

Thailand Refinery

Negative factors already priced in

- We reinitiate Thai refinery sector coverage with an Overweight call. Negative factors such as the drop in oil prices and lower GRMs should already be priced in – making valuations attractive.
- We think refineries' earnings in 2H23 will bounce back h-h and further improve in 2024, mainly driven by robust demand growth and limited new supply.
- SPRC and BCP are our top picks.

Positive 2H23 outlook for refineries boosted by likelihood of improving GRMs

We expect refineries' earnings in 2H23 to improve after bottoming out in 2Q23, with 2H23 earnings overtaking those of 1H23. Key drivers for the sector, in our view, are improved gross refining margins (GRMs) and an expected oil price uptrend. This would be supported by lower crude oil premiums and a potential recovery in refined product spreads in 2H23 as economic activity in China ramps up.

Demand growth to outpace new capacity in 2024-2025E

We see a brighter long-term outlook for the sector in 2024-2025 as additional supply appears to be limited and refined product demand growth should outpace new capacity. This could help improve earnings in the sector further in the longer term. Furthermore, competition in the sector would be alleviated amid growing demand.

Our top picks are SPRC and BCP

We reinitiate coverage of Thailand's refinery sector with an Overweight call. Our top picks are SPRC and BCP. As a pure refinery play and one of the largest gasoline producers, we think SPRC will benefit most from the summer driving season (2Q-3Q) and a potential refinery recovery in 2H23. We also like BCP in 3Q23-4Q23 due to the possibility of a valuation premium from the ESSO acquisition deal. We expect its ROE to re-rate to the mid-teens after the merger and push BCP to trade at a higher valuation. As for TOP, with its sizable exposure in petrochemicals, we think its share price should outperform its peers next year when petrochemical product spreads begin to pick up. Our TP for SPRC is THB12.50/shr, based on 1.2x 2024E P/BV. Our BCP TP at THB42.70/shr is based on an SoTP valuation. For TOP, we set our TP at THB61.80/shr, based on 0.8x 2024E P/BV, which is -1SD of its long-term average.

FSSIA recommendations

Company	BBG code	share price	Rating	Target Price	
				Current	Up/downside
Bangchak Corp	BCP TB	32.00	BUY	42.70	+33.4%
Star Petroleum Refining	SPRC TB	8.25	BUY	12.50	+51.5%
Thai Oil	TOP TB	43.25	BUY	61.80	+42.9%

Note: Priced at close of business 31/05/2023. Share prices and TPs are in listing currency.
Sources: FSSIA estimates



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Investment thesis

We have a positive view on Thailand's refinery sector. We believe the sector will do better in 2H23 as petroleum product crack spreads improve, especially for diesel and jet fuel, driven by higher demand from China as economic activity ramps up, and amid improved gasoline demand from the summer driving season in the US. In addition, we expect GRMs to be supported by two more factors: lower crude premiums and higher stock gains in 2H23. We think the Dubai oil price will stay above USD80/bbl from 3Q23 to the end of the year.

Catalyst

Key catalysts for the sector are:

- Higher-than-expected petroleum product demand
- Increased petroleum product spreads
- Lower crude premiums
- Rising oil prices
- Unplanned shutdowns of global refineries

Risks to our call

- A sharp decline in oil prices due to fears of a global recession which could affect sector earnings and sentiment.
- Lower-than-expected petroleum product crack spreads from weaker-than-expected demand.
- Sharp fall in GRM.

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- BANGCHAK CORP (BCP TB, BUY TP THB42.70)	
- STAR PETROLEUM REFINING (SPRC TB, BUY TP THB12.50)	
- THAI OIL (TOP TB, BUY TP THB61.80)	

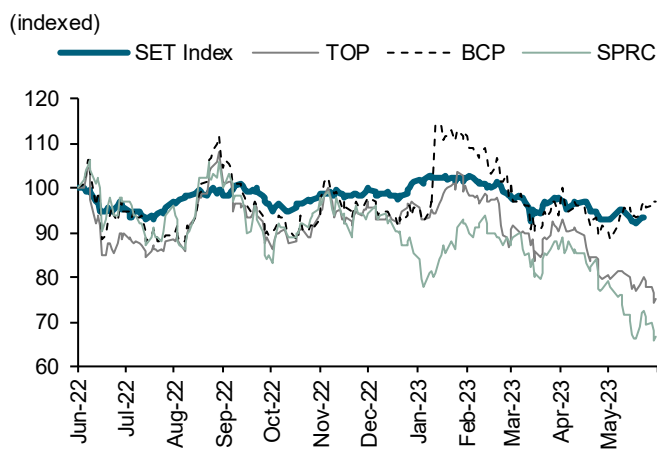
Event Calendar

Date	Event
4 June 2023	OPEC+ meeting
Early Aug 2023	2Q23 results announcement
Mid Aug 2023	2Q23 analyst meeting
Early Nov 2023	3Q23 results announcement
Mid Nov 2023	3Q23 analyst meeting

Negative factors already priced-in – attractive valuation

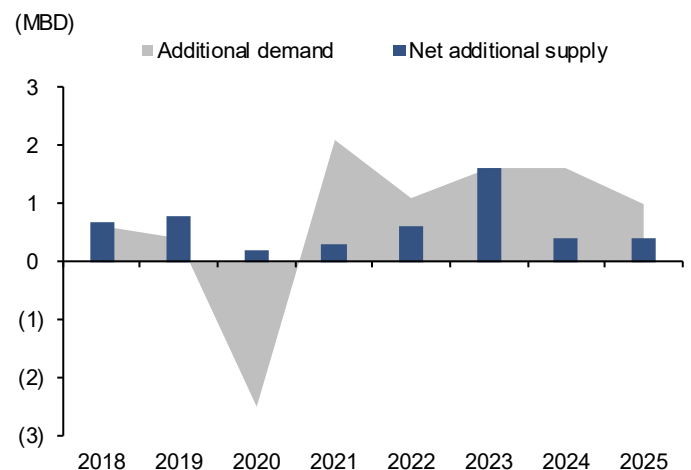
We believe refineries will be the winners among energy players in the short and long term, given our expectations of a potentially higher crude oil price outlook, lower crude oil premiums, limited additional supply over the long term, and a strong economic recovery. Though GRMs recently showed weakness from China's higher refined product export quota and recession fears, we believe the sector's valuation has already priced in the negative news. We have a positive view of GRMs in 2H23 from 1) the US driving season boosting gasoline crack spreads higher; and 2) China's economic recovery which should improve diesel and jet crack spreads. In addition, we expect crude oil premiums to remain low until the end of the year. Longer-term, we believe limited additional supply and global economic normalisation will be the key drivers for the sector.

Exhibit 1: Share prices vs SET Index



Source: Bloomberg

Exhibit 2: Limited new supply in the next 1-2 years

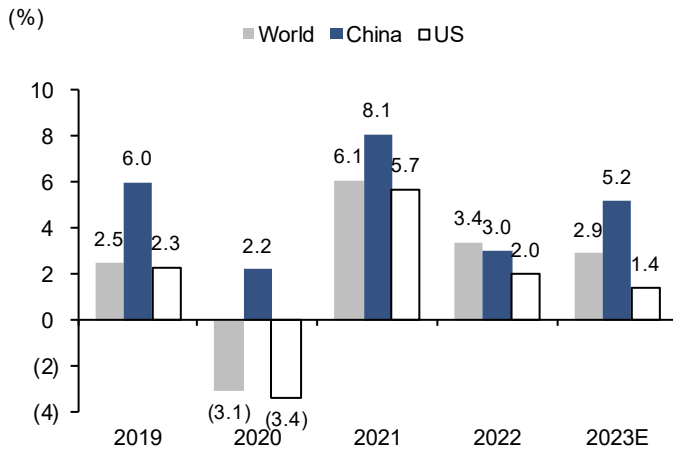


Source: TOP

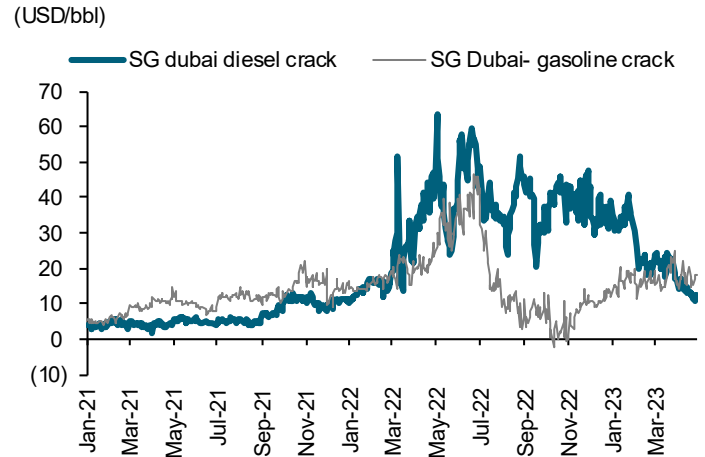
Refineries' earnings in 2H23 to rise h-h

We see refineries' earnings in 2H23 exceeding their 1H23 results for two main reasons: 1) higher GRMs; 2) an oil price uptrend.

Expect weak marketing GRMs to bottom out in 1H23. We believe the current weak marketing GRMs will bottom out in 2Q22 and recover in 2H23 amid higher gasoline and jet demand during the US summer driving season (April-September) and increased diesel demand from rising economic activity in China. Moreover, China slashed its second batch refined product export quota in May. We expect a further export quota cut for the third batch as domestic economic activity ramps up. This could help alleviate fears of a looming diesel oversupply situation and enhance product spreads in 2H23. We expect the current weakness in refined product spreads to lead to a slower-than-expected rise in utilisation rates for new capacity coming online this year. All of these factors could boost and sustain GRMs at a healthy level in 2H23.

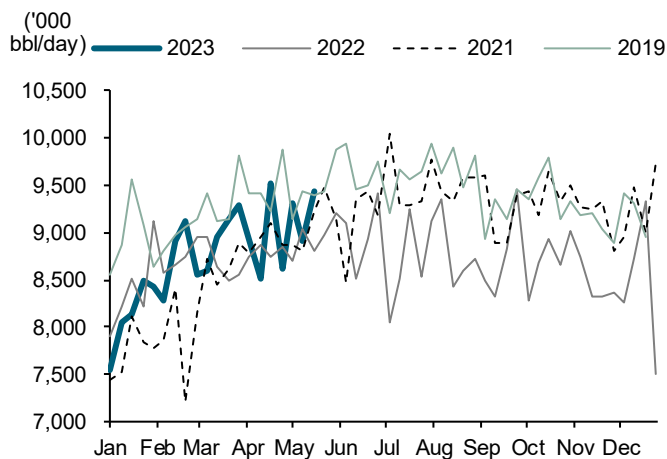
Exhibit 3: World GDP growth vs China's GDP growth

Source: IMF

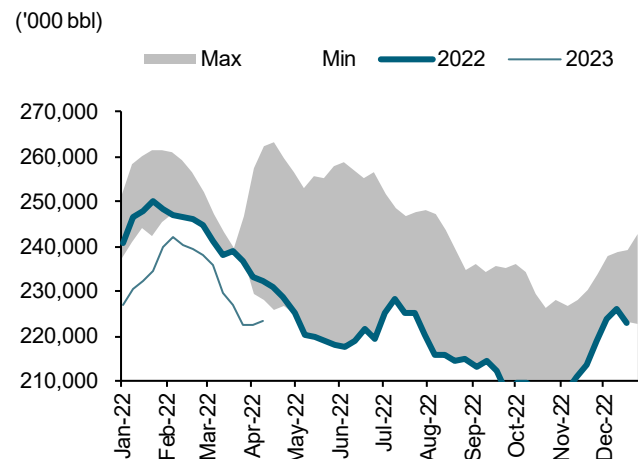
Exhibit 4: Daily Singapore diesel-Dubai and gasoline-Dubai spreads

Source: Bloomberg

Gasoline outlook brightens as spreads recover from seasonality. We believe gasoline-Dubai spreads will rise and stay strong in 2H23 from the combination of two main factors: 1) higher demand from the US summer driving season; and 2) record low US gasoline inventories. Gasoline spreads typically have a pattern of increase during the summer driving season from April-September. The US month-to-date (as of 19 May 2023) gasoline demand update reported healthy gasoline demand that was up 4.2% y-y in May as US gasoline inventories remained at record lows compared to the five-year historical average. In our view, these factors should support improved gasoline spreads in 2H23.

Exhibit 5: US gasoline demand

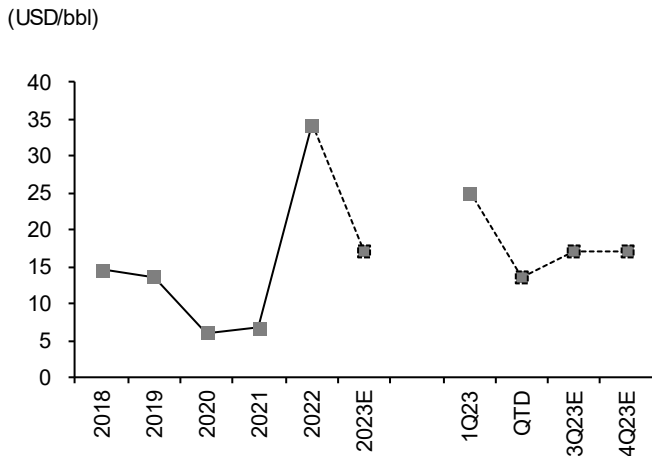
Source: EIA

Exhibit 6: US gasoline inventories at five-year lows

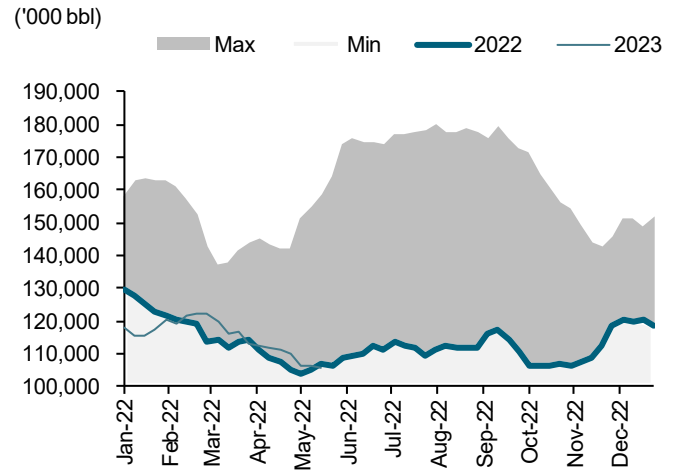
Source: EIA

Diesel outlook: stronger demand recovery in China should improve spreads.

Exhibit 7 shows that while the diesel crack spread dropped to below USD15/bbl at the end of April 2023, we believe it should tick higher and hover between USD15-20/bbl in 2H23 amid firm demand in Asia that was evident in China's better-than-expected 1Q23 GDP growth. This combined with low US middle distillate inventories should be enough to support our view. Current US middle distillate stocks shown in Exhibit 8 at 106m bbl are at the low end of the five-year range. Additionally, oversupply fears have been partly eased after China lowered its second batch refined product export quota. We expect China to further reduce its diesel export quota to support its domestic economic recovery.

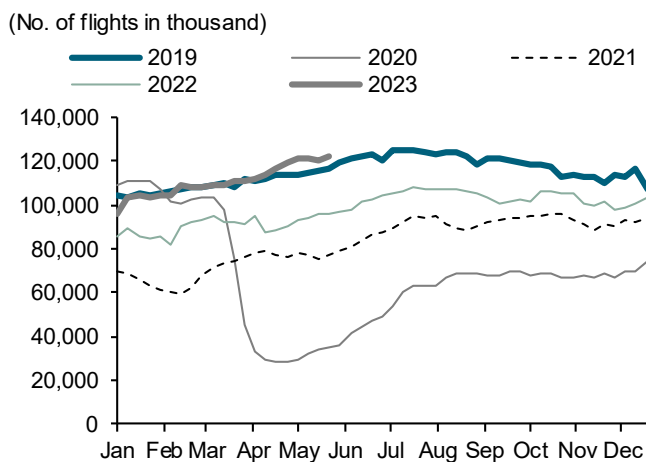
Exhibit 7: Diesel crack spreads

Sources: TOP, FSSIA estimates

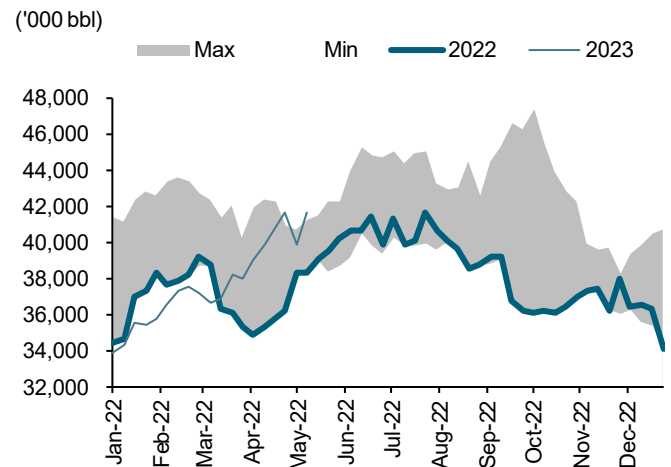
Exhibit 8: US middle distillate inventories at five-year lows

Source: EIA

Jet fuel outlook boosted by China's rising international flights. We believe the jet fuel crack spread will rise alongside diesel as the number of international flights from China rise. However, they have not yet recovered to the pre-Covid level due to other countries imposing extra entry requirements on Chinese travellers to prevent a resurgence of Covid-19 cases in their country. In addition, there is a time lag as airlines ramp up their number of flights. We expect the resumption of international flights from China to help absorb jet fuel inventories in 2H23. Furthermore, China's lower export quota should support improved product spreads in 2H23.

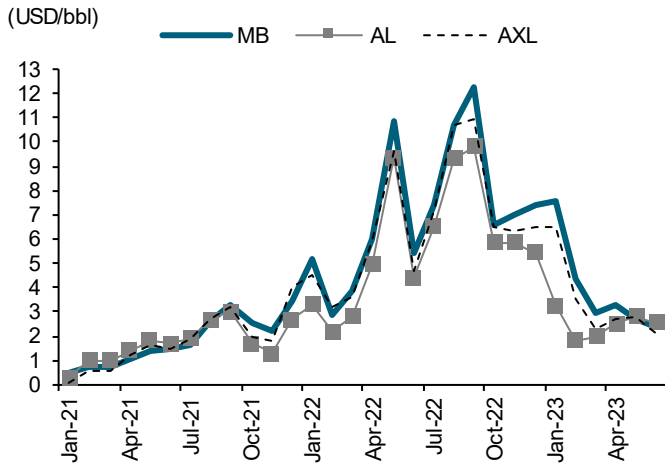
Exhibit 9: Total number of global commercial flights

Source: Bloomberg

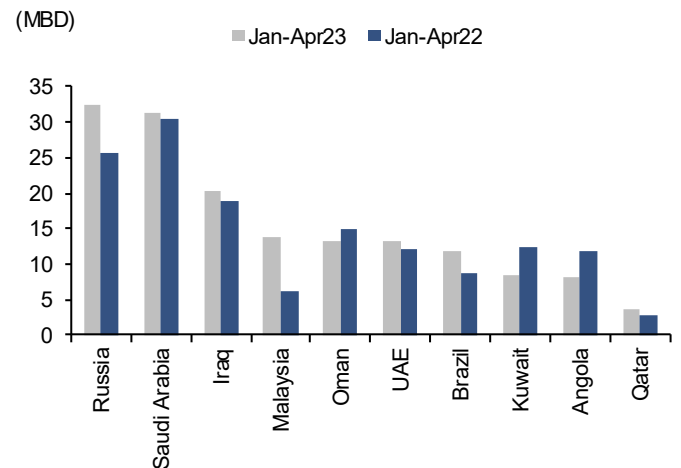
Exhibit 10: US jet fuel inventories

Source: EIA

Crude oil premiums to stay low throughout 2023. Given the new supply arriving in the region as crude from Russia is redirected into Asia (mainly China and India) and a surplus of non-OPEC production, we anticipate crude premiums especially for Murban, a light Middle Eastern crude oil, to stay low throughout this year and next year. Moreover, a short-term shortfall in GRMs would limit any upside in crude premiums.

Exhibit 11: Crude premiums to stay low in 2023

Source: TOP

Exhibit 12: China's imports by country show Russian crude overtaking Saudi Arabian crude

Source: China's General Administration of Customs

Dubai crude oil price forecast at USD86/bbl in 2023. We have seen some slowdown in oil prices recently due to recession fears that offset the effect of the OPEC+ cut. However, our Dubai oil price forecast is based on the Bank of Thailand's estimates which project the Dubai oil price to average USD86/bbl in 2023 and USD90/bbl in 2024 and 2025. Therefore, we believe oil prices this year will move upward amid Asia's sturdy demand growth in 2023, driven mainly by the acceleration of China's economic activity and lower OPEC+ production. In addition, several government agencies (Exhibit 14) recently raised their 2023 oil demand growth forecast due to higher-than-expected demand from China. Thus, we think the oil price should hover between USD85-90/bbl in 2H23. With the next OPEC meeting scheduled for 4 June 2023, we think additional OPEC+ production cuts are possible if the oil price weakens further. This could support refinery earnings in 2H23 this year.

Exhibit 13: FSSIA oil price assumptions

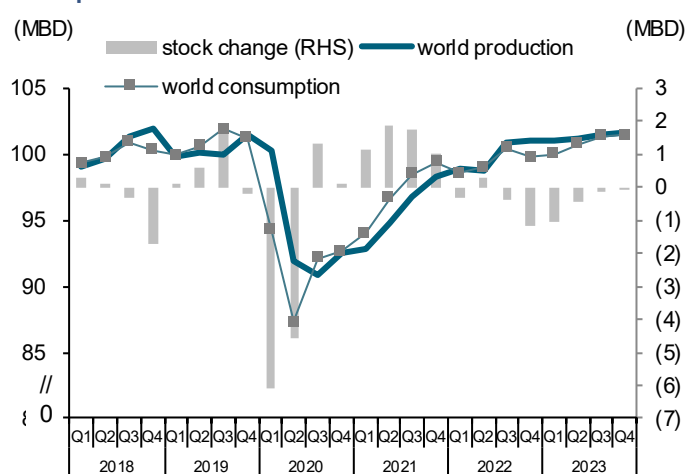
FSSIA's assumptions	2022 (USD/bbl)	2023E (USD/bbl)	2024E (USD/bbl)	2025E (USD/bbl)
Dubai oil price	96.4	86.0	90.0	90.0

Source: Bank of Thailand

Exhibit 14: Government agencies have boosted oil demand growth estimates

Oil demand growth	as of Feb23		as of May23
	2022 (MBD)	2023E (MBD)	2023E (MBD)
EIA	2.3	1.1	1.6
FGE	3.3	1.6	1.8
OPEC	2.5	1.7	2.3
IEA	2.2	1.7	2.0
Average	2.5	1.7	2.0

Sources: EIA, FGE, OPEC, IEA

Exhibit 15: World liquid fuel consumption ramping up to match production in 2023

Source: EIA

Long-term outlook sees demand growth outpacing new capacity

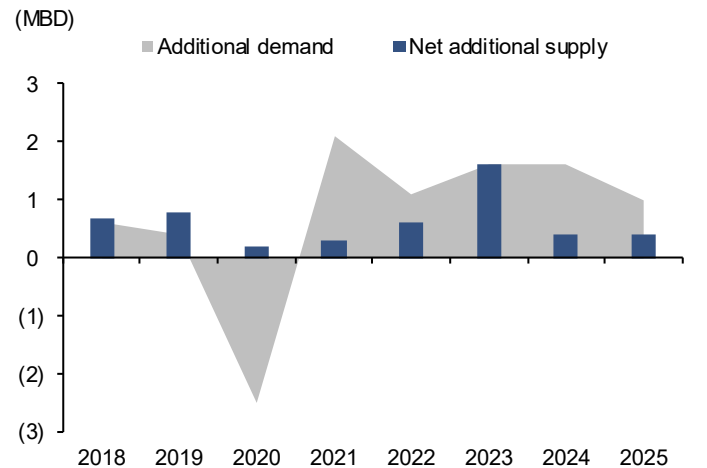
Additional refinery supply coming online in the next 2-3 years should be limited. We think this will prop up refined product spreads in the long term. Exhibit 17 shows that long-term demand growth should outpace new supply in 2024-2025 and additional supply this year should be fully online in 2H23. However, we believe utilisation rates will remain low before gradually ramping up to full capacity next year.

Exhibit 16: New capacity supply to dry up by 3Q23 as delayed projects from 2020-2022 come online

Country	Company	CDU (KBD)	Start-up
Saudi Arabia	Jizan	400	2Q21
China	Rongsheng	400	1Q22
Malaysia	Petronas	300	3Q22
India	Hindustan Petroleum	125	3Q22
China	Local Shenghong Petrochemical	320	4Q22
China	CNPC/PDVSA	400	4Q22
Iraq	Karbala	140	2Q23
Iran	Abadan	230	2Q23
Kuwait	Al Zour	615	2Q23
China	Local Hebei	170	3Q23
China	Sinopec Hainan	100	3Q23
Oman	Al-Duqm	230	4Q23

Source: TOP

Exhibit 17: Limited additional supply in 2024-2025E



Source: TOP

Exhibit 18: Key project closures in the coming years

Country	Company	CDU (KBD)	Closure
Malaysia	Petronas	(300)	3Q22
Japan	ENEOS	(112)	4Q22
Japan	ENEOS	(119)	4Q23
Japan	Idemitsu	(112)	4Q24

Source: TOP

Investment strategy – Our top picks are SPRC and BCP

Our top picks are SPRC and BCP. In 2Q23-3Q23, we prefer pure refinery plays with high exposure to gasoline demand during the US driving season in April-September. Thus, we like SPRC. We favor BCP in 3Q23-4Q23 due to its possible valuation premium from the ESSO acquisition deal. We expect its ROE will re-rate to the mid-teens post-merger which could push BCP to trade at a higher valuation. In the meantime, we expect BCP's key businesses (i.e. refinery, oil and retail marketing, and exploration & production (E&P)) to stay strong in 2H23. As for TOP, we believe its earnings and share price will begin to outperform its peers by the end of this year when diesel demand fully picks up from the acceleration of economic activity in China and higher diesel demand from seasonality (winter season). Moreover, we expect TOP to benefit as the petrochemical oversupply situation eases next year.

BCP-ESSO deal to unlock value

BCP is one of our current top picks for two main reasons 1) the ESSO deal, expected to be completed in 3Q23; and 2) its diversified portfolio. We believe a successful ESSO acquisition deal could provide a premium valuation to BCP as its ROE re-rates to the mid-teens after the merger. Currently, both parties are awaiting antitrust approval to complete the deal. In addition, we expect BCP's 2H23 earnings to not only improve from the refinery business recovery but also from its other diversified businesses, namely oil and retail marketing, E&P, and power production. Due to its recent share price weakness, we think now is a good time to accumulate the stock.

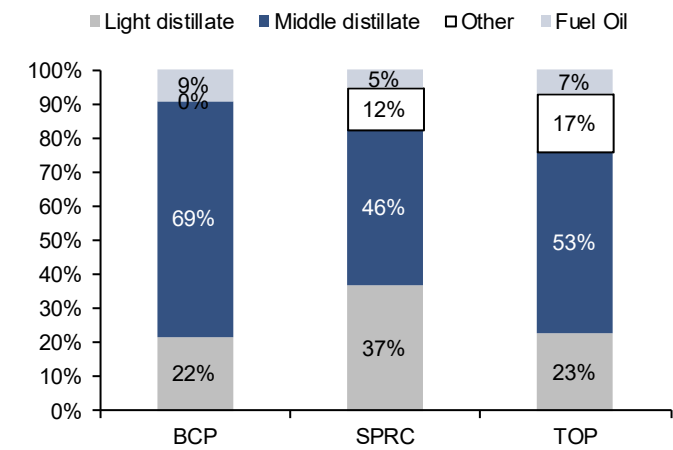
SPRC: High-beta play with attractive yield

Given that SPRC is a pure refinery play unlike its peers, its earnings have higher leverage to GRM. Hence, it is a high-beta stock. We think SPRC's GRM in 2Q23 will be more resilient relative to its peers due to its higher gasoline product yield. QTD, ULG95-Dubai was down by USD9.36/bbl q-q, compared to the diesel-Dubai spread which was down USD11.65/bbl q-q. Furthermore, we expect that in 2H23 SPRC's GRM will rise at a faster pace than its peers due to the expected reopening of its single point mooring system (SPM) in 3Q23, which would reduce its freight cost by around USD1.5/bbl and boost GRM, resulting in higher earnings in 2H23. SPRC's 2023E dividend yield is attractive at 7.9%, with limited share price downside.

TOP – Normalised years ahead

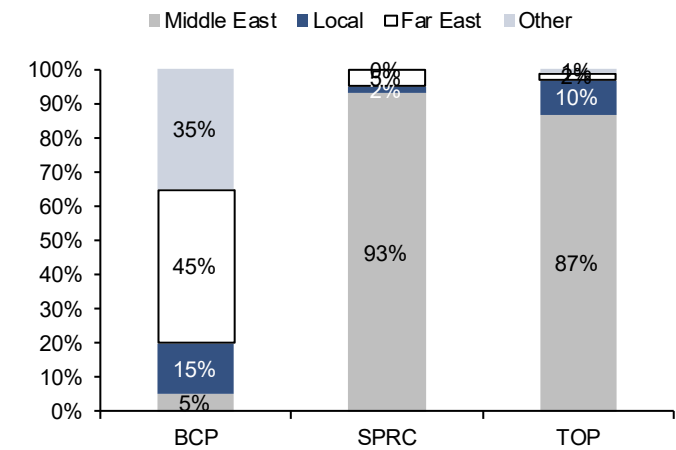
We believe 2Q23 will be the bottom quarter of the year for TOP, mainly from weaker diesel spreads caused by higher supplies in the region and the end of the peak winter season. However, we think the 2H23 outlook looks brighter for both its refinery and petrochemicals amid stepped up economic activity in China in conjunction with a lower crude premium which should help drive diesel spreads higher in 2H23. We believe its earnings and share price will start to outperform its peers by the end of this year when diesel demand fully picks up led by China's recovery and higher diesel demand from seasonality (winter season). Moreover, we expect TOP to benefit as the petrochemical oversupply situation eases next year.

Exhibit 19: Product mix – SPRC has highest light distillate proportion



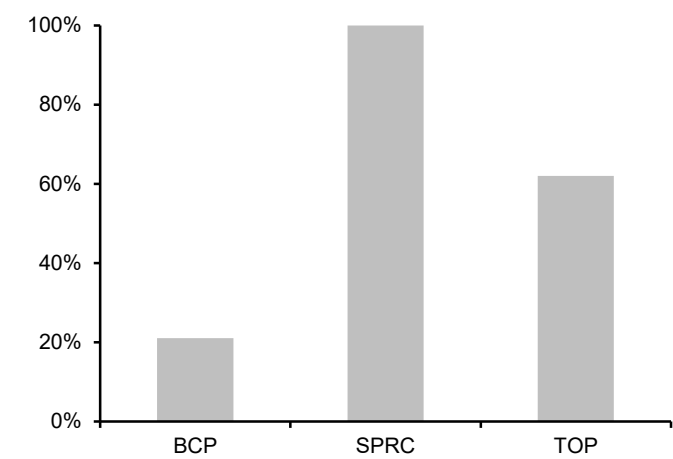
Sources: BCP, SPRC, TOP

Exhibit 20: Crude intake breakdown by region



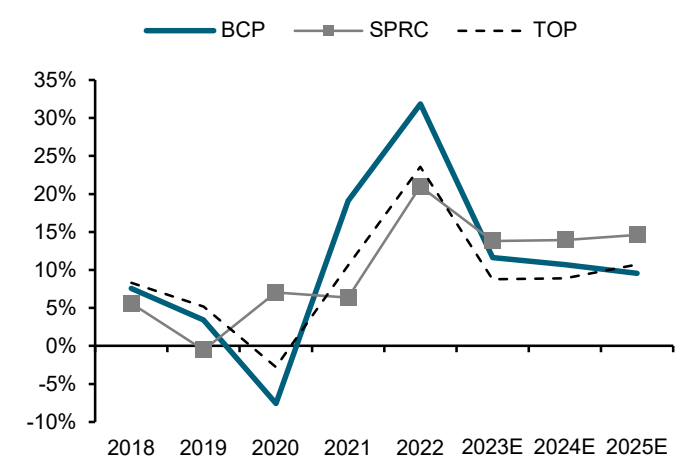
Sources: BCP, SPRC, TOP

Exhibit 21: % of EBITDA from refinery business in 2023E



Source: FSSIA estimates

Exhibit 22: ROE comparison

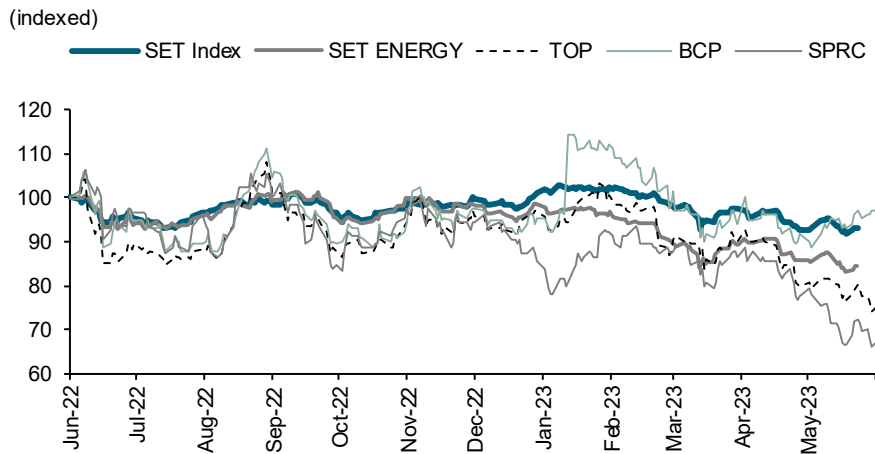


Source: FSSIA estimates

Attractive valuation below historical average

We reinitiate coverage of Thailand's refinery sector with an Overweight call based on our expectation that the sector will bottom out in 2Q23 and recover in 2H23 onwards, helped by China's reopening and a lower crude oil premium. We expect the GRM uptrend to begin in 2H23, backed by rising diesel and jet product spreads. In the meantime, gasoline spreads should be maintained at a healthy level supported by high demand during the summer driving season (2Q23-3Q23) and product inventories at historical lows. Furthermore, we think the sector's stock prices already reflect the negative factors, making the present time a good opportunity to accumulate.

Exhibit 23: One-year share price performance



Source: Bloomberg

BCP (BUY, TP THB42.70/shr)

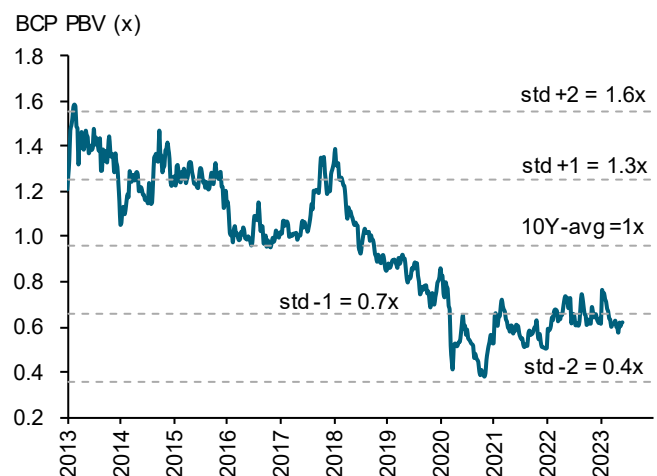
We reinitiate coverage of BCP with a BUY rating and an SoTP-based TP at THB42.70/shr. We value its refinery business based on 6x 2024E EV/EBITDA to reflect the refinery normalisation period. We also value its oil and retail marketing business at 20x 2024E P/E based on +1SD of its local peers to reflect a higher marketing margin and the expansion strategy of its oil and non-oil businesses this year. This target price valuation does not include potential impacts from the ESSO deal.

Exhibit 24: BCP's SoTP valuation

BCP valuation	Equity value		Comments
	(THB m)	(THB/shr)	
Refinery	3,082	2.2	At 6x 2024E EV/EBITDA
Oil stations	23,263	16.9	At 20x 2024E P/E
Biodiesel	4,780	3.5	At 10x 2024E P/E
BCPG	19,158	13.9	FSSIA estimates
OKEA	8,534	6.2	Bloomberg consensus
Total value	58,817	42.7	

Sources: Bloomberg, FSSIA estimates

Exhibit 25: BCP's P/BV band



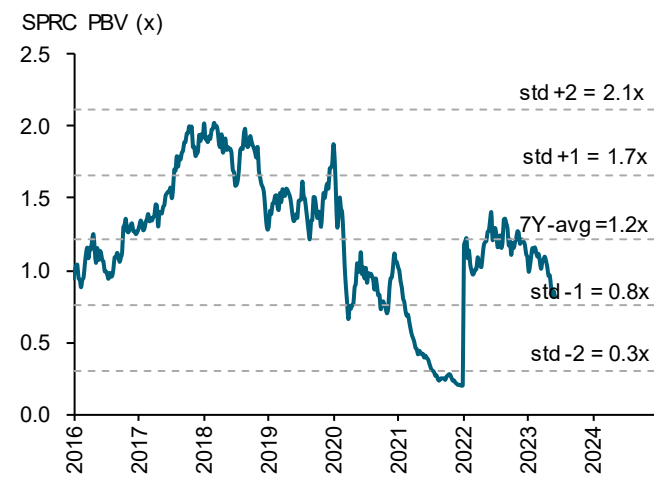
Sources: Bloomberg, FSSIA estimates

SPRC (BUY, TP THB12.50/shr)

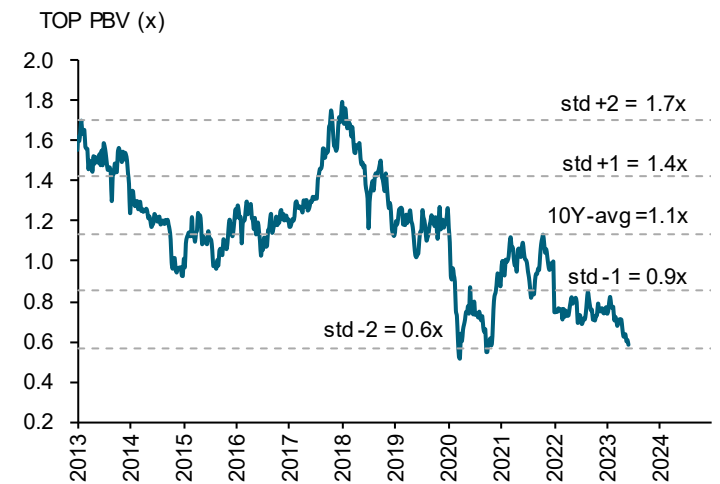
We reinitiate coverage of SPRC with a BUY rating and set our target price at THB12.50/shr, based on 1.2x 2024E P/BV. We think SPRC could reasonably trade at its long-term average based on our expectation that its earnings should turn around in 2H23 and be more resilient relative to its refinery peers due to its higher exposure to gasoline prices and the start-up of its SPM in 3Q23, which would help its GRM outpace its industry peers. Moreover, SPRC currently provides an attractive 2023E dividend yield of 7.9%, which we think protects its share price from further downside.

TOP (BUY, TP THB61.80/shr)

We reinitiate coverage of TOP with a BUY rating. Our TP at THB61.80/shr is based on 0.8x 2024E P/BV and within -1SD. We believe the stock will trade at this level due to the normalisation of the refinery business and the slower-than-expected recovery of its petrochemical business. We think its stock price shows that investors have already priced in weakness in the refinery and petrochemical business, creating a good buying opportunity. Furthermore, its low-cost refinery structure and the new CFP project should help TOP outperform its peers in the long term.

Exhibit 26: SPRC's P/BV band

Sources: Bloomberg, FSSIA estimates

Exhibit 27: TOP's P/BV band

Sources: Bloomberg, FSSIA estimates

Exhibit 28: Refinery valuation comparisons as of 31 May 2023

Company	BBG	Rec	Share price			Market Cap	2Y EPS CAGR	PE		ROE		PBV		EV/EBITDA	
			Current	Target	Upside			23E	24E	23E	24E	23E	24E	23E	24E
			(LCY)	(LCY)	(%)	(USD m)	(%)	(x)	(x)	(%)	(%)	(x)	(x)	(x)	(x)
Thailand															
Thai Oil	TOP TB	BUY	43.25	61.80	43	2,776	(38.4)	6.9	6.5	8.8	8.9	0.6	0.6	7.9	6.7
Star Petroleum Refining	SPRC TB	BUY	8.25	12.50	52	1,028	(25.8)	6.3	5.8	13.8	13.8	0.8	0.8	4.5	3.6
Bangchak	BCP TB	BUY	32.00	42.70	33	1,320	(27.9)	5.8	5.8	11.6	10.7	0.6	0.6	5.2	4.8
PTT Global Chemical	PTTGC TB	n/a	35.25	n/a	n/a	4,548	131.8	43.9	12.9	(0.2)	4.0	0.5	0.5	8.9	9.0
IRPC	IRPC TB	n/a	2.22	n/a	n/a	1,296	n/a	200.0	15.1	1.8	3.7	0.5	0.5	6.7	8.8
Tipco Asphalt	TASCO TB	n/a	18.20	n/a	n/a	837	24.7	15.3	10.0	11.4	17.4	1.9	1.7	10.5	7.1
Esso Thailand	ESSO TB	n/a	8.65	n/a	n/a	863	(20.9)	3.5	6.4	48.4	17.1	1.2	1.1	3.2	6.5
Thailand avg						12,668	(20.8)	40.2	8.9	13.6	10.8	0.9	0.8	6.7	6.6
India															
Indian Oil	IOCL IN	n/a	90.00	n/a	n/a	15,581	(14.7)	5.1	18.5	19.3	5.2	1.0	0.9	6.1	11.3
Bharat Petroleum	BPCL IN	n/a	363.50	n/a	n/a	9,680	(3.6)	7.9	23.5	18.8	3.3	1.5	1.5	8.5	13.9
Hindustan Petroleum	HPCL IN	n/a	260.90	n/a	n/a	4,573	(2.2)	5.7	n/a	17.2	(23.2)	0.9	1.3	9.3	n/a
India avg						14,252	(4.7)	6.2	21.0	18.4	(4.9)	1.1	1.2	8.0	12.6
Taiwan															
Formosa Petrochemical	6505 TT	n/a	86.20	n/a	n/a	26,631	18.2	28.7	27.9	8.0	9.1	2.4	2.4	19.4	14.7
Taiwan avg						26,631	18.2	28.7	27.9	8.0	9.1	2.4	2.4	19.4	14.7
South Korea															
SK Innovation	096770 KS	n/a	189,100	n/a	n/a	13,490	(12.4)	7.4	15.7	13.2	5.3	0.9	0.8	5.5	8.3
S-Oil	010950 KS	n/a	72,200	n/a	n/a	6,163	(23.2)	3.6	6.0	29.6	15.8	1.0	0.9	2.6	4.3
GS Holdings	078930 KS	n/a	38,500	n/a	n/a	2,694	(26.6)	1.4	2.4	20.9	10.8	0.3	0.3	3.1	4.7
South Korea avg						22,347	(20.4)	4.2	8.1	21.2	10.6	0.7	0.7	3.7	5.7
Average (all)						75,898	(19.9)	24.39	12.04	15.89	7.27	1.00	0.98	7.23	7.97

Sources: Bloomberg, FSSIA estimates

BANGCHAK CORP BCP TB

THAILAND / ENERGY

BUY
 UNCHANGED

ESSO deal to unlock value

- We reinitiate BCP with a BUY rating and TP at THB42.7/shr.
- Acquisition of ESSO (2H23E) to provide premium valuation.
- Expect an earnings turnaround in 2H23 as improving refined product spreads boost GRM.

TARGET PRICE	THB42.70
CLOSE	THB32.00
UP/DOWNSIDE	+33.4%
PRIOR TP	THB41.00
CHANGE IN TP	+4.1%
TP vs CONSENSUS	+4.6%

KEY STOCK DATA

YE Dec (THB m)	2022	2023E	2024E	2025E
Revenue	312,202	315,924	340,858	346,392
Net profit	12,575	7,592	7,567	7,304
EPS (THB)	9.13	5.51	5.50	5.30
vs Consensus (%)	-	(2.9)	3.7	(7.7)
EBITDA	45,881	33,788	39,455	37,368
Core net profit	18,514	7,592	7,567	7,304
Core EPS (THB)	13.45	5.51	5.50	5.30
Chg. In EPS est. (%)	nm	83.9	118.1	nm
EPS growth (%)	93.8	(59.0)	(0.3)	(3.5)
Core P/E (x)	2.4	5.8	5.8	6.0
Dividend yield (%)	7.0	4.3	4.3	4.1
EV/EBITDA (x)	2.2	5.2	4.8	5.3
Price/book (x)	0.7	0.6	0.6	0.6
Net debt/Equity (%)	40.9	120.8	121.5	122.7
ROE (%)	31.9	11.6	10.7	9.6

Positive view on ESSO deal's potential synergies worth THB2b-3b

We expect BCP's earnings performance – mainly due to a weak gross refining margin (GRM) – to bottom out in 2Q23 but turn around in 2H23 based on two key drivers: 1) an improved GRM from wider refined product spreads; and 2) the success of its Esso (Thailand) (ESSO TB, NR) acquisition deal. BCP is currently awaiting antitrust approval to complete the deal in 2H23. The company recently announced a tentative purchase price of THB9.94/share (implying an equity value of THB34b) based on ESSO's 1Q23 results. We estimate the actual price to be near but no more than the aforementioned value. We are positive on the deal. Our forecast does not include ESSO estimations. We expect BCP's net profit to normalise at THB7.6b in 2023 and THB7.6b in 2024.

Refinery to improve h-h with long-term sustainable margins

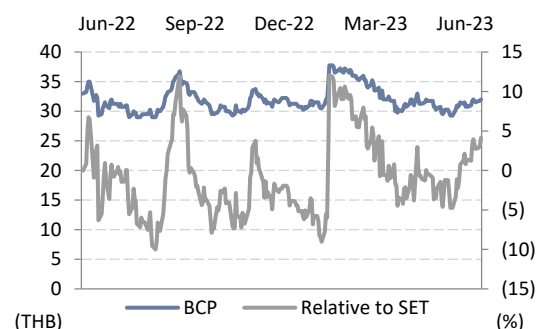
We believe BCP's GRM will improve in 2H23 after reaching the bottom in 2Q23 due to weaker refined product spreads, especially for diesel and jet fuel, that were the results of 1) China's higher export quota; 2) new additional capacity; and 3) lower-than-expected demand. We think the GRM in 2H23 will recover with support from the summer driving season in 3Q23 and China's demand recovery in 2H23, which should help widen gasoline and diesel spreads as crude premiums fall. We expect GRMs to average USD5.0/bbl in 2023 and USD3.2/bbl in 2024.

Oil retail and marketing to be key supporting factors in 2023

We expect that improved marketing margins and sales volumes will partly offset the potentially weaker results from BCP's other businesses such as power and bio-based products this year due to 1) weaker global refined product demand; 2) diesel's lower contribution to the Oil Fund; and 3) new government policies aimed at reducing the cost of living.

Initiate with a BUY rating; TP at THB42.7

We reinitiate coverage of BCP with a BUY rating and an SoTP-based TP at THB42.7. We think BCP's share price weakness in recent months means that the downturn in the refinery business has already been priced in and now is a good time to accumulate. Risks are 1) a sharp decline in oil prices; 2) weaker-than-expected petroleum product spreads and GRM; 3) higher crude oil premiums; and 4) unplanned refinery shutdowns.



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	5.8	(0.8)	(3.0)
Relative to country (%)	5.5	5.0	5.2
Mkt cap (USD m)	1,320		
3m avg. daily turnover (USD m)	6.3		
Free float (%)	59		
Major shareholder	Thailand Social Security Office (15%)		
12m high/low (THB)	39.00/28.25		
Issued shares (m)	1,376.92		

Sources: Bloomberg consensus; FSSIA estimates



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Investment thesis

BCP is a leading petroleum company in Thailand with exposure from upstream to downstream in the business, including petroleum exploration and production, refinery, marketing, green power, and bio-based products.

More than half of its revenue contributions are from its refinery and marketing business in Thailand. We expect its marketing business to be the key profit driver in 2Q23. Moreover, we believe its refinery business will recover and provide significant profits in 2H23 from lower crude premiums and higher refined product spreads, mainly from a demand recovery in China. Furthermore, we expect gains from exploration and production (E&P) in 4Q23 to help improve 2H23 performance. For 2024, we think the key driver will be the ESSO deal's THB2b-3b in expected pre-tax synergies, which should make BCP the leading oil retail and marketing player in Thailand.

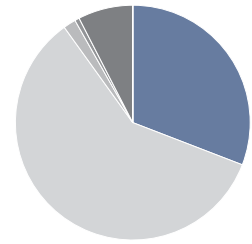
Company profile

BCP is an energy conglomerate in Thailand with the sixth-largest refinery and the second-largest number of gas stations. The company's Suboat refinery has a nameplate capacity of 120kbpd. It also runs 1,353 gas stations (as of 1Q23) and owns biodiesel plants.

www.bangchak.co.th

Principal activities (revenue, 2022)

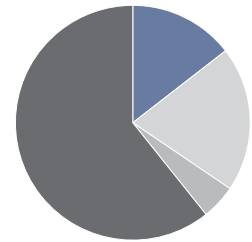
- Refinery and oil trading - 30.9 %
- Marketing - 59.2 %
- Electricity - 1.7 %
- Bio based product - 0.6 %
- Natural resource - 7.6 %
- Eliminations - 0.0 %



Source: Bangchak Corp

Major shareholders

- Thailand Social Security Office - 14.5 %
- Vayupak Fund 1 - 20.0 %
- Ministry of Finance - 4.8 %
- Others - 60.7 %



Source: Bangchak Corp

Catalysts

Key potential catalysts are 1) higher-than-expected refined product spreads; 2) higher-than-expected marketing margins and sales volumes in its marketing business; and 3) an uptrend in liquid/gas prices and rising production for its E&P business in Norway.

Risks to our call

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 refinery plants.

Event calendar

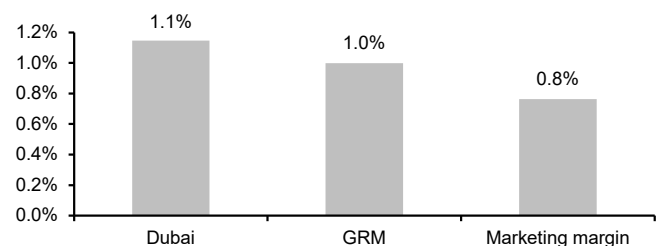
Date	Event
9 Aug 2023	2Q23 results announcement
8 Nov 2023	3Q23 results announcement

Key assumptions

BCP assumptions	2021 (USD/bbl)	2022 (USD/bbl)	2023E (USD/bbl)	2024E (USD/bbl)	2025E (USD/bbl)
Dubai	69	96	86	90	90
Operating GRM	4.5	14.3	5.0	3.2	3.2
UNL95-DB	11.1	18.7	17.0	15.0	15.0
Jet-DB	5.9	30.5	17.0	13.0	13.0
GO-DB	6.7	34.5	17.0	13.0	13.0
Marketing margin (THB/litre)	0.88	0.93	0.85	0.90	0.90
Realised gas price	65.3	98.4	79.0	72.6	67.9
Realised liquid price	105.4	144.9	140.5	134.5	90.0

Source: FSSIA estimates

Earnings sensitivity

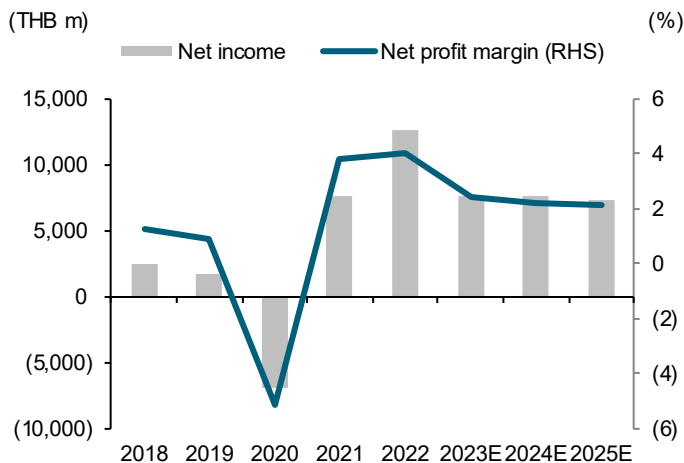


- For every 1% increase in Dubai, GRM and marketing margin, we estimate 2023 earnings would increase per the above chart, and vice versa, all else being equal.

Source: FSSIA estimates

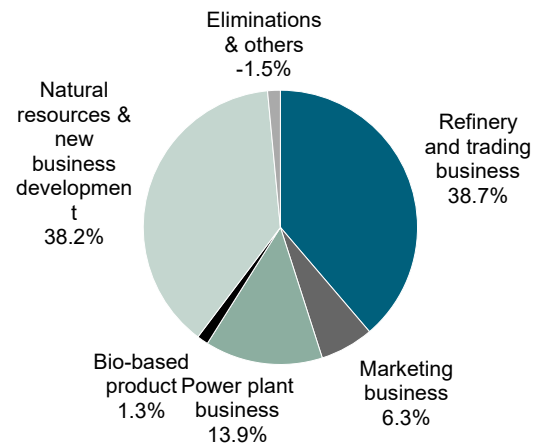
Company revenue profile

Exhibit 29: 2022 revenue breakdown



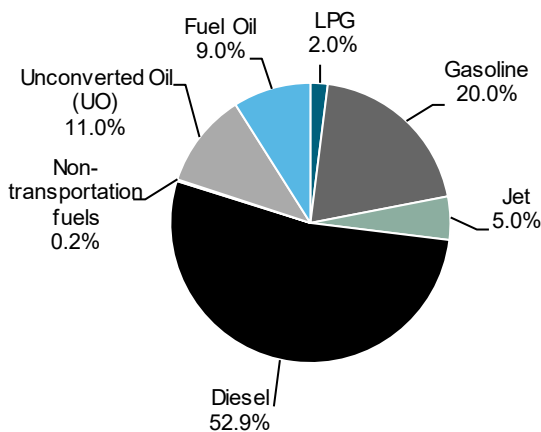
Sources: BCP; FSSIA estimates

Exhibit 30: 2022 EBITDA breakdown



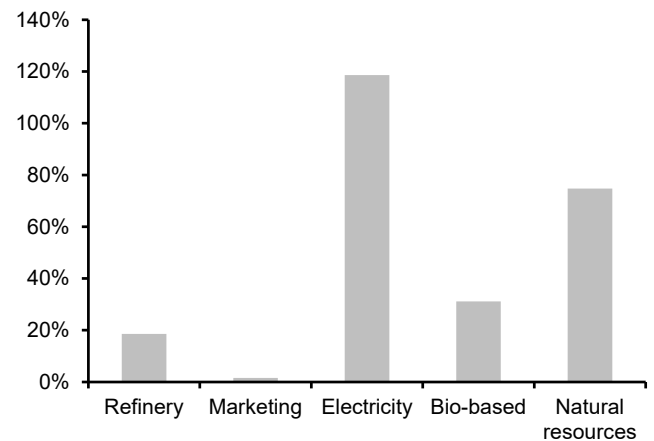
Sources: BCP; FSSIA's compilation

Exhibit 31: Product yield mix (>50% middle distillates)



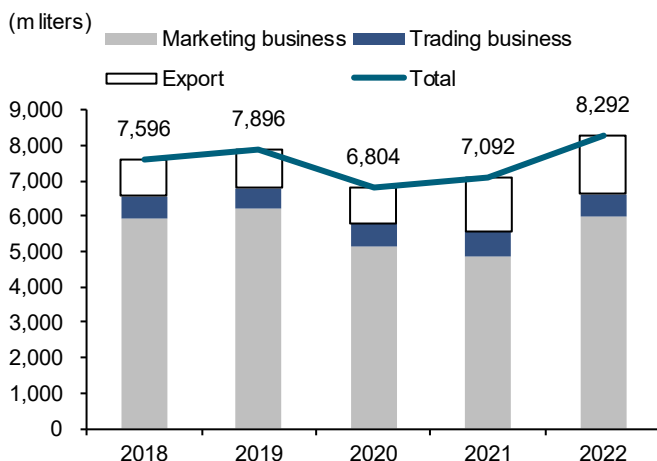
Sources: BCP; FSSIA's compilation

Exhibit 32: 2022 operating margin breakdown by business



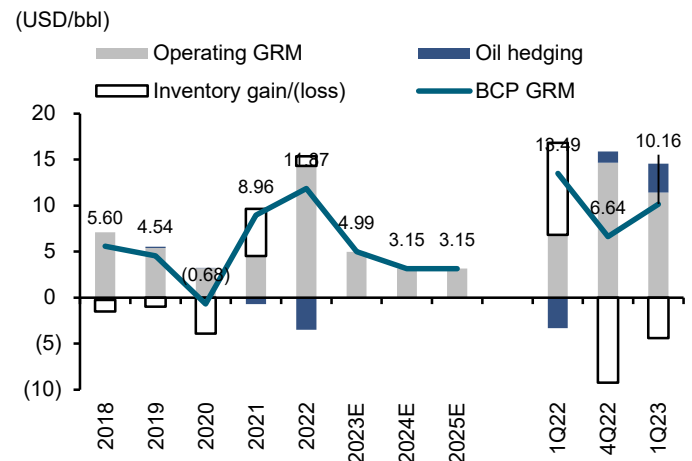
Sources: BCP; FSSIA's compilation

Exhibit 33: Petroleum sales volume breakdown by distribution channel



Sources: BCP; FSSIA's compilation

Exhibit 34: BCP's GRM breakdown



Sources: BCP; FSSIA estimates

Exhibit 35: BCP's SoTP valuation

BCP valuation	Equity value		Comments
	(THB m)	(THB/shr)	
Refinery	3,082	2.2	At 6x 2024E EV/EBITDA
Oil stations	23,263	16.9	At 20x 2024E P/E
Biodiesel	4,780	3.5	At 10x 2024E P/E
BCPG	19,158	13.9	FSSIA's estimates
OKEA	8,534	6.2	Bloomberg consensus estimates
Total value	58,817	42.7	

Sources: BCP, FSSIA estimates

Exhibit 36: Key assumptions by business

BCP assumptions	2021	2022	2023E	2024E	2025E
	(USD/bbl)	(USD/bbl)	(USD/bbl)	(USD/bbl)	(USD/bbl)
Refinery					
Dubai	69	96	86	90	90
Operating GRM	4.5	14.3	5.0	3.2	3.2
UNL95-DB	11.1	18.7	17.0	15.0	15.0
Jet-DB	5.9	30.5	17.0	13.0	13.0
GO-DB	6.7	34.5	17.0	13.0	13.0
Oil retail and marketing					
Marketing margin (THB/litre)	0.88	0.93	0.85	0.90	0.90
Number of service stations (no.)	1,277	1,343	1,413	1,473	1,523
Exploration and production (OKEA)					
Realised gas price	65.3	98.4	79.0	72.6	67.9
Realised liquid price	105.4	144.9	140.5	134.5	90.3
Total sales volume (m bbl)	5.8	5.9	8.4	13.2	13.1

Sources: BCP, FSSIA estimates

ESSO deal to unlock value

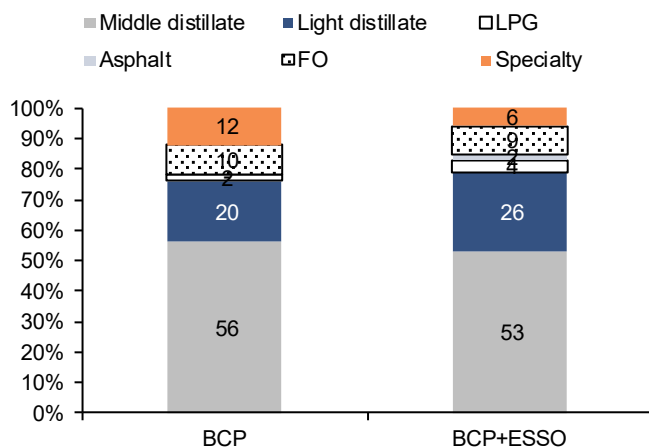
Positive view on the ESSO deal's THB2b-3b in potential synergies

We expect BCP's earnings performance to bottom out in 2Q23, mainly due to a weak GRM. However, we expect a turnaround in 2H23 from two key drivers: 1) an improved GRM from wider refined product spreads and 2) the success of the ESSO acquisition deal. BCP targets acquiring a 65.99% stake in ESSO from ExxonMobil Asia Holdings (ExxonMobil) along with a tender offer for the remaining ESSO shares. ESSO's assets include 1) a refinery plant (174kbd) and office space; 2) service stations; 3) a 21% stake in Thappline (not listed) and a 7.06% stake in Bangkok Aviation Fuel Services (BAFS TB, BUY TP THB37) (total fair value cTHB3.4b as of 3Q22); 4) an oil inventory volume of 7.4m bbl; and 5) 315 acres of freehold land. The company is currently awaiting antitrust approval to complete the deal in 2H23. BCP recently announced a tentative purchase price of THB9.94/shr (implying an equity value of THB34b) based on ESSO's 1Q23 results. We estimate the actual price to be near but no more than the aforementioned value. The deal is to be funded by bank loans and cash on hand. Currently, BCP's net D/E is low at 0.3x. We are positive on the deal and believe that the acquisition price is reasonable. BCP estimates THB2b-3b in pre-tax synergies, mainly from refinery optimisation and back-office operations.

Overview post-acquisition

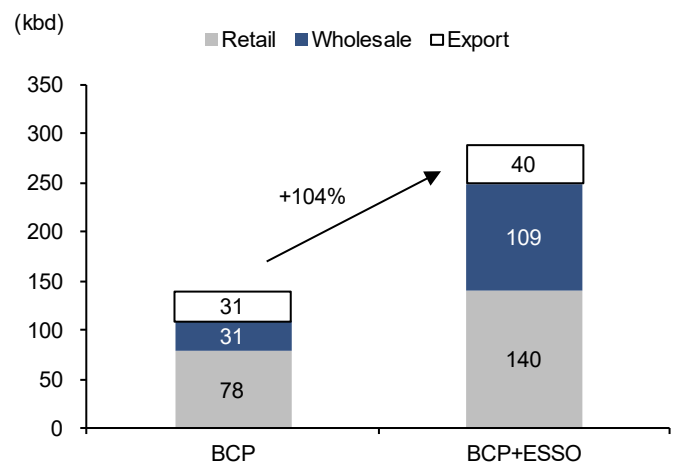
BCP's nameplate capacity would increase from 120kbd to 294kbd (+174kbd from ESSO). However, the company expects its crude run to increase by only 150kbd in the first year from ESSO due to bottlenecks, and gradually ramp up to full capacity from its operation optimisation plan. BCP would benefit from product yield optimisation, including 1) a greater proportion of light distillates such as gasoline (from 20% to 26%) and 2) optimised marine-grade fuel oil by mixing BCP's low sulphur fuel oil (LSFO) with ESSO's high sulphur fuel oil (HSFO). This would add value to BCP's LSFO product that currently sells at a discount. Moreover, it could also create an opportunity for BCP to enter the profitable asphalt market.

Exhibit 37: Refinery product yield (%)



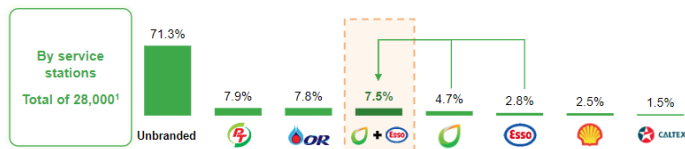
Sources: BCP; FSSIA's compilation

Exhibit 38: Petroleum product sales volume

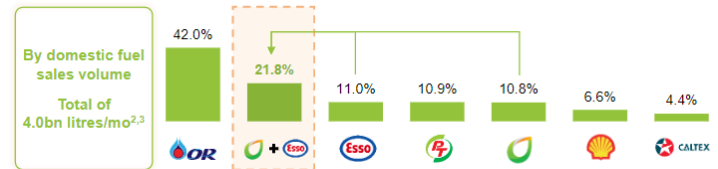


Sources: BCP; FSSIA's compilation

As for its oil retail and marketing business, BCP would become a leading player in the business, rising to third place (vs fourth) in terms of service station market share and second (vs fourth) in domestic fuel sales volume. BCP's total number of service stations as of 1Q23 was 1,350 while ESSO had 820. The company expects its fuel sales volume to double from 140kbd to 286kbd post-acquisition. This should also create a good opportunity for BCP to expand its non-oil businesses, which include Intanin, EV chargers, and Furio (a lubricant business).

Exhibit 39: Service station market share

As of Sep-22
Source: BCP

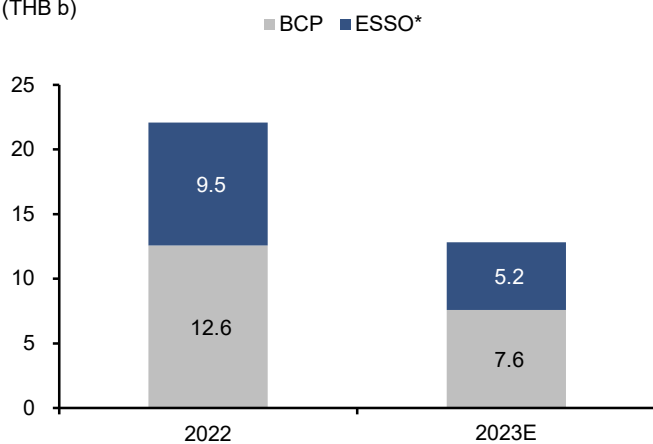
Exhibit 40: Domestic fuel sales volume market share

As of Sep-22
Source: BCP

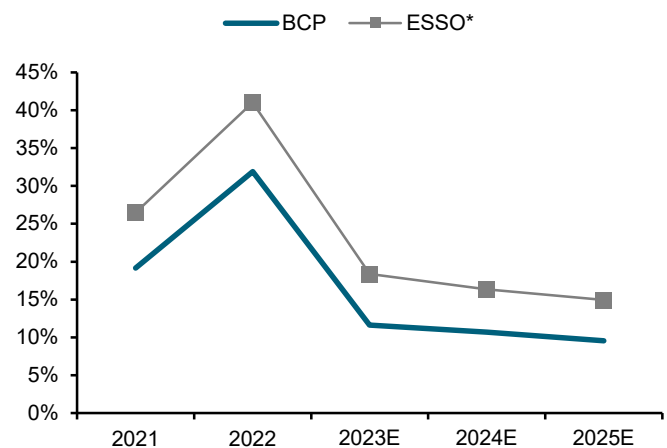
Our forecast does not include ESSO estimations. We expect BCP's net profit to normalise at THB7.6b in 2023 and THB7.6b in 2024. Currently, the Bloomberg consensus estimates that ESSO's 2023 earnings will be THB5.2b. We expect significant EPS accretion after the deal is completed.

Exhibit 41: Pro-forma net income (pre-synergies and pre-acquisition impact)

(THB b)



Note*: 2023E ESSO net profit based on Bloomberg consensus estimates
Sources: BCP, ESSO, Bloomberg, FSSIA estimates

Exhibit 42: ESSO ROE premium to BCP

Note*: ESSO's ROE estimates based on Bloomberg consensus
Source: FSSIA estimates

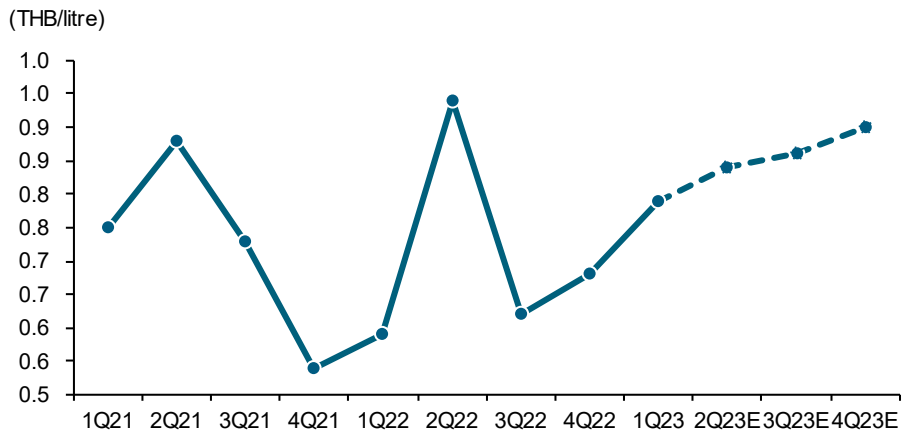
Refinery to improve h-h with long-term sustainable margins

We expect BCP's GRM to improve in 2H23 after reaching the bottom in 2Q23 due to weaker refined product spreads, especially for middle distillate products (diesel and jet), that were the result of 1) a higher export quota in China; 2) new additional capacity; and 3) lower-than-expected demand. We think the 2H23 GRM will recover mainly from the summer driving season in 3Q23 and China's demand recovery, which should help widen gasoline and diesel spreads, and our expectation of lower crude premiums. Our GRM estimates are USD5.0/bbl in 2023 and USD3.2/bbl in 2024.

For 2024-25, we expect the completion of the ESSO acquisition to provide an upside for its refinery business during the normalisation period, driven by the optimisation of product yields and operations. This should allow BCP to enhance its cost efficiency and maximise profits via a lower crude cost and a greater proportion of higher-value products, leading to an improved GRM.

Oil retail and marketing to be key supports for the business in 2023

We expect an increase in marketing margins and sales volumes for its marketing business to partly offset potential weakness in other businesses (power and bio-based products) this year for the following reasons: 1) weak global demand for refined products; 2) the Energy Planning and Policy Office (EPPO)'s policy change for a lower diesel contribution to the Oil Fund; and 3) new government policies aimed at reducing the cost of living. Our net marketing margin assumptions are pegged at THB0.85/litre in 2023 and THB0.9/litre in 2024.

Exhibit 43: Net marketing margin

Sources: BCP, FSSIA estimates

Reinitiate coverage with a BUY rating; TP at THB42.7/shr

We reinitiate coverage of BCP with a BUY rating and an SoTP-based TP at THB42.7. We value its refinery business based on 6x 2024E EV/EBITDA to reflect the refinery normalisation period. We also value its oil and retail marketing business at 20x 2024E P/E based on +1SD of its local peers to reflect a higher marketing margin and the expansion strategy of its oil and non-oil businesses this year.

BCP is one of our current top picks for two main reasons: 1) the synergy potential from the ESSO deal, expected to be completed in 3Q23; and 2) its diversified portfolio. We believe the ESSO acquisition deal could provide a premium valuation for BCP. Its ROE would re-rate into the mid-teens after the merger, which should add a premium to its current valuation. We think that BCP's share price weakness in recent months shows the refinery business downturn has already been priced in. Therefore, we think the current situation represents a good opportunity to accumulate the stock.

However, the share price might face an overhang until 2 June 2023 when the share resale period ends. As of 25 May 2023, there were 6.7m remaining shares.

Risks are 1) a sharp decline in oil prices; 2) weaker-than-expected petroleum product spreads and GRM; 3) higher crude oil premiums; and 4) unplanned refinery shutdowns.

Management team

Exhibit 44: Key management team members

Name	Mr. Chaiwat Kovavisarach	Ms. Phatpree Chinkulkitnivat	Mr. Pativat Tivasasit	Mr. Somchai Tejavanija
Position	Chief Executive Officer	Senior Executive Vice President, Accounting and Finance	Chief Operations Officer, Refinery Business Group	Chief Marketing Officer, Marketing Business Group
5 years past experiences	<p>2015 - Present: President and Group Chief Executive Officer, The Bangchak Corporation Public Company Limited</p> <p>2015: President and Chief Executive Officer, The Bangchak Corporation Public Company Limited</p>	<p>Present: Senior Executive Vice President, Accounting and Finance, and Acting Executive Vice President, Financial Controller</p> <p>2019 - 2022: Executive Vice President, Acting as Senior Executive Vice President, Finance and Accounting, BCPG Public Company Limited Others</p> <p>2014 - 2018: Senior Vice President, Strategic Planning Head/Office of President, Commercial Banking Group</p>	<p>2021 - Present: Chief Operations Officer & Senior Executive Vice President, Refinery Business Group</p> <p>2020 - Present: Senior Executive Vice President, Refinery Business Group</p> <p>2019: Executive Vice President, Refinery Manufacturing Business and acting Senior Executive Vice President, Refinery Business Unit</p>	<p>2017 - Present: Chief Marketing Officer and Senior Executive Vice President, Marketing Business Group</p>
Education	<p>>>Master of Engineering, Asian Institute of Technology (AIT)</p> <p>>>Master of Business Administration (MBA), Thammasat University</p> <p>>>Bachelor of Engineering (Honor), King Mongkut's Institute of Technology Ladkrabang (KMITL)</p> <p>>>Investment Banking, Kellogg Business School, Northwestern University</p>	<p>>>Master of Business Administration (High Distinction), School of Business Administration, University of Michigan, Ann Arbor, USA</p> <p>>>Bachelor of Economics (First Class Honors), Faculty of Economics Chulalongkorn University, Thailand</p>	<p>>>Bachelor of Science (Chemical Technology), Chulalongkorn University</p>	<p>>>Master of Business Administration (MBA), Thammasat University</p> <p>>>Bachelor of Engineering, Kasetsart University</p> <p>>>Stanford-SEAC Leading in a Disruptive World 4 (LDW4), The Stanford Center for Professional Development (SCPD), Stanford University</p> <p>>>Strategy and Innovation for Business in Asia (SIBA7), Massachusetts Institute of Technology (MIT), College of Management Mahidol University (CMMU)</p>

Sources: BCP; FSSIA's compilation

Financial Statements

Bangchak Corp

Profit and Loss (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Revenue	199,417	312,202	315,924	340,858	346,392
Cost of goods sold	(167,670)	(255,930)	(270,130)	(288,450)	(295,861)
Gross profit	31,747	56,272	45,793	52,407	50,531
Other operating income	-	-	-	-	-
Operating costs	(7,669)	(10,391)	(12,005)	(12,953)	(13,163)
Operating EBITDA	24,078	45,881	33,788	39,455	37,368
Depreciation	(8,075)	(10,004)	(14,698)	(20,545)	(20,480)
Goodwill amortisation	0	0	0	0	0
Operating EBIT	16,003	35,877	19,090	18,909	16,888
Net financing costs	(2,289)	(3,976)	(4,124)	(4,000)	(4,158)
Associates	1,042	188	188	188	207
Recurring non-operating income	2,321	2,042	2,134	2,134	2,348
Non-recurring items	(1,927)	(5,939)	0	0	0
Profit before tax	14,108	28,004	17,100	17,044	15,078
Tax	(4,263)	(12,852)	(7,611)	(7,585)	(5,948)
Profit after tax	9,845	15,152	9,490	9,459	9,130
Minority interests	(2,221)	(2,577)	(1,898)	(1,892)	(1,826)
Preferred dividends	0	0	0	0	0
Other items	-	-	-	-	-
Reported net profit	7,624	12,575	7,592	7,567	7,304
Non-recurring items & goodwill (net)	1,927	5,939	0	0	0
Recurring net profit	9,551	18,514	7,592	7,567	7,304
Per share (THB)					
Recurring EPS *	6.94	13.45	5.51	5.50	5.30
Reported EPS	5.54	9.13	5.51	5.50	5.30
DPS	2.00	2.25	1.38	1.37	1.33
Diluted shares (used to calculate per share data)	1,377	1,377	1,377	1,377	1,377
Growth					
Revenue (%)	46.1	56.6	1.2	7.9	1.6
Operating EBITDA (%)	500.7	90.6	(26.4)	16.8	(5.3)
Operating EBIT (%)	nm	124.2	(46.8)	(0.9)	(10.7)
Recurring EPS (%)	nm	93.8	(59.0)	(0.3)	(3.5)
Reported EPS (%)	nm	64.9	(39.6)	(0.3)	(3.5)
Operating performance					
Gross margin inc. depreciation (%)	11.9	14.8	9.8	9.3	8.7
Gross margin of key business (%)	11.9	14.8	9.8	9.3	8.7
Operating EBITDA margin (%)	12.1	14.7	10.7	11.6	10.8
Operating EBIT margin (%)	8.0	11.5	6.0	5.5	4.9
Net margin (%)	4.8	5.9	2.4	2.2	2.1
Effective tax rate (%)	28.9	38.1	45.0	45.0	40.0
Dividend payout on recurring profit (%)	28.8	16.7	25.0	25.0	25.0
Interest cover (X)	8.0	9.5	5.1	5.3	4.6
Inventory days	37.7	34.2	41.0	40.8	41.6
Debtor days	19.8	21.9	29.7	35.4	42.9
Creditor days	30.4	31.8	40.2	40.0	40.8
Operating ROIC (%)	15.3	27.5	9.5	6.9	5.7
ROIC (%)	10.0	17.5	7.5	5.9	5.1
ROE (%)	19.1	31.9	11.6	10.7	9.6
ROA (%)	7.6	10.8	4.6	4.1	3.8
* Pre-exceptional, pre-goodwill and fully diluted					
Revenue by Division (THB m)					
Refinery and oil trading	65,161	96,328	101,065	100,758	100,606
Marketing	117,265	184,897	177,580	188,514	198,869
Electricity	4,661	5,395	5,352	6,356	8,671
Bio based product	2,234	1,980	3,744	4,435	4,435

Sources: Bangchak Corp; FSSIA estimates

Financial Statements

Bangchak Corp

Cash Flow (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Recurring net profit	9,551	18,514	7,592	7,567	7,304
Depreciation	8,075	10,004	14,698	20,545	20,480
Associates & minorities	1,279	1,854	1,946	1,946	2,141
Other non-cash items	-	-	-	-	-
Change in working capital	(3,866)	(13,903)	(7,132)	(7,988)	(7,821)
Cash flow from operations	15,039	16,469	17,104	22,071	22,103
Capex - maintenance	(6,514)	(8,070)	(12,769)	(17,384)	(19,692)
Capex - new investment	-	-	-	-	-
Net acquisitions & disposals	-	-	-	-	-
Other investments (net)	(13,948)	5,181	(75,977)	(10,057)	(7,508)
Cash flow from investing	(20,462)	(2,889)	(88,746)	(27,442)	(27,200)
Dividends paid	(1,928)	(3,098)	(2,326)	(1,895)	(1,859)
Equity finance	0	0	0	0	0
Debt finance	17,263	732	39,268	5,000	10,000
Other financing cash flows	1,266	3,125	(1,302)	(2,613)	(3,115)
Cash flow from financing	16,601	759	35,640	492	5,026
Non-recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
Net other adjustments	0	0	0	0	0
Movement in cash	11,178	14,339	(36,002)	(4,879)	(70)
Free cash flow to firm (FCFF)	(2,883.49)	17,556.39	(67,517.25)	(1,371.26)	(938.44)
Free cash flow to equity (FCFE)	13,105.81	17,437.11	(33,675.89)	(2,984.03)	1,788.50
Per share (THB)					
FCFF per share	(2.09)	12.75	(49.03)	(1.00)	(0.68)
FCFE per share	9.52	12.66	(24.46)	(2.17)	1.30
Recurring cash flow per share	13.73	22.06	17.60	21.83	21.73
Balance Sheet (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Tangible fixed assets (gross)	115,934	127,965	217,965	247,965	277,965
Less: Accumulated depreciation	(46,701)	(54,947)	(69,645)	(90,190)	(110,670)
Tangible fixed assets (net)	69,233	73,018	148,320	157,775	167,295
Intangible fixed assets (net)	15,613	11,738	11,738	11,738	11,738
Long-term financial assets	-	-	-	-	-
Invest. in associates & subsidiaries	14,196	3,632	3,632	3,632	3,632
Cash & equivalents	32,829	47,169	11,167	6,288	6,217
A/C receivable	15,234	22,199	29,247	36,852	44,580
Inventories	18,497	29,533	31,171	33,285	34,140
Other current assets	2,812	12,449	12,597	13,591	13,812
Current assets	69,372	111,349	84,183	90,017	98,750
Other assets	33,370	42,606	42,606	42,606	42,606
Total assets	201,785	242,344	290,480	305,768	324,022
Common equity	53,467	62,704	67,970	73,642	79,087
Minorities etc.	16,092	20,674	22,572	24,464	26,290
Total shareholders' equity	69,559	83,378	90,542	98,106	105,377
Long term debt	69,787	70,507	100,507	110,507	120,507
Other long-term liabilities	28,334	40,607	40,607	40,607	40,607
Long-term liabilities	98,121	111,114	141,114	151,114	161,114
A/C payable	15,651	28,948	30,554	32,626	33,464
Short term debt	10,720	10,732	20,000	15,000	15,000
Other current liabilities	7,734	8,172	8,270	8,922	9,067
Current liabilities	34,105	47,852	58,823	56,548	57,531
Total liabilities and shareholders' equity	201,785	242,344	290,480	305,768	324,022
Net working capital	13,158	27,060	34,192	42,181	50,002
Invested capital	145,571	158,055	240,489	257,932	275,274
* Includes convertibles and preferred stock which is being treated as debt					
Per share (THB)					
Book value per share	38.83	45.54	49.36	53.48	57.44
Tangible book value per share	27.49	37.01	40.84	44.96	48.91
Financial strength					
Net debt/equity (%)	68.5	40.9	120.8	121.5	122.7
Net debt/total assets (%)	23.6	14.1	37.6	39.0	39.9
Current ratio (x)	2.0	2.3	1.4	1.6	1.7
CF interest cover (x)	6.7	5.4	(7.2)	0.3	1.4
Valuation	2021	2022	2023E	2024E	2025E
Recurring P/E (x) *	4.6	2.4	5.8	5.8	6.0
Recurring P/E @ target price (x) *	6.2	3.2	7.7	7.8	8.0
Reported P/E (x)	5.8	3.5	5.8	5.8	6.0
Dividend yield (%)	6.3	7.0	4.3	4.3	4.1
Price/book (x)	0.8	0.7	0.6	0.6	0.6
Price/tangible book (x)	1.2	0.9	0.8	0.7	0.7
EV/EBITDA (x) **	4.5	2.2	5.2	4.8	5.3
EV/EBITDA @ target price (x) **	5.1	2.5	5.6	5.1	5.7
EV/invested capital (x)	0.7	0.6	0.7	0.7	0.7
* Pre-exceptional, pre-goodwill and fully diluted ** EBITDA includes associate income and recurring non-operating income					

Sources: Bangchak Corp; FSSIA estimates

STAR PETROLEUM REFINING

THAILAND / ENERGY

SPRC TB

BUY

UNCHANGED

TARGET PRICE	THB12.50
CLOSE	THB8.25
UP/DOWNSIDE	+51.5%
PRIOR TP	THB14.60
CHANGE IN TP	-14.4%
TP vs CONSENSUS	+7.0%

High-beta play and attractive yield

- We reinitiate coverage of SPRC with a BUY rating and a TP of THB12.50/share.
 - We expect SPRC's earnings to be resilient among refiners.
- Key potential catalysts: 1) higher gasoline demand and GRM; 2) a sharp increase in the oil price; and 3) SPM reopening.

Valuation is attractive with limited downside from high yield

Given that SPRC is a pure refinery play, unlike its peers, its earnings have higher leverage over the gross refining margin (GRM). Hence, it is a high-beta stock. However, we think the decrease in its share price (absolute 3M -23% and -21% relative to the SET) already reflects the refinery normalisation period and impact from the oil spill event. The provision related to the event this year is USD7m. The stock currently trades below its book value, and our 2023E dividend yield is attractive at 7.4%. Therefore, it is a good time to accumulate, in our view.

Resilient GRM in the upcoming quarters

SPRC is a leading gasoline producer in Thailand. We expect SPRC's GRM to be resilient relative to others in 2Q23 as it would benefit the most from higher gasoline demand during the summer driving season (2Q-3Q). In addition, we expect its 2H23 GRM to ease on lower freight costs by around USD1.5/bbl from the reopening of the single point mooring system and a diesel spread recovery on the Chinese demand recovery. Our 2023E/24E GRMs are at USD6.6/bbl and USD6.5/bbl, respectively. We expect 2023 net profit to be at THB5.6b and 2024 to be at THB6.2b.

Synergies from the new fuel business reinforce long-term outlook

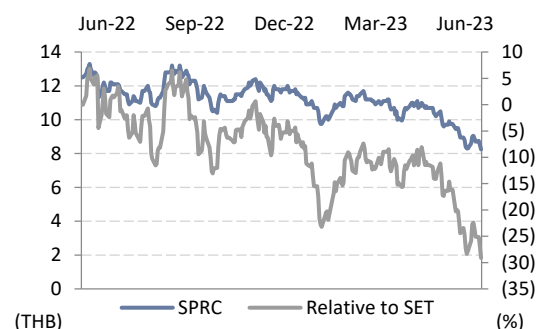
We think the THB5.6b fuel business investment will enhance its diversification. The transaction is to improve vertical integration, including downstream marketing (Caltex) and refinery business distribution, with small stakes in Thapline and BAFS. We expect net income contributions of THB0.5b and THB0.6b in 2024 and in 2025. Synergies from supply chain integration and optimisation should provide a further upside.

Reinitiate coverage with BUY rating and TP of THB12.5

We reinitiate coverage of SPRC with a BUY rating. Our target price is THB12.5/shr, based on a long-term average 2024E P/BV of 1.2x. We think it is trading at a reasonable level during the refining normalisation period. Its 2023E dividend yield is the highest among Thai refiners at 7.9%, which could limit the downside of the share price. Potential risks are a lower-than-expected GRM, delay of the SPM reopening, and lawsuit risk from the ongoing court case related to the oil spill incident.

KEY STOCK DATA

YE Dec (THB m)	2022	2023E	2024E	2025E
Revenue	285,264	228,406	314,742	313,389
Net profit	7,674	5,636	6,159	6,831
EPS (THB)	1.77	1.30	1.42	1.58
vs Consensus (%)	-	1.5	6.4	6.1
EBITDA	12,243	9,705	10,832	11,590
Core net profit	7,674	5,636	6,159	6,831
Core EPS (THB)	1.77	1.30	1.42	1.58
Chg. In EPS est. (%)	nm	(18.1)	(35.4)	nm
EPS growth (%)	296.1	(26.5)	9.3	10.9
Core P/E (x)	4.7	6.3	5.8	5.2
Dividend yield (%)	13.5	7.9	8.6	9.5
EV/EBITDA (x)	3.7	4.5	3.6	2.9
Price/book (x)	0.9	0.8	0.8	0.7
Net debt/Equity (%)	24.9	17.3	6.5	(3.9)
ROE (%)	21.0	13.8	13.8	14.2



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	(14.9)	(25.0)	(32.9)
Relative to country (%)	(15.2)	(20.7)	(27.2)
Mkt cap (USD m)	1,028		
3m avg. daily turnover (USD m)	3.6		
Free float (%)	39		
Major shareholder	Chevron South Asia Holdings Pte Ltd (61%)		
12m high/low (THB)	13.50/8.10		
Issued shares (m)	4,335.90		

Sources: Bloomberg consensus; FSSIA estimates



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Investment thesis

SPRC is a pure refinery play in Thailand with a higher exposure to gasoline than most of its peers. We think that with the weak diesel spreads in 2Q23, SPRC can remain resilient relative to others from its higher gasoline product yield.

Furthermore, we expect its GRM to improve more than its peers' in 2H23 from the reopening of its single point mooring (SPM) system, which we estimate would lower freight costs by ~USD1.5/bbl, while diesel spreads have started to turn around from China's demand recovery.

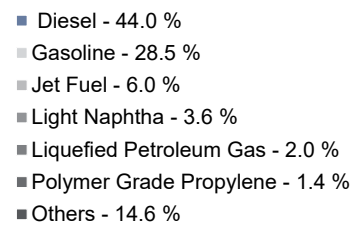
We think the recent share price drop has already taken the refinery normalisation and oil spill incident into account. The company has already recorded a provision regarding liability costs from the oil spill. SPRC is a high-beta stock as its earnings are currently exposed to refinery only. We think the current valuation at below its book value is attractive. We expect the stock to outperform in the next 6-12 months.

Company profile

SPRC is a subsidiary of US-based Chevron, with a capacity of 165kb/d. Its competitive, low-cost structure and high crude consumption flexibility are key to sustaining its high market GRM.

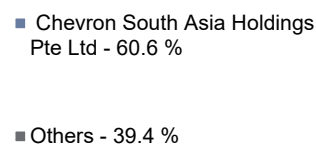
www.sprc.co.th

Principal activities (revenue, 2022)



Source: Star Petroleum Refining

Major shareholders



Source: Star Petroleum Refining

Catalysts

Key potential catalysts are higher-than-expected demand from the US driving season in 2Q23 and the acceleration of China's economic activities in 2H23, which should allow SPRC to enhance its refined product margins while crude premiums remain at a low level this year.

Risks to our call

Downside risks to our P/BV-based TP are weak demand for refined oil products, a lower crude oil price and GRM, the delay of the SPM reopening, and lawsuit risk related to the oil spill off Rayong in 2022..

Event calendar

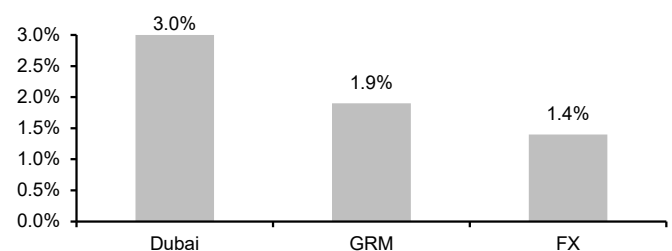
Date	Event
8 Aug 2023	2Q23 financial performance announcement
9 Aug 2023	2Q23 analyst meeting and Opportunity Day
8 Nov 2023	3Q23 financial performance announcement
9 Nov 2023	3Q23 analyst meeting and Opportunity Day

Key assumptions

(USD/bbl)	2021	2022	2023E	2024E	2025E
Marketing GRM	3.66	9.64	6.60	6.51	6.89
Stock gain/(loss)	3.84	(0.42)	0.00	0.00	0.00
Accounting GRM	7.50	9.22	6.60	6.51	6.89
Crude premium	2.18	5.41	(3.60)	(1.44)	(0.37)
Freight cost	0.73	2.30	2.20	1.50	1.50
Gasoline-Dubai	11.01	18.85	17.00	15.00	15.00
Diesel-Dubai	6.70	34.29	17.00	13.00	13.00
Utilisation rate (%)	77	89	89	89	89

Source: FSSIA estimates

Earnings sensitivity

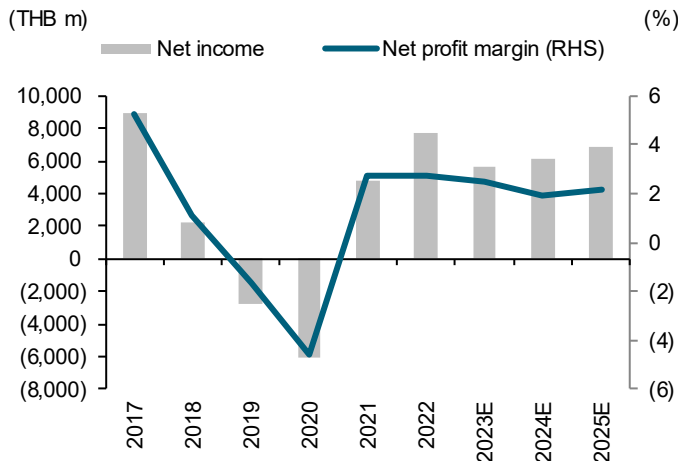


- For every 1% increase in Dubai, GRM and FX, we estimate 2023 earnings percentage changes as per the above chart, and vice versa, all else being equal.

Source: FSSIA estimates

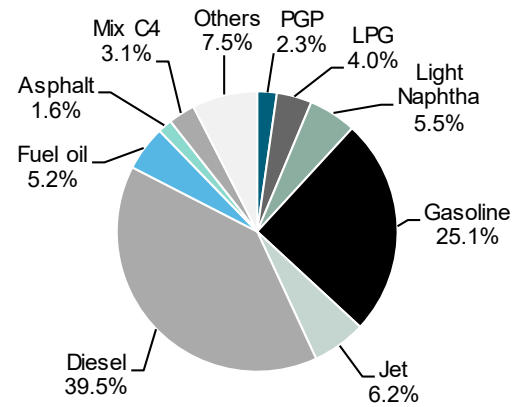
Company highlights

Exhibit 45: Net income and net profit margin



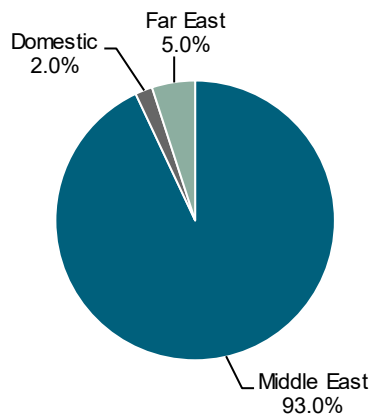
Sources: SPRC; FSSIA estimates

Exhibit 46: Product yield (2022)



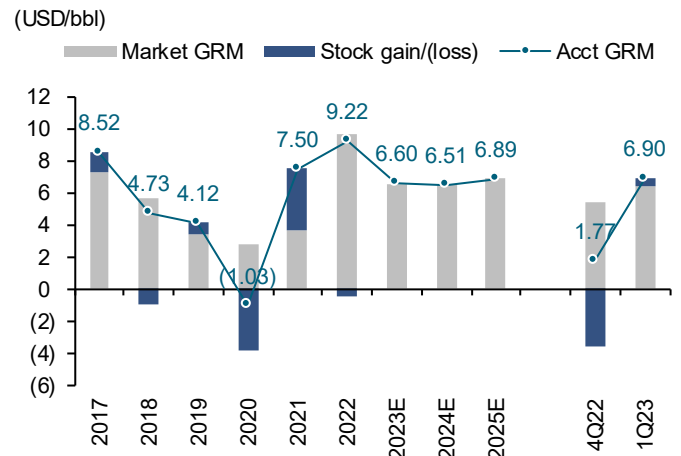
Sources: SPRC; FSSIA's compilation

Exhibit 47: Crude intake breakdown



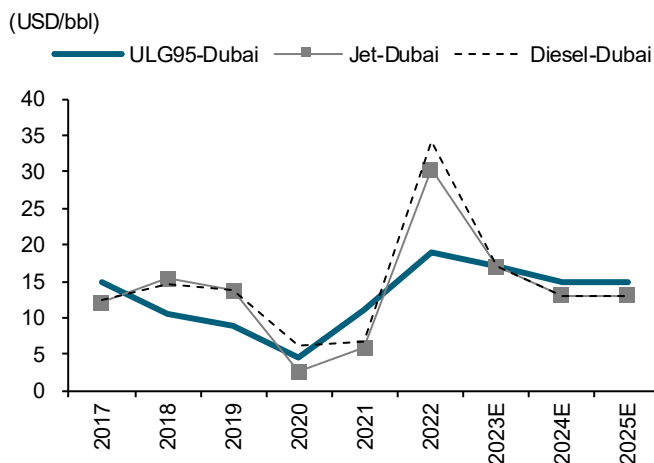
Sources: SPRC; FSSIA's compilation

Exhibit 48: SPRC's GRM



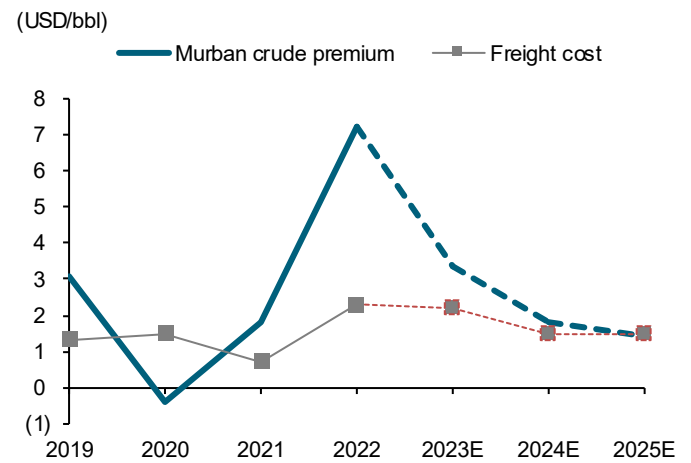
Sources: SPRC; FSSIA estimates

Exhibit 49: Petroleum product spreads



Sources: SPRC; FSSIA estimates

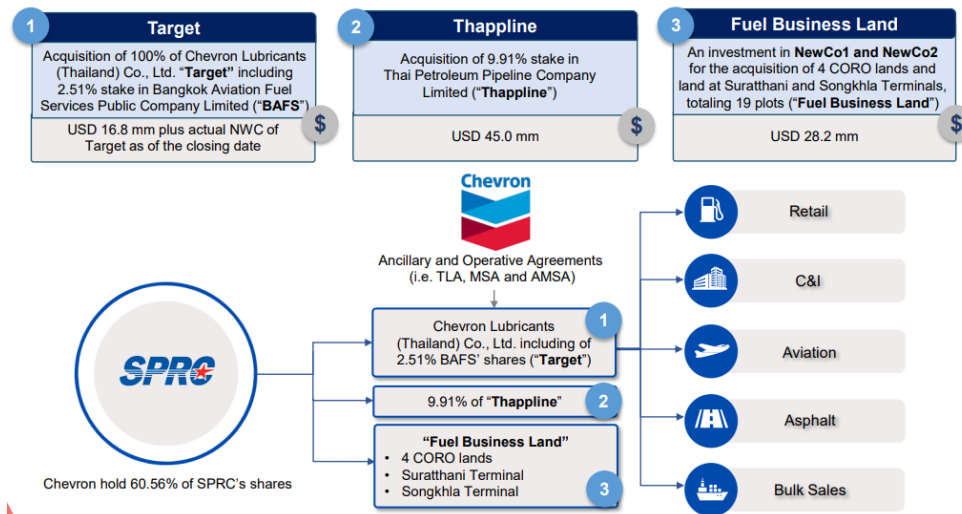
Exhibit 50: Cost per barrel (bbl)



Sources: SPRC; FSSIA estimates

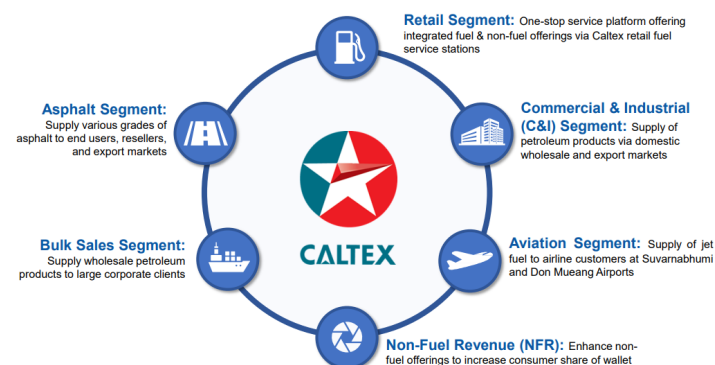
New fuel business overview

Exhibit 51: Transaction overview



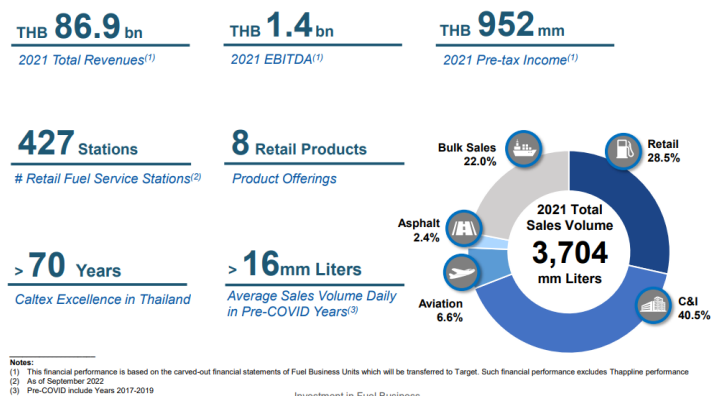
Source: SPRC

Exhibit 52: Caltex business overview



Source: SPRC

Exhibit 53: Fuel business summary



Source: SPRC

Synergies from the new fuel business reinforce long-term outlook

We think the THB5.6b investment in the fuel business (transaction expected to be completed in 1Q24) will enhance the diversification of the business, thus helping to streamline its earnings during a refinery business downturn in the future. The transaction is to improve vertical integration, including downstream marketing (Caltex) and refinery business distribution, with small stakes in Thai Petroleum Pipeline Co, Ltd (Thappline, not listed; 9.91% stake) and Bangkok Aviation Fuel Services (BAFS TB, BUY, TP THB37; 2.51% stake). We expect net income contributions of THB0.5b and THB0.6b in 2024 and in 2025, respectively.

The company expects further upside synergies from 1) its business strategy as a refinery and fuel business to help improve strategic investment; 2) supply chain integration and optimisation to help reduce operational costs, increase sales channels and sales volumes; and 3) expand growth opportunities in retail and other business areas.

Management team

Exhibit 54: Key management team

Name	Mr. Robert Joseph Dobrik	Mrs. Nutsara Somkiatweera	Mr. Narong Triyotee	Mr. Pongkorn Chochuwong	Mr. Steven Lewis Gibson
Position	Chief Executive Officer	Chief Financial Officer	General Manager - Refinery Operations	General Manager - Operational Excellence	Senior Advisor - Business Development
5 years past experiences	<p>2021 – Present: Director, Chairman of the Human Resources Committee, Member of the Nomination, Remuneration and Corporate Governance Committee and Chief Executive Officer, SPRC</p> <p>2020 – 2021: President and Director, Chevron Canada Limited, Canada</p> <p>2018 – 2020: Production Operations Manager, Chevron Australia Pty Ltd., Australia</p> <p>2015 – 2018: Asset Manager, Chevron Australia Pty Ltd., Australia</p>	<p>2022 - Present: Chief Financial Officer, SPRC</p> <p>2009 – 2022: Accounting Manager, SPRC</p>	<p>2022-Present: General Manager - Refinery Operations</p> <p>2020-2022: Senior Manager – Operations, Chevron Oronite, Singapore</p> <p>2014-2020: Manager of Production Unit-Processes & Utilities, SPRC</p> <p>2009-2014: Manager of Production Unit-Movement 7 Dispatches, SPRC</p>	<p>2022 - Present: General Manager - Refinery Operations</p> <p>2020 – 2022: Manager Process Safety and QEHS, SPRC</p> <p>2014 – 2019: Manager of Asset Management, SPRC</p> <p>2009 - 2014: Manager of Production Unit-Processes & Utilities, SPRC</p>	<p>2022- Present: Senior Advisor - Business Development</p> <p>2013 – 2022: Deputy Chief Executive Officer - Operations, SPRC</p> <p>2009 – 2013: Manager of Asset Management, SPRC</p>
Education	>>Chemical Engineering, University of Waterloo, Canada	<p>>>Master's Degree Science (Finance), University of Houston-Clear Lake, USA</p> <p>>>Bachelor's Degree Business Administration - Finance & Banking, Assumption University</p> <p>>>Bachelor's Degree Accountancy, Sukhothai Thammathirat University</p>	>>Bachelor's Degree Engineering in Chemical Engineering, Curtin University of Technology, Perth, Australia	>>Bachelor's Degree Science in Chemistry, Chiang Mai University	>>Bachelor's Degree Chemical Engineering, University of Sydney, Australia

Sources: SPRC; FSSIA's compilation

Financial Statements

Star Petroleum Refining

Profit and Loss (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Revenue	172,484	285,264	228,406	314,742	313,389
Cost of goods sold	(165,763)	(270,230)	(216,466)	(300,830)	(298,733)
Gross profit	6,721	15,034	11,940	13,911	14,656
Other operating income	-	-	-	-	-
Operating costs	(749)	(2,791)	(2,235)	(3,080)	(3,066)
Operating EBITDA	5,972	12,243	9,705	10,832	11,590
Depreciation	(2,644)	(2,603)	(2,603)	(3,123)	(3,123)
Goodwill amortisation	0	0	0	0	0
Operating EBIT	3,328	9,640	7,103	7,709	8,467
Net financing costs	147	60	(281)	(240)	(165)
Associates	-	-	-	-	-
Recurring non-operating income	(371)	(106)	180	185	191
Non-recurring items	2,809	0	0	0	0
Profit before tax	5,913	9,594	7,002	7,654	8,493
Tax	(1,166)	(1,921)	(1,365)	(1,495)	(1,662)
Profit after tax	4,746	7,674	5,636	6,159	6,831
Minority interests	0	0	0	0	0
Preferred dividends	0	0	0	0	0
Other items	-	-	-	-	-
Reported net profit	4,746	7,674	5,636	6,159	6,831
Non-recurring items & goodwill (net)	(2,809)	0	0	0	0
Recurring net profit	1,937	7,674	5,636	6,159	6,831
Per share (THB)					
Recurring EPS *	0.45	1.77	1.30	1.42	1.58
Reported EPS	1.09	1.77	1.30	1.42	1.58
DPS	0.18	1.11	0.65	0.71	0.79
Diluted shares (used to calculate per share data)	4,336	4,336	4,336	4,336	4,336
Growth					
Revenue (%)	32.5	65.4	(19.9)	37.8	(0.4)
Operating EBITDA (%)	99.9	105.0	(20.7)	11.6	7.0
Operating EBIT (%)	2,038.5	189.7	(26.3)	8.5	9.8
Recurring EPS (%)	(6.3)	296.1	(26.5)	9.3	10.9
Reported EPS (%)	nm	61.7	(26.5)	9.3	10.9
Operating performance					
Gross margin inc. depreciation (%)	2.4	4.4	4.1	3.4	3.7
Gross margin of key business (%)	4.0	4.4	4.1	3.4	3.7
Operating EBITDA margin (%)	3.5	4.3	4.2	3.4	3.7
Operating EBIT margin (%)	1.9	3.4	3.1	2.4	2.7
Net margin (%)	1.1	2.7	2.5	2.0	2.2
Effective tax rate (%)	19.7	20.0	20.0	20.0	20.0
Dividend payout on recurring profit (%)	39.9	62.7	50.0	50.0	50.0
Interest cover (X)	(20.1)	(158.8)	25.9	32.9	52.5
Inventory days	28.1	27.2	36.1	26.5	30.1
Debtor days	23.0	17.6	22.9	16.6	16.7
Creditor days	24.0	18.1	19.4	14.8	17.3
Operating ROIC (%)	(1.9)	(4.5)	(3.0)	(3.2)	(3.6)
ROIC (%)	(1.6)	(4.3)	(2.9)	(3.1)	(3.5)
ROE (%)	6.4	21.0	13.8	13.8	14.2
ROA (%)	3.7	12.6	8.8	9.1	9.7
* Pre-exceptional, pre-goodwill and fully diluted					
Revenue by Division (THB m)					
Diesel	74,023	125,384	96,257	96,520	96,257
Gasoline	57,584	81,205	66,362	62,385	62,214
Jet Fuel	2,927	17,192	13,345	13,382	13,345
Light Naphtha	7,270	10,287	9,119	9,601	9,575

Sources: Star Petroleum Refining; FSSIA estimates

Financial Statements

Star Petroleum Refining

Cash Flow (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Recurring net profit	1,937	7,674	5,636	6,159	6,831
Depreciation	2,644	2,603	2,603	3,123	3,123
Associates & minorities	-	-	-	-	-
Other non-cash items	-	-	-	-	-
Change in working capital	(6,107)	(9,574)	1,926	(1,307)	67
Cash flow from operations	(1,526)	703	10,165	7,975	10,021
Capex - maintenance	(2,602)	(2,557)	(2,603)	(2,603)	(2,603)
Capex - new investment	(104)	(1,438)	(3,809)	(1,232)	(1,082)
Net acquisitions & disposals	0	0	0	0	0
Other investments (net)	1,677	(792)	180	368	191
Cash flow from investing	(1,030)	(4,787)	(6,232)	(3,467)	(3,494)
Dividends paid	0	(4,936)	(1,518)	(2,385)	(3,513)
Equity finance	0	0	0	0	0
Debt finance	(2,183)	1,677	(731)	(2,000)	(3,000)
Other financing cash flows	6,049	4,475	(180)	2,279	1,973
Cash flow from financing	3,866	1,215	(2,428)	(2,106)	(4,540)
Non-recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
Net other adjustments	0	0	0	0	0
Movement in cash	1,310	(2,869)	1,505	2,402	1,987
Free cash flow to firm (FCFF)	(2,343.71)	(3,767.76)	4,213.69	4,747.68	6,692.56
Free cash flow to equity (FCFE)	1,310.00	2,067.27	3,022.38	4,786.68	5,500.56
Per share (THB)					
FCFF per share	(0.54)	(0.87)	0.97	1.09	1.54
FCFE per share	0.30	0.48	0.70	1.10	1.27
Recurring cash flow per share	1.06	2.37	1.90	2.14	2.30
Balance Sheet (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Tangible fixed assets (gross)	77,210	80,007	86,419	87,269	88,269
Less: Accumulated depreciation	(52,992)	(57,271)	(59,874)	(62,477)	(65,079)
Tangible fixed assets (net)	24,219	22,735	26,545	24,792	23,189
Intangible fixed assets (net)	93	113	113	113	113
Long-term financial assets	-	-	-	-	-
Invest. in associates & subsidiaries	0	0	0	0	0
Cash & equivalents	2,945	76	1,580	3,982	5,969
A/C receivable	13,219	14,328	14,328	14,328	14,328
Inventories	16,486	23,762	19,035	24,726	24,553
Other current assets	81	92	74	101	101
Current assets	32,731	38,258	35,016	43,137	44,952
Other assets	1,683	2,182	2,182	2,000	2,000
Total assets	58,726	63,288	63,856	70,042	70,254
Common equity	34,371	38,707	42,826	46,600	49,918
Minorities etc.	0	0	0	0	0
Total shareholders' equity	34,371	38,707	42,826	46,600	49,918
Long term debt	3,374	0	7,000	6,000	3,000
Other long-term liabilities	950	677	677	677	677
Long-term liabilities	4,324	677	7,677	6,677	3,677
A/C payable	13,961	12,780	10,238	14,227	14,128
Short term debt	4,680	9,731	2,000	1,000	1,000
Other current liabilities	1,390	1,393	1,115	1,537	1,530
Current liabilities	20,031	23,904	13,353	16,765	16,659
Total liabilities and shareholders' equity	58,726	63,288	63,856	70,042	70,254
Net working capital	14,435	24,009	22,083	23,391	23,324
Invested capital	40,430	49,039	50,923	50,296	48,626
* Includes convertibles and preferred stock which is being treated as debt					
Per share (THB)					
Book value per share	7.93	8.93	9.88	10.75	11.51
Tangible book value per share	7.91	8.90	9.85	10.72	11.49
Financial strength					
Net debt/equity (%)	14.9	24.9	17.3	6.5	(3.9)
Net debt/total assets (%)	8.7	15.3	11.6	4.3	(2.8)
Current ratio (x)	1.6	1.6	2.6	2.6	2.7
CF interest cover (x)	(8.6)	(57.4)	25.3	26.1	40.9
Valuation	2021	2022	2023E	2024E	2025E
Recurring P/E (x) *	18.5	4.7	6.3	5.8	5.2
Recurring P/E @ target price (x) *	28.0	7.1	9.6	8.8	7.9
Reported P/E (x)	7.5	4.7	6.3	5.8	5.2
Dividend yield (%)	2.2	13.5	7.9	8.6	9.5
Price/book (x)	1.0	0.9	0.8	0.8	0.7
Price/tangible book (x)	1.0	0.9	0.8	0.8	0.7
EV/EBITDA (x) **	6.8	3.7	4.5	3.6	2.9
EV/EBITDA @ target price (x) **	9.9	5.2	6.3	5.3	4.5
EV/invested capital (x)	1.0	0.9	0.8	0.8	0.7
* Pre-exceptional, pre-goodwill and fully diluted ** EBITDA includes associate income and recurring non-operating income					

Sources: Star Petroleum Refining; FSSIA estimates

1 JUNE 2023

EQUITY RESEARCH - REINITIATION REPORT

THAI OIL TOP TB

THAILAND / ENERGY

Normalised years ahead

- Reinitiate coverage with a BUY rating and TP at THB61.80/share.
- We expect TOP to benefit from refinery GRM normalisation and the recovery of petrochemical spreads in 2024-25.
- Key catalyst is a higher GRM from an expected diesel spread recovery in 2H23.

2H23 outlook brightens

We believe 2Q23 will be the bottom of the year, mainly from weaker diesel spreads due to the higher supply in the region and the end of the peak season. However, we see a brighter refinery outlook in 2H23 while petrochemicals recover at a slower pace. The acceleration of economic activity in China in conjunction with lower crude premiums should help drive GRM in 2H23. We expect TOP's 2023 net profit to normalise at THB14.0b and improve 6.4% y-y to THB14.9b in 2024.

Refinery and aromatics: stable long-term outlook

Our GRM estimates are pegged at USD6.9/bbl in 2023 and USD6.7/bbl in 2024, down from the high base in 2022. Our assumptions are based on normalised gasoline- and diesel-to-Dubai spreads of USD17/bbl and USD17/bbl in 2023, and USD15/bbl/USD13/bbl in 2024. Nevertheless, we expect crude premiums to remain low at USD3.35/bbl in 2023 and drop further to USD1.8/bbl in 2024. We expect GRM to stay at a healthy level above pre-Covid.

Resilient and competitive player in the long term

We believe TOP is one of the most competitive players in the long term due to its investments in diversification and expansion. In 2025 onwards, we expect TOP's refinery capacity to increase 45% from 275kbd to 400kbd from the upgraded refinery units in its USD4.8b Clean Fuel Project (CFP). Product yield will move more toward middle distillates (53% to 62%) while lower-valued products such as fuel oil (7% to 0%) will be eliminated.

Reinitiate with a BUY rating; TP at THB61.80/share

We reinitiate coverage of TOP with a BUY rating. Our TP at THB61.80/share is based on 0.8x 2024E P/BV, which is -1SD of its historical 10-year average. We expect the stock to trade at this level to reflect the normalisation of the refinery business and the slower-than-expected recovery of its petrochemical business. We think its weak share price performance already reflects its negative factors, which means now is a good time to accumulate. Key risks are a sharp decline in crude oil prices and GRM.



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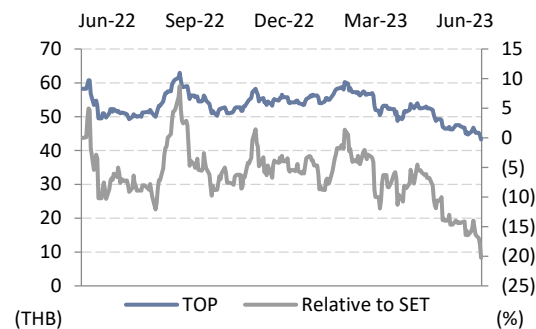
BUY

UNCHANGED

TARGET PRICE	THB61.80
CLOSE	THB43.25
UP/DOWNSIDE	+42.9%
PRIOR TP	THB70.00
CHANGE IN TP	-11.7%
TP vs CONSENSUS	+0.3%

KEY STOCK DATA

YE Dec (THB m)	2022	2023E	2024E	2025E
Revenue	529,589	447,275	459,496	572,939
Net profit	32,668	14,048	14,866	18,763
EPS (THB)	15.29	6.29	6.65	8.40
vs Consensus (%)	-	2.2	6.9	(7.3)
EBITDA	52,014	27,213	27,327	37,921
Core net profit	32,668	14,048	14,866	18,762
Core EPS (THB)	15.29	6.29	6.65	8.40
Chg. In EPS est. (%)	nm	(6.0)	1.9	nm
EPS growth (%)	147.9	(58.9)	5.8	26.2
Core P/E (x)	2.8	6.9	6.5	5.1
Dividend yield (%)	8.6	7.3	7.7	9.7
EV/EBITDA (x)	4.1	7.9	6.7	4.0
Price/book (x)	0.6	0.6	0.6	0.5
Net debt/Equity (%)	71.0	69.1	47.7	29.2
ROE (%)	23.6	8.8	8.9	10.7



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	(7.0)	(14.4)	(25.4)
Relative to country (%)	(7.3)	(9.4)	(19.1)
Mkt cap (USD m)	2,776		
3m avg. daily turnover (USD m)	14.7		
Free float (%)	52		
Major shareholder	PTT plc. (48%)		
12m high/low (THB)	63.25/43.00		
Issued shares (m)	2,234.00		

Sources: Bloomberg consensus; FSSIA estimates

Investment thesis

We believe the refinery and petrochemical business will recover in 2H23, led by the acceleration of economic activity in China which should boost diesel and petrochemical product demand and drive product spreads higher.

In addition, as a low cost structure refinery, we expect TOP to stand out based on its earnings resilience relative to its local refinery peers during this shoulder period, as refinery spreads normalise and the petrochemical business begins to recover.

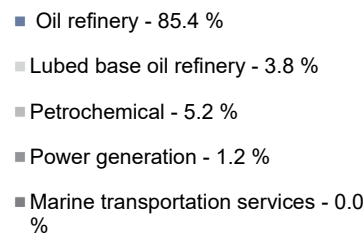
Long-term, we anticipate that its Clean Fuel Project (CFP) project (COD in 1Q25) will allow TOP to maximise profits from greater feedstock flexibility and better yields of higher value middle distillate products. In addition, its 15.38% stake in the expansion project of Chandra Asri Petrochemical (CAP2), an olefin investment in Indonesia (COD in 2026), should support and diversify TOP's earnings.

Company profile

TOP operates the largest single-site refinery in Thailand, which is one of the most complex refineries in the Asia-Pacific region with a nameplate capacity of 275 kbd. It also undertakes power generation, petrochemical production, and oil and petrochemical product transportation.

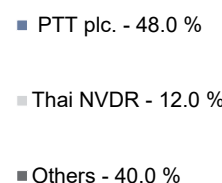
www.thaioilgroup.com

Principal activities (revenue, 2022)



Source: Thai Oil

Major shareholders



Source: Thai Oil

Catalysts

Potential catalysts are 1) a faster-than-expected resumption of economic activity in China in 2H23, which would boost diesel and aromatics product demand and send product spreads higher; 2) lower-than-expected crude premiums; and 3) a sharp rise in oil prices.

Risks to our call

Downside risks to our P/BV-based TP are 1) a sharp fall in oil prices; 2) weaker demand for refined oil products; 3) GRM volatility; and 4) unplanned refinery shutdowns..

Event calendar

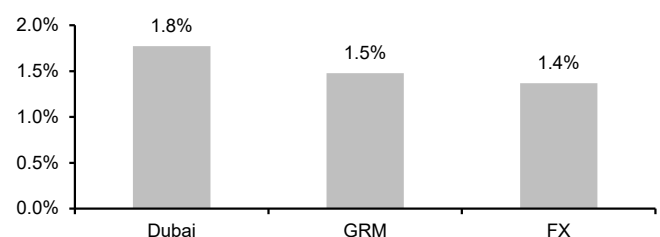
Date	Event
17 Aug 2023	2Q23 analyst meeting
23 Aug 2023	2Q23 Opportunity Day
20 Nov 2023	3Q23 analyst meeting
22 Nov 2023	3Q23 Opportunity Day

Key assumptions

	2021 (USD/bbl)	2022 (USD/bbl)	2023E (USD/bbl)	2024E (USD/bbl)	2025E (USD/bbl)
Marketing GRM	2.2	12.0	6.9	6.7	7.2
Stock gain/loss	4.7	1.0	-	-	-
Accounting GRM	6.9	13.0	6.9	6.7	7.2
Crude premium	1.8	7.1	3.3	1.8	1.4
Diesel-Dubai	6.7	34.3	17.0	13.0	13.0
Gasoline-Dubai	11.1	18.8	17.0	15.0	15.0
Capacity utilisation rate	100%	107%	108%	110%	110%
PX-ULG95	177	124	200	220	260
BZ-ULG95	232	50	104	125	150

Source: FSSIA estimates

Earnings sensitivity

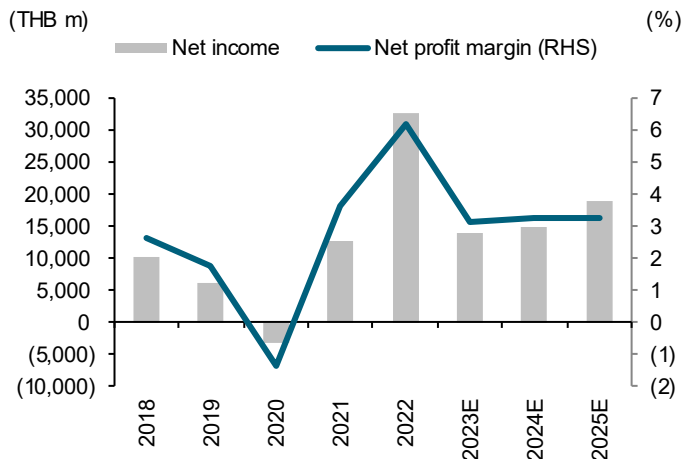


- For every 1% increase in Dubai, GRM and FX, we estimate 2023 earnings would increase according to the above chart, and vice versa, all else being equal.

Source: FSSIA estimates

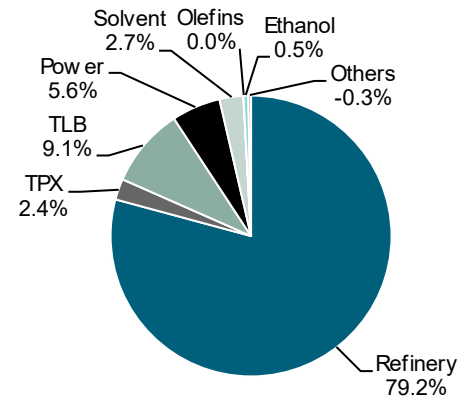
Company profile

Exhibit 55: Net profit vs net profit margin



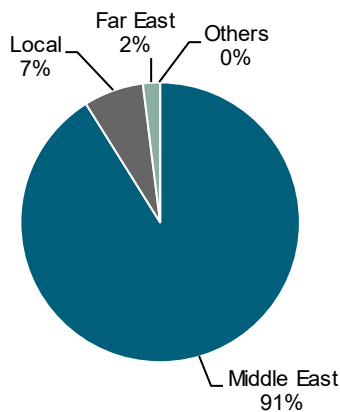
Sources: TOP; FSSIA estimates

Exhibit 56: EBITDA breakdown by business (2022)



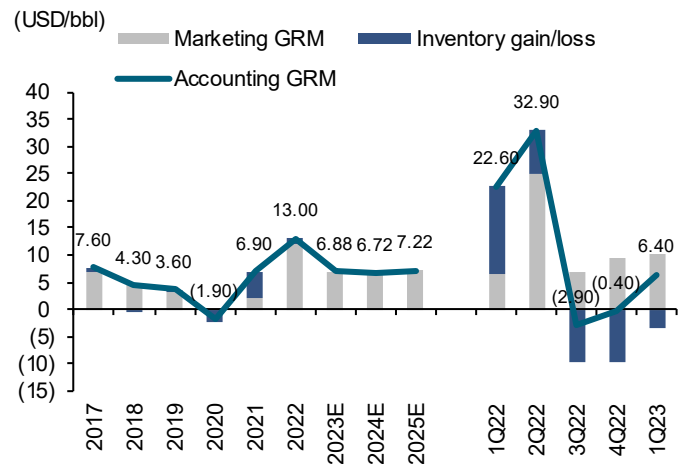
Sources: TOP; FSSIA's compilation

Exhibit 57: Crude intake breakdown (2022)



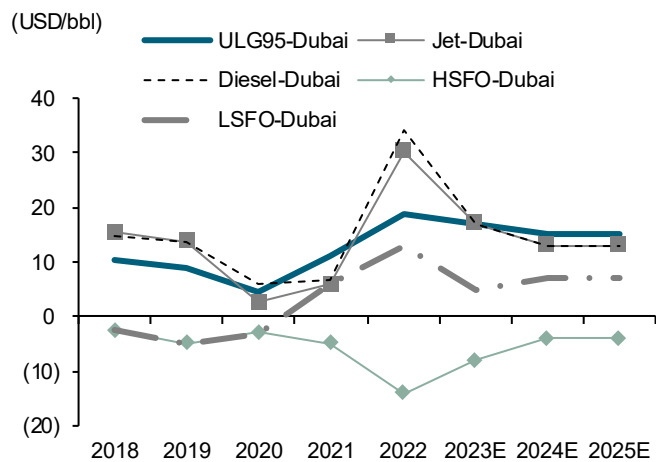
Sources: TOP; FSSIA's compilation

Exhibit 58: TOP's GRM



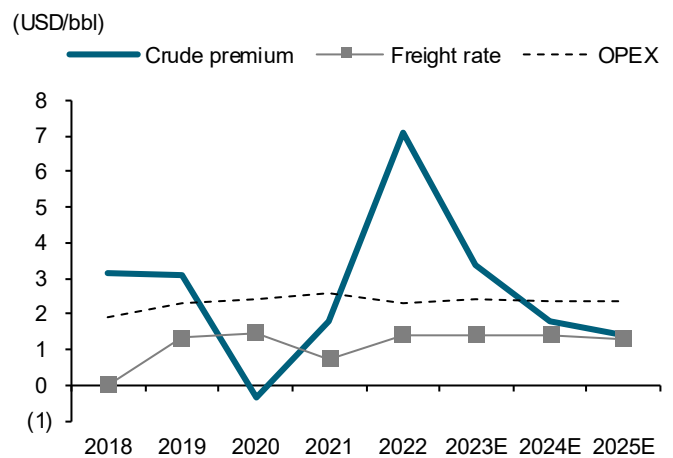
Sources: TOP; FSSIA estimates

Exhibit 59: Petroleum product spreads



Sources: TOP; FSSIA estimates

Exhibit 60: Cost per barrel



Sources: TOP; FSSIA estimates

Normalised years ahead

Brighter outlook in 2H23

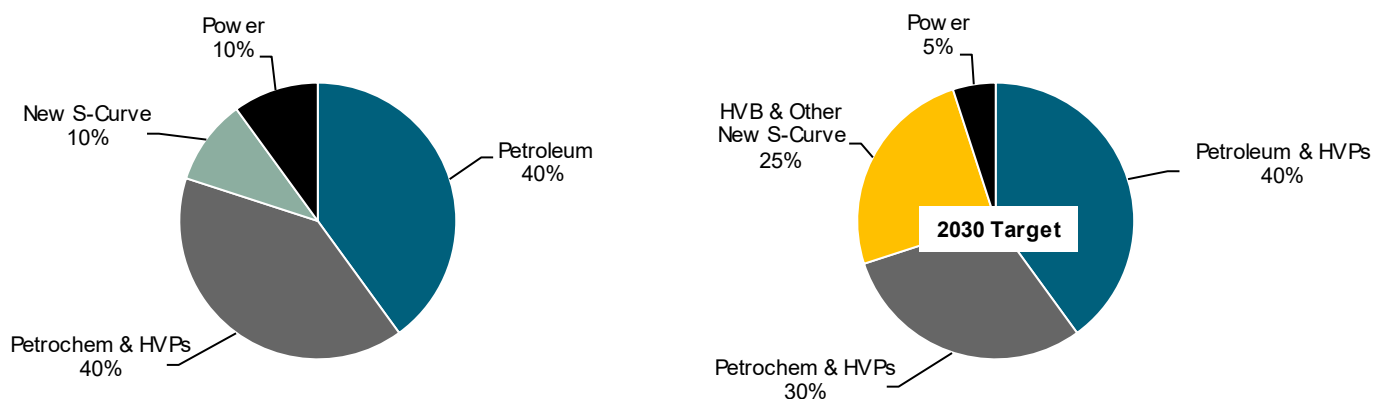
We believe 2Q23 will mark the bottom of the year for TOP, mainly from weaker diesel spreads due to the higher supply in the region and the end of peak seasonal demand. We expect a brighter refinery outlook in 2H23 while petrochemicals recover at a slower pace. Furthermore, the acceleration of economic activity in China in conjunction with lower crude premiums should help drive GRM in 2H23. Due to its a low cost structure refinery, we expect TOP will be one of the outperformers during this shoulder period. We estimate TOP's 2023 net profit to normalise at THB14.0b and improve 6.4% y-y to THB14.9b in 2024. Longer-term, we believe the petrochemicals business should be the key driver as the oversupply situation eases.

Refinery and aromatics: stable long-term outlook

We estimate GRMs at USD6.9/bbl in 2023 and USD 6.7/bbl in 2024, down from the high base in 2022. Our assumptions are based on normalised gasoline- and diesel-to-Dubai spreads of USD17/bbl and USD17/bbl in 2023 and USD15/bbl/USD13/bbl in 2024. Nevertheless, we expect crude premiums to stay low at USD3.35/bbl in 2023 and drop further to USD1.8/bbl in 2024. We think GRMs will stay at a healthy level above pre-Covid while refined product spreads should normalise. We expect a stable outlook for the refinery business going forward amid limited additional supply and gradually increasing demand. The outlook for aromatic products (PX/BZ) should be supported for the same reasons, in our view.

Long-term refinery business outlook: enhanced flexibility, reduced volatility

Exhibit 61: Net profit contribution in 2022 vs 2030 target



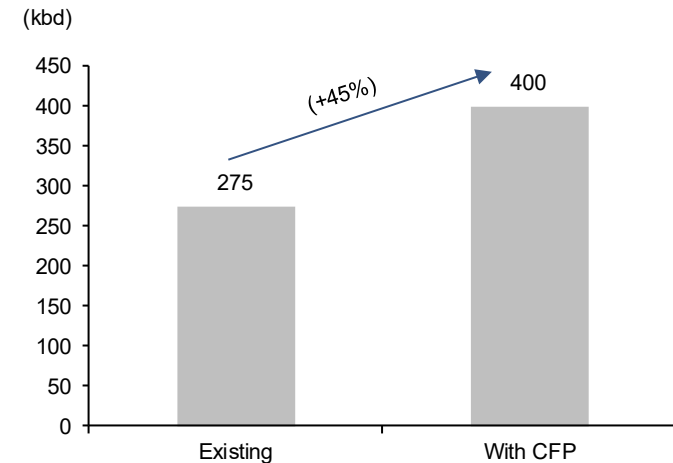
Sources: TOP; FSSIA's compilation

We believe TOP will be one of the most competitive players in the long term due to its investments in diversification and expansion. TOP targets reducing its reliance on refinery earnings, which is a very cyclical business, and increasing both its production flexibility and proportion of higher value-added products (HVPs). Its targets for 2030 are 1) reducing the proportional net profit contribution from its refinery to <40%; and 2) increasing HVP and new S-curve contributions to >25%. We think the CFP is a key step in that direction.

Clean Fuel Project (CFP)

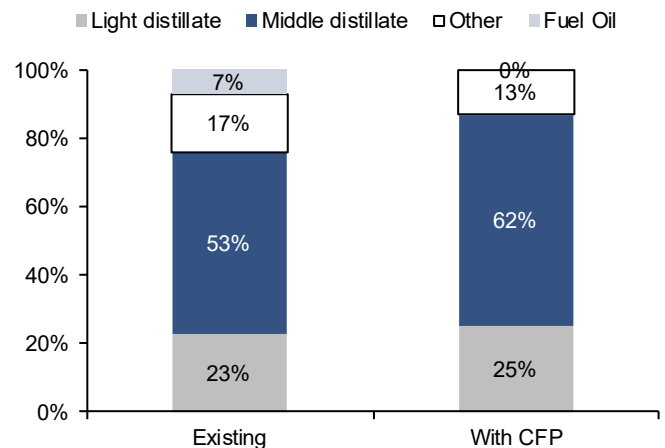
This USD4.8b project will increase TOP's refinery capacity by 45% from 275kbd to 400kbd by upgrading and expanding its production units. Product yield will move more toward middle distillates (53% to 62%) while lower value-added products such as fuel oil (7% to 0%) will be eliminated. With more flexibility in feedstock choices, costs should fall while profit is maximised from its higher value output. While the project will gradually start operations in 2024, we expect meaningful contributions to materialise in 2025 onwards.

Exhibit 62: 45% capacity growth with CFP



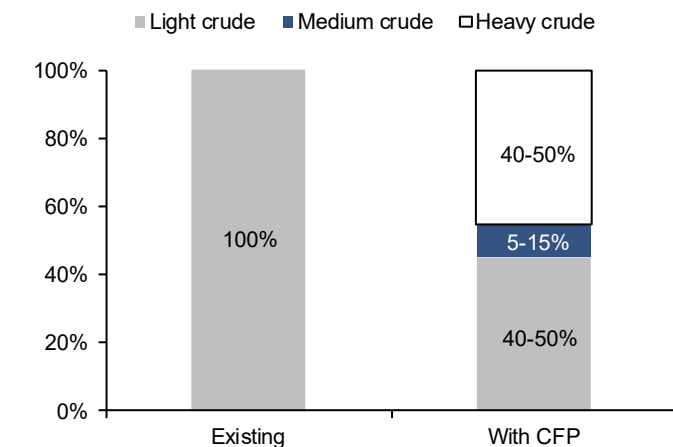
Sources: TOP; FSSIA's compilation

Exhibit 63: Increased middle distillate production as fuel oil phased out



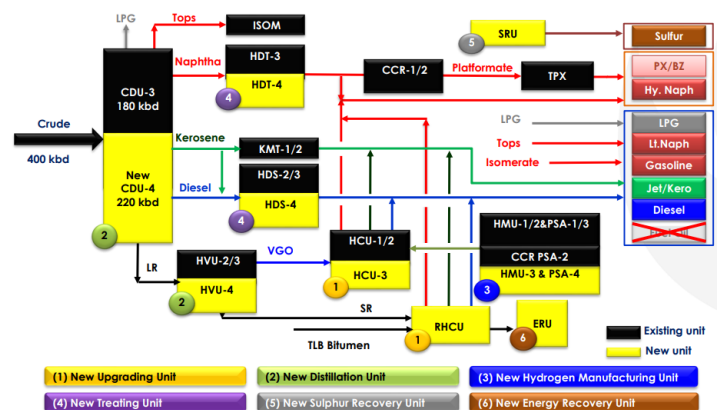
Sources: TOP; FSSIA's compilation

Exhibit 64: Enhanced feedstock flexibility for cost optimisation



Sources: TOP; FSSIA's compilation

Exhibit 65: CFP unit upgrades and expansions



Source: TOP

Reinitiate with a BUY rating; TP at THB61.80/shr

We reinitiate coverage of TOP with a BUY rating. Our TP at THB61.80/share is based on 0.8x 2024E P/BV which is -1SD of its historical 10-year average. We expect the stock to trade at this level to reflect the normalisation of its refinery business and a slower-than-expected petrochemicals recovery. We think its weak share price performance already reflects the negative factors, which means now is a good time to accumulate the stock. Risks are volatility in oil prices and GRM, and a slower-than-expected demand recovery from China's reopening.

Management team

Exhibit 66: Key management profiles

Name	Mr. Bandhit Thamprajamchit	Mrs. Wanida Boonpiraks	Mr. Chatapong Wungtanagorn	Mr. Jeerawat Pattanasomsit	Mr. Rathakorn Kampanathsanyakorn
Position	Chief Executive Officer	Executive Vice President-Finance and Accounting	Executive Vice President-Corporate Commercial	Executive Vice President-Power, New Business and Digitalisation	Executive Vice President-Strategy
5 years past experiences	<p>Jul 2017 - Sep 2018: Senior Executive Vice President-Petroleum & Petrochemical and Acting Executive Vice President-Manufacturing, TOP</p> <p>Oct 2018 - Jan 2020: Senior Executive Vice President-Petroleum & Petrochemical and Acting Executive Vice President-Operational Excellence, TOP</p> <p>Feb - Dec 2020: Senior Executive Vice President-Petroleum & Petrochemical, TOP</p> <p>Jan 2021 - Dec 2022: Senior Executive Vice President-Hydrocarbon and Acting Executive Vice President-Manufacturing, TOP</p> <p>Jan 2023 – Present: >> Senior Executive Vice President, PTT Secondment to TOP as Chief Executive Officer and President >> Acting Senior Executive Vice President-Hydrocarbon and Acting Executive Vice President-Manufacturing, TOP >> Acting Managing Director, LABIX Co., Ltd.</p>	<p>Nov 2016-Jan 2018: Chief Financial Officer, GPSC</p> <p>Feb 2018-Mar 2020: Executive Vice President-Finance and Accounting, GPSC</p> <p>Apr-Dec 2020: Chief Financial Officer, GPSC</p> <p>Jan 2021-Present: Executive Vice President-Finance and Accounting, TOP</p>	<p>Jan-Dec 2018: Executive Vice President-Corporate Commercial</p> <p>Jan 2019-Dec 2021: Executive Vice President - Corporate Commercial and Vice President-Commercial Planning (Act.)</p> <p>Jan 2022-Present: Executive Vice President-Corporate Commercial</p>	<p>Oct 2018-Apr 2019: Executive Vice President-Manufacturing (Act.) and Vice President-Refinery</p> <p>Apr 2019-Dec 2020: Executive Vice President-Manufacturing and Vice President-Refinery (Act.)</p> <p>Jan 2021-Sep 2022: Executive Vice President-Power, New Business and Digitalisation and Vice President-New S-curve Business Development (Act.) Oct</p> <p>2022-Present: Executive Vice President-Power, New Business and Digitalisation</p>	<p>Sep 16-Nov 15, 2018: Executive Vice President-Downstream Business Group Planning (Act.), PTT</p> <p>Nov 16, 2018-Sep 2021: Executive Vice President-Downstream Business Group Planning, PTT</p> <p>Oct 2021-Present: Executive Vice President-Strategy, TOP</p>
Education	<p>>> Bachelor of Engineering (Chemical Engineering) (1st Class Honours, Gold Medal), Chulalongkorn University</p> <p>>> M.Sc. in Advanced Chemical Engineering (Distinction), Imperial College, University of London, United Kingdom</p> <p>>> Master of Business Administration (Executive), Sasin Graduate Institute of Business Administration of Chulalongkorn University</p>	<p>>> Bachelor of Accountancy, Chulalongkorn University</p> <p>>> Master of Business Administration (Finance), University of St. Thomas, USA</p>	<p>>> Bachelor of Engineering, King Mongkut's University of Technology Thonburi</p> <p>>> Master of Advanced Chemical Engineering, The Imperial College of Science, Technology and Medicine, London, United Kingdom</p> <p>>> Master of Management, College of Management, Mahidol University</p>	<p>>> Bachelor of Engineering, Kasetsart University</p> <p>>> Master of Science, The Petroleum and Petrochemical College, Chulalongkorn University</p>	<p>>> Bachelor of Engineering, Chulalongkorn University</p> <p>>> Master of Science, Chemical Engineering, Imperial College London, United Kingdom</p> <p>>> Master of Science, International Management, King's College London, United Kingdom</p>

Sources: TOP; FSSIA's compilation

Financial Statements

Thai Oil

Profit and Loss (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Revenue	345,496	529,589	447,275	459,496	572,939
Cost of goods sold	(312,131)	(473,393)	(416,299)	(428,451)	(534,445)
Gross profit	33,366	56,196	30,976	31,045	38,494
Other operating income	-	-	-	-	-
Operating costs	(3,056)	(4,182)	(3,763)	(3,718)	(573)
Operating EBITDA	30,309	52,014	27,213	27,327	37,921
Depreciation	(7,424)	(7,744)	(7,744)	(7,744)	(13,576)
Goodwill amortisation	0	0	0	0	0
Operating EBIT	22,885	44,270	19,469	19,583	24,345
Net financing costs	(9,523)	(1,733)	(1,561)	(1,453)	(1,345)
Associates	1,675	(513)	200	1,000	1,000
Recurring non-operating income	1,675	(513)	200	1,000	1,000
Non-recurring items	0	0	0	0	1
Profit before tax	15,037	42,024	18,108	19,130	24,001
Tax	(2,034)	(8,918)	(3,622)	(3,826)	(4,800)
Profit after tax	13,003	33,106	14,486	15,304	19,201
Minority interests	(425)	(438)	(438)	(438)	(438)
Preferred dividends	0	0	0	0	0
Other items	-	-	-	-	-
Reported net profit	12,578	32,668	14,048	14,866	18,763
Non-recurring items & goodwill (net)	0	0	0	0	(1)
Recurring net profit	12,578	32,668	14,048	14,866	18,762
Per share (THB)					
Recurring EPS *	6.17	15.29	6.29	6.65	8.40
Reported EPS	6.17	15.29	6.29	6.65	8.40
DPS	2.60	3.70	3.14	3.33	4.20
Diluted shares (used to calculate per share data)	2,040	2,137	2,234	2,234	2,234
Growth					
Revenue (%)	39.4	53.3	(15.5)	2.7	24.7
Operating EBITDA (%)	nm	71.6	(47.7)	0.4	38.8
Operating EBIT (%)	nm	93.4	(56.0)	0.6	24.3
Recurring EPS (%)	nm	147.9	(58.9)	5.8	26.2
Reported EPS (%)	nm	147.9	(58.9)	5.8	26.2
Operating performance					
Gross margin inc. depreciation (%)	7.5	9.1	5.2	5.1	4.3
Gross margin of key business (%)	7.5	9.1	5.2	5.1	4.3
Operating EBITDA margin (%)	8.8	9.8	6.1	5.9	6.6
Operating EBIT margin (%)	6.6	8.4	4.4	4.3	4.2
Net margin (%)	3.6	6.2	3.1	3.2	3.3
Effective tax rate (%)	13.5	21.2	20.0	20.0	20.0
Dividend payout on recurring profit (%)	42.2	24.2	50.0	50.0	50.0
Interest cover (X)	2.6	25.2	12.6	14.2	18.8
Inventory days	36.3	36.6	47.2	45.2	41.3
Debtor days	19.1	18.0	24.5	25.2	23.0
Creditor days	19.0	37.5	49.2	32.8	30.0
Operating ROIC (%)	10.0	16.2	6.7	6.3	7.7
ROIC (%)	8.1	11.5	5.1	5.3	6.7
ROE (%)	10.6	23.6	8.8	8.9	10.7
ROA (%)	6.4	8.5	3.8	4.1	4.8

* Pre-exceptional, pre-goodwill and fully diluted

Revenue by Division (THB m)	2021	2022	2023E	2024E	2025E
Oil refinery	284,019	452,096	364,749	373,992	487,435
Lubed base oil refinery	18,826	20,078	23,926	23,689	23,689
Petrochemical	24,461	27,752	28,838	32,052	32,052
Power generation	4,059	6,211	6,211	6,211	6,211

Sources: Thai Oil; FSSIA estimates

Financial Statements

Thai Oil

Cash Flow (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Recurring net profit	12,578	32,668	14,048	14,866	18,762
Depreciation	7,424	7,744	7,744	7,744	13,576
Associates & minorities	-	-	-	-	-
Other non-cash items	-	-	-	-	-
Change in working capital	(14,344)	30,043	(35,678)	(1,247)	(11,572)
Cash flow from operations	5,659	70,455	(13,886)	21,364	20,766
Capex - maintenance	-	-	-	-	-
Capex - new investment	(33,174)	(28,076)	(12,124)	(12,064)	(12,058)
Net acquisitions & disposals	-	-	-	-	-
Other investments (net)	45,907	(1,454)	30,000	30,000	30,000
Cash flow from investing	12,733	(29,530)	17,876	17,936	17,942
Dividends paid	(5,304)	(8,265)	(7,024)	(7,433)	(9,381)
Equity finance	0	0	0	0	0
Debt finance	(1,219)	(550)	(21,357)	(1,551)	(21,551)
Other financing cash flows	(35,415)	(18,230)	638	1,438	1,439
Cash flow from financing	(41,939)	(27,045)	(27,743)	(7,546)	(29,493)
Non-recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
Net other adjustments	0	0	0	0	0
Movement in cash	(23,548)	13,880	(23,753)	31,754	9,215
Free cash flow to firm (FCFF)	21,985.74	44,785.11	7,764.77	42,987.70	42,310.34
Free cash flow to equity (FCFE)	(18,243.87)	22,145.27	(16,728.84)	39,186.49	18,595.98
Per share (THB)					
FCFF per share	9.84	20.05	3.48	19.24	18.94
FCFE per share	(8.17)	9.91	(7.49)	17.54	8.32
Recurring cash flow per share	9.80	18.91	9.76	10.12	14.48
Balance Sheet (THB m) Year Ending Dec	2021	2022	2023E	2024E	2025E
Tangible fixed assets (gross)	320,167	355,988	368,112	380,176	392,234
Less: Accumulated depreciation	(141,768)	(149,512)	(157,256)	(165,001)	(178,577)
Tangible fixed assets (net)	178,399	206,476	210,855	215,175	213,657
Intangible fixed assets (net)	0	0	0	0	0
Long-term financial assets	-	-	-	-	-
Invest. in associates & subsidiaries	55,412	32,603	32,803	33,803	34,803
Cash & equivalents	29,696	43,576	19,823	51,577	60,792
A/C receivable	23,415	28,759	31,309	32,165	40,106
Inventories	39,576	55,343	52,335	53,765	67,039
Other current assets	8,552	26,150	10,000	10,000	10,000
Current assets	101,239	153,828	113,468	147,507	177,936
Other assets	27,094	51,674	32,040	27,405	1,654
Total assets	362,144	444,581	389,166	423,890	428,050
Common equity	120,881	156,034	163,058	170,491	179,873
Minorities etc.	2,213	2,623	2,825	3,025	3,225
Total shareholders' equity	123,094	158,657	165,883	173,516	183,098
Long term debt	163,343	151,442	131,635	131,635	111,635
Other long-term liabilities	37,230	30,809	30,809	56,926	56,926
Long-term liabilities	200,574	182,250	162,444	188,561	168,561
A/C payable	23,001	74,154	38,018	39,057	48,700
Short term debt	2,142	4,776	2,820	2,756	2,692
Other current liabilities	13,334	24,743	20,000	20,000	25,000
Current liabilities	38,476	103,673	60,838	61,813	76,391
Total liabilities and shareholders' equity	362,144	444,581	389,166	423,890	428,050
Net working capital	35,209	11,355	35,626	36,873	43,445
Invested capital	296,114	302,108	311,324	313,256	293,559
* Includes convertibles and preferred stock which is being treated as debt					
Per share (THB)					
Book value per share	59.25	69.85	72.99	76.32	80.52
Tangible book value per share	59.25	69.85	72.99	76.32	80.52
Financial strength					
Net debt/equity (%)	110.3	71.0	69.1	47.7	29.2
Net debt/total assets (%)	37.5	25.3	29.5	19.5	12.5
Current ratio (x)	2.6	1.5	1.9	2.4	2.3
CF interest cover (x)	2.6	30.0	(1.9)	36.3	23.8
Valuation	2021	2022	2023E	2024E	2025E
Recurring P/E (x) *	7.0	2.8	6.9	6.5	5.1
Recurring P/E @ target price (x) *	10.0	4.0	9.8	9.3	7.4
Reported P/E (x)	7.0	2.8	6.9	6.5	5.1
Dividend yield (%)	6.0	8.6	7.3	7.7	9.7
Price/book (x)	0.7	0.6	0.6	0.6	0.5
Price/tangible book (x)	0.7	0.6	0.6	0.6	0.5
EV/EBITDA (x) **	7.5	4.1	7.9	6.7	4.0
EV/EBITDA @ target price (x) **	8.7	4.9	9.4	8.2	5.1
EV/invested capital (x)	0.8	0.7	0.7	0.6	0.5
* Pre-exceptional, pre-goodwill and fully diluted ** EBITDA includes associate income and recurring non-operating income					

Sources: Thai Oil; FSSIA estimates

Public disclosures related to sustainable development evaluation of Thai listed companies

Rating regarding the sustainable development of Thai listed companies, both on the SET and MAI, are publicly available on the website of the Securities and Exchange Commission of Thailand (SEC). Currently, ratings available are 1) "**CG Score**" by the Thai Institute of Directors Association (Thai IOD); 2) "**AGM Checklist**" by the Thai Investors Association (TIA), a "**CAC certified member**" of the Thai Private Sector Collective Action Against Corruption (CAC); and 3) **Sustainability Investment List (THSI)** by the Stock Exchange of Thailand. The ratings are updated on an annual basis. FSS International Investment Advisory Company Limited does not confirm nor certify the accuracy of such ratings.

CG Score by the Thai Institute of Directors Association (Thai IOD) ¹

The CG Score indicates corporate governance (CG) strength in the sustainable development of Thai listed companies. Annually, the Thai IOD, with support from the Stock Exchange of Thailand (SET), surveys and assesses the CG practices of companies and publishes the results on the Thai IOD website in a bid to promote and enhance the CG of Thai listed companies in order to promote compliance with international standards for better investment decisions. The results are from the perspective of a third party, not an evaluation of operations, as of the date appearing in the report, and may be changed after that date.

The five underlying categories and weighting used for the CG scoring in 2022 include the rights of shareholders and equitable treatment of shareholders (weight 25% combined), the role of stakeholders (25%), disclosure and transparency (15%), and board responsibilities (35%).

The CGR report rates CG in six categories: 5 for Excellent (score range 90-100), 4 for Very Good (score range 80-89), 3 for Good (Score range 70-79), 2 for Fair (score range 60-69), 1 for Pass (score range 50-59), and not rated (score below 50).

AGM Checklist by the Thai Investors Association (TIA) ²

The "AGM Checklist" quantifies the extent to which shareholders' rights and equitable treatment are incorporated into business operations and the extent to which information is sufficiently disclosed and the level of its transparency. All the considered factors form important elements of two out of five the CG components. Annually, the TIA, with support from the SEC, leads the project to evaluate the quality of Annual General Meetings of Shareholders (AGMs) and to rate quality of the meetings.

The Checklist contains the minimum requirements under law that companies must comply with, or best practices according to international CG guidance. Representatives of the TIA will attend the meetings and perform the evaluation. The assessment criteria cover AGM procedures before the meeting (45%), at the meeting date (45%), and after the meeting (10%). The first assesses 1) advance circulation of sufficient information for voting; and 2) facilitating of how voting rights can be exercised. The second assesses 1) the ease of attending meetings; 2) transparency and verifiability; and 3) openness for Q&A. The third involves the meeting minutes that should contain discussion issues, resolutions and voting results.

The results are classified into four categories: 5 for Excellent (score 100), 4 for Very Good (score 90-99), 3 for Fair (score 80-89), and not rated (score below 79).

CAC certified member by the Thai Private Sector Collective Action Against Corruption (CAC) ³

A CAC certified member is a listed company whose Checklist satisfies the CAC Certification's criteria and is approved by the CAC Council. The core elements of the Checklist include corruption risk assessment, establishment of key controls, and the monitoring and developing of policies. Note that the CAC does not certify the behaviour of the employees nor whether the companies have engaged in bribery, and Certification is good for three years.

Companies deciding to become a CAC certified member start with by submitting a Declaration of Intent signed by the Chairman of the Board to kick off the 18-month deadline for companies to submit the CAC Checklist for Certification. The 18-month provision is for risk assessment, in place of policy and control, training of managers and employees, establishment of whistleblowing channels, and communication of policies to all stakeholders.

The checklist document will be reviewed by the CAC Certification Committee for adequate information and evidence. It is worth noting that the committee consists of nine professionals in business law, corporate governance, internal audit, financial audit and experienced representatives from certified members.

A passed Checklist will move on to the CAC Council for granting certification approvals. The CAC Council consists of twelve prominent individuals who are highly respected in professionalism and ethical achievements. Among them are former ministers, a former central bank governor, the former head of the Thai Listed Companies Association, Chairman of Anti-Corruption Organizations (Thailand), Chairman of Thai Institute of Directors, and reputable academic scholars.

Sustainability Investment (THSI) ⁴ by the Stock Exchange of Thailand (SET)

Thailand Sustainability Investment (THSI) quantifies responsibility in Environmental, and Social issues, by managing business with transparency in Governance. The THSI serves as another choice for investors who desire to adopt a responsible investment approach, according to the SET.

Annually, the SET will announce the voluntary participation of the company candidates which pass the preemptive criteria, and whose two key crucial conditions are met, i.e. no irregular trading of the board members and executives and a free float of >15% by the number of shareholders, and combined holding must >15% of paid-up capital. Some key disqualifying criteria include a CG score of below 70%; independent directors and free float violation; executives' wrongdoing related to CG, social and environmental impacts, equity in negative territory, and earnings in the red for more than three years in the last five years. To become eligible for THSI, the candidate must pass three indicators in data declaration: Economic (CG, risk management, customer relation management, supply chain management, and innovation); Environmental (environmental management, eco-efficiency, and climate risk); Social (human rights, talent attraction, operational health & safety, community development, and stakeholder engagement); and the incorporation of ESG in business operations.

To be approved for THSI inclusion, verified data must be scored at a 50% minimum for each indicator, unless the company is a part of the Dow Jones Sustainability Indices⁵ (DJSI) during the assessment year. The scoring will be fairly weighted against the nature of the relevant industry and materiality.

Note that, from the THSI list, the SET further developed a sustainability SETTHSI Index in June 2018 from selected THSI companies whose 1) market capitalisation > THB5b (~USD150b); 2) free float >20%; and 3) liquidity >0.5% of paid-up capital for at least 9 out of 12 months. The SETTHSI Index is a market capitalisation-weighted index, cap 5% quarterly weight at maximum, and no cap for number of stocks.

Sources: SEC; Thai IOD; Thai CAC; SET; FSSIA's compilation

Disclaimer:

¹ Thai Institute of Directors Association (Thai IOD) was established in December 1999 and is a membership organisation 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.

² Thai Investors Association (TIA) was established in 1983 with a mission to promote investment knowledge and to protect the investment rights of Thai investors. In 2002, the association was appointed by the Securities and Exchange Commission (SEC) to represent individual shareholders. To obtain information for evaluation, the association recruits volunteer investors to join AGMs and score the meetings. Weightings for each meeting are at a 45:45:10 ratio. They have been applied since 2017 and subject to change.

³ Thai Private Sector Collective Action against Corruption (CAC) was founded in 2010 and is 100% privately funded. It is an initiative by the Thai private sector to take part in tackling corruption problems via collective action. The CAC promotes the implementation of effective anti-corruption policies in order to create a transparent business ecosystem by developing a unique certification program for large/medium/small companies to apply for and to control corruption risk systematically and efficiently. The CAC's operations are sponsored by the US-based Center for Private Enterprise (CIPE) and the UK Prosperity Fund.

⁴ Sustainability Investment List (THSI), created by the Stock Exchange of Thailand in 2015, comprises the listed companies that conduct sustainable business operations.

⁵ Dow Jones Sustainability Indices – Wikipedia – Launched in 1999, DJSI evaluates the sustainability performance of companies based on corporate economic, environmental, and social performance.

GENERAL DISCLAIMER

ANALYST(S) CERTIFICATION

Kwanwaree Apichartsataporn FSS International Investment Advisory Securities Co., Ltd

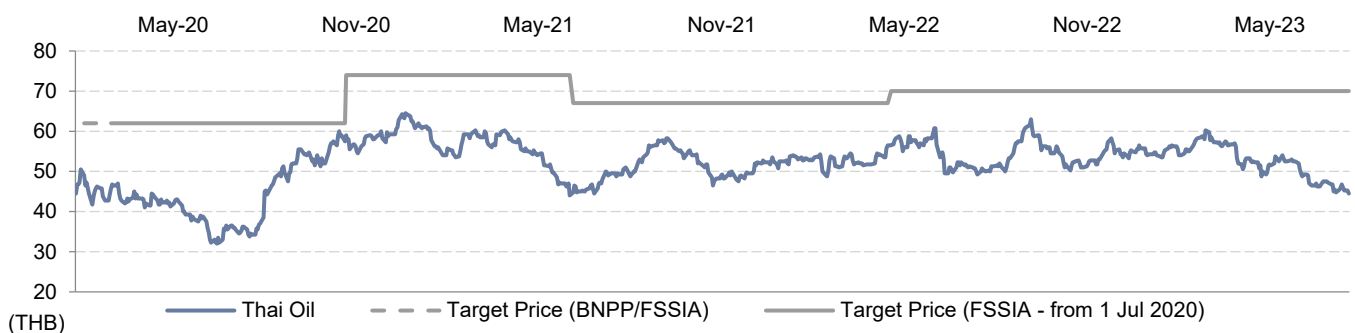
The individual(s) identified above certify(ies) that (i) all views expressed in this report accurately reflect the personal view of the analyst(s) with regard to any and all of the subject securities, companies or issuers mentioned in this report; and (ii) no part of the compensation of the analyst(s)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

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History of change in investment rating and/or target price

Thai Oil (TOP TB)



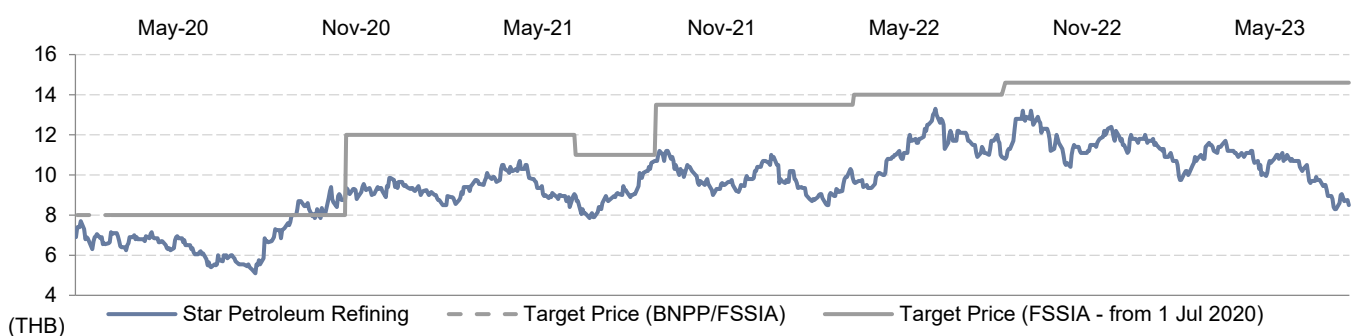
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
08-Jun-2020	BUY	62.00	30-Jul-2021	BUY	67.00	-	-	-
18-Jan-2021	BUY	74.00	29-Apr-2022	BUY	70.00			

Kwanwaree Apichartsataporn started covering this stock from 01-Jun-2023

Price and TP are in local currency

Source: FSSIA estimates

Star Petroleum Refining (SPRC TB)



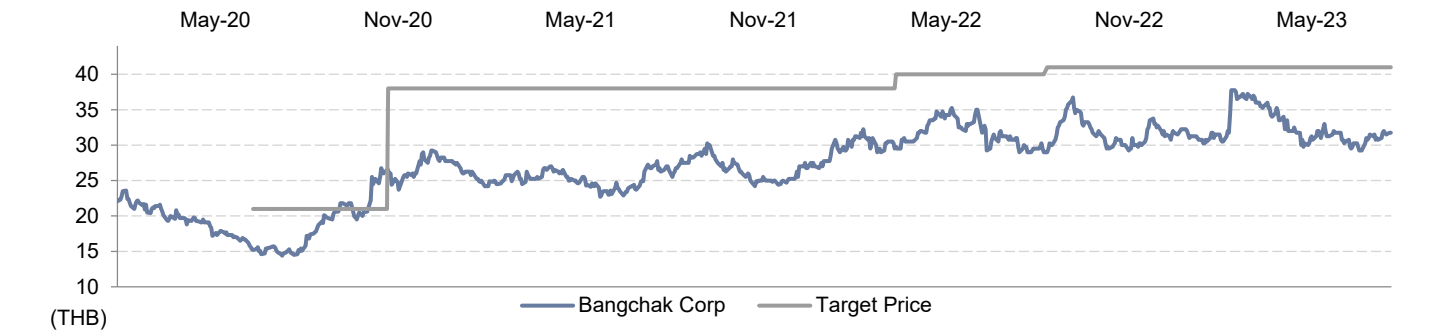
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
02-Jun-2020	BUY	8.00	03-Aug-2021	BUY	11.00	30-Mar-2022	BUY	14.00
18-Jan-2021	BUY	12.00	11-Oct-2021	BUY	13.50	05-Aug-2022	BUY	14.60

Kwanwaree Apichartsataporn started covering this stock from 01-Jun-2023

Price and TP are in local currency

Source: FSSIA estimates

Bangchak Corp (BCP TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
24-Sep-2020	BUY	21.00	30-Mar-2022	BUY	40.00	-	-	-
18-Jan-2021	BUY	38.00	05-Aug-2022	BUY	41.00	-	-	-

Kwanwaree Apichartsataporn started covering this stock from 01-Jun-2023

Price and TP are in local currency

Source: FSSIA estimates

Company	Ticker	Price	Rating	Valuation & Risks
Thai Oil	TOP TB	THB 43.25	BUY	Downside risks to our P/BV-based TP are 1) a sharp fall in oil prices; 2) weaker demand for refined oil products; 3) GRM volatility; and 4) unplanned refinery shutdowns.
Star Petroleum Refining	SPRC TB	THB 8.25	BUY	Downside risks to our P/BV-based TP are weak demand for refined oil products, a lower crude oil price and GRM, the delay of the SPM reopening, and lawsuit risk related to the oil spill off Rayong in 2022
Bangchak Corp	BCP TB	THB 32.00	BUY	The downside risks to our SoTP-based TP include: 1) lower-than-expected demand of petroleum products; 2) higher crude premiums; and 3) unplanned shutdowns of refinery plants.

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

FSSIA may incorporate the recommendations and target prices of companies currently covered by FSS Research into equity research reports, denoted by an 'FSS' before the recommendation. FSS Research is part of Finansia Syrus Securities Public Company Limited, which is the parent company of FSSIA.

All share prices are as at market close on 31-May-2023 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.