Petrochemicals

SET PETRO index	Close: 4/10/2024	622.29	-4.40 / -0.70%	Bt1,530mn
Bloomberg ticker:	SETPETRO			

Outlook still gloomy

SETPETRO has risen 14% over the past month, outperforming the SET (+6%), on more supportive macro factors, especially China's new stimulus package. This is likely to be short-lived, as the huge imbalance between demand and supply will keep investors wary until more substantial stimulative measures revive China's property sector and lift consumer confidence in the longer term. We maintain Neutral on the sector, with PTTGC our top pick as it has more upside from last close. We maintain our Neutral rating on IVL after a 21% jump in share price (-1M). GGC is expected to underperform sector peers due to weak ME margin.

China stimulus a near-term catalyst. China's government recently announced more stimulus to revive its property market and increase liquidity in the market; the last stimulus was announced in May. The government hopes this will help it achieve its 2024 GDP growth target of 5%. We believe the market is wary as the size of the stimulus of 7.5trn yuan is only 6% of total GDP, against 12.5% in 2008. The stimulus drove petrochemical share prices up 10% to a 4-month high the day after the announcement, but prices have since already fallen 8%.

Capacity rationalization slowing. In 9M24, petrochemical industry rationalization continued, especially in Europe, driven by high energy and production costs and poor demand in the region amid weak economic growth over the past few years. Market conditions in Europe are likely to be challenging for the long term and this led some Thai companies to terminate their businesses in Europe, including IVL's PET/PTA in the Netherlands with combined capacity of 1.126mtpa and PTTGC's HDI/TDI in France. We expect the wave of rationalization to continue in 2025 as product spread will remain subdued.

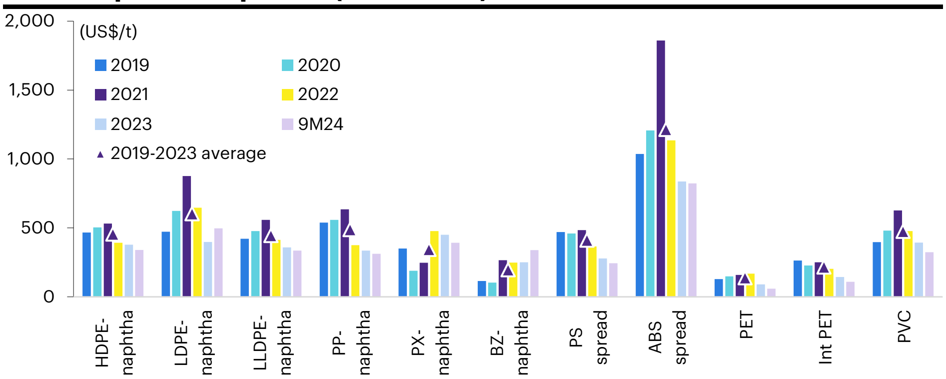
Demand outlook remains uncertain. We stay cautious on the petrochemical sector although it has surmounted its worst year, as we expect only gradual recovery until demand-supply is more balanced. Higher oil price will delay the upturn due to more costly feedstock and possible damage from high oil price and persistently tight monetary policy hurting demand. At this point we prefer PTTGC on its improving margin from higher ethane feedstock, which makes it more competitive than naphtha-based producers.

Mixed 3Q24F earnings outlook. Earnings direction for Thai petrochemical companies will be mixed due to different policies for asset impairment. While we expect IVL to report better profit QoQ in 3Q24 on a huge asset impairment in 2Q24 and better integrated PET/PTA spread, PTTGC's earnings are likely to dip into the red due to an impairment charge for Vencorex in Europe.

Low valuation to continue in 2025. We expect valuation of Thai petrochemical stocks to remain below their 5-year average, as product spread is likely to hover in the 2023-9M24 low range, though a slight increase is likely. We prefer the aromatics chain to olefins given the lower risk from supply additions. Product spreads for PX and benzene in 9M24 were still above 5-year average while spreads for polyolefins and PET chains were at 74% and 50% of 5-year average. Our sector pick is PTTGC (TP: Bt37) as share price still lags its peers.

Risk factors. An economic slowdown would erode demand for petrochemical products while oil price volatility may cause stock losses. Other risks are asset impairment and regulatory changes on GHG emissions and government intervention in the energy business. Key ESG risk factors are the environmental impact and how it adapts to the transition to clean energy.

Product spread comparison (2019-9M24)



Source: Bloomberg Finance L.P. and InnovestX Research

Valuation summary

	Rating	Price (Bt)	TP (Bt)	ETR (%)	P/E (x) 24F	P/E (x) 25F	P/BV (x) 24F	P/BV (x) 25F
GGC	Underperform	4.6	5.2	13.3	n.m.	20.6	0.5	0.5
IVL	Neutral	23.8	26.0	11.8	20.4	10.8	0.9	0.9
PTTGC	Outperform	29.0	37.0	31.0	13.1	10.5	0.5	0.5
Average					**16.7**	**14.0**	**0.6**	**0.6**

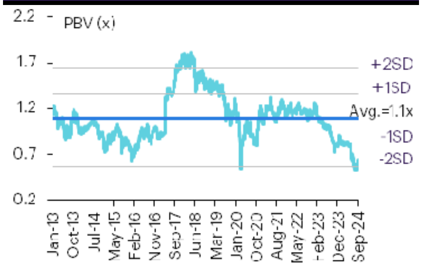
Source: InnovestX Research

Price performance

	Absolute			Relative to SET		
(%)	1M	3M	12M	1M	3M	12M
GGC	(4.2)	(38.3)	(57.0)	(6.8)	(43.9)	(56.8)
IVL	15.5	24.0	(5.7)	12.3	12.6	(5.2)
PTTGC	6.4	(5.7)	(12.8)	3.5	(14.3)	(12.3)

Source: SET and InnovestX Research

PBV band – SETPETRO



Source: SET, InnovestX Research

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Industry and product spread review

The heat map for petrochemical product spread shown below suggests that most of the industry continued to hover at the cyclic trough in 3Q24 and 9M24, especially olefins and derivatives. Among polyethylene products, LDPE recovered markedly in 3Q24 on more robust demand, supply disruption and capacity rationalization in Europe by key players in the industry, like LyondellBasell and ExxonMobil. In the aromatics chain, benzene continued to outperform due to tighter supply while PX spread weakened in 3Q24 as gasoline blending demand softened from 1H24 since US gasoline buyers had been purchasing blendstock since early 2024. Slight improvements were seen in PVC in 3Q24 due to lower ethylene cost despite weaker demand during Asia's monsoon season.

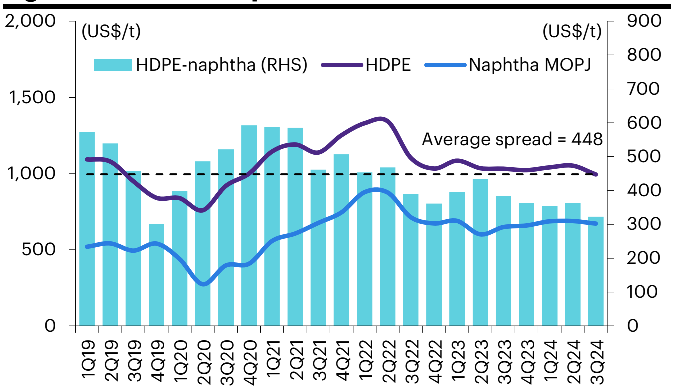
Figure 1: Product spread – heat map

Product	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24	2Q24	3Q24	Product
HDPE	583	576	462	505	421	445	368	336	373	436	361	344	338	350	333	HDPE
LDPE	968	917	740	880	741	782	600	472	446	437	343	363	415	502	581	LDPE
LLDPE	581	583	510	557	445	477	389	344	369	408	337	319	322	344	338	LLDPE
PP	754	695	547	550	428	432	352	291	359	393	295	290	297	319	318	PP
PX	226	312	274	179	286	635	501	468	401	484	490	426	411	421	339	PX
BZ	188	352	324	198	200	357	272	157	238	270	256	238	322	366	321	BZ
PS	511	498	450	472	395	305	392	365	285	306	239	281	192	262	278	PS
ABS	1,925	1,976	1,760	1,785	1,366	1,231	1,024	945	863	863	816	804	749	847	875	ABS
PET	145	149	118	217	203	201	200	69	109	117	66	69	63	45	66	PET
Int PET	241	224	209	321	269	172	257	113	166	190	106	112	105	97	120	Int PET
PVC	619	710	548	629	472	579	446	412	453	354	453	315	286	338	352	PVC

Source: Bloomberg Finance L.P. and InnovestX Research

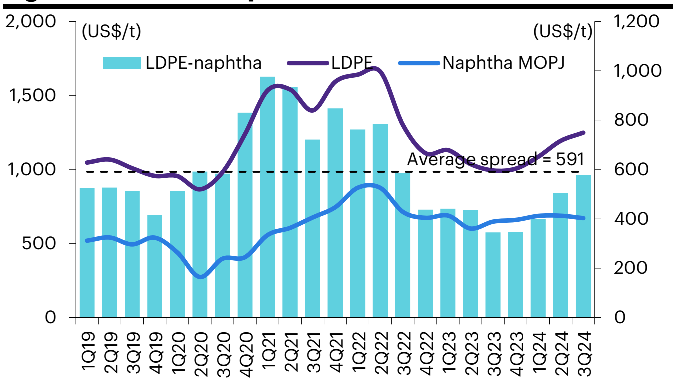
Olefins: average PE/PP spread dipped QoQ in 3Q24. Additional capacity in Asia continued to hurt polyolefins product spread in 3Q24. Average PE/PP spread, excluding LDPE, fell 2% QoQ in 3Q24 to US$331/t, better than 12MMA of US$306/t but still lower than typical cash cost of US$350/t. Only LDPE spread continued to rise from 1Q24, reflecting a better demand-supply balance than for other polyolefins: spread widened 18% QoQ in 3Q24 to US$581/t against 12MMA of US$463/t. In 9M24, average LDPE spread increased 21% YoY vs. -11% for other PE/PP products. We expect product spread to remain weak as buyers prefer to stay sidelined amidst volatile oil price, low seasonal demand in 4Q and uncertain demand outlook for 2025. The polyolefins supply overhang is expected to continue in 2H24 and 2025 as several producers prepare to bring new capacity online in one region while another region will rationalize its output. *(S&P Commodity Insights)*

Figure 2: HDPE vs. naphtha



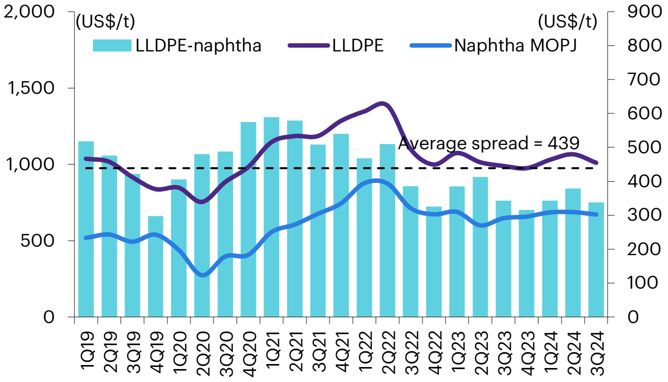
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

Figure 3: LDPE vs. naphtha



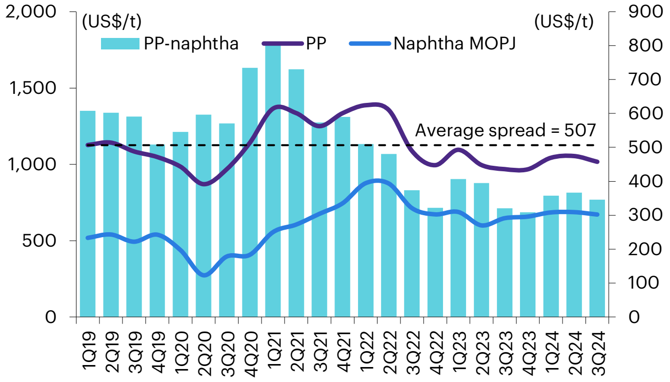
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

Figure 4: LLDPE vs. naphtha



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

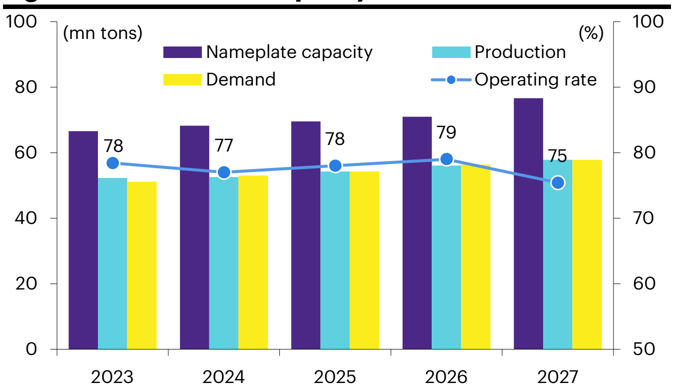
Figure 5: PP vs. naphtha



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

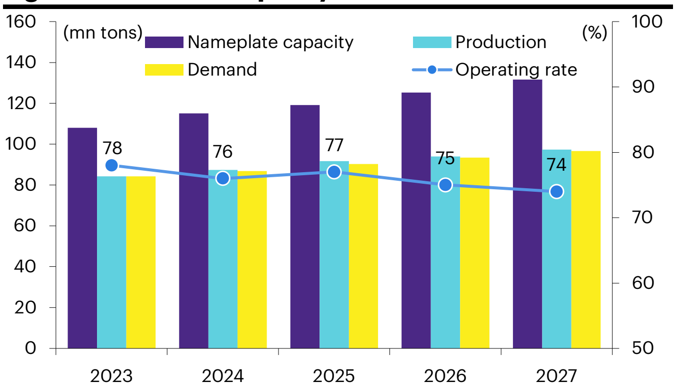
Global HDPE capacity suggests a slight recovery in HDPE product spread in 2025 and 2026 as operating rate gradually increases to 78% and 79%, respectively. This is slightly lower than the 80% previously estimated. Operating rate is expected to fall back to only 75% in 2027 when additional capacities start up in China. S&P Global Commodity Insights, citing Sinopec's Economics and Development Institute, reports that China is set to add 25mtpa of ethylene capacity by 2027 (~10% of total capacity in 2023) with polyolefins expansion totaling more than 30mtpa over the same period. This reaffirms the country's aim at self-sufficiency and steady shift to petrochemicals at oil refineries. The PP demand-supply gap will remain wider than for PE, although there will be a slight increase in operating rate in 2025. Persistently weak product spread is likely to urge more capacity rationalization in the global market, although this process has been slower than expected. It is expected that about 24% of global petrochemical capacity is at risk of permanent closure by 2028 amid weak margins. *(Wood Mackenzie)* Further, the current downturn will last longer than the typical five to seven years because of a prolonged capacity build up, especially in China. *(McKinsey)*

Figure 6: Global HDPE capacity and demand



Source: Industry data and InnovestX Research

Figure 7: Global PP capacity and demand



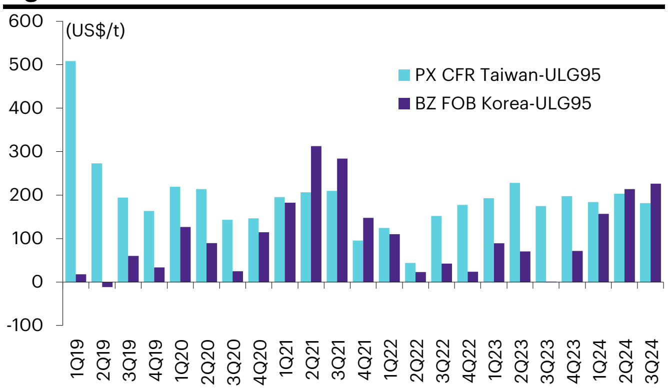
Source: Industry data and InnovestX Research

Aromatics: product spread softened in 3Q24 after a strong 1H24. PX spread over condensate and ULG95 weakened 13% and 7% QoQ in 3Q24 on higher PX plant operating rates caused by lower demand for gasoline blending. This led integrated oil refineries to maximize PX production as feedstock availability improved and to compensate for lower gasoline crack spread. After the challenging 3Q24, the Asian PX market is expected to remain soft in 4Q24 as demand from top importer of PX – China – has slowed with domestic inventories rising on higher production and the PTA and polyester chain does not look very good. The polyester downstream market showed little signs of improvement this year despite a sharp rise in operating rates to ~93%. *(S&P Commodity Insights)*

Benzene spread weakened 14% QoQ to US$321/t vs. 12MMA of US$313/t but is still much higher than the <US$200/t in 2019-2023. This was driven by China's policy to step up incentives to encourage consumers to replace old home appliances with new ones, offering subsidies of up to 2,000 yuan ($280.28) for each item in a bid to expand domestic demand and stimulate internal growth. *(Global Times)* The incentive did raise demand for benzene, the upstream feedstock for ABS and PS, used in appliances, earlier this year. Also supporting benzene price and spread, the ongoing shipping delays

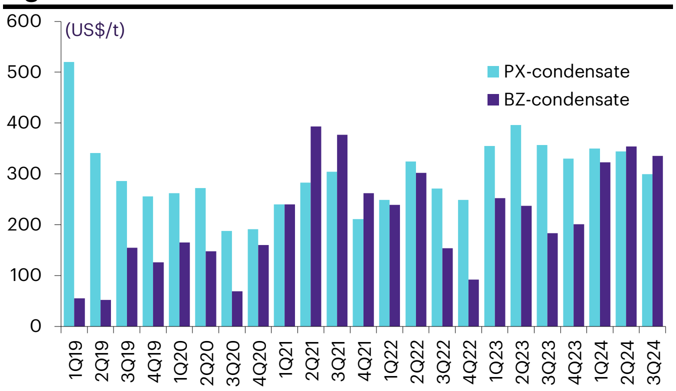
through the Panama Canal extends shipping time from Northeast Asia to the US Gulf Coast by up to two months. Benzene price in Asia is projected to remain good in 4Q24 due to a lack of new capacities while derivative capacities are expected to continue expanding. *(S&P Commodity Insights)* As new Chinese downstream capacities pressure margins for producers globally, trade barriers in the form of anti-dumping duties will curtail export demand for Chinese benzene derivatives, limiting demand in the biggest consumer country in the world, the US.

Figure 8: PX & benzene vs. ULG 95



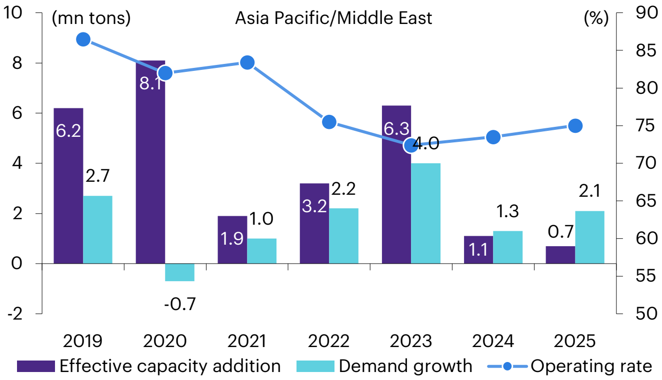
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

Figure 9: PX & benzene vs. condensate



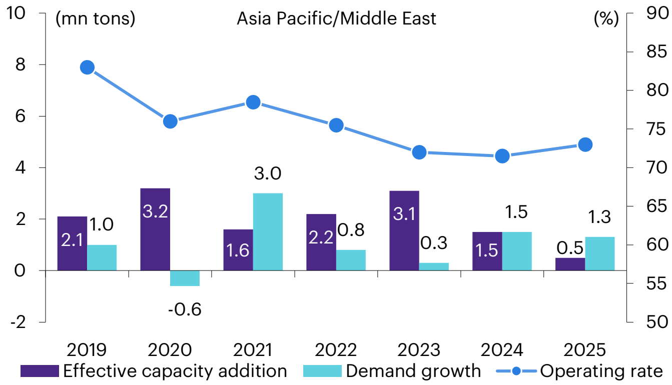
Source: Industry data, Bloomberg Finance L.P. and InnovestX Research

Figure 10: PX capacity addition vs. demand growth



Source: Industry data and InnovestX Research

Figure 11: Benzene capacity addition vs. demand growth



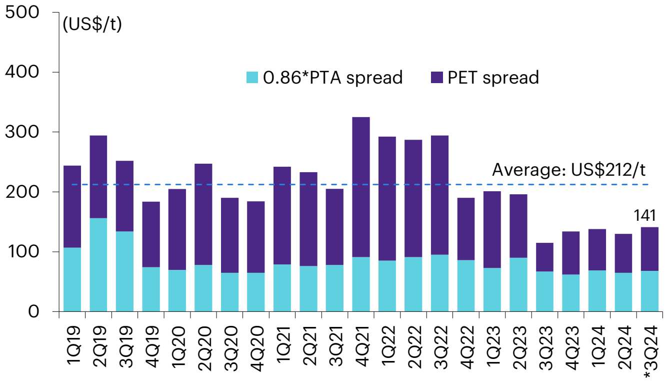
Source: Industry data and InnovestX Research

PET: Integrated PET spread in Asia under pressure. Integrated PET spread in Asia rose 8% QoQ to US$141/t in 3Q24, but remains 13% below the 2023 average (US$162/t) and far below the average of US$252/t in 2008 to 2022. Though spread has gradually improved since July on seasonal demand and less industry destocking, it remains weak, reflecting large excess supply in the region, notably in China, as more countries impose anti-dumping duties on PET imports from China. As shown in Figure 15:, effective capacity of PET in China in 2024 is far above local demand, raising the necessity of more exports, especially to EMEA where production cost has skyrocketed due to high energy cost and costly feedstock.

Disruptions in logistics helped hold up PET spread in the EMEA region in 2024, with integrated PET spread in Europe widening 25% to US$423/t from the 2023 average of US$338/t. The gap in integrated PET spread between European and Asian markets widened to US$287/t (+63% from 2023) vs. the 5-year average of US$244/t due to supply disruptions in Europe caused by the Red Sea crisis. Further, in early Apr the European Commission announced the final ruling on the anti-dumping investigation of PET originating from China, imposing anti-dumping duties ranging from 6.6% to 24.2% on the products involved. We expect the change in the PET industry landscape in the region brought by declining cost competitiveness to continue into 2025. This has led several local producers, including IVL, to permanently shutter their plants. It is likely to uphold premium on integrated PET spread in the EMEA market over Asia unless the geopolitical tension in the Middle East eases.

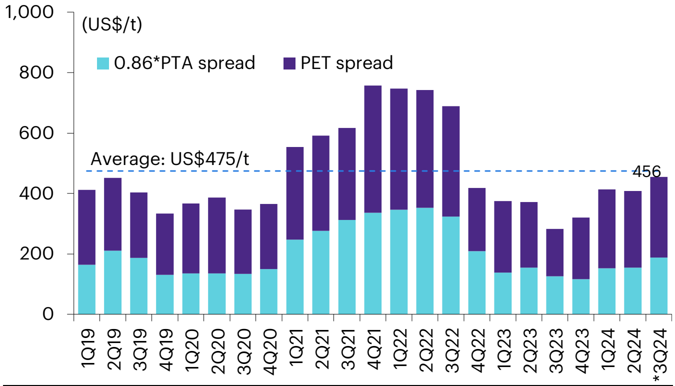
We expect integrated PET spread to weaken QoQ in 4Q24 on slower seasonal demand before recovering in 1Q25 on greater demand to replenish inventories. We expect Asia's integrated PET spread to remain below the 5-year average as suggested by global PET capacity (Figure 15:), which shows a wider gap between effective capacity and demand due to capacity additions in China, forcing producers to focus more on cost reduction and capacity rationalization.

Figure 12: Integrated PET spread – Asia



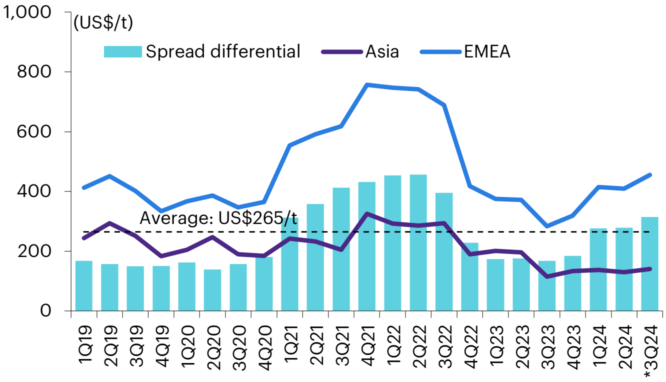
Source: Industry data and InnovestX Research

Figure 13: Integrated PET spread – EMEA



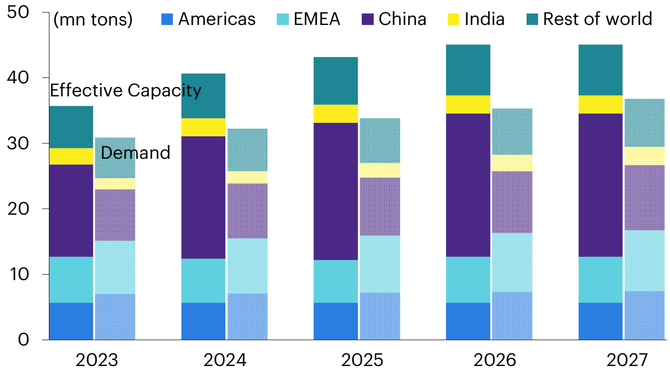
Source: Industry data and InnovestX Research

Figure 14: Integrated PET spread differential



Source: Industry data and InnovestX Research

Figure 15: Global PET capacity and demand



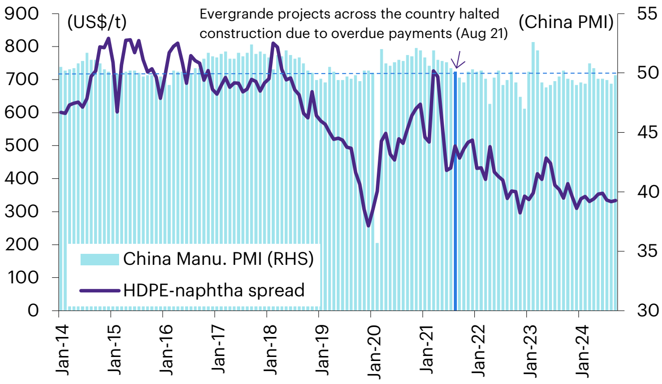
Source: Industry data and InnovestX Research

We remain cautious on the sector outlook, though some improvements were seen in 9M24. Despite China's recent announcement a stimulus package, the substantial demand-supply imbalance will take years to resolve given China's new capacity amidst global chemicals rationalization. Rising geopolitical tension in the Middle East could also defer demand recovery in the petrochemical market given a more volatile oil price, increasing downside risk from inventory losses and loss of consumer confidence. Further, global conflicts increase risk of supply disruption and freight cost, bringing inflationary pressure.

China's stimulus to boost optimism. The latest stimulus package in China will boost optimism in the sector in the near term, especially the policy to revive the ailing property market, which we view as one of the main drivers of demand for petrochemical products. Stimulus packages in 2024, including the most recent, now amount to ~7.5tn yuan (US$1.07tn), or equivalent to 6% of the country's GDP in 2024. *(Reuters)* If the most recent stimulus moves are effective, construction activity on unfinished projects should pick up and work on new developments may gather pace heading into 2025.

Together with measures to revive capital markets, consumer confidence in China may improve, which would have a broad-based impact on petrochemical product demand. We expect the actual impact on petrochemical demand to take some time to be seen amidst persistent supply gluts. The greater optimism on the sector brought by China's stimulus package has not yet been reflected in product prices, in our view. This suggests that buyers remain cautious on the impact of the stimulus on demand amidst abundant supply in the market. Rising fears of an escalation of the Middle East conflict, coupled with China's latest round of stimulus to prop up its economy could elevate oil price and thereby raise feedstock cost for petrochemical producers, especially naphtha-based ones.

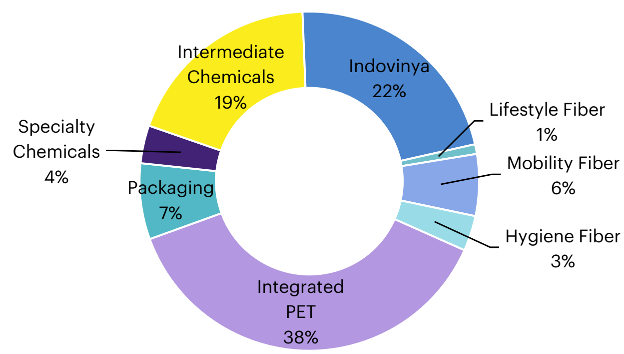
Figure 16: China's manufacturing PMI vs. HDPE spread



Source: Bloomberg Finance L.P. and InnovestX Research

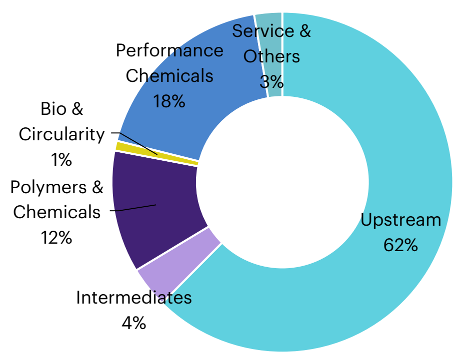
High-value product portfolio drives margin. Amidst the uncertain outlook for product spread of commodity-grade petrochemicals over the next 2-3 years, the high-value product portfolio is expected to support profitability. Among Thai companies, we estimate that the EBITDA contribution from HVP over the past 12 months accounted for 31% of IVL's total EBITDA against only 18% for PTTGC; however, if we exclude the oil refinery EBITDA, EBITDA contribution of PTTGC's HVP was at a similar level of 30% in the period despite losses from the HDI/TDI business in Europe (Vencorex). The HVP business has provided significant support to overall margin given a stable and superior margin to commodity products. Adjusted EBITDA margin at IVL's Indovinya in 1H24 was 15-20% for the HVA portion while that of PTTGC's allnex was 10-14% while overall margin is in the mid single digits.

Figure 17: EBITDA breakdown – IVL



Source: Company data and InnovestX Research

Figure 18: EBITDA breakdown – PTTGC



Source: Company data and InnovestX Research

3Q24 earnings outlook

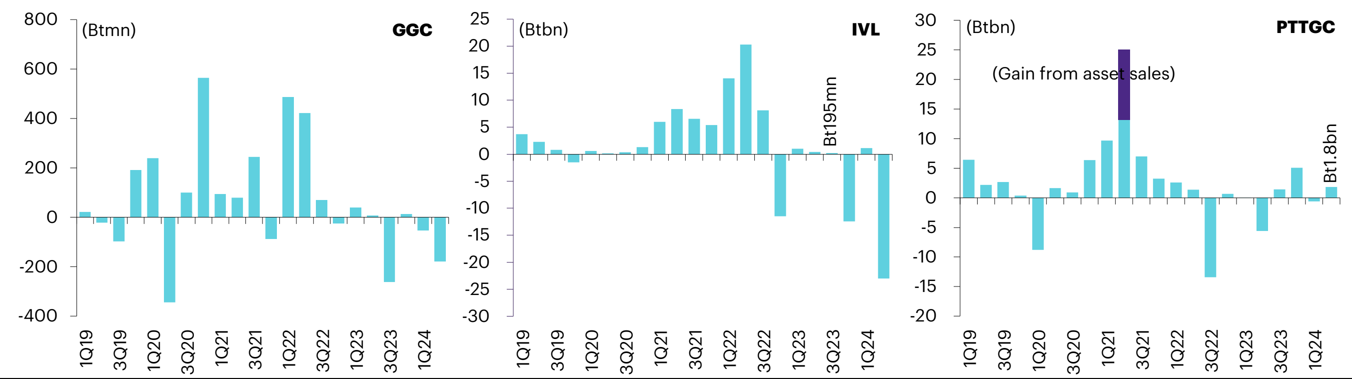
Volatile oil price and weak petrochemical prices and product spread will continue to dampen petrochemical earnings in 3Q24. Direction of profit performance QoQ for the quarter is expected to be mixed with IVL to report higher profit QoQ after a huge impairment charge was booked in 2Q24, but impairment impact to loom large at PTTGC in 3Q24 and 4Q24. The downward trend of oil and petrochemical product prices is expected to cause some inventory losses for both companies. We expect GGC's earnings to remain weak given a poor margin for methyl ester (biodiesel), though this will be somewhat offset by a wider margin for the fatty alcohol segment.

Figure 19: Quarterly net profit of petrochemical companies

Company	3Q23	4Q23	1Q24	2Q24	3Q24F YoY	3Q24F QoQ	4Q24F YoY	4Q24F QoQ
GGC	(262)	14	(54)	(178)	+	=	+	+
					Earnings to remain weak in 3Q24 and 4Q24, hurt by weak ME margin and losses from the joint investment in the ethanol business. We expect a better margin for fatty alcohol to lift profit in 4Q24 due to seasonal impact.			
IVL	195	(12,428)	1,133	(22,996)	+	+	+	-
					Net profit is expected to rise QoQ after a huge impairment charge was booked in 2Q24. Slight increase in integrated PET spread and better earnings contribution from the IOD business will lift core profit in 3Q24 before softening in 4Q24 on lower sales volume due to weaker seasonal demand.			
PTTGC	1,427	5,081	(606)	1,846	-	-	-	=
					Net profit will be eroded by impairment charges, but core profit is expected to improve QoQ, led by oil refinery and olefins. Profit contribution from performance chemicals should be solid after the impairments of the loss maker, i.e. Vencorex.			

Source: Company data and InnovestX Research

Figure 20: Quarterly earnings – Petrochemicals

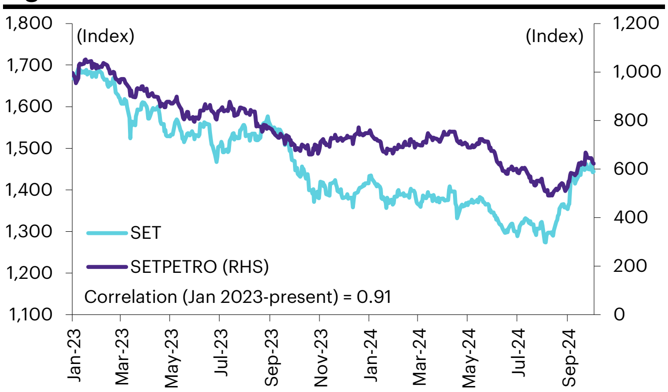


Source: SET, Bloomberg Finance L.P. and InnovestX Research

Sector pick

The SETPETRO index (-17% YTD) has underperformed the SET (+2%) in 2024TD for the third straight year due to weak product spread and uncertain demand outlook. The sector index has recovered a strong 22% since late Aug, aided by greater optimism about earnings prospects in 4Q24 and 2025 after the overhang on impairment was lifted, plus China's economic stimulus package. Although we believe the worst is behind us, recovery of product spread is likely to take some time as demand outlook remains uncertain, and rising geopolitical tension and oil volatility will hinder the global economic recovery. We stay cautious on the sector and rate it as Neutral due to undemanding valuation. Our top pick for the sector is PTTGC as share price performance (-25% YTD) still lags local peers, while the overhang on the downside risk from impairment charges should be largely priced in.

Figure 21: SET vs. SETPETRO



Source: Bloomberg Finance L.P. and InnovestX Research

PTTGC: overhang from loss makers lifted

Impairing loss makers in performance chemicals. PTTGC's recent move to impair its investment in hexamethylene diisocyanate (HDI) and derivatives in France and acrylonitrile (AN) businesses in Thailand given their uncompetitive cost will cost the company a one-time hit to the bottom line. We, however, expect this restructuring to eventually be a positive, including a positive impact on net profit of Bt4bn in 2025 with no loss from Vencorex (based on net loss of €56mn or Bt2bn in 1H24).

Olefins margin to improve on more ethane supply. We expect the EBITDA margin for PTTGC's olefins segment to improve on more ethane feedstock from PTT's gas separation plants following a maintenance shutdown in 3Q24. This will return the proportion of ethane feedstock to nearly 40% from 34% in 1H24 and keep the adjusted EBITDA of the segment in positive territory.

Earnings recovery in 2025F. After the huge net loss in 2024F, caused mainly by huge non-cash impairment charges, PTTGC's profit is expected to turn around in 2025F. We expect demand in the petrochemical business to improve gradually in 2025, backed by stronger global GDP growth (+3.3% YoY, IMF forecast). The key factor is the availability of ethane supply from PTT. PTTGC also has an alternative feedstock, propane, from the olefins 2 modification project (OMP) which increases its ability to optimize production mode to align with market conditions. Demand for allnex's products (coating resins and additives) with an EBITDA margin premium to PTTGC's, is expected to gradually recover YoY, pegged to improving markets in Europe, the US and Asia.

Undemanding valuation. PTTGC is trading at PBV of only 0.5x (2025F) while we expect ROE to turn around gradually from -1.1% in 2023 to +3.5% in 2024F and +4.4% in 2025F. Our TP is raised to Bt37.00, based on 0.6x PBV (2025F)

(Risk factors in Figure 25:)

Figure 22: Forecasts and valuation – PTTGC

Year to 31 Dec	Unit	2022	2023	2024F	2025F	2026F
Revenue	(Btmn)	683,954	621,631	603,361	578,337	558,475
EBITDA	(Btmn)	46,537	38,627	48,538	52,334	57,170
Core profit	(Btmn)	13,792	(3,183)	10,011	12,445	16,317
Reported profit	(Btmn)	(8,752)	999	(12,475)	12,445	16,317
Core EPS	(Bt)	3.06	(0.71)	2.22	2.76	3.62
DPS	(Bt)	1.00	1.00	1.00	1.40	1.70
P/E, core	(x)	9.5	n.a.	13.1	10.5	8.0
EPS growth, core	(%)	(57.3)	n.a.	n.a.	24.3	31.1
P/BV, core	(x)	0.4	0.5	0.5	0.5	0.5
ROE	(%)	4.4	(1.1)	3.5	4.4	5.6
Dividend yield	(%)	3.4	3.4	3.4	4.8	5.9
EV/EBITDA	(x)	8.1	8.7	7.0	6.2	5.4

Source: InnovestX Research

IVL: asset optimization helps improve profitability

Asset optimization executed. Asset optimization under its "2.0 strategic evolution" led to an extra expense of US$660-680mn (net tax) in 2Q24: a US$540-550mn impairment charge and US$120-130mn for related expenses from the closure of some production plants – PET/PTA in the Netherlands with combined capacity of 1.126mtpa and ethylene oxide (EO) and derivatives in Australia (100ktpa). IVL will begin to benefit from cost savings of US$193mn/year from this asset optimization.

Earnings performance to improve in 2H24. We expect earnings to recover in 2H24, backed by better product spread in the surfactant segment and the benefit of savings on fixed costs at the closed plants. IVL's sales volume is expected to grow further in 3Q24. Product spread will continue to edge up as industry destocking has ended and IVL will begin to benefit from fixed cost savings of ~US$15-20mn in 3Q24 and US$30mn in 4Q24 from the asset optimization.

Sharp earnings recovery to be seen in 2025; TP upped to Bt26. Although the asset optimization will reduce IVL's annual capacity by 1.9mt and production volume by 0.6mt, it is expected to have limited impact on revenue as products will be sourced from other, most cost-competitive locations such as Egypt and Turkey. We expect IVL's sales volume to increase further in 2025F as the industry begins restocking. IVL will reap more benefit from savings on fixed costs of US$170mn/year from the asset optimization.

This will translate into EBITDA enhancement of US$150-160mn/year. We roll over TP to end-2025 with a new TP of Bt26, pegged to 1x PBV (2025F) or -1.5SD of 5-year average.

(Risk factors in Figure 25:)

Figure 23: Forecasts and valuation – IVL

Year to 31 Dec	Unit	2022	2023	2024F	2025F	2026F
Revenue	(Btmn)	656,266	541,458	545,372	529,540	511,838
EBITDA	(Btmn)	84,054	40,646	52,472	55,858	60,817
Core profit	(Btmn)	38,717	389	6,555	12,320	17,796
Reported profit	(Btmn)	31,006	(10,798)	(18,256)	12,320	17,796
Core EPS	(Bt)	6.90	0.07	1.17	2.19	3.17
DPS	(Bt)	1.60	0.93	0.60	1.00	1.00
P/E, core	(x)	3.5	343.2	20.4	10.8	7.5
EPS growth, core	(%)	43.5	(99.0)	1,583.5	87.9	44.5
P/BV, core	(x)	0.7	0.8	0.9	0.9	0.8
ROE	(%)	22.5	0.2	4.3	8.5	11.4
Dividend yield	(%)	6.7	3.9	2.5	4.2	4.2
EV/EBITDA	(x)	4.3	8.8	6.1	5.2	4.2

Source: InnovestX Research

GGC: Biodiesel business remains the key drag

Earnings remain in the doldrums. We expect a weak EBITDA margin for both ME and FA with loss contributions from an associate in the ethanol business continuing to hurt profit in 2H24 and 2025. We believe demand for biodiesel and fatty alcohol will remain weak while product spread will remain pressured by high cost for feedstock CPKO. Product spread for ME will continue to be attacked by high competition in the market.

Extending biofuel mandate provides breathing space for operators. Share price of biofuel was hit in Jul-Aug from the government's intention to terminate the Oil Fuel Fund, which is used to subsidize prices of ethanol made from sugarcane and cassava, as well as biodiesel from palm oil, to promote their use, reduce dependence on fossil fuels and help farmers earn more through incentives like discounts at gas stations and reduced excise taxes. The government has decided to extend the Fund until 2026. This will not solve the problem of persistent oversupply in the industry, which hurts margin.

Unattractive valuation. Although GGC is trading at PBV of only 0.5x (2025F), P/E multiple of >20x and dividend yield of 2.4% in 2025F still look unattractive. We maintain TP of Bt5.20/share, based on 0.5x PBV (2025F).

(Risk factors in Figure 25:)

Figure 24: Forecasts and valuation – GGC

Year to 31 Dec	Unit	2022	2023	2024F	2025F	2026F
Revenue	(Btmn)	25,084	17,719	19,187	20,165	21,177
EBITDA	(Btmn)	1,744	520	760	935	1,119
Core profit	(Btmn)	1,002	(209)	(257)	229	400
Reported profit	(Btmn)	953	(202)	(257)	229	400
Core EPS	(Bt)	0.98	(0.20)	(0.25)	0.22	0.39
DPS	(Bt)	0.50	0.10	0.01	0.11	0.16
P/E, core	(x)	4.7	n.a.	n.a.	20.6	11.8
EPS growth, core	(%)	30.4	n.a.	n.a.	n.a.	74.4
P/BV, core	(x)	0.5	0.5	0.5	0.5	0.5
ROE	(%)	9.9	(2.1)	(2.7)	2.4	4.1
Dividend yield	(%)	10.9	2.2	0.2	2.4	3.4
EV/EBITDA	(x)	1.7	6.4	4.7	3.4	2.4

Source: InnovestX Research

Figure 25: Investment summary

Company	TP (end-2025) & Valuation method	Bullish views	Bearish views	Risks
PTTGC *(OUTPERFORM)*	37.00 (0.6x PBV)	▪ Competitive feedstock cost, mainly ethane from PTT's gas separation plant, will support profitability in the medium term. ▪ Feedstock flexibility was raised by the startup of the olefins retrofit project (ORP) in 2021 and the olefins 2 modification project (OMP) in 2023. ▪ The planned expansion in downstream specialty and recycled products will stabilize profitability in the long term. ▪ Recovery in demand for allnex's products and closure of Vencorex's plants in Europe will boost earnings of performance chemicals.	▪ Lower ethane supply from PTT than expected will be the key drag on olefins EBITDA margin in 2024. More risk has emerged from the government's intention to alter the gas supply allocation to the petrochemical industry. ▪ Investors are concerned about depleting gas reserves in the Gulf of Thailand which will reduce its competitiveness in the longer term. ▪ The company's plan to invest in an olefins cracker in the US continues to undermine investor appetite for the stock. The downcycle of the petrochemical industry has led it to defer this investment in the near term.	▪ Volatile crude oil price and product spread for oil refining and petrochemicals. ▪ Higher feedstock cost due to lower gas feedstock. ▪ More asset impairment. ▪ Regulatory change on GHG emissions and single-use plastics (<3% of capacity). ▪ Change in allocation of domestic gas supply to petrochemicals. ▪ Key ESG risk factors include the environmental impact of its business and how it adapts during the transition to clean energy and circular economy.
IVL *(NEUTRAL)*	26.00 (1.0x PBV)	▪ Demand growth for IVL's products will be resilient in 2025 as it is used for daily necessities, especially that of combined PET and IOD segments. Demand for PET is expected to increase as society returns to normal. ▪ IVL's lead position in the market and its cost competitiveness is expected to sustain long-term margin. More cost optimization will continue to reduce its operating cost in 2024-26 under Project Olympus. ▪ Asset optimization is expected to improve earnings performance in the medium term on better cost management.	▪ Outlook for product spread remains challenging given sluggish demand and supply glut in China. Higher logistics cost for transportation constraints between Asia and western markets could hold up premium for integrated PET spread of ~US$200/t but down from US$400-500/t during the pandemic. ▪ Slow economic growth in Europe (>20% of IVL revenue) remains the key challenge in 2024 with 1.4% GDP growth expected (IMF). IVL's competitive operating cost, production reliability and market position will keep the company afloat despite high energy cost and weak demand outlook. ▪ High energy cost in Europe, though much lower YoY, will continue to hurt IVL's operating cost while cost passthrough will be more difficult amidst weak demand.	▪ Weaker demand than expected. ▪ Less efficiency improvement at new assets than expected. ▪ Changes in regulations on plastic products. ▪ More asset impairments. ▪ Key ESG risk factors include the environmental impact of its business and how it adapts during the transition to clean energy and the circular economy.
GGC *(UNDERPERFORM)*	5.20 (0.5x PBV)	▪ Domestic CPO stock remains lower than 5-year average of 360kt and this will support CPO price in the near term although it is down from historical peak. ▪ Demand for biodiesel is expected to recover to pre-COVID level as economic activities return to normal.	▪ Demand growth for biodiesel could lag a recovery in demand for high-speed diesel after the cut in government mandate of biodiesel content to 7% from 10%. ▪ Earnings contribution from Bio-complex phase 1 was weaker than expected on high feedstock cost. ▪ Past inventory mismanagement may continue to be an overhang on investor appetite for the stock.	▪ Volatile CPO and CPKO prices may cause stock loss and lower product spread. ▪ The government's wobbly policy on biodiesel mandate for domestic high-speed diesel also hurts demand for ME in the medium term.

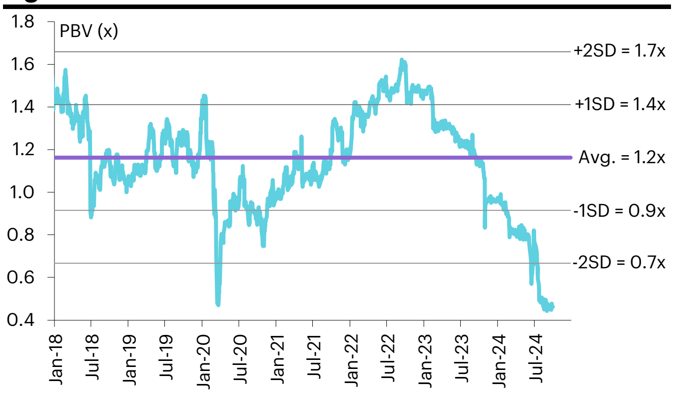
Source: Company data, SET, Thai Institute of Directors, Bloomberg Finance L.P. and InnovestX Research

Figure 26: ESG summary – Petrochemicals

Company	IVL	PTTGC	GGC
2023 SET ESG Ratings	AA	AAA	–
2023 CG Rating	5	5	5
Member of DJSI	Yes	Yes	–
2022 Bloomberg ESG Financial Materiality Score [1/] (Rank in the sector)	5.44 (1/14)	4.53 (2/14)	n.a.
- Environmental Score and Rank	5.16 (1/14)	4.89 (2/14)	n.a.
- Social Score and Rank	7.14 (1/14)	3.16 (2/14)	n.a.
- Governance Score and Rank	4.38 (2/14)	5.46 (1/14)	n.a.
Environmental Issue	▪ IVL is one of the key players in plastic recycling. It has committed to recycle post-consumer PET bale input by 0.75mn tons/year by 2025 and 1.50mn tons/year by 2030. ▪ The company pledged to be Net Zero Carbon by 2050-2070 and announced a US$4.7bn investment to increase biomass feedstock to 2.4mn tons by 2030. ▪ IVL targets 10% renewable electricity consumption by 2025 and 25% by 2030. ▪ New CarbonLite recycling facility in the US and an upcoming facility in Indonesia will recycle 5bn PET bottles annually by 2023. The manufacturing site in Thailand recorded a waste diversion rate of 99%, obtaining Zero Waste to Landfill certification.	▪ PTTGC targets to reduce greenhouse gas (scope 1 and 2) by 20% within 2030 from peak year in 2025 and to achieve net zero emissions and cooperate with suppliers and customers to halve scope 3 emissions within 2050. ▪ It is one of the first organizations in Thailand to implement a Circular Economy by raising public awareness of waste management. ▪ PTTGC continues to invest in renewable energy technology and integrate green initiatives into its business operations, aiming at reducing the consumption of fossil fuels. This includes the installation of solar rooftops. The company also enhanced energy efficiency and reduced energy consumption in production process and offices. PTTGC also joins hand with other companies under PTT group to study opportunities in CCUS in Thailand.	▪ GGC's main product, methyl ester (biodiesel) contributes to reduction in pollution, including the PM2.5 problem or environmental impact. ▪ GGC manages energy under the ISO 50001 standards and implements energy-saving projects to mitigate the impacts of climate change. ▪ GGC manages waste derived from operations by applying the concept of 3Rs (Reduce, Reuse and Recycle) to control the amount of waste, as well as reducing environmental impacts and waste disposal costs. GGC continues towards its goal of Zero-Waste to Landfill.
Social Issue	▪ IVL implemented a global Environment, Health and Safety (EHS) and Sustainability Software Management System. ▪ IVL continue to focus on the execution of the Injury and Illness Prevention Program (I2P2), which systematically analyses incident trends and implements controls to reduce the most frequent types. In 2022, 79% of plants participating in the program improved their TRIR and 66% improved their LTIFR. ▪ The company recorded an overall LTIFR of 0.51 in 2022, down from 0.66, approaching the goal to achieve an LTIFR of less than 0.5 cases per 200,000 man-hours by 2025. ▪ Diversity highlights for 2022 include women in the workforce (25%, up from 22% in 2021), women in leadership roles (35%) and in top management (21.3%). ▪ IVL continues to educate people on PET's circular and recyclable qualities, and the importance of recycling to prevent PET waste mismanagement.	▪ PTTGC set up social enterprises with the goal of generating sustainable income for local communities, leveraging strategy via a Circular Economy, mainly the management of waste for delivery as feedstock to its recycled plastic resin factory under the Community Waste Model project in order to promote end-to-end waste management. ▪ PTTGC employed customer recommendations to enhance the efficiency of its customer relationship management. It continuously maintains customer satisfaction at 93%. ▪ PTTGC continued to emphasize improving employee capability while maintaining work-life balance and safety and occupational health with competitive compensation. Employee turnover rate was 5.65% in 2022, slightly up from 3.83% in 2021 and Lost Time Injury Frequency Rate and Total recordable incident rate was 0 and 0.4 case/1 million man-hours, respectively.	▪ GGC had no complaints from the community regarding its operations. This resulted in a community satisfaction rating of 91.4% in 2022, slightly higher than the previous year, in line with the company's Corporate Social Responsibility Management Strategy. ▪ GGC has formulated a Safety, Health, and Environmental (SHE) 5-year Plan (2020 - 2024) that integrated operations with international safety standards. It focuses on occupational health and safety in three areas, including personal safety, process safety, and off the job safety.
Governance Issue	▪ IVL's board of directors consists of 12 directors, including five independent directors (41.67% of the entire Board) and three non-executive directors. These include three female members (25% of the entire Board). ▪ 100% independent directors on the Nomination, Compensation and Corporate Governance (NCCG) Committee. ▪ IVL has been rated "Excellent" (5 stars) by the Thai Institute of Directors for the tenth consecutive year in 2022.	▪ PTTGC's board of directors (2022) consists of 14 directors, 13 non-executive directors (92.8% of the entire board), 8 independent directors, which exceeds half of the board (57.1% of the entire board), and an executive director. There is one female member (7.1% of the entire board). ▪ The company has been rated "Excellent" (5 stars) by the Thai Institute of Directors in 2022.	▪ GGC's board of directors consists of 11 directors, 10 non-executive directors (90.9% of the entire Board), 6 independent directors, which exceeds half of the board (54.54% of the entire board), and an executive director. This includes one female member (9.1% of the entire board) ▪ The company has been rated "Excellent" (5 stars) by the Thai Institute of Directors for the fifth consecutive year in 2022.

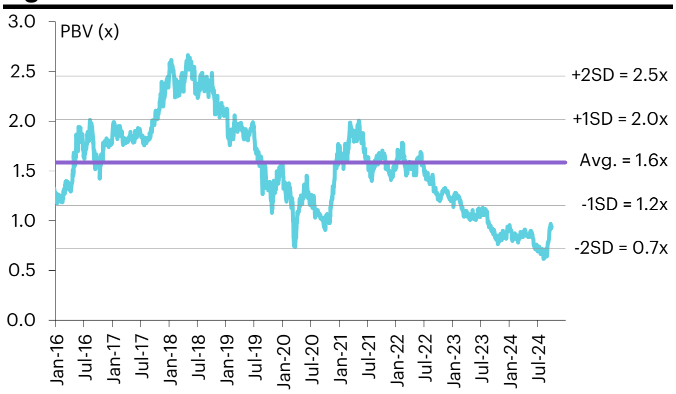
Note: [1/] Scores range between 0-10, with higher scores indicating a better management of material issues.
Source: Company data, SET, Thai Institute of Directors, Bloomberg Finance L.P. and InnovestX Research

Figure 27: PBV band – GGC



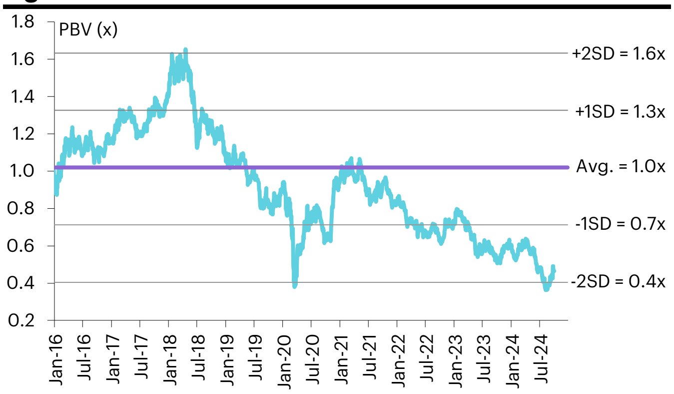
Source: InnovestX Research

Figure 28: PBV band – IVL



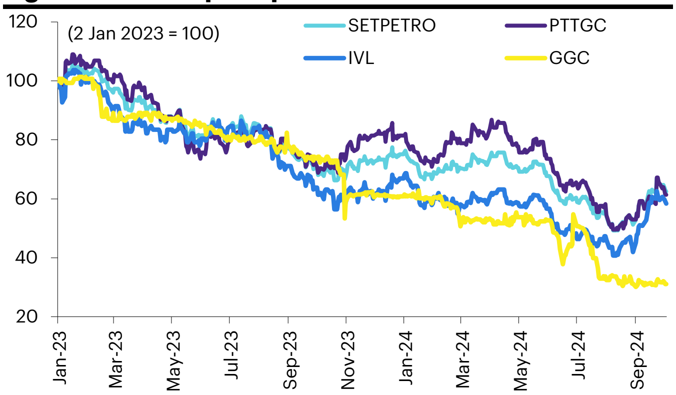
Source: InnovestX Research

Figure 29: PBV band – PTTGC



Source: InnovestX Research

Figure 30: Share price performance



Source: InnovestX Research

Figure 31: Valuation summary – Petrochemicals (price as of Oct 4, 2024)

	Rating	Price (Bt/Sh)	Target (Bt/Sh)	ETR (%)	P/E (x) 23A	24F	25F	EPS growth (%) 23A	24F	25F	P/BV (x) 23A	24F	25F	ROE (%) 23A	24F	25F	Div. Yield (%) 23A	24F	25F	EV/EBITDA (x) 23A	24F	25F
GGC	Underperform	4.60	5.2	13.3	n.m.	n.m.	20.6	n.m.	(23)	n.m.	0.5	0.5	0.5	(2)	(3)	2	2.2	0.2	2.4	6.4	4.7	3.4
IVL	Neutral	23.80	26.0	11.8	343.2	20.4	10.8	(99)	1,583	88	0.8	0.9	0.9	0	4	8	3.9	2.5	4.2	8.8	6.1	5.2
PTTGC	Outperform	29.00	37.0	31.0	n.m.	13.1	10.5	n.m.	n.m.	24	0.5	0.5	0.5	(1)	3	4	3.4	3.4	4.8	8.7	7.0	6.2
Average					**343.2**	**16.7**	**14.0**	**(99)**	**780**	**56**	**0.6**	**0.6**	**0.6**	**(1)**	**2**	**5**	**3.2**	**2.1**	**3.8**	**8.0**	**5.9**	**4.9**

Source: InnovestX Research

Figure 32: Regional peer comparison – petrochemicals

Company	PE (x) 24F	25F	26F	EPS Growth (%) 24F	25F	26F	PBV (x) 24F	25F	26F	ROE (%) 24F	25F	26F	Div. Yield (%) 24F	25F	26F	EV/EBITDA (x) 24F	25F	26F
Sinopec Shanghai Petrochem	186.9	38.3	27.9	112.8	387.5	37.2	1.3	1.1	1.3	0.8	3.1	4.2	0.2	0.6	0.9	24.9	9.2	8.8
China Petroleum & Chemical	12.4	11.6	10.7	15.6	6.7	8.0	1.0	1.0	0.9	8.2	8.6	8.9	5.3	5.6	5.9	5.6	4.4	3.8
PetroChina Co Ltd	6.7	6.6	6.3	4.2	1.6	4.4	0.7	0.7	0.6	10.7	10.5	9.9	7.0	6.7	7.0	3.8	3.8	3.7
Reliance Industries Ltd	24.3	21.0	19.1	12.0	15.6	10.4	2.1	2.0	1.8	9.3	9.8	10.2	0.4	0.4	0.4	12.3	10.9	9.9
Mitsui Chemicals Inc	11.0	8.7	7.6	13.4	26.9	13.4	0.8	0.8	0.7	7.7	9.2	9.8	3.9	4.2	4.4	7.2	6.3	5.8
Asahi Kasei Corp	15.4	11.6	10.4	860.8	32.5	11.9	0.8	0.8	0.7	5.8	6.9	7.3	3.4	3.4	3.5	6.6	5.9	5.5
Sumitomo Chemical Co Ltd	n.m	12.9	8.7	74.6	191.0	48.5	0.7	0.7	0.7	(3.9)	5.3	6.8	2.1	2.5	3.2	n.a.	8.4	7.7
Lotte Chemical Corp	n.m	16.2	10.1	(330.7)	216.4	61.2	0.3	0.3	n.a.	(1.8)	1.6	2.6	3.1	3.5	3.8	15.7	8.5	7.3
Far Eastern New Century Corp	20.7	18.4	15.9	10.2	12.9	15.2	0.8	0.9	0.9	3.7	4.2	5.5	3.9	4.5	5.2	10.8	9.6	8.4
Formosa Chemicals & Fibre	30.2	20.9	17.7	(1.8)	44.7	18.1	0.8	0.8	0.7	2.3	3.2	4.7	2.7	3.8	5.0	17.1	15.2	12.8
Formosa Plastics Corp	39.6	25.2	21.8	16.4	57.1	15.5	1.0	1.0	0.9	2.4	3.3	4.8	2.1	3.1	4.9	34.9	25.0	21.8
Nan Ya Plastics Corp	33.3	20.7	15.2	73.1	60.9	36.4	1.0	0.9	1.0	3.5	5.2	6.3	2.4	4.2	5.0	14.9	12.1	10.0
Formosa Petrochemical Corp	27.0	18.6	16.6	(12.3)	45.6	12.1	1.5	1.5	1.4	6.1	7.8	8.5	3.5	4.4	5.3	14.1	11.0	9.8
Petronas Chemicals Group Bhd	19.7	17.3	16.3	39.2	13.6	6.0	1.1	1.1	1.1	5.3	6.5	5.0	3.1	3.2	3.6	9.5	8.5	8.2
Indorama Ventures PCL	n.m	14.5	9.9	(48.0)	154.0	45.8	0.9	0.9	0.8	(5.3)	6.2	8.6	2.0	2.7	3.3	8.4	7.5	7.0
IRPC PCL	1,680	23.0	9.1	100.7	7,200	152.1	0.5	0.4	0.4	0.7	2.9	4.5	2.6	3.6	4.3	10.4	8.7	7.4
PTT Global Chemical PCL	n.m	12.8	9.3	(314.5)	578.8	37.7	0.5	0.5	0.4	5.9	3.3	4.9	8.2	3.1	4.6	10.0	8.6	7.7
Global Green Chemicals	n.m	17.0	11.5	37.5	316.0	48.1	0.5	0.5	0.5	(1.3)	2.8	4.1	0.2	2.4	3.5	7.1	5.8	4.9
Alpek SA de CV	15.7	10.1	7.2	115.5	54.9	40.0	0.8	0.8	0.8	4.3	7.7	10.8	1.8	8.2	8.2	5.4	4.9	4.3
Eastman Chemical Co	15.0	12.6	11.6	(3.8)	18.8	8.8	2.2	2.1	1.9	15.9	17.2	17.8	3.0	3.1	3.4	9.6	8.8	8.3
Average	**142.5**	**16.9**	**13.2**	**38.7**	**471.8**	**31.5**	**1.0**	**0.9**	**0.9**	**4.0**	**6.3**	**7.3**	**3.0**	**3.7**	**4.3**	**12.0**	**9.2**	**8.1**

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, 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, CPAXTT, CPF, CPI, CPL, 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, OISHI[1], 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, SFP[2], 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, THRE, THREL, TIDLOR, TIPH, TISCO, TK, TKN, TKS, TKT, TLI, TM, TMC, TMD, TMT, TNDT, TNITY, TNL, TNR, TOA, TOG, TOP, TPBI, TPCS, TPIPL, TPIPP, TPS, TQM, TQR, TRT, TRUE, TRV, TSC, TSTE, TSTH, TTA, TTB, TTCL, TTW, TURTLE, TVDH, TVH, TVO, TVT, TWPC, UAC, UBE, UBIS, UKEM, UP, UPF, UPOIC, UV, VCOM, VGI, VIBHA, VIH, VL, WACOAL, WGE, WHA, WHAUP, WICE, WINMED, WINNER, XPG, YUASA, ZEN

Companies with Very Good CG Scoring

2S, A5, AAI, AIE, ALUCON, AMR, APURE, ARIN, AS, ASIA, ASIAN, ASIMAR, ASN, AURA, BR, BSBM, BSRC, BTG, CEN, CGH, CH, CHIC, CI, CIG, CMC, COMAN, CSP, DOD, DPAINT, DV8, EFORL, EKH, 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[3], 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.

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

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

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

Anti-corruption Progress Indicator

Certified (ได้รับการรับรอง)

2S, AAI, ADB, ADVANC, AE, AF, AH, AI, AIE, AIRA, AJ, AKP, AMA, AMANAH, AMATA, AMATAV, AP, APCS, AS, ASIAN, ASK, ASP, ASW, AWC, AYUD, B, BAFS, BAM, BANPU, BAY, BBGI, BBL, BCH, BCP, BCPG, BE8, BEYOND, BGC, BGRIM, BLA, BPP, BRI, BRR, BSBM, BTC, BTG, BTS, BWG, CBG, CEN, CENTEL, CFRESH, CGH, CHEWA, CHOTI, CHOW, CI, CIG, CIMBT, CM, CMC, COM7, CPALL, CPAXTT, CPF, CPI, CPL, CPN, CPW, CRC, CREDIT, CSC, DCC, DELTA, DEMCO, DIMET, DMT, DOHOME, DRT, DUSIT, EA, EASTW, ECF, EGCO, EP, EPG, ERW, ETC, ETE, FNS, FPI, FPT, FSMART, FSX, FTE, GBX, GC, GCAP, GEL, GFPT, GGC, GJS, GLOBAL, GPI, GPSC, GSTEEL, GULF, GUNKUL, HANA, HARN, HEALTH, HENG, HMPRO, HTC, ICC, ICHI, IFS, III, ILINK, ILM, INET, INOX, INSURE, INTUCH, IRPC, ITEL, IVL, JAS, JR, JTS, KASET, KBANK, KCAR, KCC, KCE, KGEN, KGI, KKP, KSL, KTB, KTC, L&E, LANNA, LHFG, LHK, LPN, LRH, M, MAJOR, MALEE, MATCH, MBAX, MBK, MC, MCOT, MEGA, MENA, META, MFC, MFEC, MILL, MINT, MODERN, MONO, MOONG, MSC, MTC, MTI, NATION, NCAP, NEP, NKI, NOBLE, NRF, NWR, OCC, OGC, OR, ORI, OSP, 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, RBF, RML, RS, RWI, S&J, SA, SAAM, SABINA, SAK, SAPPE, SAT, SC, SCB, SCC, SCCC, SCG, SCGP, SCM, SCN, SEAOIL, SE-ED, SELIC, SENA, SENX, SFLEX, SGC, SGP, SIRI, SITHAI, SKR, SM, SMIT, SMPC, SNC, SNP, SORKON, SPACK, SPALI, SPC, SPI, SPRC, SRICHA, SSF, SSP, SSSC, SST, STA, STGT, STOWER, SUSCO, SVI, SVOA, SVT, SYMC, SYNTEC, TAE, TAKUNI, TASCO, TCAP, TCMC, TEGH, TFG, TFI, TFMAMA, TGE, TGH, THANI, THCOM, THIP, THRE, THREL, TIDLOR, TIPCO, TIPH, TISCO, TKN, TKS, TKT, TMD, TMILL, TMT, TNITY, TNL, TNP, TNR, TOG, TOP, TOPP, TPA, TPCS, TPLAS, TRT, TRU, TRUE, TSC, TSI, TSTE, TSTH, TTA, TTB, TTCL, TU, TURTLE, TVDH, TVO, TWPC, UBE, UBIS, UEC, UKEM, UPF, UV, VCOM, VGI, VIBHA, VIH, WACOAL, WHA, WHAUP, WICE, WIIK, XO, YUASA, ZEN, ZIGA

Declared (ประกาศเจตนารมณ์)

ACE, ADVICE, ALT, AMARIN, AMC, ANI, APCO, B52, BLAND, BPS, BYD, CAZ, CHASE, CHG, CV, DEXON, DITTO, ECL, EKH, EVER, FLOYD, GREEN, HL, HUMAN, ICN, IHL, IP, ITC, JDF, JMART, K, KJL, LDC, LH, LIT, MITSIB, MJD, MOSHI, NER, NEX, PLE, PLUS, POLY, PQS, PRI, PRIME, PROEN, PROUD, PRTR, PTC, RT, S, SANKO, SAWAD, SCAP, SCGD, SFT, SHR, SINGER, SINO, SIS, SJWD, SKE, SNNP, SOLAR, SONIC, SUPER, TBN, TMI, TPAC, TPP, TQM, UREKA, VNG, WELL, WIN, WPH, XPG

N/A

24CS, 3K-BAT, A, A5, AAV, ABM, ACAP, ACC, ACG, ADD, AEONTS, AFC, AGE, AHC, AIT, AJA, AKR, AKS, ALLA, ALPHAX, ALUCON, AMARC, AMR, ANAN, AOT, APEX, APO, APP, APURE, AQUA, ARIN, ARIP, ARROW, ASAP, ASEFA, ASIA, ASIMAR, ASN, ATP30, AU, AUCT, AURA, BA, BBIK, BC, BCT, BDMS, BEAUTY, BEM, BGT, BH, BIG, BIOTEC, BIS, BIZ, BJC, BJCHI, BKD, BKGI, BKIH, BLC, BLESS, BLISS, BM, BOL, BR, BROCK, BSM, BSRC, BTNC, BTW, BUI, BVG, CCET, CCP, CEYE, CFARM, CGD, CH, CHAO, CHARAN, CHAYO, CHIC, CHO, CITY, CIVIL, CK, CKP, CMAN, CMO, CMR, CNT, COCOCO, COLOR, COMAN, CPANEL, CPH, CPR, CPT, CRANE, CRD, CSP, CSR, CSS, CTW, CWT, D, DCON, DDD, DHOUSE, DOD, DPAINT, DTCENT, DTCI, DV8, EASON, EE, EFORL, EMC, ESTAR, ETL, EURO, F&D, FANCY, FE, FM, FMT, FN, FORTH, FTI, FVC, GABLE, GENCO, GFC, GIFT, GL, GLAND, GLOCON, GLORY, GRAMMY, GRAND, GSC, GTB, GTV, GYT, HFT, HPT, HTECH, HYDRO, I2, IIG, IMH, IND, INGRS, INSET, IRC, IRCP, IT, ITD, ITNS, ITTHI, J, JAK, JCK, JCKH, JCT, JKN, JMT, JPARK, JSP, JUBILE, KAMART, KBS, KC, KCG, KCM, KDH, KEX, KIAT, KISS, KK, KKC, KLINIQ, KOOL, KTIS, KTMS, KUMWEL, KUN, KWC, KWI, KWM, KYE, LALIN, LEE, LEO, LOXLEY, LPH, LST, LTS, MAGURO, MANRIN, MASTER, MATI, MCA, M-CHAI, MCS, MDX, MEB, METCO, MGC, MGI, MGT, MICRO, MIDA, MK, ML, MORE, MST, MTW, MUD, MVP, NAM, NAT, NC, NCH, NCL, NCP, NDR, NEO, NETBAY, NEW, NEWS, NFC, NL, NNCL, NOK, NOVA, NPK, NSL, NTSC, NTV, NUSA, NV, NVD, NYT, OHTL, OKJ, ONEE, ORN, PACO, PAF, PANEL, PCC, PCE, PEACE, PEER, PERM, PF, PHG, PICO, PIN, PJW, PLT, PMC, PMTA, POLAR, PORT, PPM, PRAKIT, PRAPAT, PRECHA, PRIN, PRO, PSG, PSP, PTL, QTCG, RAM, RCL, READY, RICHY, RJH, ROCK, ROCTEC, ROH, ROJNA, RP, RPC, RPH, RSP, S11, SABUY, SAF, SAFARI, SAFE, SALEE, SAM, SAMART, SAMCO, SAMTEL, SAUCE, SAV, SAWANG, SBNEXT, SCI, SCL, SCP, SDC, SE, SEAFCO, SECURE, SEI, SGF, SHANG, SIAM, SICT, SIMAT, SISB, SK, SKN, SKY, SLM, SLP, SMART, SMD, SMK, SMT, SO, SPA, SPCG, SPG, SPREME, SPVI, SQ, SR, SRS, SSC, STANLY, STC, STEC, STECH, STHAI, STI, STP, STPI, STX, SUC, SUN, SUTHA, SVR, 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, TMW, TNDT, TNH, TNPC, TOA, TPBI, TPCH, TPIPL, TPIPP, TPL, TPOLY, TPS, TQR, TR, TRC, TRITN, TRP, TRUBB, TRV, TSE, TTI, TTT, TTW, TVH, TVT, TWP, TWZ, TYCN, UAC, UBA, UMI, UMS, UNIQ, UOBKH, UP, UPOIC, UTP, UVAN, VARO, VL, VPO, VRANDA, W, WARRIX, WAVE, WFX, WGE, WINDOW, WINMED, WINNER, WORK, 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 June 30, 2024) are categorised into: companies that have declared their intention to join CAC, and companies certified by CAC.