# **Petrochemicals**

Close: 20/2/2024 SET Petro Index 697.59 -3.84 / -0.55% Bt507mn

Bloomberg ticker: SETPETRO



# Upward price adjustment lifts spread

Stable naphtha cost and upward revision of product price lifted petrochemical product spread by 2-4% WoW, led by PX (+4% WoW) amidst a quiet market during the Spring Festival holiday. The price increase reflects higher feedstock cost but will take place at a gradual pace due to concerns on supply gluts and demand uncertainties. The main thing to watch is the effect of China's moves to prop up its property sector, including the effect of the biggest ever reduction in the benchmark mortgage rate (Reuters). We believe more positive sentiment in the property market could then beef up demand for petrochemical products. We recommend investors to stay cautious.

Average PE/PP spread crept up WoW as product prices were revised up. Average PE/PP spread edged up 1% WoW to US\$340/t, led by HDPE and PP, but still weaker than the 12MMA of US\$360/t and breakeven spread of US\$350/t. PE and PP prices were adjusted up 1% WoW to reflect higher naphtha cost in previous weeks. The slow price adjustment highlights market caution on the demand-supply imbalance for these products, although some global producers have become more positive on the outlook in 2024 due to market stabilization in 1024.

PX spread up WoW on tighter supply. PX price moved up 2% WoW to US\$1,105/t in the past week, reflecting lower supply due to planned regional plant turnarounds, including Saudi Arabia's Rabigh (1.34mtpa) and Reliance (2.25mtpa), which have been closed since mid-Jan (CCF). This boosted PX spread to US\$410/t (+4% WoW), still below the 12MMA of US\$454/t. This coincided with planned maintenance of PTA plants (demand for PX) in China, reducing the impact of lower PX supply in the period. Benzene spread was steady WoW at US\$350/t, still much higher than the 12MMA of US\$261/t, although the impact of supply loss in the US persists.

Integrated PET spread down WoW on higher PX and PTA prices. Integrated PET spread sank 10% WoW to US\$105/t after reaching an 8-week high last week, eroded by higher PX and PTA prices (+2% WoW each) while price of PET bottle chips was steady at US\$930/t amidst quiet trading during the long Spring Festival holiday. Demand is expected to pick up when normal production of downstream packaging resumes this week to replenish inventory ahead of the summer high season. A positive sign was seen in Europe with integrated PET spread widening US\$143/t MoM in Jan 2024 to US\$467/t. The gap between Asia and EMEA's spread expanded from US\$182/t in 4Q23 to US\$337/t in Jan 2024, a reflection of the disruption to logistics caused by the Red Sea crisis.

Valua	tion sumn	narı	J				
	Rating				P/E (x) 23F 24F		
GGC	Underperform	8.4	10.0	20.2	n.m. 17.9	0.9	0.8
IVL	Neutral	23.5	35.0	50.2	49.0 10.3	0.7	0.7
PTTGC	Neutral	37.3	50.0	36.9	n.m. 13.7	0.6	0.6
Average					49.014.0	0.7	0.7

Source: InnovestX Research

Price p	perfor	man	се								
	Al	Absolute Relative to S									
(%)	1M	3M	12M	1M	3M	12M					
GGC	(5.6)	(8.2)	(36.4)	(5.5)	(5.4)	(23.1)					
VL	(0.4)	(12.1)	(40.1)	(0.3)	(9.4)	(27.7)					
PTTGC	8.0	(3.2)	(23.6)	8.1	(0.3)	(7.7)					

Source: SET and InnovestX Research



#### Analyst

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Key product prices and spread

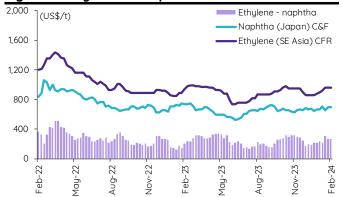
(US\$/t)	Current 16-Feb-24	-1W	-1M	-3M	-6M	-12M	1Q24 QTD	4Q23	QoQ%	2024 YTD	YoY%	12MMA
Naphtha (Japan) C&F	695	0%	5%	11%	8%	-6%	672	657	2%	672	-5%	650
Ethylene (SE Asia) CFR	955	0%	7%	1%	10%	2%	915	919	0%	915	4%	891
Propylene (SE Asia) CFR	880	-4%	-7%	9%	2%	-12%	924	806	15%	924	-1%	854
HDPE (SE Asia Film) CFR	1,030	1%	2%	5%	0%	-6%	1,013	1,001	1%	1,013	-4%	1,028
LDPE (SE Asia Film) CFR	1,110	0%	5%	11%	8%	-5%	1,074	1,019	5%	1,074	-6%	1,042
LLDPE (SE Asia Film) CFR	1,010	1%	1%	5%	0%	-7%	1,000	975	3%	1,000	-6%	1,005
PP (SE Asia Inj) CFR	990	1%	2%	6%	2%	-11%	971	947	3%	971	-8%	979
Related stocks	PTTGC (+)	SCC (+)	IRPC (+)									
Paraxylene (FOB)	1,105	2%	0%	2%	0%	0%	1,095	1,083	1%	1,095	-1%	1,103
Benzene (FOB Korea Spot)	1,045	0%	9%	16%	15%	10%	982	894	10%	982	5%	908
Related stocks	PTTGC (+)	TOP (+)										
MEG (SE Asia) CFR	555	0%	2%	11%	18%	6%	552	493	12%	552	4%	503
PTA (SE Asia) CFR	800	2%	1%	3%	1%	1%	788	776	2%	788	-2%	799
PET Bottle (NE Asia) FOB	930	0%	1%	2%	0%	-5%	923	904	2%	923	-5%	943
Related stocks	PTTGC (-)	IVL (-)										
ABS (SE Asia) CFR	1,340	2%	3%	2%	1%	-8%	1,311	1,331	-1%	1,311	-7%	1,347
PS GPPS (SE Asia) CFR	1,270	2%	3%	0%	6%	-4%	1,240	1,254	-1%	1,240	-5%	1,242
Related stocks	IRPC (+)											
PVC (SE Asia) CFR	790	0%	5%	3%	-13%	-14%	773	786	-2%	773	-14%	828
Related stocks	SCC (=)	PTTGC (=)										
Spread												
Ethylene - naphtha	260	-1%	13%	-19%	19%	29%	243	263	-7%	243	44%	241
Propylene - naphtha	185	-19%	-34%	1%	-13%	-28%	252	150	69%	252	10%	204
HDPE - naphtha	335	2%	-3%	-5%	-13%	-7%	341	344	-1%	341	-1%	379
LDPE - naphtha	415	-1%	5%	11%	8%	-4%	402	363	11%	402	-9%	392
LDPE - Ethylene	155	0%	-6%	182%	-6%	-33%	159	100	59%	159	-41%	151
LLDPE - naphtha	315	2%	-6%	-6%	-13%	-11%	328	319	3%	328	-7%	355
PP - naphtha	295	2%	-4%	-3%	-9%	-21%	299	290	3%	299	-14%	329
PX - naphtha	410	4%	-6%	-11%	-12%	12%	423	426	-1%	423	7%	453
BZ - naphtha	350	0%	20%	28%	33%	65%	310	238	31%	310	34%	258
MEG - Ethylene	-37	n.a.	n.a.	n.a.	n.a.	n.a.	-15	-76	n.a.	-15	n.a.	-49
PTA - PX	60	3%	13%	12%	29%	20%	54	50	8%	54	-13%	60
PET spread	53	-19%	-4%	-23%	-41%	-56%	58	69	-16%	58	-46%	85
ABS spread	720	3%	-2%	-10%	-13%	-18%	731	804	-9%	731	-16%	821
PS spread	168	11%	-22%	-41%	-27%	-44%	199	281	-29%	199	-34%	266
PVC - ethylene	286	0%	8%	-6%	-43%	-39%	281	315	-11%	281	-40%	372

urce: Industry data, Bloomberg Finance L.P. and InnovestX Research

Note: The impact on related stocks is based on WoW change.

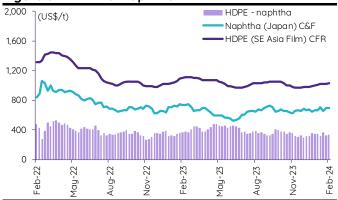






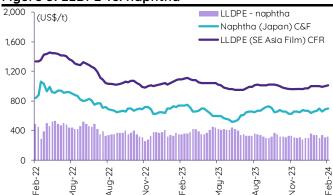
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

Figure 3: HDPE vs. naphtha



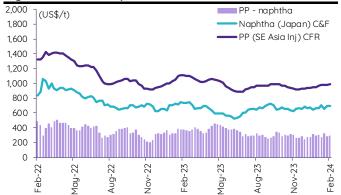
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

Figure 5: LLDPE vs. naphtha



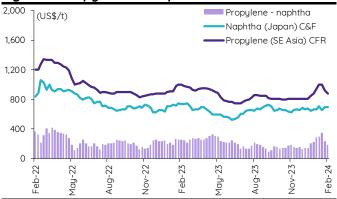
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

Figure 7: PP vs. naphtha



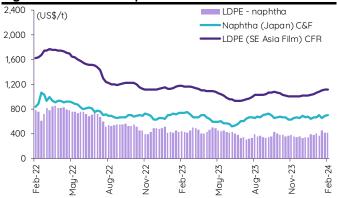
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

Figure 2: Propylene vs. naphtha



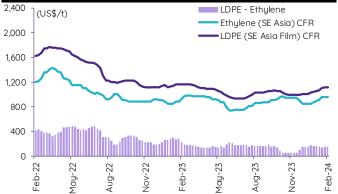
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

Figure 4: LDPE vs. naphtha



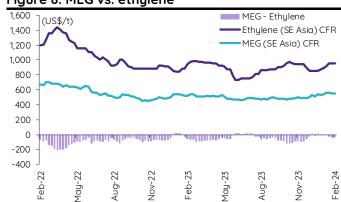
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

Figure 6: LDPE vs. ethylene



Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

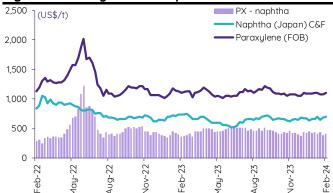
Figure 8: MEG vs. ethylene



Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

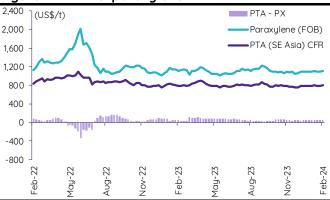






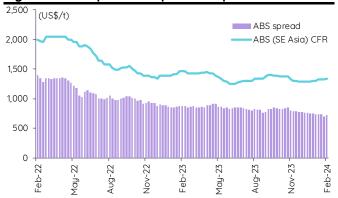
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

# Figure 11: PTA vs. paraxylene



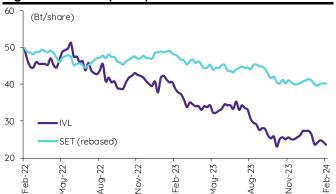
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

# Figure 13: ABS price and product spread



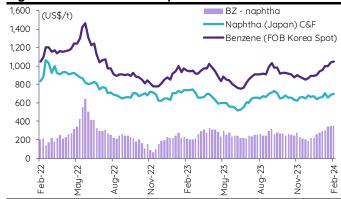
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

Figure 15: Share price performance - IVL



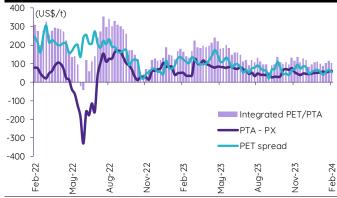
Source: Bloomberg Finance L.P. and InnovestX Research

# Figure 10: Benzene vs. naphtha



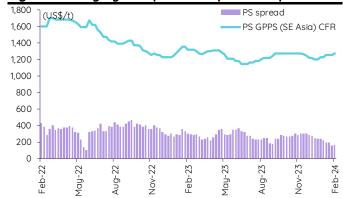
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

## Figure 12: Integrated PET spread



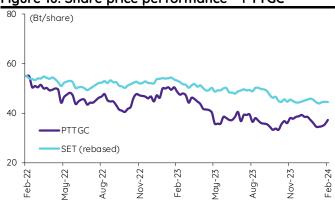
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

# Figure 14: Polystyrene price and product spread



Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

# Figure 16: Share price performance - PTTGC



Source: Bloomberg Finance L.P. and InnovestX Research





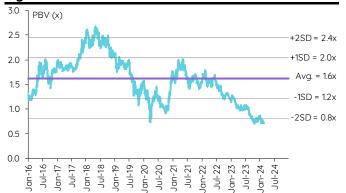
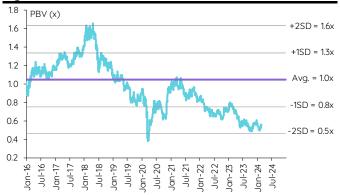


Figure 18: PBV band - PTTGC



Source: InnovestX Research

Figure 19: Product spread - heat map

Product	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24	Product
HDPE	362	497	518	607	583	576	462	505	421	445	368	336	373	436	361	344	341	HDPE
LDPE	430	577	601	831	968	917	740	880	741	782	600	472	446	437	343	363	402	LDPE
LLDPE	357	485	471	565	581	583	510	557	445	477	389	344	369	408	337	319	328	LLDPE
PP	464	560	525	653	754	695	547	550	428	432	352	291	359	393	295	290	299	PP
PX	294	196	122	149	226	312	274	179	286	635	501	468	401	484	490	426	423	PX
BZ	170	100	31	107	188	352	324	198	200	357	272	157	238	270	256	238	310	BZ
PS	372	459	411	574	511	498	450	472	395	305	392	365	285	306	239	281	199	PS
ABS	976	992	1,222	1,571	1,925	1,976	1,760	1,785	1,366	1,231	1,024	945	863	863	816	804	731	ABS
PET	146	175	129	132	145	149	118	217	203	201	200	69	109	117	66	69	58	PET
Int PET	198	279	213	208	241	224	209	321	269	172	257	113	166	190	106	112	58	Int PET
PVC	454	445	465	543	619	710	548	629	472	579	446	412	453	354	453	315	281	PVC

Source: InnovestX Research

Source: InnovestX Research

Figure 20: Valuation summary (price as of Feb 20, 2024)

	Rating	Price	Target	ETR	P/E (x)	EPS growth (%)		P/BV (x)	ROE (%)	Div. Yield (%)			EV/EBITDA (x)			
		(Bt/Sh)	(Bt/Sh)	(%)	22A 23F 24F	22A	23F	24F	22A 23F 24F	22A 23F 24F	22A	23F	24F	22A	23F	24F
GGC	Underperform	8.40	10.0	20.2	8.6 n.m. 17.9	30	n.m.	n.m.	0.8 0.9 0.8	10 (2) 5	6.0	1.2	2.9	3.9	13.8	5.8
IVL	Neutral	23.50	35.0	50.2	3.4 49.0 10.3	44	(93)	377	0.7 0.7 0.7	22 1 7	6.8	1.3	3.0	4.2	7.1	5.0
PTTGC	Neutral	37.25	50.0	36.9	12.2 n.m. 13.7	(57)	n.m.	n.m.	0.6 0.6 0.6	4 (1) 4	2.7	2.7	3.8	8.9	9.7	7.4
Average					8.1 49.0 14.0	6	(93)	377	0.7 0.7 0.7	12 (1) 5	5.1	1.7	3.2	5.7	10.2	6.1

Source: InnovestX Research

Figure 21: Regional peer comparison

Company	PE (x)			EPS (	Growth	(%)	Р	BV (x)		R	OE (%)		Div.	Yield (%	5)	EV/E	BITDA (	x)
	23F	24F	25F	23F	24F	25F	23F	24F	25F	23F	24F	25F	23F	24F	25F	23F	24F	25F
Sinopec Shanghai Petrochem	115.0	25.1	15.1	109.1	358.3	66.4	1.1	1.1	1.0	0.9	4.5	6.4	n.a	1.8	4.5	10.6	6.5	5.2
China Petroleum & Chemical	10.6	9.6	9.1	7.1	11.2	5.5	0.9	0.9	0.9	8.7	9.3	9.3	6.2	6.3	6.3	5.1	4.7	4.4
PetroChina Co Ltd	6.0	6.0	6.4	10.1	(0.2)	(6.3)	0.7	0.6	0.6	11.5	10.4	9.1	8.2	7.8	7.3	3.9	3.9	3.9
Reliance Industries Ltd	n.m.	24.8	22.1	n.m.	n.m.	12.2	2.3	2.2	2.0	8.7	9.4	9.7	0.3	0.3	0.4	14.5	12.8	11.5
Mitsui Chemicals Inc	11.1	9.3	7.6	(21.5)	18.8	23.2	0.9	0.9	0.8	9.0	10.3	11.5	3.3	3.6	3.9	7.5	6.7	5.8
Asahi Kasei Corp	31.2	13.0	11.3	266.7	140.8	14.5	0.8	0.8	0.8	5.0	6.3	7.0	3.4	3.4	3.5	7.6	6.8	6.3
Sumitomo Chemical Co Ltd	n.m	127.8	7.6	(326.3)	103.9	1,572.0	0.5	0.5	0.5	n.m.	0.7	6.4	4.0	3.7	4.3	n.a.	n.a.	7.6
Lotte Chemical Corp	545.5	30.2	10.8	(86.3)	1,708.9	179.0	0.4	0.4	n.a.	(0.1)	1.1	3.4	1.6	2.3	2.8	14.6	9.2	6.8
Far Eastern New Century Corp	20.4	19.1	15.2	(5.0)	7.1	25.2	0.8	0.8	0.7	3.8	4.1	4.9	3.7	4.4	4.7	11.4	10.6	10.1
Formosa Chemicals & Fibre	36.6	24.6	19.3	25.4	48.8	27.4	1.0	1.0	0.9	3.1	2.8	4.7	2.0	2.4	3.9	22.1	19.0	14.5
Formosa Plastics Corp	39.2	26.7	18.7	(66.9)	46.6	42.9	1.4	1.3	1.2	3.7	4.8	6.9	2.0	3.0	4.0	35.7	23.3	18.8
Nan Ya Plastics Corp	29.7	21.4	14.5	(49.1)	38.8	47.9	1.3	1.2	1.1	2.8	5.8	8.2	1.6	3.6	5.2	23.0	13.2	10.4
Formosa Petrochemical Corp	30.4	25.7	20.0	59.9	18.2	28.3	2.1	1.8	1.9	7.5	7.3	9.2	2.5	2.7	3.7	19.0	13.8	11.8
Petronas Chemicals Group Bhd	26.8	18.2	14.9	(66.5)	46.8	22.1	1.4	1.4	1.3	5.7	7.8	8.9	2.6	3.0	3.6	12.0	10.0	8.8
Indorama Ventures PCL	42.7	13.6	9.4	(89.8)	213.3	45.0	0.7	0.7	0.7	1.6	4.8	7.5	1.8	2.5	4.0	9.3	7.9	7.0
IRPC PCL	n.m	17.0	8.5	66.2	263.4	100.9	0.5	0.5	0.5	(1.6)	2.8	4.8	1.3	2.3	3.4	13.4	8.4	7.3
PTT Global Chemical PCL	n.m	22.1	13.2	60.2	317.6	67.7	0.7	0.6	0.6	5.9	3.0	5.1	6.4	2.8	4.3	11.1	9.0	7.9
Global Green Chemicals	336.0	17.3	13.7	(97.3)	1,840.0	26.8	0.9	0.8	0.8	(0.0)	5.0	6.0	1.2	2.4	3.7	11.8	7.7	7.0
Alpek SA de CV	18.3	6.9	7.0	(90.8)	164.7	(1.5)	0.6	0.5	0.5	2.5	5.1	7.7	13.2	8.4	9.2	4.5	4.4	4.3
Eastman Chemical Co	13.8	11.5	10.0	(4.2)	20.3	15.5	1.9	1.7	1.6	13.9	15.6	16.5	3.7	3.9	4.1	9.0	8.0	7.3
Average	82.1	23.5	12.7	(15.7)	282.5	115.7	1.0	1.0	1.0	4.9	6.0	7.7	3.6	3.5	4.3	12.9	9.8	8.3

Source: Bloomberg Finance L.P., 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, BBG, BBIK, BBL, BC, BCH, BCP, BCPG, BDMS, BEC, BEM, BEYOND, BGC, BGRIM, BH, BIZ, BLC, BLCH, BLC, BLCH, BLC, BCH, BCP, BCPG, BDMS, BEC, BEM, BEYOND, BGC, BGRIM, BH, BIZ, BLC, BLCH, BLC, BCH, BCP, BCPG, BDMS, BEC, BEM, BEYOND, BGC, BGRIM, BH, BIZ, BLC, BCL, BE, BGCO, COTTO, CPALL, CPAXT, CPP, CPI, CPI, CPN, CPW, CRC, CRD, CSC, CSS, CV, DCC, DDD, DELTA, DEMCO, DMT, DOHOME, DRT, DUSIT, EA, EASTW, ECF, ECL, EE, EGCO, EPG, ERW, ETC, ETE, FE, FLOYD, 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, IRPC, ITC, 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, 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, SPALI, SPC, SPCG, SPI, SPRC, SR, SSC, SSF, SSSC, STA, STC, STEC, STGT, STI, SUC, SUN, SUSCO, SUTHA, SVI, SVT, SYMC, SYNEX, SYNTEC, TACC, TAE, TCAP, TCMC, TEAMG, TEGH, TFG, TFMAMA, TGE, TGH, THANA, THANI, THCOM, THIP, THEC, TIDLOR, TIPH, TISCO, TK, TKN, TKS, TKT, TLI, TM, TWC, TMD, TMT, TNDT, TNITY, TNL, TNR, TOA, TOG, TOP, TPBI, TPICS, TPIPL, TPIPP

#### 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, TCCC<sup>3</sup>, 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.

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

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

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

# Anti-corruption Progress Indicator

## Certified (ได้รับการรับรอง)

2S, 7UP, AAI, ADVANC, AF, AH, AI, AIE, AIRA, AJ, AKP, AMA, AMANAH, AMATAV, AP, APCS, AS, ASIAN, ASK, ASP, AWC, AYUD, B, BAFS, BAM, BANPU, BAY, BBGI, BBL, BCH, BCP, BCPG, BE8, BEC, BEYOND, BGC, BGRIM, BKI, BLA, BPP, BROOK, BRR, BSBM, 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, KCC, KCE, KGEN, KGI, KKP, KSL, KTB, KTC, L&E, LANNA, LHFG, LHK, LPN, LRH, M, MAJOR, MALEE, MATCH, MBAX, MBK, MC, MCOT, META, MFC, MIEC, 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, SCC, SCCG, SCGP, SCM, SCN, 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, TPCS, 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, 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, OTO, 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, APP, APURE, AQUA, ARIN, ARIP, ARROW, ASAP, ASEFA, ASIA, ASIMAR, ASN, ATF30, AU, AUCT, AURA, B52, BA, BBIK, BC, BCT, BDMS, BEAUTY, BEM, BGT, BH, BIG, BIOTEC, BIS, BIZ, BJC, BJCHI, BKD, BLC, BLESS, BLISS, BM, BOL, BR, BRI, BROCK, BSM, BSRC, BTNC, BTW, BUI, BVG, CCET, CCP, CEYE, CGD, CH, CHARAB, 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, 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, NETBAY, NEW, NEWS, NFC, NL, NNCL, NOK, NOVA, NOVA,

#### 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.