



Nanya Technology (2408.TW/2408 TT)

Declining DRAM supply & demand; price rebound in sight

FTSE4Good TIP Taiwan ESG Index stock

Outperform · Maintained

Price as of September 14 (NT\$)	70.00
12M target price (NT\$)	85.00
Previous target price (NT\$)	86.00
Revised down (%)	1.2
Upside (%)	21.4

Key message

Both supply and demand for the DRAM sector have declined since 2Q23. We believe DDR4 spot price and contract price hikes will commence in 4Q23 amid ongoing inventory digestion. We recommend engaging this stock

Trading data

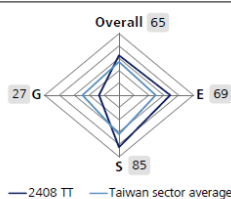
Mkt cap (NT\$bn/US\$m)	216.9 / 6,784
Outstanding shares (mn)	3,098
Foreign ownership (mn)	518
3M avg. daily trading (mn)	7.25
52-week trading range (NT\$)	45.50 – 78.50

Performance	3M	6M	12M
Absolute (%)	-8.1	20.7	38.1
Relative (%)	-5.6	11.3	23.4

Quarterly EPS

NT\$	1Q	2Q	3Q	4Q
2022	2.11A	2.12A	0.85A	(0.37)A
2023	(0.54)A	(0.25)A	(0.46)F	(0.49)F
2024	(0.26)F	0.45F	0.98F	1.64F

ESG score card



Source: Refinitiv, KGI securities

Event

Both supply and demand for the DRAM sector have declined since 2Q23. We believe DDR4 spot price and contract price hikes will commence in 4Q23F amid ongoing inventory digestion.

Impact

Competition within the consumer DRAM market intensified in 3Q23. DDR3 market competition has intensified since 2Q23, dragging down Nanya Technology's UTR to 76% in 3Q23 from 82% in 2Q23, as: (1) purchasing activity has no upside since the TV supply chain commenced restocking; (2) Winbond's (2344 TT, NT\$27.30, NR) Kaohsiung, Taiwan plant wafer input rose, resulting in inventory piling up; (3) GigaDevice (CN) has developed 2Gb and 4Gb DDR3 products, and is expected to introduce 1Gb products; and (4) SK Hynix (KR) is expected to increase wafer input for 4Gb DDR3 and DDR4 at its Wuxi Fab from 1Q24F. Therefore, we revise Nanya Technology's 3Q23F loss per share (LPS) to NT\$0.46.

Samsung to extend DRAM production cuts in 4Q23F, bolstering price hikes. Samsung (KR) will increase its production cut from 20% in 2Q23 to 25% in 3Q23 and 30% in 4Q23F. DDR4 will be the main focus, with the goal to reduce inventory levels below 10 weeks at end-4Q23F. We expect Nanya Technology to commence production cuts as well in 4Q23, as UTR is at only 73%. As a result, we revise down Nanya Technology's 2023F LPS to NT\$1.75. DRAM pricing dynamics are improving. Although leading DRAM makers, such as Samsung, have increased memory production cuts since the start of September, channel quotes from module houses have risen, boosting memory module pricing. We maintain our forecast that DDR4 contract and spot prices will rebound in 4Q23F. As inventory digestion is ongoing, we believe DRAM makers will continue to cut production in 1H24F, despite a price uptrend having begun. We forecast Nanya Technology will turn profitable from 2Q24F, and 2024F EPS will arrive at NT\$2.81, largely in line with our previous estimates.

Valuation & Action

To reflect a downward revision to the 2H23F earnings outlook, we revise down our target price to NT\$85, based on 1.5x 2024F BVPS of NT\$57. However, with a new wave of price hikes ahead for DRAM from 4Q23F, we recommend engaging this stock and maintain Outperform.

Risks

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

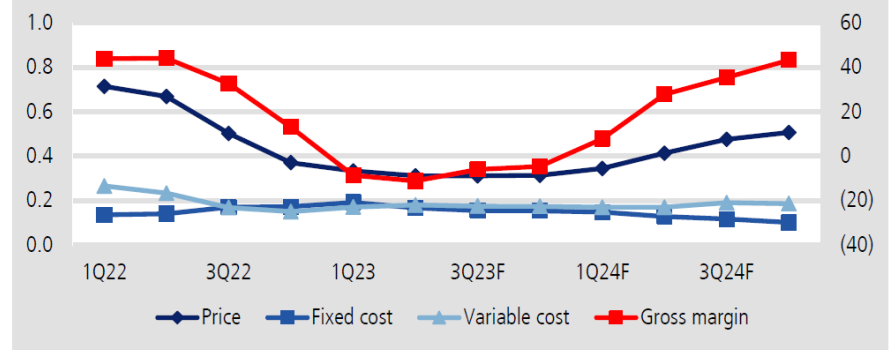
Key financials and valuations

	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
Revenue (NT\$m)	61,006	85,604	56,952	28,927	56,698
Gross profit (NT\$m)	15,692	37,044	21,342	(2,165)	18,169
Operating profit (NT\$m)	8,434	27,186	11,002	(11,695)	8,169
Net profit (NT\$m)	7,686	22,849	14,619	(5,415)	8,696
EPS (NT\$)	2.51	7.40	4.72	(1.75)	2.81
Cash DPS (NT\$)	1.30	3.70	2.13	0.30	1.30
EPS growth (%)	(22.3)	195.2	(36.2)	(137.0)	0.0
PE (x)	27.9	9.5	14.8	N.A.	24.9
PB (x)	1.4	1.3	1.2	1.3	1.2
EV/EBITDA (x)	6.8	3.0	5.2	42.4	6.2
Net debt to equity (%)	Net cash	Net cash	Net cash	Net cash	Net cash
Dividend yield (%)	1.9	5.3	3.0	0.4	1.9
Return on average equity (%)	5.0	14.0	8.3	(3.1)	5.0

Source: Company data, KGI Research estimates

Figure 1: Declining DRAM unit prices leading to gross margin downtrend, but trend will reverse in 4Q23-1Q24F

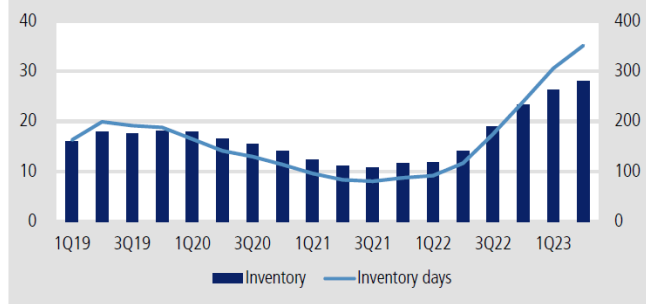
Nanya Technology DRAM shipment rate, fixed costs & variable costs, US\$/Gb (LHS); gross margin, percent (RHS)



Source: Gartner; KGI Research

Figure 2: Wafer starts to further decline in 3Q-4Q23F

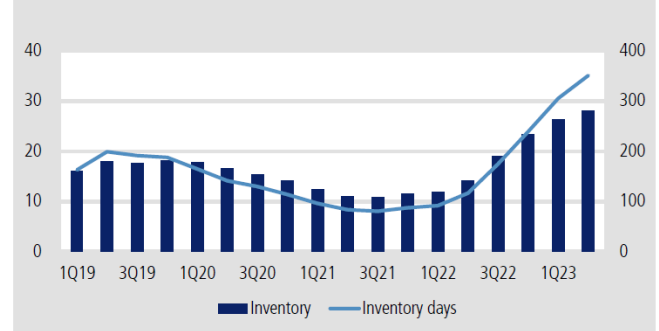
Production capacity and wafer starts, '000 pieces/month (LHS); UTR, percent (RHS)



Source: TrendForce; KGI Research

Figure 3: Inventory remains stubbornly high

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



Source: KGI Research

Figure 4: Breakdown of 3Q-4Q23 forecast revisions vs. consensus

NT\$m	3Q23F							4Q23F						
	Revision	Previous	Chg. (%)	QoQ (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	QoQ (%)	YoY (%)	Consensus	Diff. (%)
Sales	7,643	7,552	1.2	8.8	(30.7)	7,901	(3.3)	7,832	8,780	(10.8)	2.5	(1.5)	9,103	(14.0)
Gross profits	(454)	(54)	-	-	-	(264)	-	(368)	271	-	-	-	716	-
Operating income	(2,837)	(2,617)	-	-	-	(2,854)	-	(2,788)	(2,388)	-	-	-	(2,006)	-
Pretax Income	(1,797)	(1,789)	-	-	-	(2,106)	-	(1,905)	(1,540)	-	-	-	(1,284)	-
Net income	(1,438)	(1,431)	-	-	-	(1,707)	-	(1,521)	(1,267)	-	-	-	(1,069)	-
EPS (NT\$)	(0.46)	(0.46)	-	-	-	(0.56)	-	(0.49)	(0.41)	-	-	-	(0.33)	-
Gross margin (%)	(5.9)	(0.7)	(5.2)ppts	5.3 ppts	(38.6)ppts	(3.3)	(2.6)ppts	(4.7)	3.1	(7.8)ppts	1.3 ppts	(17.7)ppts	7.9	(12.6)ppts
OP margin (%)	(37.1)	(34.7)	(2.5)ppts	8.2 ppts	(45.5)ppts	(36.1)	(1.0)ppts	(35.6)	(27.2)	(8.4)ppts	1.5 ppts	(16.2)ppts	(22.0)	(13.6)ppts
Net margin (%)	(18.8)	(19.0)	0.1 ppts	(7.8)ppts	(42.8)ppts	(21.6)	2.8 ppts	(19.4)	(14.4)	(5.0)ppts	(0.6)ppts	(5.0)ppts	(11.7)	(7.7)ppts

Source: Gartner; KGI Research

Figure 5: Breakdown of 2023-24 forecast revisions vs. consensus

NT\$m	2023F						2024F					
	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)	Revision	Previous	Chg. (%)	YoY (%)	Consensus	Diff. (%)
Sales	28,927	29,784	(2.9)	(49.2)	30,275	(4.5)	56,698	59,628	(4.9)	96.0	51,876	9.3
Gross profit	(2,165)	(1,125)	-	(110.1)	(861)	-	18,169	19,400	(6.3)	(939.4)	15,668	16.0
Operating income	(11,695)	(11,075)	-	(206.3)	(10,676)	-	8,169	9,100	(10.2)	(169.9)	5,350	52.7
Pretax profit	(7,735)	(7,362)	-	(145.8)	(7,420)	-	10,605	11,300	(6.2)	(237.1)	8,343	27.1
Net profit	(5,415)	(5,154)	-	(137.0)	(5,356)	-	8,696	9,266	(6.2)	(260.6)	6,233	39.5
EPS (NT\$)	(1.75)	(1.66)	-	(137.0)	(1.63)	-	2.81	2.99	(6.2)	(260.6)	2.07	39.5
Gross margin (%)	(7.5)	(3.8)	(3.7)ppts	(45.0)ppts	(2.8)	(4.6)ppts	32.0	32.5	(0.5)ppts	39.5 ppts	30.2	1.8 ppts
OP margin (%)	(40.4)	(37.2)	(3.2)ppts	(59.7)ppts	(35.3)	(5.2)ppts	14.4	15.3	(0.9)ppts	54.8 ppts	10.3	4.1 ppts
Net margin (%)	(18.7)	(17.3)	(1.4)ppts	(44.4)ppts	(17.7)	(1.0)ppts	15.3	15.5	(0.2)ppts	34.1 ppts	12.0	3.3 ppts

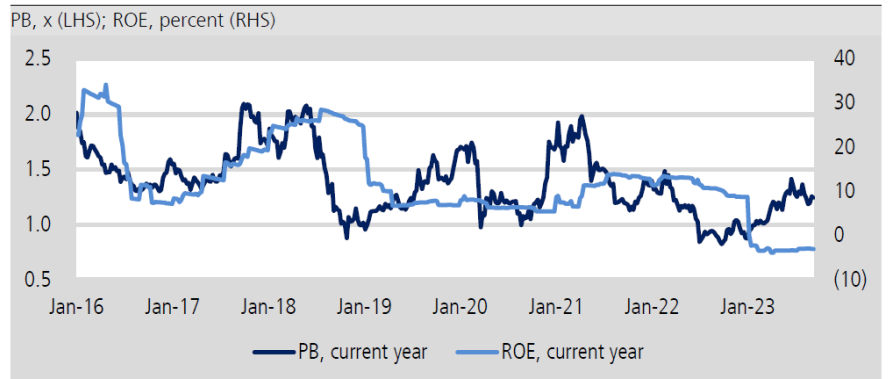
Source: Gartner; KGI Research

Figure 6: Nanya Technology's operating metrics

(NT\$m)	1Q23	2Q23	3Q23F	4Q23F	1Q24F	2Q24F	3Q24F	4Q24F	2020	2021	2022	2023F	2024F
Revenue	6,425	7,027	7,643	7,832	9,046	12,484	15,792	19,375	61,006	85,604	56,952	28,927	56,698
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	775	807	847	974	1,072	1,234	4,493	4,475	3,312	2,948	4,127
QoQ(%)	(7)	15	6	4	5	15	10	15					
YoY(%)	(36)	(20)	8	17	33	33	38	53	37	(0)	(26)	(11)	40
Price(US\$/Gb)	0.33	0.31	0.31	0.31	0.34	0.41	0.48	0.51	0.46	0.69	0.58	0.32	0.44
QoQ(%)	(10)	(7)	0	1	10	20	15	7					
YoY(%)	(53)	(53)	(38)	(15)	3	33	53	62	(10)	49	(16)	(45)	40
COGS	6,979	7,815	8,098	8,200	8,339	9,009	10,187	10,994	45,314	48,560	35,610	31,092	38,528
Unit cost(US\$/Gb)	0.36	0.35	0.33	0.33	0.32	0.30	0.31	0.29	0.34	0.39	0.36	0.34	0.30
Depreciation	3,694	3,758	3,800	3,847	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	0.15	0.15	0.15	0.13	0.12	0.10	0.11	0.12	0.15	0.17	0.12
Capex	5,817	2,808	3,750	2,625	3,750	3,750	3,750	3,750	8,476	11,260	20,711	15,000	15,000
Variable cost	3,285	4,057	4,298	4,352	4,464	5,134	6,312	7,119	31,100	33,526	20,622	15,992	23,028
Unit variable cost(US\$/Gb)	0.17	0.18	0.18	0.17	0.17	0.19	0.19	0.19	0.24	0.27	0.21	0.18	0.18
Gross profit	(554)	(788)	(454)	(368)	707	3,475	5,605	8,382	15,692	37,044	21,342	(2,165)	18,169
Gross margin(%)	(9)	(11)	(6)	(5)	8	28	35	43	26	43	37	(7)	32
Operating income	(2,885)	(3,185)	(2,837)	(2,788)	(1,778)	982	3,098	5,867	8,434	27,186	11,002	(11,695)	8,169
EBITDA	873	663	1,038	1,131	2,167	4,927	7,043	9,812	22,885	42,480	26,249	3,705	23,949
Non-op income/loss	773	1,264	1,040	883	789	699	609	339	557	581	5,875	3,959	2,436
Income tax	(428)	(1,150)	(359)	(384)	(178)	303	667	1,117	1,305	4,918	2,258	(2,321)	1,909
Tax rate(%)	20	60	20	20	18	18	18	18	15	18	13	30	18
Net income	(1,685)	(771)	(1,438)	(1,521)	(811)	1,379	3,040	5,089	7,686	22,849	14,619	(5,415)	8,696
EPS(NT\$)	(0.54)	(0.25)	(0.46)	(0.49)	(0.26)	0.45	0.98	1.64	2.51	7.40	4.72	(1.75)	2.81

Source: Gartner; KGI Research

Figure 7: Nanya Technology's valuation to be bolstered by bottoming DRAM macroeconomy



Source: KGI Research

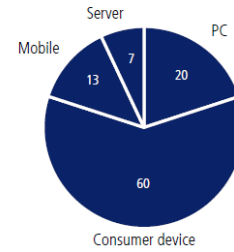
Figure 8: Company profile

Founded in 1995, Nanya Technology is a DRAM maker in Formosa Plastics Group (FPG), with production based in New Taipei City. Nanya Technology buys semiconductor silicon wafers, mainly from Formosa Sumco (3532 TT, NT\$149.5, NR) to make DRAM, which is tested and packaged by Formosa Advanced Technologies (8131 TT, NT\$39.45, NR), to be used in consumer niche applications and PCs. Formosa Sumco and Formosa Advanced Technologies are both member companies of Formosa Plastics Group.

Source: KGI Research

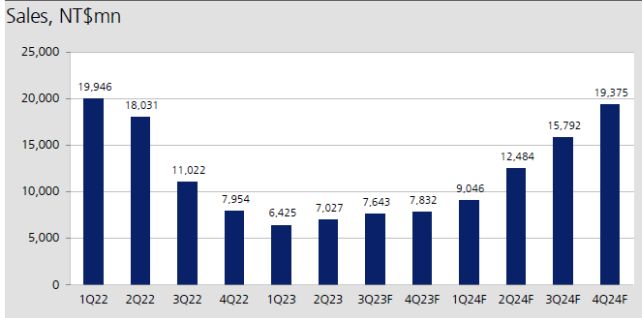
Figure 9: Consumer DRAM is key sales contributor

Sales weighting by application in 2020, percent



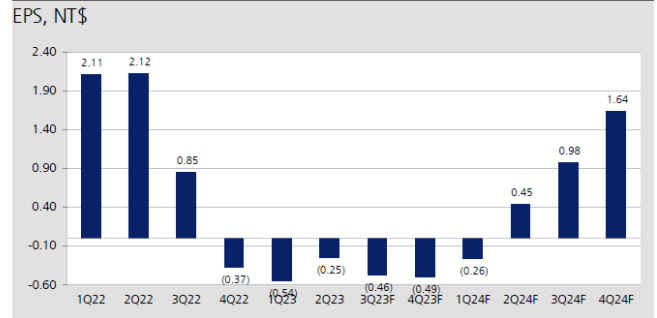
Source: KGI Research

Figure 10: Sales



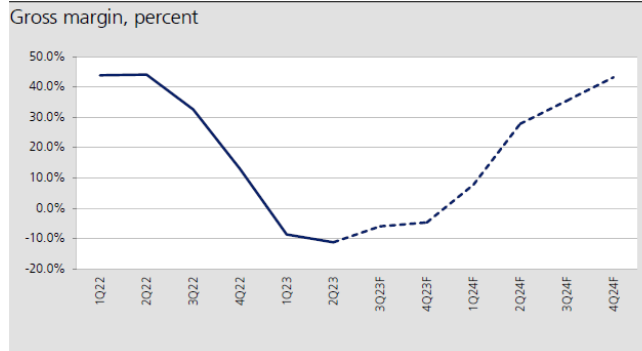
Source: KGI Research

Figure 11: EPS



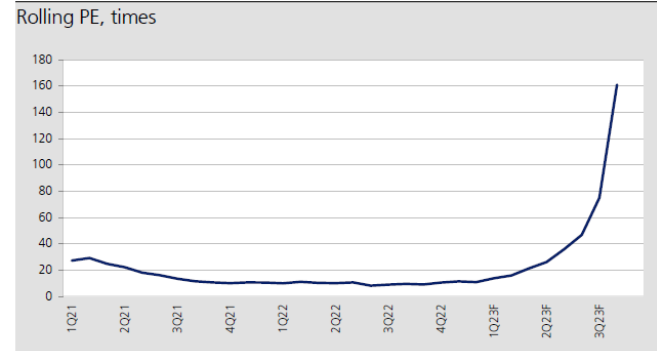
Source: KGI Research

Figure 12: Gross Margin



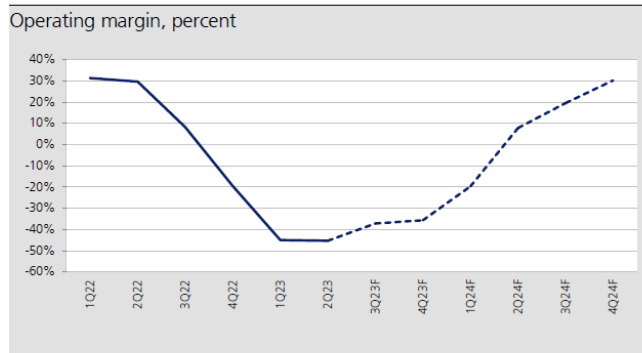
Source: KGI Research

Figure 13: Rolling PE



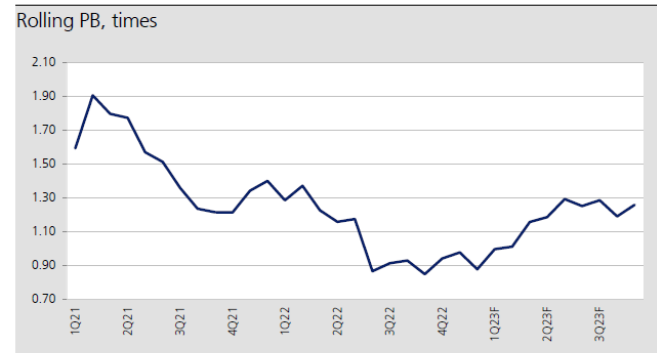
Source: KGI Research

Figure 14: Operating Margin



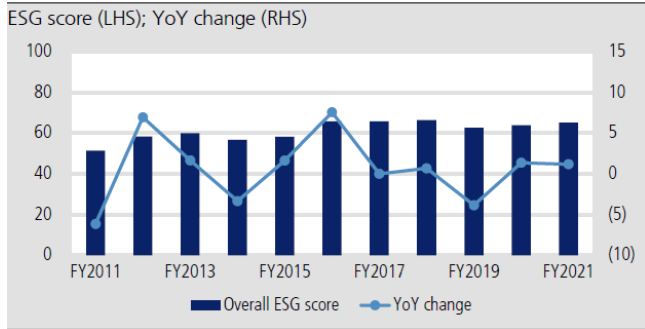
Source: KGI Research

Figure 15: Rolling PB



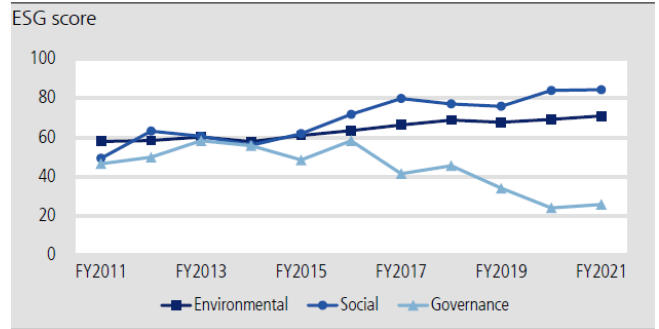
Source: KGI Research

Figure 16: Overall ESG score



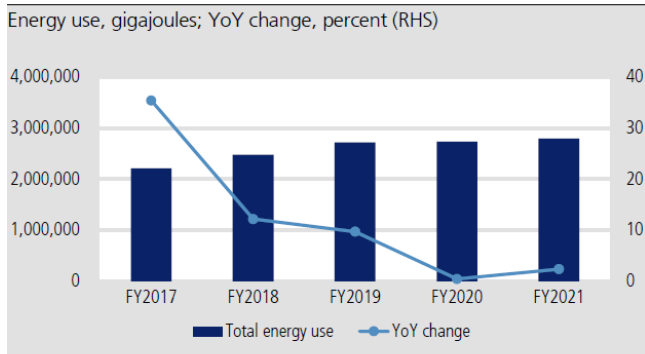
Source: Refinitiv, Company data

Figure 17: ESG scores



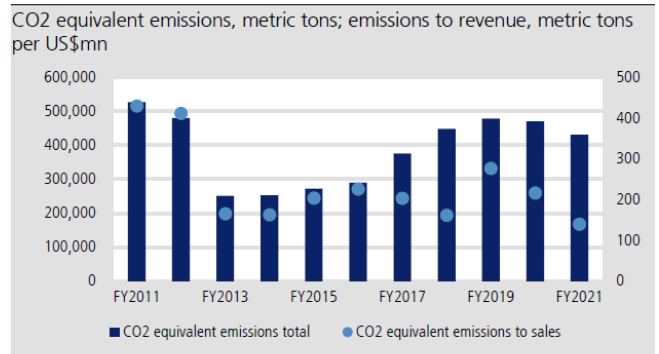
Source: Refinitiv, Company data

Figure 18: Energy Use



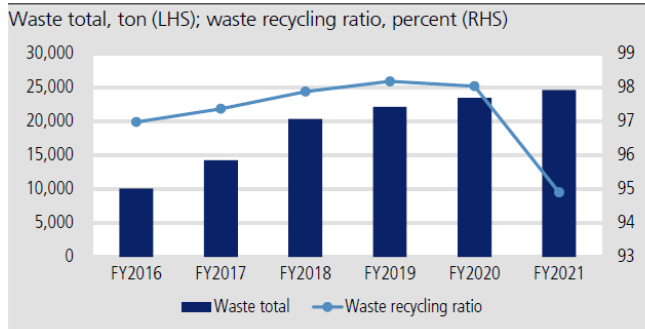
Source: Refinitiv, Company data

Figure 19: CO2 equivalent emissions



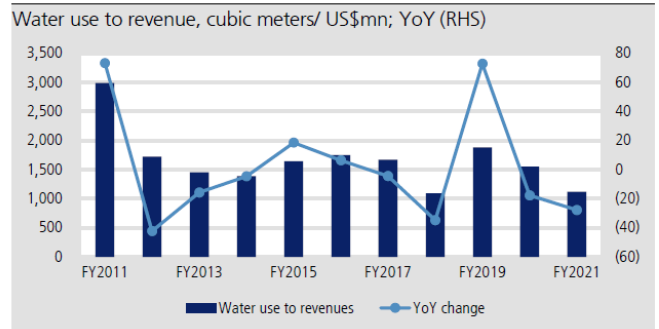
Source: Refinitiv, Company data

Figure 20: Waste total



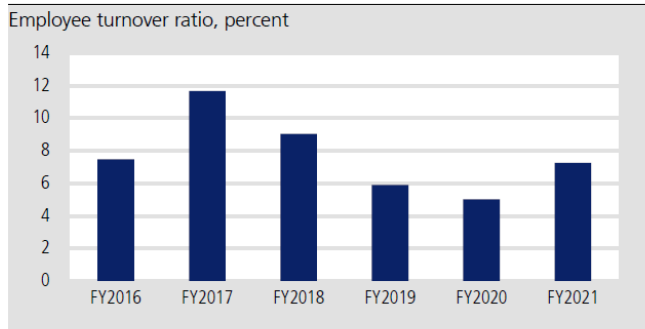
Source: Refinitiv, Company data

Figure 21: Water use to revenue



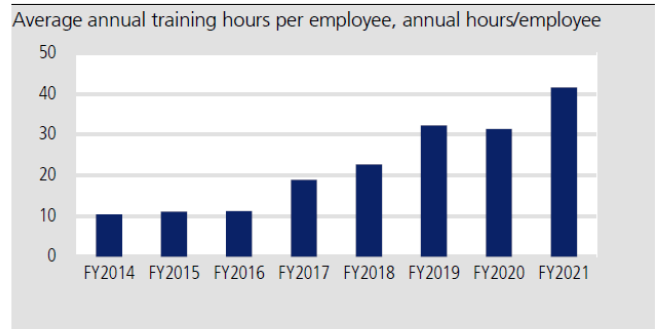
Source: Refinitiv, Company data

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\$mn)											
Revenue	6,425	7,027	7,643	7,832	9,046	12,484	15,792	19,375	56,952	28,927	56,698
Cost of goods sold	(6,979)	(7,815)	(8,098)	(8,200)	(8,339)	(9,009)	(10,187)	(10,994)	(35,610)	(31,092)	(38,528)
Gross profit	(554)	(788)	(454)	(368)	707	3,475	5,605	8,382	21,342	(2,165)	18,169
Operating expenses	(2,331)	(2,396)	(2,383)	(2,420)	(2,485)	(2,493)	(2,508)	(2,515)	(10,340)	(9,530)	(10,000)
Operating profit	(2,885)	(3,185)	(2,837)	(2,788)	(1,778)	982	3,098	5,867	11,002	(11,695)	8,169
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	1,003	1,125	2,162	4,922	7,037	9,806	26,249	3,664	23,927
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)	300	551	40	40	40	40	514	851	160
Non-operating income	759	903	1,062	1,325	814	724	634	364	2,483	4,049	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)	(1,797)	(1,905)	(989)	1,681	3,707	6,206	16,877	(7,735)	10,605
Current taxation	428	1,150	359	384	178	(303)	(667)	(1,117)	(2,258)	2,321	(1,909)
Minorities	-	-	-	-	-	-	-	-	-	-	-
Normalised net profit	(1,685)	(771)	(1,438)	(1,521)	(811)	1,379	3,040	5,089	14,619	(5,415)	8,696
Extraordinary items	0	0	-	(0)	-	-	-	-	-	-	-
Net profit	(1,685)	(771)	(1,438)	(1,521)	(811)	1,379	3,040	5,089	14,619	(5,415)	8,696
EPS (NT\$)	(0.54)	(0.25)	(0.46)	(0.49)	(0.26)	0.45	0.98	1.64	4.72	(1.75)	2.81
Margins (%)											
Gross profit margin	(8.6)	(11.2)	(5.9)	(4.7)	7.8	27.8	35.5	43.3	37.5	(7.5)	32.0
Operating margin	(44.9)	(45.3)	(37.1)	(35.6)	(19.7)	7.9	19.6	30.3	19.3	(40.4)	14.4
EBITDA margin	13.6	9.4	13.1	14.4	23.9	39.4	44.6	50.6	46.1	12.7	42.2
Pretax profit margin	(32.9)	(27.3)	(23.5)	(24.3)	(10.9)	13.5	23.5	32.0	29.6	(26.7)	18.7
Net profit margin	(26.2)	(11.0)	(18.8)	(19.4)	(9.0)	11.0	19.2	26.3	25.7	(18.7)	15.3
Sequential growth (%)											
Revenue growth	(19.2)	9.4	8.8	2.5	15.5	38.0	26.5	22.7			
Gross profit growth	(153.4)	42.3	(42.3)	(19.1)		391.5	61.3	49.5			
Operating profit growth	86.9	10.4	(10.9)	(1.7)	(36.2)		215.3	89.4			
EBITDA growth	(60.6)	(24.1)	51.3	12.2	92.1	127.7	43.0	39.3			
Pretax profit growth	48.9	(9.1)	(6.4)	6.0	(48.1)		120.5	67.4			
Net profit growth	47.0	(54.2)	86.5	5.8	(46.7)		120.5	67.4			
YoY growth (%)											
Revenue growth	(67.8)	(61.0)	(30.7)	(1.5)	40.8	77.7	106.6	147.4	(33.5)	(49.2)	96.0
Gross profit growth	(106.3)	(109.9)	(112.6)	(135.5)					(42.4)	(110.1)	
Operating profit growth	(146.1)	(159.4)	(408.4)	80.6	(38.4)				(59.5)	(206.3)	
EBITDA growth	(91.4)	(92.8)	(78.7)	(49.3)	147.5	642.6	601.9	771.7	(38.2)	(86.0)	553.1
Pretax profit growth	(126.3)	(127.0)	(156.8)	34.3	(53.2)				(39.2)	(145.8)	
Net profit growth	(125.7)	(111.7)	(154.5)	32.7	(51.9)				(36.0)	(137.0)	

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	186,110	193,877
Current assets	76,745	106,460	105,512	88,867	96,816
Cash & ST securities	51,726	80,700	73,593	53,612	59,763
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 L-T liabilities	1,424	1,242	898	5,444	5,444
Total equity	153,812	172,978	180,958	169,675	177,442
Share capital	30,972	30,973	30,981	30,981	30,981
Retained earnings reserve	79,395	95,426	95,267	88,923	93,592
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%)	(49.2%)	96.0%
Operating profit growth	(11.4%)	222.3%	(59.5%)	(206.3%)	-
EBITDA growth	(4.4%)	85.6%	(38.2%)	(86.0%)	553.1%
Net profit growth	(21.8%)	197.3%	(36.0%)	(137.0%)	-
EPS growth	(22.3%)	195.2%	(36.2%)	(137.0%)	-
Profitability					
Gross profit margin	25.7%	43.3%	37.5%	(7.5%)	32.0%
Operating margin	13.8%	31.8%	19.3%	(40.4%)	14.4%
EBITDA margin	37.5%	49.6%	46.1%	12.7%	42.2%
Net profit margin	12.6%	26.7%	25.7%	(18.7%)	15.3%
Return on average assets	4.6%	12.8%	7.4%	(2.8%)	4.6%
Return on average equity	5.0%	14.0%	8.3%	(3.1%)	5.0%
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	(84.9)	107.1
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	18.0	220.8
Cash flow/int. & ST debt (x)	1,723.9	1,863.7	429.1	18.0	220.8
Current ratio (x)	8.7	6.8	6.5	8.1	8.8
Quick ratio (x)	7.1	6.0	5.1	5.5	6.3
Net debt (NT\$m)	(51,726)	(80,700)	(73,593)	(53,612)	(59,763)
Per share data					
EPS (NT\$)	2.51	7.40	4.72	(1.75)	2.81
CFPS (NT\$)	7.38	14.29	6.81	0.52	7.13
BVPS (NT\$)	49.66	55.85	58.41	54.78	57.28
Adj BVPS (NT\$)	50.18	56.03	58.42	54.78	57.28
SPS (NT\$)	19.90	27.73	18.39	9.34	18.30
EBITDA/share (NT\$)	7.47	13.76	8.47	1.18	7.72
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	0.30
Days receivable	47.3	49.3	27.9	58.4	29.9
Days inventory	114.1	87.3	239.7	329.1	266.3
Days payable	17.1	21.4	57.4	52.2	42.2
Cash cycle	144.3	115.2	210.2	335.3	254.0

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	28,927	56,698
Cost of goods sold	(45,314)	(48,560)	(35,610)	(31,092)	(38,528)
Gross profit	15,692	37,044	21,342	(2,165)	18,169
Operating expenses	(7,257)	(9,858)	(10,340)	(9,530)	(10,000)
Operating profit	8,434	27,186	11,002	(11,695)	8,169
Non-operating income	1,148	795	2,483	4,049	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	851	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	(7,735)	10,605
Current taxation	(1,305)	(4,918)	(2,258)	2,321	(1,909)
Minorities	-	-	-	-	-
Extraordinary items	-	0	0	-	-
Net profit	7,686	22,849	14,619	(5,415)	8,696
EBITDA	22,885	42,480	26,249	3,664	23,927
EPS (NT\$)	2.51	7.40	4.72	(1.75)	2.81

Cash flow

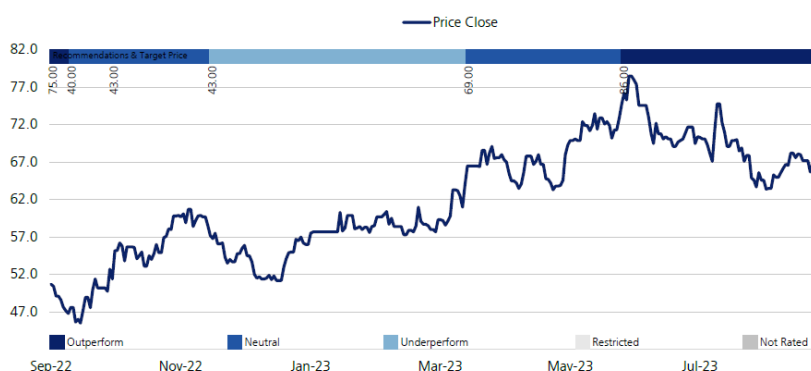
NT\$m	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
Operations cash flow	22,612	44,107	21,082	1,618	22,079
Net profit	7,686	22,849	14,619	(5,415)	8,696
Depreciation & amortisation	14,451	15,294	15,247	15,358	15,758
Decrease in working capital	3,125	(535)	(4,685)	(2,853)	(4,896)
Other operating cash flow	(2,649)	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)	(10,940)	2,303
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)	(19,981)	6,150

ROIC

	Dec-20A	Dec-21A	Dec-22A	Dec-23F	Dec-24F
1 - COGS/revenue					
- Operating exp./revenue	11.9%	11.5%	18.2%	32.9%	17.6%
= Operating margin	13.8%	31.8%	19.3%	(40.4%)	14.4%
1 / (Working capital/revenue	0.3	0.1	0.3	0.8	0.5
+ Net PPE/revenue	1.3	0.9	1.5	2.9	1.5
+ 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%	(40.4%)	14.4%
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%	(7.2%)	5.8%

Source: Company data, KGI Research estimates

Nanya Technology – Recommendation & target price history



Date	Rating	Target	Price
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
2022-09-23	Neutral	40.0	47.6

Source: TEJ, KGI Research

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