

BUY (Unchanged)
Change in Numbers

TP: Bt 47.00
Upside : 16.0%

(From: Bt 57.00)

10 JULY 2024

Global Power Synergy (GPSC TB)

Continued recovery trend

Despite a faster-than-expected normalization of SPP margin, we still expect GPSC's earnings outlook to be strong with 45/21% growth in 2024-25F, driven by recovering SPP profit and growing renewable capacity. We reaffirm our BUY call on GPSC.

Reaffirming BUY

We reaffirm our BUY rating on GPSC despite a faster-than-expected SPP margin normalization leading us to cut our earnings forecasts by 8/11% in 2025-26F. Our DCF-derived SOTP-based 12-month TP (2024F base year) thus falls to Bt47/share (from Bt57). *First*, we expect the SPP spark margin (electricity tariff – fuel cost) to remain healthy at Bt1.45-1.50/kWh in 2024-26F vs. Bt0.76 during the high energy price year in 2022 and Bt1.43 normalized level in 2019. *Second*, we still estimate a strong EPS growth outlook at a 25% EPS CAGR in 2024-26F, driven by a continuing SPP business recovery and growing renewable capacity. *Lastly*, GPSC's share price has fallen by 26% over the past three months, and its PE thus looks more attractive to us at 22/18x over 2024-25F.

SPP margin outlook

We forecast the spark margin of GPSC's SPP plants to remain healthy at Bt1.50/1.45/1.45/kWh in 2024-26F vs. Bt1.25 in 2023. This is based on our conservative assumptions of the government cutting national electricity tariff to its targeted level of Bt4.00/kWh in 2025 (from Bt4.18 in 2024) by pending out debt repayments to EGAT. We are not overly concerned about rebounding Brent oil and Asian spot LNG prices, which are major components of the gas pool price formula, since we project them to be offset by 1) the inclusion of wet gas in the gas pool since March and 2) a gas supply charge cut for SPPs. Therefore, we expect a stable domestic gas pool price of around Bt300-310/mmbtu in 2024-25F. See Exhibit 5 for our detailed SPP margin assumptions.

Risk from rising renewable supply

We project a rising proportion of renewables in Thailand's in total electricity generation mix to reduce the country's average power generation cost. But the lower cost, and thus a lower electricity tariff, would mean a narrower long-term margin for SPPs. Having said that, this trend of a growing mix of renewable power is not new, and we have factored this into our models for SPP projects. We also don't yet expect a material medium-term impact as renewables are targeted for just 33% of Thailand's generation capacity by 2030 (23% in 2024), based on the new PDP draft.

Strong earnings momentum

We expect GPSC's earnings to grow 45/21/12% in 2024-26F. Strong growth this year is driven mainly by elevated spark margins at SPP plants, which have improved from a low base last year. Although we project the SPP margin to normalize down in 2025F, we expect earnings to continue to grow with higher profits from three renewable projects: higher output from the Xayaburi hydropower plant in Laos, two offshore wind farms in Taiwan starting up, and growing solar power portfolio in India.



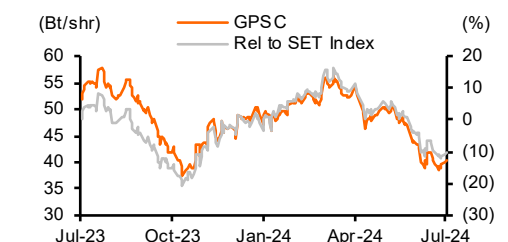
NUTTAPOL PRASITSUKSANT

662 – 483 8296
nuttapol.pra@thanachartsec.co.th

COMPANY VALUATION

Y/E Dec (Bt m)	2023A	2024F	2025F	2026F
Sales	90,303	100,632	93,711	88,855
Net profit	3,694	5,204	6,306	7,063
Consensus NP	—	4,972	6,341	6,720
Diff frm cons (%)	—	4.7	(0.5)	5.1
Norm profit	3,596	5,204	6,306	7,063
Prev. Norm profit	—	4,613	6,877	7,896
Chg frm prev (%)	—	12.8	(8.3)	(10.6)
Norm EPS (Bt)	1.3	1.8	2.2	2.5
Norm EPS grw (%)	1,551.6	44.7	21.2	12.0
Norm PE (x)	31.8	21.9	18.1	16.2
EV/EBITDA (x)	13.6	11.9	12.1	11.1
P/BV (x)	1.1	1.0	1.0	1.0
Div yield (%)	1.8	2.5	3.0	3.4
ROE (%)	3.4	4.8	5.7	6.2
Net D/E (%)	102.8	92.0	91.5	75.6

PRICE PERFORMANCE



COMPANY INFORMATION

Price as of 10-Jul-24 (Bt)	40.50
Market Cap (US\$ m)	3,137.9
Listed Shares (m shares)	2,819.7
Free Float (%)	24.8
Avg Daily Turnover (US\$ m)	8.6
12M Price H/L (Bt)	57.75/37.50
Sector	Utilities
Major Shareholder	PTT Group 67.27%

Sources: Bloomberg, Company data, Thanachart estimates

ESG Summary Report P8

Continued recovery trend

We reaffirm BUY on GPSC

We reaffirm our BUY recommendation on shares of Global Power Synergy Pcl (GPSC) based on three key supporting reasons.

1) SPP spark margin remains strong ...

- **First**, we expect SPP's spark margin to remain high at Bt1.50/1.45/1.45/kWh over 2024-26F despite now assuming a faster normalization of the margin amid the strong global energy price outlook such that the government will likely slow debt repayments to EGAT to keep the national electricity price at its targeted level of Bt4.0/kWh.

2) ... while growing renewables look to be another growth driver

- **Second**, we still forecast GPSC's earnings to turn around strongly at a 25% CAGR in 2024-26F, driven by an SPP margin recovery from the low base in 2022-23 and growing profit contribution from overseas renewable projects.

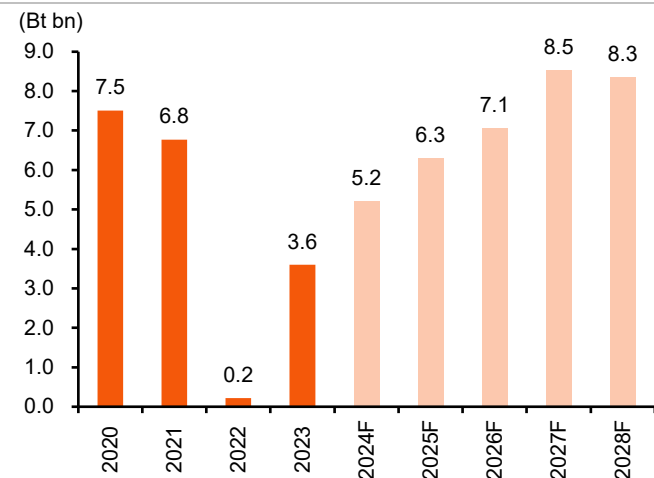
3) Market seems overly concerned by PDP draft

- **Third**, we believe its 26% share price decline over the past three months, likely due to the market's concern about the potential long-term negative impacts from the new PDP draft on the SPP margin and spike in global energy prices, is overdone.

Valuation looks attractive to us despite our earnings cuts

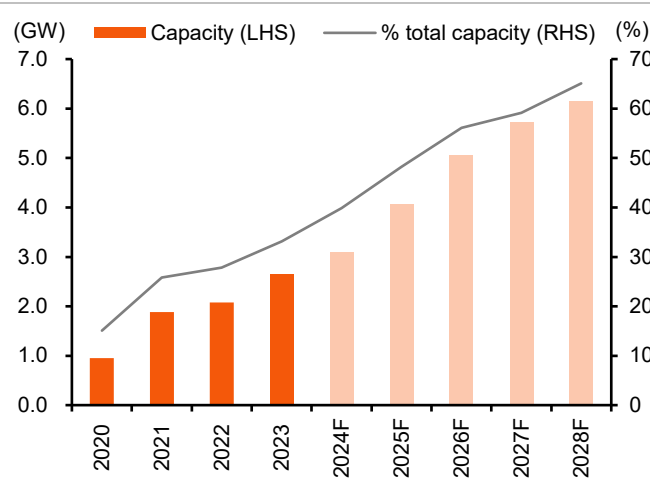
In this report, we lower our earnings forecasts for GPSC by 8/11% in 2025-26F to reflect a faster-than-expected normalization of the SPP spark margin from the current elevated level and slower-than-expected global interest rate cuts. Therefore, our DCF-derived SOTP-based 12-month TP (2024F base year) declines to Bt47/share (from Bt57). Having said that, despite our downward earnings revisions, GPSC's valuation looks attractive to us, trading at 22x PE in 2024F after its share price fall.

Ex 1: Earnings Turnaround Continues



Sources: Company data, Thanachart estimates

Ex 2: Growing Renewable Capacity



Sources: Company data, Thanachart estimates

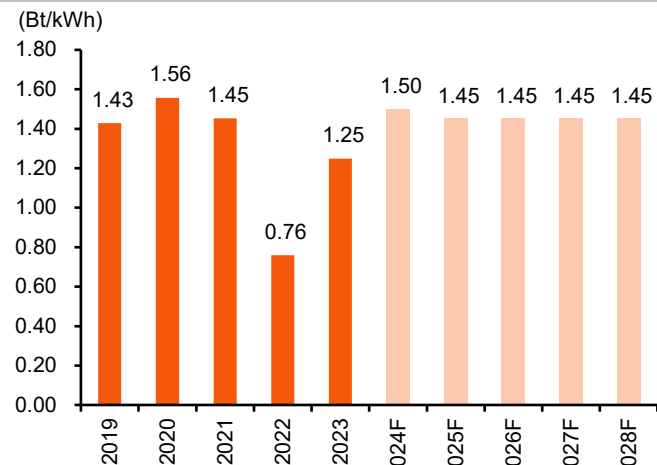
Strong earnings momentum

Earnings turnaround continues with a 25% EPS CAGR over 2024-26F

We estimate a 25% EPS CAGR for GPSC over 2024-26F. This year's stronger growth of 45% is driven mainly by an above-average spark margin from its SPP projects of Bt1.50/kWh, vs. Bt1.25 in 2023 and the Bt1.43 normalized level in 2019. This is because we believe the national electricity will be kept at the current level of Bt4.18/kWh throughout this year (down 10% from Bt4.67 in the previous year), while we project the domestic gas pool price to fall to Bt306/mmbtu in 2024F, or 20% lower than Bt381 last year. Our projections already factor in a rising Brent oil price of US\$85/bbl and an Asian spot LNG price of US\$12.0/mmbtu in 2H24F, from \$84 and \$10.4 in 1H24. We expect these higher energy prices in the second half of this year to be more than offset by the positive impacts of 1) the inclusion of lower-priced wet gases (i.e., ethane and propane) in the pool and 2) a lower supply charge for natural gas sold by the PTT Group to SPP power plants, thus leading to

a lower gas cost for SPP power plants. See our Utilities sector report – *A new PDP, a new catalyst*, dated 26 April 2024 – for more details on Thailand's gas pool price structure changes. Even though we project the SPP spark margin to normalize to Bt1.45/kWh in 2025-26F after the national electricity tariff cut to the government's targeted level of Bt4.00/kWh in 2025F, we still forecast 21/12% earnings growth for GPSC, supported by stronger profits from overseas renewable power projects and the falling interest rate trend.

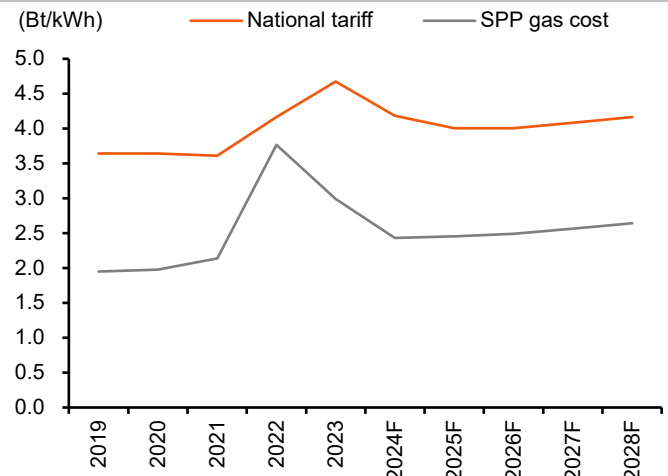
Ex 3: We Expect SPP Spark Margin To Remain Elevated



Sources: Company data, Thanachart estimates

Note: Spark margin = Avg. electricity selling price – Avg. fuel cost per unit

Ex 4: Sharp Gas Pool Price Fall After Structure Changes



Sources: Company data, EPPO, Thanachart estimates

Note: Wet gases (i.e. ethane and propane) from domestic gas fields are included into the pool since March 2024

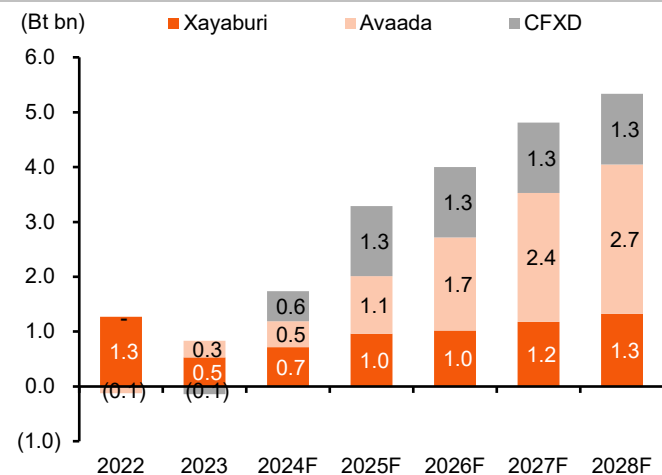
Ex 5: Our Key Assumptions For SPP Spark Margin

	2022	2023	2024F	2025F	2026F	2027F
Brent oil price (US\$/bbl)	98.4	82.2	84.1	83.0	78.0	75.0
Asian spot LNG (US\$/ton)	22.4	15.6	11.9	12.0	10.0	10.0
Gas pool price (Bt/mmbtu)	444.2	370.0	306.2	310.0	315.0	324.5
National electricity tariff (Bt/kWh)	4.17	4.67	4.18	4.00	4.00	4.08

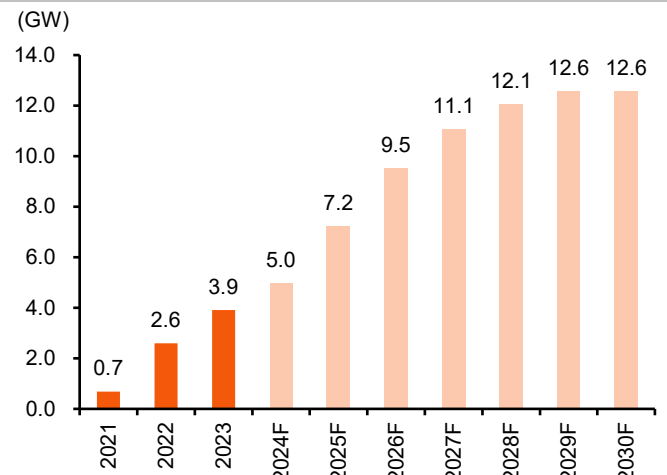
Sources: Bloomberg, Energy Policy and Planning Office (EPPO), Thanachart estimates

Growing renewable profits should more than offset SPP margin normalization

We expect increasing profits from GPSC's major renewable power projects to be its key earnings growth driver in 2025-26F. *First*, electricity output from its 321MW equity-owned capacity Xayaburi hydropower project in Laos should increase with strengthening La Nina conditions in the Indochina region, while deleveraging benefits amid the falling interest rate trend are driving long-term earnings growth for the project. *Second*, the Changfang and Xidao offshore wind power projects (CFXD) in Taiwan, with a total of 149MW in equity-owned capacity, are due to commence operations over 2024F, thus offering a full-year earnings growth impact in 2025F. *Lastly*, we project the operating capacity of solar power projects in India, through its 43% investment stake in Avaada Energy, to grow to 12.6GW in 2028F from 4.0GW in 2023. These factors should outweigh the lower profit from its domestic SPP plants as their spark margin reverses down to an average level in 2025F.

Ex 6: Growing Profits From Major Renewable Projects

Sources: Company data, Thanachart estimates

Ex 7: Our Projections For Avaada's Operating Capacity

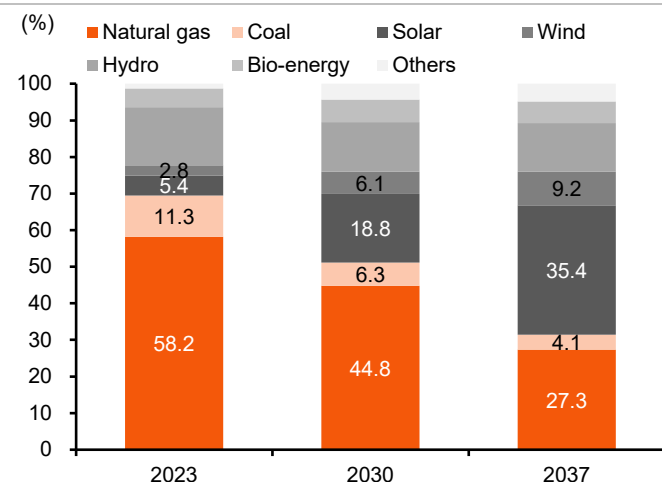
Sources: Company data, Thanachart estimates

Note: Pro-rate basis, GPSC holds 43% stake in Avaada

Risk from rising renewable supply

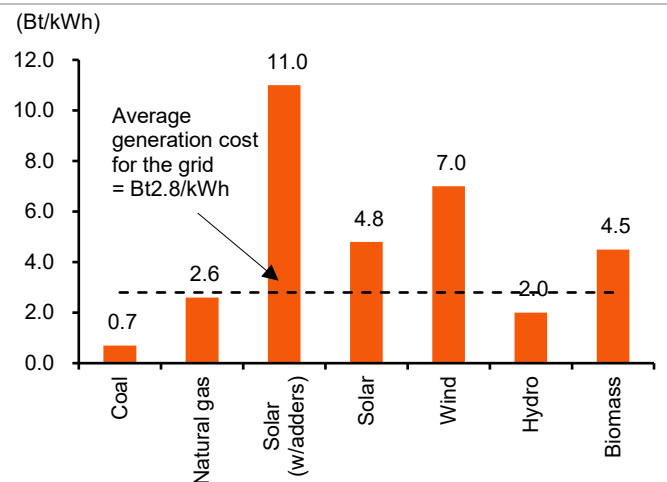
Pressure on SPP margin from rising renewable mix is not yet material

We believe GPSC's recent share price weakness has partially been due to market concerns about the potential negative impacts from the draft of Thailand's new Power Development Plan (PDP-2024) released in early June. The draft targets electricity generation from solar power to become 35% of the country's total electricity generation capacity in 2037. Since EGAT's tariff to be paid for electricity from new solar power purchase contracts (from 2023) is low at Bt2.2/kWh, which is also below the average electricity generation cost for the Thai national grid of Bt2.8/kWh as of 1Q24, we thus project an increasing mix of solar power in the country's electricity supply to lower the average generation cost for the grid and reduce the national tariff price. This likely results in a narrowing gap between the cost of natural gas for electricity generation and the electricity generation cost from the grid, leading to a weakening SPP margin trend in long-term. However, this trend of growing solar capacity is not new news, and we have already factored in the long-term SPP spark margin dropping to Bt1.40/kWh in our projections. Moreover, we foresee a minimal impact in the near term since, based on the new PDP draft, the portion of solar power in the country's total generating capacity would rise to only 19% in 2030 from 5% in 2024.

Ex 8: Increasing Renewable Mix In Thai Electricity Supply

Sources: Draft of Power Development Plan 2024 for public hearing (June 2024)

Note: Calculated based on targeted capacity supply from the new PDP draft

Ex 9: Cost Of Electricity Generation By Sources

Sources: EPPO, Thanachart estimates

Note: Estimated as of 1Q24 based on average fuel costs (conventional plants) and electricity purchasing prices (renewable plants) paid by EGAT.

Ex 10: Our 12-month DCF-Derived SOTP-Based Valuation, Using A 2024F Base Year

(Bt m)	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036-50F
EBITDA excl. depre from right of use	18,850	18,744	19,103	19,243	17,649	17,707	16,530	16,586	16,643	16,701	16,759	16,817	
Free cash flow	15,016	(362)	18,885	18,747	17,083	16,683	15,878	15,707	15,760	15,821	15,883	15,956	
PV of free cash flow	14,227	(320)	15,667	14,613	12,510	11,479	10,265	8,611	8,014	7,462	6,950	6,477	89,987
Risk-free rate (%)	2.5												
Market risk premium (%)	8.0												
Beta	0.8												
WACC (%)	5.5												
Terminal growth (%)	2.0												
Enterprise value - add investments	205,941												
Net debt (2023A)	120,778												
Minority interest	11,330												
Equity value	73,833												
# of shares (m)	2,820												
Equity value / share (Bt)	26.2												

	Valuation method	WACC	Equity value	Value per share (Bt)
BIC	DCF	5.1%	1,258	0.4
TSR/SSE	DCF	6.4%	2,142	0.8
NNEG	DCF	5.0%	3,137	1.1
GRP	DCF	6.7%	1,359	0.5
NL1PC	DCF	5.0%	3,012	1.1
RPCL	DCF	4.8%	905	0.3
XPCL	DCF	5.8%	18,572	6.6
Avaada	DCF	7.1%	16,476	5.8
Taiwan wind farms	DCF	6.8%	11,755	4.2
Total				20.8
Grand total				47.0

Source: Thanachart estimates

Valuation Comparison

Ex 11: 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 (%)
Cheung Kong Infrastructure	1038 HK	Hong Kong	6.9	7.5	13.6	12.7	0.9	0.9	45.3	44.0	5.7	5.8
China Power Int'l	2380 HK	Hong Kong	35.3	23.6	10.0	8.1	1.0	0.9	10.0	8.6	4.9	6.0
China Resources Power	836 HK	Hong Kong	19.3	15.0	7.7	6.7	1.2	1.0	7.0	6.1	5.2	6.1
CLP Holdings	2 HK	Hong Kong	32.4	4.8	12.8	12.3	1.5	1.4	8.8	8.4	5.0	5.1
Hongkong Electric Holdings	6 HK	Hong Kong	4.3	2.9	14.8	14.4	1.0	1.0	na	na	6.6	6.6
Huaneng Power	902 HK	Hong Kong	5.4	11.5	6.9	6.2	0.8	0.7	9.5	8.7	6.5	7.2
Tata Power	TPWR IN	India	4.1	19.8	37.6	31.4	4.4	3.9	17.2	15.0	0.4	0.5
Tenaga Nasional	TNB MK	Malaysia	4.1	15.7	21.1	18.3	1.4	1.3	8.2	7.8	3.0	3.4
YTL Corp	YTL MK	Malaysia	167.1	10.3	19.3	17.5	2.6	2.4	8.9	7.6	2.1	2.3
YTL Power	YTLP MK	Malaysia	129.0	4.1	13.5	13.0	2.2	2.0	9.8	8.8	1.5	1.6
Manila Electric	MER PM	Philippines	0.7	1.8	11.7	11.5	2.8	2.6	7.8	7.6	5.5	5.5
BCPG Pcl *	BCPG TB	Thailand	11.2	16.2	21.1	18.2	0.7	0.7	16.6	17.7	3.7	3.7
B.Grimm Power Pcl *	BGRIM TB	Thailand	(7.1)	18.6	46.3	39.0	1.5	1.5	9.3	9.0	0.9	1.0
Banpu Power Pcl *	BPP TB	Thailand	(23.6)	17.9	10.2	8.6	0.8	0.7	10.2	9.4	6.3	6.3
CK Power Pcl *	CKP TB	Thailand	22.8	11.9	16.5	14.7	1.1	1.1	14.9	14.0	2.3	2.3
EA Pcl*	EA TB	Thailand	(13.3)	7.1	7.4	7.0	1.0	0.9	7.7	7.0	2.7	2.9
Electricity Generating *	EGCO TB	Thailand	5.6	14.1	5.1	4.5	0.5	0.5	17.2	15.1	6.3	6.3
Global Power Synergy *	GPSC TB	Thailand	44.7	21.2	21.9	18.1	1.0	1.0	11.9	12.1	2.5	3.0
Gulf Energy Dev. Pcl *	GULF TB	Thailand	15.1	17.5	28.5	24.3	4.0	3.8	28.6	25.4	2.5	2.9
Gunkul Engineering *	GUNKUL TB	Thailand	(6.3)	3.6	15.4	14.9	1.5	1.4	15.0	15.5	2.6	2.7
RATCH Group *	RATCH TB	Thailand	56.7	27.8	8.9	7.0	0.6	0.6	20.2	17.2	5.7	5.7
Average			23.5	12.6	16.4	14.5	1.6	1.5	14.3	13.3	4.0	4.2

Sources: Bloomberg, * Thanachart estimates

Based on 10 July 2024 closing prices

COMPANY DESCRIPTION

Established in January 2013, Global Power Synergy Company Ltd (GPSC) is PTT Group's flagship company in the power business. GPSC generates and distributes electricity, steam, and processed water to Thailand's national grid and industrial customers. GPSC acquired Glow Energy, which doubled its generation capacity in March 2019. The company has a total of 7.2GW equity-owned operating capacity of domestic and overseas power plants, of which 47% was from renewable sources as of 2023. Its investment strategy is now geared toward expanding renewable capacity abroad.

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

- Growing along with PTT Group's business expansion.
- The strong reputation of PTT Group helps pave the way to grow its business regionally.
- Access to low financing costs as part of PTT Group.

O — Opportunity

- Expansion into electricity generation in neighbouring countries through both greenfield developments and M&As.
- Tapping new S-curve industries of energy technology solutions, energy storage systems, and electric vehicles via investment in Li-ion battery plants with PTT Group.

W — Weakness

- No direct experience investing abroad.
- Late player in the renewable segment and Li-ion battery business.
- Limitation of gearing cap from the PTT Group

T — Threat

- Limited capacity growth potential in domestic market given Thailand's currently high reserve margin, while government's policy in bidding out renewable contracts remains slow.
- Relies on the group's policy for key investment decisions.

CONSENSUS COMPARISON

	Consensus	Thanachart	Diff
Target price (Bt)	56.93	47.00	-17%
Net profit 24F (Bt m)	4,972	5,204	5%
Net profit 25F (Bt m)	6,341	6,306	-1%
Consensus REC	BUY: 15	HOLD: 8	SELL: 0

HOW ARE WE DIFFERENT FROM THE STREET?

- Our 2024-25F earnings forecasts are relatively in line with the Bloomberg consensus numbers.
- However, our DCF-derived SOTP-based TP is 17% lower, which we believe is due to us assuming lower long-term SPP margins than the Street.

Sources: Bloomberg consensus, Thanachart estimates

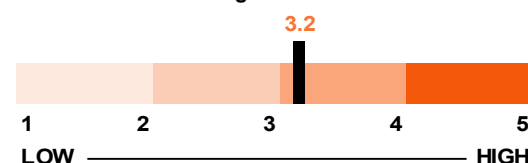
RISKS TO OUR INVESTMENT CASE

- A slower-than-expected recovery of SPP margin, either from a gas price spike or national tariff price subsidization, is the key downside risk to our earnings forecasts and valuation.
- Lower-than-expected profit contribution from developing renewable projects overseas, either from slow capacity expansion or weak project returns, is another downside risk to our numbers.
- Lower-than-expected returns from future investments, either in the power generation industry or other related businesses, is a long-term sustainability risk for GPSC.

Source: Thanachart

GPSC is a utility investment arm of PTT Group. In 2023, it operated 6.1GW of power generating capacity, 52% gas, 17% coal, and 31% renewables. Its ESG policy is relatively strong since it needs to align its performance with the PTT Group. We thus rate its ESG score at 3.2. We see its key weakness being around business sustainability and innovation aspects.

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)
GPSC	YES	AA	YES	B	63.75	56.46	85.00	-	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

- GPSC shares the same targets as PTT Group in achieving carbon neutrality by 2050 and net-zero emissions by 2060, slightly ahead of the country's goals. Its nearer-term plan is to increase its renewable mix to 45% of its equity capacity by 2025 (from 35% in 2022) and reduce its carbon emission intensity by 35% within 2030, from 2020's base.
- GPSC allocates an annual budget to investment emission reduction businesses and innovative technology for lowering emissions from its power plants, based on its internal carbon pricing policy to minimize air and water pollution from its operations.
- The 3Rs approach (Reduce, Reuse, and Recycle) is implemented to reduce waste creation from all its business activities.
- GPSC saved 2.17MWh of electricity consumption in 2022 (from 1.78MWh of savings in 2021) through efficiency improvements and solar rooftop adoption. It emitted 0.45 tonnes CO2 equivalent of greenhouse gas (GHG) per MWh of electricity generated in 2022, slightly higher than the 0.44 tonnes in 2021.

SOCIAL

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

- GPSC adheres to the UN Guiding Principles (UNGP) in developing its human rights policies to protect the rights of its direct staff and all stakeholders along its supply chain.
- GPSC provides its staff with a self-development platform and a clear career path. This is based on the company's belief that its business success relies heavily on 1) an internal succession plan, 2) preparation to keep its staff up-to-date with industry dynamics, 3) ensuring morale/unity among staff, and 4) enjoying good employer branding.
- GPSC collaboratively provides support donations to communities around its power plants and facilities with other business entities under the PTT Group; thus, it significantly boosts the local economy and quality of life.

GOVERNANCE &
SUSTAINABILITY

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

- GPSC's board of directors comprises 14 members, which seems slightly too large in our view. Only six of them are independent directors, with three total female members.
- We see GPSC's corporate governance (including transparency) as very strong, in line with the protocols from the PTT Group.
- We are slightly concerned over GPSC's business sustainability as power purchase contracts for some big power plants are expiring, and it now looks difficult to find investment opportunities to offset the gap amid the current market situation.
- GPSC had a good initiative via an investment in 24M's Li-ion battery technology in 2017. However, it has been delayed in reaching the commercialized stage despite already having launched various product prototypes with the support of the PTT Group.

Sources: Thanachart, Company note

INCOME STATEMENT

FY ending Dec (Bt m)	2022A	2023A	2024F	2025F	2026F
Sales	123,685	90,303	100,632	93,711	88,855
Cost of sales	120,324	80,258	88,936	83,071	78,414
Gross profit	3,361	10,045	11,697	10,640	10,441
% gross margin	2.7%	11.1%	11.6%	11.4%	11.8%
Selling & administration expenses	1,817	2,250	2,295	2,318	2,330
Operating profit	1,544	7,795	9,401	8,322	8,111
% operating margin	1.2%	8.6%	9.3%	8.9%	9.1%
Depreciation & amortization	9,293	9,483	9,568	10,544	11,116
EBITDA	10,837	17,278	18,969	18,866	19,227
% EBITDA margin	8.8%	19.1%	18.8%	20.1%	21.6%
Non-operating income	1,076	1,238	1,210	1,145	1,101
Non-operating expenses	0	0	0	0	0
Interest expense	(4,299)	(5,297)	(5,474)	(5,020)	(4,704)
Pre-tax profit	(1,679)	3,736	5,138	4,447	4,508
Income tax	(746)	405	617	667	676
After-tax profit	(932)	3,331	4,521	3,780	3,832
% net margin	-0.8%	3.7%	4.5%	4.0%	4.3%
Shares in affiliates' Earnings	1,716	1,202	1,954	3,589	4,308
Minority interests	(566)	(937)	(1,271)	(1,063)	(1,077)
Extraordinary items	674	98	0	0	0
NET PROFIT	891	3,694	5,204	6,306	7,063
Normalized profit	218	3,596	5,204	6,306	7,063
EPS (Bt)	0.3	1.3	1.8	2.2	2.5
Normalized EPS (Bt)	0.1	1.3	1.8	2.2	2.5

*Strong turnaround from
SPP margin recovery and
rising renewable capacity*

BALANCE SHEET

FY ending Dec (Bt m)	2022A	2023A	2024F	2025F	2026F
ASSETS:					
Current assets:	52,822	41,823	39,246	32,910	41,933
Cash & cash equivalent	14,236	13,197	10,000	5,000	15,000
Account receivables	20,178	10,886	11,028	10,270	9,738
Inventories	11,915	11,431	9,746	9,104	8,593
Others	6,494	6,310	8,471	8,536	8,602
Investments & loans	54,135	61,788	64,250	64,296	64,296
Net fixed assets	92,647	92,799	85,865	95,368	85,175
Other assets	89,206	85,293	84,175	83,058	81,944
Total assets	288,810	281,703	273,536	275,632	273,348
LIABILITIES:					
Current liabilities:	32,193	38,667	31,011	30,335	28,999
Account payables	10,887	7,060	6,579	6,145	5,801
Bank overdraft & ST loans	3,371	111	1,218	1,200	1,134
Current LT debt	11,457	26,960	18,087	17,817	16,845
Others current liabilities	6,478	4,537	5,127	5,172	5,218
Total LT debt	123,033	106,904	102,495	100,965	95,457
Others LT liabilities	18,483	18,607	18,504	18,602	18,700
Total liabilities	173,710	164,178	152,010	149,902	143,155
Minority interest	10,370	11,330	12,601	13,664	14,741
Preferreds shares	0	0	0	0	0
Paid-up capital	28,197	28,197	28,197	28,197	28,197
Share premium	70,176	70,176	70,176	70,176	70,176
Warrants	0	0	0	0	0
Surplus	(16,441)	(17,185)	(17,185)	(17,185)	(17,185)
Retained earnings	22,798	25,007	27,737	30,877	34,264
Shareholders' equity	104,730	106,195	108,925	112,065	115,452
Liabilities & equity	288,810	281,703	273,536	275,632	273,348

Sources: Company data, Thanachart estimates

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2022A	2023A	2024F	2025F	2026F
Earnings before tax	(1,679)	3,736	5,138	4,447	4,508
Tax paid	746	(405)	(617)	(667)	(676)
Depreciation & amortization	9,293	9,483	9,568	10,544	11,116
Chg In working capital	(7,232)	5,948	1,061	967	698
Chg In other CA & CL / minorities	4,787	(76)	382	3,569	4,143
Cash flow from operations	5,915	18,685	15,533	18,861	19,789
Capex	(6,179)	(9,460)	(2,515)	(19,925)	(800)
Right of use	116	(134)	(50)	(50)	(50)
ST loans & investments	1,060	(449)	0	0	0
LT loans & investments	(16,475)	(7,653)	(2,462)	(46)	0
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	2,282	4,492	947	1,143	1,283
Cash flow from investments	(19,195)	(13,205)	(4,080)	(18,878)	433
Debt financing	18,220	(4,291)	(12,174)	(1,818)	(6,546)
Capital increase	0	0	0	0	0
Dividends paid	(3,384)	(1,692)	(2,474)	(3,165)	(3,676)
Warrants & other surplus	(1,112)	(537)	0	0	0
Cash flow from financing	13,724	(6,520)	(14,649)	(4,983)	(10,222)
Free cash flow	(264)	9,225	13,018	(1,064)	18,989

Multiple investment
pipelines to grow
capacity during 2024-26F

VALUATION

FY ending Dec	2022A	2023A	2024F	2025F	2026F
Normalized PE (x)	524.5	31.8	21.9	18.1	16.2
Normalized PE - at target price (x)	608.7	36.9	25.5	21.0	18.8
PE (x)	128.1	30.9	21.9	18.1	16.2
PE - at target price (x)	148.7	35.9	25.5	21.0	18.8
EV/EBITDA (x)	21.9	13.6	11.9	12.1	11.1
EV/EBITDA - at target price (x)	23.6	14.7	12.9	13.1	12.0
P/BV (x)	1.1	1.1	1.0	1.0	1.0
P/BV - at target price (x)	1.3	1.2	1.2	1.2	1.1
P/CFO (x)	19.3	6.1	7.4	6.1	5.8
Price/sales (x)	0.9	1.3	1.1	1.2	1.3
Dividend yield (%)	1.2	1.8	2.5	3.0	3.4
FCF Yield (%)	(0.2)	8.1	11.4	(0.9)	16.6
(Bt)					
Normalized EPS	0.1	1.3	1.8	2.2	2.5
EPS	0.3	1.3	1.8	2.2	2.5
DPS	0.5	0.7	1.0	1.2	1.4
BV/share	37.1	37.7	38.6	39.7	40.9
CFO/share	2.1	6.6	5.5	6.7	7.0
FCF/share	(0.1)	3.3	4.6	(0.4)	6.7

Sources: Company data, Thanachart estimates

Valuation of 22x PE in
2024F looks justified given
strong earnings turnaround

FINANCIAL RATIOS

FY ending Dec	2022A	2023A	2024F	2025F	2026F
Growth Rate					
Sales (%)	65.2	(27.0)	11.4	(6.9)	(5.2)
Net profit (%)	(87.8)	314.4	40.9	21.2	12.0
EPS (%)	(87.8)	314.4	40.9	21.2	12.0
Normalized profit (%)	(96.8)	1,551.6	44.7	21.2	12.0
Normalized EPS (%)	(96.8)	1,551.6	44.7	21.2	12.0
Dividend payout ratio (%)	158.2	56.5	55.0	55.0	55.0
Operating performance					
Gross margin (%)	2.7	11.1	11.6	11.4	11.8
Operating margin (%)	1.2	8.6	9.3	8.9	9.1
EBITDA margin (%)	8.8	19.1	18.8	20.1	21.6
Net margin (%)	(0.8)	3.7	4.5	4.0	4.3
D/E (incl. minor) (x)	1.2	1.1	1.0	1.0	0.9
Net D/E (incl. minor) (x)	1.1	1.0	0.9	0.9	0.8
Interest coverage - EBIT (x)	0.4	1.5	1.7	1.7	1.7
Interest coverage - EBITDA (x)	2.5	3.3	3.5	3.8	4.1
ROA - using norm profit (%)	0.1	1.3	1.9	2.3	2.6
ROE - using norm profit (%)	0.2	3.4	4.8	5.7	6.2
DuPont					
ROE - using after tax profit (%)	na	3.2	4.2	3.4	3.4
- asset turnover (x)	0.4	0.3	0.4	0.3	0.3
- operating margin (%)	na	10.0	10.5	10.1	10.4
- leverage (x)	2.6	2.7	2.6	2.5	2.4
- interest burden (%)	(64.1)	41.4	48.4	47.0	48.9
- tax burden (%)	na	89.2	88.0	85.0	85.0
WACC (%)	5.5	5.5	5.5	6.4	6.4
ROIC (%)	0.7	3.0	3.6	3.2	3.0
NOPAT (Bt m)	1,544	6,950	8,273	7,074	6,894
invested capital (Bt m)	228,355	226,973	220,725	227,048	213,888

Sources: Company data, Thanachart estimates

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 redisseminated in any form and may not be used as a basis for, or a component of, any financial instruments or products or indices. Further, none 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.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. ("MJKK") 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 MJKK. 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. MJKK 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.

MJKK 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 MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY550,000,000.

MJKK 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.



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 "Subordinated Perpetual Debentures of INDORAMA VENTURES PUBLIC COMPANY LIMITED (IVL) No.1/2024 which payable upon dissolution with the issuer's right to early redemption and unconditional interest deferral, 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 Corporation Public Company Limited (SAWAD) No. 4/2024 (B.E. 2567) tranche 1-3 which its maturity at 2027-29 (B.E. 2570-72), 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 Limsuthiwanpoom

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 Phupipathirungul

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 Tiypittayarut

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 Klangpremchitt, CISA

Analyst, Retail Market Strategy

Tel: 662-779-9107

nariporn.kla@thanachartsec.co.th