

HANA MICROELECTRONICS

THAILAND / ELECTRONIC COMPONENT

HANA TB

BUY

FROM HOLD

TARGET PRICE	THB46.00
CLOSE	THB38.75
UP/DOWNSIDE	+18.7%
PRIOR TP	THB60.00
CHANGE IN TP	-23.3%
TP vs CONSENSUS	-8.0%

Inventory correction might end in 4Q

- Short-term, we forecast a lower 2Q23 core profit by 32% y-y, as IC revenue has not recovered.
- Management expects the smartphone inventory correction to end in 4Q23; auto supply constraints should be overcome by end-2023.
- We cut 2023-24E profit and our TP to reflect the weak 1Q23.

2Q23 IC orders still not bright

We have a slightly negative view from the analyst meeting on 12 May 2023. IC purchase orders have not recovered and stabilised to 1Q23 levels, as customers' inventories are close to the bottom. IC customers are planning to increase purchase orders in 2H23. Additionally, its SiC production line has suffered from an unplanned shutdown. However, management still targets 2023 SiC revenue of USD25m-30m, but the SiC EBITDA breakeven point might be postponed to 1Q24 from 2H23.

Inventory correction might end in 4Q23

Management expects that customers' smartphone inventory correction might end in 4Q23, after the supply chain will have been facing high inventory levels for 6-9 months, in line with HANA's customers' views. International Data Corporation (IDC) forecasts the recovery to be pushed forward into 2024 amid weak demand. Management also mentioned that certain semiconductor supply constraints for autos remain, but they believe this will be overcome by the end of this year.

2Q23 core profit should drop y-y; cut 2023-24 forecasts

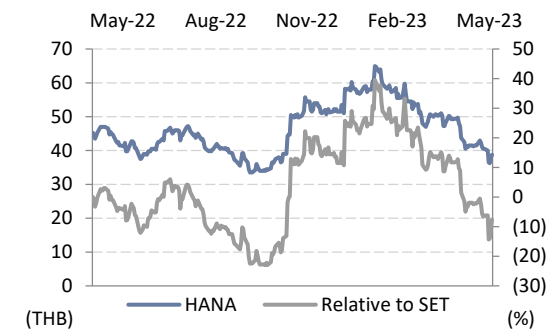
In the short term, we forecast a higher 2Q23 core profit by 39% q-q to THB409m, but it might drop by 32% y-y due to higher production costs and changing product mix. In accordance with the lower-than-expected 1Q23 operations, we cut our 2023 net profit forecast by 23.3% to THB1.85b (-11.9% y-y) and 2024E earnings by 22% to THB2.05b (+10.5% y-y). Assuming in-line 1H23 results, the earnings would account for 37% of our full-year forecast. We expect its 2H23 net profit to return to high h-h growth, but be flat y-y due to the high base in 2H22. In addition, we revise down 2023E SiC revenue to USD25m from our previous forecast of USD30m. We estimate solid SiC revenue growth in 2H23, after its existing capacity production can return to normal operations.

Cut target price but raise recommendation

We revise down our target price to THB46 from THB60, based on the same target 2023 P/E of 20x, slightly above its five-year historical average. The share price plunged by 37% in three months. We think this might reflect the poor earnings in 1Q23. Our new target price has a wide upside of 19%, hence, we raise our recommendation to BUY from Hold.

KEY STOCK DATA

YE Dec (THB m)	2022	2023E	2024E	2025E
Revenue	27,167	25,963	27,454	29,252
Net profit	2,102	1,852	2,045	2,375
EPS (THB)	2.61	2.30	2.54	2.95
vs Consensus (%)	-	(12.7)	(21.7)	(19.4)
EBITDA	4,054	3,640	4,014	4,453
Core net profit	2,398	1,852	2,045	2,375
Core EPS (THB)	2.98	2.30	2.54	2.95
Chg. In EPS est. (%)	-	(23.3)	(22.0)	(20.5)
EPS growth (%)	5.4	(22.8)	10.5	16.1
Core P/E (x)	13.0	16.8	15.2	13.1
Dividend yield (%)	2.6	2.4	3.0	3.4
EV/EBITDA (x)	6.9	7.8	7.2	6.4
Price/book (x)	1.3	1.2	1.2	1.2
Net debt/Equity (%)	(14.1)	(11.6)	(9.4)	(9.8)
ROE (%)	10.2	7.6	8.0	9.0



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	(19.3)	(32.3)	(17.1)
Relative to country (%)	(15.8)	(26.2)	(12.1)
Mkt cap (USD m)	907		
3m avg. daily turnover (USD m)	13.6		
Free float (%)	58		
Major shareholder	OMAC and related companies (32%)		
12m high/low (THB)	65.00/32.75		
Issued shares (m)	1,020.00		

Sources: Bloomberg consensus; FSSIA estimates


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Investment thesis

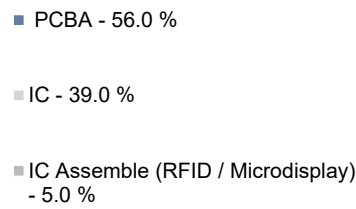
The company provides electronic manufacturing services to original equipment manufacturers (OEM), manufacturing products based on the customer's specifications and designs. HANA's strengths are: 1) its products can support a wider range of end applications such as telecommunications, computers, consumer products, automobiles, radio frequency identification (RFID), and medical products; and 2) it has diversified production plants. Aside from that, HANA is improving its own technology and new product called silicon carbide (SiC) to satisfy customer demand. We have a bullish view on its SiC demand for the EV industry in the long term.

Company profile

HANA is one of South East Asia's leading independent electronics manufacturing service providers. The company produces PCBA, IC, assembles and tests micro-displays, and RFID. The company's headquarters are in Bangkok and there are six manufacturing facilities in Thailand, China, the USA, Cambodia, and South Korea. In 2022, Its revenue contribution came mainly from PCBA (56% of total revenue), followed by IC (38%), RFID (5%), and SiC (1%).

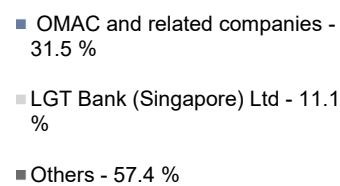
www.hanagroup.com

Principal activities (revenue, 2022)



Source: Hana Microelectronics

Major shareholders



Source: Hana Microelectronics

Catalysts

Potential catalysts for HANA's earnings growth in 2023 are 1) a stronger global economy and a consumption recovery; 2) a decline in raw material costs; and 3) a faster-than-expected capacity expansion.

Risks to our call

Downside risks to our P/E-based TP include 1) a slower-than-expected consumption recovery; 2) a potential rise in raw material costs; and 3) a stronger-than-expected THB against USD.

Event calendar

Date	Event
August 2023	2Q23 results announcement

Key assumptions

	2023E	2024E	2025E
USD total revenue (USD m)	787	832	886
SiC revenue (USD m)	25	50	80
FX rate (USD/THB)	33	33	33
THB revenue growth (%)	(4.4)	5.7	6.5
Gross margin (%)	11.5	12.0	12.8

Source: FSSIA estimates

Earnings sensitivity

- For every THB1/USD increase, we estimate 2023 net profit to fall by 6.8%, and vice versa, all else being equal.
- For every 0.5% increase in GPM, we estimate 2023 net profit to rise by 5.7%, and vice versa, all else being equal.
- For every 0.2% increase in SG&A, we estimate 2023 net profit to fall by 1.3%, and vice versa, all else being equal.
- For every 10% increase in labour cost, we estimate 2023 net profit to fall by 6.6%, and vice versa, all else being equal.

Source: FSSIA estimates

1Q23 results were weaker than expected

HANA posted a 1Q23 net profit of THB266m (-75% q-q, -27% y-y), missing our expectation by 50% and the Bloomberg consensus estimate by 47%. Excluding an FX loss of THB12m and a derivative loss of THB16m, the company's 1Q23 core profit was equal to THB295m (-47% q-q, -26% y-y). It was a 17-quarter-low.

Total USD revenue dropped by 3% q-q but slightly grew by 3.2% y-y to USD191m. Meanwhile, its integrated circuit (IC) revenue decreased by 17.8% q-q and 1.8% y-y, due to declining revenues from both the Ayutthaya and Jiaxing factories. We think this was a sign of the beginning of the consumption slowdown. Though IC is a high-margin product, HANA faced higher utility costs in 1Q23. Hence, its 1Q23 gross margin was only at 8.6%, down from 13.4% in 4Q22 and 10.8% in 1Q22.

Exhibit 1: 1Q23 earnings results

	1Q22	2Q22	3Q22	4Q22	1Q23	Change	
	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(q-q%)	(y-y%)
Sales	6,107	6,390	7,545	7,125	6,466	(9.3)	5.9
Cost of sales	5,445	5,512	6,378	6,171	5,913	(4.2)	8.6
Gross profit	663	878	1,167	954	553	(42.0)	(16.5)
SG&A	381	401	408	505	382	(24.4)	0.2
Operating profit	282	477	759	449	171	(61.8)	(39.1)
Interest expense	1.5	2.7	2.5	5.9	1.8	(69.9)	21.8
Tax expense	15	15	46	31	12	(62.8)	(20.4)
Reported net profit	365	245	417	1,075	266	(75.2)	(27.0)
Core profit	399	603	843	553	295	(46.7)	(26.1)
Key ratios (%)						(ppt)	(ppt)
Gross margin	10.8	13.7	15.5	13.4	8.6	(4.8)	(2.3)
SG&A to sales	6.2	6.3	5.4	7.1	5.9	(1.2)	(0.3)
Operating margin	4.6	7.5	10.1	6.3	2.7	(3.6)	(2.0)
Net margin	6.0	3.8	5.5	15.1	4.1	(11.0)	(1.9)
Core margin	6.5	9.4	11.2	7.8	4.6	(3.2)	(2.0)
Operating statistics (THB m)							
PCBA - Lamphun	2,759	2,603	2,963	2,814	3,032	7.8	9.9
PCBA - Jiaxing	710	838	1,189	1,066	797	(25.2)	12.3
PCBA - Cambodia	73	74	75	76	77	1.3	5.5
IC - Ayutthaya	2,010	2,275	2,464	2,217	1,816	(18.1)	(9.7)
IC - Jiaxing	286	301	384	388	247	(36.3)	(13.5)
HMT - USA	263	312	370	414	345	(16.6)	31.4
IC - South Korea	41	31	109	91	146	61.0	253.9

Sources: HANA; FSSIA's compilation

2Q23 IC orders still not bright

We have a slightly negative view from the analyst meeting on 12 May 2023. Currently, IC purchase orders have not recovered and stabilised to 1Q23 levels, as customers' inventories are close to the bottom. Its IC customers are planning to increase purchase orders in 2H23.

Aside from that, its SiC production line has been problematic due to an unplanned shutdown. Management stated that SiC growth is constrained by production, not demand. Therefore, we think it will affect SiC revenue temporarily in 2Q23. However, management still targets 2023 SiC revenue of USD25m-30m, but the SiC EBITDA breakeven point might be postponed to 1Q24 from the previous target of 2H23.

Overall, we assume operations will recover in 2H23 and increase significantly in 2024. Preliminarily, we forecast 2Q23 core profit to rise by 39% q-q to THB409m, but drop by 32% y-y due to higher production costs and changing product mix.

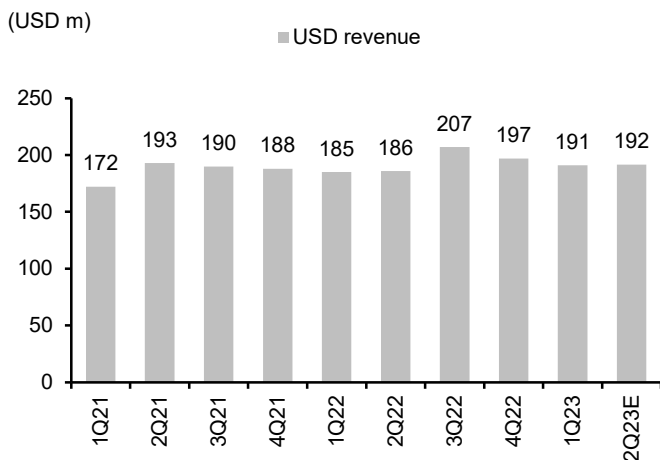
Exhibit 2: 2Q23 earnings preview

	2Q22	3Q22	4Q22	1Q23	2Q23E	Change		1H22	1H23E	Change
	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(q-q%)	(y-y%)	(THB m)	(THB m)	(y-y%)
Sales	6,390	7,545	7,125	6,466	6,517	0.8	2.0	12,497	12,983	3.9
Cost of sales	5,512	6,378	6,171	5,913	5,833	(1.3)	5.8	10,956	11,746	7.2
Gross profit	878	1,167	954	553	684	23.7	(22.1)	1,541	1,237	(19.7)
SG&A	401	408	505	382	391	2.4	(2.4)	782	773	(1.1)
Operating profit	477	759	449	171	293	71.1	(38.5)	759	465	(38.8)
Interest expense	2.7	2.5	5.9	1.8	2.0	13.0	(24.9)	4	4	(8.4)
Tax expense	15	46	31	12	15	26.9	(0.9)	30	27	(10.6)
Reported net profit	245	417	1,075	266	409	53.6	67.1	610	676	10.8
Core profit	603	843	553	295	409	38.9	(32.1)	1,002	704	(29.7)

Key ratios (%)					Change (ppt)				Change (ppt)	
Gross margin	13.7	15.5	13.4	8.6	10.5	1.9	(3.2)	12.3	9.5	(2.8)
SG&A to sales	6.3	5.4	7.1	5.9	6.0	0.1	(0.3)	6.3	6.0	(0.3)
Operating margin	7.5	10.1	6.3	2.7	4.5	1.8	(3.0)	6.1	3.6	(2.5)
Net margin	3.8	5.5	15.1	4.1	6.3	2.2	2.4	4.9	5.2	0.3
Core margin	9.4	11.2	7.8	4.6	6.3	1.7	(3.2)	8.0	5.4	(2.6)

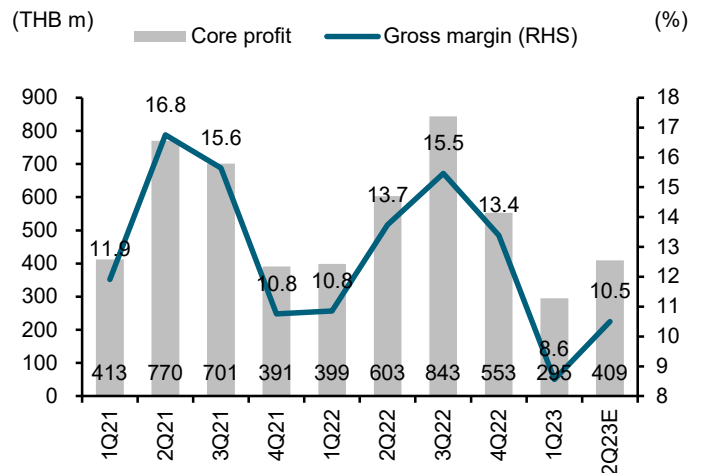
Sources: HANA; FSSIA estimates

Exhibit 3: Quarterly USD revenue



Sources: HANA, FSSIA estimates

Exhibit 4: Quarterly core profit and gross margin



Sources: HANA, FSSIA estimates

Inventory correction might end in 4Q23

Management expects that customers' smartphone inventory correction might end in 4Q23, after the supply chain will have been facing high inventory levels for 6-9 months, in line with HANA's customers' views. Canalys reported that global smartphone shipments fell by 12% y-y in 1Q23 – the fifth consecutive quarter of decline. Meanwhile, IDC forecasts the recovery to be pushed forward into 2024 amid weak demand.

Management also mentioned that certain semiconductor supply constraints for autos remain, but they believe this will be overcome by the end of this year.

In accordance with the lower-than-expected 1Q23 operations, we cut our 2023 net profit forecast by 23.3% to THB1.85b (-11.9% y-y) and 2024E earnings by 22% to THB2.05b (+10.5% y-y). Assuming in-line 1H23 results, the earnings would account for 37% of our full-year forecast. We expect its 2H23 net profit to return to high h-h growth, but be flat y-y due to the high base in 2H22.

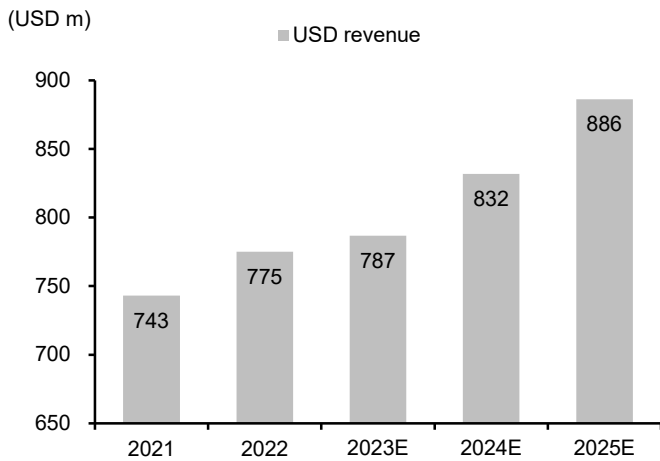
In addition, we revise down 2023E revenue from SiC to USD25m from our previous forecast of USD30m. We estimate solid SiC revenue growth in 2H23, after its existing capacity production can return to normal operational levels.

Exhibit 5: Key assumptions for HANA

	Current			Previous			Change		
	2023E (THB m)	2024E (THB m)	2025E (THB m)	2023E (THB m)	2024E (THB m)	2025E (THB m)	2023E (%)	2024E (%)	2025E (%)
Total sales value (THB m)	25,963	27,454	29,252	26,589	28,259	30,589	(2.4)	(2.8)	(4.4)
Costs	22,977	24,160	25,507	22,999	24,388	26,368	(0.1)	(0.9)	(3.3)
Gross profit	2,986	3,294	3,744	3,589	3,871	4,221	(16.8)	(14.9)	(11.3)
SG&A expense	1,610	1,702	1,814	1,648	1,752	1,897	(2.4)	(2.8)	(4.4)
Interest expense	11	11	12	11	11	10	0.0	0.0	22.5
Reported net profit	1,852	2,045	2,375	2,415	2,621	2,988	(23.3)	(22.0)	(20.5)
Core profit	1,852	2,045	2,375	2,415	2,621	2,988	(23.3)	(22.0)	(20.5)
Key ratios (%)									
Total revenue growth	(4.4)	5.7	6.5	(2.1)	6.3	8.2	(2.3)	(0.5)	(1.7)
Net profit growth	(11.9)	10.5	16.1	14.9	8.5	14.0	(26.8)	1.9	2.1
Core profit growth	(22.8)	10.5	16.1	0.7	8.5	14.0	(23.5)	1.9	2.1
Gross margin	11.5	12.0	12.8	13.5	13.7	13.8	(2.0)	(1.7)	(1.0)
SG&A to sales	6.2	6.2	6.2	6.2	6.2	6.2	0.0	0.0	0.0
Net margin	7.1	7.5	8.1	9.1	9.3	9.8	(1.9)	(1.8)	(1.6)
Norm margin	7.1	7.5	8.1	9.1	9.3	9.8	(1.9)	(1.8)	(1.6)
Operating statistics									
Total revenue (USD m)	787	832	886	806	856	927	(2.4)	(2.8)	(4.4)
SiC revenue (USD m)	25	50	80	30	60	100	(16.7)	(16.7)	(20.0)
FX rate (THB/USD)	33.0	33.0	33.0	33.0	33.0	33.0	0.0	0.0	0.0

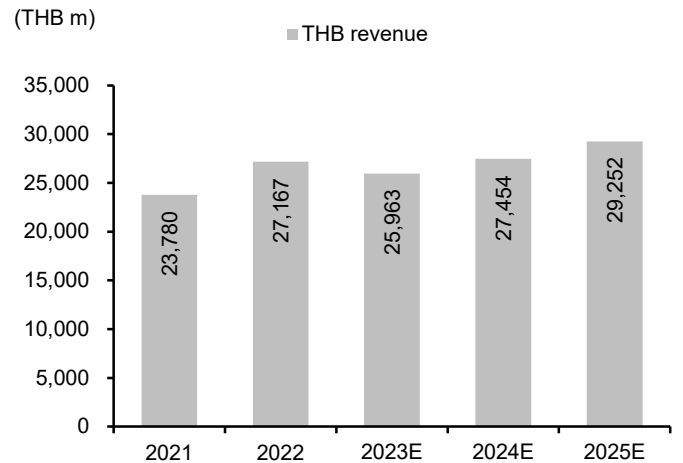
Source: FSSIA estimates

Exhibit 6: Yearly USD revenue



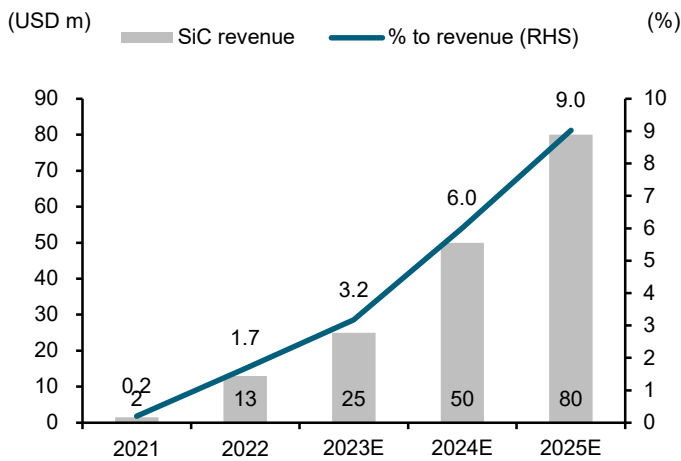
Sources: HANA, FSSIA estimates

Exhibit 7: Yearly THB revenue



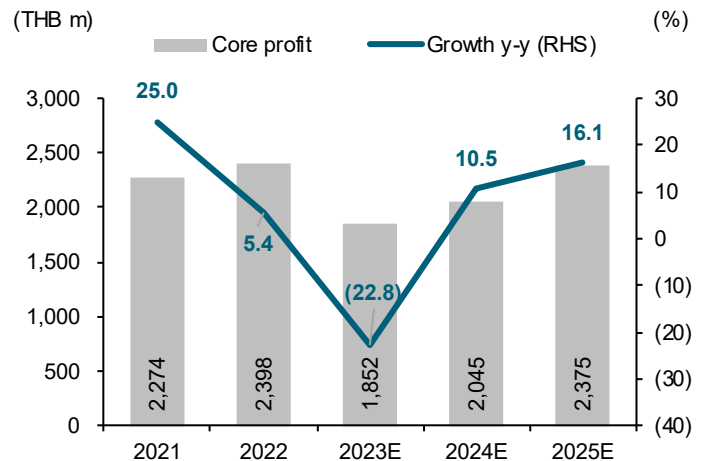
Sources: HANA, FSSIA estimates

Exhibit 8: Yearly SiC revenue



Sources: HANA, FSSIA estimates

Exhibit 9: Yearly core profit and gross margin



Sources: HANA, FSSIA estimates

Cut our target price

We revise down our target price to THB46 from THB60, based on the same target 2023 P/E of 20x, slightly above its five-year historical average. The share price plunged by 37% in three months. We think its share price might reflect the poor earnings in 1Q23. Our new target price has a wide upside of 19%, hence, we raise our recommendation to BUY from Hold.

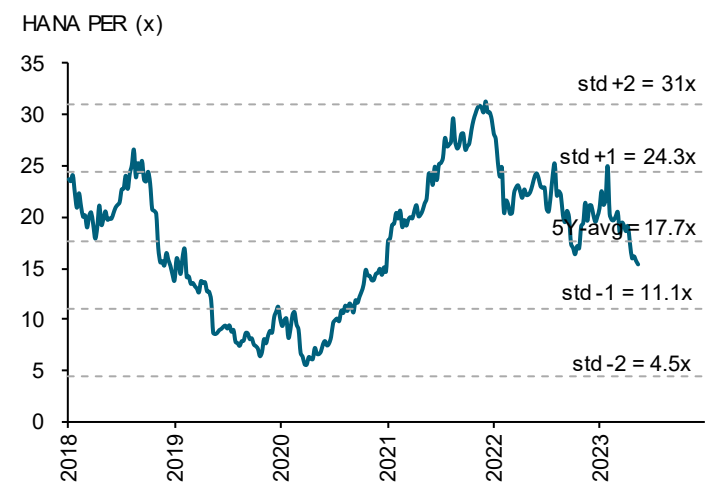
In addition, management plans to invest USD70m-80m over 3Q23-1Q24 to expand its SiC capacity production. They are considering sources of funds. The first option entails fundraising via debt of around USD80m. They are also considering raising funds with a capital increase via private placement under a general mandate for an amount not exceeding 80.487 million shares (10% of total shares). This plan would be completed within 2H23. Management announced that they have undertaken non-deal roadshows to communicate their expansion plans and future capital requirements.

Exhibit 10: Peers comparison as of 19 May 2023

Company	BBG	Rec	Share price			Market Cap (USD m)	PE		ROE		PBV		EV/EBITDA	
			Current (LCY)	Target (LCY)	Upside (%)		23E (x)	24E (x)	23E (%)	24E (%)	23E (x)	24E (x)	23E (x)	24E (x)
Thailand														
Delta Electronics (Thailand)*	DELTA TB	REDUCE	89.00	56.00	(37)	32,286	6.4	5.9	29.5	26.9	1.7	1.5	4.7	4.1
KCE Electronics*	KCE TB	HOLD	36.75	35.50	(3)	1,263	23.8	20.2	13.4	15.3	3.1	3.0	14.0	12.3
Hana Microelectronics*	HANA TB	BUY	38.75	46.00	19	907	16.8	15.2	7.6	8.0	1.2	1.2	7.8	7.2
SVI	SVI TB	n/a	8.05	n/a	n/a	492	11.7	10.6	20.4	20.0	2.3	2.0	11.5	10.0
Cal-Comp Electronics	CCET TB	n/a	2.02	n/a	n/a	341	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Stars Microelectronics	SMT TB	n/a	4.04	n/a	n/a	97	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Thailand average						35,387	14.7	13.0	17.7	17.5	2.1	1.9	9.5	8.4
Regional														
Taiwan Semiconductor	2330 TT	n/a	532.00	n/a	n/a	448,718	16.6	13.6	25.6	26.2	4.0	3.3	8.9	7.2
STMicroelectronics	STM FP	n/a	41.54	n/a	n/a	40,925	10.6	10.5	27.8	22.6	2.5	2.1	6.3	6.1
ROHM	6963 JP	n/a	12,040.0	n/a	n/a	8,895	14.8	15.8	9.2	7.9	1.3	1.2	6.3	5.7
Infineon	IFX GR	n/a	35.94	n/a	n/a	50,781	14.1	13.7	19.5	17.7	2.8	2.4	8.5	8.1
Mitsubishi Electric	6503 JP	n/a	1,755.0	n/a	n/a	28,003	17.5	15.4	7.2	7.6	1.2	1.1	7.8	7.1
On Semiconductor	ON US	n/a	84.36	n/a	n/a	36,433	17.4	15.6	29.5	27.6	4.7	3.8	12.0	10.7
SMIC	688981 CH	n/a	55.00	n/a	n/a	31,549	71.8	58.1	4.1	5.1	3.2	3.0	13.2	10.3
Regional average						645,304	23.3	20.4	17.5	16.4	2.8	2.4	9.0	7.9
Overall average						680,691	20.1	17.7	17.6	16.8	2.6	2.2	9.2	8.1

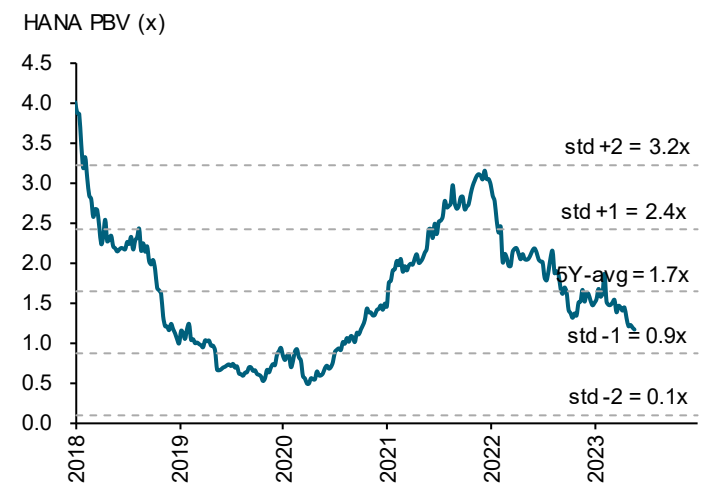
Sources: Bloomberg, *FSSIA estimates

Exhibit 11: Historical P/E band



Sources: Bloomberg, FSSIA's compilation

Exhibit 12: Historical P/BV band



Sources: Bloomberg, FSSIA's compilation

Financial Statements

Hana Microelectronics

Profit and Loss (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Revenue	23,780	27,167	25,963	27,454	29,252
Cost of goods sold	(19,192)	(21,876)	(21,173)	(22,205)	(23,453)
Gross profit	4,589	5,291	4,791	5,249	5,799
Other operating income	357	458	460	467	468
Operating costs	(1,423)	(1,695)	(1,610)	(1,702)	(1,814)
Operating EBITDA	3,522	4,054	3,640	4,014	4,453
Depreciation	(1,301)	(1,630)	(1,805)	(1,955)	(2,055)
Goodwill amortisation	0	0	0	0	0
Operating EBIT	2,221	2,425	1,836	2,059	2,399
Net financing costs	106	81	93	72	76
Associates	0	0	0	0	0
Recurring non-operating income	0	0	0	0	0
Non-recurring items	(729)	(296)	0	0	0
Profit before tax	1,598	2,209	1,929	2,131	2,474
Tax	(53)	(107)	(77)	(85)	(99)
Profit after tax	1,545	2,102	1,852	2,045	2,375
Minority interests	0	0	0	0	0
Preferred dividends	0	0	0	0	0
Other items	-	-	-	-	-
Reported net profit	1,545	2,102	1,852	2,045	2,375
Non-recurring items & goodwill (net)	729	296	0	0	0
Recurring net profit	2,274	2,398	1,852	2,045	2,375
Per share (THB)					
Recurring EPS *	2.83	2.98	2.30	2.54	2.95
Reported EPS	1.92	2.61	2.30	2.54	2.95
DPS	2.00	1.00	0.92	1.14	1.33
Diluted shares (used to calculate per share data)	805	805	805	805	805
Growth					
Revenue (%)	23.3	14.2	(4.4)	5.7	6.5
Operating EBITDA (%)	21.4	15.1	(10.2)	10.3	11.0
Operating EBIT (%)	28.6	9.2	(24.3)	12.2	16.5
Recurring EPS (%)	26.5	5.4	(22.8)	10.5	16.1
Reported EPS (%)	(19.0)	36.0	(11.9)	10.5	16.1
Operating performance					
Gross margin inc. depreciation (%)	13.8	13.5	11.5	12.0	12.8
Gross margin of key business (%)	13.8	13.5	11.5	12.0	12.8
Operating EBITDA margin (%)	14.8	14.9	14.0	14.6	15.2
Operating EBIT margin (%)	9.3	8.9	7.1	7.5	8.2
Net margin (%)	9.6	8.8	7.1	7.5	8.1
Effective tax rate (%)	3.3	4.9	4.0	4.0	4.0
Dividend payout on recurring profit (%)	70.8	33.6	40.0	45.0	45.0
Interest cover (X)	(20.9)	(29.9)	(19.7)	(28.8)	(31.7)
Inventory days	108.0	136.1	152.1	138.0	137.7
Debtor days	61.5	64.0	67.5	63.2	63.0
Creditor days	55.7	64.0	63.0	53.1	52.9
Operating ROIC (%)	12.1	10.2	6.9	7.3	8.1
ROIC (%)	11.6	9.9	6.7	7.1	7.9
ROE (%)	10.2	10.2	7.6	8.0	9.0
ROA (%)	8.3	8.1	6.0	6.6	7.5
* Pre-exceptional, pre-goodwill and fully diluted					
Revenue by Division (THB m)					
PCBA	13,425	15,214	14,266	14,413	14,546
IC	9,394	10,595	10,705	11,753	12,743
IC Assemble (RFID / Microdisplay)	961	1,358	992	1,287	1,962

Sources: Hana Microelectronics; FSSIA estimates

Financial Statements

Hana Microelectronics

Cash Flow (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Recurring net profit	2,274	2,398	1,852	2,045	2,375
Depreciation	1,301	1,630	1,805	1,955	2,055
Associates & minorities	-	-	-	-	-
Other non-cash items	(455)	24	0	0	0
Change in working capital	(2,566)	(2,626)	585	(502)	(589)
Cash flow from operations	554	1,426	4,242	3,498	3,842
Capex - maintenance	-	-	-	-	-
Capex - new investment	(4,026)	(2,821)	(3,500)	(3,000)	(2,000)
Net acquisitions & disposals	-	-	-	-	-
Other investments (net)	(99)	14	15	(30)	36
Cash flow from investing	(4,124)	(2,807)	(3,485)	(3,030)	(1,964)
Dividends paid	(1,382)	(1,191)	(762)	(920)	(1,069)
Equity finance	0	0	0	0	0
Debt finance	(5)	(2)	5	(1)	(5)
Other financing cash flows	1,289	209	(470)	15	(653)
Cash flow from financing	(98)	(984)	(1,227)	(906)	(1,727)
Non-recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
Net other adjustments	0	0	0	0	0
Movement in cash	(3,668)	(2,365)	(470)	(438)	151
Free cash flow to firm (FCFF)	(3,562.70)	(1,368.15)	767.63	478.96	1,890.07
Free cash flow to equity (FCFE)	(2,285.87)	(1,174.20)	292.30	482.25	1,219.84

Per share (THB)

FCFF per share	(3.49)	(1.34)	0.75	0.47	1.85
FCFE per share	(2.24)	(1.15)	0.29	0.47	1.20
Recurring cash flow per share	3.88	5.03	4.54	4.97	5.50

Balance Sheet (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Tangible fixed assets (gross)	26,004	28,300	31,800	34,800	36,800
Less: Accumulated depreciation	(16,342)	(17,446)	(19,251)	(21,206)	(23,261)
Tangible fixed assets (net)	9,663	10,853	12,549	13,594	13,539
Intangible fixed assets (net)	0	0	0	0	0
Long-term financial assets	72	72	72	72	0
Invest. in associates & subsidiaries	-	-	-	-	-
Cash & equivalents	5,999	3,634	3,164	2,726	2,877
A/C receivable	4,553	4,981	4,624	4,889	5,209
Inventories	6,857	9,457	8,184	8,605	9,085
Other current assets	162	171	130	137	146
Current assets	17,570	18,243	16,101	16,357	17,317
Other assets	548	534	519	549	585
Total assets	27,853	29,703	29,242	30,572	31,441
Common equity	23,058	23,862	25,059	26,184	26,820
Minorities etc.	0	0	0	0	0
Total shareholders' equity	23,058	23,862	25,059	26,184	26,820
Long term debt	3	0	6	5	0
Other long-term liabilities	763	813	260	275	293
Long-term liabilities	766	814	265	280	293
A/C payable	3,506	4,161	3,148	3,310	3,494
Short term debt	8	274	250	250	250
Other current liabilities	515	593	519	549	585
Current liabilities	4,029	5,027	3,917	4,109	4,329
Total liabilities and shareholders' equity	27,853	29,703	29,242	30,572	31,441
Net working capital	7,550	9,856	9,270	9,773	10,361
Invested capital	17,833	21,316	22,410	23,988	24,485

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

Per share (THB)

Book value per share	28.65	29.65	31.13	32.53	33.32
Tangible book value per share	28.65	29.65	31.13	32.53	33.32

Financial strength

Net debt/equity (%)	(26.0)	(14.1)	(11.6)	(9.4)	(9.8)
Net debt/total assets (%)	(21.5)	(11.3)	(9.9)	(8.1)	(8.4)
Current ratio (x)	4.4	3.6	4.1	4.0	4.0
CF interest cover (x)	(15.3)	(19.3)	(39.6)	(47.6)	(41.6)

Valuation	2021	2022	2023E	2024E	2025E
Recurring P/E (x) *	13.7	13.0	16.8	15.2	13.1
Recurring P/E @ target price (x) *	16.3	15.4	20.0	18.1	15.6
Reported P/E (x)	20.2	14.8	16.8	15.2	13.1
Dividend yield (%)	5.2	2.6	2.4	3.0	3.4
Price/book (x)	1.4	1.3	1.2	1.2	1.2
Price/tangible book (x)	1.4	1.3	1.2	1.2	1.2
EV/EBITDA (x) **	7.2	6.9	7.8	7.2	6.4
EV/EBITDA @ target price (x) **	8.8	8.3	9.4	8.6	7.7
EV/invested capital (x)	1.4	1.3	1.3	1.2	1.2

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

Sources: Hana Microelectronics; FSSIA estimates

Public disclosures related to sustainable development evaluation of Thai listed companies

[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**" by the Thai Institute of Directors Association (Thai IOD); 2) "**AGM Checklist**" by the Thai Investors Association (TIA), a "**CAC certified member**" of the Thai Private Sector Collective Action Against Corruption (CAC); and 3) **Sustainability Investment List (THSI)** by the Stock Exchange of Thailand. The ratings are updated on an annual basis. FSS International Investment Advisory Company Limited does not confirm nor certify the accuracy of such ratings.

CG Score by the Thai Institute of Directors Association (Thai IOD)¹

The [CG Score](#) indicates corporate governance (CG) strength in the sustainable development of Thai listed companies. Annually, the Thai IOD, with support from the Stock Exchange of Thailand (SET), surveys and assesses the CG practices of companies and publishes the results on the [Thai IOD website](#) in a bid to promote and enhance the CG of Thai listed companies in order to promote compliance with international standards for better investment decisions. The results are from the perspective of a third party, not an evaluation of operations, as of the date appearing in the report, and may be changed after that date.

The [five underlying categories and weighting](#) used for the CG scoring in 2022 include the rights of shareholders and equitable treatment of shareholders (weight 25% combined), the role of stakeholders (25%), disclosure and transparency (15%), and board responsibilities (35%).

The CGR report rates CG in six categories: 5 for Excellent (score range 90-100), 4 for Very Good (score range 80-89), 3 for Good (Score range 70-79), 2 for Fair (score range 60-69), 1 for Pass (score range 60-69), and not rated (score below 50).

AGM Checklist by the Thai Investors Association (TIA)²

The "[AGM Checklist](#)" quantifies the extent to which shareholders' rights and equitable treatment are incorporated into business operations and the extent to which information is sufficiently disclosed and the level of its transparency. All the considered factors form important elements of two out of five the CG components. Annually, the TIA, with support from the SEC, leads the project to evaluate the quality of Annual General Meetings of Shareholders (AGMs) and to rate quality of the meetings.

The [Checklist](#) contains the minimum requirements under law that companies must comply with, or best practices according to international CG guidance. Representatives of the TIA will attend the meetings and perform the evaluation. The assessment criteria cover AGM procedures before the meeting (45%), at the meeting date (45%), and after the meeting (10%). The first assesses 1) advance circulation of sufficient information for voting; and 2) facilitating of 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.

The results are classified into four categories: 5 for Excellent (score 100), 4 for Very Good (score 90-99), 3 for Fair (score 80-89), and not rated (score below 79).

CAC certified member by the Thai Private Sector Collective Action Against Corruption (CAC)³

A [CAC certified member](#) is a listed company whose Checklist satisfies the CAC Certification's criteria and is approved by the CAC Council. The core elements of the Checklist include corruption risk assessment, establishment of key controls, and the monitoring and developing of policies. Note that the CAC does not certify the behaviour of the employees nor whether the companies have engaged in bribery, and Certification is good for three years.

Companies deciding to become a CAC certified member [start with](#) by submitting a Declaration of Intent signed by the Chairman of the Board to kick off the 18-month deadline for companies to submit the CAC Checklist for Certification. The 18-month provision is for risk assessment, in place of policy and control, training of managers and employees, establishment of whistleblowing channels, and communication of policies to all stakeholders.

The checklist document will be reviewed by the CAC Certification Committee for adequate information and evidence. It is worth noting that the committee consists of nine professionals in business law, corporate governance, internal audit, financial audit and experienced representatives from certified members.

A passed Checklist will move on to the [CAC Council](#) for granting certification approvals. The CAC Council consists of twelve prominent individuals who are highly respected in professionalism and ethical achievements. Among them are former ministers, a former central bank governor, the former head of the Thai Listed Companies Association, Chairman of Anti-Corruption Organizations (Thailand), Chairman of Thai Institute of Directors, and reputable academic scholars.

Sustainability Investment (THSI)⁴ by the Stock Exchange of Thailand (SET)

Thailand Sustainability Investment ([THSI](#)) quantifies responsibility in **E**nvironmental, and **S**ocial issues, by managing business with transparency in **G**overnance. The THSI serves as another choice for investors who desire to adopt a responsible investment approach, according to the SET.

Annually, the SET will announce the voluntary participation of the company candidates which pass the preemptive criteria, and whose two key crucial conditions are met, i.e. no irregular trading of the board members and executives and a free float of >150 by the number of shareholders, and combined holding must >15% of paid-up capital. Some key disqualifying criteria include a CG score of below 70%; independent directors and free float violation; executives' wrongdoing related to CG, social and environmental impacts, equity in negative territory, and earnings in the red for more than three years in the last five years. To become eligible for THSI, the candidate must pass three indicators in data declaration: **E**conomic (CG, risk management, customer relation management, supply chain management, and innovation); **E**nvironmental (environmental management, eco-efficiency, and climate risk); **S**ocial (human rights, talent attraction, operational health & safety, community development, and stakeholder engagement); and the incorporation of ESG in business operations.

To be approved for THSI inclusion, verified data must be scored at a 50% minimum for each indicator, unless the company is a part of the Dow Jones Sustainability Indices⁵ (DJSI) during the assessment year. The scoring will be fairly weighted against the nature of the relevant industry and materiality.

Note that, from the [THSI list](#), the SET further developed a sustainability [SETTHSI Index](#) in June 2018 from selected THSI companies whose 1) market capitalisation > 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.

Sources: [SEC](#); [Thai IOD](#); [Thai CAC](#); [SET](#); FSSIA's compilation

Disclaimer:

¹ Thai Institute of Directors Association ([Thai IOD](#)) was established in December 1999 and is a membership organisation that strives to promote professionalism in directorship. The Thai IOD offers directors certification and professional development courses, provides a variety of seminars, forums and networking events, and conducts research on board governance issues and practices. Membership comprises board members from companies ranging from large publicly listed companies to small private firms.

² Thai Investors Association ([TIA](#)) was established in 1983 with a mission to promote investment knowledge and to protect the investment rights of Thai investors. In 2002, the association was appointed by the Securities and Exchange Commission (SEC) to represent individual shareholders. To obtain information for evaluation, the association recruits volunteer investors to join AGMs and score the meetings. Weightings for each meeting are at a 45:45:10 ratio. They have been applied since 2017 and subject to change.

³ Thai Private Sector Collective Action against Corruption ([CAC](#)) was founded in 2010 and is 100% privately funded. It is an initiative by the Thai private sector to take part in tackling corruption problems via collective action. The CAC promotes the implementation of effective anti-corruption policies in order to create a transparent business ecosystem by developing a unique certification program for large/medium/small companies to apply for and to control corruption risk systematically and efficiently. The CAC's operations are sponsored by the US-based Center for Private Enterprise (CIPE) and the UK Prosperity Fund.

⁴ Sustainability Investment List ([THSI](#)), created by the Stock Exchange of Thailand in 2015, comprises the listed companies that conduct sustainable business operations.

⁵ Dow Jones Sustainability Indices – [Wikipedia](#) – Launched in 1999, DJSI evaluates the sustainability performance of companies based on corporate economic, environmental, and social performance.

GENERAL DISCLAIMER

ANALYST(S) CERTIFICATION

Sureeporn Teewasuwet FSS International Investment Advisory Securities Co., Ltd

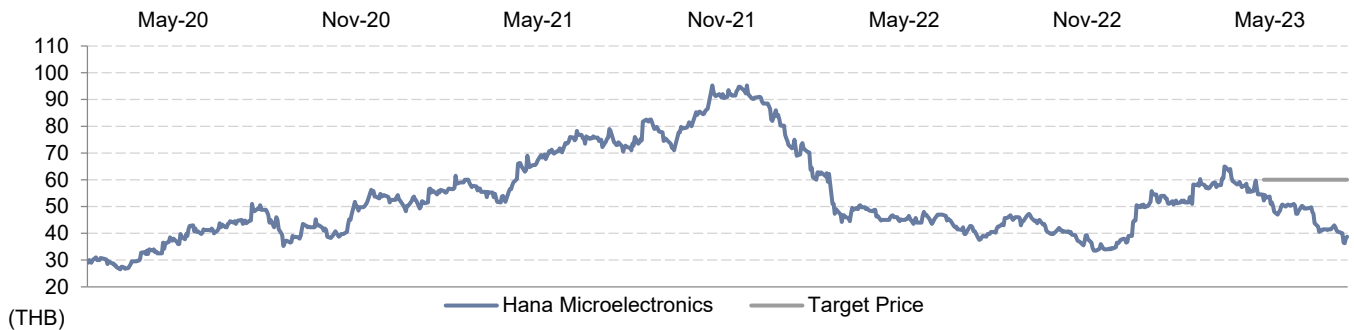
The individual(s) identified above certify(ies) that (i) all views expressed in this report accurately reflect the personal view of the analyst(s) with regard to any and all of the subject securities, companies or issuers mentioned in this report; and (ii) no part of the compensation of the analyst(s) was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed herein.

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History of change in investment rating and/or target price

Hana Microelectronics (HANA TB)



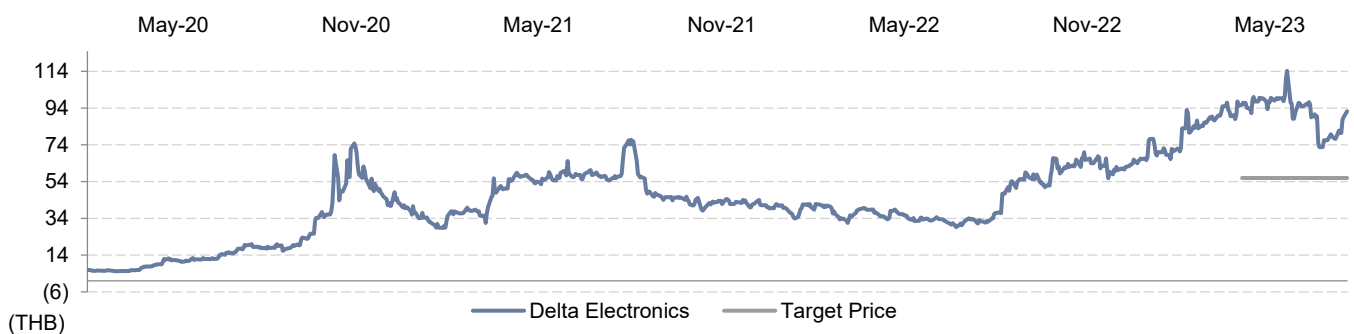
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
07-Mar-2023	HOLD	60.00	-	-	-	-	-	-

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

Price and TP are in local currency

Source: FSSIA estimates

Delta Electronics (DELTA TB)



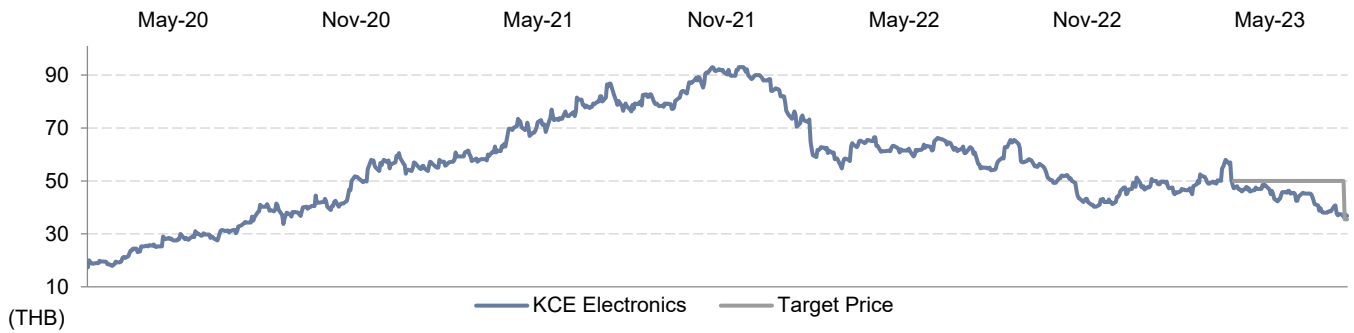
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
17-Feb-2023	REDUCE	56.00	-	-	-	-	-	-

Sureeporn Teewasuwet covering this stock from 17-Feb-2023

Price and TP are in local currency

Source: FSSIA estimates

KCE Electronics (KCE TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
09-Feb-2023	HOLD	50.00	16-May-2023	HOLD	35.50	-	-	-

Sureporn Teewasuwet started covering this stock from 09-Feb-2023

Price and TP are in local currency

Source: FSSIA estimates

Company	Ticker	Price	Rating	Valuation & Risks
Hana Microelectronics	HANA TB	THB 38.75	BUY	Downside risks to our P/E-based TP include 1) a slower-than-expected consumption recovery; 2) a potential rise in raw material costs; and 3) a stronger-than-expected THB against USD.
Delta Electronics	DELTA TB	THB 89.00	REDUCE	Upside risks to our P/E-based TP include 1) higher-than-expected global EV car sales; 2) lower-than-expected raw material costs; and 3) a weaker-than-expected THB against USD.
KCE Electronics	KCE TB	THB 36.75	HOLD	Downside and upside risks to our P/E-based TP include 1) a slower or faster-than-expected automotive recovery; 2) a potential rise or fall in raw material costs; and 3) a stronger or weaker-than-expected THB against USD.

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

FSSIA may incorporate the recommendations and target prices of companies currently covered by FSS Research into equity research reports, denoted by an 'FSS' before the recommendation. FSS Research is part of Finansia Syrus Securities Public Company Limited, which is the parent company of FSSIA.

All share prices are as at market close on 19-May-2023 unless otherwise stated.

RECOMMENDATION STRUCTURE

Stock ratings

Stock ratings are based on absolute upside or downside, which we define as (target price* - current price) / 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.