

8 OCTOBER 2021

THAILAND / OIL &amp; GAS

# THAI OIL TOP TB

## BUY

UNCHANGED

TARGET PRICE	THB67.00
CLOSE	THB56.50
UP/DOWNSIDE	+18.6%
PRIOR TP	THB67.00
CHANGE IN TP	UNCHANGED
TP vs CONSENSUS	+20.0%

## From bottom to top GRM wave rider

### GRM uptrend finally arrives in 4Q21

We believe TOP is now poised to see a sharp rise in its gross refining margin (GRM) in 4Q21, driven by the higher margins of three key products – gasoline, diesel, and jet. This is thanks to the global demand recovery on higher Covid vaccination rates and the substitutional impact of the gas price spike for diesel and high sulphur fuel oil (HSFO) as the two alternative fuels for the gas used for power plants worldwide.

### The most resilient refiner in the Thai refinery sector

TOP's GRM should increase at a much higher rate than its local refinery peers, in our view, as TOP's market GRM has underperformed local peers' GRMs since 2018 due to its lower operational flexibility to cut the then-loss-making jet fuel and from paying a higher-than-peer crude premium for Murban crude. However, starting in 4Q21, we anticipate that TOP's GRM should rebound at the highest degree vs its peers, as TOP's initial market GRM base is much lower than its peers' market GRMs. We expect TOP's market GRM in 4Q21 onward to rise 4-10x from USD0.4/bbl in 2Q21, far above the market GRM improvements we expect to see for ESSO, SPRC (3-5x for the same period) and BCP (2-3x).

### Expect a 3Q21 net profit of THB1.9b

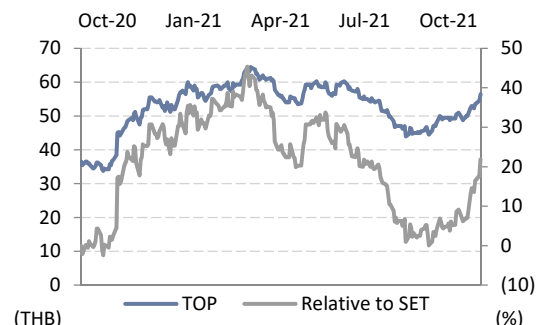
We project TOP to post a stronger q-q net profit of THB1.9b, up 163% q-q but down 24% y-y in 3Q21. We expect its core net profit to rise to THB526m in 3Q21, up from a net loss of THB2b in 2Q21 and a net profit of THB160m in 3Q20. Key expectations are 1) a q-q higher market GRM to USD1.5/bbl, up from USD0.4/bbl in 2Q21, driven by the higher q-q product margins; 2) a q-q higher crude premium by USD0.9-1.2/bbl for Arab Light and Murban crudes; 3) a q-q lower aromatics GIM due to lower paraxylene and benzene-naphtha margins; 4) a q-q lower lube GIM from USD2.4/bbl in 2Q21 to USD2.0/bbl in 3Q21 due to the q-q lower lube-HSFO margin; and 5) a THB0.1b gain from the divestment of its 2.5% stake in the newly listed Ubon Ethanol (UBE TB, not rated).

### Maintain BUY

We maintain BUY and our target price of THB67, based on 8.4x 2021E EV/EBITDA. We believe TOP is the most resilient refiner in the Thai refinery sector, given its low base market GRM and the higher upside potential from improvements in product margins and its utilisation rate. TOP is one of the most efficient refiners in Thailand with its historical average utilisation rate of over 110% during the pre-pandemic period.

## KEY STOCK DATA

YE Dec (THB m)	2020	2021E	2022E	2023E
Revenue	242,840	299,968	298,113	298,521
Net profit	(3,301)	12,698	11,766	12,023
EPS (THB)	(1.62)	6.22	5.77	5.89
vs Consensus (%)	-	65.2	57.3	41.2
EBITDA	(7,556)	32,590	32,582	33,497
Core net profit	(3,301)	12,698	11,766	12,023
Core EPS (THB)	(1.62)	6.22	5.77	5.89
Chg. In EPS est. (%)	nm	-	-	-
EPS growth (%)	nm	nm	(7.3)	2.2
Core P/E (x)	(34.9)	9.1	9.8	9.6
Dividend yield (%)	3.5	5.0	4.6	4.7
EV/EBITDA (x)	(27.5)	7.7	8.2	8.4
Price/book (x)	1.0	0.9	0.9	0.8
Net debt/Equity (%)	73.6	103.5	110.3	115.8
ROE (%)	(2.8)	10.6	9.3	9.0



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	14.1	3.7	58.0
Relative to country (%)	15.3	0.9	23.3
Mkt cap (USD m)	3,406		
3m avg. daily turnover (USD m)	23.5		
Free float (%)	45		
Major shareholder	PTT plc. (49%)		
12m high/low (THB)	66.00/32.75		
Issued shares (m)	2,040.03		

Sources: Bloomberg consensus; FSSIA estimates



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### Investment thesis

Since IMO 2020 regulations came into force mandating the use of low sulphur fuel oil (LSFO) by the global shipping industry, we think TOP has stood out as one of the potential refinery winners in Asia to capture the projected widening diesel-fuel oil spreads. TOP has sustained its earnings improvement since 2009, thanks to its well-diversified earnings portfolio. We expect 40-50% of its 2021-22 earnings to be derived from its non-refinery businesses, including aromatics (20%), lube (10%), power (10%) and marine transportation (3%). We believe TOP's Clean Fuel Project (CFP) will allow it to employ its capital more efficiently and position itself to benefit from the projected USD2-4/bbl higher market gross refining margin (GRM) from the widening diesel-Dubai spread. This is because TOP intends to convert all of its loss-making fuel oil capacity to produce diesel post-completion and start-up of CFP in 2024.

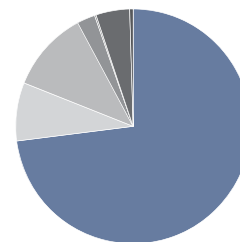
### Company profile

TOP operates Thailand's largest single-site refinery, which is one of the most complex refineries in the Asia Pacific region with a nameplate capacity of 220,000 bopd. It also undertakes power generation, petrochemical production and oil and petrochemical product transportation.

[www.thaioilgroup.com](http://www.thaioilgroup.com)

### Principal activities (revenue, 2020)

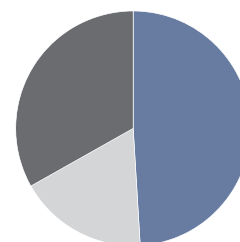
- Oil refinery - 73.0 %
- Lubed base oil refinery - 8.0 %
- Petrochemical - 11.1 %
- Power generation - 2.5 %
- Marine transportation services - 0.2 %



Source: Thai Oil

### Major shareholders

- PTT plc. - 49.0 %
- Thai NVDR - 17.8 %
- Others - 33.2 %



Source: Thai Oil

### Catalysts

A key potential catalyst for TOP would be a higher-than-expected recovery in market GRM due to stronger-than-expected diesel cracks and a lower-than-expected crude premium.

### Risks to our call

Downside risks to our EV/EBITDA-based TP are a sharp rise in oil price and weak demand for refined oil products.

### Event calendar

Date	Event
Nov 2021	3Q21 results announcement

### Key assumptions

	2021E (USD/bbl)	2022E (USD/bbl)	2023E (USD/bbl)
Dubai oil price	65.0	60.0	60.0
Refining margin	4.8	5.5	5.5
Crude premium	3.0	3.0	2.0
Diesel-Dubai margin	7.0	10.0	15.0
Jet-Dubai margin	5.0	10.0	15.0
Gasoline-Dubai margin	12.0	15.0	15.0
HSFO-Dubai margin	(3.0)	(5.0)	(5.0)

Source: FSSIA estimates

### Earnings sensitivity

- For every 1% increase in average Dubai oil price, we project 2021 earnings to rise by 2.4%, and vice versa, all else being equal.
- For every 1% increase in market GRM, we estimate 2021 earnings will rise by 2%, and vice versa, all else being equal.
- Stability in crude oil price, rising diesel cracks and a low crude premium are key for earnings growth.

Source: FSSIA estimates

## From bottom to top GRM wave rider

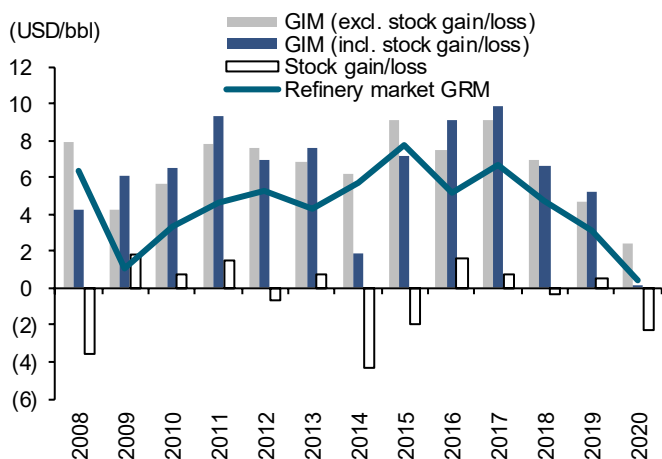
We believe TOP is now poised to see a sharp rise in its GRM in 4Q21, driven by the higher margins of three key products – gasoline, diesel, and jet. This is thanks to the global demand recovery on higher Covid vaccination rates and the substitutional impact of the gas price spike for diesel and HSFO as the two alternative fuels for the gas used for power plants worldwide.

Since 1Q20, TOP's GRM has remained at depressed levels, hovering in the range of USD0.3/bbl to USD1.1/bbl, much lower than local peers, due to the higher crude premium paid and the net loss generated from TOP's unavoidable production of jet fuel despite its negative margin over crude oil price.

Thanks to TOP's well-diversified business portfolio, its gross integrated margin (GIM), which includes its GRM and the GIM from its aromatics and lube businesses, has stayed above TOP's overall accounting cost of USD4-5/bbl, resulting in TOP's net operating profits in 1Q20-2Q21.

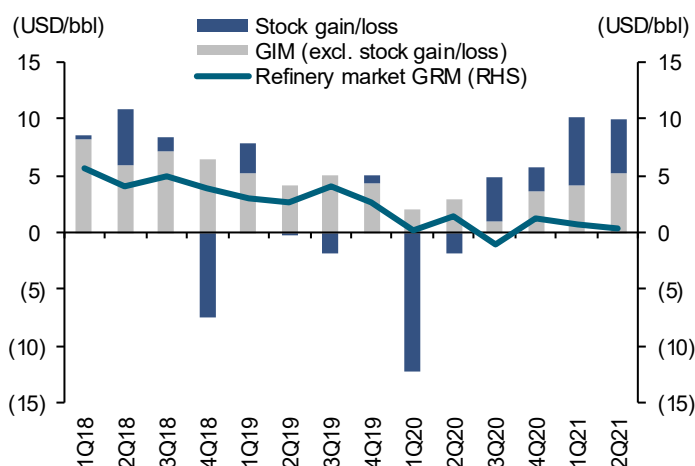
While we project TOP's accounting GIM to decline from USD10/bbl in 2Q21 down to USD8.9/bbl in 3Q21, due mainly to a q-q lower inventory gain, we expect its GIM to rebound to over USD11/bbl in 4Q21, likely continuing into 2022, driven by a sharp rise in its GRM and inventory gains which should more than offset the expected y-y weaker GIMs from aromatics and lube.

**Exhibit 1: Annual accounting and market GIM, GRM, and stock gain/loss**



Source: TOP

**Exhibit 2: Quarterly market GIM, GRM, and stock gain/loss**

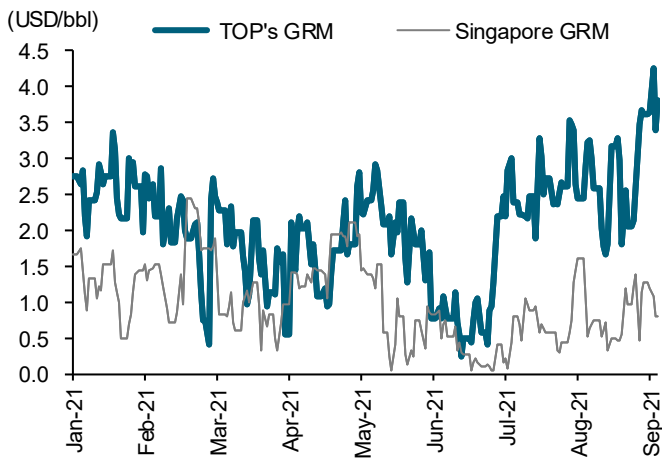


Source: TOP

### Market GRM to rebound by 4x q-q in 3Q21 and exceed USD4/bbl in 4Q21

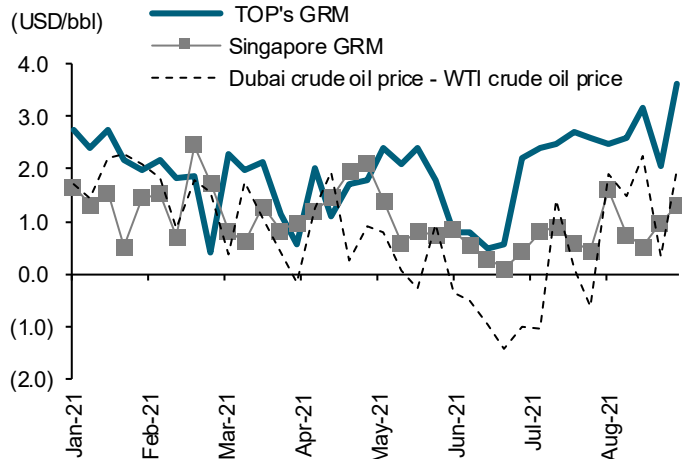
As the margins of diesel, jet fuel, and gasoline over crude have rebounded markedly in Sep-Oct 2021 due to the higher demand and the gradual decline in crude premiums, TOP's estimated market GRM based on Bloomberg consensus' calculation has risen from USD0.5/bbl in June 2021 to over USD3.5/bbl in Oct 2021.

Exhibit 3: TOP's GRM vs Singapore GRM (daily)



Source: Bloomberg

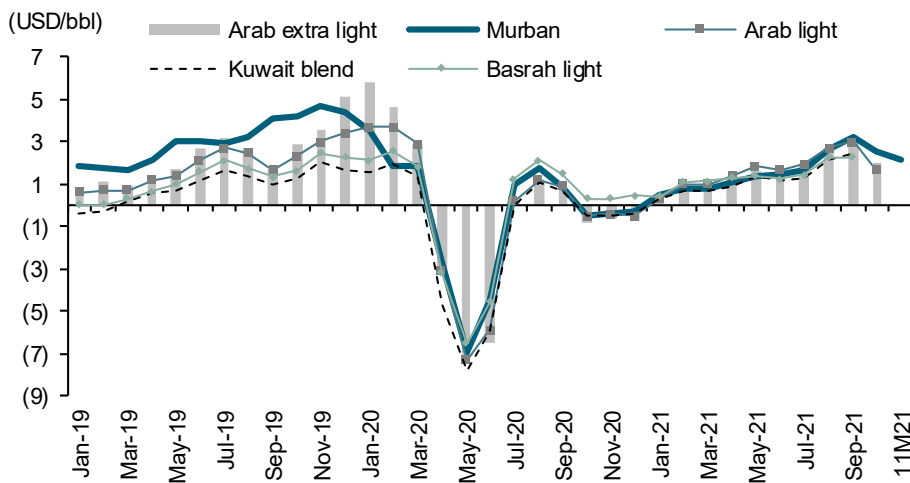
Exhibit 4: TOP's GRM vs Singapore GRM (weekly)



Source: Bloomberg

However, Bloomberg's GRM projection for TOP had excluded the crude premium impact, leading to the divergence of Bloomberg's estimated GRM and TOP's actual GRM in 1H21 in the range of a USD1.5-2.0/bbl discrepancy. If we incorporate the impact of the crude premiums, mainly for Murban, Arab Light, and Arab Extra Light crudes – consumed by TOP at over 50% of total crude consumption – we still expect that TOP's GRM will rise substantially in 4Q21 onward to over USD4-5/bbl.

Exhibit 5: Crude premiums of Middle East producers

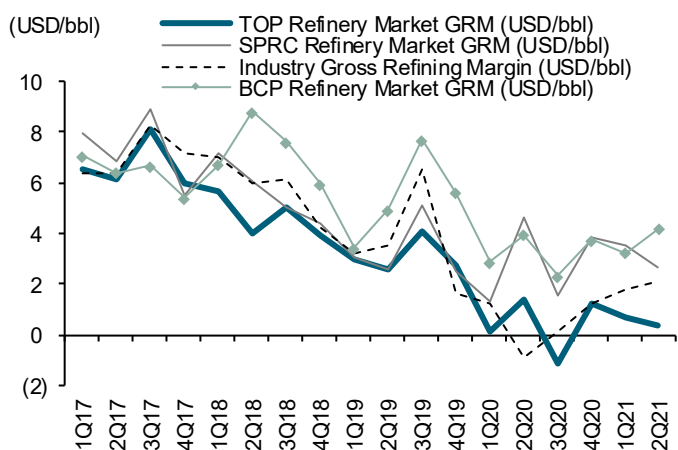


Source: TOP

**TOP's GRM vs peers'**. We believe TOP's GRM will increase at a much higher rate than its local refinery peers, as TOP's market GRM has underperformed local peers' GRMs since 2018 when the ban on HSFO for the global shipping industry had been announced by the International Maritime Organisation (IMO) and was eventually enforced globally on 1 Jan 2020. In 2020-2H21, TOP's market GRM has continued to underperform its peers' due to its lower operational flexibility to cut the then-loss-making jet fuel and from paying a higher-than-peer crude premium for Murban crude.

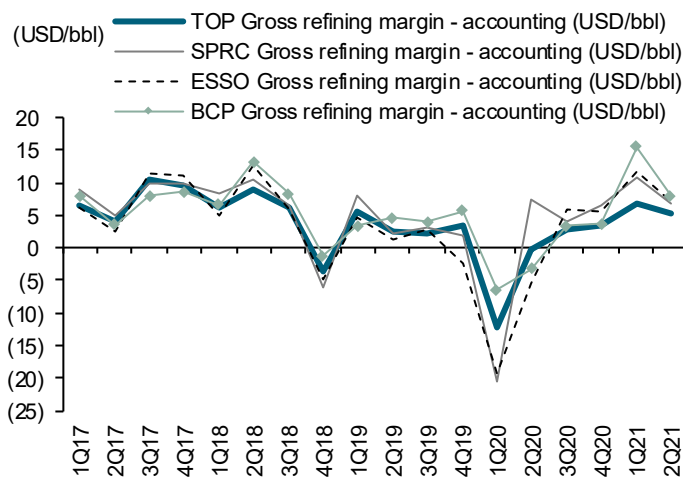
However, starting in 4Q21, we anticipate that TOP's GRM should rebound at the highest degree vs its peers, as TOP's initial market GRM base is much lower than its peers' market GRMs. We expect TOP's market GRM in 4Q21 onward to rise 4-10x from USD0.4/bbl in 2Q21, far above the market GRM improvements we expect to see for Esso (Thailand) (ESSO TB, HOLD, TP THB8.9), Star Petroleum Refining (SPRC TB, BUY, TP THB11) (3-5x for the same period) and Bangchak Corporation (BCP TB, BUY, TP THB38) (2-3x).

**Exhibit 6: TOP, SPRC, BCP – market GRM**



Source: Company data

**Exhibit 7: TOP, SPRC, ESSO, BCP – gross refining margin**

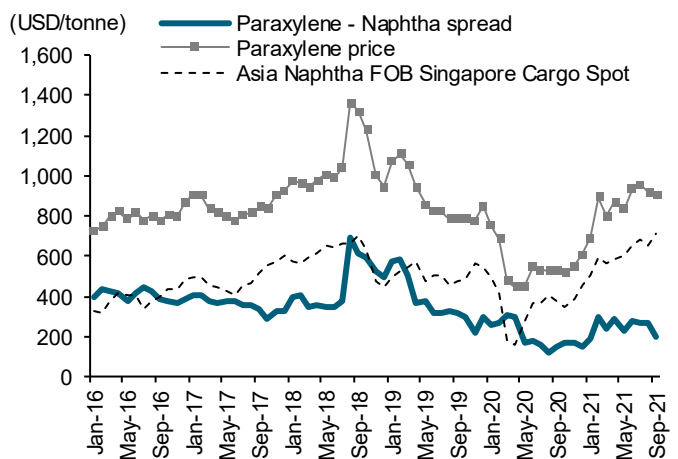


Source: Company data

**Aromatics margin to weaken q-q in 3Q21**

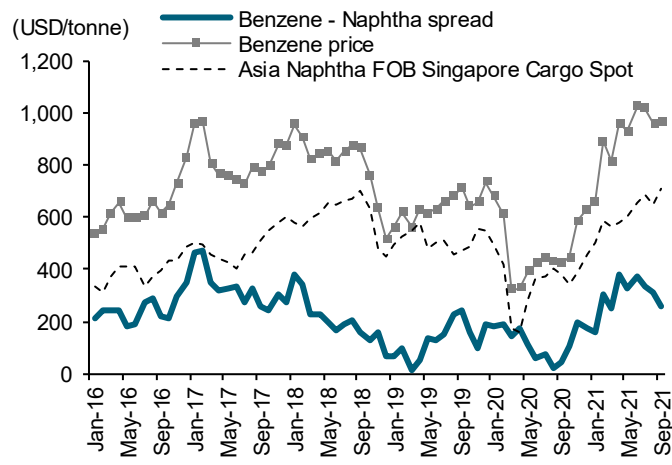
We project TOP's aromatics product-to-feed (P2F) to decline q-q from USD231/t in 2Q21 to USD200/t in 3Q21 due to the lower q-q margins of paraxylene-naphtha and benzene-naphtha. However, we project the benzene-naphtha margin to remain high at above USD200/t in 4Q21 thanks to the sustained strong demand for automotive parts and household appliance products that we expect to see after the global economic reopening.

**Exhibit 8: Naphtha spread and price – paraxylene**



Source: Bloomberg

**Exhibit 9: Naphtha spread and price – benzene**



Source: Bloomberg

### 3Q21 results estimates

We project TOP to post a stronger q-q net profit of THB1.9b, up 163% q-q but down 24% y-y in 3Q21. We expect its core net profit to rise to THB526m in 3Q21, up from a net loss of THB2b in 2Q21 and a net profit of THB160m in 3Q20. Key expectations are:

- A q-q higher market GRM to USD1.5/bbl, up from USD0.4/bbl in 2Q21, driven by the higher q-q product margins over crude price, including gasoline, diesel, and jet fuel;
- A q-q higher crude premium by USD0.9-1.2/bbl for Arab Light and Murban crudes;
- A q-q lower aromatics GIM due to lower paraxylene and benzene-naphtha margins;
- A q-q lower lube GIM from USD2.4/bbl in 2Q21 to USD2.0/bbl in 3Q21 due to the q-q lower lube-HSFO margin;
- A THB0.1b gain from the divestment of its 2.5% stake in the newly listed Ubon Ethanol (UBE TB, not rated)

### Exhibit 10: 3Q21E/9M21E summary

	3Q20	2Q21	----- 3Q21E-----			9M20	9M21E	Change
	(THB m)	(THB m)	(THB m)	(q-q%)	(y-y%)	(THB m)	(THB m)	(y-y%)
<b>Revenue</b>	<b>50,523</b>	<b>58,422</b>	<b>84,231</b>	<b>44.2</b>	<b>66.7</b>	<b>186,775</b>	<b>239,325</b>	<b>28.1</b>
Operating costs	(50,030)	(54,327)	(75,943)	39.8	51.8	(191,716)	(210,878)	10.0
<b>EBITDA</b>	<b>2,881</b>	<b>3,819</b>	<b>6,325</b>	<b>65.6</b>	<b>119.5</b>	<b>(5,548)</b>	<b>21,600</b>	<b>nm</b>
<i>EBITDA margin (%)</i>	5.7	6.5	7.5	nm	nm	(3.0)	9.0	nm
Depn & amort.	(2,109)	(2,218)	(1,863)	(16.0)	(11.6)	(6,455)	(5,497)	(14.8)
EBIT	4,141	1,994	4,462	123.7	7.8	(10,010)	12,642	nm
Interest expense	(1,029)	(1,172)	(908)	(22.5)	(11.8)	(3,306)	(2,611)	(21.0)
Interest & invt inc	315	214	236	10.1	(25.1)	928	590	(36.5)
Associates' contrib	699	846	541	(36.1)	(22.6)	2,129	1,549	(27.3)
Exceptionals	2,388	(276)	(1,963)	nm	nm	(607)	(6,847)	1,027.2
<b>Pretax profit</b>	<b>6,514</b>	<b>1,608</b>	<b>2,368</b>	<b>47.3</b>	<b>(63.6)</b>	<b>(10,866)</b>	<b>5,323</b>	<b>nm</b>
Tax	(495)	(33)	(398)	1,120.0	(19.6)	3,031	(1,144)	nm
<i>Tax rate (%)</i>	7.6	2.0	16.8	nm	nm	27.9	21.5	nm
Minority interests	(136)	(75)	(92)	22.7	(32.5)	(274)	(274)	0.1
<b>Net profit</b>	<b>2,480</b>	<b>715</b>	<b>1,878</b>	<b>162.6</b>	<b>(24.3)</b>	<b>(10,559)</b>	<b>7,427</b>	<b>nm</b>
Non-recurring	2,320	2,687	1,352	(49.7)	(41.7)	(8,402)	4,254	nm
<b>Core profit</b>	<b>160</b>	<b>(1,972)</b>	<b>526</b>	<b>nm</b>	<b>228.8</b>	<b>(2,157)</b>	<b>3,173</b>	<b>nm</b>
EPS (THB)	1.22	0.35	0.92	162.6	(24.3)	(5.18)	3.64	nm
Core EPS (THB)	0.08	(0.97)	0.26	nm	228.8	(1.06)	1.56	nm

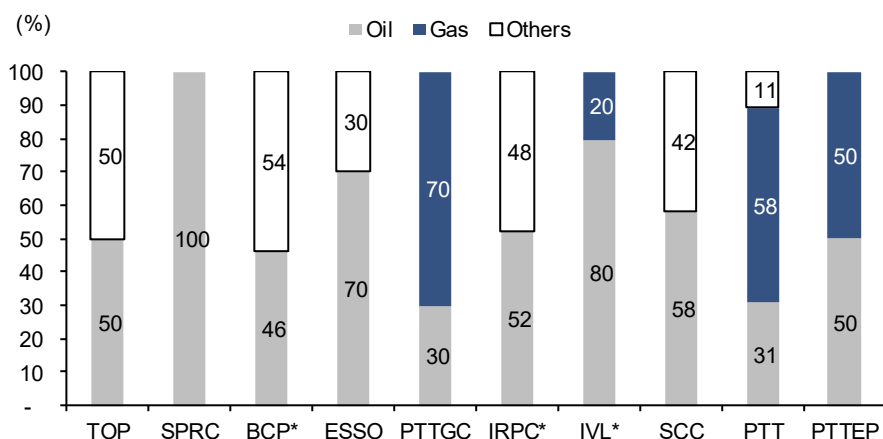
Sources: TOP; FSSIA estimates

### The most resilient refiner with an attractive valuation

We believe TOP is the most resilient refiner in the Thai refinery sector, given its low base market GRM and the higher upside potential from improvements in product margins and its utilisation rate. TOP is one of the most efficient refiners in Thailand with its historical average utilisation rate of over 110% during the pre-pandemic period.

Meanwhile, over 50% of TOP's net profit is generated from its refinery business, second only to SPRC as the only pure refinery play in Thailand without any business diversification. Other refinery companies' earnings are generated from downstream oil stations (ESSO, BCP), power (BCP, IRPC (IRPC TB, BUY, TP THB5), PTT Global Chemical (PTTGC TB, BUY, TP THB75)), and petrochemical products (PTTGC, IRPC, ESSO).

Exhibit 11: Net profit breakdown by oil, gas, and others as of 2Q21



\*EBITDA breakdown for BCP, IRPC, and IML

Sources: Companies; FSSIA estimates

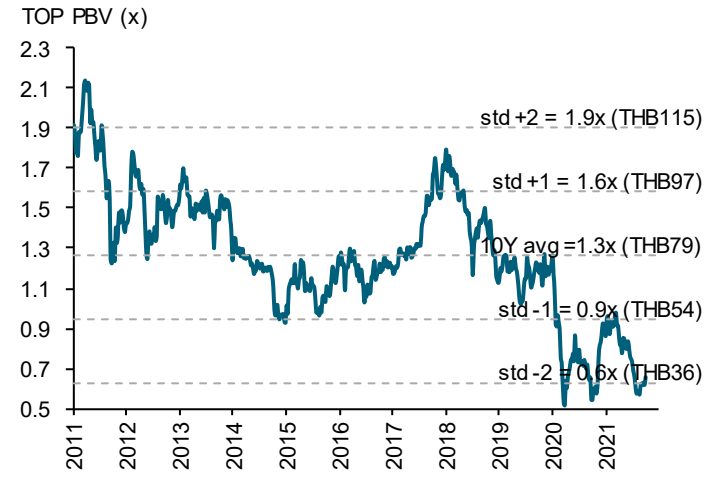
Exhibit 12: Peers comparison

Company	BBG	Rec	-- Share price --		Up side (%)	Market Cap (USD m)	21E-23E EPS CAGR (%)	----- PE -----		----- ROE -----		---- PBV ----		- EV/EBITDA -	
			Current (LCY)	Target (LCY)				21E (x)	22E (x)	21E (%)	22E (%)	21E (x)	22E (x)	21E (x)	22E (x)
<b>THAILAND</b>															
Thai Oil	TOP TB	BUY	56.50	67.00	19	3,406	nm	9.1	9.8	10.6	9.3	0.9	0.9	7.7	8.2
Star Petro	SPRC TB	BUY	10.40	11.00	6	1,332	43.7	9.3	7.7	17.5	19.4	1.5	1.4	7.3	4.5
Bangchak	BCP TB	BUY	28.25	38.00	35	1,133	nm	14.8	6.8	5.6	11.5	0.8	0.8	9.7	7.4
Esso Thailand	ESSO TB	HOLD	8.20	8.90	9	839	67.8	6.4	5.6	26.8	24.5	1.5	1.2	6.1	5.0
Ptt Global Cheml	PTTGC TB	BUY	64.50	75.00	16	8,594	nm	9.0	11.5	11.2	8.7	1.0	1.0	10.9	10.2
Irpc	IRPC TB	BUY	4.44	5.00	13	2,681	nm	8.3	7.4	14.0	14.8	1.1	1.1	6.1	5.5
Tipco Asphalt	TASCO TB	BUY	18.30	22.50	23	853	(5.7)	12.9	9.5	14.8	19.1	1.9	1.7	10.0	7.1
<b>Thailand avg</b>						<b>18,838</b>	<b>23.4</b>	<b>9.3</b>	<b>9.7</b>	<b>12.5</b>	<b>11.8</b>	<b>1.1</b>	<b>1.1</b>	<b>9.1</b>	<b>8.2</b>
<b>INDIA</b>															
Bharat Petro	BPCL IN	NA	447.20	NA	NA	13,104	34.4	9.7	11.1	24.7	16.2	2.1	1.8	7.8	8.8
Hindustan Petro	HPCL IN	NA	311.60	NA	NA	6,131	34.6	6.1	7.0	24.1	16.9	1.4	1.2	6.0	7.5
Indian Oil	IOCL IN	NA	130.10	NA	NA	16,719	nm	8.2	7.4	14.6	13.9	1.2	1.0	7.2	6.5
<b>India avg</b>						<b>35,954</b>	<b>34.5</b>	<b>8.4</b>	<b>8.7</b>	<b>19.9</b>	<b>15.3</b>	<b>1.5</b>	<b>1.3</b>	<b>7.2</b>	<b>7.5</b>
<b>TAIWAN</b>															
Formosa Petro	6505 TT	NA	102.00	NA	NA	34,746	88.9	19.3	21.0	15.6	13.3	2.8	2.7	11.8	12.9
<b>Taiwan avg</b>						<b>34,746</b>	<b>88.9</b>	<b>19.3</b>	<b>21.0</b>	<b>15.6</b>	<b>13.3</b>	<b>2.8</b>	<b>2.7</b>	<b>11.8</b>	<b>12.9</b>
<b>SOUTH KOREA</b>															
Sk Innovation	096770 KS	NA	252,000	NA	NA	19,577	nm	36.3	18.5	4.5	7.7	1.4	1.4	9.8	9.0
Gs Holdings	078930 KS	NA	44,800	NA	NA	3,497	409.8	4.0	4.6	12.1	9.5	0.5	0.4	7.7	7.7
S-Oil	010950 KS	NA	108,000	NA	NA	10,215	nm	9.0	10.0	21.9	17.7	1.8	1.6	6.2	6.8
<b>South Korea avg</b>						<b>33,290</b>	<b>409.8</b>	<b>24.6</b>	<b>14.4</b>	<b>10.6</b>	<b>11.0</b>	<b>1.4</b>	<b>1.3</b>	<b>8.5</b>	<b>8.2</b>
<b>Refinery under coverage</b>						<b>18,838</b>	<b>23.4</b>	<b>9.3</b>	<b>9.7</b>	<b>12.5</b>	<b>11.8</b>	<b>1.1</b>	<b>1.1</b>	<b>9.1</b>	<b>8.2</b>
<b>Average (all)</b>						<b>122,828</b>	<b>88.68</b>	<b>16.00</b>	<b>13.88</b>	<b>15.03</b>	<b>13.00</b>	<b>1.80</b>	<b>1.69</b>	<b>9.12</b>	<b>9.32</b>

Share prices as of 6 Oct 2021

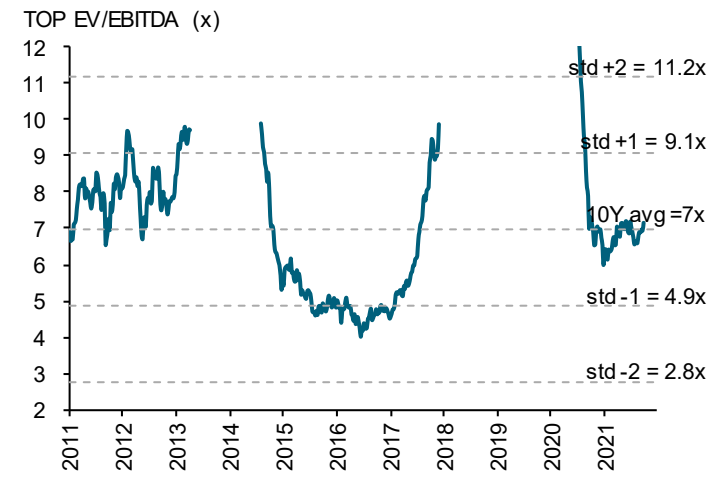
Sources: FSSIA estimates

**Exhibit 13: Prospective P/BV band**



Sources: Bloomberg; TOP

**Exhibit 14: Prospective EV/EBITDA band**



Sources: Bloomberg; TOP



## Financial Statements

Thai Oil

Profit and Loss (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Revenue	361,768	242,840	299,968	298,113	298,521
Cost of goods sold	(348,029)	(247,746)	(264,104)	(262,277)	(261,766)
<b>Gross profit</b>	<b>13,740</b>	<b>(4,906)</b>	<b>35,864</b>	<b>35,836</b>	<b>36,755</b>
Other operating income	-	-	-	-	-
Operating costs	(2,546)	(2,650)	(3,274)	(3,254)	(3,258)
<b>Operating EBITDA</b>	<b>11,193</b>	<b>(7,556)</b>	<b>32,590</b>	<b>32,582</b>	<b>33,497</b>
Depreciation	(7,085)	(7,554)	(15,690)	(17,086)	(17,925)
Goodwill amortisation	0	0	0	0	0
<b>Operating EBIT</b>	<b>4,109</b>	<b>(15,110)</b>	<b>16,900</b>	<b>15,496</b>	<b>15,571</b>
Net financing costs	2,372	9,016	(3,198)	(3,093)	(2,989)
Associates	1,276	2,566	2,694	2,829	2,970
Recurring non-operating income	1,276	2,566	2,694	2,829	2,970
Non-recurring items	0	0	0	0	0
<b>Profit before tax</b>	<b>7,757</b>	<b>(3,529)</b>	<b>16,396</b>	<b>15,232</b>	<b>15,553</b>
Tax	(1,240)	647	(3,279)	(3,046)	(3,111)
<b>Profit after tax</b>	<b>6,516</b>	<b>(2,882)</b>	<b>13,117</b>	<b>12,185</b>	<b>12,442</b>
Minority interests	(240)	(419)	(419)	(419)	(419)
Preferred dividends	0	0	0	0	0
Other items	-	-	-	-	-
<b>Reported net profit</b>	<b>6,277</b>	<b>(3,301)</b>	<b>12,698</b>	<b>11,766</b>	<b>12,023</b>
<b>Non-recurring items &amp; goodwill (net)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Recurring net profit</b>	<b>6,277</b>	<b>(3,301)</b>	<b>12,698</b>	<b>11,766</b>	<b>12,023</b>
<b>Per share (THB)</b>					
Recurring EPS *	3.08	(1.62)	6.22	5.77	5.89
Reported EPS	3.08	(1.62)	6.22	5.77	5.89
DPS	1.50	2.00	2.80	2.60	2.65
Diluted shares (used to calculate per share data)	2,040	2,040	2,040	2,040	2,040
<b>Growth</b>					
Revenue (%)	(7.1)	(32.9)	23.5	(0.6)	0.1
Operating EBITDA (%)	(45.9)	nm	nm	0.0	2.8
Operating EBIT (%)	(69.4)	nm	nm	(8.3)	0.5
Recurring EPS (%)	(38.2)	nm	nm	(7.3)	2.2
Reported EPS (%)	(38.2)	nm	nm	(7.3)	2.2
<b>Operating performance</b>					
Gross margin inc. depreciation (%)	1.8	(5.1)	6.7	6.3	6.3
Gross margin of key business (%)	1.8	(5.1)	6.7	6.3	6.3
Operating EBITDA margin (%)	3.1	(3.1)	10.9	10.9	11.2
Operating EBIT margin (%)	1.1	(6.2)	5.6	5.2	5.2
Net margin (%)	1.7	(1.4)	4.2	3.9	4.0
Effective tax rate (%)	16.0	18.3	20.0	20.0	20.0
Dividend payout on recurring profit (%)	48.8	(123.6)	45.0	45.0	45.0
Interest cover (X)	(2.3)	1.4	6.1	5.9	6.2
Inventory days	31.0	38.9	39.8	48.7	48.7
Debtor days	23.6	26.4	20.5	25.6	25.5
Creditor days	26.6	25.4	24.2	35.4	35.4
Operating ROIC (%)	2.2	(7.9)	6.9	5.9	6.0
ROIC (%)	2.4	(5.1)	5.7	4.5	4.2
ROE (%)	5.2	(2.8)	10.6	9.3	9.0
ROA (%)	1.6	(3.5)	4.5	3.5	3.2
* Pre-exceptional, pre-goodwill and fully diluted					
<b>Revenue by Division (THB m)</b>					
Oil refinery	298,325	177,280	234,408	232,553	232,961
Lubed base oil refinery	18,096	19,501	19,501	19,501	19,501
Petrochemical	28,390	27,070	27,911	27,670	27,670
Power generation	5,519	6,071	5,230	5,471	5,471

Sources: Thai Oil; FSSIA estimates

## Financial Statements

### Thai Oil

Cash Flow (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Recurring net profit	6,277	(3,301)	12,698	11,766	12,023
Depreciation	7,085	7,554	15,690	17,086	17,925
Associates & minorities	-	-	-	-	-
Other non-cash items	-	-	-	-	-
Change in working capital	(361)	2,096	(4,953)	189	(42)
<b>Cash flow from operations</b>	<b>13,000</b>	<b>6,349</b>	<b>23,435</b>	<b>29,042</b>	<b>29,907</b>
Capex - maintenance	-	-	-	-	-
Capex - new investment	(27,467)	0	(37,099)	(15,944)	(15,942)
Net acquisitions & disposals	-	-	-	-	-
Other investments (net)	49,798	(4,375)	(35,623)	(35,623)	(35,623)
<b>Cash flow from investing</b>	<b>22,331</b>	<b>(4,375)</b>	<b>(72,722)</b>	<b>(51,567)</b>	<b>(51,565)</b>
Dividends paid	(12,750)	(3,060)	(5,714)	(5,295)	(5,410)
Equity finance	0	0	0	0	0
Debt finance	(2,300)	(2,363)	24,568	58,404	18,404
Other financing cash flows	20,533	(18,161)	13,113	13,248	13,389
<b>Cash flow from financing</b>	<b>5,482</b>	<b>(23,584)</b>	<b>31,967</b>	<b>66,358</b>	<b>26,383</b>
Non-recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
<b>Net other adjustments</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Movement in cash</b>	<b>40,813</b>	<b>(21,610)</b>	<b>(17,320)</b>	<b>43,832</b>	<b>4,725</b>
Free cash flow to firm (FCFF)	38,554.74	6,265.67	(45,088.98)	(18,422.11)	(17,649.30)
Free cash flow to equity (FCFE)	53,563.05	(18,550.29)	(11,605.99)	49,127.07	10,135.29
<b>Per share (THB)</b>					
FCFF per share	18.90	3.07	(22.10)	(9.03)	(8.65)
FCFE per share	26.26	(9.09)	(5.69)	24.08	4.97
Recurring cash flow per share	6.55	2.08	13.92	14.14	14.68
<b>Balance Sheet (THB m) Year Ending Dec</b>					
Tangible fixed assets (gross)	233,349	279,568	316,668	332,612	348,554
Less: Accumulated depreciation	(126,789)	(134,343)	(150,034)	(167,120)	(185,045)
<b>Tangible fixed assets (net)</b>	<b>106,559</b>	<b>145,225</b>	<b>166,634</b>	<b>165,492</b>	<b>163,508</b>
<b>Intangible fixed assets (net)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Long-term financial assets	-	-	-	-	-
Invest. in associates & subsidiaries	32,442	24,521	27,214	30,043	33,013
Cash & equivalents	74,854	53,244	35,924	79,756	84,482
A/C receivable	22,466	12,702	20,998	20,868	20,896
Inventories	30,292	22,461	35,099	34,882	34,929
Other current assets	7,064	25,822	25,822	25,822	25,822
<b>Current assets</b>	<b>134,676</b>	<b>114,229</b>	<b>117,843</b>	<b>161,328</b>	<b>166,129</b>
Other assets	9,767	22,213	77,714	98,948	119,898
<b>Total assets</b>	<b>283,445</b>	<b>306,188</b>	<b>389,405</b>	<b>455,810</b>	<b>482,549</b>
Common equity	119,973	116,229	123,213	129,684	136,297
Minorities etc.	3,951	3,889	4,091	4,291	4,491
<b>Total shareholders' equity</b>	<b>123,924</b>	<b>120,118</b>	<b>127,304</b>	<b>133,975</b>	<b>140,788</b>
Long term debt	119,873	135,958	162,121	222,121	242,121
Other long-term liabilities	981	21,491	56,926	56,926	56,926
<b>Long-term liabilities</b>	<b>120,854</b>	<b>157,449</b>	<b>219,047</b>	<b>279,047</b>	<b>299,047</b>
A/C payable	25,015	9,517	25,497	25,340	25,374
Short term debt	2,912	5,665	5,556	5,447	5,339
Other current liabilities	10,740	13,438	12,000	12,001	12,001
<b>Current liabilities</b>	<b>38,667</b>	<b>28,620</b>	<b>43,054</b>	<b>42,788</b>	<b>42,714</b>
<b>Total liabilities and shareholders' equity</b>	<b>283,445</b>	<b>306,188</b>	<b>389,405</b>	<b>455,810</b>	<b>482,549</b>
Net working capital	24,067	38,030	44,421	44,231	44,273
Invested capital	172,836	229,989	315,983	338,714	360,692
* Includes convertibles and preferred stock which is being treated as debt					
<b>Per share (THB)</b>					
Book value per share	58.81	56.97	60.40	63.57	66.81
Tangible book value per share	58.81	56.97	60.40	63.57	66.81
<b>Financial strength</b>					
Net debt/equity (%)	38.7	73.6	103.5	110.3	115.8
Net debt/total assets (%)	16.9	28.9	33.8	32.4	33.8
Current ratio (x)	3.5	4.0	2.7	3.8	3.9
CF interest cover (x)	(33.2)	3.1	9.0	22.0	9.7
<b>Valuation</b>					
<b>Recurring P/E (x) *</b>	<b>18.4</b>	<b>(34.9)</b>	<b>9.1</b>	<b>9.8</b>	<b>9.6</b>
<b>Recurring P/E @ target price (x) *</b>	<b>21.8</b>	<b>(41.4)</b>	<b>10.8</b>	<b>11.6</b>	<b>11.4</b>
Reported P/E (x)	18.4	(34.9)	9.1	9.8	9.6
Dividend yield (%)	2.7	3.5	5.0	4.6	4.7
Price/book (x)	1.0	1.0	0.9	0.9	0.8
Price/tangible book (x)	1.0	1.0	0.9	0.9	0.8
EV/EBITDA (x) **	14.9	(27.5)	7.7	8.2	8.4
EV/EBITDA @ target price (x) **	16.8	(30.3)	8.4	8.9	9.1
EV/invested capital (x)	1.0	0.9	0.8	0.8	0.8
* Pre-exceptional, pre-goodwill and fully diluted ** EBITDA includes associate income and recurring non-operating income					

Sources: Thai Oil; FSSIA estimates

## Corporate Governance report of Thai listed companies 2020

EXCELLENT LEVEL										
AAV	ADVANC	AF	AIRA	AKP	AKR	ALT	AMA	AMATA	AMATAV	ANAN
AOT	AP	ARIP	ARROW	ASP	BAFS	BANPU	BAY	BCP	BCPG	BDMS
BEC	BEM	BGRIM	BIZ	BKI	BLA	BOL	BPP	BRR	BTS	BWG
CENTEL	CFRESH	CHEWA	CHO	CIMBT	CK	CKP	CM	CNT	COL	COMAN
COTTO	CPALL	CPF	CPI	CPN	CSS	DELTA	DEMCO	DRT	DTAC	DTC
DV8	EA	EASTW	ECF	ECL	EGCO	EPG	ETE	FNS	FPI	FPT
FSMART	GBX	GC	GCAP	GEL	GFPT	GGC	GPSC	GRAMMY	GUNKUL	HANA
HARN	HMPRO	ICC	ICI	III	ILINK	INTUCH	IRPC	IVL	JKN	JSP
JWD	K	KBANK	KCE	KKP	KSL	KTB	KTC	LANNA	LH	LHFG
LIT	LPN	MAKRO	MALEE	MBK	MBKET	MC	MCOT	METCO	MFEC	MINT
MONO	MOONG	MSC	MTC	NCH	NCL	NEP	NKI	NOBLE	NSI	NVD
NYT	OISHI	ORI	OTO	PAP	PCSGH	PDJ	PG	PHOL	PLANB	PLANET
PLAT	PORT	PPS	PR9	PREB	PRG	PRM	PSH	PSL	PTG	PTT
PTTEP	PTTGC	PYLON	Q-CON	QH	QTC	RATCH	RS	S	S & J	SAAM
SABINA	SAMART	SAMTEL	SAT	SC	SCB	SCC	SCCC	SCG	SCN	SDC
SEAFCO	SEAOIL	SE-ED	SELIC	SENA	SIRI	SIS	SITHAI	SMK	SMPC	SNC
SONIC	SORKON	SPALI	SPI	SPRC	SPVI	SSSC	SST	STA	SUSCO	SUTHA
SVI	SYMC	SYNTEC	TACC	TASCO	TCAP	TFMAMA	THANA	THANI	THCOM	THG
THIP	THRE	THREL	TIP	TIPCO	TISCO	TK	TKT	TTB	TMILL	TNDT
TNL	TOA	TOP	TPBI	TQM	TRC	TRC	TSC	TSR	TSTE	TSTH
TTCL	TTW	TU	TVD	TVI	TVO	TWPC	U	UAC	UBIS	UV
VGI	VIH	WACOAL	WAVE	WHA	WHAUP	WICE	WINNER	TRUE		

VERY GOOD LEVEL										
2S	ABM	ACE	ACG	ADB	AEC	AEONTS	AGE	AH	AHC	AIT
ALLA	AMANAHA	AMARIN	APCO	APCS	APURE	AQUA	ASAP	ASEFA	ASIA	ASIAN
ASIMAR	ASK	ASN	ATP30	AUCT	AWC	AYUD	B	BA	BAM	BBL
BFIT	BGC	BJC	BJCHI	BROOK	BTW	CBG	CEN	CGH	CHARAN	CHAYO
CHG	CHOTI	CHOW	CI	CIG	CMC	COLOR	COM7	CPL	CRC	CRD
CSC	CSP	CWT	DCC	DCON	DDD	DOD	DOHOME	EASON	EE	ERW
ESTAR	FE	FLOYD	FN	FORTH	FSS	FTE	FVC	GENCO	GJS	GL
GLAND	GLOBAL	GLOCON	GPI	GULF	GYT	HPT	HTC	ICN	IFS	ILM
IMH	INET	INSURE	IRC	IRCP	IT	ITD	ITEL	J	JAS	JCK
JCKH	JMART	JMT	KBS	KCAR	KGI	KIAT	KOOL	KTIS	KWC	KWM
L&E	LALIN	LDC	LHK	LOXLEY	LPH	LRH	LST	M	MACO	MAJOR
MBAX	MEGA	META	MFC	MGT	MILL	MITSIB	MK	MODERN	MTI	MVP
NETBAY	NEX	NINE	NTV	NWR	OCC	OGC	OSP	PATO	PB	PDG
PDI	PICO	PIMO	PJW	PL	PM	PPP	PRIN	PRINC	PSTC	PT
QLT	RCL	RICHY	RML	RPC	RWI	S11	SALEE	SAMCO	SANKO	SAPPE
SAWAD	SCI	SCP	SE	SEG	SFP	SGF	SHR	SIAM	SINGER	SKE
SKR	SKY	SMIT	SMT	SNP	SPA	SPC	SPCG	SR	SRICHA	SSC
SSF	STANLY	STI	STPI	SUC	SUN	SYNEX	T	TAE	TAKUNI	TBSP
TCC	TCMC	TEAM	TEAMG	TFG	TIGER	TITLE	TKN	TKS	TM	TMC
TMD	TMI	TMT	TNITY	TNP	TNR	TOG	TPA	TPAC	TPCORP	TPOLY
TPS	TRITN	TRT	TRU	TSE	TVT	TWP	UEC	UMI	UOBKH	UP
UPF	UPOIC	UT	UTP	UWC	VL	VNT	VPO	WIJK	WP	XO
YUASA	ZEN	ZIGA	ZMICO							

GOOD LEVEL										
7UP	A	ABICO	AJ	ALL	ALUCON	AMC	APP	ARIN	AS	AU
B52	BC	BCH	BEAUTY	BGT	BH	BIG	BKD	BLAND	BM	BR
BROCK	BSBM	BSM	BTNC	CAZ	CCP	CGD	CITY	CMAN	CMO	CMR
CPT	CPW	CRANE	CSR	D	EKH	EP	ESSO	FMT	GIFT	GREEN
GSC	GTB	HTECH	HUMAN	IHL	INOX	INSET	IP	JTS	JUBILE	KASET
KCM	KKC	KUMWEL	KUN	KWG	KYE	LEE	MATCH	MATI	M-CHAI	MCS
MDX	MJD	MM	MORE	NC	NDR	NER	NFC	NNCL	NPK	NUSA
OCEAN	PAF	PF	PK	PLE	PMTA	POST	PPM	PRAKIT	PRECHA	PRIME
PROUD	PTL	RBF	RCI	RJH	ROJNA	RP	RPH	RSP	SF	SFLEX
SGP	SISB	SKN	SLP	SMART	SOLAR	SPG	SQ	SSP	STARK	STC
SUPER	SVOA	TC	TCCC	THMUI	TIW	TNH	TOPP	TPCH	TIPIP	TPLAS
TTI	TYCN	UKEM	UMS	VCOM	VRANDA	WIN	WORK	WPH		

Description	Score Range
Excellent	90-100
Very Good	80-89
Good	70-79

**Disclaimer:**

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

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

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

Source: Thai Institute of Directors Association (IOD); FSSIA's compilation

## Anti-corruption Progress Indicator 2020

CERTIFIED										
2S	ADVANC	AI	AIE	AIRA	AKP	AMA	AMANAH	AP	AQUA	ARROW
ASK	ASP	AYUD	B	BAFS	BANPU	BAY	BBL	BCH	BCP	BCPG
BGC	BGRIM	BJCHI	BKI	BLA	BPP	BROOK	BRR	BSBM	BTS	BWG
CEN	CENTEL	CFRESH	CGH	CHEWA	CHOTI	CHOW	CIG	CIMBT	CM	CMC
COL	COM7	CPALL	CPF	CPI	CPN	CSC	DCC	DELTA	DEMCO	DIMET
DRT	DTAC	DTC	EASTW	ECL	EGCO	FE	FNS	FPI	FPT	FSS
FTE	GBX	GC	GCAP	GEL	GFPT	GGC	GJS	GPSC	GSTEEL	GUNKUL
HANA	HARN	HMPRO	HTC	ICC	ICHI	IFS	INET	INSURE	INTUCH	IRPC
ITEL	IVL	K	KASET	KBANK	KBS	KCAR	KCE	KGI	KKP	KSL
KTB	KTC	KWC	L&E	LANNA	LHFG	LHK	LPN	LRH	M	MAKRO
MALEE	MBAX	MBK	MBKET	MC	MCOT	MFC	MFEC	MINT	MONO	MOONG
MPG	MSC	MTC	MTI	NBC	NEP	NINE	NKI	NMG	NNCL	NSI
NWR	OCC	OCEAN	OGC	ORI	PAP	PATO	PB	PCSGH	PDG	PDI
PDJ	PE	PG	PHOL	PL	PLANB	PLANET	PLAT	PM	PPP	PPPM
PPS	PREB	PRG	PRINC	PRM	PSH	PSL	PSTC	PT	PTG	PTT
PTTEP	PTTGC	PYLON	Q-CON	QH	QLT	QTC	RATCH	RML	RWI	S & J
SABINA	SAT	SC	SCB	SCC	SCCC	SCG	SCN	SEAOIL	SE-ED	SELIC
SENA	SGP	SIRI	SITHAI	SMIT	SMK	SMPC	SNC	SNP	SORKON	SPACK
SPC	SPI	SPRC	SRICHA	SSF	SSSC	SST	STA	SUSCO	SVI	SYNTEC
TAE	TAKUNI	TASCO	TBSP	TCAP	TCMC	TFG	TFI	TFMAMA	THANI	THCOM
THIP	THRE	THREL	TIP	TIPCO	TISCO	TKT	TTB	TMD	TMILL	TMT
TNITY	TNL	TNP	TNR	TOG	TOP	TPA	TPCORP	TPP	TRU	TSC
TSTH	TTCL	TU	TVD	TVI	TVO	TWPC	U	UBIS	UEC	UKEM
UOBKH	UWC	VGI	VIH	VNT	WACOAL	WHA	WHAUP	WICE	WIJK	XO
ZEN	TRUE									

DECLARED										
7UP	ABICO	AF	ALT	AMARIN	AMATA	AMATAV	ANAN	APURE	B52	BKD
BM	BROCK	BUI	CHO	CI	COTTO	DDD	EA	EFORL	EP	ERW
ESTAR	ETE	EVER	FSMART	GPI	ILINK	IRC	J	JKN	JMART	JMT
JSP	JTS	KWG	LDC	MAJOR	META	NCL	NOBLE	NOK	PK	PLE
ROJNA	SAAM	SAPPE	SCI	SE	SHANG	SINGER	SKR	SPALI	SSP	STANLY
SUPER	SYNEX	THAI	TKS	TOPP	TRITN	TTA	UPF	UV	WIN	ZIGA

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

**Disclaimer:**

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Note: Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of June 24, 2019) are categorised into: 1) companies that have declared their intention to join CAC, and; 2) companies certified by CAC.

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

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### ANALYST(S) CERTIFICATION

Suwat Sinsadok FSS International Investment Advisory Securities Co., Ltd

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Company	Ticker	Price	Rating	Valuation & Risks
Thai Oil	TOP TB	THB 56.50	BUY	Downside risks to our EV/EBITDA-based TP are a sharp rise in oil price and weak demand for refined oil products.
Esso Thailand	ESSO TB	THB 8.20	HOLD	The downside risks to our SoTP-based TP on ESSO include 1) lower-than-expected demand for petroleum products; 2) a higher crude premium; and 3) unplanned shutdowns of its refinery and petrochemical plants. The upside risks include 1) higher-than-expected demand for petroleum products; and 2) a lower crude premium.
Star Petroleum Refining	SPRC TB	THB 10.40	BUY	TP is based on EV/EBITDA. Downside risks are a sharp rise in oil price and weak demand for refined oil products.
Bangchak Corp	BCP TB	THB 28.25	BUY	The downside risks to our SoTP-based TP include: 1) lower-than-expected demand for petroleum products; 2) higher crude premiums; and 3) unplanned shutdowns of the company's refinery plants.
IRPC PCL	IRPC TB	THB 4.44	BUY	Key risks to our positive view and EV/EBITDA-based target price are weaker-than-expected oil product demand growth and lower-than-expected PP-naphtha and SM-benzene margins.
PTT Global Chemical	PTTGC TB	THB 64.50	BUY	The key downside risks to our EV/EBITDA-based TP are the weaker-than-expected HDPE price and HDPE-naphtha margin.
Tipco Asphalt	TASCO TB	THB 18.30	BUY	Downside risks to our EV/EBITDA multiple based TP include 1) a lower asphalt margin due to a oversupply in Asia on the back of faster recovery of utilisation rate for global refiners; and 2) a lower-than-expected supply of alternative crudes and asphalt.

Source: FSSIA estimates

### Additional Disclosures

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

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All share prices are as at market close on 06-Oct-2021 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.