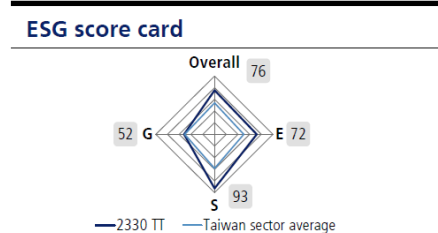


## TSMC (2330.TW/2330 TT)

### Preview – Strong 4Q24F; no low season impact in 1Q25F

FTSE4Good TIP Taiwan ESG Index stock			
<b>Outperform · Maintained</b>			
Price as of January 6 (NT\$)	1,125		
12M target price (NT\$)	1,450		
Previous target price (NT\$)	1,450		
Unchanged (%)	0.0		
Upside (%)	28.9		
<b>Key message</b>			
1. 4Q24F results to slightly beat guidance.			
2. 1Q25F sales to arrive flat QoQ.			
3. TSMC sales to grow 25-30% in 2025F, with capex of US\$36bn.			
<b>Trading data</b>			
Mkt cap (NT\$bn/US\$m)	29,174 / 888,766		
Outstanding shares (mn)	25,933		
Foreign ownership (mn)	19,085		
3M avg. daily trading (mn)	29.31		
52-week trading range (NT\$)	580 – 1,125		
<b>Performance</b>	<b>3M</b>	<b>6M</b>	<b>12M</b>
Absolute (%)	15.1	11.9	95.3
Relative (%)	9.5	11.9	60.9

Quarterly EPS				
NT\$	1Q	2Q	3Q	4Q
2023	7.98A	7.01A	8.14A	9.21A
2024	8.70A	9.56A	12.55A	14.68F
2025	14.09F	13.70F	15.55F	16.77F



#### Event

TSMC is scheduled to host its 4Q24 analyst meeting on January 16. We believe 4Q24 revenue will reach the high end of guidance of 10-13% QoQ growth, and we don't expect the low season to have an obvious impact in 1Q25 due to the ramp-up of clients' products, strong AI demand, and rising price quotes for advanced nodes in 2025F.

#### Impact

**4Q24F results to slightly beat guidance.** We forecast 4Q24 sales will grow 13.4% QoQ, slightly above guidance of 10-13% QoQ thanks to AI demand and the iPhone 16. We estimate 4Q24 gross margin of 58.9% due to high UTR and NT-dollar depreciation. The focus of the analyst meeting will be: (1) the outlook for AI demand (GPU vs. ASIC) and CoWoS expansion; (2) 2025 capex and sales guidance; (3) the outlook for the semiconductor upcycle, particularly for non-AI demand; and (4) N2 progress.

**1Q25F sales to arrive flat QoQ.** We expect TSMC to guide 1Q25 sales will arrive flat QoQ ±2%, versus consensus of a 6.6% QoQ decline due to strong AI demand and higher price quotes for N3, N4, N5, and CoWoS. In 1Q25, we expect UTR for N4 and N5 to rise further on strong AI demand (N4) and new business from Apple's (US) in-house modem (N5). N3 UTR will remain high as major clients' N3 migration will offset seasonality for the iPhone. We estimate TSMC will raise N3, N4, and N5 prices by 3-7% and CoWoS-S by 25%. The CoWoS-L price is 50-60% higher than CoWoS-S, therefore we expect TSMC's blended ASP to further increase and help offset the negative impact of the high cost of utilities and overseas expansion.

**TSMC sales to grow 25-30% in 2025F, with capex of US\$36bn.** In 2025, we expect the semiconductor cycle to peak and TSMC to have another strong year with 25-30% sales growth. AI demand (AI GPU and ASIC), Intel (US) outsourcing orders, Apple's inhouse modem/RF business, and major clients' N3 migration will be key growth drivers in 2025F. In addition, rising price quotes for advanced nodes and market share expansion will mitigate the impact of the semiconductor cycle.

#### Valuation & Action

To factor in a strong 1Q25 outlook, we revise up 2025-26F EPS by a respective 3.9% and 1.3%, 3.0% and 2.7% above consensus. We maintain our target price of NT\$1,450 to factor in: (1) upward revision of 2025-26F EPS; rolling over PE from 2025F to 2026F; and (3) in anticipation of the semiconductor cycle peaking in 1H25, we lower target PE from 25x (cycle peak) to 20x (upcycle average). We maintain Outperform on TSMC's strong technological leadership.

#### Risks

Global macro and geopolitical uncertainties; prolonged inventory correction.

#### Key financials and valuations

	Dec-22A	Dec-23A	Dec-24F	Dec-25F	Dec-26F
Revenue (NT\$m)	2,263,891	2,161,736	2,887,677	3,737,271	4,258,504
Gross profit (NT\$m)	1,348,355	1,175,111	1,619,291	2,157,832	2,554,006
Operating profit (NT\$m)	1,121,279	921,088	1,316,611	1,775,311	2,125,347
Net profit (NT\$m)	1,016,530	838,498	1,179,203	1,558,627	1,853,350
EPS (NT\$)	39.20	32.34	45.48	60.12	71.49
Cash DPS (NT\$)	11.00	13.00	16.00	18.00	18.00
EPS growth (%)	70.4	(17.5)	40.6	32.2	18.9
PE (x)	28.7	34.8	24.7	18.7	15.7
PB (x)	9.9	8.4	6.9	5.5	4.4
EV/EBITDA (x)	18.1	19.1	14.3	11.5	9.8
Net debt to equity (%)	Net cash	Net cash	Net cash	Net cash	Net cash
Dividend yield (%)	1.0	1.2	1.4	1.6	1.6
Return on average equity (%)	39.8	26.2	30.7	32.7	30.9

Source: Company data, KGI Research estimates

**Figure 1: Breakdown of 4Q24-1Q25 forecast revisions vs. consensus**

NT\$m	4Q24F							1Q25F						
	Revision	Previous	Chg. (%)	QoQ (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	QoQ (%)	YoY (%)	Consensus	Diff. (%)
Revenue	861,831	860,422	0.2	13.4	37.8	852,558	1.1	858,362	794,704	8.0	(0.4)	44.8	796,390	7.8
Gross profit	507,316	503,167	0.8	15.5	52.9	497,272	2.0	500,520	440,212	13.7	(1.3)	59.1	448,870	11.5
Operating profit	420,271	412,822	1.8	16.8	61.6	409,441	2.6	409,963	359,311	14.1	(2.5)	64.6	368,009	11.4
Net profit	380,615	374,172	1.7	17.0	59.4	367,573	3.5	365,256	322,202	13.4	(4.0)	62.0	329,043	11.0
EPS (NT\$)	14.68	14.43	1.7	17.0	59.5	14.20	3.4	14.09	12.43	13.4	(4.0)	62.0	12.69	11.1
Gross margin (%)	58.9	58.5	0.4 ppts	1.0 ppts	5.8 ppts	58.3	0.5 ppts	58.3	54.3	4.0 ppts	(0.6)ppts	5.2 ppts	56.4	1.9 ppts
OP margin (%)	48.8	48.0	0.8 ppts	1.4 ppts	7.2 ppts	48.0	0.7 ppts	47.8	43.8	4.0 ppts	(1.0)ppts	5.7 ppts	46.2	1.6 ppts
Net margin (%)	44.2	43.5	0.7 ppts	1.3 ppts	6.0 ppts	43.1	1.0 ppts	42.6	39.9	2.6 ppts	(1.6)ppts	4.5 ppts	41.3	1.2 ppts

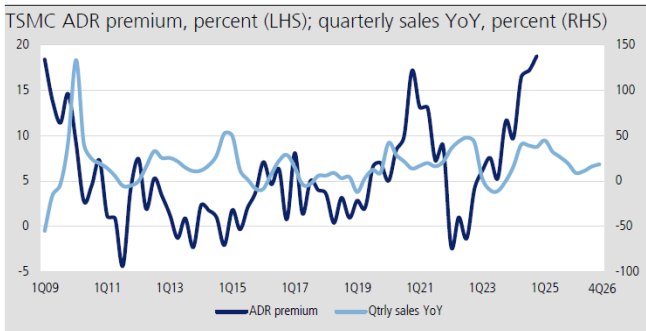
Source: Bloomberg, KGI Research estimates

**Figure 2: Breakdown of 2025-26 forecast revisions vs. consensus**

NT\$m	2025F							2026F						
	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)		
Revenue	3,737,271	3,608,048	3.6	29.4	3,623,334	3.1	4,258,504	4,342,768	(1.9)	13.9	4,261,153	(0.1)		
Gross profit	2,157,832	2,071,848	4.2	33.3	2,082,258	3.6	2,554,006	2,534,416	0.8	18.4	2,445,561	4.4		
Operating profit	1,775,311	1,705,659	4.1	34.8	1,714,094	3.6	2,125,347	2,097,274	1.3	19.7	2,026,818	4.9		
Net profit	1,558,627	1,500,525	3.9	32.2	1,523,636	2.3	1,853,350	1,829,804	1.3	18.9	1,807,068	2.6		
EPS (NT\$)	60.12	57.87	3.9	32.2	58.39	3.0	71.49	70.57	1.3	18.9	69.64	2.7		
Gross margin (%)	57.7	56.7	1.1 ppts	1.7 ppts	57.5	0.3 ppts	60.0	59.7	0.3 ppts	2.2 ppts	57.4	2.6 ppts		
OP margin (%)	47.5	46.1	1.4 ppts	1.9 ppts	47.3	0.2 ppts	49.9	49.5	0.4 ppts	2.4 ppts	47.6	2.3 ppts		
Net margin (%)	41.7	41.2	0.5 ppts	0.9 ppts	42.1	(0.3)ppts	43.5	43.5	0.0 ppts	1.8 ppts	42.4	1.1 ppts		

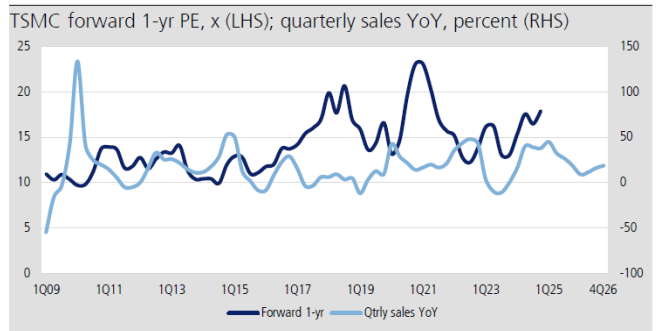
Source: Bloomberg, KGI Research estimates

**Figure 3: TSMC ADR premium vs. quarterly sales YoY**



Source: TEI, Bloomberg, KGI Research estimates

**Figure 4: TSMC forward 1-year PE vs. quarterly sales YoY**



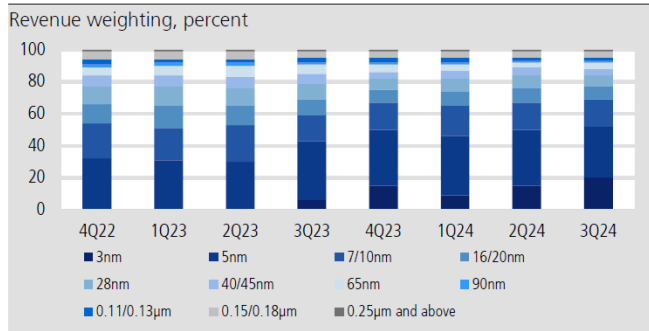
Source: TEI, Bloomberg, KGI Research estimates

**Figure 5: 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.

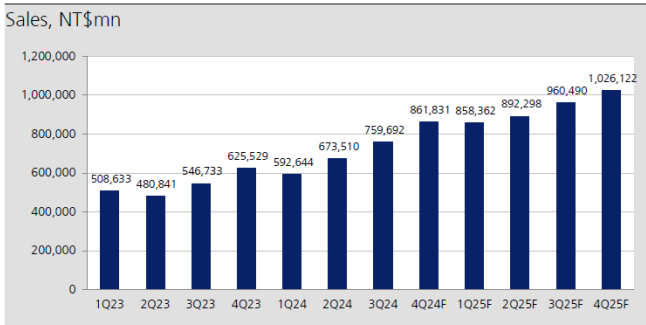
Source: Company data, KGI Research

**Figure 6: TSMC wafer revenue by node**



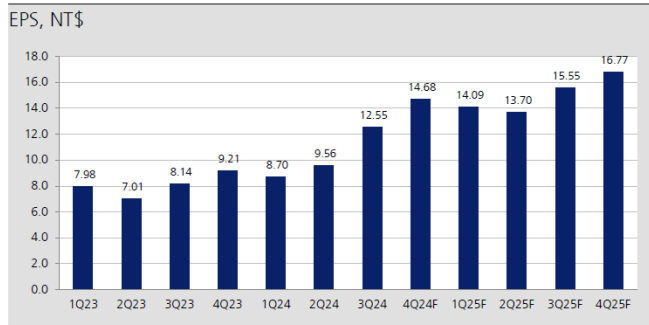
Source: Company data, KGI Research

**Figure 7: Sales**



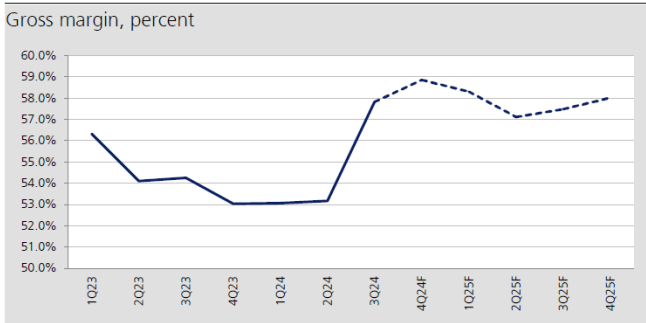
Source: KGI Research

**Figure 8: EPS**



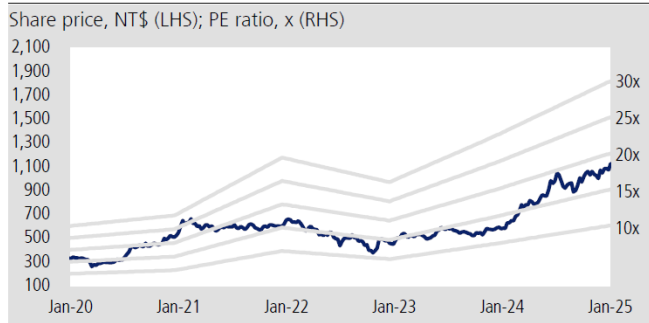
Source: KGI Research

**Figure 9: Gross margin**



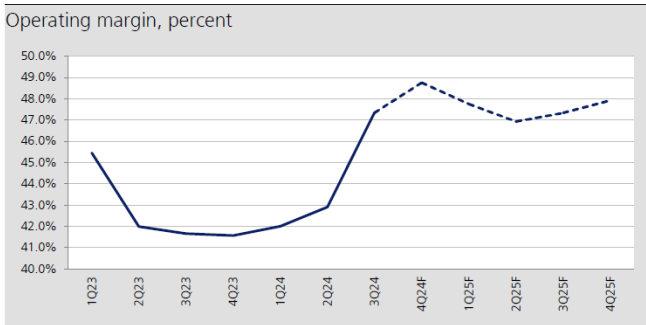
Source: KGI Research

**Figure 10: 12M forward PE band**



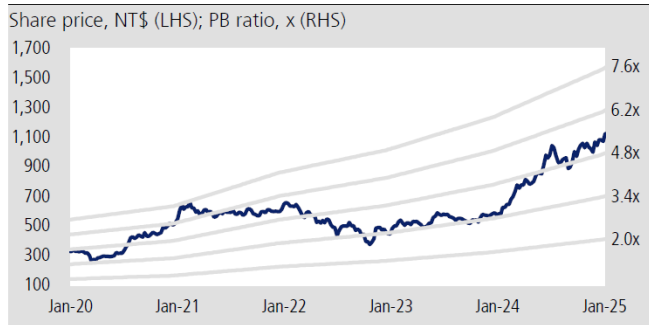
Source: TEI, KGI Research estimates

**Figure 11: Operating margin**



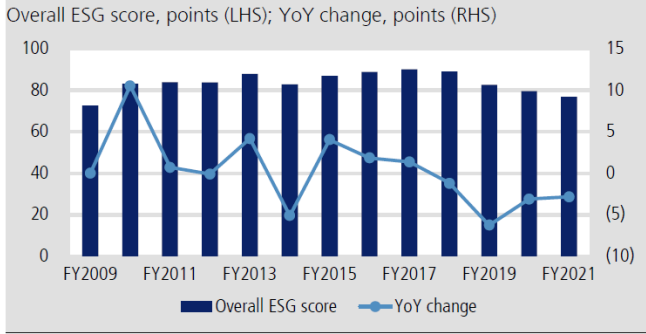
Source: KGI Research

**Figure 12: 12M forward PB band**



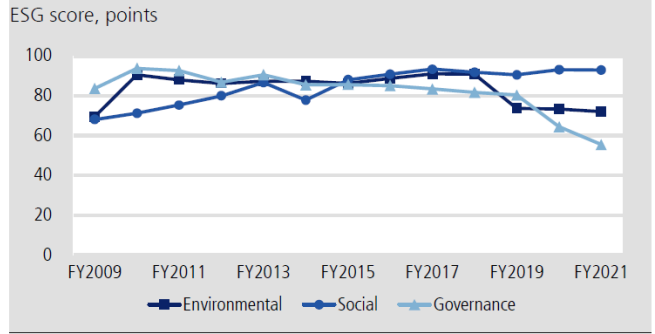
Source: TEI, KGI Research estimates

**Figure 13: Overall ESG score**



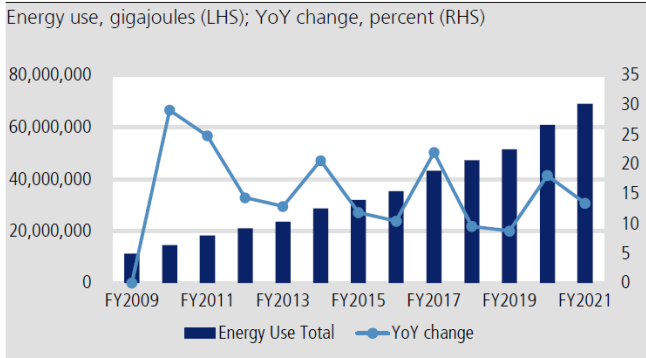
Source: Refinitiv, Company data

**Figure 14: ESG score by category**



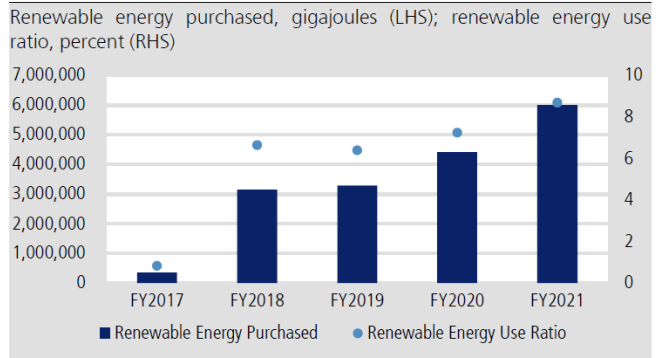
Source: Refinitiv, Company data

**Figure 15: Energy use**



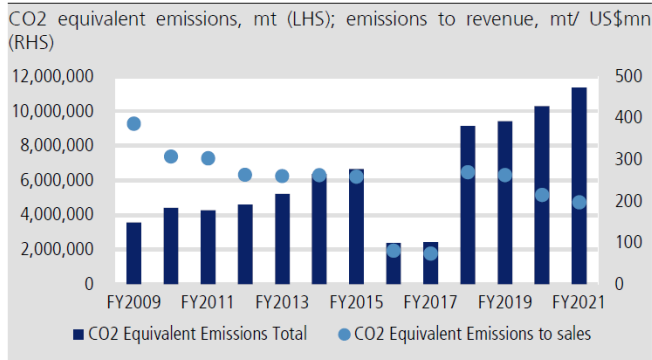
Source: Refinitiv, Company data

**Figure 16: Renewable energy**



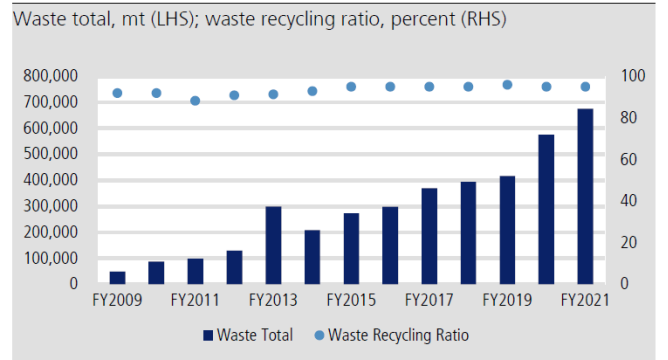
Source: Refinitiv, Company data

**Figure 17: CO2 equivalent emissions**



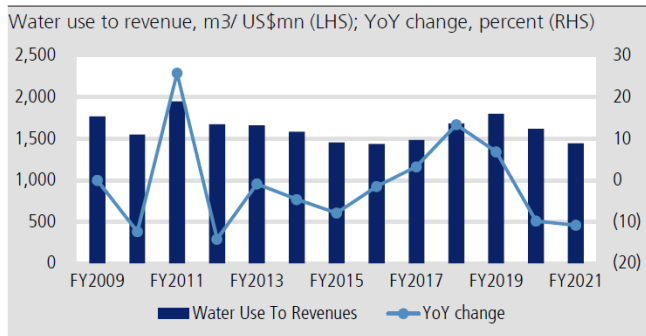
Source: Refinitiv, Company data

**Figure 18: Waste total**



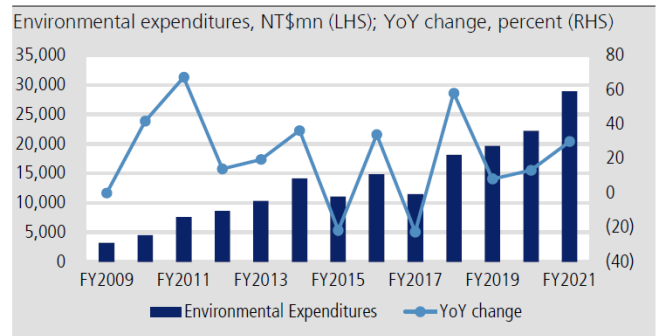
Source: Refinitiv, Company data

**Figure 19: Water use to revenue**

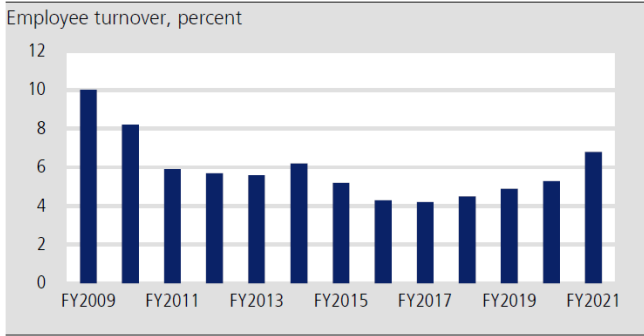


Source: Refinitiv, Company data

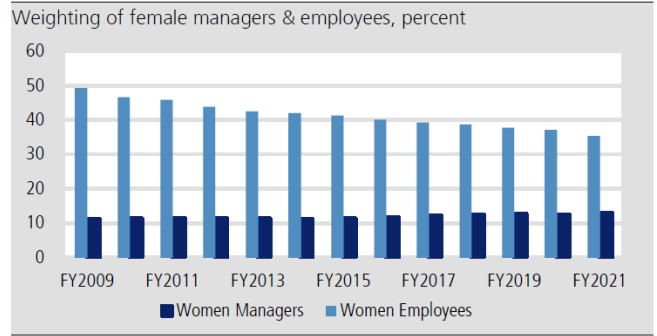
**Figure 20: Environmental expenditures**



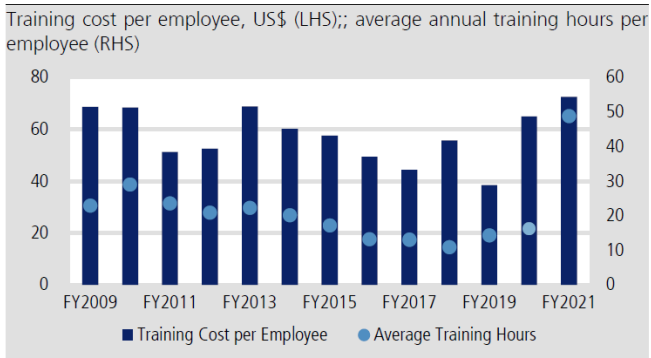
Source: Refinitiv, Company data

**Figure 21: Employee turnover**


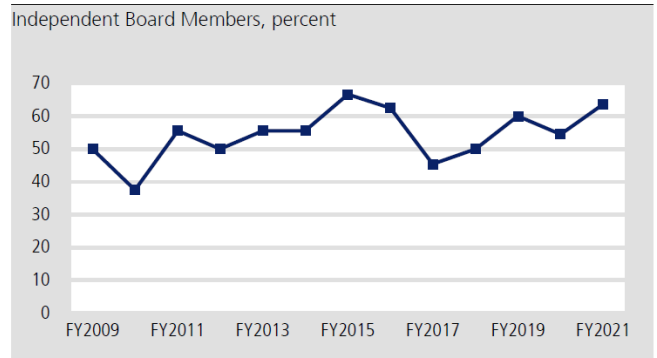
Source: Refinitiv, Company data

**Figure 22: Gender diversification**


Source: Refinitiv, Company data

**Figure 23: Employee training**


Source: Refinitiv, Company data

**Figure 24: Independent Board Members**


Source: Refinitiv, Company data

**ESG chart definition**

Item	Definition	Remarks
Energy use	<p>Total direct and indirect energy consumption in gigajoules.</p> <ul style="list-style-type: none"> <li>- the total amount of energy that has been consumed within the boundaries of the company's operations</li> <li>- total energy use = total direct energy consumption + indirect energy consumption</li> <li>- purchased energy and produced energy are included in total energy use</li> <li>- 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)</li> <li>- for utilities, raw materials such as coal, gas or nuclear used in the production of energy are not considered under 'total energy use'</li> </ul>	
Renewable energy purchased	<p>Total primary renewable energy purchased in gigajoules.</p> <ul style="list-style-type: none"> <li>- 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</li> <li>- if there is no evidence that renewable energy is produced by the company, then we consider the reported energy figure as renewable energy purchased</li> </ul>	
Renewable energy use ratio	Renewable energy to total energy used	
CO2 equivalent emissions	<p>Direct CO2 and CO2 equivalent emissions in metric tons.</p> <ul style="list-style-type: none"> <li>- direct emissions from sources that are owned or controlled by the company (scope 1 emissions)</li> <li>- following gases are relevant: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorinated compound (PFCS), sulfur hexafluoride (SF6), nitrogen trifluoride (NF3)</li> </ul>	
CO2 equivalent emissions to sales	<p>Direct CO2 and CO2 equivalent emissions (metric tons) to sales (NT\$m)</p> <ul style="list-style-type: none"> <li>- direct emissions from sources that are owned or controlled by the company (scope 1 emissions)</li> <li>- following gases are relevant: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorinated compound (PFCS), sulfur hexafluoride (SF6), nitrogen trifluoride (NF3)</li> </ul>	
Waste total	<p>Total amount of waste produced in metric tons.</p> <ul style="list-style-type: none"> <li>- total waste = non-hazardous waste + hazardous waste</li> <li>- 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</li> <li>- for sectors like mining, oil &amp; gas, waste generation like tailings, waste rock, coal and fly ash are also considered</li> </ul>	
Waste recycling ratio	<p>The waste recycling ratio as reported by the company.</p> <ul style="list-style-type: none"> <li>- waste recycling ratio = waste recycled/total waste*100</li> <li>- waste to energy or waste incinerated with energy recovery are considered as waste recycled</li> <li>- waste recovered via composting is considered as recycled waste</li> </ul>	
Water withdrawal total	<p>Total water withdrawal in cubic meters.</p> <ul style="list-style-type: none"> <li>- 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</li> <li>- different sources of water like wells, town/utility/municipal water, river water, and surface water are considered</li> </ul>	
Environmental expenditures	<p>Total amount of environmental expenditures.</p> <ul style="list-style-type: none"> <li>- all environmental investment &amp; expenditures for environmental protection or to prevent, reduce, control environmental aspects, impacts, and hazards. It also includes disposal, treatment, sanitation, and clean-up expenditures</li> </ul>	
Turnover of employees	<p>Percentage of employee turnover.</p> <ul style="list-style-type: none"> <li>- 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</li> <li>- employees turnover rate = (employees leaving/average number of employees)*100</li> <li>- where the average number of employees = (employees at the end of the current year + employees at the end of the previous year)/2</li> <li>- employees at the end of the current fiscal year = employees at the end of the previous fiscal year + new employees - employees leaving</li> </ul>	
Women managers	<p>Percentage of women managers.</p> <ul style="list-style-type: none"> <li>- percentage of women managers among total managers of the company</li> <li>- 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</li> <li>- percentage of women managers = number of women managers/total number of managers*100</li> </ul>	
Women employees	<p>Percentage of women employees.</p> <ul style="list-style-type: none"> <li>- percentage of women employees to the total number of employees of the company</li> <li>- percentage of women employees = number of women/total number of employees*100</li> </ul>	
Training hours total	<p>Total training hours performed by all employees.</p> <ul style="list-style-type: none"> <li>- consider only employee training hours</li> <li>- includes all types of training given to general employees (such as health &amp; safety, environmental, emergency response, skills &amp; career development training)</li> <li>- if the value is given in days, multiply by 8, assuming that 1 day = 8 hours worked</li> </ul>	
Training hours per employee	Training hours per employee per year	

Source: Refinitiv, KGI Research

**Income statement**

	Quarterly								Annually		
	Mar-24A	Jun-24A	Sep-24A	Dec-24F	Mar-25F	Jun-25F	Sep-25F	Dec-25F	Dec-24F	Dec-25F	Dec-26F
<b>Income statement (NT\$mn)</b>											
<b>Revenue</b>	<b>592,644</b>	<b>673,510</b>	<b>759,692</b>	<b>861,831</b>	<b>858,362</b>	<b>892,298</b>	<b>960,490</b>	<b>1,026,122</b>	<b>2,887,677</b>	<b>3,737,271</b>	<b>4,258,504</b>
Cost of goods sold	(278,139)	(315,386)	(320,346)	(354,515)	(357,842)	(382,607)	(408,308)	(430,683)	(1,268,386)	(1,579,439)	(1,704,498)
<b>Gross profit</b>	<b>314,505</b>	<b>358,124</b>	<b>439,346</b>	<b>507,316</b>	<b>500,520</b>	<b>509,691</b>	<b>552,182</b>	<b>595,439</b>	<b>1,619,291</b>	<b>2,157,832</b>	<b>2,554,006</b>
Operating expenses	(65,487)	(69,022)	(79,578)	(87,045)	(90,557)	(90,836)	(97,490)	(103,638)	(302,680)	(382,521)	(428,660)
<b>Operating profit</b>	<b>249,018</b>	<b>289,103</b>	<b>359,767</b>	<b>420,271</b>	<b>409,963</b>	<b>418,855</b>	<b>454,692</b>	<b>491,801</b>	<b>1,316,611</b>	<b>1,775,311</b>	<b>2,125,347</b>
Depreciation of fixed assets	(156,697)	(162,929)	(165,915)	(133,317)	(142,230)	(149,676)	(157,123)	(151,538)	(618,859)	(600,567)	(606,152)
Amortisation of intangible assets	(2,326)	(2,237)	(2,313)	(2,546)	(2,830)	(2,944)	(3,349)	(2,894)	(9,423)	(12,017)	(12,120)
<b>EBITDA</b>	<b>408,041</b>	<b>454,269</b>	<b>527,996</b>	<b>556,134</b>	<b>555,023</b>	<b>571,475</b>	<b>615,164</b>	<b>646,233</b>	<b>1,944,892</b>	<b>2,387,895</b>	<b>2,743,619</b>
Interest income	19,359	20,979	22,602	20,979	20,979	20,979	20,979	20,979	83,919	83,917	83,917
Investment income	950	1,355	1,286	1,200	1,200	1,200	1,200	1,200	4,791	4,800	4,800
Other non-op income	0	(0)	316	-	-	-	-	-	316	-	-
<b>Non-operating income</b>	<b>20,309</b>	<b>22,335</b>	<b>24,203</b>	<b>22,179</b>	<b>22,179</b>	<b>22,179</b>	<b>22,179</b>	<b>22,179</b>	<b>89,026</b>	<b>88,717</b>	<b>88,717</b>
Interest expense	(2,698)	(2,638)	(2,636)	(2,638)	(2,638)	(2,638)	(2,638)	(2,638)	(10,610)	(10,553)	(10,553)
Investment loss	-	-	-	-	-	-	-	-	-	-	-
Other non-op expenses	(86)	58	1,853	-	-	-	-	-	1,826	-	-
<b>Non-operating expenses</b>	<b>(2,784)</b>	<b>(2,580)</b>	<b>(783)</b>	<b>(2,638)</b>	<b>(2,638)</b>	<b>(2,638)</b>	<b>(2,638)</b>	<b>(2,638)</b>	<b>(8,785)</b>	<b>(10,553)</b>	<b>(10,553)</b>
<b>Pre-tax profit</b>	<b>266,543</b>	<b>308,858</b>	<b>383,188</b>	<b>439,812</b>	<b>429,504</b>	<b>438,396</b>	<b>474,233</b>	<b>511,342</b>	<b>1,396,852</b>	<b>1,853,475</b>	<b>2,203,511</b>
Current taxation	(41,322)	(58,649)	(59,107)	(59,375)	(64,426)	(83,295)	(71,135)	(76,701)	(218,452)	(295,557)	(350,871)
Minorities	264	184	177	177	177	177	177	177	803	710	710
<b>Normalised net profit</b>	<b>225,485</b>	<b>250,393</b>	<b>324,259</b>	<b>380,615</b>	<b>365,256</b>	<b>355,278</b>	<b>403,275</b>	<b>434,818</b>	<b>1,179,203</b>	<b>1,558,627</b>	<b>1,853,350</b>
Extraordinary items	(0)	(2,547)	999	-	-	-	-	-	-	-	-
<b>Net profit</b>	<b>225,485</b>	<b>247,846</b>	<b>325,258</b>	<b>380,615</b>	<b>365,256</b>	<b>355,278</b>	<b>403,275</b>	<b>434,818</b>	<b>1,179,203</b>	<b>1,558,627</b>	<b>1,853,350</b>
EPS (NT\$)	8.70	9.56	12.55	14.68	14.09	13.70	15.55	16.77	45.48	60.12	71.49
<b>Margins (%)</b>											
Gross profit margin	53.1	53.2	57.8	58.9	58.3	57.1	57.5	58.0	56.1	57.7	60.0
Operating margin	42.0	42.9	47.4	48.8	47.8	46.9	47.3	47.9	45.6	47.5	49.9
EBITDA margin	68.9	67.4	69.5	64.5	64.7	64.0	64.0	63.0	67.4	63.9	64.4
Pretax profit margin	45.0	45.9	50.4	51.0	50.0	49.1	49.4	49.8	48.4	49.6	51.7
Net profit margin	38.0	36.8	42.8	44.2	42.6	39.8	42.0	42.4	40.8	41.7	43.5
<b>Sequential growth (%)</b>											
Revenue growth	(5.3)	13.6	12.8	13.4	(0.4)	4.0	7.6	6.8			
Gross profit growth	(5.2)	13.9	22.7	15.5	(1.3)	1.8	8.3	7.8			
Operating profit growth	(4.3)	16.1	24.4	16.8	(2.5)	2.2	8.6	8.2			
EBITDA growth	(0.7)	11.3	16.2	5.3	(0.2)	3.0	7.6	5.1			
Pretax profit growth	(4.2)	15.9	24.1	14.8	(2.3)	2.1	8.2	7.8			
Net profit growth	(5.5)	9.9	31.2	17.0	(4.0)	(2.7)	13.5	7.8			
<b>YoY growth (%)</b>											
Revenue growth	16.5	40.1	39.0	37.8	44.8	32.5	26.4	19.1	33.6	29.4	13.9
Gross profit growth	9.8	37.6	48.1	52.9	59.1	42.3	25.7	17.4	37.8	33.3	18.4
Operating profit growth	7.7	43.1	57.9	61.6	64.6	44.9	26.4	17.0	42.9	34.8	19.7
EBITDA growth	19.5	39.4	40.8	35.4	36.0	25.8	16.5	16.2	33.8	22.8	14.9
Pretax profit growth	9.1	43.9	58.6	58.1	61.1	41.9	23.8	16.3	42.7	32.7	18.9
Net profit growth	8.9	36.3	54.2	59.4	62.0	43.3	24.0	14.2	40.6	32.2	18.9

Source: Company data, KGI Research estimates

**Balance sheet**

NT\$mn	Dec-22A	Dec-23A	Dec-24F	Dec-25F	Dec-26F
<b>Total assets</b>	<b>4,964,779</b>	<b>5,532,371</b>	<b>6,498,827</b>	<b>7,629,222</b>	<b>9,036,793</b>
<b>Current assets</b>	<b>2,052,897</b>	<b>2,194,033</b>	<b>2,708,936</b>	<b>3,276,198</b>	<b>3,999,058</b>
Cash & ST securities	1,561,486	1,687,644	1,989,061	2,423,501	3,034,045
Inventory	221,149	250,997	317,472	385,680	422,751
Accounts receivable	231,340	201,938	338,947	403,561	478,806
Other current assets	38,922	53,453	63,456	63,456	63,456
<b>Non-current assets</b>	<b>2,911,882</b>	<b>3,338,338</b>	<b>3,789,891</b>	<b>4,353,024</b>	<b>5,037,735</b>
LT investments	68,928	129,442	128,532	133,332	138,132
Net fixed assets	2,693,837	3,064,475	3,468,547	4,026,879	4,706,790
Other assets	149,117	144,421	192,813	192,813	192,813
<b>Total liabilities</b>	<b>2,004,290</b>	<b>2,049,108</b>	<b>2,251,811</b>	<b>2,290,246</b>	<b>2,311,136</b>
<b>Current liabilities</b>	<b>944,227</b>	<b>913,583</b>	<b>1,188,474</b>	<b>1,226,910</b>	<b>1,247,799</b>
Accounts payable	56,522	57,293	89,004	108,127	118,520
Interest bearing ST liabilities	19,314	9,293	58,805	58,805	58,805
Other current liabilities	868,391	846,997	1,040,665	1,059,978	1,070,474
<b>Non-current liabilities</b>	<b>1,060,063</b>	<b>1,135,525</b>	<b>1,063,337</b>	<b>1,063,337</b>	<b>1,063,337</b>
Long-term debt	839,096	918,283	921,227	921,227	921,227
Other L-T liabilities	191,203	188,560	127,174	127,174	127,174
<b>Total equity</b>	<b>2,960,489</b>	<b>3,483,263</b>	<b>4,247,017</b>	<b>5,338,976</b>	<b>6,725,657</b>
Share capital	259,304	259,321	259,327	259,327	259,327
Retained earnings reserve	2,323,223	2,846,884	3,883,396	4,975,355	6,362,036
Minority interests	14,836	24,349	31,903	31,903	31,903
Preferred shareholders funds	-	-	-	-	-

**Key ratios**

	Dec-22A	Dec-23A	Dec-24F	Dec-25F	Dec-26F
<b>Growth</b>					
Revenue growth	42.6%	(4.5%)	33.6%	29.4%	13.9%
Operating profit growth	72.5%	(17.9%)	42.9%	34.8%	19.7%
EBITDA growth	45.3%	(6.8%)	33.8%	22.8%	14.9%
Net profit growth	70.4%	(17.5%)	40.6%	32.2%	18.9%
EPS growth	70.4%	(17.5%)	40.6%	32.2%	18.9%
<b>Profitability</b>					
Gross profit margin	59.6%	54.4%	56.1%	57.7%	60.0%
Operating margin	49.5%	42.6%	45.6%	47.5%	49.9%
EBITDA margin	68.8%	67.2%	67.4%	63.9%	64.4%
Net profit margin	44.9%	38.8%	40.8%	41.7%	43.5%
Return on average assets	23.4%	16.0%	19.6%	22.1%	22.2%
Return on average equity	39.8%	26.2%	30.7%	32.7%	30.9%
<b>Stability</b>					
Gross debt to equity	29.0%	26.6%	23.1%	18.4%	14.6%
Net debt to equity	Net cash	Net cash	Net cash	Net cash	Net cash
Interest coverage (x)	98.4	82.6	132.7	176.6	209.8
Interest & ST debt coverage (x)	1.0	1.0	1.0	1.0	1.0
Cash flow interest coverage(x)	137.1	103.5	161.7	196.4	225.1
Cash flow/int. & ST debt (x)	51.8	58.3	24.7	29.9	34.2
Current ratio (x)	2.2	2.4	2.3	2.7	3.2
Quick ratio (x)	1.9	2.1	2.0	2.4	2.9
Net debt (NT\$mn)	(484,404)	(537,852)	(728,209)	(1,162,650)	(1,773,193)
<b>Per share data</b>					
EPS (NT\$)	39.20	32.34	45.48	60.12	71.49
CFPS (NT\$)	62.12	47.90	66.18	79.92	91.62
BVPS (NT\$)	113.60	133.38	162.57	204.70	258.19
Adj BVPS (NT\$)	113.60	133.40	162.57	204.70	258.19
SPS (NT\$)	87.31	83.37	111.37	144.15	164.26
EBITDA/share (NT\$)	60.11	56.05	75.01	92.10	105.82
Cash DPS (NT\$)	11.00	13.00	16.00	18.00	18.00
<b>Activity</b>					
Sales / avg assets	0.52	0.41	0.48	0.53	0.51
Days receivable	37.3	34.1	43.0	39.4	41.0
Days inventory	88.2	92.9	91.6	89.1	90.5
Days payable	22.5	21.2	25.7	25.0	25.4
Cash cycle	102.9	105.8	108.9	103.6	106.2

Source: Company data, KGI Research estimates

**Profit & loss**

NT\$mn	Dec-22A	Dec-23A	Dec-24F	Dec-25F	Dec-26F
<b>Revenue</b>	<b>2,263,891</b>	<b>2,161,736</b>	<b>2,887,677</b>	<b>3,737,271</b>	<b>4,258,504</b>
Cost of goods sold	(915,536)	(986,625)	(1,268,386)	(1,579,439)	(1,704,498)
<b>Gross profit</b>	<b>1,348,355</b>	<b>1,175,111</b>	<b>1,619,291</b>	<b>2,157,832</b>	<b>2,554,006</b>
Operating expenses	(227,076)	(254,022)	(302,680)	(382,521)	(428,660)
<b>Operating profit</b>	<b>1,121,279</b>	<b>921,088</b>	<b>1,316,611</b>	<b>1,775,311</b>	<b>2,125,347</b>
<b>Non-operating income</b>	<b>31,168</b>	<b>65,429</b>	<b>89,026</b>	<b>88,717</b>	<b>88,717</b>
Interest income	22,422	60,294	83,919	83,917	83,917
Investment income	8,065	5,119	4,791	4,800	4,800
Other non-op income	681	16	316	-	-
<b>Non-operating expenses</b>	<b>(8,256)</b>	<b>(7,723)</b>	<b>(8,785)</b>	<b>(10,553)</b>	<b>(10,553)</b>
Interest expense	(11,750)	(11,999)	(10,610)	(10,553)	(10,553)
Investment loss	-	-	-	-	-
Other non-op expenses	3,494	4,276	1,826	-	-
<b>Pre-tax profit</b>	<b>1,144,191</b>	<b>978,794</b>	<b>1,396,852</b>	<b>1,853,475</b>	<b>2,203,511</b>
Current taxation	(127,290)	(141,404)	(218,452)	(295,557)	(350,871)
Minorities	(370)	730	803	710	710
Extraordinary items	-	377	-	-	-
<b>Net profit</b>	<b>1,016,530</b>	<b>838,498</b>	<b>1,179,203</b>	<b>1,558,627</b>	<b>1,853,550</b>
<b>EBITDA</b>	<b>1,558,533</b>	<b>1,453,279</b>	<b>1,944,892</b>	<b>2,387,895</b>	<b>2,743,619</b>
EPS (NT\$)	39.20	32.34	45.48	60.12	71.49

**Cash flow**

NT\$mn	Dec-22A	Dec-23A	Dec-24F	Dec-25F	Dec-26F
<b>Operations cash flow</b>	<b>1,610,599</b>	<b>1,241,967</b>	<b>1,715,764</b>	<b>2,072,025</b>	<b>2,375,395</b>
Net profit	1,016,530	838,498	1,179,203	1,558,627	1,853,550
Depreciation & amortisation	437,254	532,191	628,282	612,584	618,272
Decrease in working capital	(53,286)	324	(171,772)	(113,700)	(101,923)
Other operating cash flow	210,100	(129,046)	80,052	14,513	5,696
<b>Investing cash flow</b>	<b>(1,190,928)</b>	<b>(906,121)</b>	<b>(1,085,735)</b>	<b>(1,170,916)</b>	<b>(1,298,183)</b>
Sale of ST investment	(128,838)	(55,781)	(21,441)	-	-
New investments	-	-	-	-	-
Capital expenditure	(1,082,672)	(949,817)	(1,126,869)	(1,170,916)	(1,298,183)
Others investing cashflow	20,582	99,478	62,575	-	-
<b>Free cash flow</b>	<b>289,078</b>	<b>361,461</b>	<b>430,926</b>	<b>808,169</b>	<b>992,968</b>
<b>Financing cash flow</b>	<b>(200,244)</b>	<b>(204,894)</b>	<b>(401,089)</b>	<b>(466,668)</b>	<b>(466,668)</b>
Increase in short term debt	(111,960)	-	-	-	-
Increase in long term loans	195,983	68,204	52,456	-	-
New ordinary shares issued	-	-	-	-	-
Ordinary dividends paid	(285,234)	(291,722)	(414,841)	(466,668)	(466,668)
Other financing cashflow	1,839	18,623	(35,615)	-	-
<b>Forex effects</b>	<b>58,397</b>	<b>(8,339)</b>	<b>13,874</b>	-	-
<b>Total cash generated</b>	<b>277,824</b>	<b>122,614</b>	<b>242,814</b>	<b>434,440</b>	<b>610,544</b>

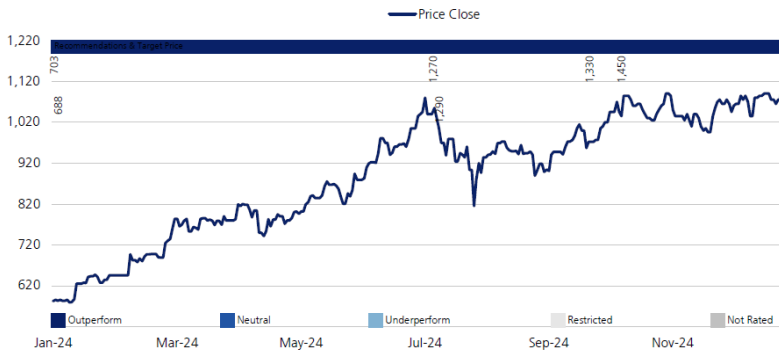
**ROIC**

	Dec-22A	Dec-23A	Dec-24F	Dec-25F	Dec-26F
1 - COGS/revenue					
- Operating exp./revenue	10.0%	11.8%	10.5%	10.2%	10.1%
<b>= Operating margin</b>	<b>49.5%</b>	<b>42.6%</b>	<b>45.6%</b>	<b>47.5%</b>	<b>49.9%</b>
1 / (Working capital/revenue	(0.2)	(0.2)	(0.1)	(0.1)	(0.1)
+ Net PPE/revenue	1.2	1.4	1.2	1.1	1.1
+ Other assets/revenue)	0.0	0.0	0.1	0.1	0.0
<b>= Capital turnover</b>	<b>1.0</b>	<b>0.8</b>	<b>0.9</b>	<b>1.0</b>	<b>0.9</b>
Operating margin	49.5%	42.6%	45.6%	47.5%	49.9%
x Capital turnover	1.0	0.8	0.9	1.0	0.9
x (1 - tax rate)	88.9%	85.6%	84.4%	84.1%	84.1%
<b>= After-tax ROIC</b>	<b>43.9%</b>	<b>29.4%</b>	<b>34.2%</b>	<b>38.2%</b>	<b>38.2%</b>

Source: Company data, KGI Research estimates



**TSMC – Recommendation & target price history**



Date	Rating	Target	Price
2024-11-08	Outperform	1,450	1,090
2024-10-17	Outperform	1,450	1,035
2024-10-01	Outperform	1,330	972
2024-08-21	Outperform	1,290	958
2024-07-18	Outperform	1,290	1,005
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

Source: TEI, KGI Research

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