



# Petrochemicals

SET Petro Index Close: 5/5/2022 1,063.63 -6.05 / -0.57% Bt2,048mn  
 Bloomberg ticker: SETPETRO

## Mixed 1Q22F results expected

Higher oil price hurt petrochemical product spread broadly in 1Q22 except for PX, where spread over condensate/ULG95 increased 18%/25% QoQ, compared with 9-13% QoQ fall for other products. Naphtha-based crackers were hit by costly naphtha at an 8-year high. We expect this trend to continue in 2Q22, but product prices caught up in April, good for petrochemical product spread in the near term. We see slower global demand as the key risk. 1Q22 earnings will be mixed, with IVL to outperform and PTTGC adversely affected by higher naphtha cost and lower gas supply, implying less competitive feedstock cost. We reaffirm our Outperform rating on IVL which is the top pick for the sector.

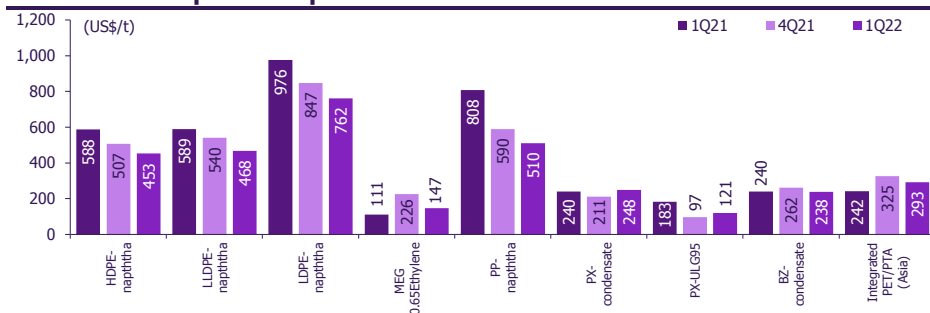
**High naphtha cost hurt olefins cracker margin in 1Q22.** As naphtha cost rose 57% YoY and 18% QoQ to an 8-year high in 1Q22, PE/PP spread fell 26% YoY and 12% QoQ to US\$548/t, though still above cash cost of US\$450/t. Product spread of HDPE and LLDPE fell the most to below US\$500/t, the weakest since the pandemic broke out in 2Q-3Q20. The sharp decline YoY also reflects abnormally high spread in 1Q21 when the US suffered a polar vortex. Several regional players reduced utilization rate in response to weakening spread and to balance the market. This could bode well for 2Q22 if demand is not severely hit by slower economic growth.

**PX spread up the most in 1Q22.** PX spread over condensate recovered in 1Q22 (+18% QoQ) as regional producers reduced utilization rate to balance the market. Also, better crack spread for gasoline incentivized integrated oil refiners to switch from feedstock for aromatics to blendstock for gasoline. We believe this trend will continue in 2Q22 as demand for gasoline remains strong and global inventory of gasoline is still below the 5-year average, though keep in mind China's demand will slow during the new wave of COVID lockdowns. We believe slower demand for benzene could be the key risk for the aromatics chain given weak demand for downstream ABS and PS which remains pressured by a global semiconductor shortage that could last until 2024.

**Integrated PET/PTA spread weakened QoQ but still high in western markets.** Asian integrated PET/PTA spread fell 10% QoQ to US\$293/t in 1Q22 from an abnormal high in 4Q21, but this should have limited on global players like IVL. Note that PET (Asia) accounted for <20% of IVL's total revenue in 2021. This will be offset by high spread in western markets (37% of total revenue) at >US\$800/t, a premium of >US\$530/t over Asian markets. The high premium is expected to stay in 2Q22 due to supply shortage, import duty and high logistics costs.

**IVL preferred amidst uncertain demand for petrochemical products.** We remain optimistic on IVL's earnings and long-term growth as PET will remain a preferred raw material for packaging. Demand for PET will remain resilient due to its recyclability, versatility and competitive cost. PET bottle production consumes just half of the energy required for an aluminum can and one-third for glass bottles. Key drivers are the completion of the Oxiteno acquisition by end-Mar 2022 and a full-year operation of the Lake Charles gas cracker, which will benefit from wider gas cost advantage. IVL also expects US\$500mn more in benefits from Olympus initiatives in 2022, up from US\$291mn in 2021. Growth in IOD is also promising with less product spread volatility. We maintain TP (end-2022) at Bt55, based on 1.7x PBV and Outperform. Key risks: 1) weaker demand, 2) less efficiency improvement at new assets than expected and 3) changes in regulations on plastic products.

### Petrochemical product spread



Source: Bloomberg Finance LP and SCBS Investment Research

### Valuation summary

	Rating	Price (Bt)	TP (Bt)	ETR (%)	P/E (x)	P/BV (x)
GGC	Neutral	13.8	12.4	(6.8)	14.9	15.6
IVL	Outperform	44.8	55.0	28.3	6.3	5.9
PTTGC	Neutral	50.3	80.0	64.0	10.5	8.4
<b>Average</b>					<b>10.6</b>	<b>9.9</b>

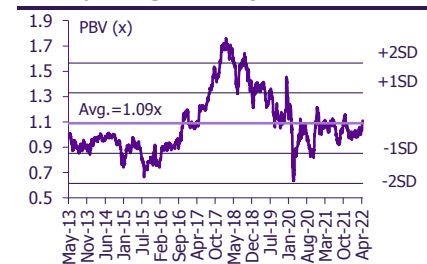
Source: SCBS Investment Research

### Price performance

(%)	Absolute			Relative to SET		
	1M	3M	12M	1M	3M	12M
GGC	2.2	0.7	22.1	5.8	2.6	16.8
IVL	(3.2)	(6.8)	(7.3)	0.2	(5.0)	(11.3)
PTTGC	(2.4)	(12.6)	(25.8)	1.0	(11.0)	(29.1)

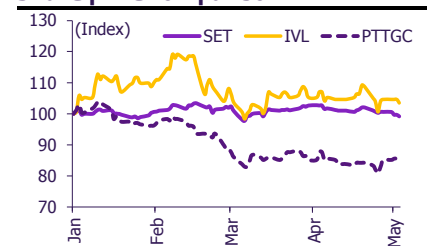
Source: SET, SCBS Investment Research

### PBV band – SETPETRO



Source: SET, SCBS Investment Research

### Share price comparison



Source: SET, SCBS Investment Research

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Figure 1: Earnings preview – IVL

(Btmn)	1Q21	4Q21	1Q22F	%YoY	%QoQ	Comment
Sales	98,161	131,755	167,185	70.3	26.9	<ul style="list-style-type: none"> <li>1Q22F profit is expected to surge YoY and QoQ on higher core EBITDA/t from improved product spread in the integrated PET segment. We expect it to fully capture the benefit from contract revision in Western markets for PET and PTA to cover higher energy cost and to reflect import parity price, driven by high logistics costs.</li> </ul>
EBITDA	14,896	16,225	18,660	25.3	15.0	
Core profit	3,850	5,466	6,614	71.8	21.0	
<b>Net profit</b>	<b>6,009</b>	<b>5,392</b>	<b>8,464</b>	<b>40.9</b>	<b>57.0</b>	<ul style="list-style-type: none"> <li>In addition to wider spread for MTBE (+80% QoQ), the reopening of the ethane cracker in the US in Nov 2021 will also boost profitability of the IOD business in the US. The cracker is operating at 70% utilization, unchanged from late 4Q21. IVL plans to stabilize the operating rate to ensure smooth production at the plant.</li> <li>Performance of the fiber business was stable although demand for mobility and lifestyle segments remained pressured by the semiconductor shortage and slower demand. Operating performance was supported by the cost reduction program, Project Olympus.</li> <li>We also expect an inventory gain of US\$80mn, up from US\$18mn in 4Q21, driven by higher oil and petrochemical product prices while no insurance compensation for an incident at its US ethane cracker was booked in 1Q22.</li> </ul>
EPS (Bt/share)	1.07	0.96	1.51	40.9	57.0	
Sales volume (mt)	3.66	3.71	3.79	3.5	2.1	
Core EBITDA/t (US\$/t)	100	124	129	29.3	4.0	
Expected result date: <b>May 12</b>						

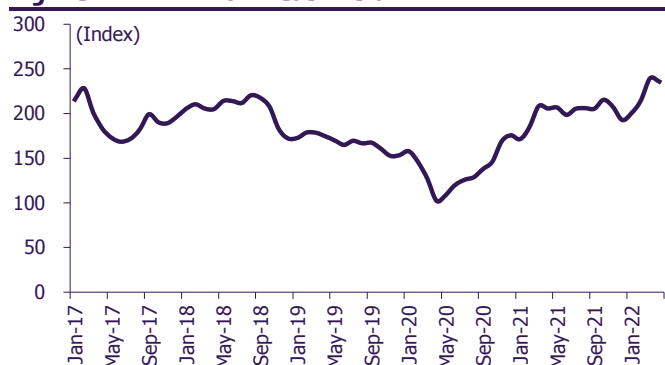
Source: Company data, SCBS Investment Research

Figure 2 : Earnings preview – PTTGC

(Btmn)	1Q21	4Q21	1Q22F	%YoY	%QoQ	Comment
Sales and Service Incomes	102,676	140,461	172,537	68.0	22.8	<ul style="list-style-type: none"> <li>Profit is expected to weaken YoY but be flat QoQ despite a stronger performance at the oil refining business because of weak performances at the olefins and aromatics businesses.</li> </ul>
EBITDA	16,316	10,479	11,288	(30.8)	7.7	
Core profit	6,869	2,304	4,723	(31.2)	105.0	
<b>Net profit</b>	<b>9,695</b>	<b>3,248</b>	<b>3,306</b>	<b>(65.9)</b>	<b>1.8</b>	<ul style="list-style-type: none"> <li><b>Oil refinery:</b> better performance for oil refining from a high utilization rate and much stronger GRM, rising to US\$8/bbl in 1Q22F from US\$6.4/bbl in 4Q21 due to strong recovery in crack spread for middle distillate products (70% of product yield) and LSFO (16%). We also expect a stock gain of Bt5.2bn on the pick-up in oil price but this will be offset by a loss from oil price hedging of &gt;US\$6bn.</li> <li><b>Olefins:</b> Low gas supply from PTT's gas separation plants continued to hurt PTTGC's mix of feedstock for its cracker. The proportion of naphtha remained high at 24%, which is expected to cut olefins adjusted EBITDA margin down to only 8%. We expect utilization rate of PE to increase QoQ from 98% in 4Q21 to 105% in 1Q22 after the planned shutdown of LDPE and LLDPE plants in 4Q21.</li> <li><b>Aromatics:</b> Weak P2F margin of aromatics plant is expected to hurt earnings in 1Q22 although product spread of PX over condensate increased 18% QoQ. Spread of other products declined QoQ, mainly benzene and LPG. We believe this cut its P2F margin in 1Q22 to US\$52/t, down 63% YoY and 49% QoQ.</li> <li><b>Performance materials &amp; chemicals:</b> Phenol business continued to perform well in 1Q22 on wider product spread and higher utilization rate. PTTGC also started to recognize earnings from Allnex after the acquisition in late Dec 2021.</li> </ul>
EPS (Bt/share)	2.15	0.72	0.73	(65.9)	1.8	
CDU utilization rate	102%	101%	100%	(2.0)	(1.0)	
Market GRM (PTTGC)	3.17	6.35	8.00	152.4	26.0	
Utilization rate - PE	105%	98%	105%	0.0	7.0	
Adj. EBITDA margin - Olefins	26%	12%	8%	(18.0)	(4.0)	
Utilization rate - BTX	98%	97%	99%	1.0	2.0	
P2F margin - aromatics (US\$/t)	142	101	52	(63.4)	(48.5)	
Expected result date: <b>May 11</b>						

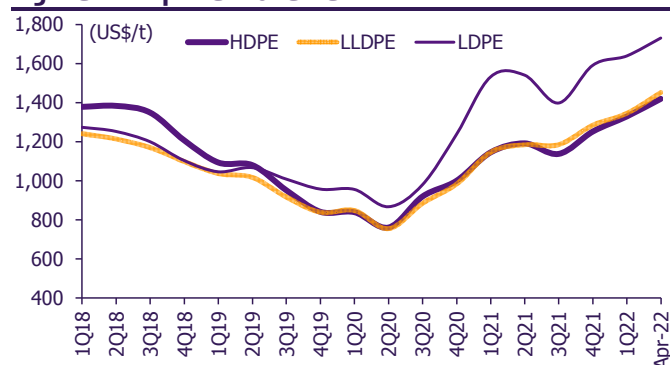
Source: Company data, SCBS Investment Research

Figure 3: IPEX – Northeast Asia



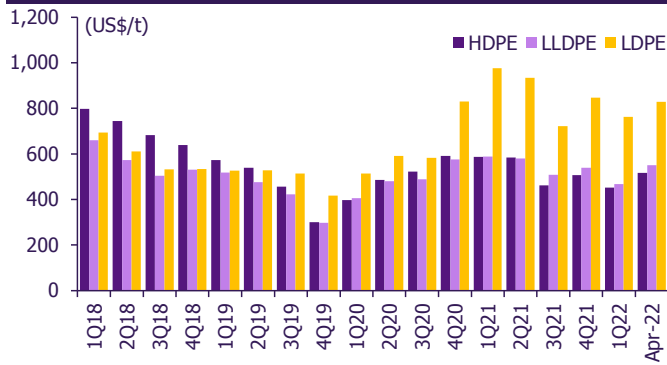
Source: ICIS, SCBS Investment Research

Figure 4: PE price movement



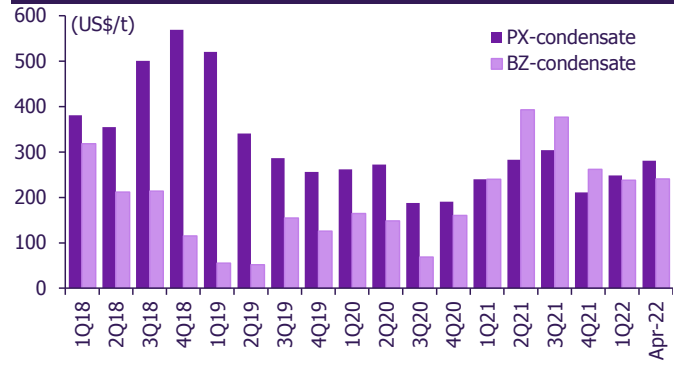
Source: Industry data, SCBS Investment Research

**Figure 5: PE spread over naphtha**



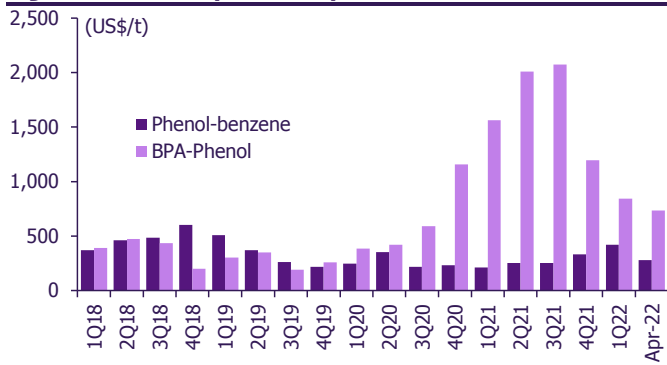
Source: Industry data, SCBS Investment Research

**Figure 6: Aromatics spread over condensate**



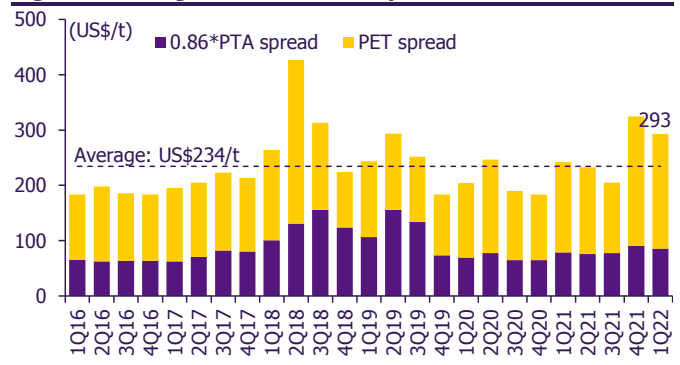
Source: Bloomberg Finance LP, SCBS Investment Research

**Figure 7: Phenol product spread**



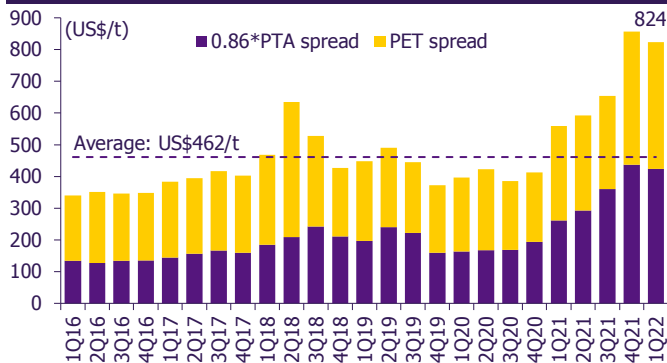
Source: Industry data, SCBS Investment Research

**Figure 8: Integrated PET/PTA spread – Asia**



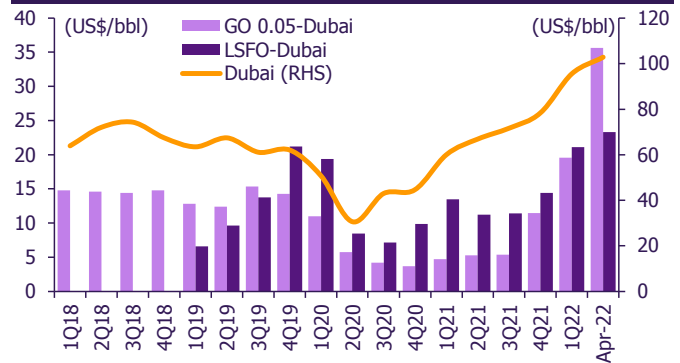
Source: Industry data, SCBS Investment Research

**Figure 9: Integrated PET/PTA spread – Western**



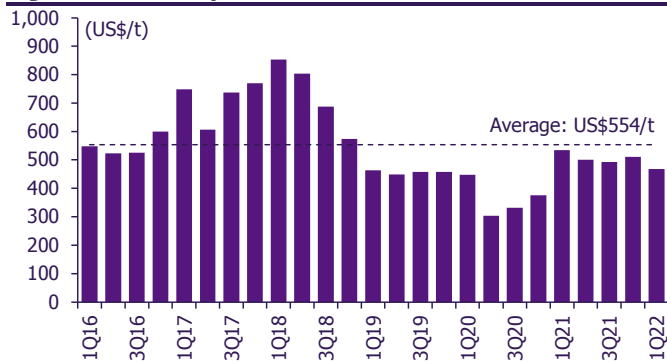
Source: Industry data, Company data, SCBS Investment Research

**Figure 10: Crack spread over Dubai – Diesel & LSFO**



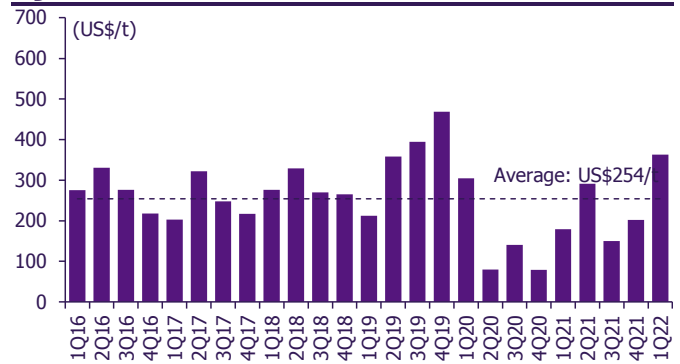
Source: Industry data, Company data, SCBS Investment Research

**Figure 11: MEG spread – US**



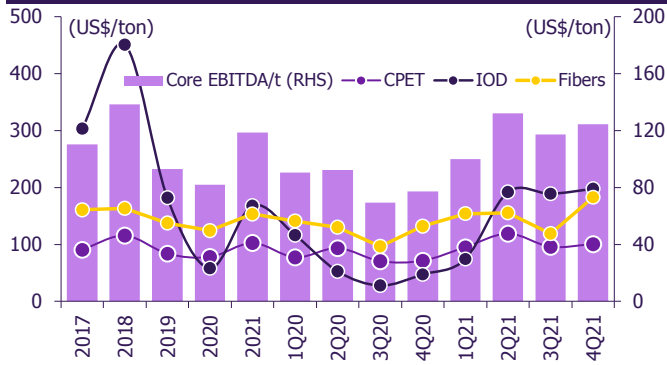
Source: Bloomberg Finance LP, SCBS Investment Research

**Figure 12: MTBE – US**



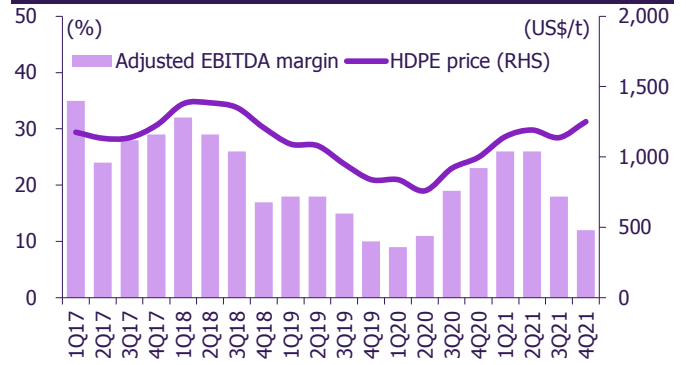
Source: Bloomberg Finance LP, SCBS Investment Research

**Figure 13: IVL – core EBITDA/t**



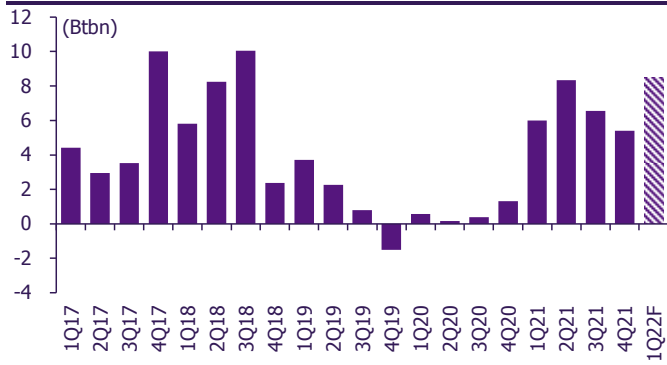
Source: Company data, SCBS Investment Research

**Figure 14: PTTGC – adjusted EBITDA (Olefins)**



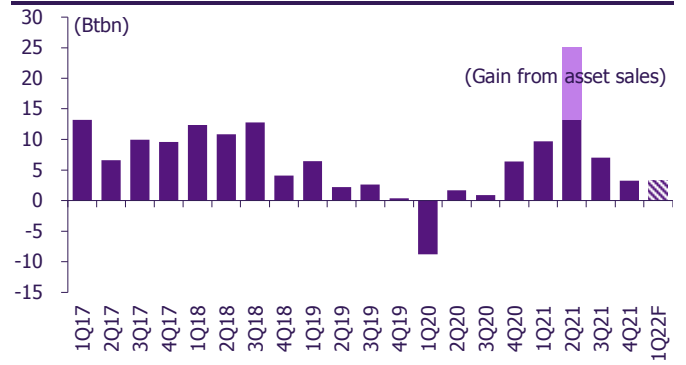
Source: Company data, SCBS Investment Research

**Figure 15: IVL – quarterly profit**



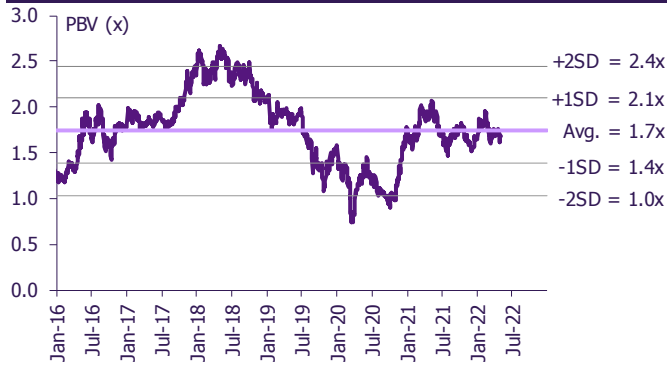
Source: Company data, SCBS Investment Research

**Figure 16: PTTGC – quarterly profit**



Source: Company data, SCBS Investment Research

**Figure 17: IVL – PBV band**



Source: Bloomberg Finance LP, SCBS Investment Research

**Figure 18: PTTGC – PBV band**



Source: Bloomberg Finance LP, SCBS Investment Research

**Figure 19: Valuation summary** (Price as of May 5, 2022)

	Rating	Price (Bt/Sh)	Target (Bt/Sh)	ETR (%)	P/E (x)			EPS growth (%)			P/BV (x)			ROE (%)			Div. Yield (%)			EV/EBITDA (x)		
					21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F
GGC	Neutral	13.80	12.4	(6.8)	18.4	14.9	15.6	39	24	(5)	1.4	1.3	1.3	8	9	8	2.5	3.4	3.2	8.5	7.7	7.0
IVL	Outperform	44.75	55.0	28.3	9.3	6.3	5.9	2,210	49	7	1.6	1.3	1.1	19	23	21	2.2	5.4	5.1	7.0	5.0	4.3
PTTGC	Neutral	50.25	80.0	64.0	7.0	10.5	8.4	n.m.	(33)	26	0.7	0.7	0.7	10	6	8	7.5	4.8	6.0	5.8	7.2	6.7
<b>Average</b>					<b>11.6</b>	<b>10.6</b>	<b>9.9</b>	<b>1,125</b>	<b>13</b>	<b>9</b>	<b>1.2</b>	<b>1.1</b>	<b>1.0</b>	<b>12</b>	<b>13</b>	<b>12</b>	<b>4.1</b>	<b>4.5</b>	<b>4.8</b>	<b>7.1</b>	<b>6.6</b>	<b>6.0</b>

Source: SCBS Investment Research

Figure 20: Regional peer comparison

	PE (x)			EPS Growth (%)			PBV (x)			ROE (%)			Div. Yield (%)			EV/EBITDA (x)		
	22F	23F	24F	22F	23F	24F	22F	23F	24F	22F	23F	24F	22F	23F	24F	22F	23F	24F
Sinopec Shanghai Petrochem	17.8	13.3	13.1	(5.4)	33.1	2.1	1.1	1.0	1.0	7.1	7.9	8.7	3.9	4.2	5.5	4.9	4.5	3.9
China Petroleum & Chemical	7.1	6.9	6.8	2.7	3.3	1.9	0.6	0.6	0.6	9.3	9.0	9.0	9.0	9.0	8.7	3.6	3.4	3.4
PetroChina Co Ltd	5.2	5.8	5.7	24.4	(9.8)	2.1	0.4	0.4	0.4	8.4	6.9	6.2	8.5	7.2	6.9	3.3	3.3	3.8
Reliance Industries Ltd	25.8	22.1	n.m.	24.5	16.6	n.m.	2.3	2.1	n.a	8.9	9.5	9.0	0.3	0.4	0.5	15.5	13.2	11.8
Mitsui Chemicals Inc	6.5	6.4	6.0	(4.7)	1.6	7.5	0.8	0.7	0.7	13.2	12.0	11.8	4.0	4.1	4.5	5.2	5.1	4.6
Asahi Kasei Corp	9.3	9.4	8.3	0.9	(0.4)	12.7	0.9	0.8	0.8	9.9	9.4	9.9	3.2	3.4	3.6	6.0	5.7	5.1
Sumitomo Chemical Co Ltd	6.7	7.1	6.8	11.3	(6.3)	4.6	0.8	0.7	0.7	12.1	10.4	10.2	4.3	4.3	4.3	6.3	6.9	7.0
Lotte Chemical Corp	8.6	6.3	6.4	(41.9)	37.7	(2.1)	0.5	0.4	0.4	5.4	7.2	12.0	3.9	4.2	4.1	3.7	3.0	3.0
Far Eastern New Century Corp	12.9	11.6	n.m.	19.9	11.3	n.m.	0.7	0.7	n.a	5.6	6.1	n.m.	6.1	6.7	n.a	11.3	10.7	n.a.
Formosa Chemicals & Fibre Corp	15.4	16.4	13.9	(20.7)	(6.1)	18.1	1.2	1.2	1.2	7.5	7.3	8.7	4.5	4.5	5.3	14.3	13.7	12.0
Formosa Plastics Corp	11.6	12.5	12.8	(18.2)	(7.7)	(2.5)	1.7	1.7	1.6	15.2	14.2	14.2	6.7	6.2	6.8	11.8	11.8	11.2
Nan Ya Plastics Corp	11.0	12.0	n.m.	(23.4)	(8.0)	n.m.	1.7	1.6	1.5	15.4	14.1	15.3	6.8	6.3	7.3	9.0	9.0	8.0
Formosa Petrochemical Corp	18.6	19.6	17.9	(6.7)	(4.7)	9.5	2.4	2.3	2.2	12.9	11.8	14.1	3.8	3.6	4.7	11.2	11.4	9.9
Far Eastern New Century Corp	12.9	11.6	n.m.	19.9	11.3	n.m.	0.7	0.7	n.a	5.6	6.1	n.m.	6.1	6.7	n.a	11.3	10.7	n.a.
Petronas Chemicals Group Bhd	11.8	13.0	13.6	(5.7)	(9.5)	(3.8)	2.2	2.0	1.9	18.1	15.6	13.9	4.7	4.2	4.0	7.8	8.4	8.9
Indorama Ventures PCL	8.8	8.6	8.3	13.4	2.2	2.9	1.4	1.3	1.1	16.6	15.2	14.1	3.1	3.4	3.1	7.2	7.0	6.9
IRPC PCL	14.2	10.8	8.4	(65.4)	32.1	28.6	0.8	0.8	0.7	6.3	8.1	9.5	4.4	4.9	5.9	7.4	7.1	6.2
PTT Global Chemical PCL	9.6	8.6	7.8	(47.5)	11.3	10.0	0.9	0.7	0.7	5.9	7.9	8.4	4.7	5.7	6.5	7.7	7.4	6.9
Global Green Chemicals	10.8	10.0	9.3	52.3	8.7	7.5	2.3	2.0	1.8	21.0	24.4	20.9	2.9	3.1	3.5	8.8	8.4	7.9
Alpek SA de CV	12.1	11.3	10.0	0.3	6.2	6.9	1.3	1.2	1.1	11.2	11.0	11.4	4.5	4.6	4.8	7.9	7.7	7.0
Eastman Chemical Co	8.0	8.8	10.2	(6.8)	(9.0)	(13.5)	1.2	1.1	1.1	18.5	13.5	10.7	5.4	5.3	5.3	4.3	4.8	5.3
<b>Average</b>	<b>11.6</b>	<b>11.0</b>	<b>9.7</b>	<b>(3.6)</b>	<b>5.4</b>	<b>5.4</b>	<b>1.2</b>	<b>1.1</b>	<b>1.1</b>	<b>11.2</b>	<b>10.8</b>	<b>11.5</b>	<b>4.8</b>	<b>4.9</b>	<b>5.0</b>	<b>8.0</b>	<b>7.8</b>	<b>7.0</b>

Source: Bloomberg Finance LP, SCBS Investment Research

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**CG Rating 2021 Companies with CG Rating**  
**Companies with Excellent CG Scoring**

AAV, ADVANC, AF, AH, AIRA, AKP, AKR, ALT, AMA, AMATA, AMATAV, ANAN, AOT, AP, ARIP, ARROW, ASP, AUCT, AWC, AYUD, BAFS, BANPU, BAY, BBL, BCP, BCPG, BDMS, BEM, BGC, BGRIM, BIZ, BKI, BOL, BPP, BRR, BTS, BTW, BWG, CENTEL, CFRESH, CHEWA, CHO, CIMBT, CK, CKP, CM, CNT, COM7, COMAN, COTTO, CPALL, CPF, CPI, CPN, CRC, CSS, DDD, DELTA, DEMCO, DRT, DTAC, DUSIT, EA, EASTW, ECF, ECL, EE, EGCO, EPG, ETC, FPI, FPT, FSMART, GBX, GC, GCAP, GFPT, GGC\*, GLAND, GLOBAL, GPI, GPSC, GRAMMY, GULF, GUNKUL, HANA, HARN, HMPRO, ICC, ICHI, III, ILINK, ILM, INTUCH, IP, IRPC, ITEL, IVL, JSP, JWD, K, KBANK, KCE, KKP, KSL, KTB, KTC, LALIN, LANNA, LH, LHFG, LIT, LPN, MACO, MAJOR, MAKRO, MALEE, MBK, MBKET, MC, MCOT, METCO, MFEC, MINT, MONO, MOONG, MSC, MTC, MVP, NCL, NEP, NER, NKI, NOBLE, NSI, NVD, NWR, NYT, OISHI, OR, ORI, OSP, OTO, PAP, PCSGH, PDG, PDJ, PG, PHOL\*, PLANB, PLANET, PLAT, PORT, PPS, PR9, PREB, PRG, PRM, PROUD, PSH, PSL, PTG, PTT, PTTEP, PTTGC, PYLON, Q-CON, QH, QTC, RATCH, RS, S, S & J, SAAM, SABINA, SAMART, SAMTEL, SAT, SC, SCB, SCC, SCCC, SCG, SCGP, SCM, SDC, SEAFCO, SEAOL, SE-ED, SELIC, SENA, SHR, SIRI, SIS, SITHAI, SMK, SMPC, SNC, SONIC, SPALI, SPI, SPRC, SPVI, SSSC, SST, STA, STEC\*, STI, SUN, SUSCO, SUTHA, SVI\*, SYMC, SYNTEC, TACC, TASCO, TCAP, TEAMG, TFMAMA, TGH, THANA, THANI, THCOM, THG, THIP, THRE, THREL, TIP<sup>1</sup>, TIPCO, TISCO, TK, TKT, TMT, TNDT, TNITY, TOA, TOP, TPBI, TQM, TRC, TRU, TRUE, TSC, TSR, TSTE, TSTH, TTA, TTB, TTCL, TTW, TU, TVD, TVI, TVO, TWPC, U, UAC, UBIS, UV, VGI, VIH, WACOAL, WAVE, WHA, WHAUP, WICE, WINNER, ZEN

**Companies with Very Good CG Scoring**

2S, 7UP, ABICO, ABM, ACE, ACG, ADB, AEONTS, AGE, AHC, AIT, ALL, ALLA, ALUCON, AMANAH, AMARIN, APCO, APCS, APURE, AQUA, ASEFA, ASIAN, ASK, ATP30, BA, BC, BEC, BFIT, BJCHI, BR, CBG, CGH, CHAYO, CHOTI, CI, CMC, CPL, CRD, CSP, DCC, ASAP, ASIA, ASIMAR, ASN, B, BAM, BCH, BEYOND, BJC, BLA, BROOK, CEN, CHARAN, CHG, CHOW, CIG, COLOR, CPW, CSC, CWT, DCON, DHOUSE, DOD, DOHOME, DV8, EASON, EFORL, ERW, ESSO, ESTAR, ETE, FE, FLOYD, FN, FNS, FORTH, FSS, FTE, FVC, GEL, GENCO, GJS, GYT, HEMP, HPT, HTC, HYDRO, ICN, IFS, IMH, IND, INET, INSET, INSURE, IRC, IRCP, IT, ITD\*, J, JAS, JCK, JCKH, JMART, JMT, KBS, KCAR, KEX, KGI, KIAT\*, KISS, KOOL, KTIS, KUMWEL, KUN, KWC, KWM, L&E, LDC, LEO, LHK, LOXLEY, LRH, LST, M, MATCH, MBAX, MEGA, META, MFC\*, MGT, MICRO, MILL, MITSIB, MK, MODERN, MTI, NBC, NCAP, NCH, NETBAY, NEX, NINE, NRV, NTV, OCC, OG, PATO, PB, PICO, PIMO, PJW, PL, PM, PMTA, PPP, PPPM, PRIME, PRIN, PRINC, PSTC, PT, QLT, RBF, RCL, RICHY, RML, ROJNA, RPC, RT, RWI, S11, SA, SAK, SALEE, SAMCO, SANKO, SAPPE, SAWAD, SCI, SCN, SCP, SE, SFLEX, SFP, SFT, SGF, SIAM, SINGER, SKE, SKN, SKR, SKY, SLP, SMIT, SMT, SNP, SO, SORKON, SPA, SPC, SPCG, SR, SRICHA, SSC, SSF, STANLY, STGT, STOWER\*, STPI, SUC, SWC, SYNEX, T, TAE, TAKUNI, TBSP, TCC, TCMC, TEAM, TFG, TFI, TIGER, TITL, TKN, TMS, TM, TMC, TMD, TMI, TMILL, TNL, TNP, TOG, TPA, TPAC, TPCS, TPS, TRITN, TRT, TSE, TVT, TWP, UEC, UMI, UOBKH, UP, UPF, UPOIC, UTP, VCOM, VL, VNT, VPO, VRANDA, WGE, WIJK, WP, XO, XPG, YUASA

**Companies with Good CG Scoring**

A, AI, AIE, AJ, AMC, APP, AQ, ARIN, AS, AU, B52, BEAUTY, BGT, BH, BIG, BLAND, BM, BROCK, BSBM, BSM, BYD\*, CCP, CITY, CMO, CPT, CSR, EKH, EP, FMT, GLOCON\*, GSC, HTECH, IHL, INGRS, JAK, JTS, KASET, KK, KWG, LEE, BTNC, CAZ, CGD, CMAN, CMR, CRANE, D, EMC, F&D, GIFT, GREEN, GTB, HUMAN, IIG, INOX, JR, JUBILE, KCM, KKC, KYE, LPH, MATI, M-CHAI, MCS, MDX, MJD, MORE, MUD, NC, NDR, NFC, NNCL, NOVA, NPK, NUSA, OCEAN, PAF, PF, PK, PLE, PPM, PRAKIT, PRAPAT, PRECHA, PTL, RCI<sup>2</sup>, RJH, RP, RPH, RSP, SABUY, SF, SGP, SICT, SIMAT, SISB, SK, SMART, SOLAR, SPACK, SPG, SQ, SSP, STARK, STC, SUPER, SVOA, TC, TCCC, THMUI, TNH, TNR, TOPP, TPCH, TPIPL, TPIPP, TPLAS, TPOLY, TQR, TTI, TYCN, UKEM, UMS, UNIQ, UPA, UREKA, VIBHA, W, WIN, WORK, WPH, YGG, ZIGA

**Corporate Governance Report**

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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. SCB 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 2020 to 26 October 2021) is publicized.

<sup>1</sup> TIP was voluntarily delisted from the Stock Exchange of Thailand effectively on July 24, 2021

<sup>2</sup> RCI was voluntarily delisted from the Stock Exchange of Thailand, effectively on July 16, 2021

\* บริษัทหรือกรรมการหรือผู้บริหารของบริษัทที่มีข่าวด้านการศึกษาเกี่ยวกับดุลยกลาง เช่น การกระทำความผิดเกี่ยวกับหลักทรัพย์ การทุจริต คอร์รัปชัน เป็นต้น ซึ่งการใช้ข้อมูล CGR ควรตระหนักถึงข้อข้างดังกล่าวประกอบด้วย

**Anti-corruption Progress Indicator**  
**Certified (ได้รับการรับรอง)**

2S, 7UP, ADVANC, AF, AI, AIE, AIRA, AKP, ALPHAX, AMA, AMANAH, AMATA, AMATAV, AP, APCS, AQUA, ARROW, AS, ASIAN, ASK, ASP, AWC, AYUD, B, BAFS, BAM, BANPU, BAY, BBL, BCH, BCP, BCPG, BE8, BEYOND, BGC, BGRIM, BJCHI, BKI, BLA, BPP, BROOK, BRR, BSBM, BTS, BWG, CEN, CENTEL, CFRESH, CGH, CHEWA, CHOTI, CHOW, CIG, CIMBT, CM, CMC, COM7, COTTO, CPALL, CPF, CPI, CPN, CSC, DCC, DELTA, DEMCO, DIMET, DRT, DTAC, DUSIT, EA, EASTW, ECL, EGCO, EP, EPG, ERW, ESTAR, ETE, FE, FNS, FPI, FPT, FSMART, FSS, FTE, GBX, GC, GCAP, GEL, GFPT, GGC, GJS, GPI, GPSC, GSTEEL, GUNKUL, HANA, HARN, HEMP, HENG, HMPRO, HTC, ICC, ICHI, IFEC, IFS, ILINK, INET, INSURE, INTUCH, IRC, IRPC, ITEL, IVL, JKN, K, KASET, KBANK, KBS, KCAR, KCE, KGI, KKK, KSL, KTB, KTC, KWC, KWI, L&E, LANNA, LH, LHFG, LHK, LPN, LRH, M, MAKRO, MALEE, MATCH, MBAX, MBK, MC, MCOT, META, MFC, MFEC, MILL, MINT, MONO, MOONG, MSC, MST, MTC, MTI, NBC, NEP, NINE, NKI, NMG, NNCL, NOBLE, NOK, NSI, NWR, OCC, OG, ORI, PAP, PATO, PB, PCSGH, PDG, PDJ, PE, PG, PHOL, 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, RATCH, RML, RWI, S & J, SAAM, SABINA, SAPPE, SAT, SC, SCB, SCC, SCCC, SCG, SCN, SEAOL, SE-ED, SELIC, SENA, SGP, SINGER, SIRI, SITHAI, SKR, SMIT, SMK, SMPC, SNC, SNP, SORKON, SPACK, SPALI, SPC, SPI, SPRC, SRICHA, SSF, SSP, SSSC, SST, STA, STOWER, SUSCO, SVI, SYMC, SYNTEC, TAE, TAKUNI, TASCO, TCAP, TCMC, TFG, TFI, TFMAMA, TGH, THANI, THCOM, THIP, THRE, THREL, TIDLOR, TIPCO, TISCO, TKS, TKT, TMD, TMILL, TMT, TNITY, TNL, TNP, TNR, TOG, TOP, TOPP, TPA, TPP, TRU, TRUE, TSC, TSTE, TSTH, TTA, TTB, TTCL, TU, TVD, TVI, TVO, TWPC, U, UBE, UBIS, UEC, UKEM, UOBKH, UPF, UV, VGI, VIH, WACOAL, WHA, WHAUP, WICE, WIJK, XO, ZEN

**Declared (ประกาศเจตนารมณ์)**

AJ, ALT, APCO, B52, BEC, CHG, CPL, CPR, CPW, CRC, DDD, DHOUSE, DOHOME, ECF, EKH, ETC, FLOYD, GULF, III, INOX, JR, JTS, KEX, KUMWEL, LDC, MAJOR, NCAP, NCL, NOVA, NRF, NUSA, NYT, OR, PIMO, PLE, RS, SAK, SCGP, SCM, SIS, SSS, STECH, STGT, TKN, TMI, TQM, TSI, VARO, VCOM, VIBHA, YUASA, ZIGA

**N/A**

3K-BAT, A, A5, AAV, ABICO, ABM, ACAP, ACC, ACE, ACG, ADB, ADD, AEONTS, AFC, AGE, AH, AHC, AIT, AJA, AKR, ALL, ALLA, ALUCON, AMARIN, AMC, AMR, ANAN, AOT, APEX, APP, APURE, AQ, ARIN, ARIP, ASAP, ASEFA, ASIA, ASIMAR, ASN, ASW, ATP30, AU, AUCT, BA, BBGI, BBIK, BC, BCT, BDMS, BEAUTY, BEM, BFIT, BGT, BH, BIG, BIS, BIZ, BJC, BKD, BLAND, BLISS, BM, BOL, BR, BRI, BROCK, BSM, BTNC, BTW, BUI, BYD, CAZ, CBG, CCET, CCP, CEYE, CGD, CHARAN, CHAYO, CHO, CI, CITY, CIVIL, CK, CKP, CMAN, CMO, CMR, CNT, COLOR, COMAN, CPANEL, CPH, CPT, CRANE, CRD, CSP, CSR, CSS, CTW, CV, CWT, D, DCON, DITTO, DMT, DOD, DPAINT, DTCI, DV8, EASON, EE, EFORL, EMC, ESSO, EVER, F&D, FANCY, FMT, FN, FORTH, FVC, GENCO, GIFT, GL, GLAND, GLOBAL, GLOCON, GLORY, GRAMMY, GRAND, GREEN, GSC, GTB, GYT, HFT, HL, HPT, HTECH, HUMAN, HYDRO, ICN, IHL, IIG, ILM, IMH, IND, INGRS, INSET, IP, IRCP, IT, ITD, J, JAK, JAS, JCK, JCKH, JCT, JDF, JMART, JMT, JP, JSP, JUBILE, JUTHA, JWD, KAMART, KC, KCC, KCM, KDH, KIAT, KISS, KK, KKC, KOOL, KTIS, KUN, KWM, KYE, LALIN, LEE, LEO, LIT, LOXLEY, LPH, LST, MACO, MANRIN, MATI, MAX, M-CHAI, MCS, MDX, MEGA, MENA, METCO, MGT, MICRO, MIDA, MITSIB, MJD, MK, ML, MODERN, MORE, MPIC, MUD, MVP, NC, NCH, NDR, NER, NETBAY, NEW, NEWS, NEX, NFC, NPK, NSL, NTV, NV, NVD, OHTL, OISHI, ONEE, OSP, OTO, PACÉ, PACO, PAE, PAF, PEACE, PERM, PF, PICO, PIN, PJW, PMTA, POLAR, POMPUI, PORT, POST, PPM, PRAKIT, PRAPAT, PRECHA, PRIME, PRIN, PRO, PROEN, PROUD, PSG, PTC, PTL, RAM, RBF, RCL, RICHY, RJH, ROCK, ROH, ROJNA, RP, RCP, RPH, RSP, RT, S, S11, SA, SABUY, SAFARI, SALEE, SAM, SAMART, SAMCO, SAMTEL, SANKO, SAUCE, SAWAD, SAWANG, SCI, SCP, SDC, SE, SEAFCO, SECURE, SF, SFLEX, SFP, SFT, SGF, SHANG, SHR, SIAM, SICT, SIMAT, SISB, SK, SKE, SKN, SKY, SLM, SLP, SMART, SMD, SMT, SNPP, SO, SOLAR, SONIC, SPA, SPCG, SPG, SPVI, SQ, SR, SSC, STANLY, STARK, STC, STEC, STHAI, STI, STPI, SUC, SUN, SUPER, SUTHA, SVH, SVOA, SVT, SWC, SYNEX, TACC, TAPAC, TC, TCC, TCCC, TCJ, TCOAT, TEAM, TEAMG, TFM, TGPRO, TH, THAI, THANA, THE, THG, THL, THMUI, TIGER, TIPH, TITL, TK, TKC, TM, TMC, TMW, TNDT, TNH, TNPC, TOA, TPAC, TPBI, TPCH, TPCS, TPIPL, TPIPP, TPLAS, TPOLY, TPO, TQR, TR, TRC, TRITN, TRT, TRUBB, TRV, TSE, TSF, TSR, TTI, TTT, TTW, TVT, TWP, TWZ, TYCN, UAC, UMI, UMS, UNIQ, UP, UPA, UPOIC, UREKA, UTP, UVAN, VL, VNG, VPO, VRANDA, W, WAVE, WFX, WGE, WIN, WINMED, WINNER, WORK, WORLD, WP, WPH, XPG, YGG

**Explanations**

Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of January 6, 2022) are categorised into: companies that have declared their intention to join CAC, and companies certified by CAC.