

HANA MICROELECTRONICS

THAILAND / ELECTRONIC COMPONENT

HANA TB

BUY

UNCHANGED

1Q24 results at first glance

1Q24 core profit missed our estimate by 6%, but recovered q-q and y-y

TARGET PRICE	THB50.00
CLOSE	THB40.75
UP/DOWNSIDE	+22.7%
TP vs CONSENSUS	+14.2%

Highlights

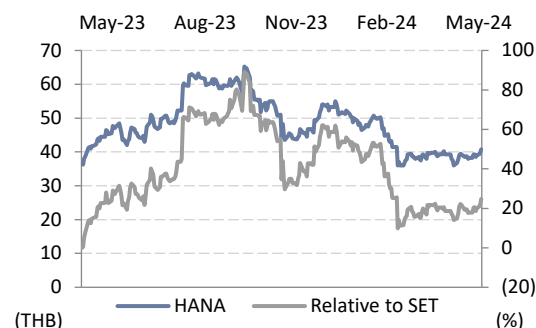
- HANA reported a 1Q24 net profit of THB313m (+151% q-q, +18% y-y). Excluding an FX loss of THB39m, its core profit equaled THB352m (+21% q-q, +20% y-y), missing our forecast and Bloomberg's consensus estimate by 6% and 10%, respectively. We have a neutral view on this performance.
- 1Q24 USD revenue grew by 2.9% q-q, but declined 6.3% y-y, while revenue in THB dipped 1.5% y-y due to baht depreciation.
- PCBA revenue increased by 6% q-q and 5% y-y, thanks to higher revenue from the production base in Thailand and China. In addition, IC revenue decreased by -4% q-q and -12% y-y, due to lower revenue from the production base in Thailand, China, and South Korea. To elaborate, SiC revenue dropped by 20% q-q and 38% y-y, mainly from weaker demand from China.
- HANA booked 1Q24 revenue from China of THB1b (+10.7% q-q, -3.4% y-y), which increased q-q from the low base in 4Q23, but still declined y-y.
- The gross margin recovered to 10.8% in 1Q24, in line with our expectation. It was up from 9.9% in 4Q23 and 8.6% in 1Q23, due to baht depreciation.

Outlook

- HANA's 1Q24 core profit accounted for 16% of our full-year estimate.
- The overall situation remains in line with management's guidance. We anticipate that HANA's operating performance will continue to improve in 2Q24. We have a positive view on a recovery trend manifesting in 2H24 across all product segments, especially IC and SiC. This anticipation is mainly driven by the expectation of a rebound in demand from China, as well as benefits from AI upgrades integrated into software systems of new devices in consumer electronics.

KEY STOCK DATA

YE Dec (THB m)	2023	2024E	2025E	2026E
Revenue	26,152	26,260	28,108	29,998
Net profit	1,761	2,189	2,442	2,707
EPS (THB)	1.99	2.47	2.76	3.06
vs Consensus (%)	-	2.1	(2.5)	(3.1)
EBITDA	3,752	4,058	4,426	4,732
Recurring net profit	2,009	2,189	2,442	2,707
Core EPS (THB)	2.27	2.47	2.76	3.06
EPS growth (%)	(23.8)	8.9	11.5	10.9
Core P/E (x)	18.0	16.5	14.8	13.3
Dividend yield (%)	2.5	2.7	3.0	4.5
EV/EBITDA (x)	7.6	7.0	6.3	5.6
Price/book (x)	1.2	1.2	1.1	1.1
Net debt/Equity (%)	(26.0)	(24.7)	(25.7)	(29.1)
ROE (%)	7.6	7.4	7.9	8.4



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	3.8	(12.8)	0.6
Relative to country (%)	5.3	(12.3)	14.1
Mkt cap (USD m)	984		
3m avg. daily turnover (USD m)	12.2		
Free float (%)	58		
Major shareholder	OMAC and related companies (29%)		
12m high/low (THB)	66.25/35.25		
Issued shares (m)	885.36		

Sources: Bloomberg consensus; FSSIA estimates


Sureeporn Teewasuwet

 Fundamental Investment Analyst on Securities; License no. 040694
 sureeporn.t@fssia.com, +66 2646 9972

Exhibit 1: HANA – 1Q24 results summary

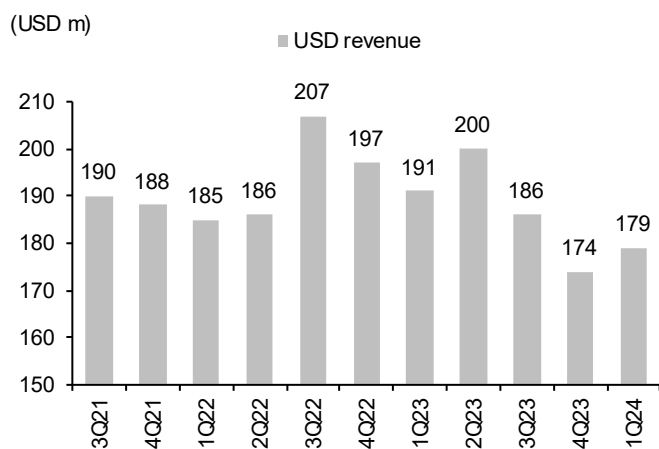
	1Q23	2Q23	3Q23	4Q23	1Q24	Change	
	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(q-q%)	(y-y%)
Total revenue	6,466	6,910	6,555	6,221	6,371	2.4	(1.5)
Cost of sales	5,913	5,871	5,523	5,602	5,683	1.4	(3.9)
Gross profit	553	1,039	1,031	619	687	11.0	24.2
SG&A	382	392	449	408	415	1.8	8.8
Operating profit	171	646	582	211	272	28.9	58.6
Interest expense	1.8	8.0	17.4	24.7	23.9	(3.3)	1247.8
Tax expense	12	33	21	20	27	34.9	127.7
Reported net profit	266	635	734	125	313	150.8	17.5
Core profit	295	749	674	291	352	21.2	19.5

Key ratios (%)						(ppt)	(ppt)
Gross margin	8.6	15.0	15.7	9.9	10.8	0.8	2.2
SG&A to sales	5.9	5.7	6.9	6.6	6.5	(0.0)	0.6
Operating margin	2.7	9.4	8.9	3.4	4.3	0.9	1.6
Net margin	4.1	9.2	11.2	2.0	4.9	2.9	0.8
Core margin	4.6	10.8	10.3	4.7	5.5	0.9	1.0

Operating statistics (THB m)							
PCBA - Lamphun	3,032	3,142	3,094	3,044	3,176	4.3	4.7
PCBA - Jiaxing	797	893	785	774	884	14.2	10.9
PCBA - Cambodia	82	128	131	54	61	12.7	(26.0)
IC - Ayutthaya	1,816	1,983	1,827	1,692	1,624	(4.0)	(10.6)
IC - Jiaxing	247	293	238	137	125	(9.0)	(49.5)
HMT - USA	345	341	389	407	411	0.9	18.9
IC - South Korea	146	129	92	113	90	(20.1)	(38.1)
Total IC revenue	2,554	2,746	2,545	2,349	2,249	(4.2)	(11.9)
Total PCBA revenue	3,912	4,164	4,010	3,872	4,121	6.4	5.4
Revenue from China	1,044	1,186	1,023	911	1,009	10.7	(3.4)

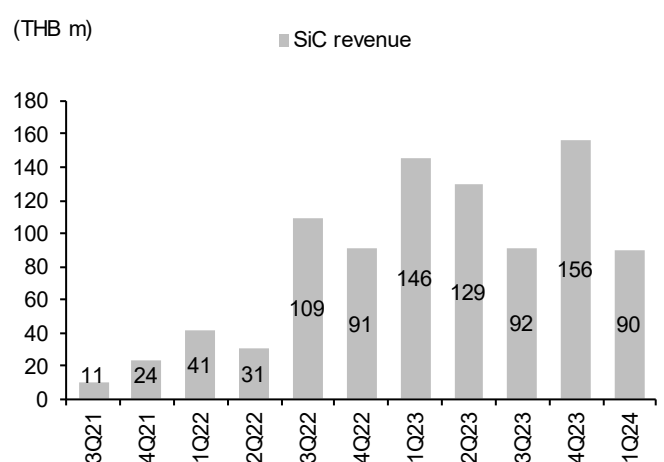
Sources: HANA; FSSIA's compilation

Exhibit 2: USD revenue



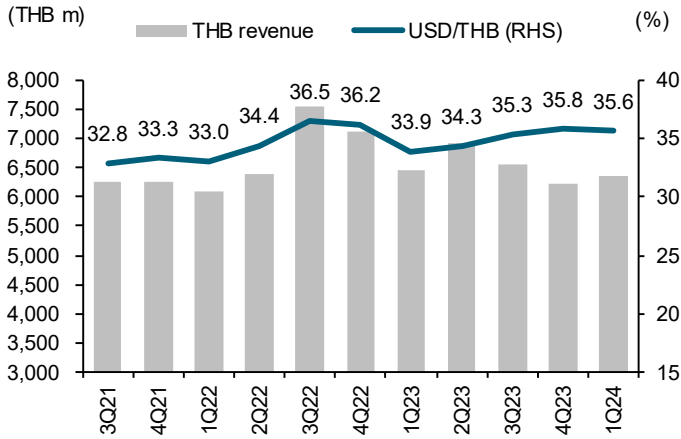
Sources: HANA, FSSIA's compilation

Exhibit 3: SiC revenue



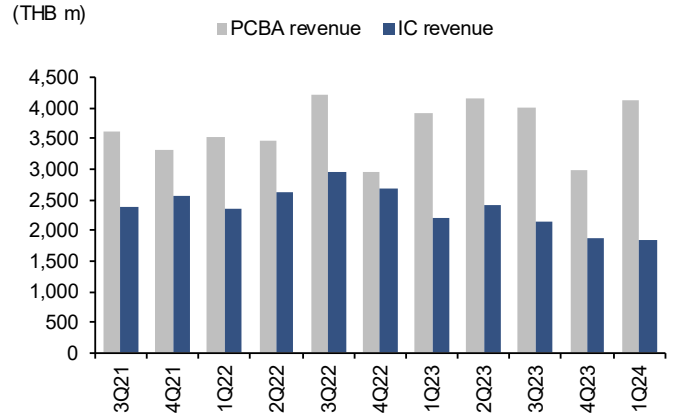
Sources: HANA, FSSIA's compilation

Exhibit 4: THB revenue



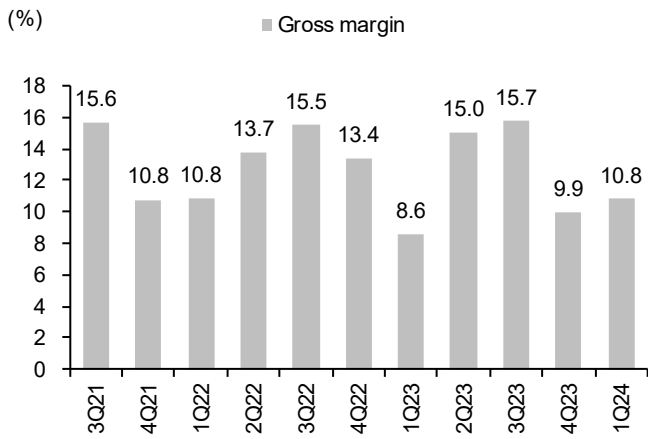
Sources: HANA, FSSIA's compilation

Exhibit 5: Revenue breakdown by product



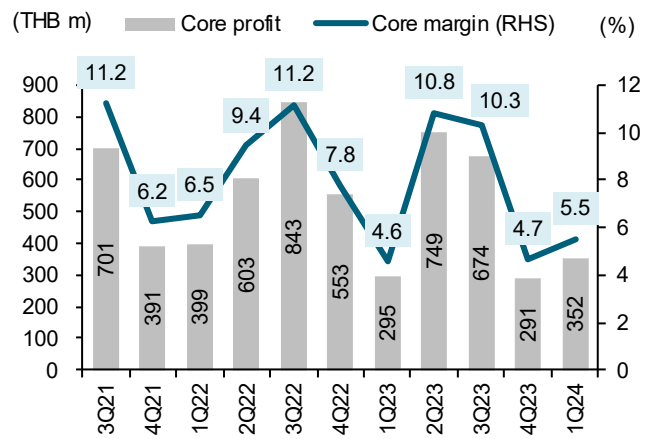
Sources: HANA, FSSIA's compilation

Exhibit 6: Gross margin



Sources: HANA, FSSIA's compilation

Exhibit 7: Core profit and margin



Sources: HANA, FSSIA's compilation

Financial Statements

Hana Microelectronics

Profit and Loss (THB m) Year Ending Dec	2022	2023	2024E	2025E	2026E
Revenue	27,167	26,152	26,260	28,108	29,998
Cost of goods sold	(23,506)	(22,910)	(22,846)	(24,341)	(25,888)
Gross profit	3,661	3,242	3,414	3,766	4,110
Other operating income	458	439	446	478	510
Operating costs	(1,695)	(1,631)	(1,654)	(1,771)	(1,890)
Operating EBITDA	4,054	3,752	4,058	4,426	4,732
Depreciation	(1,630)	(1,702)	(1,852)	(1,952)	(2,002)
Goodwill amortisation	0	0	0	0	0
Operating EBIT	2,425	2,050	2,206	2,473	2,730
Net financing costs	81	45	86	83	105
Associates	0	0	0	0	0
Recurring non-operating income	0	0	0	0	0
Non-recurring items	(296)	(249)	0	0	0
Profit before tax	2,209	1,846	2,292	2,557	2,835
Tax	(107)	(85)	(103)	(115)	(128)
Profit after tax	2,102	1,761	2,189	2,442	2,707
Minority interests	0	0	0	0	0
Preferred dividends	0	0	0	0	0
Other items	-	-	-	-	-
Reported net profit	2,102	1,761	2,189	2,442	2,707
Non-recurring items & goodwill (net)	296	249	0	0	0
Recurring net profit	2,398	2,009	2,189	2,442	2,707
Per share (THB)					
Recurring EPS *	2.98	2.27	2.47	2.76	3.06
Reported EPS	2.61	1.99	2.47	2.76	3.06
DPS	1.00	1.00	1.11	1.24	1.83
Diluted shares (used to calculate per share data)	805	885	885	885	885
Growth					
Revenue (%)	14.2	(3.7)	0.4	7.0	6.7
Operating EBITDA (%)	15.1	(7.5)	8.2	9.1	6.9
Operating EBIT (%)	9.2	(15.5)	7.6	12.1	10.4
Recurring EPS (%)	5.4	(23.8)	8.9	11.5	10.9
Reported EPS (%)	36.0	(23.9)	24.3	11.5	10.9
Operating performance					
Gross margin inc. depreciation (%)	13.5	12.4	13.0	13.4	13.7
Gross margin exc. depreciation (%)	19.5	18.9	20.1	20.3	20.4
Operating EBITDA margin (%)	14.9	14.3	15.5	15.7	15.8
Operating EBIT margin (%)	8.9	7.8	8.4	8.8	9.1
Net margin (%)	8.8	7.7	8.3	8.7	9.0
Effective tax rate (%)	4.9	4.6	4.5	4.5	4.5
Dividend payout on recurring profit (%)	33.6	44.1	45.0	45.0	60.0
Interest cover (X)	(29.9)	(45.4)	(25.5)	(29.7)	(26.0)
Inventory days	136.1	158.6	154.1	147.5	147.2
Debtor days	64.0	70.9	71.0	67.7	67.8
Creditor days	64.0	65.0	56.7	52.7	52.6
Operating ROIC (%)	10.2	7.7	7.8	8.4	9.2
ROIC (%)	9.9	7.5	7.7	8.3	9.0
ROE (%)	10.2	7.6	7.4	7.9	8.4
ROA (%)	8.1	6.1	6.1	6.7	7.1
* Pre exceptional, pre-goodwill and fully diluted					
Revenue by Division (THB m)					
PCBA	15,214	15,791	16,107	16,912	18,265
IC	10,595	8,962	8,726	9,697	10,115
IC Assemble (RFID / Microdisplay)	1,358	1,399	1,427	1,498	1,618

Sources: Hana Microelectronics; FSSIA estimates

Financial Statements

Hana Microelectronics

Cash Flow (THB m) Year Ending Dec	2022	2023	2024E	2025E	2026E
Recurring net profit	2,398	2,009	2,189	2,442	2,707
Depreciation	1,630	1,702	1,852	1,952	2,002
Associates & minorities	-	-	-	-	-
Other non-cash items	24	(241)	0	0	0
Change in working capital	(2,626)	(491)	63	(695)	(716)
Cash flow from operations	1,426	2,980	4,104	3,699	3,994
Capex - maintenance	-	-	-	-	-
Capex - new investment	(2,821)	(2,550)	(3,000)	(2,000)	(1,000)
Net acquisitions & disposals	-	-	-	-	-
Other investments (net)	14	162	(21)	(28)	(28)
Cash flow from investing	(2,807)	(2,389)	(3,021)	(2,028)	(1,028)
Dividends paid	(1,191)	(859)	(985)	(1,099)	(1,624)
Equity finance	0	4,588	0	0	0
Debt finance	(2)	1,280	(1,280)	0	0
Other financing cash flows	209	(342)	(191)	55	57
Cash flow from financing	(984)	4,667	(2,457)	(1,043)	(1,568)
Non-recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
Net other adjustments	0	0	0	0	0
Movement in cash	(2,365)	5,258	(1,374)	628	1,398
Free cash flow to firm (FCFF)	(1,368.15)	643.40	1,101.54	1,686.10	2,965.63
Free cash flow to equity (FCFE)	(1,174.20)	1,529.93	(389.12)	1,726.43	3,022.33

Per share (THB)

FCFF per share	(1.55)	0.73	1.24	1.90	3.35
FCFE per share	(1.33)	1.73	(0.44)	1.95	3.41
Recurring cash flow per share	5.03	3.92	4.56	4.96	5.32

Balance Sheet (THB m) Year Ending Dec	2022	2023	2024E	2025E	2026E
Tangible fixed assets (gross)	28,300	29,984	32,984	34,984	35,984
Less: Accumulated depreciation	(17,446)	(18,283)	(20,135)	(22,087)	(24,089)
Tangible fixed assets (net)	10,853	11,701	12,849	12,897	11,895
Intangible fixed assets (net)	0	0	0	0	0
Long-term financial assets	72	72	72	72	72
Invest. in associates & subsidiaries	-	-	-	-	-
Cash & equivalents	3,634	8,893	7,518	8,146	9,544
A/C receivable	4,981	5,178	5,036	5,391	5,753
Inventories	9,457	8,969	8,763	9,336	9,930
Other current assets	171	119	131	141	150
Current assets	18,243	23,159	21,449	23,014	25,377
Other assets	534	373	394	422	450
Total assets	29,703	35,306	34,764	36,404	37,794
Common equity	23,862	29,147	30,292	31,634	32,717
Minorities etc.	0	0	0	0	0
Total shareholders' equity	23,862	29,147	30,292	31,634	32,717
Long term debt	0	204	0	0	0
Other long-term liabilities	813	921	788	843	900
Long-term liabilities	814	1,125	788	843	900
A/C payable	4,161	3,391	3,130	3,334	3,546
Short term debt	274	1,105	30	30	30
Other current liabilities	593	538	525	562	600
Current liabilities	5,027	5,034	3,685	3,927	4,176
Total liabilities and shareholders' equity	29,703	35,306	34,764	36,404	37,794
Net working capital	9,856	10,338	10,276	10,971	11,687
Invested capital	21,316	22,485	23,591	24,362	24,103

* Includes convertibles and preferred stock which is being treated as debt

Per share (THB)

Book value per share	29.65	32.92	34.21	35.73	36.95
Tangible book value per share	29.65	32.92	34.21	35.73	36.95

Financial strength

Net debt/equity (%)	(14.1)	(26.0)	(24.7)	(25.7)	(29.1)
Net debt/total assets (%)	(11.3)	(21.5)	(21.5)	(22.3)	(25.2)
Current ratio (x)	3.6	4.6	5.8	5.9	6.1
CF interest cover (x)	(19.3)	(89.4)	(29.2)	(43.7)	(37.3)

Valuation	2022	2023	2024E	2025E	2026E
Recurring P/E (x) *	13.7	18.0	16.5	14.8	13.3
Recurring P/E @ target price (x) *	16.8	22.0	20.2	18.1	16.4
Reported P/E (x)	15.6	20.5	16.5	14.8	13.3
Dividend yield (%)	2.5	2.5	2.7	3.0	4.5
Price/book (x)	1.4	1.2	1.2	1.1	1.1
Price/tangible book (x)	1.4	1.2	1.2	1.1	1.1
EV/EBITDA (x) **	7.3	7.6	7.0	6.3	5.6
EV/EBITDA @ target price (x) **	9.1	9.8	9.1	8.2	7.3
EV/invested capital (x)	1.4	1.3	1.2	1.1	1.1

* Pre-exceptional, pre-goodwill and fully diluted ** EBITDA includes associate income and recurring non-operating income

Sources: Hana Microelectronics; FSSIA estimates

Hana Microelectronics PCL (HANA TB)

FSSIA ESG rating

★ ★ ★

56.35 /100

Exhibit 8: FSSIA ESG score implication

Rating	Score	Implication
★★★★★	>79-100	Leading its industry peers in managing the most significant ESG risks which not only better cost efficiency but also lead to higher profitability.
★★★★★	>59-79	A mixed track record of managing the most significant ESG risks and opportunities relative to industry peers.
★★★	>39-59	Relevant ESG materiality matrix has been constructively addressed, well-managed and incorporated into day-to-day operations, in which targets and achievements are evaluated annually.
★★	>19-39	Relevant ESG materiality matrix has been identified with key management in charge for progress to be followed up on and to provide intensive disclosure. Most targets are conventional and achievable.
★	1-19	The company has adopted the United Nations Sustainable Development Goals (UN SDGs), established sustainability management guidelines and fully complies with regulations or ESG suggested guidance from related organizations such as the SET and SEC.

Sources: FSSIA estimates

Exhibit 9: ESG – peer comparison

	FSSIA ESG score	Domestic ratings						Global ratings						Bloomberg	
		DJSI	SET THSI	THSI	CG score	AGM level	Thai CAC	Morningstar ESG risk	ESG Book	MSCI	Moody's	Refinitiv	S&P Global	ESG score	Disclosure score
SET100	69.20	5.34	4.40	4.40	4.76	4.65	3.84	Medium	51.76	BBB	20.87	58.72	63.91	3.72	28.17
Coverage	67.12	5.11	4.15	4.17	4.83	4.71	3.53	Medium	52.04	BB	16.97	56.85	62.09	3.40	31.94
DELTA	87.59	Y	Y	Y	5.00	5.00	Certified	Low	68.81	AA	--	91.19	74.00	4.15	--
HANA	56.35	--	Y	Y	5.00	5.00	Certified	Negligible	56.93	BBB	--	44.01	31.00	1.81	--
KCE	45.77	--	--	--	5.00	5.00	Certified	Medium	52.70	--	--	61.53	16.00	2.16	52.98

Sources: SETTRADE.com; FSSIA's compilation

Exhibit 10: ESG score by Bloomberg

FY ending Dec 31	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
ESG financial materiality scores - ESG score	0.91	0.98	0.99	1.39	1.61	1.81	—
BESG environmental pillar score	0.00	0.00	0.00	0.00	0.00	0.00	—
BESG social pillar score	0.37	0.37	0.37	1.14	1.63	1.66	—
BESG governance pillar score	3.51	3.89	3.96	3.95	3.95	4.88	—
ESG disclosure score	25.98	25.98	25.98	30.50	36.02	36.02	—
Environmental disclosure score	1.66	1.66	1.66	7.13	22.92	22.92	—
Social disclosure score	15.90	15.90	15.90	24.00	24.79	24.79	—
Governance disclosure score	60.26	60.26	60.26	60.26	60.26	60.26	—
Environmental							
Emissions reduction initiatives	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Climate change policy	No	No	No	Yes	Yes	Yes	Yes
Climate change opportunities discussed	No	No	No	Yes	Yes	Yes	Yes
Risks of climate change discussed	No	No	No	No	No	No	No
GHG scope 1	—	—	—	—	1	1	1
GHG scope 2 location-based	—	—	—	26	26	23	23
GHG Scope 3	—	—	—	—	—	—	—
Carbon per unit of production	—	—	—	—	—	—	—
Biodiversity policy	No	No	No	No	No	No	No
Energy efficiency policy	No	No	No	No	No	No	Yes
Total energy consumption	—	—	—	—	—	—	—
Renewable energy use	—	—	—	—	—	—	—
Electricity used	—	—	—	—	—	—	—
Fuel used - natural gas	—	—	—	—	—	—	—

Sources: Bloomberg; FSSIA's compilation

Exhibit 11: ESG score by Bloomberg (cont.)

FY ending Dec 31	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Fuel used - crude oil/diesel	No	No	No	No	No	No	No
Waste reduction policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hazardous waste	—	—	—	—	—	—	—
Total waste	—	—	—	—	—	—	—
Waste recycled	—	—	—	—	—	—	—
Waste sent to landfills	—	—	—	—	—	—	—
Environmental supply chain management	No	No	No	No	Yes	Yes	Yes
Water policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Water consumption	—	—	—	—	—	—	—
Social							
Human rights policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Policy against child labor	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quality assurance and recall policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Consumer data protection policy	No	No	No	No	No	No	No
Equal opportunity policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gender pay gap breakout	No	No	No	No	No	No	No
Pct women in workforce	—	—	—	73	73	72	—
Pct disabled in workforce	—	—	—	1	1	1	—
Business ethics policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Anti-bribery ethics policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Health and safety policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lost time incident rate - employees	—	—	—	0	0	0	—
Total recordable incident rate - employees	—	—	—	—	—	—	—
Training policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fair remuneration policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of employees – CSR	4,038	3,947	3,969	3,957	3,742	3,636	3,324
Employee turnover pct	—	—	—	—	—	—	—
Total hours spent by firm - employee training	199,881	165,774	182,574	197,850	179,616	207,252	150,148
Social supply chain management	No	No	No	No	Yes	Yes	Yes
Governance							
Board size	6	6	6	6	6	6	8
No. of independent directors (ID)	3	3	3	3	3	3	4
No. of women on board	1	1	1	1	1	1	2
No. of non-executive directors on board	3	3	3	3	3	3	4
Company conducts board evaluations	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of board meetings for the year	7	7	7	7	7	7	6
Board meeting attendance pct	100	100	100	100	100	100	100
Board duration (years)	—	—	—	—	—	—	—
Director share ownership guidelines	No	No	No	No	No	No	No
Age of the youngest director	56	53	54	55	56	57	58
Age of the oldest director	82	72	73	73	74	75	65
No. of executives / company managers	5	5	5	5	5	5	6
No. of female executives	1	1	1	1	1	1	1
Executive share ownership guidelines	No	No	No	No	No	No	No
Size of audit committee	3	3	3	3	3	3	4
No. of ID on audit committee	3	3	3	3	3	3	4
Audit committee meetings	4	4	4	4	4	4	4
Audit meeting attendance %	100	100	100	100	100	100	100
Size of compensation committee	0	0	0	0	0	0	0
No. of ID on compensation committee	—	—	—	—	—	—	—
No. of compensation committee meetings	—	—	—	—	—	—	—
Compensation meeting attendance %	—	—	—	—	—	—	—
Size of nomination committee	3	3	3	3	3	3	4
No. of nomination committee meetings	3	2	3	3	2	3	3
Nomination meeting attendance %	100	100	100	100	100	100	100
Sustainability governance							
Verification type	No	No	No	No	No	No	No

Sources: Bloomberg; FSSIA's compilation

Disclaimer for ESG scoring

ESG score	Methodology	Rating																			
The Dow Jones Sustainability Indices (DJSI) By S&P Global	The DJSI World applies a transparent, rules-based component selection process based on the companies' Total Sustainability Scores resulting from the annual S&P Global Corporate Sustainability Assessment (CSA). Only the top-ranked companies within each industry are selected for inclusion.	Be a member and invited to the annual S&P Global Corporate Sustainability Assessment (CSA) for DJSI. Companies with an S&P Global ESG Score of less than 45% of the S&P Global ESG Score of the highest scoring company are disqualified. The constituents of the DJSI indices are selected from the Eligible Universe.																			
Sustainability Investment List (THSI) by The Stock Exchange of Thailand (SET)	THSI quantifies responsibility in Environmental and Social issues by managing business with transparency in Governance, updated annually. Candidates must pass the preemptive criteria, with two crucial conditions: 1) no irregular trading of the board members and executives; and 2) free float of >150 shareholders, and combined holding must be >15% of paid-up capital. Some key disqualifying criteria include: 1) CG score of below 70%; 2) independent directors and free float violation; 3) executives' wrongdoing related to CG, social & environmental impacts; 4) equity in negative territory; and 5) earnings in red for > 3 years in the last 5 years.	To be eligible for THSI inclusion , verified data must be scored at a minimum of 50% for each indicator, unless the company is a part of DJSI during the assessment year. The scoring will be fairly weighted against the nature of the relevant industry and materiality. SETTHSI Index is extended from the THSI companies whose 1) market capitalization > THB5b (~USD150b); 2) free float >20%; and 3) liquidity >0.5% of paid-up capital for at least 9 out of 12 months. The SETTHSI Index is a market capitalisation-weighted index, cap 5% quarterly weight at maximum, and no cap for number of stocks.																			
CG Score by Thai Institute of Directors Association (Thai IOD)	An indicator of CG strength in sustainable development, measured annually by the Thai IOD, with support from the Stock Exchange of Thailand (SET). The results are from the perspective of a third party, not an evaluation of operations.	Scores are rated in six categories: 5 for Excellent (90-100), 4 for Very Good (80-89), 3 for Good (70-79), 2 for Fair (60-69), 1 for Pass (50-59), and not rated for scores below 50. Weightings include: 1) the rights; 2) and equitable treatment of shareholders (weight 25% combined); 3) the role of stakeholders (25%); 4) disclosure & transparency (15%); and 5) board responsibilities (35%).																			
AGM level By Thai Investors Association (TIA) with support from the SEC	It quantifies the extent to which shareholders' rights and equitable treatment are incorporated into business operations and information is transparent and sufficiently disclosed. All form important elements of two out of five the CG components to be evaluated annually. The assessment criteria cover AGM procedures before the meeting (45%), at the meeting date (45%), and after the meeting (10%). <i>(The first assesses 1) advance circulation of sufficient information for voting; and 2) facilitating how voting rights can be exercised. The second assesses 1) the ease of attending meetings; 2) transparency and verifiability; and 3) openness for Q&A. The third involves the meeting minutes that should contain discussion issues, resolutions and voting results.)</i>	The scores are classified into four categories: 5 for Excellent (100), 4 for Very Good (90-99), 3 for Fair (80-89), and not rated for scores below 79.																			
Thai CAC By Thai Private Sector Collective Action Against Corruption (CAC)	The core elements of the Checklist include corruption risk assessment, establishment of key controls, and the monitoring and developing of policies. The Certification is good for three years. <i>(Companies deciding to become a CAC certified member start by submitting a Declaration of Intent to kick off an 18-month deadline to submit the CAC Checklist for Certification, including risk assessment, in place of policy and control, training of managers and employees, establishment of whistleblowing channels, and communication of policies to all stakeholders.)</i>	The document will be reviewed by a committee of nine professionals. A passed Checklist will move for granting certification by the CAC Council approvals whose members are twelve highly respected individuals in professionalism and ethical achievements.																			
Morningstar Sustainalytics	The Sustainalytics' ESG risk rating provides an overall company score based on an assessment of how much of a company's exposure to ESG risk is unmanaged. <i>Sources to be reviewed include corporate publications and regulatory filings, news and other media, NGO reports/websites, multi-sector information, company feedback, ESG controversies, issuer feedback on draft ESG reports, and quality & peer reviews.</i>	A company's ESG risk rating score is the sum of unmanaged risk. The more risk is unmanaged, the higher ESG risk is scored. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>NEGL</th> <th>Low</th> <th>Medium</th> <th>High</th> <th>Severe</th> </tr> </thead> <tbody> <tr> <td>0-10</td> <td>10-20</td> <td>20-30</td> <td>30-40</td> <td>40+</td> </tr> </tbody> </table>	NEGL	Low	Medium	High	Severe	0-10	10-20	20-30	30-40	40+									
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ESG Book	The ESG score identifies sustainable companies that are better positioned to outperform over the long term. The methodology considers the principle of financial materiality including information that significantly helps explain future risk-adjusted performance. Materiality is applied by over-weighting features with higher materiality and rebalancing these weights on a rolling quarterly basis.	The total ESG score is calculated as a weighted sum of the features scores using materiality-based weights. The score is scaled between 0 and 100 with higher scores indicating better performance.																			
MSCI	MSCI ESG ratings aim to measure a company's management of financially relevant ESG risks and opportunities. It uses a rules-based methodology to identify industry leaders and laggards according to their exposure to ESG risks and how well they manage those risks relative to peers. <table border="1" style="margin-left: auto; margin-right: auto;"> <tbody> <tr> <td>AAA</td> <td>8.571-10.000</td> <td rowspan="3">Leader:</td> <td rowspan="3">leading its industry in managing the most significant ESG risks and opportunities</td> </tr> <tr> <td>AA</td> <td>7.143-8.570</td> </tr> <tr> <td>A</td> <td>5.714-7.142</td> </tr> <tr> <td>BBB</td> <td>4.286-5.713</td> <td rowspan="3">Average:</td> <td rowspan="3">a mixed or unexceptional track record of managing the most significant ESG risks and opportunities relative to industry peers</td> </tr> <tr> <td>BB</td> <td>2.857-4.285</td> </tr> <tr> <td>B</td> <td>1.429-2.856</td> </tr> <tr> <td>CCC</td> <td>0.000-1.428</td> <td>Laggard:</td> <td>lagging its industry based on its high exposure and failure to manage significant ESG risks</td> </tr> </tbody> </table>	AAA	8.571-10.000	Leader:	leading its industry in managing the most significant ESG risks and opportunities	AA	7.143-8.570	A	5.714-7.142	BBB	4.286-5.713	Average:	a mixed or unexceptional track record of managing the most significant ESG risks and opportunities relative to industry peers	BB	2.857-4.285	B	1.429-2.856	CCC	0.000-1.428	Laggard:	lagging its industry based on its high exposure and failure to manage significant ESG risks
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Moody's ESG solutions	Moody's assesses the degree to which companies take into account ESG objectives in the definition and implementation of their strategy policies. It believes that a company integrating ESG factors into its business model and relatively outperforming its peers is better positioned to mitigate risks and create sustainable value for shareholders over the medium to long term.																				
Refinitiv ESG rating	Designed to transparently and objectively measure a company's relative ESG performance, commitment and effectiveness across 10 main themes, based on publicly available and auditable data. The score ranges from 0 to 100 on relative ESG performance and insufficient degree of transparency in reporting material ESG data publicly. <i>(Score ratings are 0 to 25 = poor; >25 to 50 = satisfactory; >50 to 75 = good; and >75 to 100 = excellent.)</i>																				
S&P Global	The S&P Global ESG Score is a relative score measuring a company's performance on and management of ESG risks, opportunities, and impacts compared to its peers within the same industry classification. The score ranges from 0 to 100.																				
Bloomberg	ESG Score	Bloomberg score evaluating the company's aggregated Environmental, Social and Governance (ESG) performance. The score is based on Bloomberg's view of ESG financial materiality. The score is a weighted generalized mean (power mean) of Pillar Scores, where the weights are determined by the pillar priority ranking. Values range from 0 to 10; 10 is the best.																			
Bloomberg	ESG Disclosure Score	Disclosure of a company's ESG used for Bloomberg ESG score. The score ranges from 0 for none to 100 for disclosure of every data point, measuring the amount of ESG data reported publicly, and not the performance on any data point.																			

Rating regarding the sustainable development of Thai listed companies, both on the SET and MAI, are publicly available on the website of the Securities and Exchange Commission of Thailand (SEC). Currently, ratings available are 1) **CG Score**; 2) **AGM Level**; 3) **Thai CAC**; and 4) **THSI**. The ratings are updated on an annual basis. FSSIA does not confirm nor certify the accuracy of such ratings.

Source: FSSIA's compilation

GENERAL DISCLAIMER

ANALYST(S) CERTIFICATION

Sureeporn Teewasuwet FSS International Investment Advisory Securities Co., Ltd

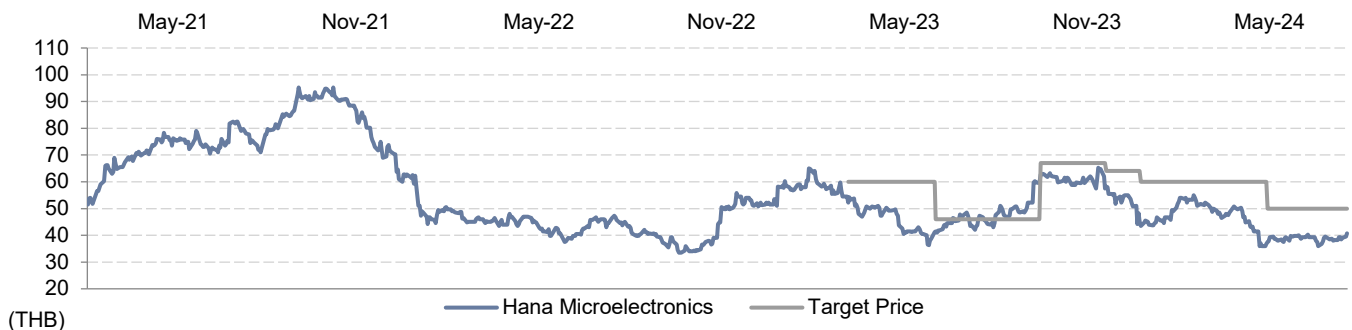
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History of change in investment rating and/or target price

Hana Microelectronics (HANA TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
07-Mar-2023	HOLD	60.00	21-Aug-2023	BUY	67.00	16-Nov-2023	BUY	60.00
22-May-2023	BUY	46.00	17-Oct-2023	BUY	64.00	05-Mar-2024	BUY	50.00

Sureeporn Teewasuwet started covering this stock from 07-Mar-2023

Price and TP are in local currency

Source: FSSIA estimates

Company	Ticker	Price	Rating	Valuation & Risks
Hana Microelectronics	HANA TB	THB 40.75	BUY	Downside risks to our P/E-based TP include 1) a slower-than-expected recovery in the global economy and purchasing power, 2) higher-than-expected raw material costs, 3) Baht strength, and 4) higher minimum wage and labor shortages.

Source: FSSIA estimates

Additional Disclosures

Target price history, stock price charts, valuation and risk details, and equity rating histories applicable to each company rated in this report is available in our most recently published reports. You can contact the analyst named on the front of this note or your representative at Finansia Syrus Securities Public Company Limited.

All share prices are as at market close on 14-May-2024 unless otherwise stated.

RECOMMENDATION STRUCTURE

Stock ratings

Stock ratings are based on absolute upside or downside, which we define as $(\text{target price}^* - \text{current price}) / \text{current price}$.

BUY (B). The upside is 10% or more.

HOLD (H). The upside or downside is less than 10%.

REDUCE (R). The downside is 10% or more.

Unless otherwise specified, these recommendations are set with a 12-month horizon. Thus, it is possible that future price volatility may cause a temporary mismatch between upside/downside for a stock based on market price and the formal recommendation.

* In most cases, the target price will equal the analyst's assessment of the current fair value of the stock. However, if the analyst doesn't think the market will reassess the stock over the specified time horizon due to a lack of events or catalysts, then the target price may differ from fair value. In most cases, therefore, our recommendation is an assessment of the mismatch between current market price and our assessment of current fair value.

Industry Recommendations

Overweight. The analyst expects the fundamental conditions of the sector to be positive over the next 12 months.

Neutral. The analyst expects the fundamental conditions of the sector to be maintained over the next 12 months.

Underweight. The analyst expects the fundamental conditions of the sector to be negative over the next 12 months.

Country (Strategy) Recommendations

Overweight (O). Over the next 12 months, the analyst expects the market to score positively on two or more of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Neutral (N). Over the next 12 months, the analyst expects the market to score positively on one of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Underweight (U). Over the next 12 months, the analyst does not expect the market to score positively on any of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.