Electronic Components

Close: 19/6/2024 SET ETRON Index +833.16 / +8.37% Bloomberg ticker: SETETRON

Bt7.042mn



Entering a growth cycle

We anticipate a modest QoQ improvement in 2Q24 with a strong recovery in 2H24 due to continued growth in global semiconductor sales and the Al-driven replacement cycle for smartphones and PCs, plus capacity expansion in the sector. We expect rising concern over the US-China tech war to benefit the Thai electronics sector given its good strategic location in SE Asia. KCE is our top pick in the sector for two reasons: 1) 2024 net profit is forecast to grow 32% (far above peers); and 2) its valuation is still discounted versus its 5-year historical average PE of 32.4x. We maintain Outperform on HANA and Neutral on DELTA.

Good outlook for electronic components in 2H24 despite several challenges. The Semiconductor Industry Association (SIA) expects semiconductor sales to achieve double-digit growth in 2024. IDC and Gartner forecast 17-20% growth in global semiconductor revenue in 2024 to US\$624bn. Backing the growth are recovery in the consumer electronics market and a booming AI industry, plus the Al-smartphone and AI-PC replacement cycle. We expect to see a steady increase in overall semiconductor demand in 2H24, good news for all electronics companies in the sector.

Smartphone market expected to resume growth in 2024. Canalys forecasts global smartphone shipment growth of 4%, and IDC expects 2.8% growth in 2024 after a decline of 4% in 2023. This growth will be spurred by the use of AI in smartphones, which will lead to a new upgrade cycle in 2H24. Given its consumer electronics-related portfolio, Thailand's electronics sector is poised to benefit.

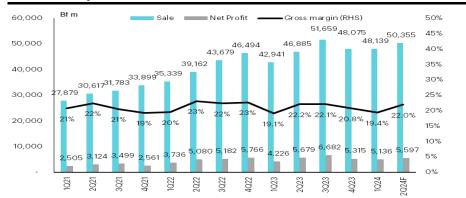
Global automotive sales continue modest growth, but price wars make EVs challenging in the short-term. Despite a dull macroeconomic backdrop and slower growth for EVs, both S&P Global Mobility and ING research forecast growth in 2024 global new car sales: the former at 2.8% and the latter at 2.6%. This will spur sales for automotive-related firms KCE (70% of total sales), DELTA (29%) and HANA (23%).

Thai electronics earnings to improve in 2Q24 and recover strongly in 2H24. Based on the improved outlook for smartphone shipments and global car sales in 2H24, we believe sector earnings will begin to improve in 2Q24 and then recover strongly in 2H24. Driving this growth will be strong demand from new Alsmartphones and the AI-PC replacement cycle, coupled with improved EV sales. Additionally, capacity expansions, such as DELTA's commercial startup of DELTA Plant 8, HANA's expansion in silicon carbide and RFID and KCE's greater highmargin product production, will support earnings momentum in 2H24.

Top picks. KCE (2025 TP Bt55.0) is our top pick in the sector in recognition of its: 1) strong profit growth with 2024 net profit to grow 32%, far above our projected growth of 3.4% for DELTA (Neutral, 2025 TP Bt83.0) and 11% for HANA (Outperform, TP Bt56.0); and 2) attractive valuation: KCE's valuation is discounted against its 5-year historical average PE ratio of 32.4x, currently trading at a PE of only 22.8x for 2024, which is close to its -1SD of its PE mean.

Key risks are changes in customer purchasing power, prolonged geopolitical unrest, resumption of the US-China tech war and exchange rate volatility. Key ESG risks are labor management and suppliers (S).

Revenue and profit trend for Electronic sector



Source: Company data and InnovestX Research

Valuation summary Price TP ETR P/E(x) P/BV(x) Rating (Bt) (Bt) (%) 24F 25F 24F 25F DELTA Neutral 87.5 83.0 (4.6) 57.3 49.9 13.5 11.3 Outperform 48.3 56.0 19.3 21.8 20.0 1.5 1.5 HANA KCE Outperform 43.8 55.0 27.5 22.8 21.3 3.4 3.1 34.030.4 6.1 5.3 Average

Source: InnovestX Research

Price performance												
		А	bsolute		Relative to SET							
(%)	1M	3M	12M	1M	3M	12M					
D	ELTA	15.5	31.1	(8.9)	22.1	38.1	7.5					
H	IANA	19.9	28.7	2.1	26.8	35.5	20.4					
K	CE	6.1	13.6	6.7	12.2	19.7	25.8					

Source: SET and InnovestX Research

Analyst

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Global semiconductor sales continue to grow YoY. The SIA reports an increase in global semiconductor sales in 1Q24 of 15.2% YoY to US\$137.7bn but a slip of 5.7% QoQ. The SIA also recently reported global semiconductor industry sales of US\$46.4bn in April, an increase of 15.8% YoY and 1.1% MoM, indicating positive market momentum, driven by Al-related application chips and memory demand. Sales in April increased YoY in the Americas (+32.4%), China (+23.4%), and Asia Pacific/all other (+11.1%) but fell in Europe (-7.0%) and Japan (-7.8%). MoM sales in April increased in the Americas (+4.2%), Japan (+2.4%) and China (+0.2%), but decreased in Asia Pacific/all other (-0.5%) and Europe (-0.8%).

World Semiconductor Trade Statistics has forecast 2024 growth of 13.1% for the global semiconductor market while the SIA expects semiconductor sales to achieve double-digit growth in 2024. International Data Corporation (IDC) and Gartner forecast global semiconductor revenue growth of 17-20% in 2024 to US\$624bn, underpinned by the recovery of the consumer electronics market and the booming Al industry.

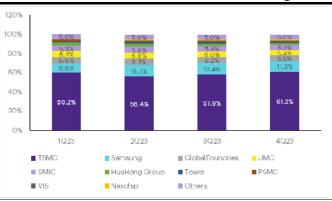
The upcycle for global semiconductor sales will benefit the Thai electronics sector as it increases demand for electronic components, especially for AI-related products.

Figure 1: Global semiconductor sales grew 15.2% YoY in March 2024



Source: Statista and InnovestX Research

Figure 2: Semiconductor foundries revenue share worldwide still dominate with TSMC and Samsung



Source: Statista and InnovestX Research

Smartphone market poised for growth in 2024. According to Canalys research, the worldwide smartphone market saw 10% YoY growth in 1Q24 to 296.2mn units, primarily fueled by vendors introducing new products plus macroeconomic stabilization in emerging market economies. In 1Q24, Samsung regained its lead position (20% market share), shipping 60.0mn units, buoyed by updates to its A-series and early premium offerings. Apple slipped to second rank (16%), shipping 48.7mn units, seeing a double-digit decline amid headwinds in its core markets. Xiaomi maintained third place with 40.7mn shipments and a 14% market share. TRANSSION and OPPO shipped 28.6mn and 25.0mn units respectively, market share of 10% and 8%. This is good news for the Thai electronics sector given its consumer electronics-related portfolio, such as HANA (8% of total sales).

Generative AI integration backing smartphone upgrade cycle. IDC defines "next-gen AI smartphones" as devices with a system-on-a-chip (SoC) capable of running on-device Generative AI (GenAI) models more quickly and efficiently. IDC's preliminary forecast implies shipment of 170mn next-gen AI smartphones in 2024, representing almost 15% of total smartphone shipments and a sizeable jump from the roughly 51mn shipped in 2023. Counterpoint Research also expects AI smartphones to reach 1bn units in 2027.



Figure 3: Global smartphone shipment forecasts

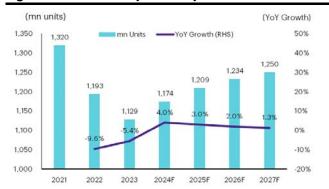


Figure 4: Global smartphone shipment on quarterly basis



Source: Canalys. and InnovestX Research

Source: Canalys estimates (Sell-in), April 2024, and InnovestX Research

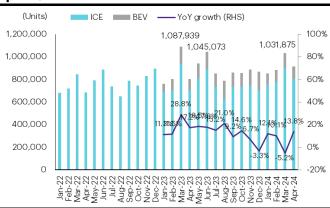
Global automotive sales still growing modestly. Despite a dull macroeconomic backdrop and slower growth for EVs, Markline reported the Global Light Vehicle selling rate stood at 86mn units/year in April 2024, up 3.8% YoY and 5.4% MoM (with YTD sales up 3.8%), backed by higher sales in the US and China. In the US, new car sales grew by 4.32% YoY to 1,470,510 units in May 2024. The China Association of Automobile Manufacturers (CAAM) announced an increase in vehicle sales in China of 10.6% YoY to 6.72mn units in 1Q24 driven by new Energy Vehicles - NEVs (BEVs, PHEVs, FCVs). In the EU, the EV car market grew by 13.7% YoY in April 2024, with new registrations of 913,995 units, driven by strong increases across all major markets. In 2024, both S&P Global Mobility and ING research forecast growth in global new car sales: the former at 2.8% and the latter at 2.6%.

This will benefit automotive-related electronic component makers KCE (70% of total sales), DELTA (29%) and HANA (23%).

Figure 5: US new car registrations rose 9% YoY in Jan 2024



Figure 6: EU new car registrations grew 13.8% YoY in April 2024



Source: The European Automobile Manufacturers' Association, and InnovestX Research

EV sales remain solid YoY but watch for a prolonged price war. In March 2024, global registrations of plug-in electric cars grew 19% YoY, indicating strong demand despite various challenges. According to EV-Volumes data, 1,314,687 new passenger plug-in electric cars were registered globally in March 2024, the third-highest monthly number ever recorded. Market share amounted to roughly 19% (compared to 16% last year).

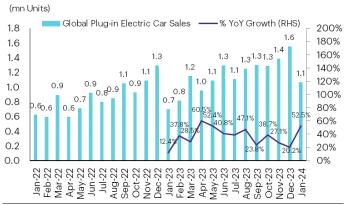
Despite the short-term concern over high interest rates and the EV price war, Bloomberg NEF forecasts global EV sales growth of 25-30% YoY in 2024. The China EV market is expected to lead with about 10mn EV sales (+31.6% YoY) in 2024. Europe is anticipated to see 3.9mn EV sales (+21.9% YoY) in 2024 and the US is expected to reach 2.2mn EV sales (+26.8% YoY) in 2024. BYD, the world's second-largest manufacturer of BEVs by market share, announced a 2024 sales target of 3.6mn units, a 20% YoY increase from the 3mn units sold in 2023.



A key factor to watch is a potential prolonged price war on new EV models that could lead buyers to delay purchases in hopes of lower prices later. We expect EV prices to decline in 2024 due to efforts by Contemporary Amperex Technology (CATL) and BYD to slash battery costs, hoping to cut battery prices by as much as 50% this year which means battery packs may cost half as much at end-2024 than at end-2023. In numbers, this means the cost of a 60-kWh battery could drop to US\$3,388 from US\$6,776 now by year's end, saving EV manufacturers over US\$3,000 per vehicle. The lower prices for batteries should translate to lower overall EV prices. Moreover, the recent news development that BYD and CATL reportedly aim to launch a new EV battery with a 6C (charge rate of six times in an hour) should help resolve the vehicle's pain point.

Figure 7: China new car registrations fell 20% YoY in Jan Figure 8: Global plug-in electric car sales still grew 52.5% 2024 on seasonality YoY in Jan 2024





Source: TradingEconomic, and InnovestX Research

Source: InsideEVs.com and InnovestX Research

Rising concern over the US-China tech war to benefit the Thai electronic sector. After US president Biden announced new tariffs on imports of electric vehicles, solar equipment, and batteries from China, we expect the ongoing trade tensions, notably the US-China trade war, to lead many multinational companies to diversify supply chains away from China. Based on US Bureau of Economic Analysis (BEA) data, US imports of electronic products from China was 40.7% of total US electronics imports, far above others, such as Mexico (8.7%), Vietnam (8.2%), South Korea (4.1%), Japan (3.9%) and Germany (3.8%). We note that Vietnam now has the fourth-highest trade surplus with the US, below China, Mexico, and the European Union.

A channel-check with Thai electronics companies indicates an expected positive impact on Thailand with a strong, established strategic location for manufacturing bases in SE Asia. This means Thailand is likely to be high on the list for electronics manufacturing base relocations.

Thus, the Thai electronics sector seems well positioned to benefit from this tension. We expect DELTA to benefit the most as it exports no EV-related products to China. Within its total revenue structure, DELTA exported 30% to the US but only 13% to China. This implies growth for exports to the US of DELTA's EV-related sales. We also expect KCE to benefit as 20% of its PCB sales are exported to the US, higher than sales to China (10% of total PCB sales). HANA's revenue from the US (24% of total sales) is higher than from China (12% of total PCB sales).

US\$ bn

2017

2018

US imports from Vietnam

■ Thailand imports from China

120

100

80

60

20

250

200

150

100

50



Figure 9: Volume of trade US, China, Vietnam, and **Thailand in 2017 to 2023**

114

2023

2022



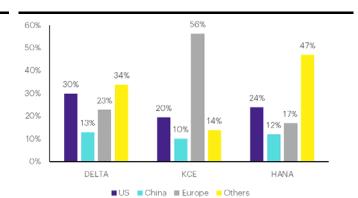


Figure 10: Revenue breakdown by location

Source: Vietnam Customs Office, US Census Bureau, Tradingeconomics, and InnovestX Research

2020

2021

■ Vietnam imports from China

2019

80⁸⁴

Source: Company data, and InnovestX Research

Thai May 2024 data suggest overall electronics demand remains weak. This is reflected in recently released data that shows a MoM decline in Thailand's PCB exports, with export value down to US\$656mn in April 2024 from US\$663mn in March 2024. Our study indicates PCB export value has a strong positive correlation with KCE's revenue (in US dollars) as KCE is a major exporter of PCBs, particularly for the automotive industry. However, we expect PCB demand to improve in 2H24 on the seasonality effect and positive sentiment about the potential cut of fed fund rate.

Figure 11: KCE's revenue vs Thai PCB export value

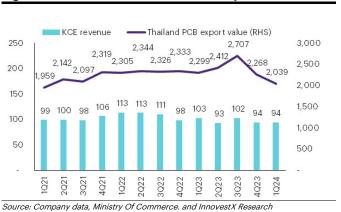
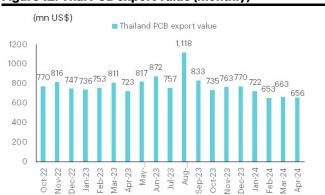


Figure 12: Thai PCB export value (monthly)



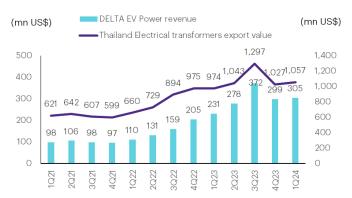
Source: Ministry Of Commerce, and InnovestX Research

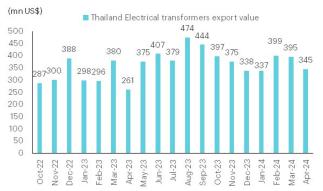
We also observe a slightly weaker MoM trend in the export value of electrical transformers, which were US\$345mn in April 2024. This suggests that contribution to DELTA's revenue from EV power products may be sluggish in 2Q24F. Based on our analysis, the export value of electrical transformers has a strong positive correlation with DELTA's exports of EV power products to Europe and the US. However, we expect the strong demand of Al-related products to offset the slowdown in EV power products.



Figure 13: DELTA's EV power revenue vs Thai electronic transformer export value







Source: Company data, Ministry of Commerce. and InnovestX Research

Source: Ministry of Commerce. and InnovestX Research

Expect Thai electronics earnings to gradually improve in 2Q24 and grow in 2H24. This expectation is based on good forecasts for semiconductor sales, global car sales and expected smartphone shipments in 2024. We believe sector earnings will improve starting in 3Q24, tagging the high season for demand, which will support sales growth, underwritten by strong demand for new Al smartphones and Al PCs. Contributing to the good earnings momentum will be capacity expansions by DELTA (commercial startup of DELTA Plant 8) and HANA (more silicon carbide machines) and the KCE (higher highmargin product, HDI production). We preliminarily forecast improved earnings for the three major electronics companies under coverage at 9.0% QoQ, led by earnings recovery for all electronics companies (DELTA +9.0% QoQ, HANA +13.6% QoQ and KCE +11.4% QoQ) but on a YoY basis, earnings are expected to decline 1.5% on weaker electronics demand, impacted by the high interest rate environment.

Figure 15: Revenue and earnings momentum for the Electronics sector

FY December 31	(Unit)	1Q23	2Q23	3Q23	4Q23	1Q24	2Q24F	%YoY	%QoQ
Electronic Sector									
Total revenue	(Btmn)	42,941	46,885	51,659	48,075	48,139	50,355	7.4%	4.6%
Gross Margin	(%)	19.1%	22.2%	22.1%	20.8%	19.4%	22.0%	-0.2%	2.6%
Net profit	(Btmn)	4,226	5,679	6,682	5,315	5,136	5,597	-1.5%	9.0%
DELTA									
Total revenue	(Btmn)	32,450	36,077	40,778	37,759	37,989	39,888	10.6%	5.0%
Gross Margin	(%)	21.2%	23.9%	23.2%	24.5%	21.0%	23.5%	-0.4%	2.5%
Net profit	(Btmn)	3,614	4,668	5,429	4,711	4,308	4,667	0.0%	8.3%
HANA									
Total revenue	(Btmn)	6,466	6,910	6,555	6,221	6,371	6,498	-6.0%	2.0%
Gross Margin	(%)	8.6%	15.0%	15.7%	5.7%	10.8%	11.0%	-4.0%	0.2%
Net profit	(Btmn)	266	635	734	125	313	356	-44.0%	13.6%
KCE									
Total revenue	(Btmn)	4,025	3,898	4,326	4,094	3,780	3,969	1.8%	5.0%
Gross Margin	(%)	19.6%	19.1%	22.0%	22.4%	23.1%	25.0%	5.9%	1.9%
Net profit	(Btmn)	345	376	520	478	515	574	52.7 %	11.4%

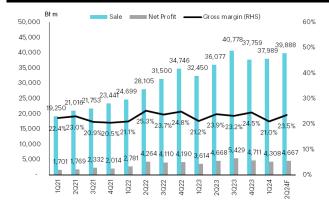
Source: Company data, InnovestX Research

Figure 16: Revenue and profit trend for Electronic sector



Source: Company data and InnovestX Research

Figure 17: Revenue and profit trend for DELTA



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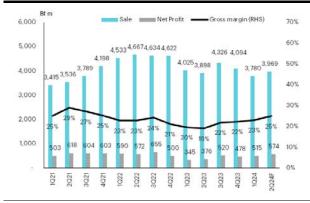
Source: Company data and InnovestX Research

Figure 18: Revenue and profit trend for HANA



Source: Company data and InnovestX Research

Figure 19: Revenue and profit trend for KCE



Source: Company data and InnovestX Research

Valuation & Recommendation. SETETRON (-1.0% YTD) has outperformed the SET index (-7.9% YTD) due to the positive sentiment brought by the strong share price performance of global technology companies, backed by the rapid adoption of generative AI technologies that has shoved up demand for advanced semiconductors and AI-related hardware. We believe the positive momentum will continue in 2H24, which is the sector's high season, aided by capacity additions as well as the benefit from the depreciation of the baht against the USD.

Top pick is KCE. KCE is our top pick in the sector. We expect its net profit to grow 32% (core profit +45%) in 2024, exceeding our projected net profit growth of 3.4% for DELTA and 11.0% for HANA. Behind the robust growth is recovery in demand for automotive-related products after inventories were depleted and backed by an effective cost-saving program. We expect revenue growth in 2H24 after signing new customers for high-margin multilayer PCB and HDI products and more cost savings that will increase overall gross margin. KCE expects revenue to rebound by 5% QoQ in 2Q24 and continue to grow in 3Q24 before a slight slowdown QoQ in 4Q24. It expects gross margin to widen 1-2% from 1Q24 to 24-25% in 2Q24, then peaking in 4Q24 as the full benefit from the efficiency improvements kicks in. Its overall gross margin target for 2024 is 25-27% (we assume 24%). Additionally, valuation is attractive, currently trading at a PE ratio of only 21.1x for 2024, which is -1SD below its 5-year PE mean of 32.6x. We have rolled over target price to 2025, which gives a new target price of Bt55.0 (from Bt52.0 previously) based on 27X PE or -0.5 SD of its 5-year historical PE mean.

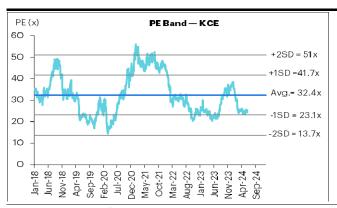
HANA. We expect 2Q24 earning momentum to gradually improve from smartphone-related (8% of total revenue) and RFID (13% of revenue) products, which are expected to be key growth drivers in 2H24 due to low inventory levels and strong demand from the AI smartphone replacement cycle and a boost in the RFID business following the signing of an agreement with Michelin (the world's largest tire manufacturer) that allows HANA to manufacture/sell RFID tire tags to other tire manufacturers. Another growth impetus will come from the upcoming expansion in silicon carbide (SiC) production capacity. HANA plans to ramp up its high energy implanted ignition (HEI) machines significantly, from just one machine in 4Q23 to five by 1Q25 (adding one machine per quarter). This expansion is expected to drive the SiC business to EBITDA breakeven within 2O25. We maintain our Outperform rating on HANA with a new 2O25 target price of Bt56.0 (from Bt42.0 previously) based on 23.4X of +0.5 SD of its 5-year historical PE mean.

DELTA. We expect 2Q24 earnings to improve QoQ on the back of a better product mix, better raw materials situation, the baht depreciation against the USD and no extraordinary expenses. We also note that DELTA Taiwan reported strong monthly sales in April of NT\$33.5bn, up 6.3% YoY, and May of NT\$35.1bn, up 2.6% YoY, indicating strong overall demand for power supply and smart and energy-saving Data Center infrastructure solutions, Al server power supplies and air and liquid cooling systems. We expect DELTA Thailand to also benefit from this new growth engine. EV power sales are expected to return to strong growth in 2H24 based on customer commitments, for which DELTA has prepared production capacity. Al-related products are expected to continue to grow, with Al sales as a percentage of total sales expected to rise to 10% this year from 3-5% last year. We believe DELTA Thailand is conducting R&D in collaboration with DELTA Taiwan. The proportion of Al-related sales is expected to be in line with the target of parent DELTA Taiwan, at ~10% this year and 20-25% next year. It is currently trading at a 2024 PE of 45.7x, which is close to its 5-year PE mean.



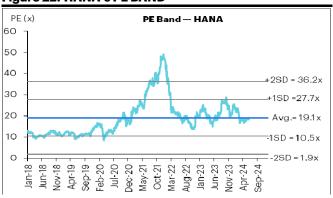
Therefore, we maintain our Neutral recommendation. We have rolled over target price to 2025, which gives a new target price of Bt83.0 (from Bt70.0 previously) based on its 5-year historical PE mean.

Figure 20: KCE's PE BAND



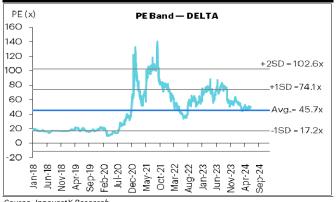
Source: InnovestX Research

Figure 22: HANA's PE BAND



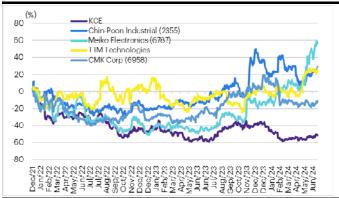
Source: InnovestX Research

Figure 24: DELTA's PE BAND



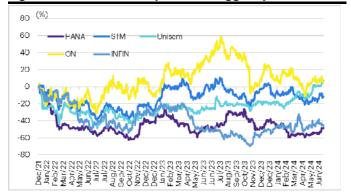
Source: InnovestX Research

Figure 21: KCE still laggard compared with Auto PCB peers



Source: Bloomberg, and InnovestX Research

Figure 23: HAHA's share price also laggard peers



Source: Bloomberg, InnovestX Research

Figure 25: DELTA's Share price underperformed peers in the past 3-4 months on weak earnings from EV-related.



Source: Bloomberg, InnovestX Research

Figure 26: Valuation summary (price as of Jun 19, 2024)

	Rating	Price	Target	ETR	P/E (x)		EPS growth (%)		P/BV (x)			ROE (%)			Div. Yield (%)			EV/EBITDA (x)			
		(Bt/Sh)	(Bt/Sh)	(%)	23A	24F 25F	23A	24F	25F	23A	24F	25F	23A	24F	25F	23A	24F	25F	23A	24F	25F
DELTA	Neutral	87.50	83.0	(4.6)	61.5	57.3 49.9	22	7	15	16.2	13.5	11.3	29	26	25	0.5	0.5	0.6	48.4	47.0	41.7
HANA	Outperform	48.25	56.0	19.3	19.5	21.8 20.0	(16)	(11)	9	1.4	1.5	1.5	8	7	7	2.1	3.2	3.5	13.9	12.6	12.0
KCE	Outperform	43.75	55.0	27.5	32.9	22.8 21.3	(31)	45	7	3.8	3.4	3.1	12	16	15	1.4	1.8	1.9	17.8	14.5	14.3
Average					38.0	34.030.4	(9)	14	10	7.1	6.1	5.3	16	16	16	1.3	1.8	2.0	26.7	24.7	22.7

Source: InnovestX Research



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CG Rating 2023 Companies with CG Rating

Companies with Excellent CG Scoring

7UP, AAV, ABM, ACE, ACG, ADB, ADD, ADVANC, AEONTS, AF, AGE, AH, AHC, AIRA, AIT, AJ, AKP, AKR, ALLA, ALT, AMA, AMARIN, AMATA, AMATAV, ANAN, AOT, AP, APCO, APCS, ARIP, ARROW, ASEFA, ASK, ASP, ASW, ATP30, AUCT, AWC, AYUD, B, BA, BAFS, BAM, BANPU, BAY, BBGI, BBIK, BBL, BC, BCH, BCP, BCPG, BDMS, BEC, BEM, BEYOND, BGC, BGRIM, BH, BIZ, BJC, BJCHI, BKI, BLA, BOL, BPP, BRI, BROOK, BRR, BTS, BTW, BWG, BYD, CBG, CENTEL, CFRESH, CHASE, CHEWA, CHG, CHOW, CIMBT, CIVIL, CK, CKP, CM, CNT, COLOR, COM7, COTTO, CPALL, CPAXT, CPF, CPI, CPL, CPN, CPW, CRC, CRD, CSC, CSS, CV, DCC, DDD, DELTA, DEMCO, DMT, DOHOME, DRT, DUSIT, EA, EASTW, ECF, ECL, EE, EGCO, EPR, ERW, ETC, ETE, FLOYO, FN, FPI, FPT, FSX, FVC, GBX, GC, GCAP, GENCO, GFPT, GGC, GLAND, GLOBAL, GPSC, GRAMMY, GULF, GUNKUL, HANA, HARN, HENG, HMPRO, HPT, HTC, ICC, ICHI, ICN, III, ILINK, ILM, IMH, IND, INET, INTUCH, IP, IRC, IRC, ITEL, IVL, JAS, JTS, KBANK, KCC, KCE, KEX, KKP, KSL, KTB, KTC, KTMS, KUMWEL, KUN, LALIN, LANNA, LH, LHFG, LIT, LOXLEY, LPN, LRH, LST, M, MAJOR, MALEE, MATCH, MBK, MC, M-CHAI, MCOT, MEGA, MFC, MFEC, MILL, MINT, MONO, MOONG, MSC, MST, MTC, MTI, NC, NCH, NCL, NDR, NER, NKI, NOBLE, NRF, NTV, NVD, NWR, NYT, OCC, OISHI¹, ONEE, OR, ORI, OSP, OTO, PAP, PATO, PB, PCSGH, PDG, PDJ, PG, PHOL, PIMO, PJW, PLANB, PLAT, PLUS, PM, POLY, PORT, PPP, PPS, PR9, PRG, PRINC, PRM, PRTR, PSH, PSL, PT, PTC, PTT, PTTEP, PTTGC, Q-CON, QH, QTC, RATCH, RBF, RPH, RS, RT, S, S&J, SA, SABINA, SAK, SAMART, SAMTEL, SAPPE, SAT, SBNEXT, SC, SCB, SCC, SCCC, SCG, SCGP, SCM, SDC, SEAFCO, SEAOIL, SECURE, SELIC, SENA, SENX, SFP², SFT, SGC, SGF, SGP, SHR, SICT, SIRI, SIS, SITHAI, SJWD, SKR, SM, SMPC, SMT, SNC, SNNP, SNP, SO, PSPALI, SPC, SPCG, SPI, SPRC, SR, SSC, SSF, SSSC, STA, STC, STC, STGT, STI, SUC, SUN, SUSCO, SUTHAA, SVI, SVT, SYMC, SYNEX, SMT, TNDT, TNITY, TNL, TNR, TOA, TOG, TOP, TPBI, TPCS, TPIPL, TPIPP, TPS, TQM, TQR, TRT, TRUE, TRV, TSC, TSTE, TSTH, TTA, TTB, TTCL, TTVH, TUHP, TWPC, UAC, UBE, UBIS, UKEM, UP, UPF, UPOIC, UV, VCOM, VGI, VIBHA, VII, VL, WACOAL, WGE, WHA, WHAUP, WICE, WIN

Companies with Very Good CG Scoring

2S, A5, AAI, AIE, ALUCON, AMR, APURE, ARIN, AS, ASIA, ASIAN, ASIMAR, ASN, AURA, BR, BSBM, BTG, CEN, CGH, CH, CHIC, CI, CIG, CMC, COMAN, CSP, DOD, DPAINT, DV8, EFORL, EKH, ESSO, ESTAR, EVER, FORTH, FSMART, FTI, GEL, GPI, HEALTH, HUMAN, IFS, INSET, IT, J, JCKH, JDF, JKN, JMART, JUBILE, K, KCAR, KGI, KIAT, KISS, KK, KTIS, KWC, KWM, LDC, LEO, LHK, MACO, METCO, MICRO, MK, MVP, NCAP, NOVA, NTSC, PACO, PIN, PQS, PREB, PRI, PRIME, PROEN, PROS, PROUD, PSTC, PTECH, PYLON, RCL, SALEE, SANKO, SCI, SCN, SE, SE-ED, SFLEX, SINGER, SKN, SONIC, SORKON, SPVI, SSP, SST, STANLY, STP, SUPER, SVOA, SWC, TCC, TEKA, TFM, TMILL, TNP, TPLAS, TPOLY, TRC, TRU, TRUBB, TSE, VRANDA, WAVE. WFX. WIIK. WIN. WP. XO

Companies with Good CG Scoring

24CS, AMANAH, AMARC, AMC, APP, ASAP, BCT, BE8, BIG, BIOTEC, BLESS, BSM, BVG, CAZ, CCET, CHARAN, CHAYO, CHOTI, CITY, CMAN, CMR, CRANE, CWT, DHOUSE, DTCENT, EASON, FNS, FTE, GIFT, GJS, GTB, GTV, GYT, HL, HTECH, HYDRO, IIG, INGRS, INSURE, IRCP, ITD, ITNS, JCK, JMT, JR, JSP, KBS, KGEN, KJL, L&E, LEE, MASTER, MBAX, MEB, MENA, META, MGT, MITSIB, MJD, MOSHI, MUD, NATION, NNCL, NPK, NSL, NV, OGC, PAF, PCC, PEACE, PICO, PK, PL, PLANET, PLE, PMTA, PPM, PRAKIT, PRAPAT, PRECHA, PRIN, PSG, RABBIT, READY, RJH, RSP, RWI, S11, SAAM, SAF, SAMCO, SAWAD, SCAP, SCP, SIAM, SKE, SKY, SMART, SMD, SMIT, SOLAR, SPA, STECH, STPI, SVR, TC, TCCC3, TEAM, TFI, TIGER, TITLE, TKC, TMI, TNH, TPA, TPAC, TRITN, UBA, UMI, UMS, UTP, VARO, VPO, W, WARRIX, WORK, WPH, YONG, ZIGA

Corporate Governance Report

The material contained in this publication is for general information only and is not intended as advice on any of the matters discussed herein. Readers and others should perform their own independent analysis as to the accuracy or completeness or legality of such information. The Thai Institute of Directors, its officers, the authors and editor make no representation or warranty as to the accuracy, completeness or legality of any of the information contained herein. By accepting this document, each recipient agrees that the Thai Institute of Directors Association, its officers, the authors and editor shall not have any liability for any information contained in, or for any omission from, this publication.

The survey result is as of the date appearing in the Corporate Governance Report of Thai Listed Companies. As a result, the survey result may be changed after that date. InnovestX

Securities Company Limited does not conform nor certify the accuracy of such survey result.

To recognize well performers, the list of companies attaining "Good", "Very Good" and "Excellent" levels of recognition (Not including listed companies qualified in the "no

announcement of the results" clause from 1 January 2022 to 31 October 2023) is publicized.

¹OISHI was voluntarily delisted from the Stock Exchange of Thailand, effectively on September 6, 2023

²SFP was voluntarily delisted from the Stock Exchange of Thailand, effectively on July 19, 2023

³TCCC was voluntarily delisted from the Stock Exchange of Thailand effectively on August 25, 2023

Anti-corruption Progress Indicator

Certified (ໄດ້ຮັບการรับรอง)

2S, AAI, ADVANC, AE, AF, AH, AI, AIE, AIRA, AJ, AKP, AMA, AMANAH, AMATA, AMATAV, AP, APCS, AS, ASIAN, ASK, ASP, AWC, AYUD, B, BAFS, BAM, BANPU, BAY, BBGI, BBL, BCH, BCP, BCPG, BE8, BEC, BEYOND, BGC, BGRIM, BLA, BPP, BRR, BSBM, BTC, BTS, BWG, CEN, CENTEL, CFRESH, CGH, CHEWA, CHOTI, CHOW, CIG, CIMBT, CM, CMC, COM7, CPALL, CPAXT, CPF, CPI, CPL, CPN, CPW, CRC, CSC, DCC, DELTA, DEMCO, DIMET, DOHOME, DRT, DUSIT, EA, EASTW, ECF, EGCO, EP, EPG, ERW, ESTAR, ETC, ETE, FNS, FPI, FPT, FSMART, FTE, GBX, GC, GCAP, GEL, GFPT, GGC, GJS, GPI, GPSC, GSTEEL, GULF, GUNKUL, HANA, HARN, HENG, HMPRO, HTC, ICC, ICHI, IFS, III, ILINK, ILM, INET, INOX, INSURE, INTUCH, IRPC, ITEL, IVL, JAS, JKN, JR, JTS, KASET, KBANK, KBS, KCAR, KCCAMC, KCE, KGEN, KGI, KKP, KSL, KTB, KTC, L&E, LANNA, LHFG, LHK, LPN, LRH, M, MAJOR, MALEE, MATCH, MBAX, MBK, MC, MCOT, META, MFC, MFEC, MILL, MINT, MONO, MOONG, MSC, MST, MTC, MTI, NATION, NCAP, NEP, NKI, NOBLE, NRF, NWR, OCC, OGC, OR, ORI, PAP, PATO, PB, PCSGH, PDG, PDJ, PG, PHOL, PIMO, PK, PL, PLANB, PLANET, PLAT, PM, PPP, PPPM, PPS, PR9, PREB, PRG, PRINC, PRM, PROS, PSH, PSL, PSTC, PT, PTECH, PTG, PTT, PTTEP, PTTGC, PYLON, Q-CON, QH, QLT, QTC, RABBIT, RATCH, RML, RS, RWI, S&J, SAAM, SABINA, SAK, SAPPE, SAT, SC, SCCC, SCG, SCGP, SCM, SCN, SEAOIL, SE-ED, SELIC, SENA, SGC, SGP, SIRI, SITHAI, SKR, SMIT, SMK, SMPC, SNC, SNP, SORKON, SPACK, SPALI, SPC, SPI, SPRC, SRICHA, SSF, SSP, SSSC, SST, STA, STGT, STOWER, SUSCO, SVI, SYMC, SYNTEC, TAE, TAKUNI, TASCO, TCAP, TCMC, TFG, TFI, TFMAMA, TGE, TGH, THANI, THCOM, THIP, THRE, THREL, TIDLOR, TIPCO, TISCO, TKS, TKT, TMD, TMILL, TMT, TNITY, TNL, TNP, TNR, TOG, TOP, TOPP, TPA, TECS, TRT, TRU, TSC, TSI, TSTE, TSTH, TTA, TTB, TTCL, TU, TVDH, TVO, TWPC, UBE, UBIS, UEC, UKEM, UOBKH, UV, VCOM, VGI, VIH, WACOAL, WHA, WHAUP, WICE, WIIK, XO, YUASA, ZEN, ZEN, ZIGA

Declared (ประกาศเจตนารมณ์)

ACE, ADB, ALT, AMC, ASW, BLAND, BTG, BYD, CAZ, CBG, CV, DEXON, DMT, EKH, FSX, GLOBAL, GREEN, ICN, IHL, ITC, J, JMART, JMT, LEO, LH, MENA, MITSIB, MODERN, NER, NEX, OSP, PEER, PLUS, POLY, PQS, PRIME, PROEN, PRTR, RBF, RT, SA, SANKO, SCB, SENX, SFLEX, SIS, SKE, SM, SVOA, TBN, TEGH, TIPH, TKN, TPAC, TPLAS, TQM, TRUE, W, WPH, XPG

N/A

24CS, 3K-BAT, A, A5, AAV, ABM, ACAP, ACC, ACG, ADD, ADVICE, AEONTS, AFC, AGE, AHC, AIT, AJA, AKR, AKS, ALL, ALLA, ALPHAX, ALUCON, AMARC, AMARIN, AMR, ANAN, ANI, AOT, APCO, APEX, APO, APP, APURE, AQUA, ARIN, ARIP, ARROW, ASAP, ASEA, ASIA, ASIMAR, ASN, ATP30, AU, AUCT, AURA, B52, BA, BBIK, BC, BCT, BDMS, BEAUTY, BEM, BGT, BH, BIG, BIOTEC, BIS, BIZ, BJC, BJCHI, BKD, BKGI, BKIH, BLC, BLESS, BLISS, BM, BOL, BPS, BR, BRI, BROCK, BSM, BSRC, BTNC, BTW, BUI, BVG, CCET, CCP, CEYE, CFARM, CGD, CH, CHARAN, CHASE, CHAYO, CHG, CHIC, CHO, CI, CITY, CIVIL, CK, CKP, CMAN, CMO, CMR, CNT, COCOCO, COLOR, COMAN, CPANEL, CPH, CPR, CPT, CRANE, CRD, CREDIT, CSP, CSR, CSS, CTW, CWT, D. DCON, DDD, DHOUSE, DITTO, DOD, DPAINT, DTCENT, DTCI, DV8, EASON, ECL, EE, EFORL, EMC, ETL, EURO, EVER, F&D, FANCY, FE, FLOYD, FMT, FN, FORTH, FTI, FVC, GABLE, GENCO, GFC, GIFT, GL, GLAND, GLOCON, GLORY, GRAMMY, GRAND, GSC, GTB, GTV, GYT, HEALTH, HFT, HL, HPT, HTECH, HUMAN, HYDRO, 12, IFEC, IIG, IMH, IND, INGRS, INSET, IP, IRC, IRCP, IT, ITD, ITNS, ITTHI, JAK, JCK, JCKH, JCT, JDF, JPARK, JSP, JUBILE, K, KAMART, KC, KCG, KCM, KDH, KEX, KIAT, KISS, KJL, KK, KKC, KLINIQ, KOOL, KTIS, KTMS, KUMWEL, KUN, KWC, KWI, KWM, KYE, LALIN, LDC, LEE, LIT, LOXLEY, LPH, LST, LTS, MAGURO, MANRIN, MASTER, MATI, MCA, M-CHAI, MCS, MDX, MEB, MEGA, METCO, MGC, MGI, MGT, MICRO, MIDA, MJD, MK, ML, MORE, MOSHI, MTW, MUD, MVP, NAM, NAT, NC, NCH, NCL, NDR, NEO, NETBAY, NEW, NEWS, NFC, NL, NNCL, NOK, NOVA, NPK, NSL, NTSC, NTV, NUSA, NV, NVD, NYT, OHTL, ONEE, ORN, PACO, PAF, PANEL, PCC, PEACE, PERM, PF, PHG, PICO, PIN, PJW, PLE, PLT, PMTA, POLAR, PORT, POST, PPM, PRAKIT, PRAPAT, PRECHA, PRI, PRIN, PRO, PROUD, PSG, PSP, PTC, PTL, QTCG, RAM, RCL, READY, RICHY, RJH, ROCK, ROCTEC, ROH, ROJNA, RP, RPC, RPH, RSP, S, S11, SABUY, SAF, SAFARI, SAFE, SALEE, SAM, SAMART, SAMCO, SAMTEL, SAUCE, SAV, SAWAD, SAWANG, SBNEXT, SCAP, SCGD, SCI, SCL, SCP, SDC, SE, SEAFCO, SECURE, SFT, SGF, SHANG, SHR, SIAM, SICT, SIMAT, SINGER, SINO, SISB, SJWD, SK, SKN, SKY, SLM, SLP, SMART, SMD, SMT, SNNP, SO, SOLAR, SONIC, SPA, SPCG, SPG, SPREME, SPVI, SQ, SR, SRS, SSC, STANLY, STARK, STC, STEC, STECH, STHAI, STI, STP, STPI, STX, SUC, SUN, SUPER, SUTHA, SVR, SVT, SWC, SYNEX, TACC, TAN, TAPAC, TC, TCC, TCJ, TCOAT, TEAM, TEAMG, TEKA, TERA, TFM, TGPRO, TH, THAI, THANA, THE, THG, THMUI, TIGER, TITLE, TK, TKC, TLI, TM, TMC, TMI, TMW, TNDT, TNH, TNPC, TOA, TPBI, TPCH, TPIPP, TPL, TPOLY, TPP, TPS, TQR, TR, TRC, TRITN, TRP, TRUBB, TRV, TSE, TTI, TTT, TTW, TURTLE, TVH, TVT, TWP, TWZ, TYCN, UAC, UBA, UMI, UMS, UNIQ, UP, UPF, UPOIC, UREKA, UTP, UVAN, VARO, VIBHA, VL, VNG, VPO, VRANDA, WARRIX, WAVE, WELL, WFX, WGE, WIN, WINDOW, WINMED, WINNER, WORK, WORLD, WP, YGG, YONG, ZAA

Explanations

Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of November 1, 2023) are categorised into: companies that have declared their intention to join CAC, and companies certified by CAC.