

DELTA ELECTRONICS

THAILAND / ELECTRONIC COMPONENT

DELTA TB

REDUCE

UNCHANGED

TARGET PRICE	THB70.00
CLOSE	THB84.50
UP/DOWNSIDE	-17.2%
PRIOR TP	THB70.00
CHANGE IN TP	UNCHANGED
TP vs CONSENSUS	-13.0%

More cautious view towards EV customers

- We expect a q-q lower 4Q23 profit after EV customers postponed their purchase orders to 1H24.
- We maintain our 2024E profit (+19% y-y) since we do not see any upside.
- DELTA remains fully valued. It still has the most demanding valuation among peers. Also, we expect a dividend yield of only 0.8%-1.0%. Hence, we retain our SELL call.

EV revenue would weaken in 4Q23 after customers delayed orders

We expect 4Q23 revenue of THB38b (-6% q-q, +10% y-y). It would weaken q-q due partly to seasonality since 4Q was a low season. Also, revenue from EV power would decrease q-q since 1) it continued to see a slight impact from the strikes in the U.S., and 2) EU customers delayed their purchase orders to 1H24 since demand was weak. Also, they would like to maintain their inventory at a reasonable level. Meanwhile, revenue from Data Center and Fan & Thermal Management should stabilize or ease. In 2023, we anticipate USD revenue growth of 25% y-y, a new high and in line with the target.

Expect 4Q23 profit to decrease q-q, in line with seasonality

We initially expect the 4Q23 gross margin to edge up to 23% from 22.6% in 3Q23 (but still lower than 24.5% in 4Q22) due to 1) a change in the product mix with decreased exposure from EV power, which has a lower-than-average margin, and 2) q-q lower inventory provision. Although end-2023 inventory would increase due to customers postponing their delivery, it is temporary, in our view. In particular, it should gradually decrease when DELTA ships them as planned in 1H24. Given the Baht depreciation, there could be an FX loss in 4Q23. Hence, we anticipate a 4Q23 net profit of THB4.6b (-14.5% q-q, +10.8% y-y).

Maintain profit estimate based on in-line assumptions

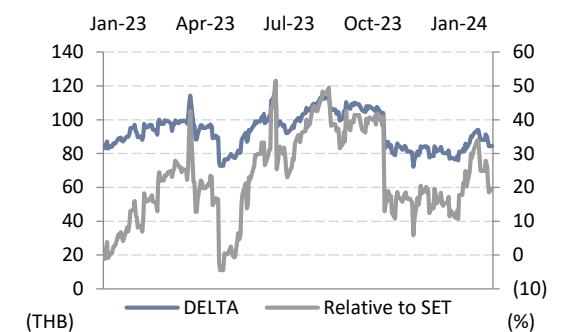
Assuming in-line 4Q23 results, the 2023 profit will hit a new high of THB18.3b (+19.6% y-y). The 2024 profit growth should continue by 19% y-y to THB21.8b. Our assumption is in tandem with DELTA's revenue growth target of 15-20% y-y, supported mainly by EV power, which expanded its capacity by over 1x in 2023. Also, we anticipate a strong revenue recovery in 1Q24 due to delayed purchase orders.

DELTA remains fully valued with a low expected dividend yield

We maintain our 2024 TP of THB70, assuming the highest PE target in the electronics sector of 40x. DELTA remains fully valued. It traded at a demanding 2023-24 PE of 60x and 48x, respectively. Besides, we expect a low dividend yield of just 0.9-1.0%. Therefore, we keep our SELL call unchanged.

KEY STOCK DATA

YE Dec (THB m)	2022	2023E	2024E	2025E
Revenue	118,558	146,417	169,347	189,942
Net profit	15,343	18,353	21,814	25,242
EPS (THB)	1.23	1.47	1.75	2.02
vs Consensus (%)	-	2.9	2.6	1.9
EBITDA	18,240	22,203	26,730	30,509
Recurring net profit	14,563	17,584	21,814	25,242
Core EPS (THB)	1.17	1.41	1.75	2.02
Chg. In EPS est. (%)	-	-	-	-
EPS growth (%)	139.7	20.7	24.1	15.7
Core P/E (x)	72.4	59.9	48.3	41.8
Dividend yield (%)	0.5	0.9	1.0	1.2
EV/EBITDA (x)	57.3	47.2	39.2	34.3
Price/book (x)	19.3	16.1	13.8	12.3
Net debt/Equity (%)	(15.0)	(10.2)	(6.9)	(8.6)
ROE (%)	30.3	29.3	30.8	31.2



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	4.3	5.0	4.6
Relative to country (%)	1.6	6.4	23.4
Mkt cap (USD m)			30,084
3m avg. daily turnover (USD m)			36.0
Free float (%)			0
Major shareholder Delta Electronics International (Singapore) Pte Ltd (43%)			
12m high/low (THB)			119.50/70.50
Issued shares (m)			12,473.82

Sources: Bloomberg consensus; FSSIA estimates



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Investment thesis

We have a bullish view of DELTA's growth, given its main product, i.e., power supply, which is crucial to several product groups, such as automotive, industrial, data center, cloud computing, and medical. Besides, DELTA has expanded to downstream businesses, such as EV power and EV battery chargers, telecommunication infrastructure, and regional energy management.

However, DELTA is fully valued, in our view. It is trading at a high 2023-24E PE of 60x and 48x, respectively, higher than its historical average and electronic component peers' average.

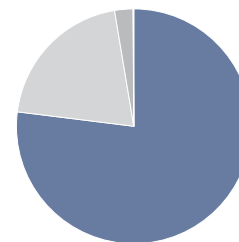
Company profile

DELTA is an electronics manufacturer and exporter of power supplies and electronic components comprising cooling fans, EMI filters, and solenoids. Key power management products consist of switching power supplies, EV chargers, DC-DC converters, and solar inverters. Its operations cover regions such as Asia, Europe, and South America. In 2022, its revenue contribution came mainly from power electronics at 77%, with infrastructure/automation/others at 20.4%/2.5%/0.1%, respectively.

www.deltathailand.com

Principal activities (revenue, 2022)

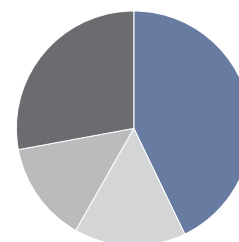
- Power electronics - 77.0 %
- Infrastructure - 20.4 %
- Automation - 2.5 %
- Others - 0.1 %



Source: Delta Electronics

Major shareholders

- Delta Electronics International (Singapore) Pte Ltd - 42.9 %
- Delta International Holding Limited - 15.4 %
- Delta Electronics Inc. - 13.9 %
- Others - 27.9 %



Source: Delta Electronics

Catalysts

Potential catalysts for DELTA's earnings growth in 2023 are 1) stronger purchase orders for data centre and EV car components; 2) a decline in raw material costs; and 3) a faster-than-expected capacity expansion.

Risks to our call

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.

Event calendar

Date	Event
February 2024	4Q23 results announcement 4Q23 analyst meeting

Key assumptions

	2023E	2024E	2025E
Power electronics (USD m)	3,437	4,252	4,805
Infrastructure (USD m)	635	752	805
Automation (USD m)	107	123	142
Total revenue (USD m)	4,183	5,132	5,756
FX rate (USD/THB)	35.0	33.0	33.0
Gross margin (%)	22.6	23.1	23.5

Source: FSSIA estimates

Earnings sensitivity

- For every 1% increase in USD revenue, we estimate 2023 net profit to rise by 0.9%, and vice versa, all else being equal.
- For every THB1/USD increase, we estimate 2023 net profit to fall by 6.5%, and vice versa, all else being equal.
- For every 0.5% increase in GPM, we estimate 2023 net profit to rise by 3.4%, and vice versa, all else being equal.
- For every 0.2% increase in SG&A, we estimate 2023 net profit to fall by 1.8%, and vice versa, all else being equal.

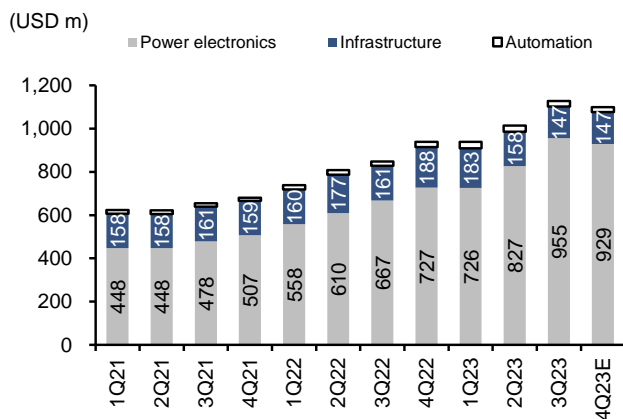
Source: FSSIA estimates

Exhibit 1: 4Q23 earnings preview

	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23E	Change	
	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(q-q%)	(y-y%)
Sales	31,324	34,606	32,294	35,840	40,478	38,067	(6.0)	10.0
Cost of sales	24,027	26,117	25,581	27,472	31,333	29,311	(6.5)	12.2
Gross profit	7,298	8,489	6,713	8,369	9,145	8,755	(4.3)	3.1
SG&A	3,524	3,829	3,236	3,796	4,098	4,035	(1.5)	5.4
Operating profit	3,774	4,661	3,477	4,573	5,047	4,720	(6.5)	1.3
Othe income	204	182	192	265	355	138	(61.2)	(24.3)
Interest expense	0	12	25	22	34	23	(31.8)	90.5
Tax expense	65	314	121	279	167	144	(13.9)	(54.3)
Other gain (Loss)	215	(311)	155	234	380	0	nm	nm
Reported net profit	4,110	4,190	3,614	4,668	5,429	4,642	(14.5)	10.8
Core profit	3,895	4,500	3,459	4,434	5,049	4,642	(8.1)	3.1
Key Ratios (%)							(ppt)	(ppt)
Gross margin	23.3	24.5	20.8	23.4	22.6	23.0	0.4	(1.5)
SG&A / Sales	11.2	11.1	10.0	10.6	10.1	10.6	0.5	(0.5)
Operating margin	12.0	13.5	10.8	12.8	12.5	12.4	(0.1)	(1.1)
Net margin	13.1	12.1	11.2	13.0	13.4	12.2	(1.2)	0.1
Core margin	12.4	13.0	10.7	12.4	12.5	12.2	(0.3)	(0.8)
Operating Statistics								
THB total revenue (THB m)	31,324	34,606	32,294	35,840	40,478	38,067	(6.0)	10.0
USD total revenue (USD m)	849	939	940	1,014	1,129	1,100	(2.6)	17.1

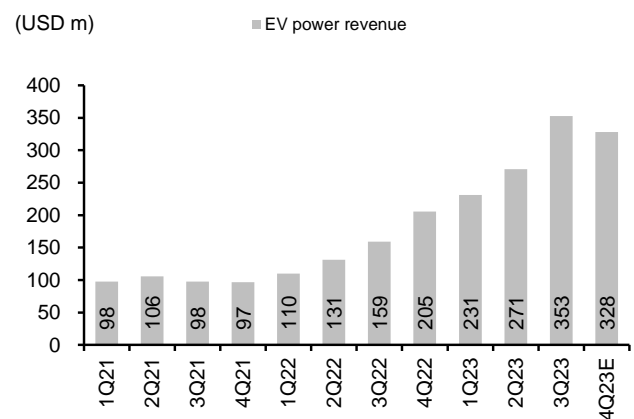
Sources: DELTA; FSSIA estimates

Exhibit 2: Quarterly revenue breakdown by product



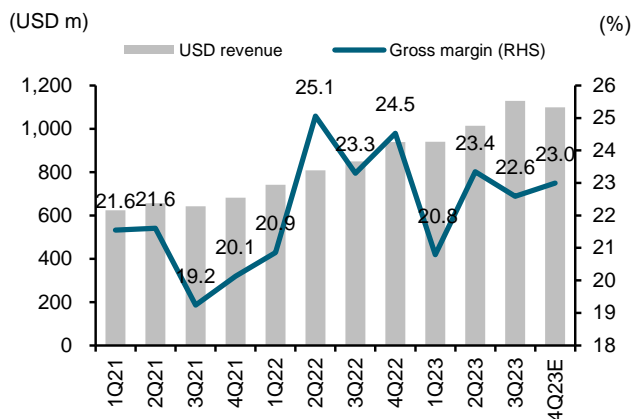
Sources: DELTA; FSSIA estimates

Exhibit 3: Quarterly EV power revenue



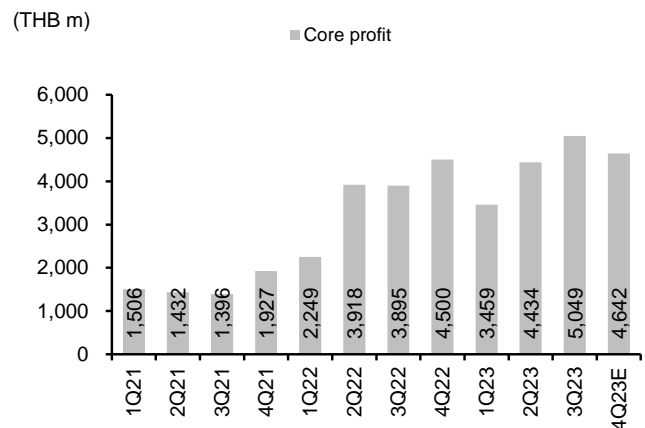
Sources: DELTA; FSSIA estimates

Exhibit 4: USD revenue and gross margin



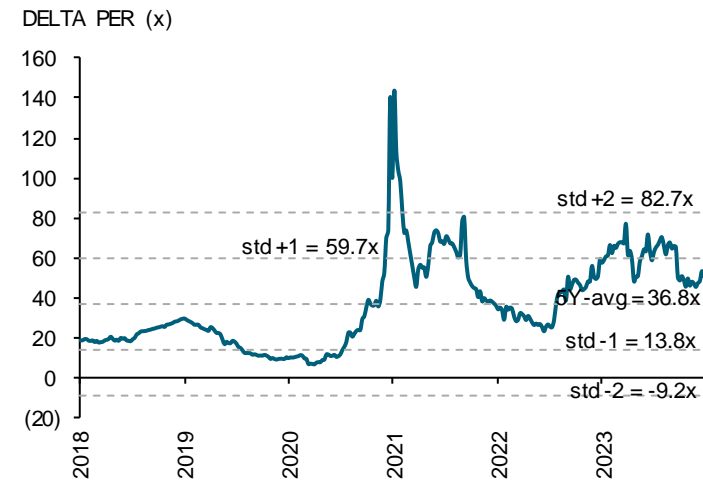
Sources: DELTA; FSSIA estimates

Exhibit 5: Quarterly core profit



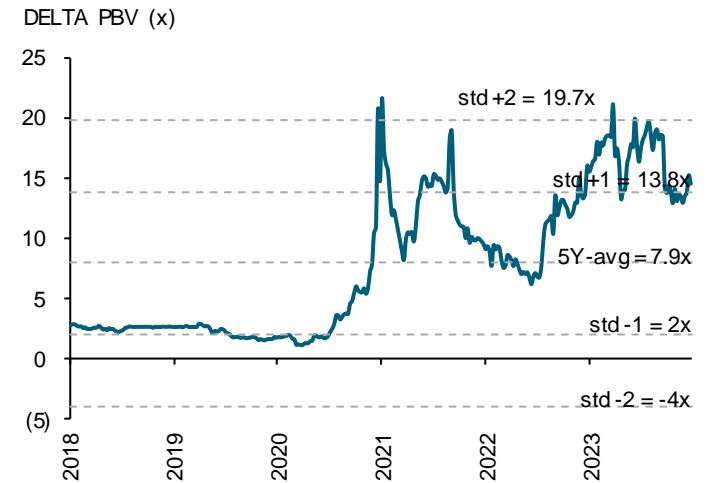
Sources: DELTA; FSSIA estimates

Exhibit 6: Historical P/E band



Sources: Bloomberg, FSSIA estimates

Exhibit 7: Historical P/BV band



Sources: Bloomberg, FSSIA estimates

Exhibit 8: Peers comparison as of 8 Jan 2024

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	84.50	70.00	(17)	30,084	59.9	48.3	29.3	30.8	16.1	13.8	47.2	39.2
KCE Electronics*	KCE TB	HOLD	52.25	60.00	15	1,763	34.6	23.6	13.1	18.5	4.5	4.3	19.9	15.3
Hana Microelectronics	HANA TB	BUY	51.75	60.00	16	1,308	20.3	19.7	9.2	8.9	1.8	1.7	10.3	9.8
SVI	SVI TB	n/a	6.90	n/a	n/a	426	15.1	12.4	14.6	15.7	2.1	1.9	11.6	10.5
Cal-Comp Electronics	CCET TB	n/a	2.04	n/a	n/a	611	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Stars Microelectronics	SMT TB	n/a	3.68	n/a	n/a	88	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Thailand average						34,280	32.5	26.0	16.6	18.5	6.1	5.4	22.2	18.7
Regional														
Taiwan Semiconductor	2330 TT	n/a	583.00	n/a	n/a	488,052	18.4	15.5	25.5	25.3	4.4	3.6	10.1	8.2
STMicroelectronics	STMPA FP	n/a	41.29	n/a	n/a	41,269	10.6	11.5	28.0	21.0	2.6	2.1	6.2	6.4
ROHM	6963 JP	n/a	2,606.50	n/a	n/a	7,467	13.0	17.1	9.2	6.3	1.2	1.1	7.5	8.1
Infineon	IFX GR	n/a	35.01	n/a	n/a	51,253	13.6	15.1	20.5	16.7	2.8	2.4	8.4	8.5
Mitsubishi Electric	6503 JP	n/a	2,029.50	n/a	n/a	30,300	19.7	16.4	7.1	7.9	1.4	1.2	8.8	8.0
On Semiconductor	ON US	n/a	75.70	n/a	n/a	33,543	15.2	16.3	30.0	23.5	4.2	3.4	10.7	11.0
SMIC	688981 CH	n/a	49.50	n/a	n/a	27,291	66.9	59.1	4.2	4.4	2.8	2.7	12.0	10.0
Regional average						679,175	22.5	21.6	17.8	15.0	2.7	2.4	9.1	8.6
Overall average						713,455	26.1	23.2	17.3	16.3	4.0	3.5	13.9	12.3

Sources: Bloomberg, FSSIA estimates

Financial Statements

Delta Electronics

Profit and Loss (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Revenue	84,318	118,558	146,417	169,347	189,942
Cost of goods sold	(66,960)	(90,618)	(113,327)	(130,228)	(145,306)
Gross profit	17,358	27,940	33,090	39,119	44,636
Other operating income	496	613	922	1,016	1,140
Operating costs	(11,674)	(13,502)	(15,450)	(17,545)	(19,657)
Operating EBITDA	8,688	18,240	22,203	26,730	30,509
Depreciation	(2,508)	(3,190)	(3,640)	(4,140)	(4,390)
Goodwill amortisation	0	0	0	0	0
Operating EBIT	6,181	15,050	18,563	22,590	26,119
Net financing costs	(4)	(20)	(110)	(100)	(95)
Associates	0	0	0	0	0
Recurring non-operating income	0	0	0	0	0
Non-recurring items	624	781	769	0	0
Profit before tax	6,801	15,811	19,222	22,490	26,025
Tax	(98)	(467)	(867)	(675)	(781)
Profit after tax	6,703	15,345	18,355	21,816	25,244
Minority interests	(4)	(1)	(2)	(2)	(2)
Preferred dividends	0	0	0	0	0
Other items	-	-	-	-	-
Reported net profit	6,699	15,343	18,353	21,814	25,242
Non-recurring items & goodwill (net)	(624)	(781)	(769)	0	0
Recurring net profit	6,075	14,563	17,584	21,814	25,242
Per share (THB)					
Recurring EPS *	0.49	1.17	1.41	1.75	2.02
Reported EPS	0.54	1.23	1.47	1.75	2.02
DPS	0.17	0.40	0.74	0.87	1.01
Diluted shares (used to calculate per share data)	12,474	12,474	12,474	12,474	12,474
Growth					
Revenue (%)	33.4	40.6	23.5	15.7	12.2
Operating EBITDA (%)	(4.7)	109.9	21.7	20.4	14.1
Operating EBIT (%)	(10.5)	143.5	23.3	21.7	15.6
Recurring EPS (%)	(10.8)	139.7	20.7	24.1	15.7
Reported EPS (%)	(5.7)	129.0	19.6	18.9	15.7
Operating performance					
Gross margin inc. depreciation (%)	20.6	23.6	22.6	23.1	23.5
Gross margin exc. depreciation (%)	23.6	26.3	25.1	25.5	25.8
Operating EBITDA margin (%)	10.3	15.4	15.2	15.8	16.1
Operating EBIT margin (%)	7.3	12.7	12.7	13.3	13.8
Net margin (%)	7.2	12.3	12.0	12.9	13.3
Effective tax rate (%)	1.4	3.0	4.5	3.0	3.0
Dividend payout on recurring profit (%)	34.9	34.3	52.2	50.0	50.0
Interest cover (X)	1,534.8	771.2	169.0	225.4	276.4
Inventory days	91.3	93.2	90.8	91.8	92.9
Debtor days	74.9	75.0	75.1	74.6	75.7
Creditor days	108.3	109.1	101.9	96.6	95.2
Operating ROIC (%)	16.0	28.3	27.6	27.4	27.9
ROIC (%)	15.0	27.1	26.5	26.3	26.7
ROE (%)	15.4	30.3	29.3	30.8	31.2
ROA (%)	9.6	18.2	18.1	19.6	20.2
* Pre-exceptional, pre-goodwill and fully diluted					
Revenue by Division (THB m)					
Power electronics	61,369	91,252	120,307	140,316	158,557
Infrastructure	20,685	24,185	22,225	24,832	26,570
Automation	2,098	3,009	3,745	4,061	4,670
Others	166	112	140	139	146

Sources: Delta Electronics; FSSIA estimates

Financial Statements

Delta Electronics

Cash Flow (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Recurring net profit	6,075	14,563	17,584	21,814	25,242
Depreciation	2,508	3,190	3,640	4,140	4,390
Associates & minorities	-	-	-	-	-
Other non-cash items	-	-	0	0	0
Change in working capital	(7,651)	(5,108)	(7,618)	(5,170)	(6,504)
Cash flow from operations	931	12,644	13,605	20,783	23,127
Capex - maintenance	-	-	-	-	-
Capex - new investment	(8,367)	(7,788)	(9,000)	(10,000)	(5,000)
Net acquisitions & disposals	-	-	-	-	-
Other investments (net)	52	213	(856)	(275)	(817)
Cash flow from investing	(8,315)	(7,575)	(9,856)	(10,275)	(5,817)
Dividends paid	(4,139)	(1,855)	(9,176)	(10,907)	(12,621)
Equity finance	0	0	0	0	0
Debt finance	2,975	569	2,615	(1,184)	306
Other financing cash flows	1,237	(213)	1,450	0	(3,000)
Cash flow from financing	73	(1,499)	(5,111)	(12,090)	(15,315)
Non-recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
Net other adjustments	0	0	0	0	0
Movement in cash	(7,310)	3,571	(1,361)	(1,582)	1,995
Free cash flow to firm (FCFF)	(7,379.42)	5,088.89	3,859.63	10,608.52	17,404.92
Free cash flow to equity (FCFE)	(3,171.33)	5,425.24	7,815.00	9,324.72	14,616.33

Per share (THB)

FCFF per share	(0.59)	0.41	0.31	0.85	1.40
FCFE per share	(0.25)	0.43	0.63	0.75	1.17
Recurring cash flow per share	0.69	1.42	1.70	2.08	2.38

Balance Sheet (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Tangible fixed assets (gross)	31,517	31,517	40,517	50,517	55,517
Less: Accumulated depreciation	(12,934)	(8,335)	(11,975)	(16,114)	(20,504)
Tangible fixed assets (net)	18,583	23,182	28,542	34,403	35,013
Intangible fixed assets (net)	693	629	629	629	629
Long-term financial assets	268	248	248	248	248
Invest. in associates & subsidiaries	-	-	-	-	-
Cash & equivalents	6,572	10,142	8,781	7,199	9,194
A/C receivable	20,593	28,132	32,091	37,117	41,631
Inventories	19,581	25,049	29,496	33,895	37,819
Other current assets	2,019	2,702	2,928	3,387	3,799
Current assets	48,764	66,025	73,297	81,598	92,443
Other assets	1,030	901	1,757	2,032	2,849
Total assets	69,338	90,984	104,472	118,909	131,182
Common equity	41,404	54,680	65,307	76,213	85,834
Minorities etc.	0	0	0	0	0
Total shareholders' equity	41,404	54,680	65,307	76,213	85,834
Long term debt	512	930	976	954	874
Other long-term liabilities	2,687	2,705	4,393	3,387	3,799
Long-term liabilities	3,198	3,635	5,369	4,341	4,673
A/C payable	22,049	30,202	31,048	35,679	37,819
Short term debt	1,669	1,011	1,138	982	956
Other current liabilities	1,018	1,457	1,611	1,693	1,899
Current liabilities	24,736	32,670	33,797	38,354	40,675
Total liabilities and shareholders' equity	69,338	90,984	104,472	118,909	131,182
Net working capital	19,126	24,225	31,857	37,027	43,531
Invested capital	39,700	49,184	63,032	74,338	82,269

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

Per share (THB)

Book value per share	3.32	4.38	5.24	6.11	6.88
Tangible book value per share	3.26	4.33	5.19	6.06	6.83

Financial strength

Net debt/equity (%)	(10.6)	(15.0)	(10.2)	(6.9)	(8.6)
Net debt/total assets (%)	(6.3)	(9.0)	(6.4)	(4.4)	(5.6)
Current ratio (x)	2.0	2.0	2.2	2.1	2.3
CF interest cover (x)	1,291.1	678.1	154.1	193.8	208.6

Valuation	2021	2022	2023E	2024E	2025E
Recurring P/E (x) *	173.5	72.4	59.9	48.3	41.8
Recurring P/E @ target price (x) *	143.7	60.0	49.7	40.0	34.6
Reported P/E (x)	157.3	68.7	57.4	48.3	41.8
Dividend yield (%)	0.2	0.5	0.9	1.0	1.2
Price/book (x)	25.5	19.3	16.1	13.8	12.3
Price/tangible book (x)	25.9	19.5	16.3	13.9	12.4
EV/EBITDA (x) **	120.8	57.3	47.2	39.2	34.3
EV/EBITDA @ target price (x) **	100.0	47.4	39.0	32.5	28.4
EV/invested capital (x)	26.4	21.3	16.6	14.1	12.7

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

Sources: Delta Electronics; FSSIA estimates

Delta Electronics Thailand (DELTA TB)

FSSIA ESG rating

87.59 /100
Exhibit 9: 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 10: 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](https://www.settrade.com); FSSIA's compilation
Exhibit 11: ESG score by Bloomberg

FY ending Dec 31	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
ESG financial materiality scores - ESG score	3.90	3.63	3.92	4.13	4.06	4.24	4.03	4.15
BESG environmental pillar score	4.87	4.68	5.12	5.75	5.33	5.80	5.25	—
BESG social pillar score	2.72	2.72	2.72	2.72	2.72	2.72	2.72	—
BESG governance pillar score	3.91	3.27	3.71	3.65	3.90	3.94	3.91	—
ESG disclosure score	61.65	63.10	63.96	60.99	65.87	67.09	68.34	—
Environmental disclosure score	59.71	63.03	65.00	63.03	63.03	69.86	70.52	—
Social disclosure score	37.79	38.82	39.42	32.47	47.13	43.95	47.07	—
Governance disclosure score	87.36	87.36	87.36	87.36	87.36	87.36	87.36	—
Environmental								
Emissions reduction initiatives	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Climate change policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Climate change opportunities discussed	No	No	No	No	No	No	Yes	Yes
Risks of climate change discussed	No	No	No	No	No	No	Yes	Yes
GHG scope 1	0	0	0	0	0	1	1	1
GHG scope 2 location-based	40	41	40	39	42	40	51	60
GHG Scope 3	—	28	19	46	40	82	127	167
Carbon per unit of production	—	—	—	—	—	—	—	—
Biodiversity policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Energy efficiency policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total energy consumption	76	80	80	92	84	80	102	121
Renewable energy use	0	0	3	7	9	10	10	—
Electricity used	74	78	79	92	80	80	91	120
Fuel used - natural gas	—	—	—	—	—	196	233	—

Sources: Bloomberg; FSSIA's compilation

Exhibit 12: ESG score by Bloomberg (cont.)

FY ending Dec 31	FY 2015	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	No
Waste reduction policy	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hazardous waste	0	0	0	0	0	0	0	0
Total waste	2	2	2	2	3	6	8	9
Waste recycled	1	2	2	2	3	4	4	5
Waste sent to landfills	0	0	0	0	0	0	0	0
Environmental supply chain management	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Water policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Water consumption	—	—	—	—	—	434	445	536
Social								
Human rights policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Policy against child labor	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quality assurance and recall policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Consumer data protection policy	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Equal opportunity policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gender pay gap breakout	No	No	No	No	Yes	Yes	Yes	No
Pct women in workforce	84	80	75	71	71	65	69	—
Pct disabled in workforce	—	—	—	—	—	—	—	—
Business ethics policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Anti-bribery ethics policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Health and safety policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lost time incident rate - employees	—	—	—	—	0	—	0	0
Total recordable incident rate - employees	1	1	0	0	1	0	—	—
Training policy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fair remuneration policy	No	No	No	No	No	No	No	No
Number of employees – CSR	10,466	9,764	10,691	11,088	11,297	13,852	16,951	20,022
Employee turnover pct	13	11	—	—	7	6	7	3
Total hours spent by firm - employee training	131,464	96,865	115,161	128,431	168,455	678,748	1,017,000	1,561,720
Social supply chain management	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Governance								
Board size	9	8	8	9	9	9	9	9
No. of independent directors (ID)	4	3	3	4	4	4	4	4
No. of women on board	1	0	0	1	1	1	1	1
No. of non-executive directors on board	7	6	6	7	6	6	6	6
Company conducts board evaluations	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of board meetings for the year	5	5	6	6	6	5	5	6
Board meeting attendance pct	93	97	93	96	100	100	98	98
Board duration (years)	3	3	3	3	3	3	3	3
Director share ownership guidelines	No	No	No	No	No	No	No	No
Age of the youngest director	52	53	54	55	52	53	54	61
Age of the oldest director	72	71	72	73	73	73	74	75
No. of executives / company managers	5	5	5	5	5	3	4	4
No. of female executives	1	1	1	1	0	0	1	1
Executive share ownership guidelines	No	No	No	No	No	No	No	No
Size of audit committee	3	3	3	3	3	3	3	3
No. of ID on audit committee	3	3	3	3	3	3	3	3
Audit committee meetings	5	4	4	4	4	4	4	4
Audit meeting attendance %	100	90	92	100	100	100	100	100
Size of compensation committee	3	5	3	3	3	3	3	3
No. of ID on compensation committee	2	3	2	2	2	2	2	2
No. of compensation committee meetings	2	4	4	4	4	5	5	6
Compensation meeting attendance %	60	91	83	83	100	93	100	94
Size of nomination committee	3	5	3	3	3	3	3	3
No. of nomination committee meetings	2	4	4	4	4	5	5	6
Nomination meeting attendance %	60	91	83	83	100	93	100	94
Sustainability governance								
Verification type	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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 Sustainability	The Sustainability's 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+									
NEGL	Low	Medium	High	Severe																	
0-10	10-20	20-30	30-40	40+																	
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

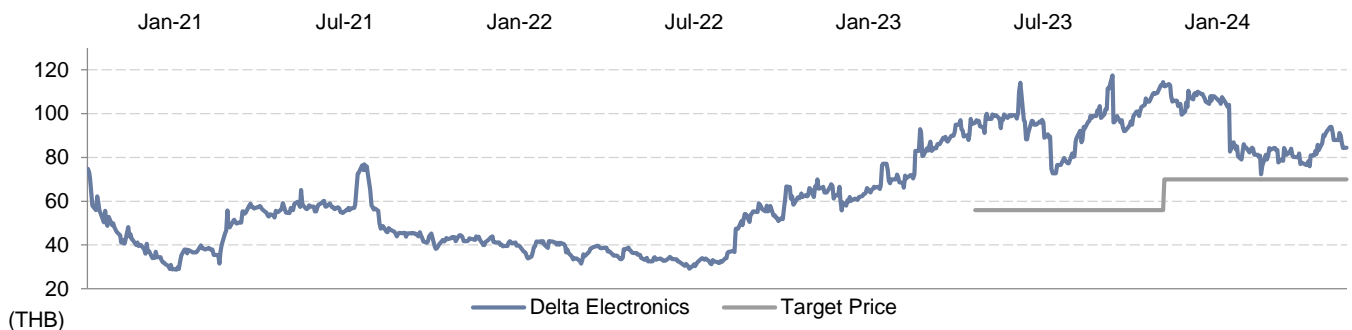
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History of change in investment rating and/or target price

Delta Electronics (DELTA TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
17-Feb-2023	REDUCE	56.00	02-Aug-2023	REDUCE	70.00	-	-	-

Sureeporn Teewasuwet started covering this stock from 17-Feb-2023

Price and TP are in local currency

Source: FSSIA estimates

KCE Electronics (KCE TB)



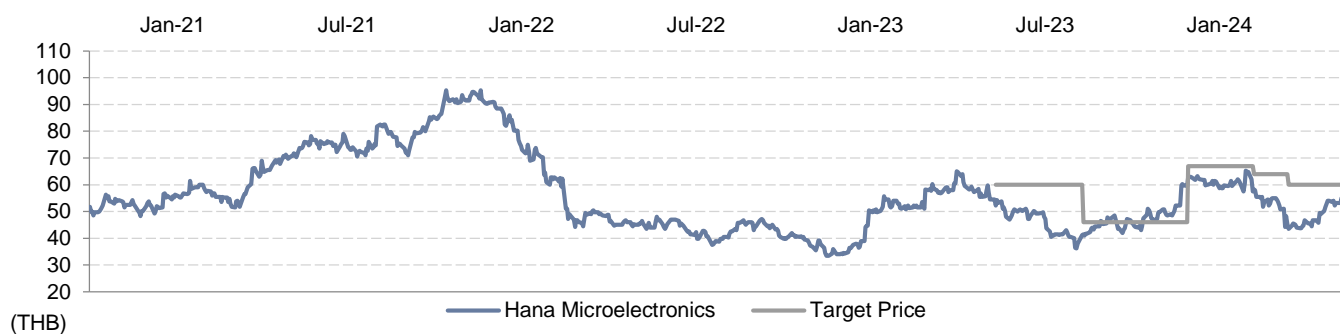
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
09-Feb-2023	HOLD	50.00	10-Aug-2023	BUY	52.00	-	-	-
16-May-2023	HOLD	35.50	16-Oct-2023	HOLD	60.00	-	-	-

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

Price and TP are in local currency

Source: FSSIA estimates

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			

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
Delta Electronics	DELTA TB	THB 84.50	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 52.25	HOLD	Downside and upside risks to our P/E-based TP include 1) sooner- or later-than-expected global economic and car sales recoveries; 2) higher- or lower-than-expected increase or decrease in raw material costs; 3) a stronger or weaker-than-expected increase or decrease in THB; and 4) a minimum wage increase or a labour shortage.
Hana Microelectronics	HANA TB	THB 51.75	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.

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 08-Jan-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.