)	-
Pre-tax profit	663,126	1,144,191	978,794	1,276,446	1,578,891
Current taxation	(66,053)	(127,290)	(141,404)	(196,705)	(242,827)
Minorities	(533)	(370)	730	813	732
Extraordinary items	-	0	377	-	-
Net profit	596,540	1,016,530	838,498	1,080,554	1,336,796
EBITDA	1,072,376	1,558,533	1,453,279	1,910,469	2,278,609
EPS (NT\$)	23.01	39.20	32.34	41.67	51.56

Cash flow

NTSmn	Dec-21A	Dec-22A	Dec-23A	Dec-24F	Dec-25F
Operations cash flow	1,112,161	1,610,599	1,241,967	1,801,138	2,014,898
Net profit	596,540	1,016,530	838,498	1,080,554	1,336,796
Depreciation & amortisation	422,395	437,254	532,191	710,385	777,881
Decrease in working capital	(100,384)	(53,286)	324	(147,170)	(111,110)
Other operating cash flow	193,610	210,100	(129,046)	157,369	11,331
Investing cash flow	(836,366)	(1,190,928)	(906,121)	(1,025,409)	(1,162,530)
Sale of ST investment	4,676	(128,838)	(55,781)	(12,782)	-
New investments	-	-	-	-	-
Capital expenditure	(839,196)	(1,082,672)	(949,817)	(1,046,907)	(1,162,530)
Others investing cashflow	(1,846)	20,582	99,478	34,280	-
Free cash flow	59,845	289,078	361,461	518,277	758,905
Financing cash flow	136,608	(200,244)	(204,894)	(330,969)	(414,868)
Increase in short term debt	35,668	(111,960)	-	-	-
Increase in long term loans	362,765	195,983	68,204	29,154	-
New ordinary shares issued	-	-	-	-	-
Ordinary dividends paid	(265,786)	(285,234)	(291,722)	(337,080)	(414,868)
Other financing cashflow	3,961	1,839	18,623	(23,044)	-
Forex effects	(7,584)	58,397	(8,339)	27,949	-
Total cash generated	404,820	277,824	122,614	472,709	437,499

ROIC

	Dec-21A	Dec-22A	Dec-23A	Dec-24F	Dec-25F
1 - COGS/revenue					
- Operating exp./revenue	10.7%	10.0%	11.8%	10.4%	10.0%
= Operating margin	40.9%	49.5%	42.6%	42.9%	44.7%
1 / (Working capital/revenue	(0.1)	(0.2)	(0.2)	(0.2)	(0.1)
+ Net PPE/revenue	1.2	1.2	1.4	1.2	1.1
+ Other assets/revenue)	0.0	0.0	0.0	0.1	0.0
= Capital turnover	0.9	1.0	0.8	0.9	0.9
Operating margin	40.9%	49.5%	42.6%	42.9%	44.7%
x Capital turnover	0.9	1.0	0.8	0.9	0.9
x (1 - tax rate)	90.0%	88.9%	85.6%	84.6%	84.6%
= After-tax ROIC	32.9%	43.9%	29.4%	33.1%	35.8%

Source: Company data, KGI Research estimates

TSMC – Recommendation & target price history


Date	Rating	Target	Price
2024-07-15	Outperform	1,270	1,040
2024-01-18	Outperform	688	588
2024-01-10	Outperform	688	584
2023-10-19	Outperform	703	546
2023-10-06	Outperform	703	532
2023-07-20	Outperform	658	579
2023-07-04	Outperform	716	585
2023-04-14	Outperform	591	516
2023-03-29	Outperform	603	530
2023-03-29	Outperform	603	530

Source: TEJ, KGI Research

All the above named KGI analyst(s) is SFC licensed person accredited to KGI Asia Ltd to carry on the relevant regulated activities. Each of them and/or his/her associate(s) does not have any financial interest in the respectively covered stock, issuer and/or new listing applicant.

Disclaimer

All the information contained in this report is not intended for use by persons or entities located in or residing in jurisdictions which restrict the distribution of this information by KGI Asia Limited ("KGI") or an affiliate of KGI. Such information shall not constitute investment advice, or an offer to sell, or an invitation, solicitation or recommendation to subscribe for or invest in any securities or investment products or services nor a distribution of information for any such purpose in any jurisdiction. In particular, the information herein is not for distribution and does not constitute an offer to sell or the solicitation of any offer to buy any securities in the United States of America, or to or for the benefit of United States persons (being residents of the United States of America or partnerships or corporations organised under the laws of the United States of America or any state, territory or possession thereof). All the information contained in this report is for general information and reference purpose only without taking into account of any particular investor's objectives, financial situation or needs. Such information is not intended to provide professional advice and should not be relied upon in that regard.

Some of KGI equity research and earnings estimates are available electronically on www.kgi.com.hk. Please contact your KGI representative for information. The information and opinions in this report are those of KGI internal research activity. KGI does not make any representation or warranty, express or implied, as to the fairness, accuracy, completeness or correctness of the information and opinions contained in this report. The information and opinions contained in this report are subject to change without any notice. No person accepts any liability whatsoever for any loss however arising from any use of this report or its contents. This report is not to be construed as an invitation or offer to buy or sell securities and/or to participate in any investment activity. This report is being supplied solely for informational purposes and may not be redistributed, reproduced or published (in whole or in part) by any means for any purpose without the prior written consent of KGI. Members of the KGI group and their affiliates may provide services to any companies and affiliates of such companies mentioned herein. Members of the KGI group, their affiliates and their directors, officers and employees may from time to time have a position in any securities mentioned herein.