

# Thailand Refinery

## ความต้องการน้ำมันดีเซลอย่างเร่งด่วนของ EU จะเร่งค่าการกลั่น (GRM) ให้ปรับขึ้นสูงใน 4Q22

- จากข้อมูลของรอยเตอร์ BP ได้ปิดดำเนินการดำเนินงานบางหน่วยของโรงกลั่นขนาด 430kbpd ในเมือง Whiting รัฐ Indiana เมื่อวันที่ 24 ส.ค. 22 จากเหตุไฟไหม้
- ค่า GRM ได้ตกต่ำสุดที่ USD5-7/bbl ก่อนติดตัวกลับมาอยู่ในช่วง USD18-20/bbl
- จากมากไปหาน้อยในกลุ่ม 4 โรงกลั่นไทยเราชอบ ESSO, TOP, BCP, และ SPRC โดย ESSO ยังเป็นหุ้นเด่นของเราในกลุ่มดังกล่าว

### อุปทานตัวและสินค้าคงคลังอยู่ในระดับต่ำกว่าความต้องการระดับสูงที่ใกล้เข้ามา

รอยเตอร์ได้รายงานว่า BP ได้ปิดดำเนินการดำเนินงานบางหน่วยของโรงกลั่นขนาด 430kbpd ในเมือง Whiting รัฐ Indiana เมื่อวันที่ 24 ส.ค. 22 จากเหตุไฟไหม้ ซึ่งเป็นหลักฐานเพิ่มเติมที่ช่วยทำให้เราแน่ใจว่า GRM ที่อยู่ในระดับสูงและราคาน้ำมันดิบ ก๊าซและถ่านหินที่สูงขึ้นกำลังจะมาถึงในฤดูหนาวนี้ ปัจจัยดังกล่าวทำให้อุปทานการกลั่นของสหรัฐฯ และของโลกตึงตัวมากยิ่งขึ้น จากการพึ่งพาน้ำมันดีเซลจากรัสเซียที่เพิ่มขึ้นมากกว่าจะลดลงของยุโรป, ข้อจำกัดภายในระบบการกลั่นของโลก, และบทบาทของน้ำมันดีเซลในฐานะเชื้อเพลิงทดแทนหลักสำหรับก๊าซธรรมชาติที่จะช่วยป้องกันภัยพิบัติจากการขาดแคลนไฟฟ้าครั้งใหญ่ที่อาจเกิดขึ้นในยุโรป เราคิดว่าความจำเป็นในการหาอุปทานน้ำมันดีเซลอาจกลายเป็นเรื่องคอขาดบาดตายในฤดูหนาวนี้ในขณะที่เชื้อเพลิงที่ได้จากการกลั่นคงคลังในสหรัฐฯ และยุโรปลดลงสู่ระดับต่ำที่สุดในรอบ 32 ปี

### ยมโลกจะเย็นจนกลายเป็นน้ำแข็งจากการห้ามนำเข้าน้ำมันดีเซลจากรัสเซียของสหภาพยุโรป (EU)

ในขณะที่ EU ประสบความสำเร็จในการลดการพึ่งพาการนำเข้าน้ำมันจากรัสเซีย ยุโรปกลับล้มเหลวในการลดการพึ่งพาน้ำมันดีเซลจากรัสเซีย จากข้อมูลของ US Energy Information Administration (EIA) การนำเข้าน้ำมันดีเซลจากรัสเซียของยุโรปตั้งแต่ต้นปีจนถึงปัจจุบันได้กระโดดเพิ่มเป็น 680kbpd ในเดือน ก.ค. (+13% m-m, +22% y-y) และยังคงสูงกว่าอุปทานที่ไม่ได้มาจากรัสเซียถึง 230kbpd ซึ่งเป็นการพลิกแนวโน้มจากช่วงก่อนโควิดในปี 2016-19 เมื่อยุโรปนำเข้าน้ำมันดีเซลจากผู้ผลิตในประเทศอื่นมากกว่ารัสเซีย เราคิดว่าเป็นเรื่องน่าสงสัยมากในปัจจุบันว่ายุโรปจะสามารถลดการพึ่งพาการนำเข้าน้ำมันดีเซลจากรัสเซียได้โดยไม่ต้องพูดถึงการบรรลุการห้ามนำเข้าอย่างสิ้นเชิงภายใน 1Q23.

### GRM และ USD18/bbl จาก Diesel-Dubai margin ที่ USD48/bbl

หลังจากปรับตัวลดลงจากจุดสูงสุดที่ USD19-25/bbl ใน 2Q22 GRM ของโรงกลั่นไทยแตะจุดต่ำสุดที่ USD5-7/bbl ในเดือน ก.ค. และเราคาดว่าปัจจุบันได้ติดตัวกลับมาอยู่ในช่วง USD18-20/bbl จากแบบจำลองการผลิตให้มีผลตอบแทนเป็นน้ำมันเบนซิน 20%, น้ำมันเชื้อเพลิงอากาศยาน 10%, น้ำมันดีเซล 50%, และน้ำมันเตาซัลเฟอร์สูง (HSFO) 20% เราคาดว่า GRM จะอยู่ที่ USD18.3/bbl หลังหัก Crude premium USD6/bbl และผลขาดทุนเชื้อเพลิง (4%) ที่ USD4/bbl โดยมีสมมติฐานจากราคาน้ำมันดิบที่ USD101/bbl เมื่อวันที่ 24 ส.ค. 22

### แนะนำซื้อหุ้นโรงกลั่น

จากมากไปหาน้อยในกลุ่ม 4 โรงกลั่นไทยเราชอบ ESSO, TOP, BCP, และ SPRC โดย ESSO ยังเป็นหุ้นเด่นในกลุ่มฯ จาก Upside ในด้านการเติบโตของกำไรจาก GRM ที่ปรับขึ้น, อัตราการใช้กำลังการผลิตของโรงกลั่นที่สูงขึ้น, และค่าการตลาดที่สูงขึ้นสำหรับธุรกิจสถานีบริการน้ำมันปลายทาง นอกจากนี้เรายังคิดว่ากำไรของ TOP น่าจะปรับขึ้นอย่างเห็นได้ชัดใน 4Q22 จาก GRM ที่ปรับขึ้นอย่างรุนแรงจากผลตอบแทนการผลิตอันประกอบด้วยน้ำมันดีเซลและน้ำมันเชื้อเพลิงอากาศยานที่อยู่ในระดับสูง, ผลขาดทุนสัญญาป้องกันความเสี่ยงที่ลดลง q-q จากจำนวนสัญญาป้องกันความเสี่ยงที่ลดลง, และกำไรที่ปรับตัวดีขึ้นของธุรกิจที่ไม่ใช่โรงกลั่น



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## EU’s diesel predicament becoming dire; GRMs could soar in 4Q22

According to Reuters, BP (BP.L) shut some units of its 430kbpd refinery plant in Whiting, Indiana on 24 Aug-22 due to an electrical fire. While the Whiting plant’s capacity represents only 2.4% of the total US refinery capacity of 17.9mbpd, even a small capacity loss is expected to have a significant impact on the US and global refinery supply. A number of US refinery companies have indicated that they plan to run their refineries at near full throttle in 2H22 despite growing fears of an imminent recession and sliding retail prices for gasoline and diesel in the US market.

We think the high running rates of US refinery plants will continue to keep the gasoline price below spring highs, further boosting oil demand. According to the EIA, US refinery plants are projected to run at 94-96% utilisation rates in 2H22, similar to the levels of 1H22.

**Low inventories heading into winter.** Gasoline inventories in the US were at nearly 24 days of supply last week, compared with the pandemic peak of 48.7 days in 2020, according to the EIA. Inventories of diesel were down to just 29.4 days, compared with the peak of 54.3 days in 2020.

At 109m bbls at end-July 2022, the US diesel and heating oil inventory is at its lowest level for this time of the year since 1996.

Distillate fuel inventories are very low in the US and Europe as stockpiles have not increased this past summer – and even saw the biggest drawdown for this time of year in over three decades.

**US supply loss from hurricane impacts could be a wild card.** In 2H22, the supply of refined oils remains at risk due to the coming hurricane season, which reaches its annual peak in September. Coastal refinery plants near the Gulf of Mexico account for over 47% of total refining capacity in the US and hence are at high risk from storm disruptions.

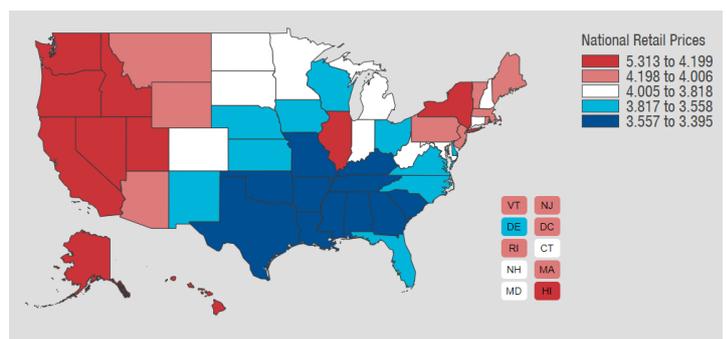
Scheduled maintenance also typically comes in 3Q22 and could further tighten the already tight supply in the US market.

**Exhibit 1: US average retail gasoline price comparison as of 22 Aug-22**



Source: [AAA.com](http://AAA.com)

**Exhibit 2: US retail gasoline prices by region as of 22 Aug-22**



Source: [AAA.com](http://AAA.com)

## EU's bid to replace Russian fuels successful for crude but a failure for diesel

Despite the signs of weakening global economic growth, regional diesel markets are tightening ahead of the coming winter and Europe's deadline for a ban on imports of Russian crude and fuels by 1Q23.

The fuel market in Europe is even tighter than in the US as industries and utilities switch to oil products to avoid the record-high cost of natural gas after Russia slashed its gas deliveries to the EU. Given the intensifying conflict in Ukraine, it is not unthinkable that Russia could completely cut off its gas supply to the EU by Sep-22, in our view.

Over the next few months, the shortages could get even worse as demand for heating ramps up in October, which will coincide with the planned EU ban on imports of Russian seaborne fuels by 1Q23.

**Exhibit 3: China and India seaborne imports of crude oil from Russia**



Source: [Vortexa](#)

**Exhibit 4: Europe's imports of diesel by source**



Source: [Vortexa](#)

**EU imports less crude but more diesel from Russia in 8M22.** While the EU has succeeded in cutting its reliance on Russian crude oil imports, it has failed to reduce its reliance on Russian diesel. Instead, imports of Russian diesel increased in July, according to the EIA.

Europe's imports of diesel from Russia jumped to an unseasonably high level of 680kbpd in July, up 13% m-m and 22% y-y, and even outpaced non-Russian supplies by 230kbpd YTD, reversing the pre-Covid-19 trend in 2016-19 when Europe imported more diesel from non-Russian producers than Russia.

**Could 'hell freeze over' for EU ban on Russian diesel imports?** We think it is highly questionable now whether Europe can reduce its reliance on Russian diesel imports, let alone fully achieve its ban by 1Q23. Europe's rising rather than falling dependence on Russian diesel, limitations within the global refining system, and the role of diesel as a key substitute fuel for natural gas to prevent potentially catastrophic power shortfalls and mass casualty events could make securing an adequate supply diesel literally a matter of life or death this coming winter, in our view.

It remains to be seen whether US refiners enticed by the high European GRMs will be able to increase their exports of diesel to the European market, as there is not much room for a further increase in diesel shipments from the US to Europe, according to the EIA. With the very low inventory and the near maximum running rates of US refiners, we think it is very unlikely that there will be more diesel exports flowing from America to Europe in the next few months.

**Low water levels on the Rhine River further worsen refinery supply in Europe.**

Fuel supplies across Europe are being further disrupted by critically low water levels on the Rhine River, a major petroleum product transportation corridor.

Hence, even as economies slow down in Europe due to high inflation and rising interest rates, the stronger demand for diesel as a substitute for natural gas as winter looms is likely to further tighten the already tight diesel market.

**Market GRMs could reach USD25-30/bbl in 4Q22**

After dropping from the peak of USD19-25/bbl in 2Q22, the market GRMs for Thai refiners bottomed out at USD5-7/bbl in July and now have already rebounded sharply into the USD18-20/bbl range, based on our estimate.

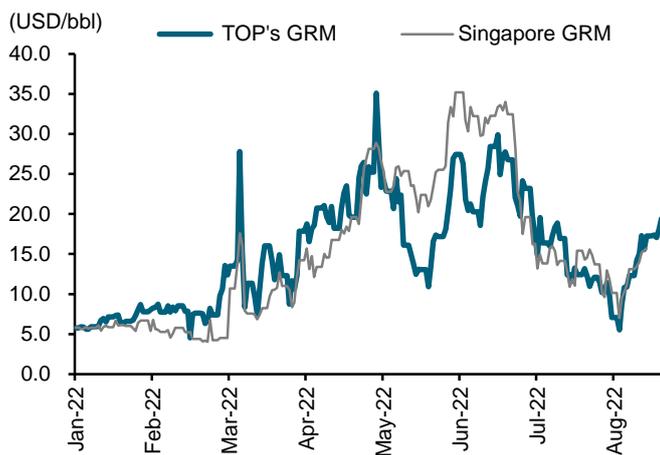
Using the proxy product yields of 20% gasoline, 10% jet, 50% diesel, and 20% HSFO, we calculate the market GRM at USD18.3/bbl after netting the crude premium of USD6/bbl and fuel loss (4%) of USD4/bbl based on the crude oil price of USD101/bbl on 24 Aug-22.

**Exhibit 5: Estimated market GRM as of 24 Aug-22**

	Margin (USD/bbl)	Yield (%)	Net GRM impact (USD/bbl)
Gasoline	18	20	3.6
Jet	45	10	4.5
Diesel	48	50	24.0
HSFO	(19)	20	(3.8)
Product margin		100	28.3
Crude premium	12	(50)	(6.0)
Fuel loss	101	(4)	(4.0)
<b>GRM (USD/bbl)</b>			<b>18.3</b>
GRM (THB/litre)			3.9

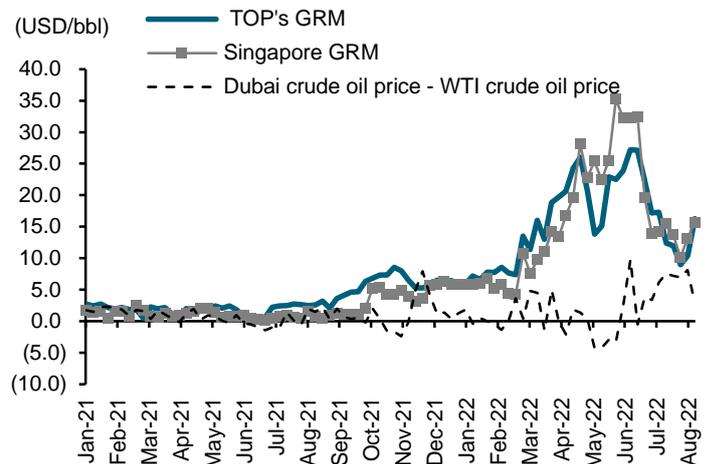
Sources: Bloomberg; FSSIA estimates

**Exhibit 6: TOP's GRM and Singapore GRM (daily)**



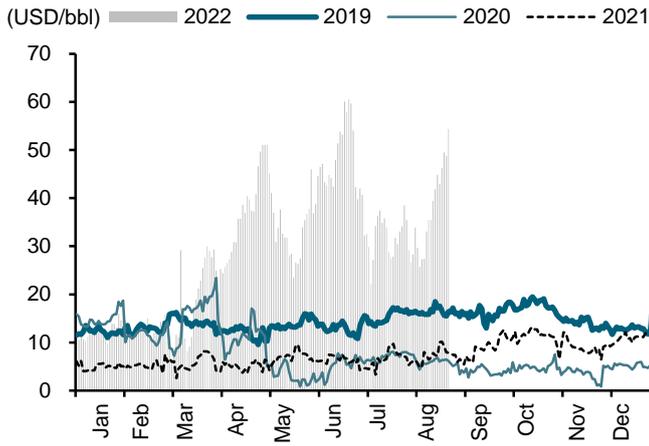
Source: Bloomberg

**Exhibit 7: TOP's GRM vs Singapore GRM vs Dubai-WTI spread (weekly)**



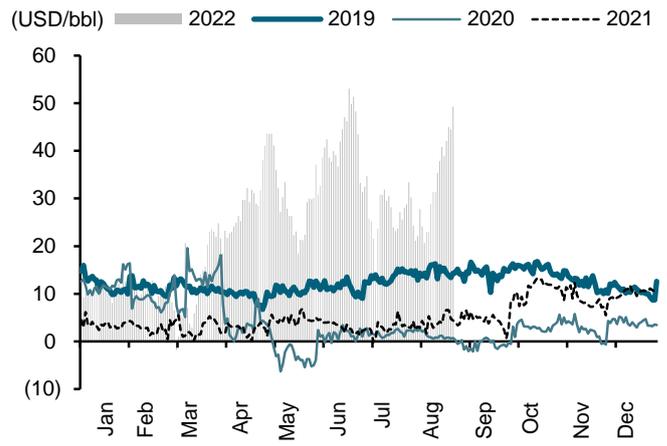
Source: Bloomberg

**Exhibit 8: Gasoil 0.5% Sulfur fob SG Spot price - Dubai crude oil price**



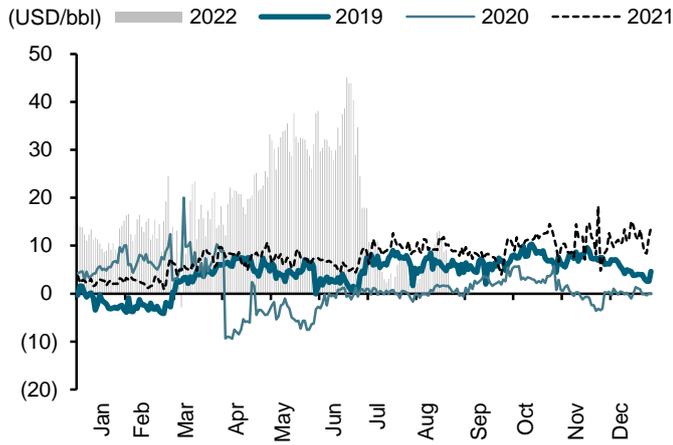
Source: Bloomberg

**Exhibit 9: Jet Kerosene fob SG Spot price - Dubai crude oil price**



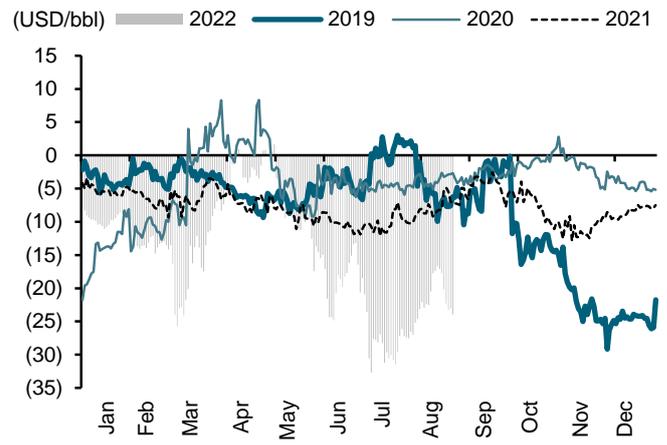
Source: Bloomberg

**Exhibit 10: 92 Octane Gasoline fob SG Spot price - Dubai crude oil price**



Source: Bloomberg

**Exhibit 11: High Sulfur fuel Oil fob SG Spot price - Dubai crude oil price**



Source: Bloomberg

## Strong BUY for refinery stocks ahead of potential GRM rally in 4Q22

Among four Thai refiners, from most to least, we prefer ESSO, TOP, BCP, and SPRC.

**ESSO: A tiger with bigger wings.** ESSO remains our top pick in the Thai refinery sector based on its earnings growth upside from higher GRMs, rising refinery utilisation rates, and higher marketing margins for its downstream, integrated oil station units.

**TOP: A rhino's strength with a cheetah's flexibility.** After its share price underperformed its local peers due to the capital increase overhang and a large hedging loss in 1H22, we think TOP's earnings are likely to surge markedly in 4Q22, driven by a sharp rise in its market GRM due to its high production yield of diesel and jet, a q-q lower hedging loss due to the reduced hedging position, and the improving earnings from its non-refinery businesses.

**BCP: At full steam in 4Q22.** We expect BCP's net profit to hit THB6b-THB7b in 4Q22, backed by its high utilisation rate of over 100%, lower-than-peers' crude premium as a result of its high proportion of locally procured crude, and the unique 13% product yield of BCP's unconverted oil, a type of fuel oil used as a feedstock to produce lube groups II and III, whose price is linked at a premium to the diesel price.

**SPRC: A pure refinery play to capture GRM rise.** We like SPRC – albeit as our least preferred refiner – due to the limited upside for its utilisation rate and despite its lack of earnings from other downstream and non-refinery businesses.

### Exhibit 12: Peer comparisons

Company	BBG code	Rec	Share Price	Target price	Upside	Market Cap	3Y EPS CAGR	PE		ROE		PBV		EV / EBITDA	
								22E	23E	22E	23E	22E	23E	22E	23E
			(LCY)	(LCY)	(%)	(USD m)	(%)	(x)	(x)	(%)	(%)	(x)	(x)	(x)	(x)
<b>THAILAND</b>															
Thai Oil	TOP TB	BUY	60.75	70.00	15	3,928	1.9	7.4	9.1	12.0	8.4	0.8	0.7	7.5	8.6
Star Petroleum	SPRC TB	BUY	12.70	14.60	15	1,538	70.1	3.6	8.0	37.0	13.3	1.1	1.0	2.1	3.4
Bangchak Corp	BCP TB	BUY	35.25	41.00	16	1,401	0.7	3.7	11.8	22.7	6.7	0.8	0.8	3.8	7.1
Esso Thailand	ESSO TB	BUY	13.40	13.00	(3)	1,295	97.8	2.2	6.7	73.4	17.3	1.2	1.1	1.8	4.7
PTT Global Chem	PTTGC TB	REDUCE	47.75	40.00	(16)	6,013	(3.2)	7.4	7.7	9.1	8.9	0.7	0.7	7.5	7.3
IRPC	IRPC TB	HOLD	3.50	3.20	(9)	1,997	(8.8)	9.8	5.4	8.4	14.6	0.8	0.8	4.9	5.3
Tipco Asphalt	TASCO TB	BUY	16.60	22.50	36	732	(8.9)	8.9	11.8	20.7	17.4	2.0	2.1	8.2	10.9
<b>Thailand avg</b>						<b>16,904</b>	<b>0.9</b>	<b>6.7</b>	<b>8.2</b>	<b>18.8</b>	<b>10.7</b>	<b>0.9</b>	<b>0.8</b>	<b>6.0</b>	<b>7.0</b>
<b>INDIA</b>															
Bharat Petrom	BPCL IN	NA	329.80	NA	NA	8,952	(20.3)	7.1	11.2	18.8	10.6	1.3	1.2	7.8	10.2
Hindustan Petro	HPCL IN	NA	241.10	NA	NA	4,280	(11.0)	5.2	15.4	17.2	8.3	0.8	1.0	7.0	10.1
Indian Oil	IOCL IN	NA	71.45	NA	NA	12,625	(5.2)	2.7	6.2	19.3	10.4	0.5	0.7	5.1	6.8
<b>India avg</b>						<b>25,857</b>	<b>(15.1)</b>	<b>4.6</b>	<b>9.5</b>	<b>18.8</b>	<b>10.1</b>	<b>0.9</b>	<b>0.9</b>	<b>6.3</b>	<b>8.5</b>
<b>TAIWAN</b>															
Formosa Petro	6505 TT	NA	86.40	NA	NA	27,243	(6.5)	15.2	18.5	14.6	12.2	2.2	2.2	10.0	11.6
<b>Taiwan avg</b>						<b>27,243</b>	<b>(6.5)</b>	<b>15.2</b>	<b>18.5</b>	<b>14.6</b>	<b>12.2</b>	<b>2.2</b>	<b>2.2</b>	<b>10.0</b>	<b>11.6</b>
<b>SOUTH KOREA</b>															
Sk Innovation	096770 KS	NA	205,000	NA	NA	14,202	198.4	5.8	8.8	15.9	9.7	0.9	0.8	4.3	5.6
Gs Holdings	078930 KS	NA	45,350	NA	NA	3,157	7.5	1.9	2.6	18.1	12.0	0.3	0.3	3.6	4.5
S-Oil Corp	010950 KS	NA	105,500	NA	NA	8,899	3.7	4.0	6.4	36.0	19.4	1.3	1.2	3.3	5.0
<b>South Korea avg</b>						<b>26,258</b>	<b>44.6</b>	<b>4.7</b>	<b>7.2</b>	<b>23.0</b>	<b>13.3</b>	<b>1.0</b>	<b>0.9</b>	<b>3.9</b>	<b>5.3</b>
<b>Refinery under coverage</b>						<b>16,904</b>	<b>0.9</b>	<b>6.7</b>	<b>8.2</b>	<b>18.8</b>	<b>10.7</b>	<b>0.9</b>	<b>0.8</b>	<b>6.0</b>	<b>7.0</b>
<b>Average (all)</b>						<b>96,261</b>	<b>28.87</b>	<b>7.99</b>	<b>11.19</b>	<b>18.74</b>	<b>11.67</b>	<b>1.27</b>	<b>1.26</b>	<b>6.63</b>	<b>8.25</b>

Share prices as of 25 Aug 2022

Sources: Bloomberg, FSSIA estimates

## Corporate Governance report of Thai listed companies 2021

EXCELLENT LEVEL – Score range 90-100										
AAV	BCPG	CPALL	GCAP	K	MSC	PLANET	SAMART	SPI	THRE	TVD
ADVANC	BDMS	CPF	GFPT	KBANK	MST	PLAT	SAMTEL	SPRC	THREL	TVI
AF	BEM	CPI	GGC	KCE	MTC	PORT	SAT	SPVI	TIPCO	TVO
AH	BGC	CPN	GLAND	KKP	MVP	PPS	SC	SSSC	TISCO	TWPC
AIRA	BGRIM	CRC	GLOBAL	KSL	NCL	PR9	SCB	SST	TK	U
AKP	BIZ	CSS	GPI	KTB	NEP	PREB	SCC	STA	TKT	UAC
AKR	BKI	DDD	GPSC	KTC	NER	PRG	SCCC	STEC	TMT	UBIS
ALT	BOL	DELTA	GRAMMY	LALIN	NKI	PRM	SCG	STI	TNDT	UV
AMA	BPP	DEMCO	GULF	LANNA	NOBLE	PROUD	SCGP	SUN	TNITY	VGI
AMATA	BRR	DRT	GUNKUL	LH	NSI	DRS	SCM	SUSCO	TOA	VIH
AMATAV	BTS	DTAC	HANA	LHFG	NVD	PSL	SDC	SUTHA	TOP	WACOAL
ANAN	BTW	DUSIT	HARN	LIT	NWR	PTG	SEAFCO	SVI	TPBI	WAVE
AOT	BWG	EA	HMPRO	LPN	NYT	PTT	SEAOIL	SYMC	TQM	WHA
AP	CENTEL	EASTW	ICC	MACO	OISHI	PTTEP	SE-ED	SYNTEC	TRC	WHAUP
ARIP	CFRESH	ECF	ICHI	MAJOR	OR	PTTGC	SELIC	TACC	TRU	WICE
ARROW	CHEWA	ECL	III	MAKRO	ORI	PYLON	SENA	TASCO	TRUE	WINNER
ASP	CHO	EE	ILINK	MALEE	OSP	Q-CON	SHR	TCAP	TSC	ZEN
AUCT	CIMBT	EGCO	ILM	MBK	OTO	QH	SIRI	TEAMG	TSR	
AWC	CK	EPG	INTUCH	MC	PAP	QTC	SIS	TFMAMA	TSTE	
AYUD	CKP	ETC	IP	MCOT	PCSGH	RATCH	SITHAI	TGH	TSTH	
BAFS	CM	FPI	IRPC	METCO	PDG	RS	SMK	THANA	TTA	
BANPU	CNT	FPT	ITEL	MFEC	PDJ	S	SMPC	THANI	TTB	
BAY	COM7	FSMART	IVL	MINT	PG	S & J	SNC	THCOM	TTCL	
BBL	COMAN	GBX	JSP	MONO	PHOL	SAAM	SONIC	THG	TTW	
BCP	COTTO	GC	JWD	MOONG	PLANB	SABINA	SPALI	THIP	TU	
VERY GOOD LEVEL – Score range 80-89										
2S	ASIMAR	CHOW	FLOYD	IT	LOXLEY	OCC	RPC	SKY	TCC	TVT
7UP	ASK	CI	FN	ITD	LRH	OGC	RT	SLP	TCMC	TWP
ABICO	ASN	CIG	FNS	J	LST	PATO	RWI	SMIT	TEAM	UEC
ABM	ATP30	CMC	FORTH	JAS	M	PB	S11	SMT	TFG	UMI
ACE	B	COLOR	FSS	JCK	MATCH	PICO	SA	SNP	TFI	UOBKH
ACG	BA	CPL	FTE	JCKH	MBAX	PIMO	SAK	SO	TIGER	UP
ADB	BAM	CPW	FVC	JMART	MEGA	PJW	SALEE	SORKON	TITLE	UPF
AEONTS	BC	CRD	GEL	JMT	META	PL	SAMCO	SPA	TKN	UPOIC
AGE	BCH	CSC	GENCO	KBS	MFC	PM	SANKO	SPC	TKS	UTP
AHC	BEC	CSP	GJS	KCAR	MGT	PMTA	SAPPE	SPCG	TM	VCOM
AIT	BEYOND	CWT	GYT	KEX	MICRO	PPP	SAWAD	SR	TMC	VL
ALL	BFIT	DCC	HEMP	KGI	MILL	PPPM	SCI	SRICHA	TMD	VPO
ALLA	BJC	DCON	HPT	KIAT	MITSIB	PRIME	SCN	SSC	TMI	VRANDA
ALUCON	BJCHI	DHOUSE	HTC	KISS	MK	PRIN	SCP	SSF	TMILL	WGE
AMANAH	BLA	DOD	HYDRO	KOOL	MODERN	PRINC	SE	STANLY	TNL	WIJK
AMARIN	BR	DOHOME	ICN	KTIS	MTI	PSG	SFLEX	STGT	TNP	WP
APCO	BROOK	DV8	IFS	KUMWEL	NBC	PSTC	SFP	STOWER	TOG	XO
APCS	CBG	EASON	IMH	KUN	NCAP	PT	SFT	STPI	TPA	XPG
APURE	CEN	EFORL	IND	KWC	NCH	QLT	SGF	SUC	TPAC	YUASA
AQUA	CGH	ERW	INET	KWM	NETBAY	RBF	SIAM	SWC	TPCS	
ASAP	CHARAN	ESSO	INSET	L&E	NEX	RCL	SINGER	SYNEX	TPS	
ASEFA	CHAYO	ESTAR	INSURE	LDC	NINE	RICHY	SKE	TAE	TRITN	
ASIA	CHG	ETE	IRC	LEO	NRF	RML	SKN	TAKUNI	TRT	
ASIAN	CHOTI	FE	IRCP	LHK	NTV	ROJNA	SKR	TBSP	TSE	
GOOD LEVEL – Score range 70-79										
A	BGT	CITY	GIFT	JTS	MDX	PK	SGP	SUPER	TQR	YGG
AI	BH	CMAN	GLOCON	JUBILE	MJD	PLE	SICT	SVOA	TTI	ZIGA
AIE	BIG	CMO	GREEN	KASET	MORE	PPM	SIMAT	TC	TYCN	
AJ	BLAND	CMR	GSC	KCM	MUD	PRAKIT	SISB	TCCC	UKEM	
ALPHAX	BM	CPT	GTB	KK	NC	PRAPAT	SK	THMUI	UMS	
AMC	BROCK	CRANE	HTECH	KKC	NDR	PRECHA	SMART	TNH	UNIQ	
APP	BSBM	CSR	HUMAN	KWI	NFC	PTL	SOLAR	TNR	UPA	
AQ	BSM	D	IHL	KYE	NNCL	RJH	SPACK	TOPP	UREKA	
ARIN	BTNC	EKH	IIG	LEE	NOVA	RP	SPG	TPCH	VIBHA	
AS	BYD	EMC	INGRS	LPH	NPK	RPH	SQ	TPIPL	W	
AU	CAZ	EP	INOX	MATI	NUSA	RSP	SSP	TIPIP	WIN	
B52	CCP	F&D	JAK	M-CHAI	PAF	SABUY	STARK	TPLAS	WORK	
BEAUTY	CGD	FMT	JR	MCS	PF	SF	STC	TPOLY	WPH	

**Disclaimer:**

The disclosure of the survey results of the Thai Institute of Directors Association ("IOD") regarding corporate governance is made pursuant to the policy of the Office of the Securities and Exchange Commission. The survey of the IOD is based on the information of a company listed on the Stock Exchange of Thailand and the Market for Alternative Investment disclosed to the public and able to be accessed by a general public investor. The result, therefore, is from the perspective of a third party. It is not an evaluation of operation and is not based on inside information.

The survey result is as of the date appearing in the Corporate Governance Report of Thai Listed Companies. As a result, the survey results may be changed after that date. FSS International Investment Advisory Company Limited does not confirm nor certify the accuracy of such survey results.

\* CGR scoring should be considered with news regarding wrong doing of the company or director or executive of the company such unfair practice on securities trading, fraud, and corruption SEC imposed a civil sanction against insider trading of director and executive

Sources: Thai Institute of Directors Association (IOD); FSSIA's compilation; data as of 26 October 2021

## Anti-corruption Progress Indicator

CERTIFIED										
2S	BCH	CPALL	GC	K	MFC	PE	QLT	SNP	THCOM	TU
7UP	BCP	CPF	GCAP	KASET	MFEC	PG	QTC	SORKON	THIP	TVD
ADVANC	BCPG	CPI	GEL	KBANK	MILL	PHOL	RATCH	SPACK	THRE	TVI
AF	BE8	CPN	GFPT	KBS	MINT	PK	RML	SPALI	THREL	TVO
AI	BEYOND	CSC	GGC	KCAR	MONO	PL	RWI	SPC	TIDLOR	TWPC
AIE	BGC	DCC	GJS	KCE	MOONG	PLANB	S & J	SPI	TIPCO	U
AIRA	BGRIM	DELTA	GPI	KGI	MSC	PLANET	SAAM	SPRC	TISCO	UBE
AKP	BJCHI	DEMCO	GPSC	KKP	MST	PLAT	SABINA	SRICHA	TKS	UBIS
ALPHAX	BKI	DIMET	GSTEEL	KSL	MTC	PM	SAPPE	SSF	TKT	UEC
AMA	BLA	DRT	GUNKUL	KTB	MTI	PPP	SAT	SSP	TMD	UKEM
AMANAHA	BPP	DTAC	HANA	KTC	NBC	PPPM	SC	SSSC	TMILL	UOBKH
AMATA	BROOK	DUSIT	HARN	KWC	NEP	PPS	SCB	SST	TMT	UPF
AMATAV	BRR	EA	HEMP	KWI	NINE	PR9	SCC	STA	TNITY	UV
AP	BSBM	EASTW	HENG	L&E	NKI	PREB	SCCC	STOWER	TNL	VGI
APCS	BTS	ECL	HMPRO	LANNA	NMG	PRG	SCG	SUSCO	TNP	VIH
AQUA	BWG	EGCO	HTC	LH	NNCL	PRINC	SCN	SVI	TNR	WACOAL
ARROW	CEN	EP	ICC	LHFG	NOBLE	PRM	SEAOIL	SYMC	TOG	WHA
AS	CENTEL	EPG	ICHI	LHK	NOK	PROS	SE-ED	SYNTEC	TOP	WHAUP
ASIAN	CFRESH	ERW	IFEC	LPN	NSI	PSH	SELIC	TAE	TOPP	WICE
ASK	CGH	ESTAR	IFS	LRH	NWR	PSL	SENA	TAKUNI	TPA	WIJK
ASP	CHEWA	ETE	ILINK	M	OCC	PSTC	SGP	TASCO	TPP	XO
AWC	CHOTI	FE	INET	MAKRO	OGC	PT	SINGER	TBSP	TRU	ZEN
AYUD	CHOW	FNS	INSURE	MALEE	ORI	PTG	SIRI	TCAP	TRUE	
B	CIG	FPI	INTUCH	MATCH	PAP	PTT	SITHAI	TCMC	TSC	
BAFS	CIMBT	FPT	IRC	MBAX	PATO	PTTEP	SKR	TFG	TSTE	
BAM	CM	FSMART	IRPC	MBK	PB	PTTGC	SMIT	TFI	TSTH	
BANPU	CMC	FSS	ITEL	MC	PCSGH	PYLON	SMK	TFMAMA	TTA	
BAY	COM7	FTE	IVL	MCOT	PDG	Q-CON	SMPC	TGH	TTB	
BBL	COTTO	GBX	JKN	META	PDJ	QH	SNC	THANI	TTCL	
DECLARED										
AJ	CHG	DDD	ETC	JR	MAJOR	NUSA	RS	SSS	TQM	YUASA
ALT	CPL	DHOUSE	FLOYD	JTS	NCAP	NYT	SAK	STECH	TSI	ZIGA
APCO	CPR	DOHOME	GULF	KEX	NCL	OR	SCGP	STGT	VARO	
B52	CPW	ECF	III	KUMWEL	NOVA	PIMO	SCM	TKN	VCOM	
BEC	CRC	EKH	INOX	LDC	NRF	PLE	SIS	TMI	VIBHA	

Level	
Certified	This level indicates practical participation with thoroughly examination in relation to the recommended procedures from the audit committee or the SEC's certified auditor, being a certified member of Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) or already passed examination to ensure independence from external parties.
Declared	This level indicates determination to participate in the Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC)

### Disclaimer:

The disclosure of the Anti-Corruption Progress Indicators of a listed company on the Stock Exchange of Thailand, which is assessed by Thaipat Institute, is made in order to comply with the policy and sustainable development plan for the listed companies of the Office of the Securities and Exchange Commission. Thaipat Institute made this assessment based on the information received from the listed company, as stipulated in the form for the assessment of Anti-corruption which refers to the Annual Registration Statement (Form 56-1), Annual Report (Form 56-2), or other relevant documents or reports of such listed company. The assessment result is therefore made from the perspective of Thaipat Institute that is a third party. It is not an assessment of operation and is not based on any inside information. Since this assessment is only the assessment result as of the date appearing in the assessment result, it may be changed after that date or when there is any change to the relevant information. Nevertheless, FSS International Investment Advisory Company Limited does not confirm, verify, or certify the accuracy and completeness of the assessment results.

Note: Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of 26 October 2021) are categorised into: 1) companies that have declared their intention to join CAC, and; 2) companies certified by CAC.

Sources: The Securities and Exchange Commission, Thailand; \* FSSIA's compilation

## GENERAL DISCLAIMER

### ANALYST(S) CERTIFICATION

Suwat Sinsadok, CFA, FRM, ERP FSS International Investment Advisory Securities Co., Ltd

The individual(s) identified above certify(ies) that (i) all views expressed in this report accurately reflect the personal view of the analyst(s) with regard to any and all of the subject securities, companies or issuers mentioned in this report; and (ii) no part of the compensation of the analyst(s) was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed herein.

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Company	Ticker	Price	Rating	Valuation & Risks
Thai Oil	TOP TB	THB 60.75	BUY	Downside risks to our EV/EBITDA-based TP are 1) a sharp fall in oil price; 2) weak demand for refined oil products; 3) customer concentrations; 4) currency risk; 5) interest rate risk; and 6) a raw material shortage.
Star Petroleum Refining	SPRC TB	THB 12.70	BUY	TP is based on EV/EBITDA. Downside risks are a sharp rise in oil price and weak demand for refined oil products.
Bangchak Corp	BCP TB	THB 35.25	BUY	The downside risks to our SoTP-based TP include: 1) lower-than-expected demand for petroleum products; 2) higher crude premiums; and 3) unplanned shutdowns of the company's refinery plants.
Esso Thailand	ESSO TB	THB 13.40	BUY	The downside risks to our SoTP-based TP on ESSO include 1) lower-than-expected demand for petroleum products; 2) a higher crude premium; and 3) unplanned shutdowns of its refinery and petrochemical plants.
PTT Global Chemical	PTTGC TB	THB 47.75	REDUCE	The key upside risks to our EV/EBITDA-based TP are a stronger-than-expected HDPE price and HDPE-naphtha margin.
IRPC PCL	IRPC TB	THB 3.50	HOLD	Key upside risks to our neutral view and EV/EBITDA-based target price are rising margins of PP-naphtha, SM and ABS-benzene, and a higher market GRM, while downside risks are weak demand for refinery and petrochemical products and a higher naphtha price.
Tipco Asphalt	TASCO TB	THB 16.60	BUY	Downside risks to our EV/EBITDA multiple based TP include 1) a lower asphalt margin due to an oversupply in Asia on the back of faster recovery of utilisation rate for global refiners; and 2) a lower-than-expected supply of alternative crudes and asphalt.

Source: FSSIA estimates

### Additional Disclosures

Target price history, stock price charts, valuation and risk details, and equity rating histories applicable to each company rated in this report is available in our most recently published reports. You can contact the analyst named on the front of this note or your representative at Finansia Syrus Securities Public Company Limited

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All share prices are as at market close on 25-Aug-2022 unless otherwise stated.

## RECOMMENDATION STRUCTURE

### Stock ratings

Stock ratings are based on absolute upside or downside, which we define as (target price\* - current price) / current price.

BUY (B). The upside is 10% or more.

HOLD (H). The upside or downside is less than 10%.

REDUCE (R). The downside is 10% or more.

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 market price and the formal recommendation.

\* In most cases, the target price will equal the analyst's assessment of the current fair value of the stock. However, if the analyst doesn't think the market will reassess the stock over the specified time horizon due to a lack of events or catalysts, then the target price may differ from fair value. In most cases, therefore, our recommendation is an assessment of the mismatch between current market price and our assessment of current fair value.

## Industry Recommendations

**Overweight.** The analyst expects the fundamental conditions of the sector to be positive over the next 12 months.

**Neutral.** The analyst expects the fundamental conditions of the sector to be maintained over the next 12 months.

**Underweight.** The analyst expects the fundamental conditions of the sector to be negative over the next 12 months.

## Country (Strategy) Recommendations

**Overweight (O).** Over the next 12 months, the analyst expects the market to score positively on two or more of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

**Neutral (N).** Over the next 12 months, the analyst expects the market to score positively on one of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

**Underweight (U).** Over the next 12 months, the analyst does not expect the market to score positively on any of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.