



Nanya Technology (2408.TW/2408 TT)

Higher idle production costs in 3Q23

FTSE4Good TIP Taiwan ESG Index stock

Outperform · Maintained

Price as of October 11 (NT\$)	70.70
12M target price (NT\$)	85.00
Previous target price (NT\$)	85.00
Unchanged (%)	0.0
Upside (%)	20.2

Key message

Nanya Technology reported 3Q23 preliminary loss per share of NT\$0.81, missing our forecast. With a new wave of price hikes ahead for DRAM from 4Q23F, we recommend engaging this stock.

Trading data

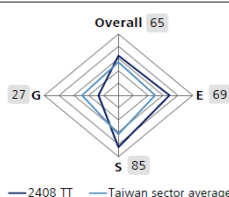
Mkt cap (NT\$bn/US\$m)	219.0 / 6,806
Outstanding shares (mn)	3,098
Foreign ownership (mn)	512
3M avg. daily trading (mn)	6.74
52-week trading range (NT\$)	51.20 –78.50

Performance	3M	6M	12M
Absolute (%)	1.1	3.7	42.1
Relative (%)	2.5	-1.1	14.9

Quarterly EPS

NT\$	1Q	2Q	3Q	4Q
2022	2.11A	2.12A	0.85A	(0.37)A
2023	(0.54)A	(0.25)A	(0.81)F	(0.50)F
2024	(0.20)F	0.57F	1.14F	1.31F

ESG score card



Source: Refinitiv, KGI securities

Event

Nanya Technology reported 3Q23 preliminary loss per share (LPS) of NT\$0.81, missing our forecast.

Impact

3Q23 earnings miss, with higher idle production costs. 3Q23 preliminary LPS came in at NT\$0.81, missing our forecast of LPS of NT\$0.46, and consensus of LPS of NT\$0.56. Gross margin of -25.2% missed our forecast of -5.9% and consensus of -3.9%, reflecting: (1) ASP decline of high-single digits QoQ to US\$0.28/Gb, below our forecast of a flat ASP; (2) bit shipments were up by high-teen digits QoQ, better than our forecast of 6% QoQ growth; (3) depreciation cost per unit decreased from US\$0.17/Gb in 2Q23 to US\$0.14/Gb in 3Q23, while variable cost per unit increased from US\$0.18/Gb in 2Q23 to US\$0.22/Gb in 3Q23. Average unit cost was higher than our forecast, because of lower utilization, and thereafter higher idle production costs, in 3Q23, relative to 2Q23. 3Q23 inventory levels remained largely static QoQ, and there were limited inventory write-downs, as inventory remains valued above cost.

Inventory digestion from 4Q23. Management guides for: (1) bit shipments to grow mid-to-high single digits QoQ in 4Q23F; (2) blended ASP to grow QoQ in 4Q23F; (3) bit shipments to fall mid-single digits YoY in 2023F, an improvement over previous guidance for a decline of around 10%; (4) cuts of 10-20% of bit production to continue through 2023F, leading to another idle production outlay in 4Q23; (4) inventory to decrease QoQ in 4Q23F; (5) 2023F capex guidance at NT\$15.0bn, in line with latest guidance; and (6) to ship 16Gb DDR5 products by mid-2024F, as expected.

DRAM pricing dynamics getting better. Management expects the DRAM market to gradually recover from 4Q23F, supported by: (1) capacity utilization cuts and inventory digestion by main suppliers; (2) server demand improving QoQ from 4Q23F, with growing DDR5 demand for AI-servers; (3) DDR5 & LPDDR5 gradually replacing DDR4 & LPDDR4 in new PC products; (4) the smartphone market in China rebounding in 4Q23F; and (5) demand for TVs, IP CAMs, and networking equipment remaining stable.

Valuation & Action

We revise 2023F LPS to NT\$2.10 to reflect higher idle production costs. We maintain our target price at NT\$85, on 1.5x 2024F BVPS of NT\$57. With a new wave of price hikes ahead for DRAM from 4Q23F, we recommend engaging this stock. Maintain Outperform.

Risks

Slow industry-wide process conversion; PC and smartphone demand.

Key financials and valuations

	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
Revenue (NT\$m)	61,006	85,604	56,952	29,755	58,319
Gross profit (NT\$m)	15,692	37,044	21,342	(3,878)	18,238
Operating profit (NT\$m)	8,434	27,186	11,002	(13,408)	8,238
Net profit (NT\$m)	7,686	22,849	14,619	(6,509)	8,753
EPS (NT\$)	2.51	7.40	4.72	(2.10)	2.83
Cash DPS (NT\$)	1.30	3.70	2.13	0.30	1.30
EPS growth (%)	(22.3)	195.2	(36.2)	(144.5)	0.0
PE (x)	28.2	9.6	15.0	N.A.	25.0
PB (x)	1.4	1.3	1.2	1.3	1.2
EV/EBITDA (x)	6.9	3.1	5.3	81.2	6.3
Net debt to equity (%)	Net cash	Net cash	Net cash	Net cash	Net cash
Dividend yield (%)	1.8	5.2	3.0	0.4	1.8
Return on average equity (%)	5.0	14.0	8.3	(3.7)	5.1

Source: Company data, KGI Research estimates

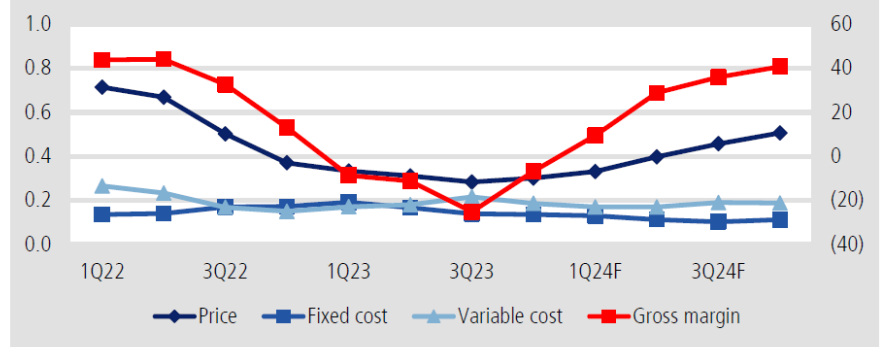
Figure 1: Business highlights in 3Q23 & outlook

	2Q23	3Q23			4Q23F	2022	2023F
	Result	Result	Consensus	Guidance	Guidance	Result	Guidance
Revenue (NT\$m)	7,027	7,736	7,854			56,952	
Bit shipment (mn Gb)	731	862				3,312	
QoQ (%)	15	18		up	up mid-to-high single digits		
YoY (%)	(20)	21				(26)	down mid-single digits
ASP (US\$Gb)	0.31	0.28				0.58	
QoQ (%)	(7)	(9)		up	up		
YoY (%)	(53)	(44)				(16)	
COGS (NT\$m)	7,815	9,689	8,160			35,610	
Per Gb (US\$Gb)	0.35	0.35				0.36	
Depreciation (NT\$m)	3,758	3,790				14,988	
Per Gb (US\$Gb)	0.17	0.14				0.15	
Variable cost (NT\$m)	4,057	5,899				20,622	
Per Gb (US\$Gb)	0.18	0.22				0.21	
Financials							
Gross margin(%)	(11.22)	(25.24)	(3.9)			37.47	
SG&A (NT\$m)	2,396	2,387				10,340	
Income tax (NT\$m)	(1150)	(638)				2258	
EPS (NT\$)	(0.25)	(0.81)	(0.56)			4.72	
Capex (NT\$m)	2,808	2,431				20,711	15,000

Source: KGI Research

Figure 2: Declining DRAM unit prices lead to gross margin downtrend

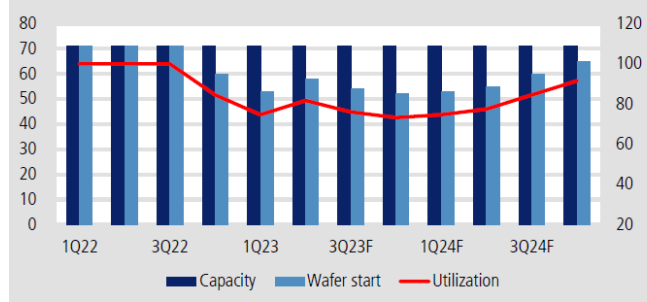
Nanya Technology DRAM average price, fixed costs & variable costs, US\$/Gb (LHS); gross margin, percent (RHS)



Source: Gartner, KGI Research

Figure 3: Wafer starts to further decline in 3Q-4Q23F

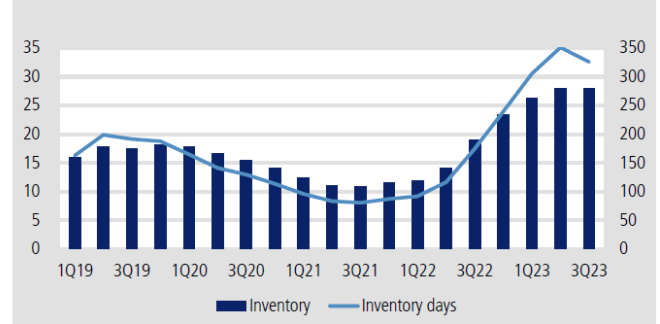
Production capacity and wafer starts, '000 pieces/month (LHS); UTR, percent (RHS)



Source: TrendForce, KGI Research

Figure 4: Inventory remains stubbornly high

Inventory value, NT\$bn (LHS); DOI, days (RHS)



Source: KGI Research

Figure 5: Breakdown of 3Q23 results & 4Q23 forecast revisions vs. consensus

NT\$m	3Q23							4Q23F						
	Result	KGI forecast	Diff. (%)	QoQ (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	QoQ (%)	YoY (%)	Consensus	Diff. (%)
Sales	7,736	7,643	1.2	10.1	(29.8)	7,854	(1.5)	8,566	7,832	9.4	10.7	7.7	8,947	(4.3)
Gross profits	(1,953)	(454)	-	-	-	(306)	-	(583)	(368)	-	-	-	682	-
Operating income	(4,340)	(2,837)	-	-	-	(2,863)	-	(2,999)	(2,788)	-	-	-	(2,113)	-
Pretax Income	(3,143)	(1,797)	-	-	-	(2,062)	-	(2,123)	(1,905)	-	-	-	(1,326)	-
Net income	(2,505)	(1,438)	-	-	-	(1,701)	-	(1,549)	(1,521)	-	-	-	(1,098)	-
EPS (NT\$)	(0.81)	(0.46)	-	-	-	(0.56)	-	(0.50)	(0.49)	-	-	-	(0.34)	-
Gross margin (%)	(25.2)	(5.9)	(19.3)ppts	(14.0)ppts	(57.9)ppts	(3.9)	(21.3)ppts	(6.8)	(4.7)	(2.1)ppts	18.4 ppts	(19.8)ppts	7.6	(14.4)ppts
OP margin (%)	(56.1)	(37.1)	(19.0)ppts	(10.8)ppts	(64.4)ppts	(36.4)	(19.7)ppts	(35.0)	(35.6)	0.6 ppts	21.1 ppts	(15.6)ppts	(23.6)	(11.4)ppts
Net margin (%)	(32.4)	(18.8)	(13.6)ppts	(21.4)ppts	(56.3)ppts	(21.7)	(10.7)ppts	(18.1)	(19.4)	1.3 ppts	14.3 ppts	(3.7)ppts	(12.3)	(5.8)ppts

Source: KGI Research

Figure 6: Breakdown of 2023 & 2024 forecast revisions vs. consensus

NT\$m	2023F						2024F					
	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)
Sales	29,755	28,927	2.9	(47.8)	30,096	(1.1)	58,319	56,698	2.9	96.0	51,051	14.2
Gross profit	(3,878)	(2,165)	-	(118.2)	(947)	-	18,238	18,169	0.4	(570.2)	15,222	19.8
Operating income	(13,408)	(11,695)	-	(221.9)	(10,743)	-	8,238	8,169	0.8	(161.4)	4,692	75.6
Pretax profit	(9,299)	(7,735)	-	(155.1)	(7,465)	-	10,674	10,605	0.7	(214.8)	7,414	44.0
Net profit	(6,509)	(5,415)	-	(144.5)	(5,142)	-	8,753	8,696	0.7	(234.5)	5,560	57.4
EPS (NT\$)	(2.10)	(1.75)	-	(144.5)	(1.65)	-	2.83	2.81	0.7	(234.5)	1.85	57.4
Gross margin (%)	(13.0)	(7.5)	(5.6)ppts	(50.5)ppts	(3.1)	(9.9)ppts	31.3	32.0	(0.8)ppts	44.3 ppts	29.8	1.5 ppts
OP margin (%)	(45.1)	(40.4)	(4.6)ppts	(64.4)ppts	(35.7)	(9.4)ppts	14.1	14.4	(0.3)ppts	59.2 ppts	9.2	4.9 ppts
Net margin (%)	(21.9)	(18.7)	(3.2)ppts	(47.5)ppts	(17.1)	(4.8)ppts	15.0	15.3	(0.3)ppts	36.9 ppts	10.9	4.1 ppts

Source: KGI Research

Figure 7: Nanya Technology's operating metrics

(NT\$m)	1Q23	2Q23	3Q23	4Q23F	1Q24F	2Q24F	3Q24F	4Q24F	2020	2021	2022	2023F	2024F
Revenue	6,425	7,027	7,736	8,566	9,894	13,654	17,272	17,499	61,006	85,604	56,952	29,755	58,319
Wafer start(k wpm)	53	58	54	52	53	55	60	65	71	71	68	54	58
Utilization(%)	75	82	76	73	75	77	85	92	100	100	96	100	100
Shipment(mn Gb)	636	731	862	918	964	1,108	1,219	1,114	4,493	4,475	3,312	3,147	4,405
QoQ(%)	(7)	15	18	6	5	15	10	(9)					
YoY(%)	(36)	(20)	21	34	52	52	41	21	37	(0)	(26)	(5)	40
Price(US\$/Gb)	0.33	0.31	0.28	0.30	0.33	0.40	0.46	0.51	0.46	0.69	0.58	0.31	0.43
QoQ(%)	(10)	(7)	(9)	6	10	20	15	11					
YoY(%)	(53)	(53)	(44)	(19)	(1)	28	62	68	(10)	49	(16)	(47)	40
COGS	6,979	7,815	9,689	9,149	8,954	9,715	11,055	10,356	45,314	48,560	35,610	33,633	40,081
Unit cost(US\$/Gb)	0.36	0.35	0.35	0.32	0.30	0.28	0.29	0.30	0.34	0.39	0.36	0.34	0.29
Depreciation	3,694	3,758	3,790	3,857	3,875	3,875	3,875	3,875	14,214	15,034	14,988	15,100	15,500
Unit depreciation(US\$/Gb)	0.19	0.17	0.14	0.14	0.13	0.11	0.10	0.11	0.11	0.12	0.15	0.15	0.11
Capex	5,817	2,808	2,431	3,944	3,750	3,750	3,750	3,750	8,476	11,260	20,711	15,000	15,000
Variable cost	3,285	4,057	5,899	5,292	5,079	5,840	7,180	6,481	31,100	33,526	20,622	18,533	24,581
Unit variable cost(US\$/Gb)	0.17	0.18	0.22	0.19	0.17	0.17	0.19	0.19	0.24	0.27	0.21	0.19	0.18
Gross profit	(554)	(788)	(1,953)	(583)	940	3,938	6,217	7,143	15,692	37,044	21,342	(3,878)	18,238
Gross margin(%)	(9)	(11)	(25)	(7)	10	29	36	41	26	43	37	(13)	31
Operating income	(2,885)	(3,185)	(4,340)	(2,999)	(1,545)	1,446	3,709	4,628	8,434	27,186	11,002	(13,408)	8,238
EBITDA	873	663	(475)	930	2,400	5,391	7,654	8,573	22,885	42,480	26,249	1,992	24,018
Non-op income/loss	773	1,264	1,197	875	789	699	609	339	557	581	5,875	4,109	2,436
Income tax	(428)	(1,150)	(638)	(574)	(136)	386	777	894	1,305	4,918	2,258	(2,790)	1,921
Tax rate(%)	20	60	20	27	18	18	18	18	15	18	13	30	18
Net income	(1,685)	(771)	(2,505)	(1,549)	(620)	1,759	3,541	4,073	7,686	22,849	14,619	(6,509)	8,753
EPS(NT\$)	(0.54)	(0.25)	(0.81)	(0.50)	(0.20)	0.57	1.14	1.31	2.51	7.40	4.72	(2.10)	2.83

Source: Gartner; KGI Research

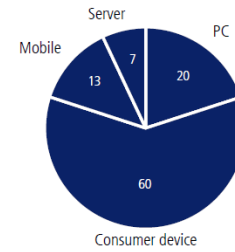
Figure 8: Company profile

Founded in 1995, Nanya Technology is a DRAM maker within Formosa Plastics Group (FPG), with production based in New Taipei City. Nanya Technology buys semiconductor silicon wafers, mainly from Formosa Sumco (3532 TT, NT\$153.0, NR) to make DRAM, which is tested and packaged by Formosa Advanced Technologies (8131 TT, NT\$38.8, NR), for use in niche consumer applications and PCs. Formosa Sumco and Formosa Advanced Technologies are member companies of Formosa Plastics Group.

Source: KGI Research

Figure 9: Consumer DRAM is key sales contributor

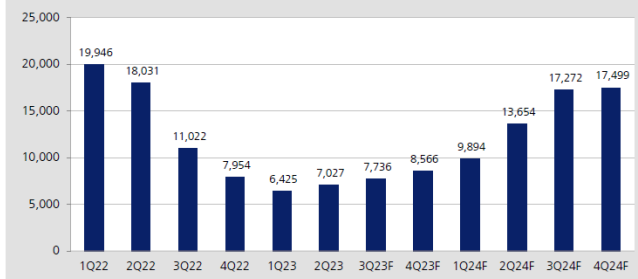
Sales weighting by application in 2020, percent



Source: KGI Research

Figure 10: Sales

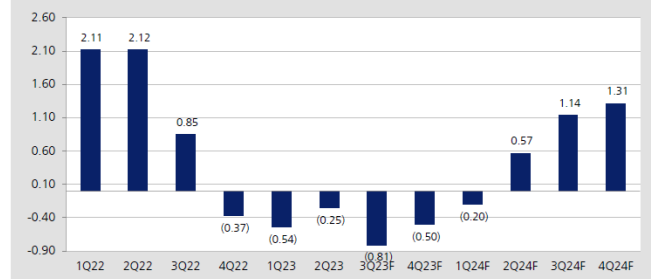
Sales, NT\$m



Source: KGI Research

Figure 11: EPS

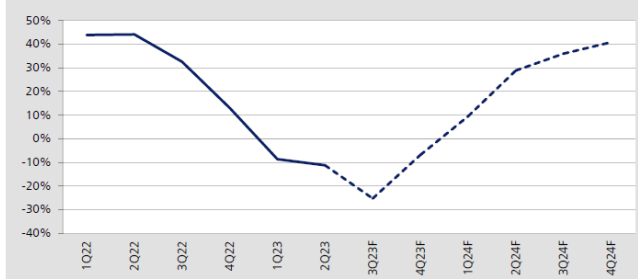
EPS, NT\$



Source: KGI Research

Figure 12: Gross Margin

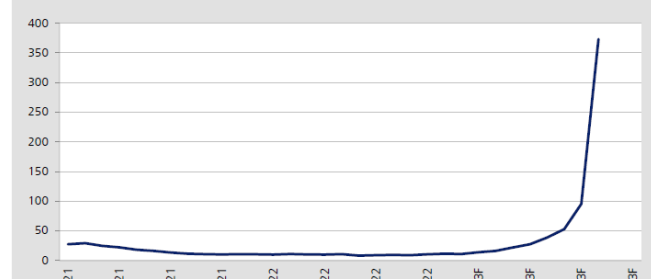
Gross margin, percent



Source: KGI Research

Figure 13: Rolling PE

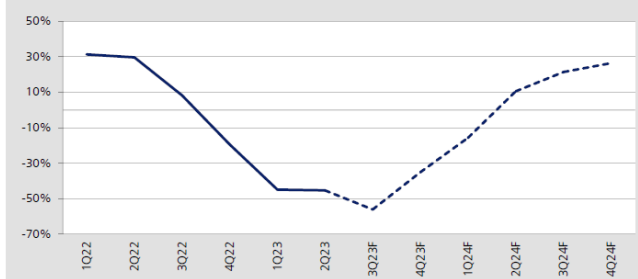
Rolling PE, times



Source: KGI Research

Figure 14: Operating Margin

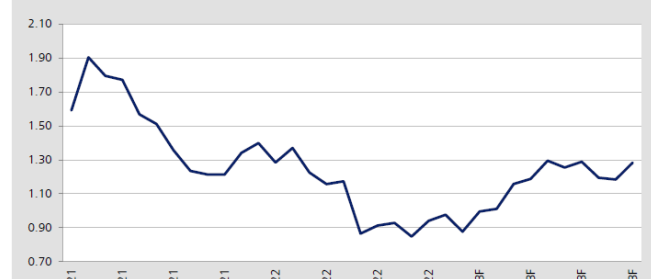
Operating margin, percent



Source: KGI Research

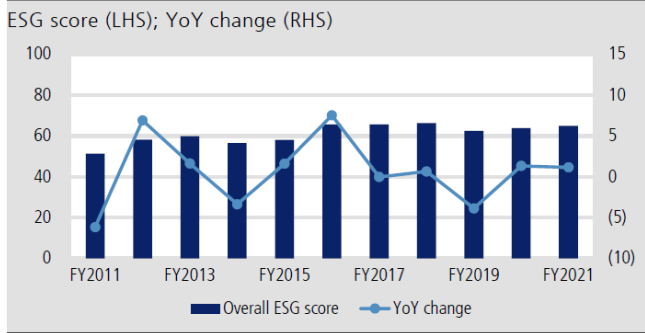
Figure 15: Rolling PB

Rolling PB, times



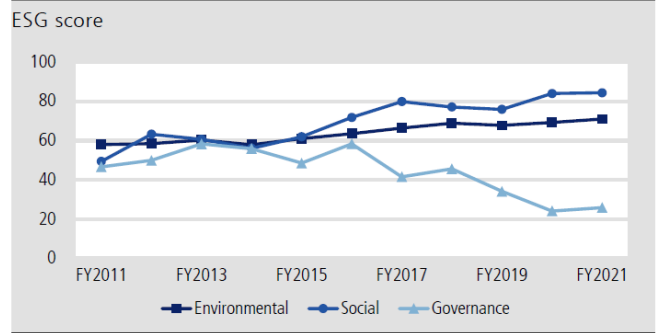
Source: KGI Research

Figure 16: Overall ESG score



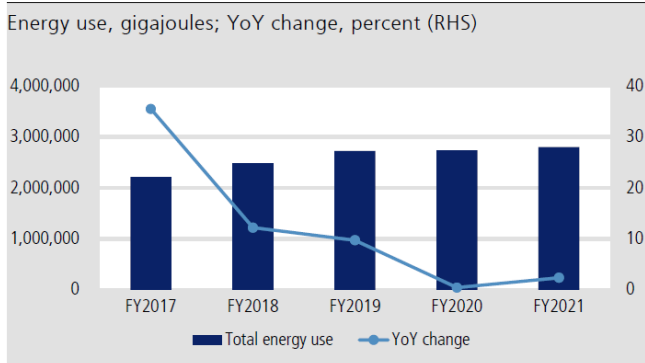
Source: Refinitiv, Company data

Figure 17: ESG scores



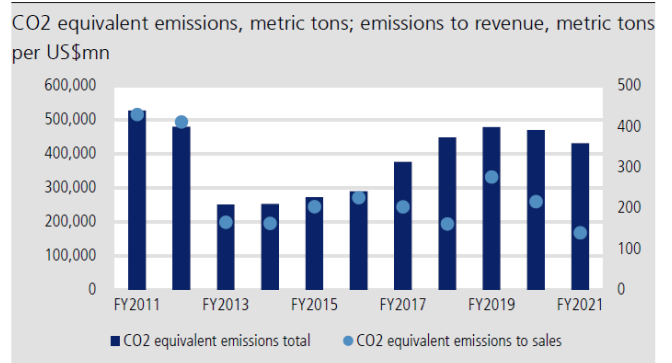
Source: Refinitiv, Company data

Figure 18: Energy Use



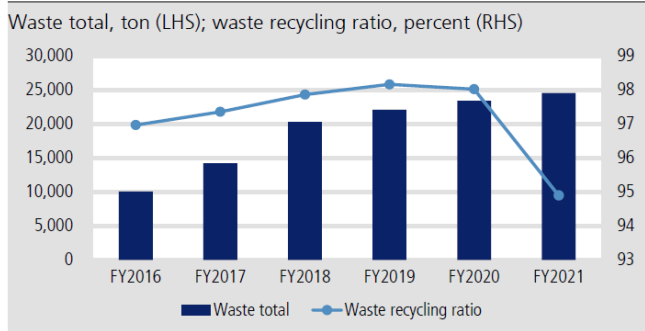
Source: Refinitiv, Company data

Figure 19: CO2 equivalent emissions



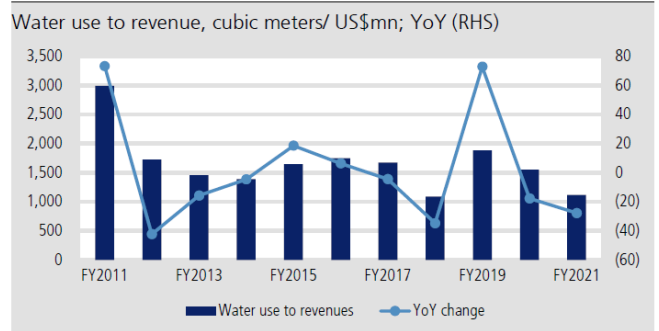
Source: Refinitiv, Company data

Figure 20: Waste total



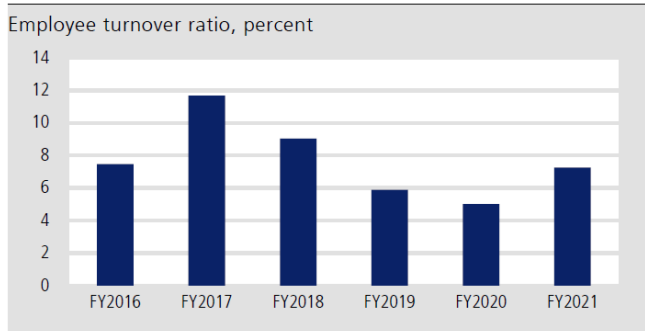
Source: Refinitiv, Company data

Figure 21: Water use to revenue



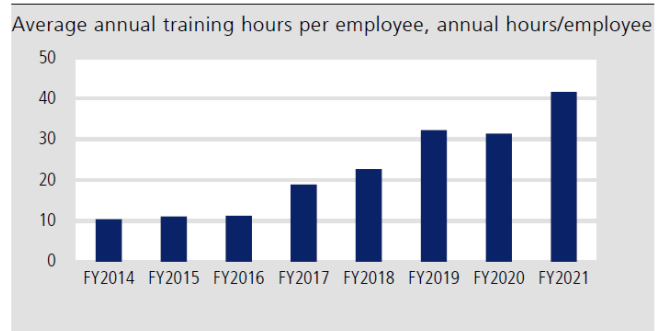
Source: Refinitiv, Company data

Figure 22: Employee turnover



Source: Refinitiv, Company data

Figure 23: Employee training



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"> - 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	<p>Total primary renewable energy purchased in gigajoules.</p> <ul style="list-style-type: none"> - 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	<p>Direct CO2 and CO2 equivalent emissions in metric tons.</p> <ul style="list-style-type: none"> - 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	<p>Direct CO2 and CO2 equivalent emissions (metric tons) to sales (NT\$mn)</p> <ul style="list-style-type: none"> - 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	<p>Total amount of waste produced in metric tons.</p> <ul style="list-style-type: none"> - 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	<p>The waste recycling ratio as reported by the company.</p> <ul style="list-style-type: none"> - 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	<p>Total water withdrawal in cubic meters.</p> <ul style="list-style-type: none"> - 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	<p>Total amount of environmental expenditures.</p> <ul style="list-style-type: none"> - 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	<p>Percentage of employee turnover.</p> <ul style="list-style-type: none"> - 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	<p>Percentage of women managers.</p> <ul style="list-style-type: none"> - 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	<p>Percentage of women employees.</p> <ul style="list-style-type: none"> - 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	<p>Total training hours performed by all employees.</p> <ul style="list-style-type: none"> - 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; Company data, KGI Research

Income statement

	Quarterly								Annually		
	Mar-23A	Jun-23A	Sep-23F	Dec-23F	Mar-24F	Jun-24F	Sep-24F	Dec-24F	Dec-22A	Dec-23F	Dec-24F
Income statement (NT\$m)											
Revenue	6,425	7,027	7,736	8,566	9,894	13,654	17,272	17,499	56,952	29,755	58,319
Cost of goods sold	(6,979)	(7,815)	(9,689)	(9,149)	(8,954)	(9,715)	(11,055)	(10,356)	(35,610)	(33,633)	(40,081)
Gross profit	(554)	(788)	(1,953)	(583)	940	3,938	6,217	7,143	21,342	(3,878)	18,238
Operating expenses	(2,331)	(2,396)	(2,387)	(2,416)	(2,485)	(2,493)	(2,508)	(2,515)	(10,340)	(9,530)	(10,000)
Operating profit	(2,885)	(3,185)	(4,340)	(2,999)	(1,545)	1,446	3,709	4,628	11,002	(13,408)	8,238
Depreciation of fixed assets	(3,694)	(3,758)	(3,775)	(3,872)	(3,875)	(3,875)	(3,875)	(3,875)	(14,988)	(15,100)	(15,500)
Amortisation of intangible assets	(64)	(89)	(65)	(40)	(65)	(65)	(65)	(65)	(258)	(258)	(258)
EBITDA	873	663	(500)	914	2,395	5,385	7,649	8,567	26,249	1,950	23,996
Interest income	720	777	650	603	630	540	450	180	1,395	2,750	1,800
Investment income	39	127	112	171	144	144	144	144	574	448	576
Other non-op income	0	(0)	458	544	40	40	40	40	514	1,001	160
Non-operating income	759	903	1,220	1,317	814	724	634	364	2,483	4,199	2,536
Interest expense	(18)	(20)	(23)	(29)	(25)	(25)	(25)	(25)	(49)	(90)	(100)
Investment loss	-	-	-	-	-	-	-	-	-	-	-
Other non-op expenses	32	381	-	(412)	-	-	-	-	3,441	-	-
Non-operating expenses	14	361	(23)	(442)	(25)	(25)	(25)	(25)	3,392	(90)	(100)
Pre-tax profit	(2,112)	(1,920)	(3,143)	(2,123)	(756)	2,145	4,318	4,967	16,877	(9,299)	10,674
Current taxation	428	1,150	638	574	136	(386)	(777)	(894)	(2,258)	2,790	(1,921)
Minorities	-	-	-	-	-	-	-	-	-	-	-
Normalised net profit	(1,685)	(771)	(2,505)	(1,549)	(620)	1,759	3,541	4,073	14,619	(6,509)	8,753
Extraordinary items	0	0	-	(0)	-	-	-	-	-	-	-
Net profit	(1,685)	(771)	(2,505)	(1,549)	(620)	1,759	3,541	4,073	14,619	(6,509)	8,753
EPS (NT\$)	(0.54)	(0.25)	(0.81)	(0.50)	(0.20)	0.57	1.14	1.31	4.72	(2.10)	2.83
Margins (%)											
Gross profit margin	(8.6)	(11.2)	(25.2)	(6.8)	9.5	28.8	36.0	40.8	37.5	(13.0)	31.3
Operating margin	(44.9)	(45.3)	(56.1)	(35.0)	(15.6)	10.6	21.5	26.4	19.3	(45.1)	14.1
EBITDA margin	13.6	9.4	(6.5)	10.7	24.2	39.4	44.3	49.0	46.1	6.6	41.1
Pretax profit margin	(32.9)	(27.3)	(40.6)	(24.8)	(7.6)	15.7	25.0	28.4	29.6	(31.3)	18.3
Net profit margin	(26.2)	(11.0)	(32.4)	(18.1)	(6.3)	12.9	20.5	23.3	25.7	(21.9)	15.0
Sequential growth (%)											
Revenue growth	(19.2)	9.4	10.1	10.7	15.5	38.0	26.5	1.3			
Gross profit growth	(153.4)	42.3	147.7	(70.1)		318.8	57.9	14.9			
Operating profit growth	86.9	10.4	36.3	(30.9)	(48.5)		156.5	24.8			
EBITDA growth	(60.6)	(24.1)	(175.5)		162.0	124.9	42.0	12.0			
Pretax profit growth	48.9	(9.1)	63.7	(32.5)	(64.4)		101.3	15.0			
Net profit growth	47.0	(54.2)	225.0	(38.2)	(60.0)		101.3	15.0			
YoY growth (%)											
Revenue growth	(67.8)	(61.0)	(29.8)	7.7	54.0	94.3	123.3	104.3	(33.5)	(47.8)	96.0
Gross profit growth	(106.3)	(109.9)	(154.3)	(156.2)					(42.4)	(118.2)	
Operating profit growth	(146.1)	(159.4)	(571.7)	94.2	(46.5)				(59.5)	(221.9)	
EBITDA growth	(91.4)	(92.8)	(110.6)	(58.8)	174.3	712.6		837.2	(38.2)	(92.6)	1130.8
Pretax profit growth	(126.3)	(127.0)	(199.4)	49.7	(64.2)				(39.2)	(155.1)	
Net profit growth	(125.7)	(111.7)	(194.9)	35.1	(63.2)				(36.0)	(144.5)	

Source: Company data, KGI Research estimates

Balance sheet

NT\$m	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
Total assets	165,632	191,421	202,236	185,015	192,838
Current assets	76,745	106,460	105,512	87,772	95,778
Cash & ST securities	51,726	80,700	73,593	52,518	58,725
Inventory	14,127	11,611	23,384	28,034	28,034
Accounts receivable	7,876	11,569	4,359	4,629	4,629
Other current assets	3,016	2,580	4,175	2,592	4,390
Non-current assets	88,887	84,961	96,723	97,243	97,060
LT investments	5,161	5,350	6,131	6,215	6,791
Net fixed assets	79,729	76,207	84,897	84,381	83,881
Other assets	3,998	3,404	5,695	6,646	6,388
Total liabilities	11,820	18,443	21,278	16,435	16,435
Current liabilities	8,779	15,692	16,179	10,990	10,990
Accounts payable	2,112	2,850	5,604	4,446	4,446
Interest bearing ST liabilities	-	-	-	-	-
Other current liabilities	6,667	12,842	10,575	6,544	6,544
Non-current liabilities	3,041	2,751	5,099	5,444	5,444
Long-term debt	-	-	-	-	-
Other LT liabilities	1,424	1,242	898	5,444	5,444
Total equity	153,812	172,978	180,958	168,580	176,404
Share capital	30,972	30,973	30,981	30,981	30,981
Retained earnings reserve	79,395	95,426	95,267	87,828	92,554
Minority interests	-	-	-	-	-
Preferred shareholders funds	-	-	-	-	-

Key ratios

	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
Growth					
Revenue growth	17.9%	40.3%	(33.5%)	(47.8%)	96.0%
Operating profit growth	(11.4%)	222.3%	(59.5%)	(221.9%)	
EBITDA growth	(4.4%)	85.6%	(38.2%)	(92.6%)	1130.8%
Net profit growth	(21.8%)	197.3%	(36.0%)	(144.5%)	
EPS growth	(22.3%)	195.2%	(36.2%)	(144.5%)	
Profitability					
Gross profit margin	25.7%	43.3%	37.5%	(13.0%)	31.3%
Operating margin	13.8%	31.8%	19.3%	(45.1%)	14.1%
EBITDA margin	37.5%	49.6%	46.1%	6.6%	41.1%
Net profit margin	12.6%	26.7%	25.7%	(21.9%)	15.0%
Return on average assets	4.6%	12.8%	7.4%	(3.4%)	4.6%
Return on average equity	5.0%	14.0%	8.3%	(3.7%)	5.1%
Stability					
Gross debt to equity	0.0%	0.0%	0.0%	0.0%	0.0%
Net debt to equity	Net cash	Net cash	Net cash	Net cash	Net cash
Interest coverage (x)	686.5	1,174.3	344.6	(102.3)	107.7
Interest & ST debt coverage (x)	1.0	1.0	1.0	1.0	1.0
Cash flow interest coverage(x)	1,723.9	1,863.7	429.1	5.8	221.4
Cash flow/int. & ST debt (x)	1,723.9	1,863.7	429.1	5.8	221.4
Current ratio (x)	8.7	6.8	6.5	8.0	8.7
Quick ratio (x)	7.1	6.0	5.1	5.4	6.2
Net debt (NT\$m)	(51,726)	(80,700)	(73,593)	(52,518)	(58,725)
Per share data					
EPS (NT\$)	2.51	7.40	4.72	(2.10)	2.83
CFPS (NT\$)	7.38	14.29	6.81	0.17	7.15
BVPS (NT\$)	49.66	55.85	58.41	54.42	56.95
Adj BVPS (NT\$)	50.18	56.03	58.42	54.42	56.95
SPS (NT\$)	19.90	27.73	18.39	9.61	18.83
EBITDA/share (NT\$)	7.47	13.76	8.47	0.63	7.75
Cash DPS (NT\$)	1.30	3.70	2.13	0.30	1.30
Activity					
Sales / avg assets	0.37	0.48	0.29	0.15	0.31
Days receivable	47.3	49.3	27.9	56.8	29.1
Days inventory	114.1	87.3	239.7	304.2	256.0
Days payable	17.1	21.4	57.4	48.2	40.6
Cash cycle	144.3	115.2	210.2	312.8	244.4

Source: Company data, KGI Research estimates

Profit & loss

NT\$m	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
Revenue	61,006	85,604	56,952	29,755	58,319
Cost of goods sold	(45,314)	(48,560)	(35,610)	(33,633)	(40,081)
Gross profit	15,692	37,044	21,342	(3,878)	18,238
Operating expenses	(7,257)	(9,858)	(10,340)	(9,530)	(10,000)
Operating profit	8,434	27,186	11,002	(13,408)	8,238
Non-operating income	1,148	795	2,483	4,199	2,536
Interest income	681	274	1,395	2,750	1,800
Investment income	467	521	574	448	576
Other non-op income	-	(0)	514	1,001	160
Non-operating expenses	(591)	(214)	3,392	(90)	(100)
Interest expense	(13)	(24)	(49)	(90)	(100)
Investment loss	-	-	-	-	-
Other non-op expenses	(578)	(190)	3,441	-	-
Pre-tax profit	8,991	27,767	16,877	(9,299)	10,674
Current taxation	(1,305)	(4,918)	(2,258)	2,790	(1,921)
Minorities	-	-	-	-	-
Extraordinary items	-	0	0	-	-
Net profit	7,686	22,849	14,619	(6,509)	8,753
EBITDA	22,885	42,480	26,249	1,950	23,996
EPS (NT\$)	2.51	7.40	4.72	(2.10)	2.83

Cash flow

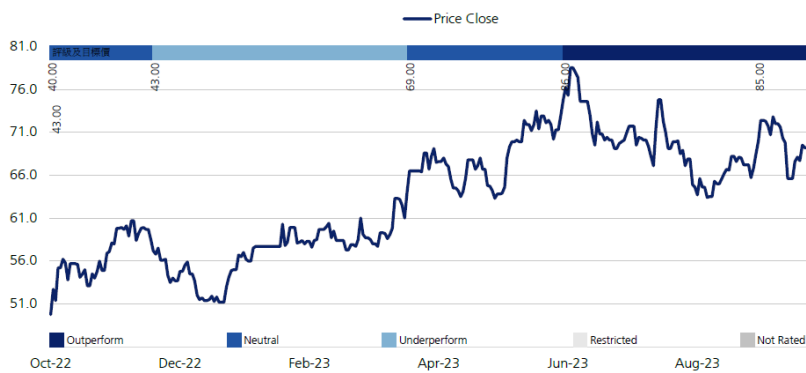
NT\$m	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
Operations cash flow	22,612	44,107	21,082	523	22,136
Net profit	7,686	22,849	14,619	(6,509)	8,753
Depreciation & amortisation	14,451	15,294	15,247	15,358	15,758
Decrease in working capital	3,125	(535)	(4,685)	(2,853)	(4,896)
Other operating cash flow	(2,649)	6,499	(4,099)	(5,472)	2,521
Investing cash flow	(8,853)	(10,930)	(20,868)	(15,000)	(15,000)
Sale of ST investment	-	(12)	(729)	-	-
New investments	-	-	-	-	-
Capital expenditure	(8,476)	(11,260)	(20,711)	(15,000)	(15,000)
Others investing cashflow	(377)	342	572	-	-
Free cash flow	16,072	25,610	(877)	(12,139)	2,360
Financing cash flow	(4,106)	(3,060)	(11,771)	(6,599)	(929)
Increase in short term debt	(3)	-	-	-	-
Increase in long term loans	-	-	-	-	-
New ordinary shares issued	-	-	-	-	-
Ordinary dividends paid	(4,600)	(4,000)	(11,470)	(6,600)	(929)
Other financing cashflow	498	(168)	(301)	1	-
Forex effects	(2,076)	(1,143)	4,451	-	-
Total cash generated	7,577	28,974	(7,107)	(21,076)	6,207

ROIC

	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
1 - COGS/revenue					
- Operating exp./revenue	11.9%	11.5%	18.2%	32.0%	17.1%
= Operating margin	13.8%	31.8%	19.3%	(45.1%)	14.1%
1 / (Working capital/revenue	0.3	0.1	0.3	0.8	0.4
+ Net PPE/revenue	1.3	0.9	1.5	2.8	1.4
+ Other assets/revenue)	0.0	0.0	0.0	0.2	0.1
= Capital turnover	0.6	1.0	0.6	0.3	0.5
Operating margin	13.8%	31.8%	19.3%	(45.1%)	14.1%
x Capital turnover	0.6	1.0	0.6	0.3	0.5
x (1 - tax rate)	85.5%	82.3%	86.6%	70.0%	82.0%
= After-tax ROIC	7.5%	25.8%	9.5%	(8.2%)	5.9%

Source: Company data, KGI Research estimates

Nanya Technology – Recommendation & target price history



Date	Rating	Target	Price
2023-09-14	Outperform	85.0	70.0
2023-07-10	Outperform	86.0	69.7
2023-06-13	Outperform	86.0	74.8
2023-04-11	Neutral	69.0	68.2
2023-03-31	Neutral	69.0	66.5
2023-03-28	Underperform	43.0	62.5
2023-01-10	Underperform	43.0	56.5
2022-11-29	Underperform	43.0	57.2
2022-10-13	Neutral	43.0	51.4
2022-10-11	Neutral	40.0	49.8

Source: TEJ, KGI Research

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