

HOLD (Unchanged)

TP: Bt 33.00 (Unchanged)

25 APRIL 2024

Change in Numbers

Downside : 10.8%

PTT Global Chemical Pcl (PTTGC TB)

Longer road to recovery

We maintain our HOLD rating on PTTGC with an unchanged DCF-based TP of Bt33. While we anticipate a profit improvement in the coming year, ROE remains relatively modest at 1.6% to 5.4% in 2024-26F. This looks justified by its low P/BV ratio of 0.6x.

**YUPAPAN POLPORNPRASERT**

662-779-9110

yupapan.pol@thanachartsec.co.th

Maintain HOLD; fairly valued

We maintain our HOLD recommendation on PTTGC with an unchanged DCF-based TP of Bt33. We have reduced our profit estimates by 4-16% over 2024-2026F due to our lower chemical profit assumptions. However, our TP is unchanged due to our lower LNG assumption, which reduces the impact of the single gas pool price. Although we anticipate a limited improvement in olefin profits over the next six months, we still expect earnings to rebound this year, driven by a higher aromatic spread and increased availability of ethane gas. However, its earnings base remains very low, resulting in an ROE of only 1.6-5.4% for 2024-26F. This justifies its low P/BV of 0.6x, in our view.

Olefin outlook remains challenging

Olefin spreads remain depressed, and we cut our HDPE-naphtha spread assumptions by 7-12% to US\$380/420/460/tonne for 2024-26F vs. US\$386/tonne in 2023. Despite a decrease in supply growth, the market continues to be significantly over-supplied due to substantial capacity expansions in recent years and sluggish demand growth. We expect that global polyethylene (PE) utilization rates will stay around 80.4% this year, with no y-y change, and only gradually recover to 81-82% by 2025-26F, compared to an average of 87% during 2019-21. The outlook for PP (polypropylene) is even bleaker, as global utilization rates are projected to remain below 80% until 2026. These persistently low utilization rates will likely keep profit margins at low levels, as any increase in demand would lead to higher production rates and more supply entering the market.

Still expect an earnings turnaround

Despite weak olefin spreads, we anticipate that PTTGC's profits will rebound this year, driven by an increasing aromatic spread resulting from lower supply growth, reduced maintenance activities, and a higher proportion of a cheaper gas feedstock mix. We project that PTTGC's gas feedstock mix will increase to 40% in 2024F from 35% in 2023, primarily due to the ramp-up of the Erawan field.

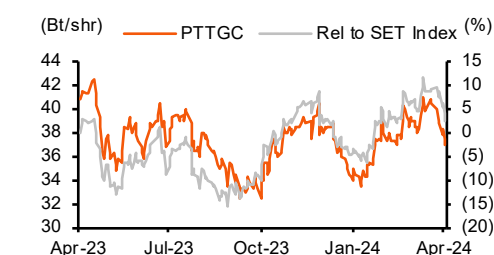
Core profit improvement in 1Q24F

We expect PTTGC to report a 1Q24F net loss of Bt353m (down from net profits of Bt82m in 1Q23 and Bt5.1bn in 4Q23). The decline would be from i) an FX loss of Bt1.8bn, and ii) the absence of three extra gains of a combined Bt5.8bn seen in 4Q23, resulting from selling shares of GC Logistics (GCL), a US bond buyback, and completion of Thai Tank Terminal's (TTT) fair value assessment. Excluding the extra items, PTTGC's operating earnings should improve y-y and q-q thanks to better olefins, aromatics, and Allnex contributions. However, we expect its refinery margin to soften q-q due to a lower diesel spread.

COMPANY VALUATION

Y/E Dec (Bt m)	2023A	2024F	2025F	2026F
Sales	616,635	623,049	613,731	618,112
Net profit	999	4,225	8,937	16,281
Consensus NP	—	7,564	13,685	15,430
Diff frm cons (%)	—	(44.1)	(34.7)	5.5
Norm profit	(2,753)	4,705	9,434	16,281
Prev. Norm profit	—	5,598	9,934	16,963
Chg frm prev (%)	—	(15.9)	(5.0)	(4.0)
Norm EPS (Bt)	(0.6)	1.0	2.1	3.6
Norm EPS grw (%)	na	na	100.5	72.6
Norm PE (x)	na	35.5	17.7	10.2
EV/EBITDA (x)	12.9	10.5	9.1	6.9
P/BV (x)	0.6	0.6	0.6	0.5
Div yield (%)	2.0	2.0	2.1	3.9
ROE (%)	na	1.6	3.2	5.4
Net D/E (%)	73.9	71.0	62.8	52.9

PRICE PERFORMANCE



COMPANY INFORMATION

Price as of 25-Apr-24 (Bt)	37.00
Market Cap (US\$ m)	4,504.7
Listed Shares (m shares)	4,508.8
Free Float (%)	54.8
Avg Daily Turnover (US\$ m)	11.2
12M Price H/L (Bt)	42.50/32.50
Sector	PETRO
Major Shareholder	PTT Pcl 45.18%

Sources: Bloomberg, Company data, Thanachart estimates

ESG Summary Report P7

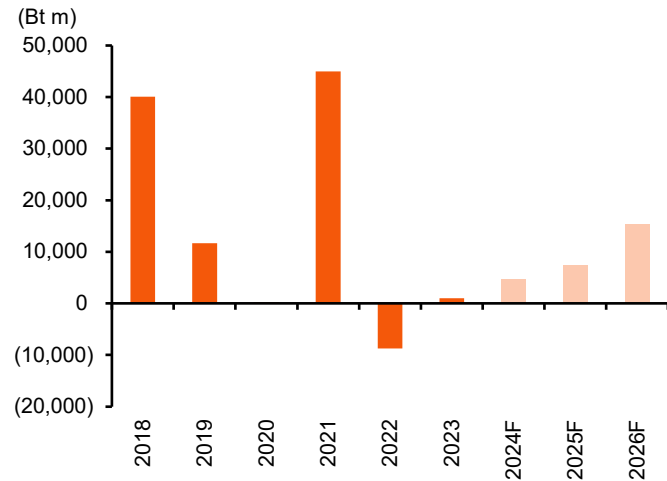


Maintain HOLD, fairly valued

Low P/BV justified by low ROE

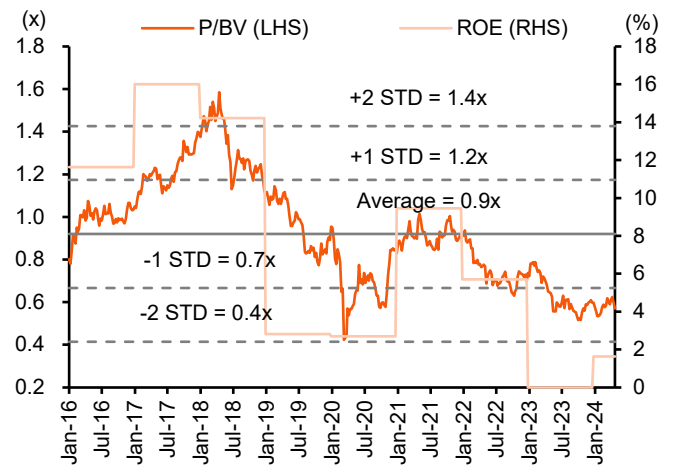
We maintain our HOLD recommendation on PTT Global Chemical Plc (PTTGC) with an unchanged DCF-based TP of Bt33. Although we anticipate a limited improvement in olefin profits in the next six months, we still expect earnings to rebound this year, driven by a higher aromatic spread and the increased availability of ethane gas. However, the company's earnings base remains very low, resulting in an ROE of only 1.6-5.4% for 2024-26F. This justifies its low P/BV of 0.6x, in our view.

Ex 1: Profit Remains Low Despite Turnaround This Year



Sources: Company data, Thanachart estimates

Ex 2: P/BV Vs. ROE



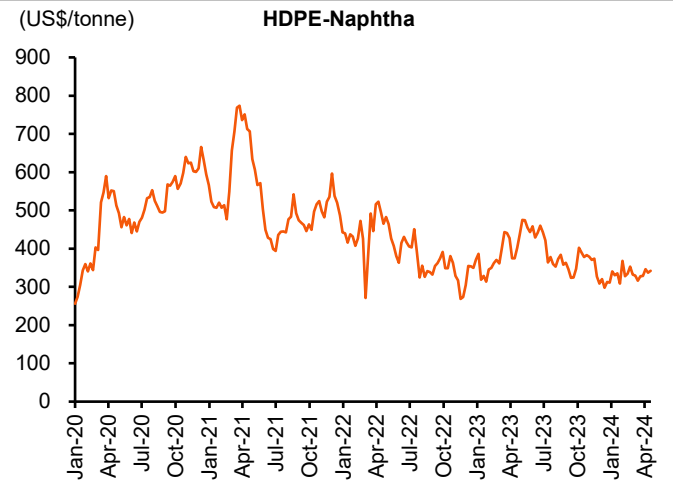
Sources: Bloomberg, Thanachart estimates

Olefin outlook remains challenging

PE utilization unchanged in 2024F despite lower capacity growth

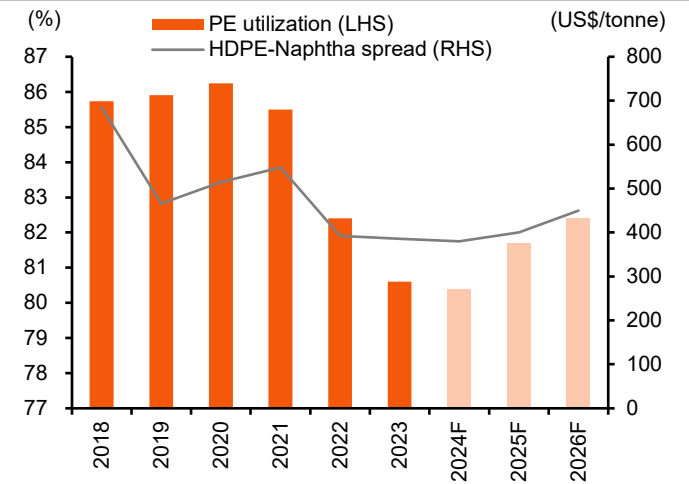
Olefin spreads remain depressed, and we cut our HDPE-naphtha spread assumptions by 7-12% to US\$380/420/460 per tonne for 2024-26F vs. US\$386/t in 2023. Our longer-term forecast of US\$500/tonne is unchanged. Despite a decrease in supply growth, the market continues to be significantly oversupplied due to considerable capacity expansions in recent years and sluggish demand growth. We expect global polyethylene (PE) utilization rates to stay at around 80.4% this year, with no y-y change, and only gradually recover to 81-82% by 2025-26F, compared to an average of 87% during 2019-21. The outlook for PP (polypropylene) is even bleaker, as global utilization rates are projected to remain below 80% until 2026. These persistently low utilization rates will likely keep profit margins at low levels, as any increase in demand would lead to higher production rates and more supply entering the market.

Ex 3: Trough Spread Dragging Out



Source: Bloomberg

Ex 4: PE Utilization Rate Vs. Spread



Sources: Company data, Thanachart estimates

Cutting our petrochemical spread assumptions

We have reduced our reported profit estimates by 4-17.5% over 2024-26F following our lower chemical spread assumptions. However, our TP is unchanged due to our lower LNG assumption, which reduces the impact of the single gas pool price.

Ex 5: Earning Revisions

	2022	2023	2024F	2025F	2025F
Reported profit (Bt m)					
- New	(8,752)	999	4,225	8,937	16,281
- Old			5,124	9,444	16,963
- Change (%)		na	(17.5)	(5.4)	(4.0)
Norm profit (Bt m)					
- New	17,381	(2,753)	4,705	9,434	16,281
- Old			5,598	9,934	16,963
- Change (%)			(15.9)	(5.0)	(4.0)

Sources: Company data, Thanachart estimates

Ex 6: Key Product Spread Changes

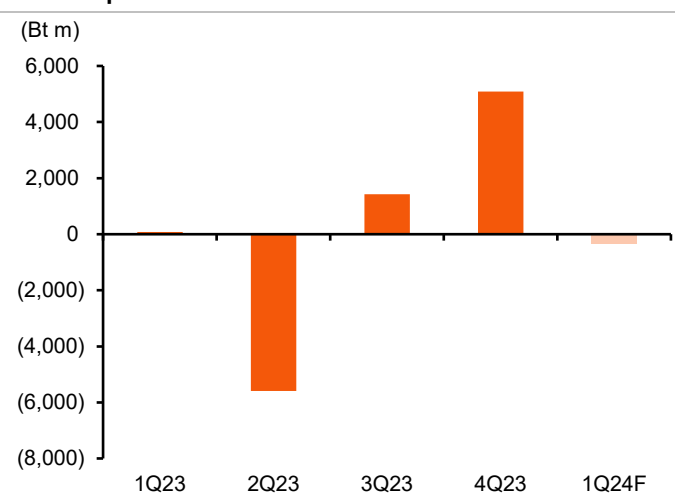
	2022	2023	2024F	2025F	2025F
New (US\$/tonne)					
HDPE - Naphtha	392	386	380	420	460
LLDPE - Naphtha	414	398	390	430	470
LDPE - Naphtha	650	575	380	420	460
Old (US\$/tonne)					
HDPE - Naphtha			430	450	500
LLDPE - Naphtha			440	460	510
LDPE - Naphtha			430	450	500
Change (%)					
HDPE - Naphtha			(11.6)	(6.7)	(8.0)
LLDPE - Naphtha			(11.4)	(6.5)	(7.8)
LDPE - Naphtha			(11.6)	(6.7)	(8.0)

Sources: Bloomberg, Thanachart estimates

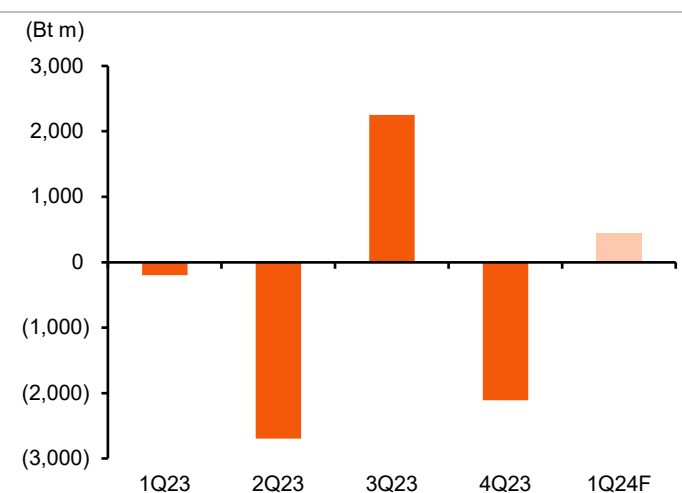
Core profit improvement in 1Q24F

We expect a 1Q24 core profit of Bt447m vs. a loss of Bt2bn in 4Q23

We estimate PTTGC to report a 1Q24F net loss of Bt353m (dropping from net profits of Bt82m in 1Q23 and Bt5.1bn in 4Q23). The decline would be from i) an FX loss of Bt1.8bn, and ii) the absence of three extra gains of a combined Bt5.8bn seen in 4Q23, resulting from selling shares of GC Logistics (GCL), a US bond buyback, and the completion of Thai Tank Terminal's (TTT) fair value assessment. Excluding the extra items, PTTGC's operating earnings should improve YoY and QoQ thanks to better olefins, aromatics, and Allnex contributions. However, we expect the refinery margin to trend down q-q due to a lower diesel spread.

Ex 7: Reported Profit

Sources: Company data, Thanachart estimates

Ex 8: Core Profit

Sources: Company data, Thanachart estimates

Ex 9: 12-month DCF-based TP Calculation, Using A Base Year Of 2024F

(Bt m)	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	Terminal Value
EBITDA & equity income	36,144	39,411	48,538	48,772	48,222	46,395	44,568	43,681	43,681	43,681	43,681	43,681	
Free cash flow	20,497	31,278	36,485	37,107	36,202	34,973	33,567	33,030	32,979	33,108	33,051	33,177	411,657
PV of free cash flow	18,940	26,481	28,423	26,599	23,872	21,219	18,740	16,403	15,003	13,800	12,623	11,610	144,052
Risk-free rate (%)	2.5												
Market risk premium (%)	8.0												
Beta	1.2												
WACC (%)	8.2												
Terminal growth (%)	1.0												
Enterprise value - add investments	377,766												
Net debt	211,520												
Minority interest	7,151												
Equity value	159,094												
# of shares (m)	4,509												
Equity value / share	35.0												
Political discount	5%												
Equity value/share (Bt)	33.3												

Source: Thanachart estimates

Valuation Comparison**Ex 10: Comparison With Regional Peers**

Name	BBG code	Country	EPS growth		PE		P/BV		EV/EBITDA		Div yield	
			24F (%)	25F (%)	24F (x)	25F (x)	24F (x)	25F (x)	24F (x)	25F (x)	24F (%)	25F (%)
Sinopec Shanghai	338 HK	Hong Kong	na	32.6	11.7	8.9	0.4	0.3	8.0	6.7	1.5	2.8
Sinopec Yizheng	1033 HK	Hong Kong	23.1	31.3	16.3	12.4	0.9	0.7	5.0	5.3	na	na
AKR Corporindo	AKRA IJ	Indonesia	17.0	(1.7)	11.2	11.4	2.8	2.6	8.0	8.1	5.9	5.6
Reliance Industries Ltd	RIL IN	India	2.4	16.4	na	na	na	na	13.9	12.3	na	na
LG Chem	051910 KS	South Korea	23.3	93.3	15.1	7.8	0.8	0.7	6.0	4.1	1.5	2.2
SK Energy	096770 KS	South Korea	81.2	71.6	9.7	5.6	0.5	0.4	6.8	4.9	2.7	2.9
Petronas Chemicals Group	PCHEM MK	Malaysia	24.2	21.9	20.5	16.9	1.3	1.3	10.3	8.9	2.7	3.3
Formosa Chemical	1326 TT	Taiwan	20.9	29.9	27.8	21.4	0.9	1.0	15.6	13.0	2.5	3.6
Far Eastern New Century	1402 TT	Taiwan	7.6	18.9	19.3	16.2	0.7	0.7	11.4	10.8	3.8	4.2
IRPC Pcl *	IRPC TB *	Thailand	124.0	104.6	66.5	32.5	0.5	0.5	12.4	11.0	0.0	0.6
Indorama Ventures *	IVL TB *	Thailand	111.2	100.4	26.6	13.3	0.8	0.7	7.1	6.1	1.1	2.3
PTT Global Chemical *	PTTGC TB *	Thailand	270.9	100.5	35.5	17.7	0.6	0.6	10.5	9.1	2.0	2.1
Siam Cement *	SCC TB *	Thailand	34.0	31.6	15.0	11.4	0.8	0.8	18.3	9.4	3.3	4.4
TPI Polene	TPIPL TB	Thailand	na	0.0	7.9	7.9	0.5	0.4	10.2	10.5	7.3	7.2
Average			84.2	53.3	25.4	15.9	0.7	0.7	11.4	9.3	2.8	3.4

Sources: Bloomberg, * Thanachart estimates

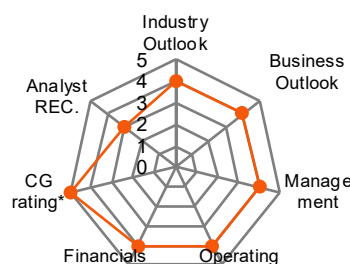
Based on 25 April 2024 closing prices

COMPANY DESCRIPTION

PTT Global Chemical Pcl (PTTGC) became a fully integrated petrochemical and refining company after the amalgamation of PTTCH (PTT Chemicals) and PTTAR (PTT Aromatics & Refining) in late 2011. The company produces olefins and derivatives, and its key products are ethylene, propylene, HDPE, LDPE, LLDPE, and MEG. Together, the olefins value chain made up about half of 2022 EBITDA. PTTGC is one of the few gas-based crackers in Asia, and it has a competitive cost structure compared with other naphtha-based crackers. The company also has fully integrated refinery and aromatics plants that produce mainly paraxylene and benzene. The company also recently moved into the specialty coating business with its investment in Allnex Holdings GmbH (Allnex).

Source: Thanachart

COMPANY RATING



Rating Scale

Excellent	5
Good	4
Fair	3
Weak	2
Very Weak	1
None	0

Source: Thanachart; *CG Rating

THANACHART'S SWOT ANALYSIS

S — Strength

- It is a low-cost producer that is leveraging its gas-based and flexible cracker.
- Large economies of scale due to synergies from its fully integrated facilities.
- Being a PTT group company helps ensure feedstock and raises its franchise value.

O — Opportunity

- Significant growth potential in terms of chemical demand in the region.
- Value enhancement from synergies, debottlenecking of its units, and further downstream integration.
- M&A activity that could lead to higher returns to investors.

W — Weakness

- Cyclical business with volatile earnings and cash flow.
- Potential impact of stock losses (due mainly to oil price movements) on earnings.
- Reliance on bulk chemicals and limited exposure to specialty chemicals.

T — Threat

- Depleting low-cost domestic gas supply would reduce its competitive edge of being a low-cost producer.
- Low oil prices erode its competitive advantage.
- Increasing competition from low-cost producers in the Middle East and US-based crackers.
- Overpaying for acquisitions and limited synergies.

CONSENSUS COMPARISON

	Consensus	Thanachart	Diff
Target price (Bt)	40.49	33.00	-19%
Net profit 24F (Bt m)	7,564	4,225	-44%
Net profit 25F (Bt m)	13,685	8,937	-35%
Consensus REC	BUY: 11	HOLD: 11	SELL: 4

HOW ARE WE DIFFERENT FROM THE STREET?

- Our 2024-25F net profits are lower than the Bloomberg consensus estimates, likely due to us having weaker chemical spread assumptions.
- Our DCF-based TP is consequently lower than the Street's.

Sources: Bloomberg consensus, Thanachart estimates

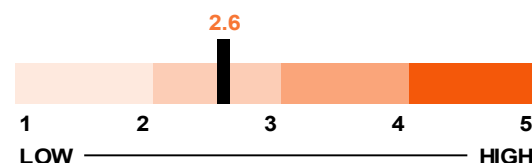
RISKS TO OUR INVESTMENT CASE

- Higher-than-expected oil prices and/or chemical spreads would be the key upside risk to our call.
- Hiccups in the gas supply from its parent company PTT or any unplanned outages at the complex would be a downside risk.

Source: Thanachart

PTTGC is a large-scale olefins cracker with 35-45% of olefins intake running on ethane gas and 55-65% on naphtha/LPG. It also has 145kbd of oil refinery capacity. Our ESG score for PTTGC is 2.6, at the low end among our coverage. The firm has clear intentions and targets to cut carbon emissions, but its score is dragged down by its high energy intensity and an information disclosure level that could be improved.

Thanachart ESG Rating



	SET ESG Index	SET ESG (BBB-AAA)	DJSI Index	MSCI (CCC-AAA)	ESG Book (0-100)	Refinitiv (0-100)	S&P Global (0-100)	Moody's (0-100)	CG Rating (0-5)
PTTGC	YES	AAA	YES	A	46.78	51.53	88.00	49.0	5.0

Sources: SETTRADE, SET ESG Index, SET ESG Rating, The Dow Jones Industrial Average (DJSI), MSCI ESG Research LLC, ESG Book, Refinitiv ESG Information, S&P Global Market Intelligence, Moody's ESG Solutions, Thai IOD (CG rating)

Note: Please see third party on "terms of use" toward the back of this report.

Factors Our Comments

ENVIRONMENT

- Environmental Policies & Guidelines
- Energy Management
- Carbon Management
- Water Management
- Waste Management

- PTTGC released 8.6m tonnes of CO2 equivalent in 2022, down 4% from 2022. We think this was attributable to weak chemical demand. Its carbon emission intensity also increased by 5% to 437kg/BOE (barrels of oil equivalent) of CO2. We believe the increases were due to falling gas and higher naphtha feedstock use in its petrochemical production. However, PTTGC emitted less carbon than the average of 476kg/BOE of CO2 for the Thai petrochemical industry, which mainly uses naphtha.
- PTTGC aims for its greenhouse gas (GHG) emissions to peak in 2025. It has a target to cut GHG emissions by 20% from the 2020 level by 2030. However, we believe this is still pending the final investment decision on a US shale gas cracker project, which is undergoing a feasibility study. PTTGC has an interest in recycling projects.
- The firm also has an interest in carbon capture and storage (CCS) investment, which we expect to be a collaboration among the PTT group given the high investment costs.

SOCIAL

- Human Rights
- Staff Management
- Health & Safety
- Product Safety & Quality
- Social Responsibility

- PTTGC encourages a culture of safety with a total recordable injury rate (TRIR) of employees and contractors of only 0.4 and 0.63 cases per 1m man hours, respectively.
- PTTGC's staff turnover rate was low at 5.65% in 2022. It invested Bt112m in 2022 on staff training that led to 37.92 training hours/person/year. It also focuses on the well-being of employees such as via the implementation of its Work From Home (WFH) policy as normal work behavior, providing insurance for employees and families, and offering an Employee Assistance Program (EAP) to boost the quality of life and help counsel employees with personal issues.
- PTTGC in 2022 received a high satisfaction rate of over 90% from customers, suppliers and employees as well as communities.

GOVERNANCE & SUSTAINABILITY

- Board
- Ethics & Transparency
- Business Sustainability
- Risk Management
- Innovation

- PTTGC has a 13-member board of directors (BOD) with seven being independent directors at a two-year average tenure.
- There are many related-party transactions with its parent company, PTT. Gas (ethane and propane) feedstock is supplied by PTT. Pricing is on a net-back or equal-IRR basis with PTT's gas separation plant business.
- We see room for improvement in more timely information disclosure, such as the performance of its US\$4.75bn Allnex acquisition and regarding past supply outages.
- We see two areas of balance sheet risk. The first is a potential asset impairment from the high investment cost of Allnex. Another risk is a potential debt increase if PTTGC decides to invest in a US ethane cracker, which would require substantial investment.

Sources: Company data, Thanachart

INCOME STATEMENT

FY ending Dec (Bt m)	2022A	2023A	2024F	2025F	2026F
Sales	678,267	616,635	623,049	613,731	618,112
Cost of sales	631,848	587,414	588,507	576,397	571,223
Gross profit	46,419	29,221	34,542	37,334	46,889
% gross margin	6.8%	4.7%	5.5%	6.1%	7.6%
Selling & administration expenses	31,457	26,824	27,103	26,698	26,888
Operating profit	14,962	2,397	7,439	10,636	20,000
% operating margin	2.2%	0.4%	1.2%	1.7%	3.2%
Depreciation & amortization	26,646	27,504	28,705	28,775	28,538
EBITDA	41,608	29,901	36,144	39,411	48,538
% EBITDA margin	6.1%	4.8%	5.8%	6.4%	7.9%
Non-operating income	7,526	8,001	8,001	8,001	8,001
Non-operating expenses	0	0	0	0	0
Interest expense	(9,170)	(10,708)	(9,847)	(8,135)	(7,539)
Pre-tax profit	13,318	(310)	5,593	10,502	20,463
Income tax	(2,272)	1,352	1,023	2,001	5,116
After-tax profit	15,590	(1,662)	4,570	8,501	15,347
% net margin	2.3%	-0.3%	0.7%	1.4%	2.5%
Shares in affiliates' Earnings	2,908	(1,225)	0	800	800
Minority interests	(1,117)	134	135	133	134
Extraordinary items	(26,134)	3,752	(480)	(497)	0
NET PROFIT	(8,753)	999	4,225	8,937	16,281
Normalized profit	17,381	(2,753)	4,705	9,434	16,281
EPS (Bt)	(1.9)	0.2	0.9	2.0	3.6
Normalized EPS (Bt)	3.9	(0.6)	1.0	2.1	3.6

We expect a turnaround in 2024-25F earnings, but there could be a risk

BALANCE SHEET

FY ending Dec (Bt m)	2022A	2023A	2024F	2025F	2026F
ASSETS:					
Current assets:	172,009	186,874	211,448	208,946	213,855
Cash & cash equivalent	31,963	46,249	70,000	70,000	75,000
Account receivables	45,254	57,761	58,361	57,489	57,899
Inventories	76,619	68,517	68,645	67,232	66,629
Others	18,173	14,347	14,442	14,226	14,327
Investments & loans	81,236	74,836	74,836	74,836	74,836
Net fixed assets	296,321	285,860	278,846	264,998	251,080
Other assets	170,399	171,435	171,435	171,435	171,435
Total assets	719,965	719,005	736,566	720,216	711,207
LIABILITIES:					
Current liabilities:	103,976	125,841	143,874	202,483	121,265
Account payables	57,613	71,163	71,295	69,828	69,202
Bank overdraft & ST loans	4,318	2,203	0	0	0
Current LT debt	9,341	18,915	40,000	100,000	20,000
Others current liabilities	32,704	33,560	32,578	32,655	32,063
Total LT debt	263,890	243,934	241,520	160,846	221,737
Others LT liabilities	53,272	53,048	53,436	52,980	53,195
Total liabilities	421,138	422,824	438,831	416,309	396,197
Minority interest	7,528	7,287	7,151	7,018	6,884
Preferreds shares	0	0	0	0	0
Paid-up capital	45,088	45,088	45,088	45,088	45,088
Share premium	36,937	36,937	36,937	36,937	36,937
Warrants	0	0	0	0	0
Surplus	(3,299)	(5,775)	(5,775)	(5,775)	(5,775)
Retained earnings	212,574	212,644	214,334	220,639	231,876
Shareholders' equity	291,300	288,895	290,584	296,889	308,126
Liabilities & equity	719,965	719,005	736,566	720,216	711,207

Sources: Company data, Thanachart estimates

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2022A	2023A	2024F	2025F	2026F
Earnings before tax	13,318	(310)	5,593	10,502	20,463
Tax paid	1,753	(859)	(1,300)	(1,874)	(5,179)
Depreciation & amortization	26,646	27,504	28,705	28,775	28,538
Chg In working capital	(12,276)	9,145	(596)	818	(434)
Chg In other CA & CL / minorities	(4,265)	9,842	(853)	965	171
Cash flow from operations	25,176	45,321	31,549	39,186	43,558
Capex	(21,925)	(17,042)	(21,692)	(14,926)	(14,620)
Right of use	(14,235)	142	0	0	0
ST loans & investments	(532)	531	54	0	0
LT loans & investments	(6,530)	6,400	0	0	0
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	(16,235)	(5,955)	(92)	(953)	215
Cash flow from investments	(59,457)	(15,925)	(21,730)	(15,879)	(14,405)
Debt financing	9,438	(11,706)	16,468	(20,674)	(19,109)
Capital increase	0	0	0	0	0
Dividends paid	(11,746)	(1,269)	(2,536)	(2,633)	(5,044)
Warrants & other surplus	(6,443)	(2,136)	0	0	0
Cash flow from financing	(8,751)	(15,110)	13,932	(23,307)	(24,153)
Free cash flow	3,251	28,279	9,857	24,260	28,938

We expect positive FCF from limited capex

VALUATION

FY ending Dec	2022A	2023A	2024F	2025F	2026F
Normalized PE (x)	9.6	na	35.5	17.7	10.2
Normalized PE - at target price (x)	8.6	na	31.6	15.8	9.1
PE (x)	na	167.0	39.5	18.7	10.2
PE - at target price (x)	na	148.9	35.2	16.6	9.1
EV/EBITDA (x)	9.9	12.9	10.5	9.1	6.9
EV/EBITDA - at target price (x)	9.5	12.3	10.0	8.6	6.5
P/BV (x)	0.6	0.6	0.6	0.6	0.5
P/BV - at target price (x)	0.5	0.5	0.5	0.5	0.5
P/CFO (x)	6.6	3.7	5.3	4.3	3.8
Price/sales (x)	0.2	0.3	0.3	0.3	0.3
Dividend yield (%)	2.7	2.0	2.0	2.1	3.9
FCF Yield (%)	1.9	17.0	5.9	14.5	17.3
(Bt)					
Normalized EPS	3.9	(0.6)	1.0	2.1	3.6
EPS	(1.9)	0.2	0.9	2.0	3.6
DPS	1.0	0.8	0.8	0.8	1.4
BV/share	64.6	64.1	64.4	65.8	68.3
CFO/share	5.6	10.1	7.0	8.7	9.7
FCF/share	0.7	6.3	2.2	5.4	6.4

Sources: Company data, Thanachart estimates

FINANCIAL RATIOS

FY ending Dec	2022A	2023A	2024F	2025F	2026F
Growth Rate					
Sales (%)	45.8	(9.1)	1.0	(1.5)	0.7
Net profit (%)	na	na	323.0	111.5	82.2
EPS (%)	na	na	323.0	111.5	82.2
Normalized profit (%)	(38.6)	na	na	100.5	72.6
Normalized EPS (%)	(38.6)	na	na	100.5	72.6
Dividend payout ratio (%)	(51.5)	338.5	40.0	40.0	40.0
Operating performance					
Gross margin (%)	6.8	4.7	5.5	6.1	7.6
Operating margin (%)	2.2	0.4	1.2	1.7	3.2
EBITDA margin (%)	6.1	4.8	5.8	6.4	7.9
Net margin (%)	2.3	(0.3)	0.7	1.4	2.5
D/E (incl. minor) (x)	0.9	0.9	0.9	0.9	0.8
Net D/E (incl. minor) (x)	0.8	0.7	0.7	0.6	0.5
Interest coverage - EBIT (x)	1.6	0.2	0.8	1.3	2.7
Interest coverage - EBITDA (x)	4.5	2.8	3.7	4.8	6.4
ROA - using norm profit (%)	2.4	na	0.6	1.3	2.3
ROE - using norm profit (%)	5.7	na	1.6	3.2	5.4
DuPont					
ROE - using after tax profit (%)	5.1	na	1.6	2.9	5.1
- asset turnover (x)	0.9	0.9	0.9	0.8	0.9
- operating margin (%)	3.3	na	2.5	3.0	4.5
- leverage (x)	2.4	2.5	2.5	2.5	2.4
- interest burden (%)	59.2	(3.0)	36.2	56.3	73.1
- tax burden (%)	117.1	na	81.7	80.9	75.0
WACC (%)	8.2	8.2	8.2	8.7	8.7
ROIC (%)	3.4	0.4	1.2	1.7	3.1
NOPAT (Bt m)	17,514	2,397	6,079	8,610	15,000
invested capital (Bt m)	536,886	507,698	502,104	487,735	474,863

Sources: Company data, Thanachart estimates

Net D/E remains relatively low

ESG Information - Third Party Terms

www.Settrade.com

SETTRADE: You acknowledge that the use of data, information or service displayed and/or contained in this website may require third party's data, content or software which is subject to the terms of third party provider. By accessing and/or using of such certain data, you acknowledge and agree to comply with and be bound by the applicable third party terms specified below.

ESG Scores by Third Party data from www.SETTRADE.com

1. MSCI (CCC- AAA)
2. ESG Book (0-100)
3. Refinitiv (0-100)
4. S&P Global (0-100)
5. Moody's ESG Solutions (0-100)
6. SET ESG Rating (BBB-AAA)

SETESG Index (SETESG)

The SETESG Index reflects the price movement of stock of companies that have sustainable business practices which consider environmental, social and governance (ESG) aspect.

SET Index, SET50 Index, SET100 Index and all indices calculated by the Stock Exchange of Thailand ("SET") (collectively called "SET Index Series") are the registered trademarks/service marks solely owned by, and proprietary to SET. Any unauthorized use of SET Index Series is strictly prohibited. All information provided is for information purposes only and no warranty is made as to its fitness for purpose, satisfactory quality or otherwise. Every effort has been made to ensure that all information given is accurate, but no responsibility or liability (including in negligence) can be accepted by SET for errors or omissions or for any losses arising from the use of this information.

SET ESG Index (SET ESG)

Currently, long-term investment guidelines abroad are beginning to focus on investing in companies that have sustainable business practices. which considers environmental, social and governance factors (Environmental, Social and Governance or ESG) of the company in making investment decisions along with analyzing the company's financial data.

Stock Exchange Has prepared the results of evaluating sustainable stocks which are stocks of listed companies (SETESG Rating) as an alternative for investors who want to invest in stocks of listed companies that are outstanding in ESG, including to support listed companies with operations. sustainable business Taking into account all stakeholders in both social and environmental aspects. There is a management process to create sustainability for the organization, such as risk management. Supply chain management and innovation development. Therefore, the SETESG index was created to be an index that reflects the price movement of a group of securities. of companies with sustainable business operations that meet the required size and liquidity criteria

ESG Book's Disclaimer

Arabesque S-Ray GmbH, also trading as "ESG Book", is a limited liability company (Gesellschaft mit beschränkter Haftung) incorporated in Frankfurt am Main and organised under the laws of Germany with registered number HRB 113087 in the commercial register of the local court with its seat and business address at Zeppelinallee 15, 60325 Frankfurt am Main, Germany (hereinafter "ESG Book"). ESG Book, with its UK branch and local subsidiaries, is a provider of sustainability data and advisory services and operates the sustainability data platform ESG Book. ESG Book does not offer any regulated financial services nor products. This document is provided on a confidential basis by ESG Book and is for information purposes only; accordingly, it is not a solicitation or an offer to buy any security or instrument or to participate in any trading activities nor should it be construed as a recommendation or advice on the merits of investing in any financial product. THIRD PARTY INFORMATION. Certain information contained in this document has been obtained from sources outside ESG Book. While such information is believed to be reliable for the purposes used herein, no representations are made as to the accuracy or completeness thereof and neither ESG Book nor its affiliates take any responsibility for such information. To the extent this document contains any links to third party websites, such links are provided as a convenience and for informational purposes only; they do not constitute an endorsement or an approval by ESG Book of any of the products, services or opinions of the corporations or organization or individual operating such third party websites. ESG Book bears no responsibility for the accuracy, legality or content of the external site or for that of subsequent links. RELIANCE – ESG Book makes no representation or warranty, express or implied, as to the accuracy or completeness of the information contained herein, and accepts no liability for any loss, of whatever kind, howsoever arising, in relation thereto, and nothing contained herein should be relied upon. CONFIDENTIALITY. This document contains highly confidential information regarding ESG Book's strategy and organization. Your acceptance of this document constitutes your agreement to keep confidential all the information contained in this document, as well as any information derived by you from the information contained in this document and not disclose any such information to any other person. This document may not be copied, reproduced, in any way used or disclosed or transmitted, in whole or in part, to any other person.

MSCI ESG Research LLC

"Certain information @2021 MSCI ESG Research LLC. Reproduced by permission"

"Although [User ENTITY NAME's] information providers, including without limitation, MSCI ESG Research LLC and its affiliates (the "ESG Parties"), obtain information (the "Information") from sources they consider reliable, none of the ESG Parties warrants or guarantees the originality, accuracy and/or completeness, of any data herein and expressly disclaim all express or implied warranties, including those of merchantability and fitness for a particular purpose. The Information may only be used for your internal use, may not be reproduced or disseminated in any form and may not be used as a basis for, or a component of, any financial instruments or products or indices. Further, non of the Information can in and of itself be used to determine which securities to buy or sell or when to buy or sell them. None of the ESG Parties shall have any liability for any errors or omissions in connection with any data herein, or any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages."

Score range	Description
CCC - B	LAGGARD: A company lagging its industry based on its high exposure and failure to manage significant ESG risks
BB - BBB - A	AVERAGE : A company with a mixed or unexceptional track record of managing the most significant ESG risks and opportunities relative to industry peers
AA - AAA	LEADER: A company leading its industry in managing the most significant ESG risks and opportunities

The Dow Jones Sustainability Indices (DJSI)

The Dow Jones Sustainability Indices (DJSI) are a family of best-in-class benchmarks for investors who have recognized that sustainable business practices are critical to generating long-term shareholder value and who wish to reflect their sustainability convictions in their investment portfolios. The family was launched in 1999 as the first global sustainability benchmark and tracks the stock performance of the world's leading companies in terms of economic, environmental and social criteria. Created jointly by S&P Dow Jones Indices and SAM, the DJSI combine the experience of an established index provider with the expertise of a specialist in Sustainable Investing to select the most sustainable companies from across 61 industries. The indices serve as benchmarks for investors who integrate sustainability considerations into their portfolios, and provide an effective engagement platform for investors who wish to encourage companies to improve their corporate sustainability practices.

S&P Global Market Intelligence

Copyright © 2021, S&P Global Market Intelligence (and its affiliates as applicable). Reproduction of any information, opinions, views, data or material, including ratings ("Content") in any form is prohibited except with the prior written permission of the relevant party. Such party, its affiliates and suppliers ("Content Providers") do not guarantee the accuracy, adequacy, completeness, timeliness or availability of any Content and are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, or for the results obtained from the use of such Content. In no event shall Content Providers be liable for any damages, costs, expenses, legal fees, or losses (including lost income or lost profit and opportunity costs) in connection with any use of the Content. A reference to a particular investment or security, a rating or any observation concerning an investment that is part of the Content is not a recommendation to buy, sell or hold such investment or security, does not address the suitability of an investment or security and should not be relied on as investment advice. Credit ratings are statements of opinions and are not statements of fact.

ESG risk combines the concepts of management and exposure to arrive at an absolute assessment of ESG risk. We identify five categories of ESG risk severity that could impact a company's enterprise value

Moody's ESG Solutions

© 2022 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS,

ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody's.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJJK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJJK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJJK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

Additional terms for Hong Kong only: Any Second Party Opinion or other opinion that falls within the definition of "advising on securities" under the Hong Kong Securities and Futures Ordinance ("SFO") is issued by Vigeo Eiris Hong Kong Limited, a company licensed by the Hong Kong Securities and Futures Commission to carry out the regulated activity of advising on securities in Hong Kong. This Second Party Opinion or other opinion that falls within the definition of "advising on securities" under the SFO is intended for distribution only to "professional investors" as defined in the SFO and the Hong Kong Securities and Futures (Professional Investors) Rules. This Second Party Opinion or other opinion must not be distributed to or used by persons who are not professional investors.

MJJK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJJK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJJK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY550,000,000.

MJJK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

Refinitiv ESG

These Terms of Use govern your access or use of the ESG information and materials on the Refinitiv website and any AI powered voice assistance software ("Refinitiv ESG Information"). 2020© Refinitiv. All rights reserved. Refinitiv ESG Information is proprietary to Refinitiv Limited and/or its affiliates ("Refinitiv").

The Refinitiv ESG Information is for general informational and non-commercial purposes only. Reproduction, redistribution or any other form of copying or transmission of the Refinitiv ESG Information is prohibited without Refinitiv's prior written consent.

All warranties, conditions and other terms implied by statute or common law including, without limitation, warranties or other terms as to suitability, merchantability, satisfactory quality and fitness for a particular purpose, are excluded to the maximum extent permitted by applicable laws. The Refinitiv ESG Information is provided "as is" and Refinitiv makes no express or implied warranties, representations or guarantees concerning the accuracy, completeness or currency of the information in this service or the underlying Third Party Sources (as defined below). You assume sole responsibility and entire risk as to the suitability and results obtained from your use of the Refinitiv ESG Information.

The Refinitiv ESG Information does not amount to financial, legal or other professional advice, nor does it constitute: (a) an offer to purchase shares in the funds referred to; or (b) a recommendation relating to the sale and purchase of instruments; or (c) a recommendation to take any particular legal, compliance and/or risk management decision. Investors should remember that past performance is not a guarantee of future results.

The Refinitiv ESG Information will not be used to construct or calculate and index or a benchmark, used to create any derivative works or used for commercial purposes. Refinitiv's disclaimer in respect of Benchmark Regulations applies to the Refinitiv ESG Information.

No responsibility or liability is accepted by Refinitiv its affiliates, officers, employees or agents (whether for negligence or otherwise) in respect of the Refinitiv ESG Information, or for any inaccuracies, omissions, mistakes, delays or errors in the computation and compilation of the Refinitiv ESG Information (and Refinitiv shall not be obliged to advise any person of any error therein). For the avoidance of doubt, in no event will Refinitiv have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of the Refinitiv ESG Information.

You agree to indemnify, defend and hold harmless Refinitiv from and against any claims, losses, damages, liabilities, costs and expenses, including, without limitation, reasonable legal and experts' fees and costs, as incurred, arising in any manner out of your use of, or inability to use, any Information contained on the Refinitiv web site or obtained via any AI powered voice assistance software.

You represent to us that you are lawfully able to enter into these Terms of Use. If you are accepting these Terms of Use for and on behalf of an entity such as the company you work for, you represent to us that you have legal authority to bind that entity.

By accepting these Terms of Use you are also expressly agreeing to the following Refinitiv's website Terms of Use.

Refinitiv ESG scores are derived from third party publicly available sources ("Third Party Sources") and are formulated on the basis of Refinitiv own transparent and objectively applied methodology. Refinitiv's ESG Information methodology can be accessed here.

Score range	Description	
0 to 25	First Quartile	Scores within this range indicates poor relative ESG performance and insufficient degree of transparency in reporting material ESG data publicly.
> 25 to 50	Second Quartile	Scores within this range indicates satisfactory relative ESG performance and moderate degree of transparency in reporting material ESG data publicly.
> 50 to 75	Third Quartile	Scores within this range indicates good relative ESG performance and above average degree of transparency in reporting material ESG data publicly.
> 75 to 100	Fourth Quartile	Score within this range indicates excellent relative ESG performance and high degree of transparency in reporting material ESG data publicly.

CG Report : by Thai Institute of Directors Association (Thai IOD), Established in December 1999, the Thai IOD is a membership organization that strives to promote professionalism in directorship. The Thai IOD offers directors certification and professional development courses, provides a variety of seminars, forums and networking events, and conducts research on board governance issues and practices. Membership comprises board members from companies ranging from large publicly listed companies to small private firms.

90-100	▲▲▲▲▲	Excellent
80-89	▲▲▲▲	Very Good
70-79	▲▲▲	Good
60-69	▲▲	Satisfactory
50-59	▲	Pass
Below		N/A

General Disclaimers And Disclosures:

This report is prepared and issued by Thanachart Securities Public Company Limited (TNS) as a resource only for clients of TNS, Thanachart Capital Public Company Limited (TCAP) and its group companies. Copyright © Thanachart Securities Public Company Limited. All rights reserved. The report may not be reproduced in whole or in part or delivered to other persons without our written consent.

This report is prepared by analysts who are employed by the research department of TNS. While the information is from sources believed to be reliable, neither the information nor the forecasts shall be taken as a representation or warranty for which TNS or TCAP or its group companies or any of their employees incur any responsibility. This report is provided to you for informational purposes only and it is not, and is not to be construed as, an offer or an invitation to make an offer to sell or buy any securities. Neither TNS, TCAP nor its group companies accept any liability whatsoever for any direct or consequential loss arising from any use of this report or its contents.

The information and opinions contained herein have been compiled or arrived at from sources believed reliable. However, TNS, TCAP and its group companies make no representation or warranty, express or implied, as to their accuracy or completeness. Expressions of opinion herein are subject to change without notice. The use of any information, forecasts and opinions contained in this report shall be at the sole discretion and risk of the user.

TNS, TCAP and its group companies perform and seek to perform business with companies covered in this report. TNS, TCAP, its group companies, their employees and directors may have positions and financial interest in securities mentioned in this report. TNS, TCAP or its group companies may from time to time perform investment banking or other services for, or solicit investment banking or other business from, any entity mentioned in this report. Therefore, investors should be aware of conflict of interest that may affect the objectivity of this report.

Note: Thanachart Securities Public Company Limited act as a Market Maker and Derivative Warrants Issuer. At present, TNS has issued Derivative Warrants underlying securities before making investment decisions.

Note: Our major shareholder TCAP (Thanachart Capital Pcl) which holding 89.96% of Thanachart Securities and also TCAP holding 100% of Thanachart SPV1 Co. Ltd. TCAP and Thanachart SPV1 Co. Ltd has stake in THANI for 60% and being the major shareholder of THANI.

Note: Thanachart Capital Public Company Limited (TCAP), TMBThanachart Bank Public Company Limited (TTB), are related companies to Thanachart Securities Public Company Limited (TNS). Thanachart Securities Pcl is a subsidiary of Thanachart Capital Pcl (TCAP) which holds 24.31% of the shareholding in TMBThanachart Bank Pcl.

Thanachart Capital Public Company Limited (TCAP), Ratchthani Leasing Public Company Limited (THANI), MBK PUBLIC COMPANY LIMITED (MBK) and PATUM RICE MILL AND GRANARY PUBLIC COMPANY LIMITED (PRG) are related companies to Thanachart Securities Public Company Limited (TNS) . Since TNS covers those securities in research report, consequently TNS incurs conflicts of interest.

Note: Thanachart Securities Public Company Limited (TNS) acts as an underwriter of “Debentures of MUANGTHAI CAPITAL PUBLIC COMPANY LIMITED No. 2/2024 (B.E. 2567) tranche 1-3 which its maturity at 2026-28 (B.E. 2569-71)”, therefore investors need to be aware that there could be conflicts of interest in this research.

Note: Thanachart Securities Public Company Limited (TNS) acts as an underwriter of “Debentures of SRISAWAD CAPITAL 1969 PUBLIC COMPANY LIMITED No. 1/2024 (B.E. 2567) tranche 1-3 which its maturity at 2026-28 (B.E. 2569-71)”, therefore investors need to be aware that there could be conflicts of interest in this research.

Disclosure of Interest of Thanachart Securities

Investment Banking Relationship

Within the preceding 12 months, Thanachart Securities has lead-managed public offerings and/or secondary offerings (excluding straight bonds) of the securities of the following companies: Moshi Moshi Retail Corporation Pcl. (MOSHI TB) and Euroasia Total Logistics Pcl (ETL TB).

Recommendation Structure:

Recommendations are based on absolute upside or downside, which is the difference between the target price and the current market price. If the upside is 10% or more, the recommendation is BUY. If the downside is 10% or more, the recommendation is SELL. For stocks where the upside or downside is less than 10%, the recommendation is HOLD. Unless otherwise specified, these recommendations are set with a 12-month horizon. Thus, it is possible that future price volatility may cause a temporary mismatch between upside/downside for a stock based on the market price and the formal recommendation.

For sectors, an "Overweight" sector weighting is used when we have BUYs on majority of the stocks under our coverage by market cap. "Underweight" is used when we have SELLs on majority of the stocks we cover by market cap. "Neutral" is used when there are relatively equal weightings of BUYs and SELLs.

Thanachart Securities Pcl.

Research Team

18 Floor, MBK Tower

444 Phayathai Road, Pathumwan Road, Bangkok 10330

Tel: 662 - 779-9119

Email: thanachart.res@thanachartsec.co.th

Pimpaka Nichgaroon, CFA

Head of Research, Strategy
Tel: 662-779-9199
pimpaka.nic@thanachartsec.co.th

Nuttapop Prasitsuksant

Telecom, Utilities
Tel: 662-483-8296
nuttapop.pra@thanachartsec.co.th

Rata Limsuthiwanoom

Auto, Industrial Estate, Media, Prop. Fund
Tel: 662-483-8297
rata.lim@thanachartsec.co.th

Siriporn Arunothai

Small Cap, Healthcare, Hotel
Tel: 662-779-9113
siriporn.aru@thanachartsec.co.th

Sittichet Rungrassameephat

Analyst, Retail Market Strategy
Tel: 662-483-8303
sittichet.run@thanachartsec.co.th

Adisak Phupiphathirungul

Retail Market Strategy
Tel: 662-779-9120
adisak.phu@thanachartsec.co.th

Pattadol Bunnak

Electronics, Food & Beverage, Shipping
Tel: 662-483-8298
pattadol.bun@thanachartsec.co.th

Saksid Phadthananarak

Construction, Transportation
Tel: 662-779-9112
saksid.pha@thanachartsec.co.th

Yupapan Polpornprasert

Energy, Petrochemical
Tel: 662-779-9110
yupapan.pol@thanachartsec.co.th

Thaloengsak Kucharoenpaisan

Analyst, Retail Market Strategy
Tel: 662-483-8304
thaloengsak.kuc@thanachartsec.co.th

Pattarawan Wangmingmat

Senior Technical Analyst
Tel: 662-779-9105
pattarawan.wan@thanachartsec.co.th

Phannarai Tiyapittayarut

Property, Retail
Tel: 662-779-9109
phannarai.von@thanachartsec.co.th

Sarachada Sornsong

Bank, Finance
Tel: 662-779-9106
sarachada.sor@thanachartsec.co.th

Witchanan Tambamroong

Technical Analyst
Tel: 662-779-9123
witchanan.tam@thanachartsec.co.th

Nariporn Klangpremschitt, CISA

Analyst, Retail Market Strategy
Tel: 662-779-9107
nariporn.kla@thanachartsec.co.th