THAILAND | Sector Note | 1 APRIL 2022

Sector Weighting | Overweight

Thailand Energy Sector

Passing its peak

Sector Valuation Company	BBG Code	Rec.	Current price (Bt)	Target price (Bt)	Market cap (US$ m)	Norm EPS grw 2022F (%)	Norm EPS grw 2023F (%)	— Norm PE — 2022F (x)	Norm PE 2023F (x)	— P/BV — 2022F (x)	P/BV 2023F (x)	— Div. yield — 2022F (%)	Div. yield 2023F (%)
Bangchak Corp.	BCP TB	BUY	29.75	34.00	1,232	38.2	(33.6)	6.5	9.7	0.7	0.7	6.1	4.0
Esso (Thailand)	ESSO TB	HOLD	7.95	8.20	827	na	320.8	40.7	9.7	1.1	1.0	0.0	0.0
IRPC Pcl	IRPC TB	BUY	3.56	4.40	2,188	(70.7)	489.1	63.5	10.8	0.8	0.8	4.3	4.6
PTT Global Chemical	PTTGC TB	BUY	50.75	58.00	6,881	(19.4)	5.4	10.0	9.5	0.7	0.7	4.9	4.7
Star Petroleum	SPRC TB	SELL	9.65	8.50	1,258	na	(23.1)	11.4	14.8	1.0	1.0	5.2	3.3
Thai Oil	TOP TB	SELL	51.75	45.00	3,175	53.9	(24.2)	12.3	16.2	0.7	0.7	5.8	2.5

Source: Thanachart estimates, Based on 31 March 2022 closing prices

We maintain our bearish view on the refinery sector seeing potential downside risk to refining margin with the war premium soon to fade. We see easing supply pressure with a falling GRM trend over the next two years. SELL TOP and SPRC.

Maintaining our bearish refinery view

This report focuses on the refinery sector where we continue to have a bearish view on. ***First,*** we see downside risk to refining margin assuming the Russia-Ukraine war de-escalates. ***Second,*** supply tightness has now changed in both Asia and Europe with China reversing its policy to halt oil product exports and the US supplying more gas to Europe. ***Third,*** we expect lower gas-to-oil switching demand in Europe and warmer weather in Asia to weigh on diesel demand growth. ***Fourth,*** we expect 1Q22 to be the peak quarter for Thai refiners driven by strong GRM and large inventory gains. ***Fifth***, trading at an average 0.9x P/BV which is near the historical average, Thai refiners are not at a bargain level.

War premium likely soon to fade

The Singapore complex GRM rose to a record high of US$13.9/bbl this week, and double the pre-war level of US$6/bbl in January and five-year pre-COVID average of US$7/bbl. The rally has mainly been driven by the Russia-Ukraine war which caused concerns over diesel supply in Europe and globally. Looking ahead, we see downside risk to refining margin as the supply situation has now improved due to i) China reversing its policy to halt oil product exports in April after lower domestic demand, and ii) Europe seeing less pressure from diesel tightness because of easing concerns over sanctions on Russian gas and more diesel exports from the US and Asia to Europe. De-escalation of the war is another big downside risk for prevailing strong refinery margin.

Easing crude premium not a big upside risk

The premium on Middle East crude, Thai refiners' key crude source, could ease from the recent record-high level because of reduced concerns about Russian oil supply disruptions. However, we expect the premium to remain elevated. Despite our expectation for the war to wind down, we believe European refiners are still trying to shun Russian crude which means greater demand for Middle East crudes.

We have SELL calls on TOP and SPRC

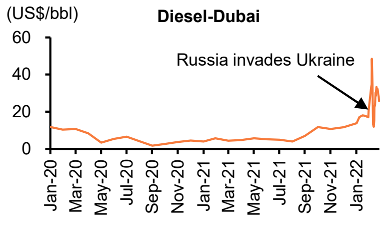
We SELL TOP and SPRC on their more expensive PE multiples than peers' and high refining margin exposure as well as high reliance on Middle East crude. BCP (BUY) and ESSO (HOLD) have oil retail business income which should improve and cushion them during the falling GRM period. PTTGC (upgrade to BUY from HOLD) and IRPC (BUY) have already seen big share price drops, and we expect their petrochemical spreads to improve next year. Please see Ex 21 for a summary of our earnings and target price revisions.

YUPAPAN POLPORNPRASERT

662-779-9110

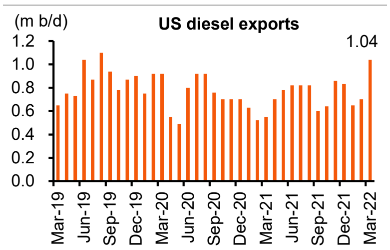
yupapan.pol@thanachartsec.co.th

Diesel-DB Surges Since The War



Source: Bloomberg

US Diesel Exports Surged



Source: Bloomberg

Thanachart Securities

This report is prepared by Thanachart Securities. Please contact our salesperson for authorisation. Please see the important notice on the back page

War premium likely soon to fade

GRM spike has mainly been driven by the Russia-Ukraine war

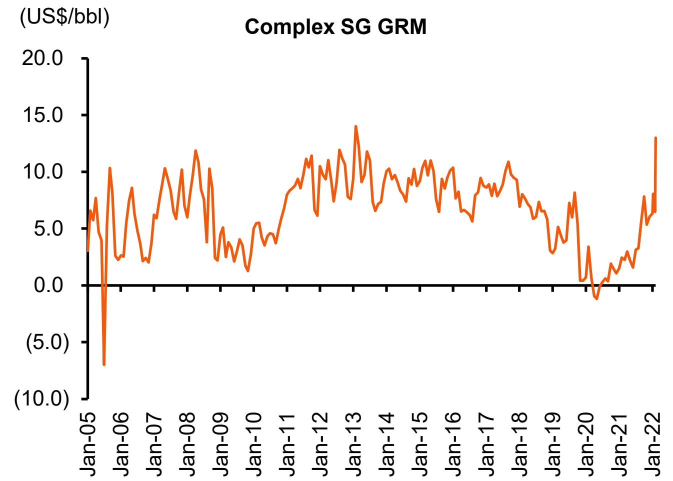
The refinery market is facing short-term disruptions from potential European refinery run cuts and less refined oil product exports from Russia amid the Russia-Ukraine war. Russia is one of the leading refined diesel exporters accounting for around 3% of global demand. Meanwhile, European refiners (15% of global demand) are shunning Russian crude which could impact their overall utilization, meaning lower diesel supply in the market. Energy Intelligence initially estimated that Russia's exports had contracted by 1.3 million b/d of refined products. The disruption is occurring during a period when global inventories have depleted to multi-year low levels. Asia middle distillate stocks in Singapore are 4m bbl (32%) below the pre-pandemic five-year average and at the lowest point since 2008. Consequently, the Singapore complex GRM rose to a 9-year high of US$13.9/bbl this week. The sharp increase was mainly driven by a surge in the diesel-dubai spread which rallied to US$48.5/bbl, a record high level, before coming down to US$26/bbl vs. the 10-year average of US$13/bbl.

Ex 1: Russia Is Another Major Supplier Of Diesel

2021 Russian exports (KBD)	Crude	Mogas/Jet	Gasoil	Fuel Oil
Europe	2,720 (27%)	30 (2%)	700 (11%)	330 (33%)
US	210 (1%)	50 (1%)	15 (0.3%)	220 (35%)
Asia	1,540 (4%)	20 (0.3%)	80 (0.8%)	200 (7%)
Other regions	100 (0.1%)	80 (1%)	120 (2%)	70 (3%)
Total	**4,570**	**180**	**915**	**820**
% global demand	**4.60%**	**1%**	**3%**	**12%**

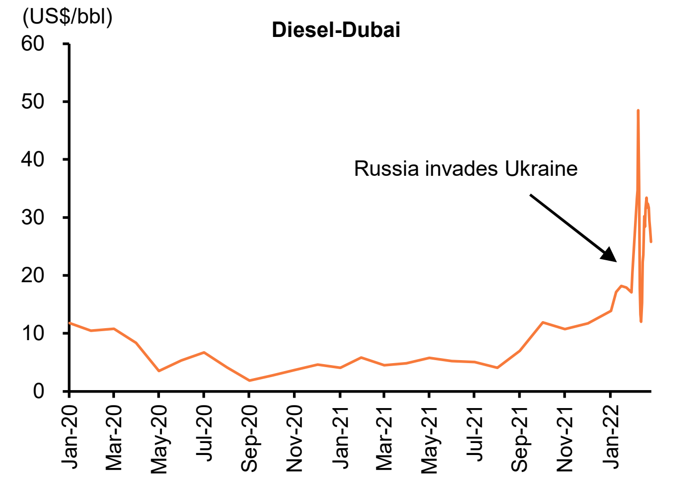
Source: TOP

Ex 2: SG GRM Has Surged To Record Levels…



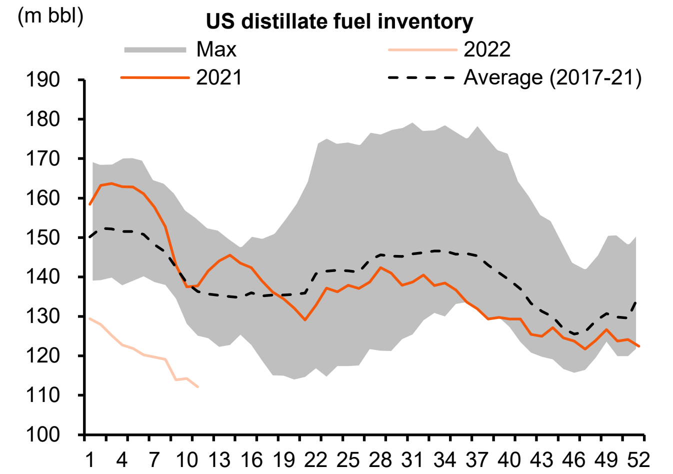
Sources: TOP, Thanachart estimates

Ex 3: …Driven By A Surge In The Diesel-Dubai Spread



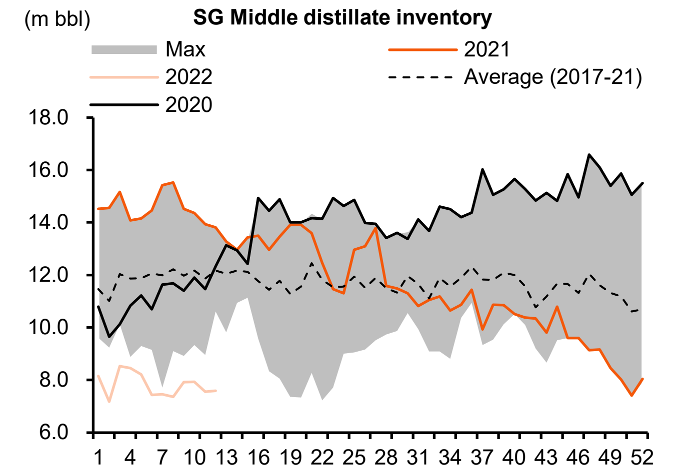
Source: TOP

Ex 4: US Middle Distillate Inventory



Source: EIA

Ex 5: Singapore Middle Distillate Inventory



Source: Bloomberg

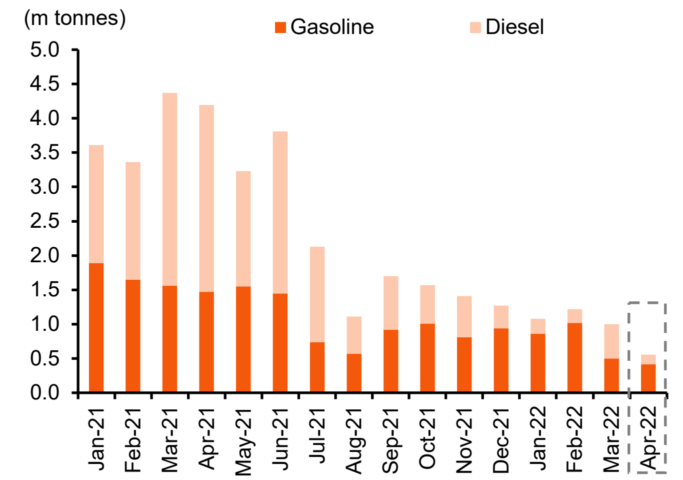
China reverses refined oil export policy from April as supply situation changed

In early March when Russia invaded Ukraine, China made a surprise move by planning to halt diesel and gasoline exports from April. We believe this was a consequence of a decline in teapot refiners' utilization amid high crude oil prices and concern over Russia's oil supplies. However, the supply situation has now changed, and China is set to export gasoline and diesel from April after domestic demand declined following the resurgence of COVID-19 across the nation, according to news reports. China anticipates exports of gasoline and gasoil in April at 416,000 m tonnes and 140,000 m tonnes, respectively. Despite potential exports from China is still low, we see further downside risk given weakening domestic demand. More than 50% of flights were canceled at the 20 largest airports in China from March 11-17. China's oil demand is expected to drop by 650,000 b/d (3% of demand) and 400,000 b/d (4% of demand) in March and April, respectively, according to SP Platts estimate.

Ex 6: China Congestion Index

Source: Bloomberg

Ex 7: China Reversed Its Ban On Oil Product Exports



Source: SP Platts

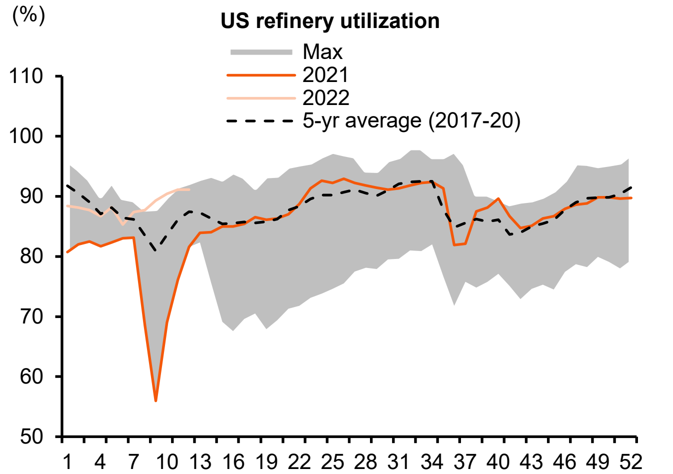
Supply increase on the horizon

The prevailing strong GRM should attract refiners to ramp up utilization to capture strong margins which would then cap potential margin upside, in our view. US refineries are already running at a 91% utilization rate which is above the five-year average of 86% and up from the recent low of 85% in mid-February 2022. Given the supply disruption in Europe, the US is exporting more diesel than it has done in years. US diesel exports have climbed to

1.04m b/d so far this month, on track to hit the highest level since August 2019, according to estimates from oil-analytics firm Vortexa. Volume to Europe has seen the biggest jump in the period to 84,700 b/d, on course for an eight-month high. Meanwhile, more Asian diesel cargoes are also heading to Europe this month, further boosting supplies. Close to 200kbd of diesel cargoes were loaded from Asia to Europe in March, with India accounting for 80% of the supplies.

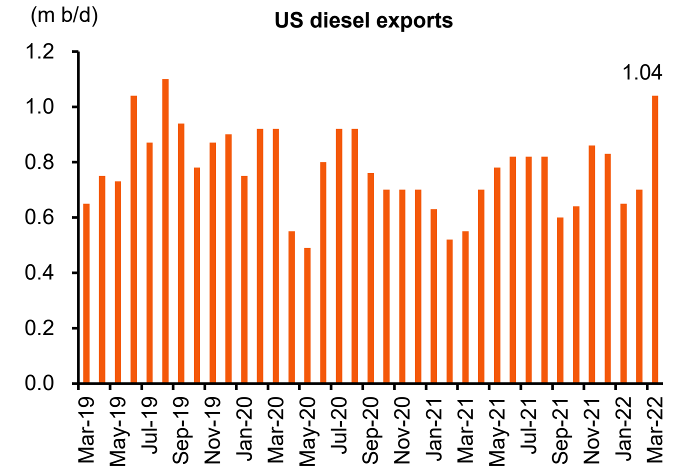
Asian refinery utilization has also been rising back to its historical average level in December 2021 and it should continue to increase throughout 2022. Most Indian state-controlled refineries have been operating at maximum capacity this month. The country's biggest state-run refiner in terms of capacity, IOC, and fellow refiner MRPL's 300,000 b/d Mangalore refinery were operating at 100% or more than their nameplate capacities. The two refiners have deferred some upcoming maintenance shutdowns given the prevailing strong refining margins.

Ex 8: US Refinery Utilization Risen To Above Average



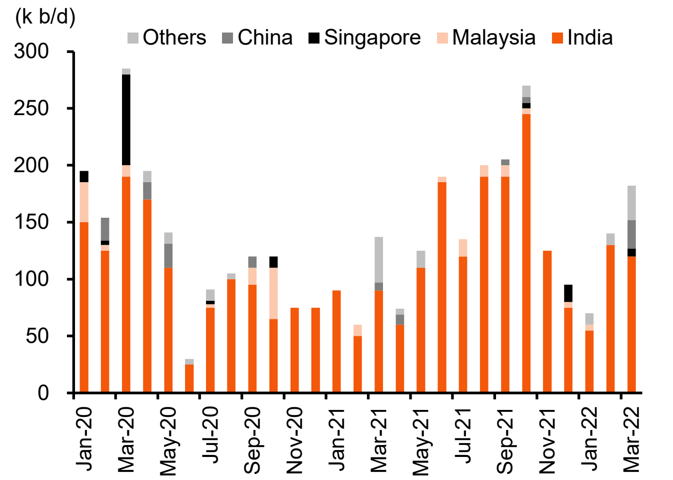
Source: EIA

Ex 9: US Diesel Exports Set To Reach Over 2-Year High



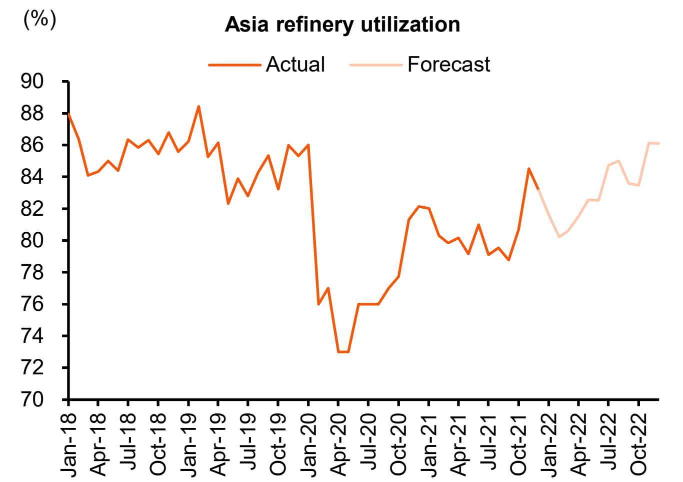
Source: Vortexa

Ex 10: Asia Diesel Loadings To Europe Is Also Rising



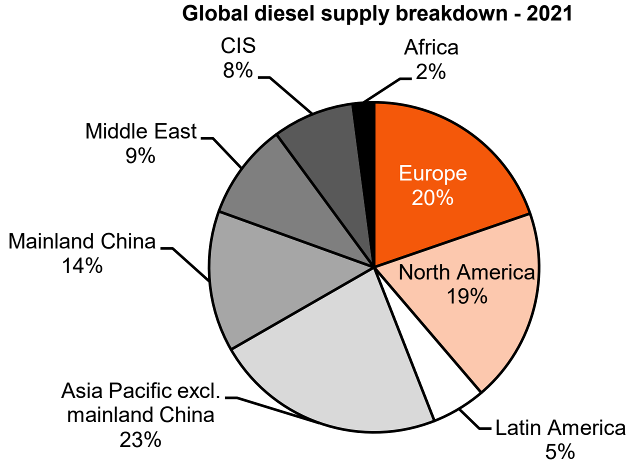
Source: Vortexa

Ex 11: Asia Run Rate On A Rising Trend



Source: TOP

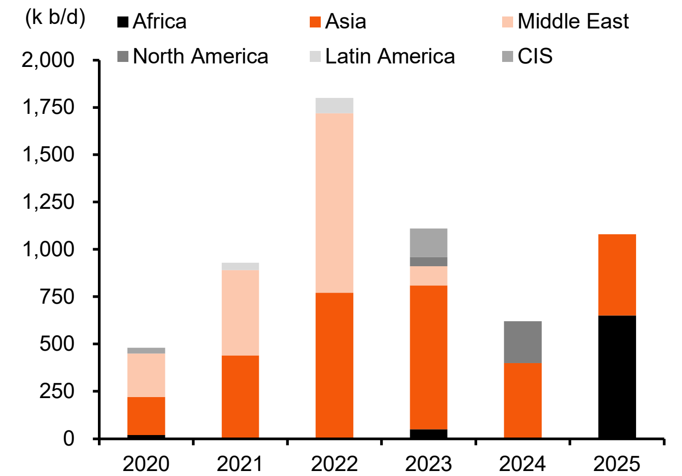
Ex 12: Global Diesel Supply Breakdown – 2021



Source: Bloomberg

New plants are still set to continue entering the market. Planned new supply additions in Asia and the Middle East come to a total of 1.1m b/d in 2022 vs. only 0.3m b/d in 2021.

Ex 13: New Supply Additions



Source: Bloomberg

Ex 14: Key New Refinery Start-Ups

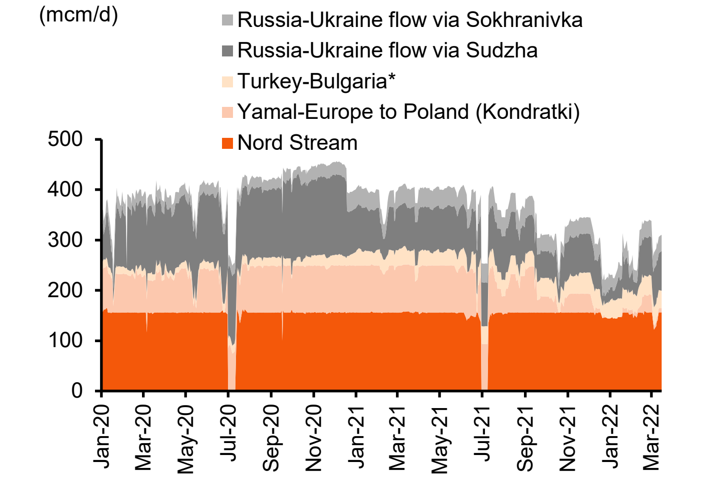
Country	Company	CDU (KBD)	Start-up
Saudi Arabia	Jizan	400	2Q21
China	Rongsheng II	400	1Q22
China	Local Shenghong Petrochemical	320	1Q22
Kuwait	Al Zour	615	2Q22
China	CNPC/PDVSA	400	3Q22
India	Hindustan Petroleum	125	4Q22
Thailand	Thai Oil	125	1Q23
Oman	Al-Duqm	230	1Q23
China	Sinopec Hainan	100	3Q23

Source: TOP

Limited room for additional demand from gas-to-oil switching

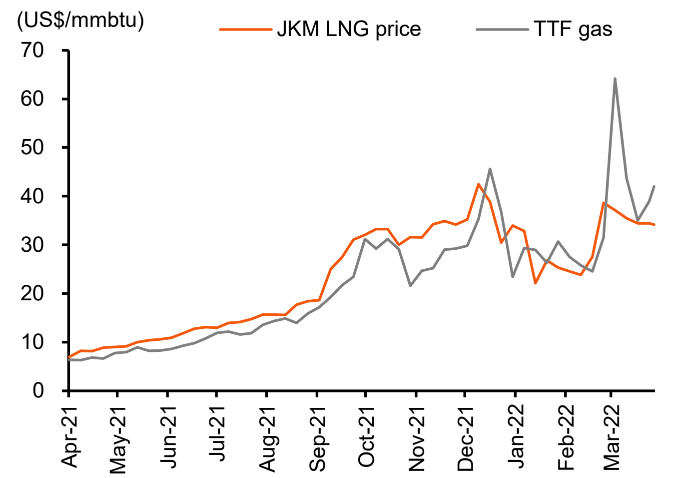
We see limited room for additional demand from gas-to-oil switching. ***First,*** concerns over a potential gas shortage in Europe have now eased as Europe is not imposing sanctions on Russian gas. Actual gas flow has actually not been hit and Russia is still sending gas to Europe as normal. Consequently, the Dutch TTF gas price (the benchmark for the European gas price) has already come down by 45% from its peak to EUR126/mWh currently. ***Second,*** the US, the world largest LNG exporter, has struck a deal to supply 15bcm of gas to Europe (10% of Russian gas exports to Europe) until the end of 2022 and an additional 50bcm at least until 2030. This would help improve the gas supply to Europe and reduce its reliance on Russian gas, in our view. ***Third,*** the weather is widely expected to become warmer in Asia based on current trends. ***Fourth,*** the gap between the global LNG prices and diesel price is narrowing and is now at US$69/bbl vs. a peak of US$129/bbl in December 2021.

Ex 15: Russian Gas Exports To Europe Still Flowing



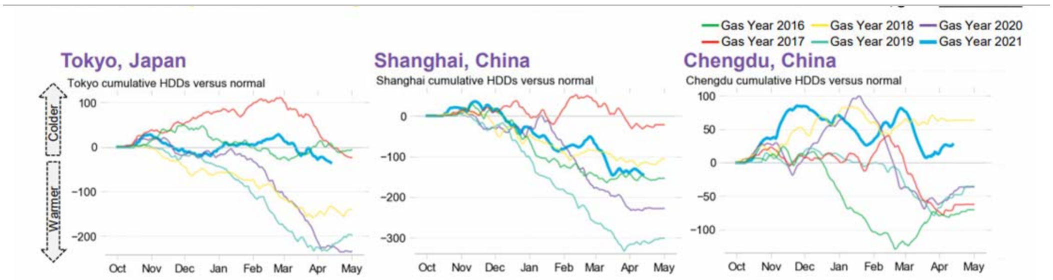
Source: Bloomberg

Ex 16: Europe Gas Price And LNG Price



Source: Bloomberg

Ex 17: Key Asian Cities Are Becoming Warmer



Source: Bloomberg

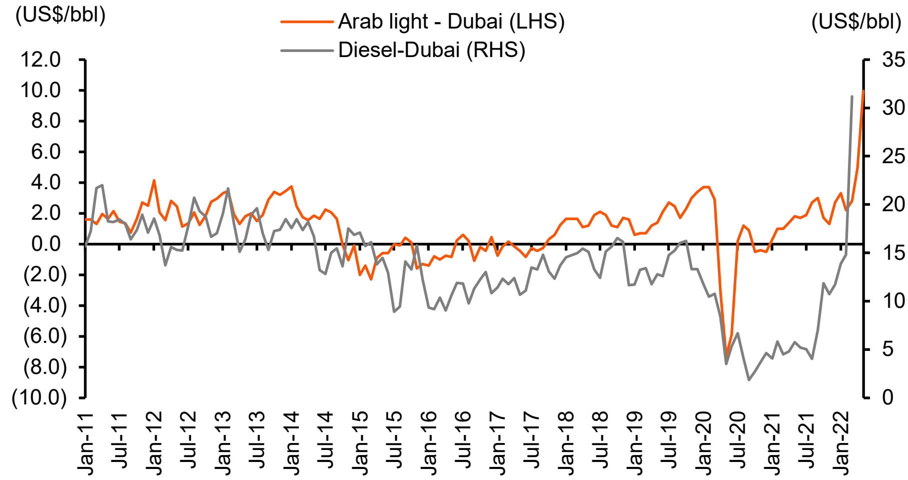
Easing crude premium not a big upside risk

Thai crude premium likely to remain elevated

At the beginning of the Russia-Ukraine war, the lower demand for Russian crude made the demand for other crudes improve substantially which caused the Middle East crude premium to surge. Note that the Arab Light premium has increased from $3.3/bbl in Jan 22 to record high level of US$4.95/bbl for April 2022 loading and likely another big jump of US$5/bbl for May loading.

However, with the war likely soon to de-escalate, the crude premium could ease, but we expect it to remain elevated. Given the ongoing geopolitical tensions between Russia and the West, Russian crude exports to Europe are likely to trend lower, even without any formal blockade on Russian energy products. This will likely create additional demand for Middle East crude.

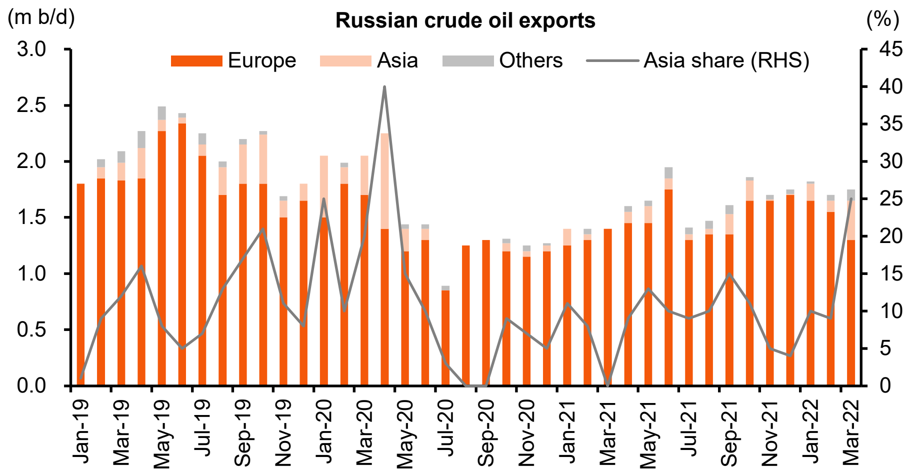
Ex 18: Crude Premium vs. Diesel-Dubai Spread



Sources: Company data, Thanachart estimates

Note: Saudi Arabia OSP in May 2022 is based on market estimate.

Ex 19: Russian Seaborne Crude Oil Exports From The Baltic And Black Sea (mbd)



Source: Vortexa

Earning revisions and recommendation changes

We revise up our 2022 sector profit forecast by 83% mainly to factor in YTD product spreads and inventory gains. We fine-tune our 2023-24F profit by 2% as we factor in a faster-than-expected jet spread recovery. Overall, target prices change marginally for our sector coverage.

In this note, we upgrade PTTGC to BUY from HOLD as we believe its share price has already reflected its fundamental change at only 0.7x P/BV. At the same time, we expect chemical spreads to have passed their bottoms and to enter an upcycle next year. We maintain our SELL rating on TOP and SPRC due to our expectation of peak refinery margins and their high reliance on expensive Middle East crude.

Ex 20: Spread Assumption Revisions

					New			Old			*Change (%)*		
	2020	2021	1Q22	Mar-22	2022F	2023F	2024F	2022F	2023F	2024F	*2022F*	*2023F*	*2024F*
(US$/tonne)													
HDPE-naphtha	506	630	413	377	450	500	550	480	530	590	*(6.3)*	*(5.7)*	*(6.8)*
LLDPE-naphtha	479	630	437	389	505	550	600	500	550	600	*1.1*	*0.0*	*0.0*
LDPE-naphtha	626	1,020	731	707	750	800	830	750	800	830	*0.0*	*0.0*	*0.0*
PP-naphtha	616	680	419	364	420	550	600	550	600	620	*(23.6)*	*(8.3)*	*(3.2)*
(US$/bbl)													
Gasoline-Dubai	4.4	11.0	16.9	22.0	16.5	13.0	12.0	13.5	12.0	12.0	*21.9*	*8.3*	*0.0*
Diesel-Dubai	6.2	6.7	17.6	33.8	19.1	14.0	14.0	13.0	13.0	13.0	*47.3*	*7.7*	*7.7*
Jet-Dubai	2.6	5.8	13.7	23.7	17.6	13.0	13.0	12.5	12.0	12.0	*41.1*	*8.3*	*8.3*
HSFO-Dubai	(3.0)	(4.9)	(8.9)	(10.3)	(7.7)	(8.0)	(8.0)	(8.0)	(8.0)	(8.0)	*(4.3)*	*0.0*	*0.0*
SG GRM	**0.7**	**3.1**	**7.4**	**12.5**	**7.3**	**5.5**	**5.2**	**5.7**	**5.4**	**5.1**	*27.9*	*2.0*	*0.5*

Sources: Bloomberg, Thanachart estimates

Ex 21: Profit Revision And Recommendation Changes

Net profit	2022F			2023F			2024F			TP (Bt/shr)			Rating	
(Bt m)	New	Old	*% chg*	New	Old	*% chg*	New	Old	*% chg*	New	Old	*% chg*	New	Old
BCP	6,347	4,538	*39.9*	4,214	4,085	*3.2*	3,785	3,699	*2.3*	34.00	32.00	*6.3*	BUY	BUY
ESSO	6,856	2,384	*187.6*	2,846	2,769	*2.8*	2,719	2,638	*3.1*	8.20	8.00	*2.5*	HOLD	HOLD
IRPC	6,208	5,440	*14.1*	6,750	6,638	*1.7*	9,109	9,085	*0.3*	4.40	4.40	*0.0*	BUY	BUY
PTTGC	26,808	23,442	*14.4*	24,032	23,380	*2.8*	29,088	28,089	*3.6*	58.00	56.00	*3.6*	BUY	HOLD
SPRC	8,041	2,467	*225.9*	3,493	3,431	*1.8*	3,518	3,452	*1.9*	8.50	8.40	*1.2*	SELL	SELL
TOP	27,591	6,363	*333.7*	6,512	6,621	*(1.6)*	6,868	6,918	*(0.7)*	45.00	46.00	*(2.2)*	SELL	SELL
Total	**81,851**	**44,634**	***83.4***	**47,846**	**46,924**	***2.0***	**55,088**	**53,881**	***2.2***					

Sources: Company data, Thanachart estimates

Ex 22: Sector Valuation Comparison

		BCP	ESSO	IRPC	PTTGC	SPRC	TOP	Industry
Rating		**BUY**	**HOLD**	**BUY**	**BUY**	**SELL**	**SELL**	
Target price (Bt)	**Thanachart**	**34.00**	**8.20**	**4.40**	**58.00**	**8.50**	**45.00**	
	Consensus	35.00	8.50	4.30	65.00	11.35	63.00	
Consensus rec.	BUY	10	3	9	13	14	18	
	HOLD	4	3	9	12	3	5	
	SELL	0	1	6	1	2	3	
Sales (Bt m)	2021	199,417	172,878	235,174	465,128	172,484	345,496	1,590,578
	2022F	256,591	169,762	265,631	627,450	216,140	416,870	1,952,445
	2023F	244,270	169,343	240,404	533,400	205,289	366,105	1,758,811
	2024F	229,538	165,990	235,484	520,860	212,689	359,336	1,723,898
Norm profits (Bt m)	2021	4,592	(1,704)	3,910	28,295	(1,542)	5,583	39,134
	2022F	6,347	676	1,146	22,808	3,676	8,591	43,243
	2023F	4,214	2,846	6,750	24,032	2,826	6,512	47,179
	2024F	3,785	2,719	9,109	29,088	3,518	6,868	55,088
Sales growth (%)	2021	46.1	36.5	54.4	41.3	32.5	39.4	41.7
	2022F	28.7	(1.8)	13.0	34.9	25.3	20.7	20.1
	2023F	(4.8)	(0.2)	(9.5)	(15.0)	(5.0)	(12.2)	(7.8)
	2024F	(6.0)	(2.0)	(2.0)	(2.4)	3.6	(1.8)	(1.8)
Norm EPS growth (%)	2021	na	na	na	270.7	na	na	270.7
	2022F	38.2	na	(70.7)	(19.4)	na	53.9	0.5
	2023F	(33.6)	320.8	489.1	5.4	(23.1)	(24.2)	122.4
	2024F	(10.2)	(4.5)	35.0	21.0	24.5	5.5	11.9
Operating margin (%)	2021	6.6	(0.3)	2.3	6.4	0.1	2.6	2.9
	2022F	8.5	1.3	0.7	4.4	2.7	3.3	3.5
	2023F	5.2	2.0	3.2	5.0	1.8	2.6	3.3
	2024F	5.1	1.9	4.4	6.3	2.0	3.3	3.8
ROE (%)	2021	9.2	(10.2)	4.8	9.4	(5.1)	4.7	2.2
	2022F	11.5	3.0	1.3	7.0	9.8	6.5	6.5
	2023F	7.2	10.4	7.3	7.1	6.8	4.5	7.2
	2024F	6.3	9.0	9.4	8.3	8.0	4.7	7.6
Dividend yield (%)	2021	6.7	0.0	2.2	7.4	1.8	5.0	3.9
	2022F	6.1	0.0	4.3	4.9	5.2	5.8	4.4
	2023F	4.0	0.0	4.6	4.7	3.3	2.5	3.2
	2024F	4.0	0.0	6.3	5.7	3.4	2.6	3.7
P/BV (x)	2021	0.8	1.4	0.8	0.7	1.2	0.9	1.0
	2022F	0.7	1.1	0.8	0.7	1.0	0.7	0.8
	2023F	0.7	1.0	0.8	0.7	1.0	0.7	0.8
	2024F	0.7	0.9	0.7	0.6	0.9	0.7	0.8
Norm PE (x)	2021	8.9	na	18.6	8.1	na	18.9	13.6
	2022F	6.5	40.7	63.5	10.0	11.4	12.3	24.1
	2023F	9.7	9.7	10.8	9.5	14.8	16.2	11.8
	2024F	10.8	10.1	8.0	7.9	11.9	15.4	10.7
EV/EBITDA (x)	2021	4.2	25.2	8.8	7.9	16.5	15.0	12.9
	2022F	4.3	8.9	13.1	7.7	4.5	12.7	8.5
	2023F	6.9	6.5	7.6	7.2	5.2	17.2	8.4
	2024F	7.0	5.9	5.9	5.9	4.2	13.0	7.0
Net D/E (x)	2021	0.7	1.5	0.6	0.6	0.1	1.1	0.8
	2022F	1.2	0.7	0.6	0.5	(0.1)	1.1	0.7
	2023F	1.3	0.4	0.5	0.4	(0.2)	1.3	0.6
	2024F	1.2	0.2	0.4	0.3	(0.2)	1.3	0.5

Sources: Company data; Thanachart estimates

Valuation Comparison

Ex 23: Comparison With Regional Peers

Company	Code	Country	EPS Growth 22F (%)	23F (%)	PE 22F (x)	23F (x)	P/BV 22F (x)	23F (x)	EV/EBITDA 22F (x)	23F (x)	Div. Yield 22F (%)	23F (%)	ROE 22F (%)	23F (%)
Refining & Marketing														
Caltex Australia	CTX AU	Australia	24.8	16.1	na	na	na	na	na	na	na	na	12.0	14.7
BPCL	BPCL IN	India	(0.5)	3.0	7.7	7.5	1.4	1.3	7.0	6.6	5.8	6.4	24.7	18.9
HPCL	HPCL IN	India	(12.5)	10.3	5.8	5.2	1.0	0.9	6.4	5.6	6.8	6.4	24.1	16.8
IOCL	IOCL IN	India	45.3	(14.1)	5.1	5.9	0.9	0.8	5.0	5.4	6.9	9.5	14.6	18.2
Reliance Industries	RIL IN	India	28.4	27.7	29.6	23.2	2.3	2.1	18.0	14.5	0.3	0.3	8.6	7.9
SK Energy	096770 KS	S.Korea	82.4	11.3	15.4	13.8	1.1	1.0	7.9	7.0	0.9	1.5	4.4	7.3
S-OIL	010950 KS	S.Korea	1.4	(15.1)	7.4	8.7	1.4	1.2	5.3	5.9	4.0	4.0	23.5	20.8
Petron	PCOR PM	Philippines	152.9	na	7.7	na	0.7	na	7.1	na	na	3.0	4.1	8.8
Formosa Petrochemical	6505 TT	Taiwan	(10.3)	0.9	19.4	19.2	2.5	2.4	11.6	11.9	4.4	3.6	15.3	12.6
Bangchak *	BCP TB	Thailand	38.2	(33.6)	6.5	9.7	0.7	0.7	4.3	6.9	6.1	4.0	11.5	7.2
ESSO (Thailand) *	ESSO TB	Thailand	na	320.8	40.7	9.7	1.1	1.0	8.9	6.5	0.0	0.0	3.0	10.4
IRPC Pcl *	IRPC TB	Thailand	(70.7)	489.1	63.5	10.8	0.8	0.8	13.1	7.6	4.3	4.6	1.3	7.3
PTG Pcl *	PTG TB	Thailand	50.8	19.5	14.9	12.4	2.5	2.2	6.8	6.3	3.4	4.0	17.6	18.8
PTT Global Chemicals *	PTTGC TB	Thailand	(19.4)	5.4	10.0	9.5	0.7	0.7	7.7	7.2	4.9	4.7	7.0	7.1
Star Petroleum Refining *	SPRC TB	Thailand	na	(23.1)	11.4	14.8	1.0	1.0	4.5	5.2	5.2	3.3	9.8	6.8
SUSCO Pcl	SUSCO TB	Thailand	35.0	30.1	12.4	9.5	0.9	0.8	5.2	4.3	4.0	5.3	7.0	8.9
Thai Oil *	TOP TB	Thailand	53.9	(24.2)	12.3	16.2	0.7	0.7	12.7	17.2	5.8	2.5	6.5	4.5
Average			**26.6**	**51.5**	**16.8**	**11.7**	**1.2**	**1.2**	**8.2**	**7.9**	**4.2**	**3.9**	**11.5**	**11.6**
Integrated oils														
PetroChina	857 HK	China	9.1	(10.0)	7.4	8.2	0.6	0.5	3.4	3.6	6.1	6.6	7.3	7.7
Sinopec	386 HK	China	(2.0)	(1.4)	6.7	6.8	0.6	0.6	3.9	3.8	9.2	9.6	9.6	8.8
Total	FP	France	46.0	(11.9)	na	na	na	na	na	na	na	na	15.3	19.3
Eni	ENI IM	Italy	85.6	(11.2)	6.0	6.7	1.0	0.9	2.6	2.9	6.5	6.6	10.7	15.9
RD/Shell A	RDSA NA	Netherlands	46.0	(10.0)	na	na	na	na	4.0	4.3	na	na	11.2	16.5
Repsol	REP SM	Spain	49.2	(7.5)	5.3	5.8	0.8	0.7	3.4	3.6	5.1	5.3	11.1	13.5
Chevron Texaco	CVX US	USA	58.2	(17.0)	12.0	14.5	2.2	2.1	6.1	7.1	3.3	3.5	11.7	17.1
Exxon Mobil	XOM US	USA	59.3	(15.0)	9.9	11.6	1.9	1.8	5.1	6.0	4.2	4.3	13.5	19.7
Conoco Philips	COP US	USA	90.1	(16.5)	8.7	10.4	2.4	2.2	4.6	5.5	1.7	2.0	20.8	27.8
PTT Pcl *	PTT TB	Thailand	10.1	(3.6)	11.3	11.7	1.0	1.0	4.9	4.6	5.2	5.2	9.5	8.8
Average			**45.1**	**(10.4)**	**8.4**	**9.5**	**1.3**	**1.2**	**4.2**	**4.6**	**5.2**	**5.4**	**12.1**	**15.5**
Exploration and Production														
Santos	STO AU	Australia	79.9	(19.6)	10.5	13.1	1.7	1.6	4.7	5.5	1.4	2.1	11.0	16.2
Woodside	WPL AU	Australia	96.9	(29.2)	10.2	14.5	2.1	2.1	4.6	5.1	3.5	6.4	11.4	25.0
Suncor Energy	SU US	Canada	155.8	(6.9)	4.9	5.3	1.1	1.0	3.7	4.1	3.2	5.2	10.9	19.9
ONGC	ONGC IN	India	na	22.6	4.9	4.0	0.8	0.7	4.1	3.4	1.9	7.3	6.1	17.6
RIL	RIL IN	India	28.4	27.7	29.6	23.2	2.3	2.1	18.0	14.5	0.3	0.3	8.6	7.9
Cairn India	CAIR IN	India	na	na	na	na	na	na	na	na	na	na	na	na
Apache	APA US	USA	98.1	(6.6)	5.1	5.5	na	9.0	4.0	4.2	0.4	1.2	(104.6	(147.5
Devon Energy	DVN US	USA	109.4	(8.1)	8.3	9.1	2.8	2.2	5.1	5.3	1.7	0.9	38.1	42.1
PTTEP *	PTTEP TB	Thailand	42.9	(23.8)	9.1	11.9	1.2	1.2	3.0	3.4	4.2	4.9	14.2	10.0
Average			**87.3**	**(5.5)**	**10.3**	**10.8**	**1.7**	**2.5**	**5.9**	**5.7**	**2.1**	**3.5**	**(0.5)**	**(1.1)**

Sources: Bloomberg, * Thanachart estimates
Based on 31 March 2022 closing prices

STOCK PERFORMANCE

	Absolute (%)				Rel SET (%)			
	1M	3M	12M	YTD	1M	3M	12M	YTD
SET INDEX	**0.1**	**2.3**	**6.3**	**2.3**	—	—	—	—
Energy	**(0.1)**	**4.3**	**(0.6)**	**4.3**	**(0.2)**	**2.1**	**(6.9)**	**2.1**
BCP TB	(6.3)	17.8	13.3	17.8	(6.4)	15.6	7.1	15.6
ESSO TB	3.9	8.2	(5.9)	8.2	3.9	5.9	(12.2)	5.9
IRPC TB	(5.3)	(7.3)	(7.8)	(7.3)	(5.4)	(9.6)	(14.0)	(9.6)
IVL TB	2.2	7.5	1.6	7.5	2.1	5.2	(4.6)	5.2
PTT TB	(1.3)	1.3	(5.5)	1.3	(1.3)	(1.0)	(11.8)	(1.0)
PTTEP TB	4.7	22.0	25.8	22.0	4.7	19.8	19.5	19.8
PTTGC TB	(2.9)	(13.6)	(19.8)	(13.6)	(2.9)	(15.9)	(26.0)	(15.9)
SPRC TB	7.2	(1.5)	6.6	(1.5)	7.2	(3.8)	0.4	(3.8)
TOP TB	(3.3)	4.5	(14.1)	4.5	(3.3)	2.3	(20.4)	2.3

Source: Bloomberg

SECTOR - SWOT ANALYSIS

S — Strength

- Synergies within the PTT group could help lower costs and increase competitiveness via integration.
- Strong balance sheets should enable Thai energy companies to take advantage of low oil prices in M&As.

W — Weakness

- High-cost E&P operation in Thailand.
- Earnings and cash flows are highly volatile, following fluctuations in global oil prices.

O — Opportunity

- Thai refineries, i.e., TOP, IRPC and PTTGC have room for further downstream expansion into higher value-added plastic pellets.
- Overseas acquisitions that could drive growth and value.

T — Threat

- Cheap imported LNG is a major threat to local gas producers, including PTTEP.
- Regulatory risk, i.e., price caps.

REGIONAL COMPARISON

	EPS growth		PE		P/BV		EV/EBITDA		Div. Yield	
Name	22F	23F	22F	23F	22F	23F	22F	23F	22F	23F
	(%)	(%)	(x)	(x)	(x)	(x)	(x)	(x)	(%)	(%)
Australia	67.2	(10.9)	10.4	13.8	1.9	1.8	4.6	5.3	2.4	4.2
China	3.6	(5.7)	7.1	7.5	0.6	0.6	3.6	3.7	7.6	8.1
India	17.8	12.9	13.8	11.5	1.4	1.3	9.8	8.3	3.7	5.0
S.Korea	41.9	(1.9)	11.4	11.3	1.2	1.1	6.6	6.5	2.4	2.7
USA	83.0	(12.6)	8.8	10.2	2.3	3.5	5.0	5.6	2.3	2.4
Thailand	13.1	76.1	19.6	12.1	1.1	1.0	7.1	7.0	4.3	3.8
Average	**37.8**	**9.6**	**11.8**	**11.1**	**1.4**	**1.5**	**6.1**	**6.1**	**3.8**	**4.4**

Sources: Bloomberg Consensus
Note: * Thanachart estimate – using normalized EPS

BUY (From: HOLD)

Change in Recommendation

TP: Bt 58.00 (From: Bt 56.00)

Upside : 14.3%

1 APRIL 2022

Thanachart Securities

PTT Global Chemical Pcl (PTTGC TB)

Value emerges

YUPAPAN POLPORNPRASERT
662-779-9110
yupapan.pol@thanachartsec.co.th

We upgrade PTTGC to BUY from Hold as we believe its share price has already factored in the change in its fundamentals trading at only 0.7x P/BV. At the same time, we expect chemical spreads to have passed their bottoms and to turn to an upcycle next year.

Upgrading to BUY

We upgrade PTTGC to BUY (from Hold) as we believe the stock has already been de-rated enough from 1.3x P/BV in 2018 to 0.7x currently. The stock is trading on nearly -1STD of its five-year P/BV band (Exhibit 8). The de-rated valuation in our view is a reflection of the change in its feedstock mix toward more expensive naphtha and less cheaper ethane gas. At the same time, we expect an improving outlook for petrochemical spreads after new global supply peaks this year.

Spreads start to rebound

Polyolefins spreads, depressed by a new supply wave this year, have been squeezed further from a jump in oil prices that pushed up naphtha and ethane feedstock costs. However, spreads have started to improve as product prices have been adjusted up along with oil prices, which have also fallen from their peak. Looking ahead, we expect spreads to improve further after the Russian-Ukraine war ends and with falling global supply additions from 2022F onward. Our benchmark HDPE-naphtha spread assumptions are US$450/500/550 per tonne in 2022-24F vs. US$630 in 2021 and US$377 in March 2022. Exhibits 3-4 show the global supply-demand outlook.

Cyclical improvement of feed mix

One of the key structural changes that has de-rated PTTGC's valuation in our view is the rising naphtha and LPG feedstock mix trend which we expect to increase from 43% in 2018 to 55% in 2025F. This year, however, will likely be cyclically the worst year of the mix in that structural trend at 65% naphtha & LPG vs. 35% gas costs. This is due to a temporary slump in gas output from the Erawan field, which Chevron is handing over to a new operator PTT Exploration & Production (PTTEP TB, HOLD, Bt148). We estimate output to fall to an average 250-300mmcfd in 2022F from 867mmcfd in 2021 before ramping up to 500mmcfd in 2023F and to its full potential of 800mmcfd in 2024F. We thus estimate PTTGC's naphtha & LPG mix to cyclically improve from 2022F's peak of 65% in 2022F to 60%/55% in 2023-24F.

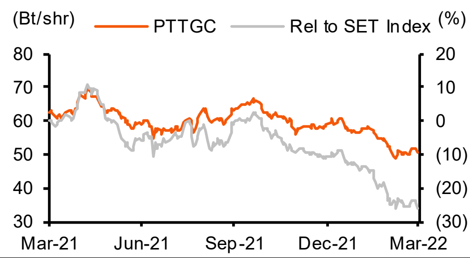
Earnings revisions

We raise our reported earnings estimate for 2022F by 14% on the higher-than-expected GRM spike and a Bt4bn inventory gain. However, we only fine tune up our earnings by 3-4% in 2023-24F. Our DCF-based 12-month TP, using a 2023F base year, is raised slightly to Bt58 (from Bt56). Exhibits 5-6 show our earnings revision assumptions.

COMPANY VALUATION

Y/E Dec (Bt m)	2021A	2022F	2023F	2024F
Sales	465,128	627,450	533,400	520,860
Net profit	44,982	26,808	24,032	29,088
Consensus NP	—	26,137	28,159	29,142
Diff frm cons (%)	—	*2.6*	*(14.7)*	*(0.2)*
Norm profit	28,295	22,808	24,032	29,088
Prev. Norm profit	—	23,442	23,380	28,089
Chg frm prev (%)	—	*(2.7)*	*2.8*	*3.6*
Norm EPS (Bt)	6.3	5.1	5.3	6.5
Norm EPS grw (%)	270.7	(19.4)	5.4	21.0
Norm PE (x)	8.1	10.0	9.5	7.9
EV/EBITDA (x)	7.9	7.7	7.2	5.9
P/BV (x)	0.7	0.7	0.7	0.6
Div yield (%)	7.4	4.9	4.7	5.7
ROE (%)	9.4	7.0	7.1	8.3
Net D/E (%)	58.0	50.8	42.1	32.3

PRICE PERFORMANCE



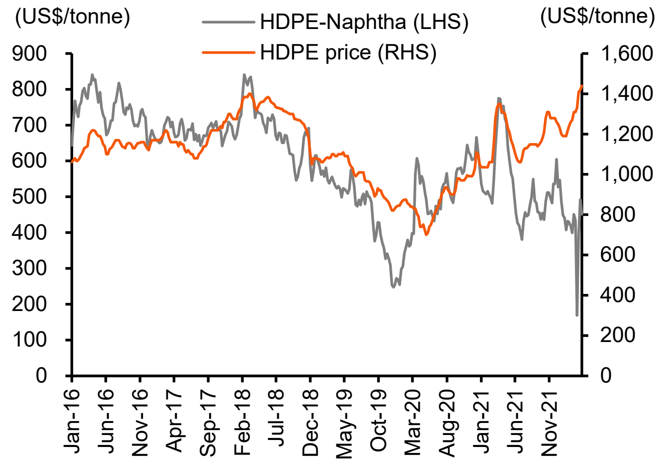
COMPANY INFORMATION

Price *as of* 31-Mar-22 (Bt)	50.75
Market Cap (US$ m)	6,882.5
Listed Shares (m shares)	4,508.8
Free Float (%)	54.3
Avg Daily Turnover (US$ m)	31.2
12M Price H/L (Bt)	69.50/48.75
Sector	PETRO
Major Shareholder	PTT Pcl 45.18%

Sources: Bloomberg, Company data, Thanachart estimates

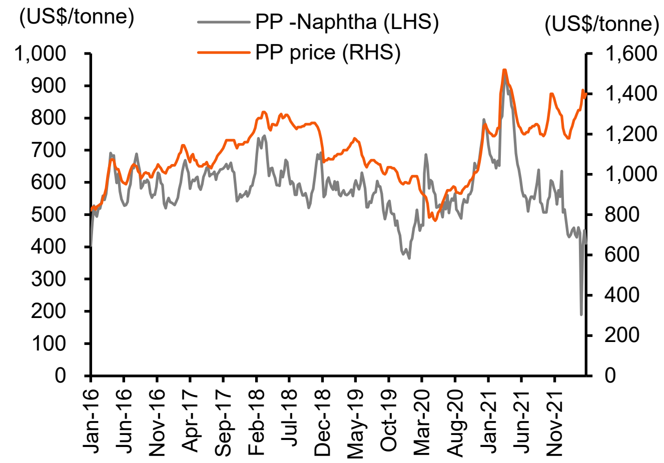
This report is prepared by Thanachart Securities. Please contact our salesperson for authorisation. Please see the important notice on the back page

Ex 1: HDPE-Naphtha Spread Starts To Bounce



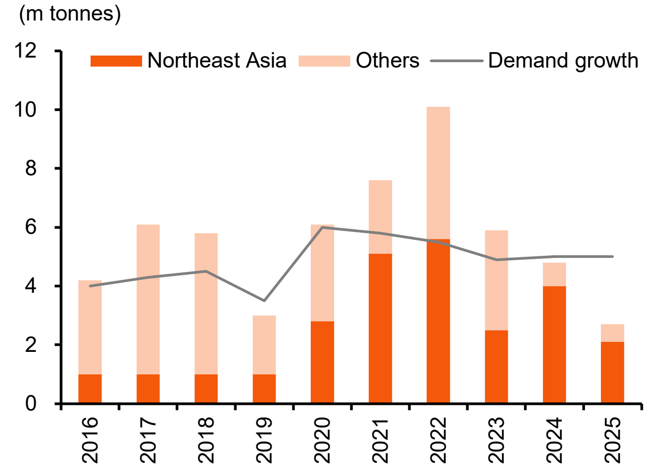
Source: Bloomberg

Ex 2: And Also PP-naphtha Spread



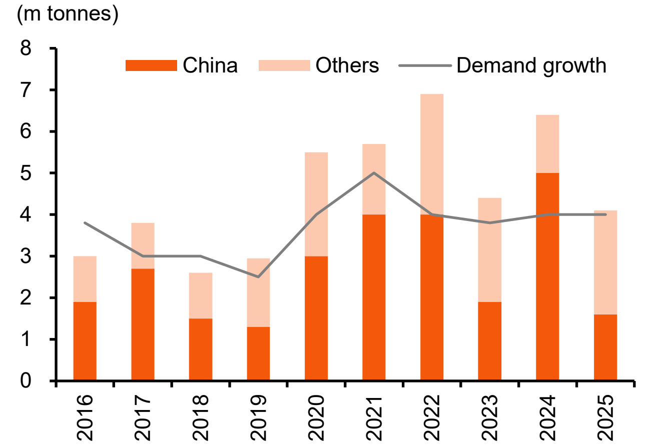
Source: Bloomberg

Ex 3: Global PE Supply Peaking Out



Source: PTTGC

Ex 4: As Is Global PP Supply



Source: IRPC

Ex 5: Spread Assumption Revisions

					New			Old			*Change (%)*		
	2020	2021	1Q22	Mar-22	2022F	2023F	2024F	2022F	2023F	2024F	*2022F*	*2023F*	*2024F*
(US$/tonne)													
HDPE-naphtha	506	630	413	377	450	500	550	480	530	590	*(6.3)*	*(5.7)*	*(6.8)*
LLDPE-naphtha	479	630	437	389	505	550	600	500	550	600	*1.1*	*0.0*	*0.0*
LDPE-naphtha	626	1,020	731	707	750	800	830	750	800	830	*0.0*	*0.0*	*0.0*
PP-naphtha	616	680	419	364	420	550	600	550	600	620	*(23.6)*	*(8.3)*	*(3.2)*
(US$/bbl)													
Gasoline-Dubai	4.4	11.0	16.9	22.0	16.5	13.0	12.0	13.5	12.0	12.0	*21.9*	*8.3*	*0.0*
Diesel-Dubai	6.2	6.7	17.6	33.8	19.1	14.0	14.0	13.0	13.0	13.0	*47.3*	*7.7*	*7.7*
Jet-Dubai	2.6	5.8	13.7	23.7	17.6	13.0	13.0	12.5	12.0	12.0	*41.1*	*8.3*	*8.3*
HSFO-Dubai	(3.0)	(4.9)	(8.9)	(10.3)	(7.7)	(8.0)	(8.0)	(8.0)	(8.0)	(8.0)	*(4.3)*	*0.0*	*0.0*
SG GRM	**0.7**	**3.1**	**7.4**	**12.5**	**7.3**	**5.5**	**5.2**	**5.7**	**5.4**	**5.1**	*27.9*	*2.0*	*0.5*

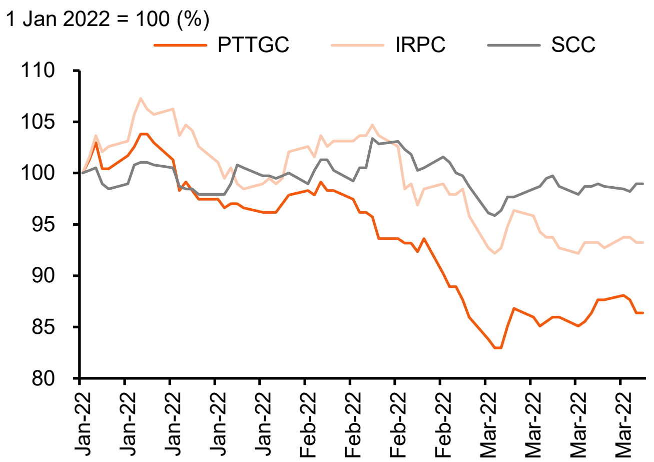
Sources: Bloomberg, Thanachart estimates

Ex 6: Earnings Revisions

(Bt m)	2021	2022F	2023F	2024F
Net Profit				
New	44,982	26,808	24,032	29,088
Old	44,982	23,442	23,380	28,089
Change (%)	*0.0*	*14.4*	*2.8*	*3.6*
Normalized profit				
New	28,295	22,808	24,032	29,088
Old	28,296	23,442	23,380	28,089
Change (%)	*(0.0)*	*(2.7)*	*2.8*	*3.6*

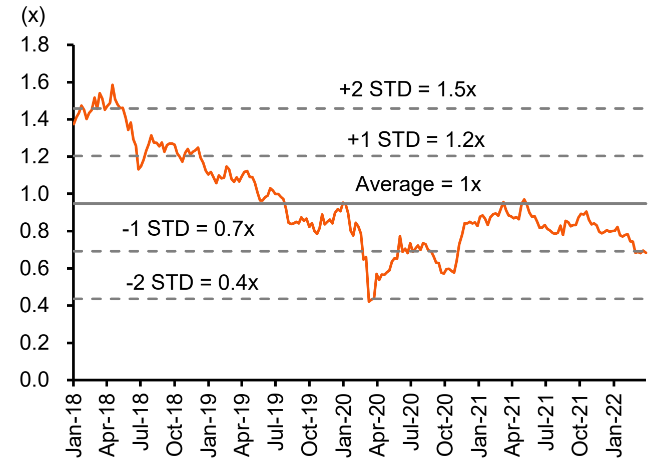
Sources: Company data, Thanachart estimates

Ex 7: PTTGC's Share Price Has Underperformed



Source: Bloomberg

Ex 8: At Nearly -1STD P/BV Ratio



Sources: Bloomberg, Thanachart estimates

Ex 9: 12-month DCF-based TP Calculation, Using A Base Year Of 2023F

(Bt m)		2023F	2024F	2025F	2026F	2018F	2028F	2029F	2030F	2031F	2032F	2033F	Terminal Value
EBITDA & equity income		52,284	59,046	59,168	59,911	58,978	58,989	59,105	59,243	59,645	59,429	57,703	
Free cash flow		44,076	45,014	45,434	48,536	47,544	46,807	46,982	47,171	47,558	47,482	46,274	582,713
PV of free cash flow		36,985	34,588	31,975	30,635	27,371	24,571	22,494	20,599	18,942	16,468	14,577	183,560
Risk-free rate (%)	2.5												
Market risk premium (%)	8.0												
Beta	1.4												
WACC (%)	9.2												
Terminal growth (%)	2.0												
Enterprise value - add investments	462,762												
Net debt (end-2022F)	190,025												
Minority interest	10,127												
Equity value	262,611												
# of shares (m)	4,509												
Equity value/share (Bt)	**58**												

Source: Thanachart estimates

Valuation Comparison

Ex 10: Comparison With Regional Peers

Name	BBG code	Country	EPS growth 22F (%)	EPS growth 23F (%)	PE 22F (x)	PE 23F (x)	P/BV 22F (x)	P/BV 23F (x)	EV/EBITDA 22F (x)	EV/EBITDA 23F (x)	Div yield 22F (%)	Div yield 23F (%)
Sinopec Shanghai	338 HK	Hong Kong	(0.4)	(2.9)	6.7	6.9	0.6	0.5	5.0	5.0	7.4	8.8
Sinopec Yizheng	1033 HK	Hong Kong	(6.7)	17.9	22.9	19.4	1.5	1.4	10.1	9.7	0.0	0.0
AKR Corporindo	AKRA IJ	Indonesia	20.8	12.5	14.2	12.6	1.8	1.6	9.8	8.7	3.0	3.5
Reliance Industries Ltd	RIL IN	India	28.4	27.7	29.6	23.2	2.3	2.1	18.0	14.5	0.3	0.3
LG Chem	051910 KS	South Korea	(33.6)	29.1	15.6	12.1	1.5	1.4	6.9	5.7	2.1	2.0
SK Energy	096770 KS	South Korea	82.4	11.3	15.4	13.8	1.1	1.0	7.9	7.0	0.9	1.5
Petronas Chemicals Group	PCHEM MK	Malaysia	(3.1)	(7.3)	12.1	13.1	2.1	1.9	7.8	8.2	4.8	4.6
Formosa Chemical	1326 TT	Taiwan	(24.8)	(1.0)	15.1	15.3	1.2	1.2	12.3	12.2	6.5	5.0
Far Eastern New Century	1402 TT	Taiwan	3.9	9.9	13.4	12.2	0.7	0.7	11.6	11.0	5.5	5.6
IRPC Pcl *	IRPC TB *	Thailand	(70.7)	489.1	63.5	10.8	0.8	0.8	13.1	7.6	4.3	4.6
Indorama Ventures *	IVL TB *	Thailand	31.7	11.5	9.7	8.7	1.5	1.4	7.7	7.8	5.2	5.7
PTT Global Chemical *	PTTGC TB *	Thailand	(19.4)	5.4	10.0	9.5	0.7	0.7	7.7	7.2	4.9	4.7
Siam Cement *	SCC TB *	Thailand	(29.1)	46.0	13.8	9.4	1.2	1.1	12.8	8.8	3.6	5.3
TPI Polene	TPIPL TB	Thailand	(37.0)	0.0	9.6	9.6	0.6	0.6	9.5	9.7	na	4.9
Average			**(4.1)**	**46.4**	**18.0**	**12.6**	**1.3**	**1.2**	**10.0**	**8.8**	**3.7**	**4.0**

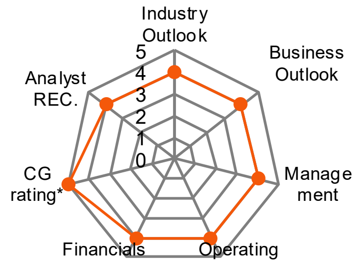
Sources: Bloomberg, * Thanachart estimates
Based on 31 March 2022 closing prices

COMPANY DESCRIPTION

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

Source: Thanachart

COMPANY RATING



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

Source: Thanachart; *CG Rating

THANACHART'S SWOT ANALYSIS

S — Strength

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

W — Weakness

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

O — Opportunity

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

T — Threat

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

CONSENSUS COMPARISON

	Consensus	Thanachart	Diff
Target price (Bt)	65.85	58.00	-12%
Net profit 22F (Bt m)	26,137	26,808	3%
Net profit 23F (Bt m)	28,159	24,032	-15%
Consensus REC	**BUY: 13**	**HOLD: 12**	**SELL: 1**

HOW ARE WE DIFFERENT FROM THE STREET?

- Our 2023F net profit is lower than consensus likely given our lower GRM assumption.
- Therefore, our target price is also lower than Bloomberg consensus.

Sources: Bloomberg consensus, Thanachart estimates

RISKS TO OUR INVESTMENT CASE

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

Source: Thanachart

Expect profit to improve in 2023F which chemical margins recovery

Balance sheet has grown following a major acquisition

INCOME STATEMENT

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
Sales	329,291	465,128	627,450	533,400	520,860
Cost of sales	308,527	416,647	574,664	485,304	467,166
Gross profit	**20,764**	**48,481**	**52,786**	**48,097**	**53,694**
% gross margin	6.3%	10.4%	8.4%	9.0%	10.3%
Selling & administration expenses	14,881	18,878	25,466	21,649	21,140
Operating profit	**5,883**	**29,603**	**27,320**	**26,448**	**32,554**
% operating margin	1.8%	6.4%	4.4%	5.0%	6.3%
Depreciation & amortization	20,292	23,092	25,001	25,836	26,492
EBITDA	**26,174**	**52,695**	**52,321**	**52,284**	**59,046**
% EBITDA margin	7.9%	11.3%	8.3%	9.8%	11.3%
Non-operating income	2,283	4,931	4,931	4,931	4,931
Non-operating expenses	0	0	0	0	0
Interest expense	(3,511)	(5,434)	(6,918)	(5,900)	(5,285)
Pre-tax profit	**4,654**	**29,100**	**25,333**	**25,479**	**32,200**
Income tax	(109)	7,229	7,333	6,370	8,050
After-tax profit	**4,763**	**21,871**	**17,999**	**19,109**	**24,150**
% net margin	1.4%	4.7%	2.9%	3.6%	4.6%
Shares in affiliates' Earnings	3,323	6,992	5,574	5,574	5,574
Minority interests	(452)	(568)	(766)	(651)	(636)
Extraordinary items	(7,434)	16,687	4,000	0	0
NET PROFIT	**200**	**44,982**	**26,808**	**24,032**	**29,088**
Normalized profit	**7,634**	**28,295**	**22,808**	**24,032**	**29,088**
EPS (Bt)	0.0	10.0	5.9	5.3	6.5
Normalized EPS (Bt)	1.7	6.3	5.1	5.3	6.5

BALANCE SHEET

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
ASSETS:					
Current assets:	129,911	207,244	250,443	222,857	223,137
Cash & cash equivalent	60,658	74,994	70,000	70,000	75,000
Account receivables	29,277	50,540	68,178	57,959	56,596
Inventories	33,445	69,725	96,168	81,214	78,179
Others	6,531	11,985	16,097	13,684	13,362
Investments & loans	65,675	74,706	74,706	74,706	74,706
Net fixed assets	269,177	289,579	284,676	275,537	261,223
Other assets	24,620	182,585	182,585	182,585	182,585
Total assets	**489,383**	**754,115**	**792,411**	**755,686**	**741,652**
LIABILITIES:					
Current liabilities:	59,041	147,007	176,511	219,460	133,122
Account payables	20,114	69,951	96,480	81,477	78,432
Bank overdraft & ST loans	19	2,423	0	0	0
Current LT debt	22,017	37,835	40,000	100,000	20,000
Others current liabilities	16,892	36,797	40,031	37,983	34,689
Total LT debt	**126,261**	**224,760**	**203,378**	**119,367**	**175,140**
Others LT liabilities	15,086	54,746	71,435	62,132	60,892
Total liabilities	**200,389**	**426,512**	**451,324**	**400,960**	**369,154**
Minority interest	7,979	9,361	10,127	10,778	11,414
Preferreds shares	0	0	0	0	0
Paid-up capital	45,088	45,088	45,088	45,088	45,088
Share premium	36,937	36,937	36,937	36,937	36,937
Warrants	0	0	0	0	0
Surplus	(3,618)	5,235	5,235	5,235	5,235
Retained earnings	**202,608**	**230,982**	**243,699**	**256,688**	**273,824**
Shareholders' equity	281,015	318,242	330,959	343,948	361,084
Liabilities & equity	**489,383**	**754,115**	**792,411**	**755,686**	**741,652**

Sources: Company data, Thanachart estimates

With a lack of capacity expansion, we expect positive FCF over the next three years

At 0.7x P/BV, we see concern on lower gas feedstock priced in.

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
Earnings before tax	4,654	29,100	25,333	25,479	32,200
Tax paid	203	(5,976)	(7,604)	(6,216)	(8,245)
Depreciation & amortization	20,292	23,092	25,001	25,836	26,492
Chg In working capital	2,322	(7,707)	(17,552)	10,171	1,353
Chg In other CA & CL / minorities	4,056	21,870	4,914	5,785	2,797
Cash flow from operations	**31,527**	**60,380**	**30,092**	**61,054**	**54,597**
Capex	(24,905)	(43,495)	(20,097)	(16,698)	(12,177)
Right of use	(7,039)	(3,373)	0	0	0
ST loans & investments	2,144	485	53	0	0
LT loans & investments	226	(9,032)	0	0	0
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	(3,192)	(94,832)	20,690	(9,303)	(1,240)
Cash flow from investments	**(32,766)**	**(150,247)**	**645**	**(26,001)**	**(13,417)**
Debt financing	41,352	111,958	(21,641)	(24,010)	(24,228)
Capital increase	0	0	0	0	0
Dividends paid	(5,024)	(14,080)	(14,090)	(11,043)	(11,952)
Warrants & other surplus	9	6,324	0	0	0
Cash flow from financing	**36,338**	**104,203**	**(35,731)**	**(35,054)**	**(36,180)**
Free cash flow	**6,622**	**16,885**	**9,995**	**44,356**	**42,420**

VALUATION

FY ending Dec	2020A	2021A	2022F	2023F	2024F
Normalized PE (x)	30.0	8.1	10.0	9.5	7.9
Normalized PE - at target price (x)	34.3	9.2	11.5	10.9	9.0
PE (x)	1,146.4	5.1	8.5	9.5	7.9
PE - at target price (x)	1,310.2	5.8	9.8	10.9	9.0
EV/EBITDA (x)	12.1	7.9	7.7	7.2	5.9
EV/EBITDA - at target price (x)	13.3	8.6	8.3	7.9	6.5
P/BV (x)	0.8	0.7	0.7	0.7	0.6
P/BV - at target price (x)	0.9	0.8	0.8	0.8	0.7
P/CFO (x)	7.3	3.8	7.6	3.7	4.2
Price/sales (x)	0.7	0.5	0.4	0.4	0.4
Dividend yield (%)	2.0	7.4	4.9	4.7	5.7
FCF Yield (%)	2.9	7.4	4.4	19.4	18.5
(Bt)					
Normalized EPS	1.7	6.3	5.1	5.3	6.5
EPS	0.0	10.0	5.9	5.3	6.5
DPS	1.0	3.8	2.5	2.4	2.9
BV/share	62.3	70.6	73.4	76.3	80.1
CFO/share	7.0	13.4	6.7	13.5	12.1
FCF/share	1.5	3.7	2.2	9.8	9.4

Sources: Company data, Thanachart estimates

Net D/E remains relatively low

FINANCIAL RATIOS

FY ending Dec	2020A	2021A	2022F	2023F	2024F
Growth Rate					
Sales (%)	(20.2)	41.3	34.9	(15.0)	(2.4)
Net profit (%)	(98.3)	22,436.0	(40.4)	(10.4)	21.0
EPS (%)	(98.3)	22,436.0	(40.4)	(10.4)	21.0
Normalized profit (%)	(6.5)	270.7	(19.4)	5.4	21.0
Normalized EPS (%)	(6.5)	270.7	(19.4)	5.4	21.0
Dividend payout ratio (%)	2,258.9	37.6	42.0	45.0	45.0
Operating performance					
Gross margin (%)	6.3	10.4	8.4	9.0	10.3
Operating margin (%)	1.8	6.4	4.4	5.0	6.3
EBITDA margin (%)	7.9	11.3	8.3	9.8	11.3
Net margin (%)	1.4	4.7	2.9	3.6	4.6
D/E (incl. minor) (x)	0.5	0.8	0.7	0.6	0.5
Net D/E (incl. minor) (x)	0.3	0.6	0.5	0.4	0.3
Interest coverage - EBIT (x)	1.7	5.4	3.9	4.5	6.2
Interest coverage - EBITDA (x)	7.5	9.7	7.6	8.9	11.2
ROA - using norm profit (%)	1.6	4.6	2.9	3.1	3.9
ROE - using norm profit (%)	2.7	9.4	7.0	7.1	8.3
DuPont					
ROE - using after tax profit (%)	1.7	7.3	5.5	5.7	6.9
- asset turnover (x)	0.7	0.7	0.8	0.7	0.7
- operating margin (%)	2.5	7.4	5.1	5.9	7.2
- leverage (x)	1.7	2.1	2.4	2.3	2.1
- interest burden (%)	57.0	84.3	78.5	81.2	85.9
- tax burden (%)	102.3	75.2	71.1	75.0	75.0
WACC (%)	9.2	9.2	9.2	9.2	9.2
ROIC (%)	1.6	6.0	3.8	3.9	4.9
NOPAT (Bt m)	6,021	22,249	19,411	19,836	24,416
invested capital (Bt m)	368,653	508,266	504,337	493,316	481,224

Sources: Company data, Thanachart estimates

SELL (Unchanged) | **TP: Bt 8.50** (From: Bt 8.40)

Change in Numbers | **Downside : 11.9%** | **1 APRIL 2022**

Small Cap Research

Star Petroleum Refining (SPRC TB)

Positives look priced in

We reaffirm our SELL rating on SPRC with a slightly higher TP of Bt8.5. SPRC is trading on a 1.0x P/BV ratio which we consider to be unattractive given our expectation of peaking GRM and SPRC's use of high crude premium input.

YUPAPAN POLPORNPRASERT
662-779-9110
yupapan.pol@thanachartsec.co.th

Reaffirming SELL

We maintain our SELL call on shares of SPRC. ***First,*** we see the recent refining margin surge on the back of the Russia-Ukraine war as being unsustainable and already in the price. SPRC's stock price has outperformed its peers' since Russia invaded Ukraine given its high leverage to refining margin. ***Second,*** we see SPRC's prevailing premium valuation as unjustified given its high reliance on more expensive Middle East crude which should make its GRM underperform rivals'. ***Third,*** we expect the company's profit to peak in 1Q22F driven by a strong GRM recovery and a substantial inventory gain.

High exposure to expensive crude

The rising Middle East crude premium should hit SPRC more than rivals given its significant reliance on expensive Middle East crude at around 90% of total crude input. This is compared to peers' 45% average. We foresee the Middle East crude premium staying high. ***First,*** European refiners are shunning Russian crude which would increase demand for Middle East crude. ***Second,*** the availability of such crude is becoming more constrained as OPEC+ has still not raised output aggressively. Note that the Arab Light premium has increased from $3.3/bbl in Jan 22 to record high level of US$4.95/bbl for April 2022 loading and likely another big jump of US$5/bbl to nearly US$10/bbl for May loading.

Refinery margin set to peak

We estimate SPRC's GRM to peak in 1Q22F at US$7.8/bbl vs. US$6.0/bbl in 4Q21. Going forward, we expect the margin to be flat or softer in 2Q22F as the strong crude premium wipes out the benefit from prevailing strong refinery margins. In this note, we factor in a 1Q22F inventory gain of Bt5bn and mark to market the strong GRM YTD while we raise SPRC's reported 2022F profit to Bt8bn from Bt2.5bn previously. We lift our 2023-24F profits by 2% as we factor in a stronger-than-anticipated jet spread recovery which causes our DCF-based 12-month TP, using a 2023F base year, to increase marginally by 1% to Bt8.5/share from Bt8.4.

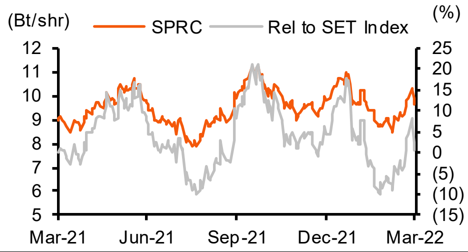
Premium valuations look unjustified

SPRC's share price has risen by 12% since Russia invaded Ukraine, outperforming peers by 4% to 18% (Exhibit 6). We regard its 1.0x P/BV ratio as demanding, especially as it is at around a 24% premium to Thai refinery peers' average of 0.9x. We see its premium valuation as unjustified given our expectation of a peaking of the GRM cycle and SPRC's hefty exposure to expensive Middle East crude. Our TP implies a P/BV of 0.9x which is similar to peers' average given that ROE is also in line with the average of its peers.

COMPANY VALUATION

Y/E Dec (Bt m)	2021A	2022F	2023F	2024F
Sales	172,484	216,140	205,289	212,689
Net profit	4,746	8,041	3,493	3,518
Consensus NP	—	4,060	4,883	6,012
Diff frm cons (%)	—	*98.0*	*(28.5)*	*(41.5)*
Norm profit	(1,542)	3,676	2,826	3,518
Prev. Norm profit	—	3,167	2,764	3,452
Chg frm prev (%)	—	*16.0*	*2.2*	*1.9*
Norm EPS (Bt)	(0.4)	0.8	0.7	0.8
Norm EPS grw (%)	na	na	(23.1)	24.5
Norm PE (x)	na	11.4	14.8	11.9
EV/EBITDA (x)	16.5	4.5	5.2	4.2
P/BV (x)	1.2	1.0	1.0	0.9
Div yield (%)	1.8	5.2	3.3	3.4
ROE (%)	na	9.8	6.8	8.0
Net D/E (%)	14.9	(6.6)	(17.1)	(25.0)

PRICE PERFORMANCE



COMPANY INFORMATION

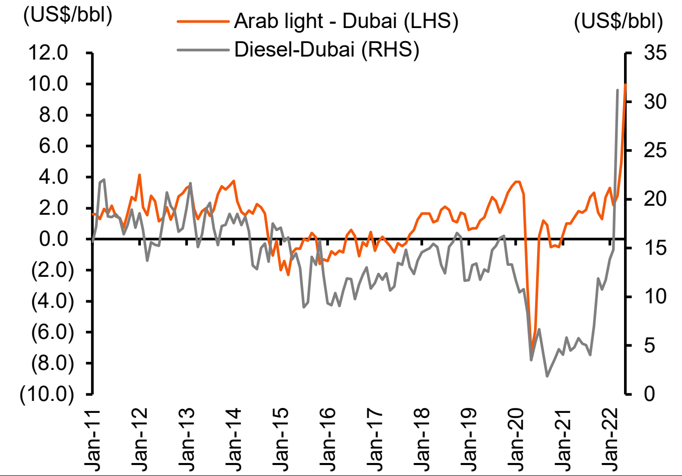
Price *as of* 31-Mar-22 (Bt)	9.65
Market Cap (US$ m)	1,258.5
Listed Shares (m shares)	4,335.9
Free Float (%)	39.4
Avg Daily Turnover (US$ m)	9.6
12M Price H/L (Bt)	11.20/7.85
Sector	Energy
Major Shareholder	Chevron Asia Holdings 60.56%

Sources: Bloomberg, Company data, Thanachart estimates

Thanachart Securities

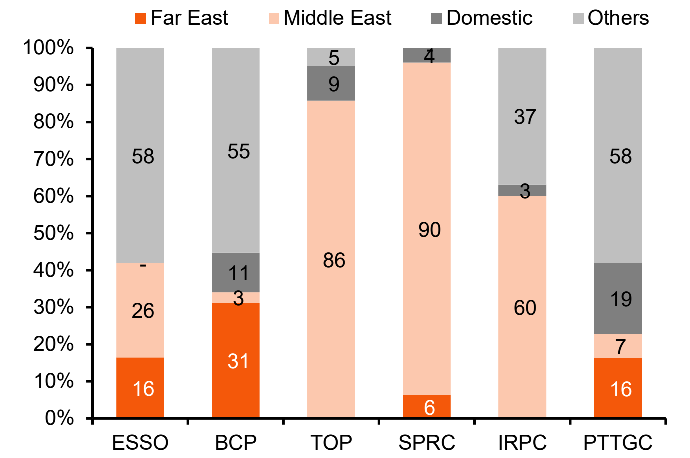
This report is prepared by Thanachart Securities. Please contact our salesperson for authorisation. Please see the important notice on the back page

Ex 1: Crude Premium Jump Dilutes High GRM Benefit



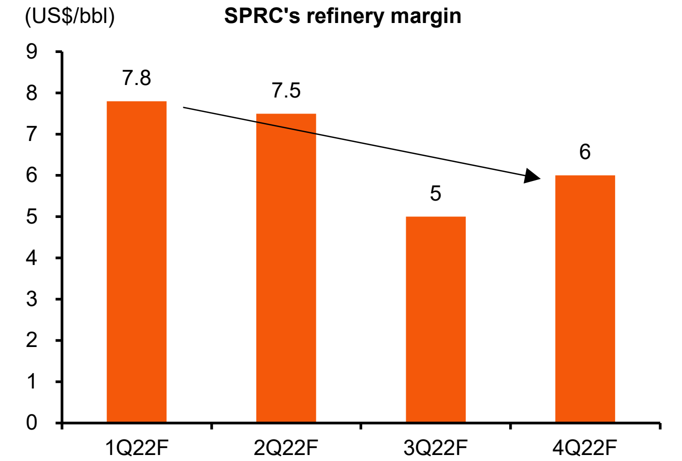
Source: Bloomberg

Ex 2: SPRC Exposed To Expensive Middle East Crude



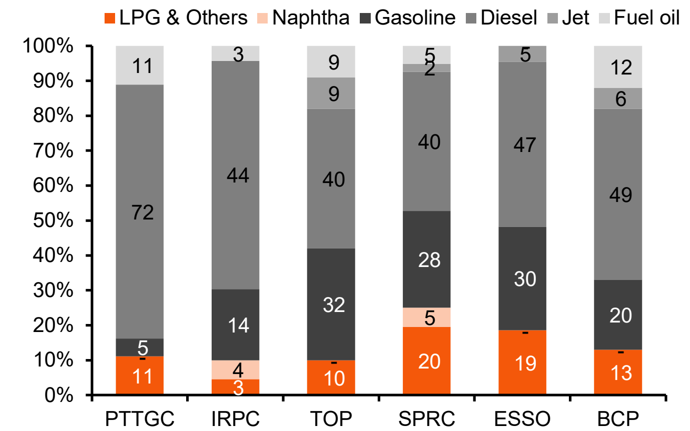
Source: DOEB

Ex 3: We Expect Market GRM To Peak In 1Q22



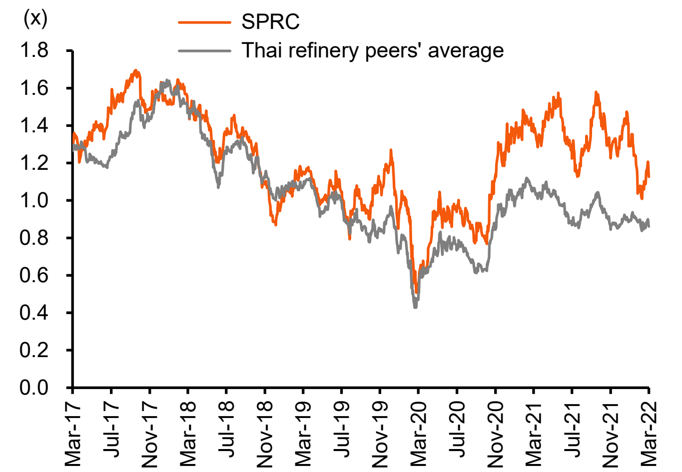
Sources: Company data, Thanachart estimates

Ex 4: SPRC Doesn't Have The Highest Diesel Yield



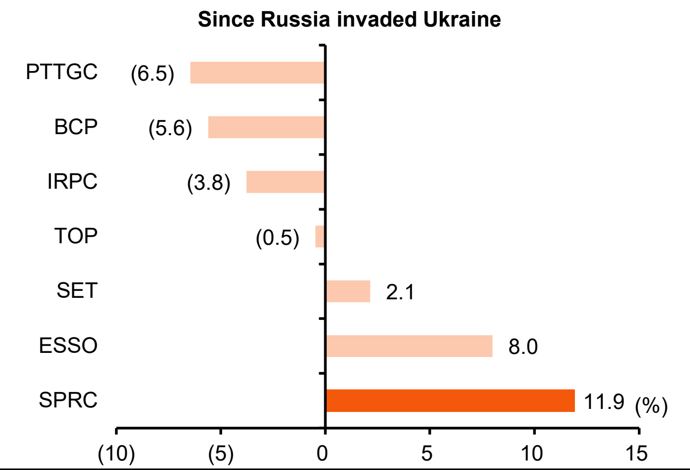
Sources: Companies

Ex 5: Premium P/BV To Peers' Should Close



Sources: Bloomberg, Thanachart estimates

Ex 6: SPRC Has Already Outperformed



Source: Bloomberg

Ex 7: Key Assumption Changes

					New			Old			Change (%)		
	2020	2021	1Q22	Mar-22	2022F	2023F	2024F	2022F	2023F	2024F	*2022F*	*2023F*	*2024F*
Gasoline-Dubai	4.4	11.0	16.9	22.0	16.5	13.0	12.0	13.5	12.0	12.0	*21.9*	*8.3*	*0.0*
Diesel-Dubai	6.2	6.7	17.6	33.8	19.1	14.0	14.0	13.0	13.0	13.0	*47.3*	*7.7*	*7.7*
Jet-Dubai	2.6	5.8	13.7	23.7	17.6	13.0	13.0	12.5	12.0	12.0	*41.1*	*8.3*	*8.3*
HSFO-Dubai	(3.0)	(4.9)	(8.9)	(10.3)	(7.7)	(8.0)	(8.0)	(8.0)	(8.0)	(8.0)	*(4.3)*	*0.0*	*0.0*
SG GRM	**0.7**	**3.1**	**7.4**	**12.5**	**7.3**	**5.5**	**5.2**	**5.7**	**5.4**	**5.1**	***27.9***	***2.0***	***0.5***

Sources: Bloomberg, Thanachart estimates

Ex 8: Profit Revisions

(Bt m)	2021	2022F	2023F	2024F
Net profit				
New	4,746	8,041	3,493	3,518
Old	4,746	2,467	3,431	3,452
Change (%)	*0.0*	*225.9*	*1.8*	*1.9*
Normalized profit				
New	(1,542)	3,676	2,826	3,518
Old	(1,542)	3,167	2,764	3,452
Change (%)	*0.0*	*16.0*	*2.2*	*1.9*

Sources: Company data, Thanachart estimates

Ex 9: 12-month DCF-based TP Calculation, Using A Base Year Of 2023F

(Bt m)		2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	Terminal Value
EBITDA + dividend		6,604	7,263	4,888	6,953	6,981	7,008	5,917	5,942	4,293	6,136	6,167	
Free cash flow		5,949	5,165	1,984	1,607	4,933	4,965	4,086	4,131	2,431	935	4,268	42,597
PV of free cash flow		4,904	3,864	1,347	969	2,689	2,446	1,819	1,662	884	293	1,204	12,012
Risk-free rate (%)	2.5												
Market risk premium (%)	8.0												
Beta	1.2												
WACC (%)	10.2												
Terminal growth (%)	1.0												
Enterprise value - add Investments	34,094												
Net debt (2022F)	(2,701)												
Minority interest	0												
Equity value	36,795												
# of shares (m)	4,336												
Equity value/sh (Bt)	**8.5**												

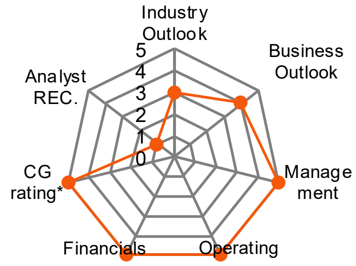
Sources: Thanachart estimates

COMPANY DESCRIPTION

Star Petroleum Refining Pcl's (SPRC) refinery produces petroleum products, which include LPG, premium and regular grades of unleaded gasoline, high-speed diesel, jet fuel and fuel oil, as well as petrochemical feedstocks used in the petrochemical industry, which include PGP, LPG, chemical-grade naphtha, mixed C4 and reformate. The company has refining capacity of 175K b/d.

Source: Thanachart

COMPANY RATING



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

Source: Thanachart; *CG Rating

THANACHART'S SWOT ANALYSIS

S — Strength

- Strong operator with a very high utilization rate and high plant reliability.
- Procurement, distribution, and technical support from parent Chevron.

W — Weakness

- Volatile earnings due to its pure refinery exposure.
- Lack of company-owned retail channel limits upside from domestic product placement and higher marketing margin.
- Limited growth potential to expand its refinery business given that Thailand is a net export country for refined oil products.

O — Opportunity

- Opportunities to upgrade and/or expand its refinery to meet higher local demand.
- Expansion into new businesses or securing its own retail channel.

T — Threat

- High oil prices could slow local demand and force it to sell in the lower-margin export market.
- Threat of substitutes such as electric vehicles may lower demand for oil products.

CONSENSUS COMPARISON

	Consensus	Thanachart	Diff
Target price (Bt)	11.25	8.50	-24%
Net profit 22F (Bt m)	4,060	8,041	98%
Net profit 23F (Bt m)	4,883	3,493	-28%
Consensus REC	**BUY: 14**	**HOLD: 3**	**SELL: 2**

HOW ARE WE DIFFERENT FROM THE STREET?

- We are significantly below the Bloomberg consensus with our 2023F earnings, likely as we assume lower GRM.
- Our DCF-based TP is consequently lower than the consensus number.

Sources: Bloomberg consensus, Thanachart estimates

RISKS TO OUR INVESTMENT CASE

- A sharply higher Singapore GRM may affect SPRC's operating results and represents the key upside risk to our call.
- Prolonged low oil prices would decrease SPRC's cash costs and positively affect its profits, posing a secondary upside risk to our call.

Source: Thanachart

We expect a core earnings recovery from 2022F, but lower in 2023F.

Balance sheet remains strong despite a difficult operating environment

INCOME STATEMENT

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
Sales	130,163	172,484	216,140	205,289	212,689
Cost of sales	137,169	171,528	209,452	200,722	207,489
Gross profit	**(7,006)**	**956**	**6,688**	**4,567**	**5,200**
% gross margin	-5.4%	0.6%	3.1%	2.2%	2.4%
Selling & administration expenses	911	749	881	881	881
Operating profit	**(7,916)**	**207**	**5,807**	**3,686**	**4,320**
% operating margin	-6.1%	0.1%	2.7%	1.8%	2.0%
Depreciation & amortization	2,832	2,644	2,874	2,918	2,944
EBITDA	**(5,084)**	**2,851**	**8,681**	**6,604**	**7,263**
% EBITDA margin	-3.9%	1.7%	4.0%	3.2%	3.4%
Non-operating income	71	62	40	70	103
Non-operating expenses	143	(433)	0	0	0
Interest expense	(177)	(212)	(169)	(65)	(33)
Pre-tax profit	**(7,880)**	**(376)**	**5,678**	**3,691**	**4,389**
Income tax	(1,555)	1,166	2,002	865	871
After-tax profit	**(6,325)**	**(1,542)**	**3,676**	**2,826**	**3,518**
% net margin	-4.9%	-0.9%	1.7%	1.4%	1.7%
Shares in affiliates' Earnings	0	0	0	0	0
Minority interests	0	0	0	0	0
Extraordinary items	(5,955)	6,288	4,365	667	0
NET PROFIT	**(12,280)**	**4,746**	**8,041**	**3,493**	**3,518**
Normalized profit	**(6,325)**	**(1,542)**	**3,676**	**2,826**	**3,518**
EPS (Bt)	(2.8)	1.1	1.9	0.8	0.8
Normalized EPS (Bt)	(1.5)	(0.4)	0.8	0.7	0.8

BALANCE SHEET

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
ASSETS:					
Current assets:	19,323	32,731	35,497	38,112	41,623
Cash & cash equivalent	1,635	2,945	5,000	9,000	11,500
Account receivables	8,515	13,219	13,217	12,554	13,006
Inventories	9,052	16,486	17,178	16,462	17,017
Others	121	81	101	96	100
Investments & loans	0	0	0	0	0
Net fixed assets	24,156	24,219	23,045	20,827	18,583
Other assets	3,062	1,776	2,202	2,096	2,169
Total assets	**46,541**	**58,726**	**60,744**	**61,036**	**62,375**
LIABILITIES:					
Current liabilities:	10,740	20,031	16,825	15,891	16,292
Account payables	7,821	13,961	14,456	13,853	14,320
Bank overdraft & ST loans	0	0	0	0	0
Current LT debt	1,380	4,680	345	254	47
Others current liabilities	1,539	1,390	2,024	1,783	1,924
Total LT debt	**8,857**	**3,374**	**1,954**	**1,442**	**268**
Others LT liabilities	517	950	1,024	1,052	1,049
Total liabilities	**20,114**	**24,355**	**19,804**	**18,385**	**17,609**
Minority interest	0	0	0	0	0
Preferreds shares	0	0	0	0	0
Paid-up capital	30,004	30,004	30,004	30,004	30,004
Share premium	978	978	978	978	978
Warrants	0	0	0	0	0
Surplus	(7,447)	(4,207)	(4,207)	(4,207)	(4,207)
Retained earnings	**2,892**	**7,596**	**14,166**	**15,876**	**17,992**
Shareholders' equity	26,427	34,371	40,941	42,651	44,767
Liabilities & equity	**46,541**	**58,726**	**60,744**	**61,036**	**62,375**

Sources: Company data, Thanachart estimates

We expect a FCF improvement from this year

We believe a GRM recovery looks priced in

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
Earnings before tax	(7,880)	(376)	5,678	3,691	4,389
Tax paid	1,555	(1,166)	(2,002)	(865)	(871)
Depreciation & amortization	2,832	2,644	2,874	2,918	2,944
Chg In w orking capital	1,736	(5,999)	(195)	777	(540)
Chg In other CA & CL / minorities	847	(171)	612	(236)	137
Cash flow from operations	**(910)**	**(5,068)**	**6,966**	**6,285**	**6,058**
Capex	(253)	(2,665)	(1,700)	(700)	(700)
Right of use	0	0	0	0	0
ST loans & investments	0	0	0	0	0
LT loans & investments	0	0	0	0	0
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	(7,191)	7,670	4,015	801	(75)
Cash flow from investments	**(7,444)**	**5,005**	**2,315**	**101**	**(775)**
Debt financing	3,738	(1,824)	(5,754)	(603)	(1,381)
Capital increase	0	0	0	0	0
Dividends paid	(271)	(774)	(1,471)	(1,783)	(1,402)
Warrants & other surplus	6,502	3,971	0	0	0
Cash flow from financing	**9,969**	**1,373**	**(7,225)**	**(2,386)**	**(2,783)**
Free cash flow	**(1,163)**	**(7,733)**	**5,266**	**5,585**	**5,358**

VALUATION

FY ending Dec	2020A	2021A	2022F	2023F	2024F
Normalized PE (x)	na	na	11.4	14.8	11.9
Normalized PE - at target price (x)	na	na	10.0	13.0	10.5
PE (x)	na	8.8	5.2	12.0	11.9
PE - at target price (x)	na	7.8	4.6	10.6	10.5
EV/EBITDA (x)	na	16.5	4.5	5.2	4.2
EV/EBITDA - at target price (x)	na	14.7	3.9	4.5	3.5
P/BV (x)	1.6	1.2	1.0	1.0	0.9
P/BV - at target price (x)	1.4	1.1	0.9	0.9	0.8
P/CFO (x)	(46.0)	(8.3)	6.0	6.7	6.9
Price/sales (x)	0.3	0.2	0.2	0.2	0.2
Dividend yield (%)	0.0	1.8	5.2	3.3	3.4
FCF Yield (%)	(2.8)	(18.5)	12.6	13.3	12.8
(Bt)					
Normalized EPS	(1.5)	(0.4)	0.8	0.7	0.8
EPS	(2.8)	1.1	1.9	0.8	0.8
DPS	0.0	0.2	0.5	0.3	0.3
BV/share	6.1	7.9	9.4	9.8	10.3
CFO/share	(0.2)	(1.2)	1.6	1.4	1.4
FCF/share	(0.3)	(1.8)	1.2	1.3	1.2

Sources: Company data, Thanachart estimates

ROE to remain in low territory despite an improving outlook

FINANCIAL RATIOS

FY ending Dec	2020A	2021A	2022F	2023F	2024F
Growth Rate					
Sales (%)	(22.9)	32.5	25.3	(5.0)	3.6
Net profit (%)	na	na	69.4	(56.6)	0.7
EPS (%)	na	na	69.4	(56.6)	0.7
Normalized profit (%)	na	na	na	(23.1)	24.5
Normalized EPS (%)	na	na	na	(23.1)	24.5
Dividend payout ratio (%)	0.0	16.3	27.0	40.0	40.0
Operating performance					
Gross margin (%)	(5.4)	0.6	3.1	2.2	2.4
Operating margin (%)	(6.1)	0.1	2.7	1.8	2.0
EBITDA margin (%)	(3.9)	1.7	4.0	3.2	3.4
Net margin (%)	(4.9)	(0.9)	1.7	1.4	1.7
D/E (incl. minor) (x)	0.4	0.2	0.1	0.0	0.0
Net D/E (incl. minor) (x)	0.3	0.1	(0.1)	(0.2)	(0.2)
Interest coverage - EBIT (x)	na	1.0	34.3	56.5	131.5
Interest coverage - EBITDA (x)	na	13.5	51.3	101.2	221.1
ROA - using norm profit (%)	na	na	6.2	4.6	5.7
ROE - using norm profit (%)	na	na	9.8	6.8	8.0
DuPont					
ROE - using after tax profit (%)	na	na	9.8	6.8	8.0
- asset turnover (x)	2.6	3.3	3.6	3.4	3.4
- operating margin (%)	na	na	2.7	1.8	2.1
- leverage (x)	1.7	1.7	1.6	1.5	1.4
- interest burden (%)	102.3	229.4	97.1	98.3	99.3
- tax burden (%)	na	na	64.7	76.6	80.2
WACC (%)	10.2	10.2	10.2	10.2	10.2
ROIC (%)	(20.2)	0.6	11.8	7.7	9.8
NOPAT (Bt m)	(7,916)	207	4,649	2,954	3,462
invested capital (Bt m)	35,029	39,480	38,240	35,347	33,582

Sources: Company data, Thanachart estimates

SELL (Unchanged)

Change in Numbers

TP: Bt 45.00 (From: Bt 46.00)

Downside : 13.0%

1 APRIL 2022

Thanachart Securities

Thai Oil Public Co Ltd (TOP TB)

Still not attractive

YUPAPAN POLPORNPRASERT
662-779-9110
yupapan.pol@thanachartsec.co.th

We reaffirm our SELL call on TOP with a lower TP of Bt45. TOP's 2022-23F PE of 12x/16x looks expensive to us given a peaking GRM outlook, pressure from a high crude premium, and a lackluster margin outlook for the aromatics and lube-base business.

Reaffirm SELL

We maintain our SELL rating on TOP. ***Firstly,*** we expect profit to weaken from 2Q22F onward as refining margin looks set to peak while costs will be be pressured by a surge in the Middle East crude premium. ***Second,*** aromatics and lube-base spreads (62% of GIM) should continue to be low given ongoing supply pressure. ***Third***, despite stronger-than-expected refining margin YTD, we still expect TOP to generate negative FCF over the next two years. ***Finally,*** we see TOP's valuation as expensive at 12/16x PE in 2022-23F given the weak outlook. Additionally, its margin-enhancement Clean Fuel Project (CFP) is being delayed by at least 12 months with no firm start-up date.

Peak GRM plus higher costs

We expect the benchmark Singapore GRM to peak this year due to an unsustainable jump from the Russian-Ukraine war and a looming new supply cycle from 2022F onward. Exhibit 5 shows the industry's supply outlook. In addition, China has reversed its export-ban policy to allow refining product exports, which should help relieve tightness of diesel in Europe. TOP also uses a high mix (86% of crude input in 2022F) of Middle East crude which has a higher crude premium vs. the Dubai benchmark. The crude premium is now substantially higher than last year and we expect this to erode the benefit from the jump in the GRM benchmark. TOP is impacted by a higher crude premium more than peers (only a 45% mix of expensive crude).

Lackluster lube and aromatics spreads

While GRM is peaking out, aromatics spreads remain under pressure due to the oversupply outlook during 2022-24F. Lube-base spread is also under pressure from higher supply due to a higher refinery utilization rate. The Px-naphtha spread is now at US$157/tonne, a 19% fall from the 4Q21 average. Lube-base spread is at US$439/tonne, or a 34% fall from the 4Q21 average.

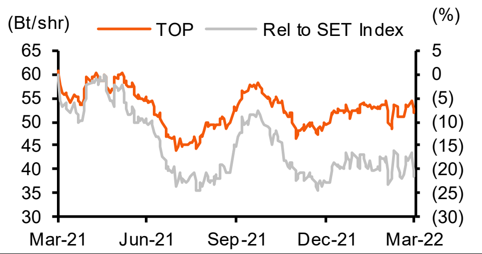
Earnings revisions

We boost our reported earnings significantly for TOP in 2022F to Bt28bn from Bt6.8bn previously as we increase our Singapore complex refining margin assumption to US$7.3/bbl (from US$5.7) and factor in a Bt10bn inventory gain, and a Bt11bn gain from lowering its stake in Global Power Synergy Public (GPSC TB, HOLD, Bt72.5) to 10% from 20.8%. But we trim our 2023-24F profits by 2/1% on lower forecast profits for Chandra Asri and GPSC. Please see Nuttapop Prasitsuksant's *GPSC – Adding to adversity,* dated 18 March 2022. Therefore, our DCF-based 12-month TP (2023F base year), falls marginally to Bt45 (from Bt46).

COMPANY VALUATION

Y/E Dec (Bt m)	2021A	2022F	2023F	2024F
Sales	345,496	416,870	366,105	359,336
Net profit	12,578	27,591	6,512	6,868
Consensus NP	—	12,676	10,552	12,358
Diff frm cons (%)	—	*117.7*	*(38.3)*	*(44.4)*
Norm profit	5,583	8,591	6,512	6,868
Prev. Norm profit	—	6,363	6,621	6,918
Chg frm prev (%)	—	*35.0*	*(1.6)*	*(0.7)*
Norm EPS (Bt)	2.7	4.2	3.2	3.4
Norm EPS grw (%)	na	53.9	(24.2)	5.5
Norm PE (x)	18.9	12.3	16.2	15.4
EV/EBITDA (x)	15.0	12.7	17.2	13.0
P/BV (x)	0.9	0.7	0.7	0.7
Div yield (%)	5.0	5.8	2.5	2.6
ROE (%)	4.7	6.5	4.5	4.7
Net D/E (%)	112.8	112.7	134.2	128.3

PRICE PERFORMANCE



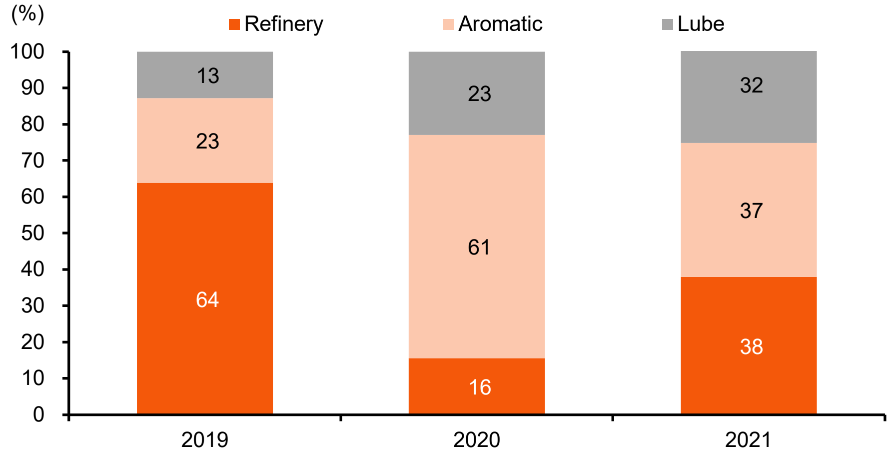
COMPANY INFORMATION

Price *as of* 31-Mar-22 (Bt)	51.75
Market Cap (US$ m)	3,175.4
Listed Shares (m shares)	2,040.0
Free Float (%)	52.0
Avg Daily Turnover (US$ m)	23.0
12M Price H/L (Bt)	60.75/44.00
Sector	Energy
Major Shareholder	PTT Pcl 45.03%

Sources: Bloomberg, Company data, Thanachart estimates

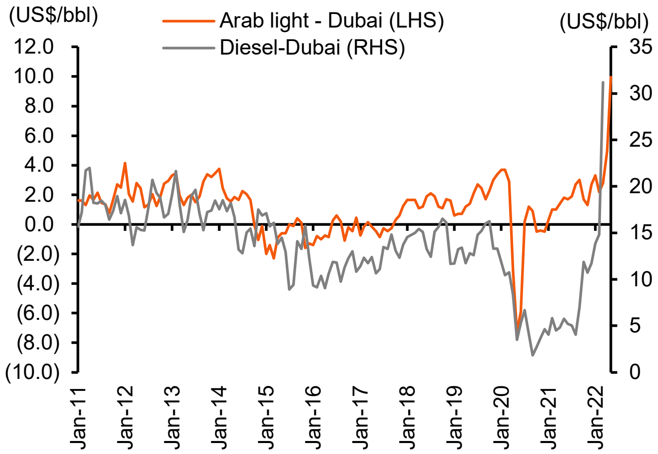
This report is prepared by Thanachart Securities. Please contact our salesperson for authorisation. Please see the important notice on the back page

Ex 1: TOP's Gross Integrated Margin (GIM) Breakdown



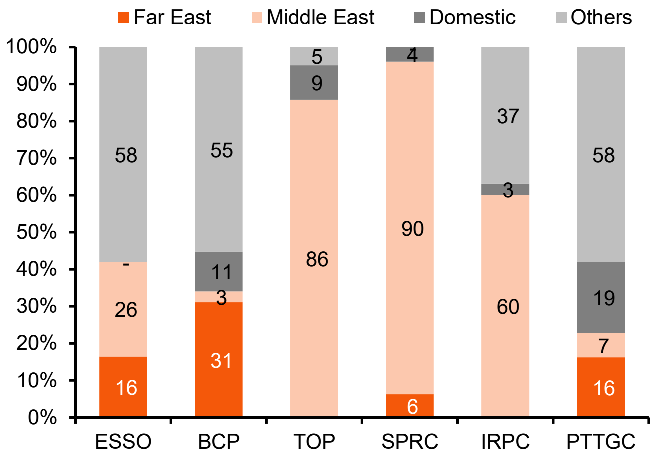
Source: Company data

Ex 2: Crude Premium Jump Dilutes High GRM Benefit



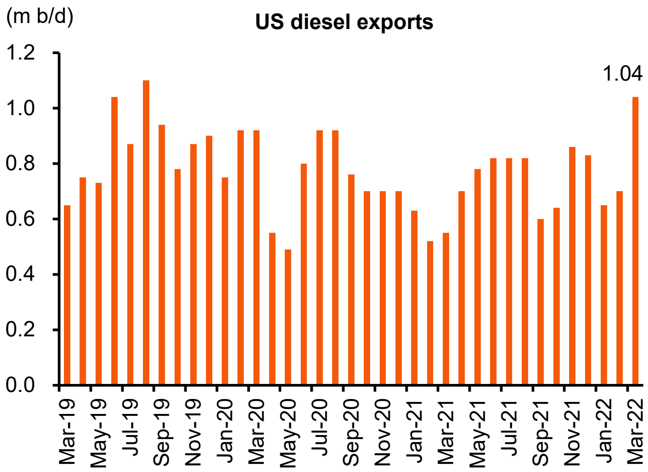
Source: Bloomberg

Ex 3: High Exposure To Expensive Middle East Crude



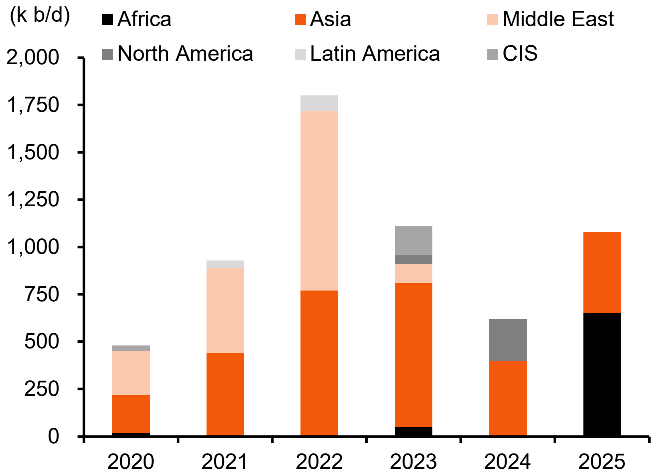
Source: Department of Energy Business (DOEB)

Ex 4: US Diesel Exports Set To Reach Over 2-Year High



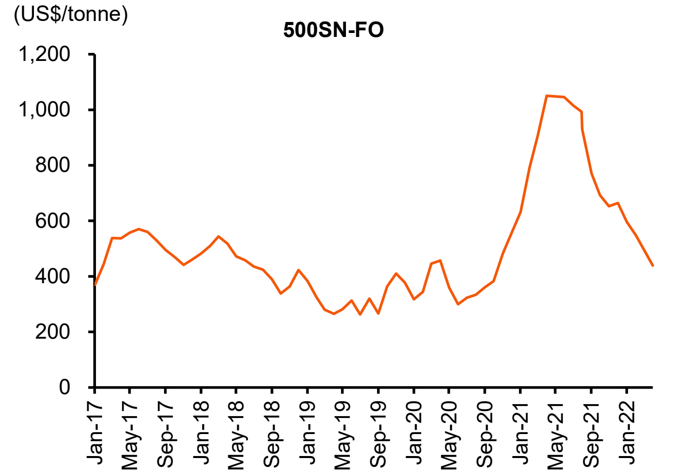
Sources: Company data, Thanachart estimates

Ex 5: New Supply Additions



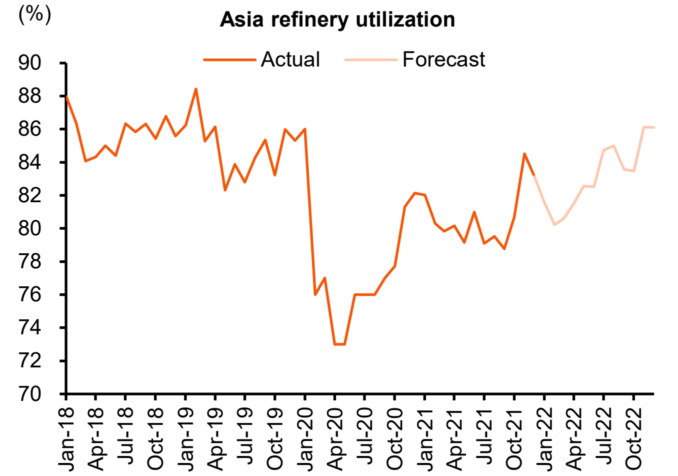
Sources: Company data, Thanachart estimates

Ex 6: Lube Base Spread Is Normalizing…



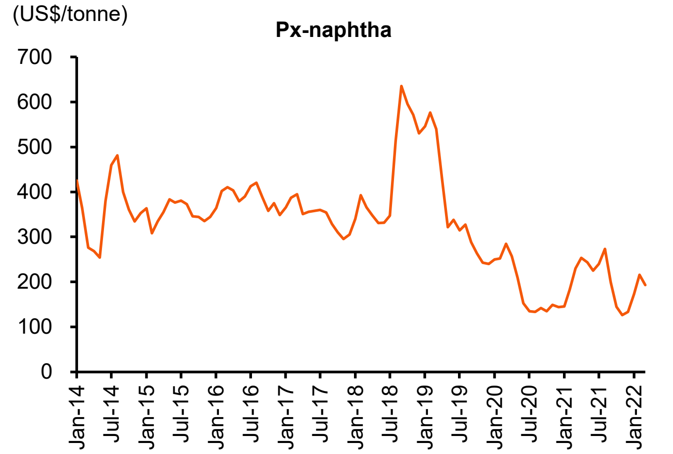
Source: TOP

Ex 7: …Given More Feedstock Availability



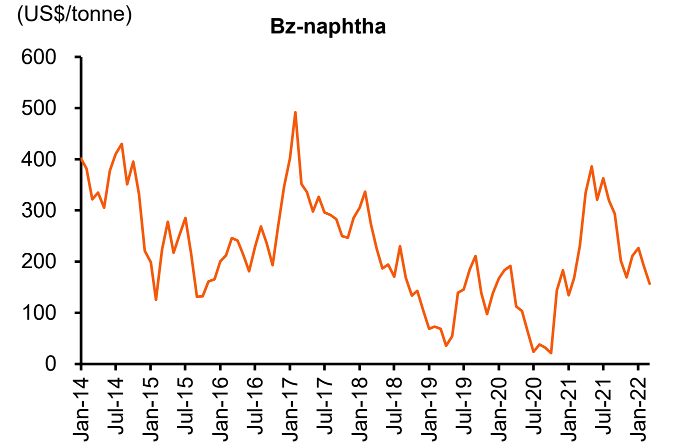
Source: TOP

Ex 8: PX-naphtha Spread To Remain Weak…



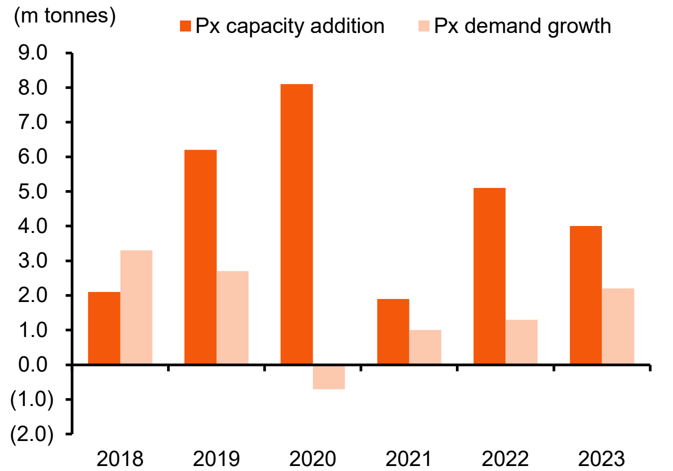
Source: Bloomberg

Ex 9: …And The Same Goes For Benzene-naphtha Spread



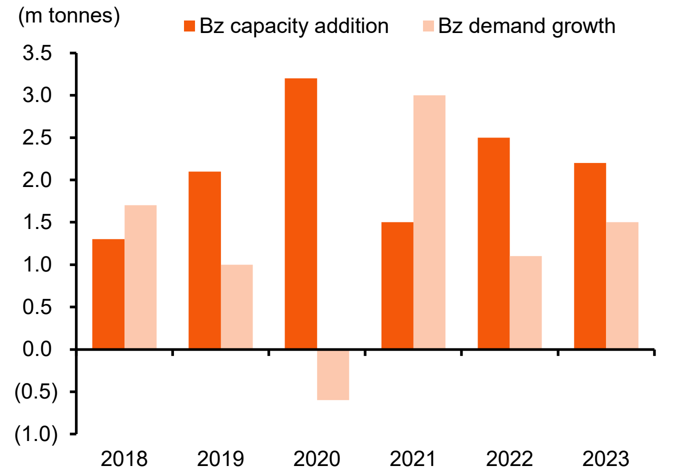
Source: Bloomberg

Ex 10: PX With Overwhelming Supply Growth



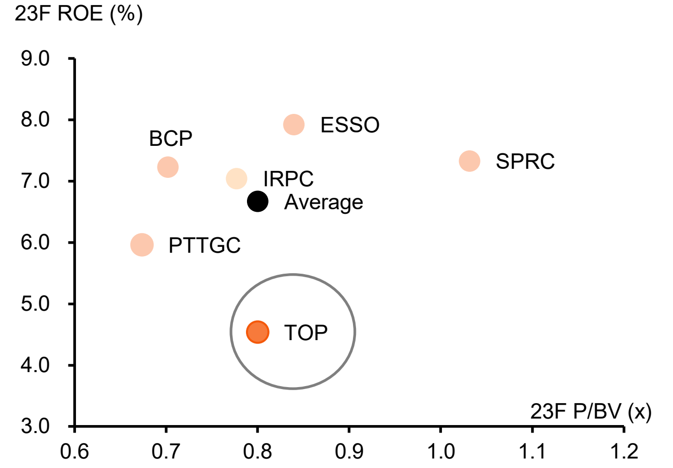
Source: TOP

Ex 11: Similar Outlook For Benzene



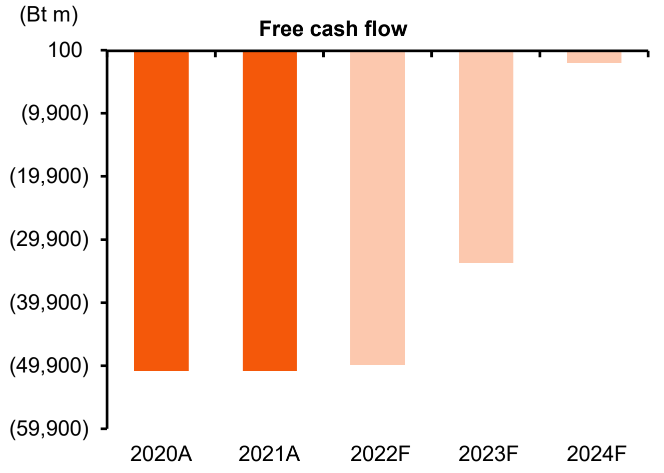
Source: TOP

Ex 12: TOP's P/BV Vs. ROE



Sources: Bloomberg, Thanachart estimates

Ex 13: TOP's FCF Still Negative



Sources: Bloomberg, Thanachart estimates

Ex 14: Key Assumption Changes

					New			Old			*Change (%)*		
	2020	2021	1Q22	Mar-22	2022F	2023F	2024F	2022F	2023F	2024F	*2022F*	*2023F*	*2024F*
Gasoline-Dubai	4.4	11.0	16.9	22.0	16.5	13.0	12.0	13.5	12.0	12.0	*21.9*	*8.3*	*0.0*
Diesel-Dubai	6.2	6.7	17.6	33.8	19.1	14.0	14.0	13.0	13.0	13.0	*47.3*	*7.7*	*7.7*
Jet-Dubai	2.6	5.8	13.7	23.7	17.6	13.0	13.0	12.5	12.0	12.0	*41.1*	*8.3*	*8.3*
HSFO-Dubai	(3.0)	(4.9)	(8.9)	(10.3)	(7.7)	(8.0)	(8.0)	(8.0)	(8.0)	(8.0)	*(4.3)*	*0.0*	*0.0*
SG GRM	**0.7**	**3.1**	**7.4**	**12.5**	**7.3**	**5.5**	**5.2**	**5.7**	**5.4**	**5.1**	***27.9***	***2.0***	***0.5***

Sources: Bloomberg, Thanachart estimates

Ex 15: Profit Revision Tables

(Bt m)	2021	2022F	2023F	2024F
Net Profit				
New	12,578	27,591	6,512	6,868
Old	12,578	6,363	6,621	6,918
Change (%)	*0.0*	*333.7*	*(1.6)*	*(0.7)*
Normalized profit				
New	5,583	8,591	6,512	6,868
Old	5,583	6,363	6,621	6,918
Change (%)	*0.0*	*35.0*	*(1.6)*	*(0.7)*

Sources: Company data, Thanachart estimates

Ex 16: 12-month DCF-based TP Calculation For Downstream Business, Using A Base Year Of 2023F

(Bt m)	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	Terminal Value
EBITDA	17,679	23,136	25,571	25,571	25,571	25,571	26,582	24,894	26,582	26,582	26,582	
Free cash flow	(25,103)	8,427	21,161	20,666	20,717	20,772	21,741	20,224	21,862	21,826	21,872	312,454
PV of free cash flow	(21,439)	6,649	15,428	13,630	12,573	11,597	11,168	9,559	9,508	8,336	7,654	109,338

Risk-free rate (%)	2.5
Market risk premium (%)	8.0
Beta	1.2
WACC (%)	8.2
Terminal growth (%)	2.0
Enterprise value - add investments	194,000
Net cash/(debt) (2022F)	138,789
Minority interest	2,726
Equity value	52,485
# of shares (m)	2,040
Equity value/share (Bt)	**26**

Sum-of-the-parts valuation	Value (Bt m)	Per share (Bt/shr)	% of total	Methodology
Downstream	52,485	26	58%	DCF
Power (GPSC)	10,898	5	12%	DCF
Chandra Asri	28,291	14	31%	BBG consensus
Total value per share	**91,674**	**45**		

Sources: Thanachart estimates

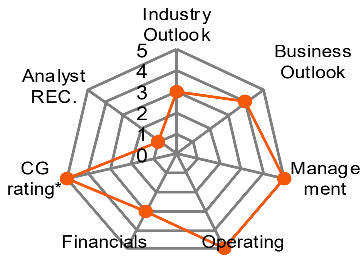
Note: Net debt position is for all businesses except GPSC, which is not consolidated

COMPANY DESCRIPTION

Thai Oil Pcl (TOP) is the flagship refinery under the PTT group which owns a 49% stake in the company. Its capacity of 275kbd makes up 25% of Thailand's total. With a Nelson complexity of 9.8, TOP produces 0.8m tpa of aromatics and 0.3m tpa of lube base oil and bitumen. The company also recently purchased a 15% stake in listed company Chandra Asri, one of the leading petrochemical complexes in Indonesia, which is also owned by SCC with a 30.5% stake. Its other businesses include power, marine transport and ethanol production.

Source: Thanachart

COMPANY RATING



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

Source: Thanachart; *CG Rating

THANACHART'S SWOT ANALYSIS

S — Strength

- Some of the lowest operating costs in the region.
- Being part of the PTT group gives TOP secured off-take agreements.

W — Weakness

- Volatile earnings due to commodity exposure especially in the refining business where demand outlook is weak.
- Weak balance sheet with substantial capex over the next two years due to the USD4bn investment in clean fuel project (CFP).

O — Opportunity

- Potential further chemical expansion following investment in Chandra Asri.
- Ability to upgrade derivatives into value-added plastic products.

T — Threat

- High oil prices could slow local demand and force it to sell in the lower-margin export market.
- Overpaying for acquisitions and higher-than-expected expansion costs.

CONSENSUS COMPARISON

	Consensus	Thanachart	Diff
Target price (Bt)	62.23	45.00	-28%
Net profit 22F (Bt m)	12,676	27,591	118%
Net profit 23F (Bt m)	10,552	6,512	-38%
Consensus REC	**BUY: 18**	**HOLD: 5**	**SELL: 3**

HOW ARE WE DIFFERENT FROM THE STREET?

- Our 22F earnings are above the Bloomberg consensus as we incorporate inventory gain, however, we are significantly below consensus for 2023F profit as we don't expect prevailing high GRM to sustain.
- Consequently, our DCF-based target price is also lower than the street.

Sources: Bloomberg consensus, Thanachart forecasts

RISKS TO OUR INVESTMENT CASE

- The key upside risk to our call is a higher-than-expected GRM or aromatics spread (chiefly PX) while a lower-than-expected light sweet crude premium would be a secondary upside risk to our call.
- Another secondary upside risk to our call would be lower oil prices, which would serve to decrease cash costs and raise profits.

Source: Thanachart

We expect earnings to decline in 2023F on weaker refinery margins.

INCOME STATEMENT

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
Sales	247,913	345,496	416,870	366,105	359,336
Cost of sales	255,300	333,614	398,538	352,386	343,604
Gross profit	**(7,387)**	**11,882**	**18,332**	**13,719**	**15,732**
% gross margin	-3.0%	3.4%	4.4%	3.7%	4.4%
Selling & administration expenses	2,650	3,056	4,586	4,027	3,953
Operating profit	**(10,037)**	**8,826**	**13,747**	**9,692**	**11,780**
% operating margin	-4.0%	2.6%	3.3%	2.6%	3.3%
Depreciation & amortization	7,554	7,424	7,454	7,987	11,356
EBITDA	**(2,483)**	**16,250**	**21,200**	**17,679**	**23,136**
% EBITDA margin	-1.0%	4.7%	5.1%	4.8%	6.4%
Non-operating income	1,115	1,136	1,370	1,203	1,181
Non-operating expenses	0	0	2,000	0	0
Interest expense	(4,292)	(3,595)	(4,148)	(4,565)	(6,321)
Pre-tax profit	**(13,215)**	**6,367**	**12,969**	**6,331**	**6,640**
Income tax	(647)	2,034	5,756	1,426	1,497
After-tax profit	**(12,568)**	**4,333**	**7,213**	**4,905**	**5,143**
% net margin	-5.1%	1.3%	1.7%	1.3%	1.4%
Shares in affiliates' Earnings	2,566	1,675	1,891	2,057	2,167
Minority interests	(419)	(425)	(513)	(450)	(442)
Extraordinary items	7,120	6,995	19,000	0	0
NET PROFIT	**(3,301)**	**12,578**	**27,591**	**6,512**	**6,868**
Normalized profit	**(10,421)**	**5,583**	**8,591**	**6,512**	**6,868**
EPS (Bt)	(1.6)	6.2	13.5	3.2	3.4
Normalized EPS (Bt)	(5.1)	2.7	4.2	3.2	3.4

Balance sheet looks stretched with major capex and an acquisition

BALANCE SHEET

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
ASSETS:					
Current assets:	114,229	101,239	82,434	78,832	77,443
Cash & cash equivalent	71,354	29,696	10,000	15,000	15,000
Account receivables	12,702	23,415	25,357	22,269	21,857
Inventories	22,461	39,576	36,758	32,502	31,692
Others	7,712	8,552	10,319	9,062	8,895
Investments & loans	24,521	55,412	55,412	55,412	55,412
Net fixed assets	145,225	178,399	233,646	261,025	264,826
Other assets	22,213	27,094	29,144	28,542	28,894
Total assets	**306,188**	**362,144**	**400,636**	**423,811**	**426,576**
LIABILITIES:					
Current liabilities:	28,620	38,476	46,327	47,168	47,721
Account payables	9,517	23,001	23,435	9,654	10,355
Bank overdraft & ST loans	713	929	957	1,176	1,160
Current LT debt	7,952	4,213	8,632	25,452	25,117
Others current liabilities	10,438	10,334	13,303	10,886	11,088
Total LT debt	**136,237**	**163,343**	**164,014**	**186,652**	**184,193**
Others LT liabilities	21,212	37,230	45,145	42,241	42,279
Total liabilities	**186,069**	**239,050**	**255,486**	**276,061**	**274,192**
Minority interest	3,889	2,213	2,726	3,177	3,619
Preferreds shares	0	0	0	0	0
Paid-up capital	20,400	20,400	20,400	20,400	20,400
Share premium	2,456	2,456	2,456	2,456	2,456
Warrants	0	0	0	0	0
Surplus	(2,557)	(7,805)	(8,141)	(8,141)	(8,141)
Retained earnings	**95,930**	**105,829**	**127,708**	**129,857**	**134,049**
Shareholders' equity	116,229	120,881	142,424	144,573	148,765
Liabilities & equity	**306,188**	**362,144**	**400,636**	**423,811**	**426,576**

Sources: Company data, Thanachart estimates

FCF to remain negative for many years due to a heavy capex schedule

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
Earnings before tax	(13,215)	6,367	12,969	6,331	6,640
Tax paid	871	(1,747)	(5,675)	(1,494)	(1,526)
Depreciation & amortization	7,554	7,424	7,454	7,987	11,356
Chg In w orking capital	2,096	(14,344)	1,310	(6,436)	1,922
Chg In other CA & CL / minorities	(1,806)	(7,818)	(1,135)	(4,614)	(5,160)
Cash flow from operations	**(4,500)**	**(10,117)**	**14,923**	**1,774**	**13,233**
Capex	(46,220)	(40,599)	(62,700)	(35,366)	(15,157)
Right of use	(14,729)	(2,402)	(500)	(500)	(500)
ST loans & investments	(8)	8	0	0	0
LT loans & investments	9,124	(30,891)	0	0	0
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	24,448	31,282	29,511	3,778	7,910
Cash flow from investments	**(27,385)**	**(42,602)**	**(33,689)**	**(32,088)**	**(7,747)**
Debt financing	27,070	18,988	5,118	39,677	(2,810)
Capital increase	0	0	0	0	0
Dividends paid	(1,020)	(2,652)	(5,712)	(4,362)	(2,676)
Warrants & other surplus	578	(5,274)	(336)	0	0
Cash flow from financing	**26,628**	**11,061**	**(930)**	**35,314**	**(5,486)**
Free cash flow	**(50,720)**	**(50,716)**	**(47,777)**	**(33,592)**	**(1,924)**

Don’t see prevailing valuations attractive, in our view.

VALUATION

FY ending Dec	2020A	2021A	2022F	2023F	2024F
Normalized PE (x)	na	18.9	12.3	16.2	15.4
Normalized PE - at target price (x)	na	16.4	10.7	14.1	13.4
PE (x)	na	8.4	3.8	16.2	15.4
PE - at target price (x)	na	7.3	3.3	14.1	13.4
EV/EBITDA (x)	na	15.0	12.7	17.2	13.0
EV/EBITDA - at target price (x)	na	14.2	12.0	16.4	12.4
P/BV (x)	0.9	0.9	0.7	0.7	0.7
P/BV - at target price (x)	0.8	0.8	0.6	0.6	0.6
P/CFO (x)	(23.5)	(10.4)	7.1	59.5	8.0
Price/sales (x)	0.4	0.3	0.3	0.3	0.3
Dividend yield (%)	1.4	5.0	5.8	2.5	2.6
FCF Yield (%)	(48.0)	(48.0)	(45.3)	(31.8)	(1.8)
(Bt)					
Normalized EPS	(5.1)	2.7	4.2	3.2	3.4
EPS	(1.6)	6.2	13.5	3.2	3.4
DPS	0.7	2.6	3.0	1.3	1.3
BV/share	57.0	59.3	69.8	70.9	72.9
CFO/share	(2.2)	(5.0)	7.3	0.9	6.5
FCF/share	(24.9)	(24.9)	(23.4)	(16.5)	(0.9)

Sources: Company data, Thanachart estimates

ROE likely to remain in low single-digit territory for many years

FINANCIAL RATIOS

FY ending Dec	2020A	2021A	2022F	2023F	2024F
Growth Rate					
Sales (%)	(31.9)	39.4	20.7	(12.2)	(1.8)
Net profit (%)	na	na	119.4	(76.4)	5.5
EPS (%)	na	na	119.4	(76.4)	5.5
Normalized profit (%)	na	na	53.9	(24.2)	5.5
Normalized EPS (%)	na	na	53.9	(24.2)	5.5
Dividend payout ratio (%)	(43.3)	42.2	22.2	40.0	40.0
Operating performance					
Gross margin (%)	(3.0)	3.4	4.4	3.7	4.4
Operating margin (%)	(4.0)	2.6	3.3	2.6	3.3
EBITDA margin (%)	(1.0)	4.7	5.1	4.8	6.4
Net margin (%)	(5.1)	1.3	1.7	1.3	1.4
D/E (incl. minor) (x)	1.2	1.4	1.2	1.4	1.4
Net D/E (incl. minor) (x)	0.6	1.1	1.1	1.3	1.3
Interest coverage - EBIT (x)	na	2.5	3.3	2.1	1.9
Interest coverage - EBITDA (x)	na	4.5	5.1	3.9	3.7
ROA - using norm profit (%)	na	1.7	2.3	1.6	1.6
ROE - using norm profit (%)	na	4.7	6.5	4.5	4.7
DuPont					
ROE - using after tax profit (%)	na	3.7	5.5	3.4	3.5
- asset turnover (x)	0.8	1.0	1.1	0.9	0.8
- operating margin (%)	na	2.9	4.1	3.0	3.6
- leverage (x)	2.5	2.8	2.9	2.9	2.9
- interest burden (%)	148.1	63.9	75.8	58.1	51.2
- tax burden (%)	na	68.1	55.6	77.5	77.5
WACC (%)	8.2	8.2	8.2	8.2	8.2
ROIC (%)	(6.2)	3.2	2.9	2.5	2.7
NOPAT (Bt m)	(10,037)	6,007	7,645	7,509	9,124
invested capital (Bt m)	189,777	259,670	306,027	342,853	344,235

Sources: Company data, Thanachart estimates

Bangchak Petroleum

INCOME STATEMENT

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
Sales	136,450	199,417	256,591	244,270	229,538
Cost of sales	132,122	179,179	225,586	222,857	209,694
Gross profit	**4,328**	**20,238**	**31,005**	**21,413**	**19,845**
% gross margin	3.2%	10.1%	12.1%	8.8%	8.6%
Selling & administration expenses	7,141	7,153	9,204	8,762	8,234
Operating profit	**(2,813)**	**13,085**	**21,801**	**12,651**	**11,611**
% operating margin	-2.1%	6.6%	8.5%	5.2%	5.1%
Depreciation & amortization	6,821	8,075	8,434	8,152	8,176
EBITDA	**4,008**	**21,159**	**30,235**	**20,803**	**19,787**
% EBITDA margin	2.9%	10.6%	11.8%	8.5%	8.6%
Non-operating income	533	(512)	1,279	1,279	1,279
Non-operating expenses	0	0	0	0	0
Interest expense	(1,969)	(2,540)	(2,865)	(2,851)	(2,918)
Pre-tax profit	**(4,250)**	**10,034**	**20,215**	**11,079**	**9,972**
Income tax	(1,589)	4,263	12,637	6,548	6,053
After-tax profit	**(2,661)**	**5,771**	**7,578**	**4,531**	**3,919**
% net margin	-2.0%	2.9%	3.0%	1.9%	1.7%
Shares in affiliates' Earnings	(592)	1,042	1,042	1,042	1,042
Minority interests	(1,197)	(2,221)	(2,273)	(1,359)	(1,176)
Extraordinary items	(2,517)	3,032	0	0	0
NET PROFIT	**(6,967)**	**7,624**	**6,347**	**4,214**	**3,785**
Normalized profit	**(4,450)**	**4,592**	**6,347**	**4,214**	**3,785**
EPS (Bt)	(5.1)	5.5	4.6	3.1	2.7
Normalized EPS (Bt)	(3.2)	3.3	4.6	3.1	2.7

BALANCE SHEET

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
ASSETS:					
Current assets:	47,296	69,372	66,507	65,111	62,419
Cash & cash equivalent	21,676	32,829	20,000	20,000	20,000
Account receivables	6,402	15,234	19,601	18,660	17,535
Inventories	16,162	18,497	23,288	23,006	21,647
Others	3,055	2,812	3,618	3,445	3,237
Investments & loans	15,586	14,070	14,070	14,070	14,070
Net fixed assets	54,567	69,233	99,799	116,848	115,872
Other assets	30,874	49,110	72,180	70,704	68,939
Total assets	**148,323**	**201,785**	**252,556**	**266,731**	**261,299**
LIABILITIES:					
Current liabilities:	25,502	34,105	43,535	45,734	42,994
Account payables	12,277	15,651	19,704	19,466	18,316
Bank overdraft & ST loans	3,975	1,257	5,521	6,092	5,831
Current LT debt	5,174	9,464	10,490	11,574	11,078
Others current liabilities	4,076	7,734	7,819	8,603	7,770
Total LT debt	**54,095**	**69,787**	**94,412**	**104,167**	**99,703**
Others LT liabilities	10,409	28,334	39,046	37,760	36,222
Total liabilities	**90,006**	**132,226**	**176,993**	**187,661**	**178,919**
Minority interest	11,950	16,092	18,366	19,725	20,901
Preferreds shares	0	0	0	0	0
Paid-up capital	1,377	1,377	1,377	1,377	1,377
Share premium	11,157	11,157	11,157	11,157	11,157
Warrants	0	0	0	0	0
Surplus	10,732	12,069	12,069	12,069	12,069
Retained earnings	**23,100**	**28,863**	**32,594**	**34,742**	**36,875**
Shareholders' equity	46,366	53,467	57,198	59,346	61,479
Liabilities & equity	**148,323**	**201,785**	**252,556**	**266,731**	**261,299**

Sources: Company data, Thanachart estimates

Bangchak Petroleum

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
Earnings before tax	(4,250)	10,034	20,215	11,079	9,972
Tax paid	1,589	(4,263)	(12,637)	(6,548)	(6,053)
Depreciation & amortization	6,821	8,075	8,434	8,152	8,176
Chg In working capital	1,139	(7,793)	(5,105)	985	1,334
Chg In other CA & CL / minorities	6,732	8,341	321	2,000	417
Cash flow from operations	**12,032**	**14,394**	**11,228**	**15,667**	**13,846**
Capex	(8,804)	(22,741)	(39,000)	(25,200)	(7,200)
Right of use	(11,087)	(2,538)	0	0	0
ST loans & investments	0	0	0	0	0
LT loans & investments	5,556	1,516	0	0	0
Adj for asset revaluation	(190)	0	0	0	0
Chg In other assets & liabilities	(1,248)	3,531	(12,358)	190	227
Cash flow from investments	**(15,773)**	**(20,231)**	**(51,358)**	**(25,010)**	**(6,973)**
Debt financing	15,935	17,513	29,917	11,408	(5,221)
Capital increase	0	0	0	0	0
Dividends paid	(743)	(2,672)	(2,616)	(2,065)	(1,652)
Warrants & other surplus	2,661	2,150	0	0	0
Cash flow from financing	**17,854**	**16,991**	**27,300**	**9,343**	**(6,873)**
Free cash flow	**3,227**	**(8,347)**	**(27,772)**	**(9,533)**	**6,646**

VALUATION

FY ending Dec	2020A	2021A	2022F	2023F	2024F
Normalized PE (x)	na	8.9	6.5	9.7	10.8
Normalized PE - at target price (x)	na	10.2	7.4	11.1	12.4
PE (x)	na	5.4	6.5	9.7	10.8
PE - at target price (x)	na	6.1	7.4	11.1	12.4
EV/EBITDA (x)	20.6	4.2	4.3	6.9	7.0
EV/EBITDA - at target price (x)	22.0	4.5	4.5	7.1	7.2
P/BV (x)	0.9	0.8	0.7	0.7	0.7
P/BV - at target price (x)	1.0	0.9	0.8	0.8	0.8
P/CFO (x)	3.4	2.8	3.6	2.6	3.0
Price/sales (x)	0.3	0.2	0.2	0.2	0.2
Dividend yield (%)	4.7	6.7	6.1	4.0	4.0
FCF Yield (%)	7.9	(20.4)	(67.8)	(23.3)	16.2
(Bt)					
Normalized EPS	(3.2)	3.3	4.6	3.1	2.7
EPS	(5.1)	5.5	4.6	3.1	2.7
DPS	1.4	2.0	1.8	1.2	1.2
BV/share	33.7	38.8	41.5	43.1	44.6
CFO/share	8.7	10.5	8.2	11.4	10.1
FCF/share	2.3	(6.1)	(20.2)	(6.9)	4.8

Sources: Company data, Thanachart estimates

Bangchak Petroleum

FINANCIAL RATIOS

FY ending Dec	2020A	2021A	2022F	2023F	2024F
Growth Rate					
Sales (%)	(28.4)	46.1	28.7	(4.8)	(6.0)
Net profit (%)	na	na	(16.7)	(33.6)	(10.2)
EPS (%)	na	na	(16.7)	(33.6)	(10.2)
Normalized profit (%)	na	na	38.2	(33.6)	(10.2)
Normalized EPS (%)	na	na	38.2	(33.6)	(10.2)
Dividend payout ratio (%)	(27.7)	36.1	39.1	39.2	43.7
Operating performance					
Gross margin (%)	3.2	10.1	12.1	8.8	8.6
Operating margin (%)	(2.1)	6.6	8.5	5.2	5.1
EBITDA margin (%)	2.9	10.6	11.8	8.5	8.6
Net margin (%)	(2.0)	2.9	3.0	1.9	1.7
D/E (incl. minor) (x)	1.1	1.2	1.5	1.5	1.4
Net D/E (incl. minor) (x)	0.7	0.7	1.2	1.3	1.2
Interest coverage - EBIT (x)	na	5.2	7.6	4.4	4.0
Interest coverage - EBITDA (x)	2.0	8.3	10.6	7.3	6.8
ROA - using norm profit (%)	na	2.6	2.8	1.6	1.4
ROE - using norm profit (%)	na	9.2	11.5	7.2	6.3
DuPont					
ROE - using after tax profit (%)	na	11.6	13.7	7.8	6.5
- asset turnover (x)	1.0	1.1	1.1	0.9	0.9
- operating margin (%)	na	6.3	9.0	5.7	5.6
- leverage (x)	2.8	3.5	4.1	4.5	4.4
- interest burden (%)	186.4	79.8	87.6	79.5	77.4
- tax burden (%)	na	57.5	37.5	40.9	39.3
WACC (%)	7.7	7.7	7.7	7.7	7.7
ROIC (%)	(3.1)	8.6	8.1	3.5	2.8
NOPAT (Bt m)	(2,813)	7,525	8,173	5,173	4,563
invested capital (Bt m)	87,934	101,145	147,622	161,178	158,090

Sources: Company data, Thanachart estimates

Esso (Thailand)

INCOME STATEMENT

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
Sales	126,672	172,878	169,762	169,343	165,990
Cost of sales	131,408	168,408	162,541	161,072	158,025
Gross profit	**(4,736)**	**4,471**	**7,221**	**8,271**	**7,965**
% gross margin	-3.7%	2.6%	4.3%	4.9%	4.8%
Selling & administration expenses	5,217	5,068	4,976	4,964	4,866
Operating profit	**(9,953)**	**(597)**	**2,244**	**3,307**	**3,099**
% operating margin	-7.9%	-0.3%	1.3%	2.0%	1.9%
Depreciation & amortization	2,568	2,808	2,837	2,872	2,908
EBITDA	**(7,385)**	**2,210**	**5,081**	**6,180**	**6,007**
% EBITDA margin	-5.8%	1.3%	3.0%	3.6%	3.6%
Non-operating income	70	29	69	69	69
Non-operating expenses	0	0	0	0	0
Interest expense	(360)	(311)	(305)	(201)	(152)
Pre-tax profit	**(10,243)**	**(879)**	**2,008**	**3,175**	**3,016**
Income tax	(2,048)	1,051	1,714	712	680
After-tax profit	**(8,195)**	**(1,930)**	**293**	**2,463**	**2,336**
% net margin	-6.5%	-1.1%	0.2%	1.5%	1.4%
Shares in affiliates' Earnings	285	227	384	384	384
Minority interests	(1)	(1)	(1)	(1)	(1)
Extraordinary items	0	6,147	6,180	0	0
NET PROFIT	**(7,911)**	**4,443**	**6,856**	**2,846**	**2,719**
Normalized profit	**(7,911)**	**(1,704)**	**676**	**2,846**	**2,719**
EPS (Bt)	(2.3)	1.3	2.0	0.8	0.8
Normalized EPS (Bt)	(2.3)	(0.5)	0.2	0.8	0.8

BALANCE SHEET

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
ASSETS:					
Current assets:	22,921	33,784	32,874	32,676	32,060
Cash & cash equivalent	262	802	802	802	802
Account receivables	5,083	8,171	8,024	8,004	7,846
Inventories	13,144	18,786	18,132	17,968	17,628
Others	4,432	6,025	5,917	5,902	5,785
Investments & loans	5,649	4,455	4,455	4,455	4,455
Net fixed assets	24,750	23,706	21,769	19,797	17,788
Other assets	8,058	8,109	8,041	8,031	7,958
Total assets	**61,378**	**70,055**	**67,139**	**64,959**	**62,262**
LIABILITIES:					
Current liabilities:	35,446	42,008	32,489	28,148	23,474
Account payables	4,452	5,117	4,939	4,894	4,802
Bank overdraft & ST loans	16,703	19,323	12,319	9,032	5,669
Current LT debt	5,167	5,667	3,613	2,649	1,663
Others current liabilities	9,125	11,900	11,618	11,573	11,340
Total LT debt	**6,333**	**3,999**	**2,550**	**1,869**	**1,173**
Others LT liabilities	5,239	4,839	6,036	6,030	5,982
Total liabilities	**47,019**	**50,846**	**41,074**	**36,047**	**30,630**
Minority interest	7	7	8	9	10
Preferreds shares	0	0	0	0	0
Paid-up capital	17,075	17,075	17,075	17,075	17,075
Share premium	4,032	4,032	4,032	4,032	4,032
Warrants	0	0	0	0	0
Surplus	325	731	731	731	731
Retained earnings	**(7,080)**	**(2,637)**	**4,219**	**7,065**	**9,785**
Shareholders' equity	14,352	19,201	26,057	28,903	31,622
Liabilities & equity	**61,378**	**70,055**	**67,139**	**64,959**	**62,262**

Sources: Company data, Thanachart estimates

Esso (Thailand)

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
Earnings before tax	(10,243)	(879)	2,008	3,175	3,016
Tax paid	2,048	(1,051)	(1,714)	(712)	(680)
Depreciation & amortization	2,568	2,808	2,837	2,872	2,908
Chg In w orking capital	6,754	(8,064)	623	139	406
Chg In other CA & CL / minorities	2,269	1,436	210	353	268
Cash flow from operations	**3,394**	**(5,751)**	**3,964**	**5,828**	**5,918**
Capex	(1,718)	(1,763)	(900)	(900)	(900)
Right of use	(4,287)	(18)	0	0	0
ST loans & investments	0	0	0	0	0
LT loans & investments	(1,941)	1,193	0	0	0
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	3,126	5,685	7,445	3	26
Cash flow from investments	**(4,821)**	**5,098**	**6,545**	**(897)**	**(874)**
Debt financing	1,259	787	(10,509)	(4,931)	(5,044)
Capital increase	0	0	0	0	0
Dividends paid	(1)	(1)	0	0	0
Warrants & other surplus	153	406	0	0	0
Cash flow from financing	**1,411**	**1,193**	**(10,509)**	**(4,931)**	**(5,044)**
Free cash flow	**1,676**	**(7,514)**	**3,064**	**4,928**	**5,018**

VALUATION

FY ending Dec	2020A	2021A	2022F	2023F	2024F
Normalized PE (x)	na	na	40.7	9.7	10.1
Normalized PE - at target price (x)	na	na	42.0	10.0	10.4
PE (x)	na	6.2	4.0	9.7	10.1
PE - at target price (x)	na	6.4	4.1	10.0	10.4
EV/EBITDA (x)	na	25.2	8.9	6.5	5.9
EV/EBITDA - at target price (x)	na	25.6	9.1	6.7	6.0
P/BV (x)	1.9	1.4	1.1	1.0	0.9
P/BV - at target price (x)	2.0	1.5	1.1	1.0	0.9
P/CFO (x)	8.1	(4.8)	6.9	4.7	4.6
Price/sales (x)	0.2	0.2	0.2	0.2	0.2
Dividend yield (%)	0.0	0.0	0.0	0.0	0.0
FCF Yield (%)	6.1	(27.3)	11.1	17.9	18.2
(Bt)					
Normalized EPS	(2.3)	(0.5)	0.2	0.8	0.8
EPS	(2.3)	1.3	2.0	0.8	0.8
DPS	0.0	0.0	0.0	0.0	0.0
BV/share	4.1	5.5	7.5	8.4	9.1
CFO/share	1.0	(1.7)	1.1	1.7	1.7
FCF/share	0.5	(2.2)	0.9	1.4	1.4

Sources: Company data, Thanachart estimates

Esso (Thailand)

FINANCIAL RATIOS

FY ending Dec	2020A	2021A	2022F	2023F	2024F
Growth Rate					
Sales (%)	(25.2)	36.5	(1.8)	(0.2)	(2.0)
Net profit (%)	na	na	54.3	(58.5)	(4.5)
EPS (%)	na	na	54.3	(58.5)	(4.5)
Normalized profit (%)	na	na	na	320.8	(4.5)
Normalized EPS (%)	na	na	na	320.8	(4.5)
Dividend payout ratio (%)	0.0	0.0	0.0	0.0	0.0
Operating performance					
Gross margin (%)	(3.7)	2.6	4.3	4.9	4.8
Operating margin (%)	(7.9)	(0.3)	1.3	2.0	1.9
EBITDA margin (%)	(5.8)	1.3	3.0	3.6	3.6
Net margin (%)	(6.5)	(1.1)	0.2	1.5	1.4
D/E (incl. minor) (x)	2.0	1.5	0.7	0.5	0.3
Net D/E (incl. minor) (x)	1.9	1.5	0.7	0.4	0.2
Interest coverage - EBIT (x)	na	na	7.3	16.5	20.4
Interest coverage - EBITDA (x)	na	7.1	16.6	30.7	39.6
ROA - using norm profit (%)	na	na	1.0	4.3	4.3
ROE - using norm profit (%)	na	na	3.0	10.4	9.0
DuPont					
ROE - using after tax profit (%)	na	na	1.3	9.0	7.7
- asset turnover (x)	2.0	2.6	2.5	2.6	2.6
- operating margin (%)	na	na	1.4	2.0	1.9
- leverage (x)	3.5	3.9	3.0	2.4	2.1
- interest burden (%)	103.6	154.7	86.8	94.0	95.2
- tax burden (%)	na	na	14.6	77.6	77.5
WACC (%)	0.0	0.0	8.0	8.0	8.0
ROIC (%)	(20.4)	(1.4)	0.7	5.9	5.8
NOPAT (Bt m)	(9,953)	(597)	328	2,566	2,401
invested capital (Bt m)	42,293	47,389	43,736	41,651	39,326

Sources: Company data, Thanachart estimates

IRPC Public Co Ltd

INCOME STATEMENT

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
Sales	152,319	235,174	265,631	240,404	235,484
Cost of sales	141,857	214,173	248,416	216,790	209,059
Gross profit	**10,462**	**21,001**	**17,215**	**23,615**	**26,425**
% gross margin	6.9%	8.9%	6.5%	9.8%	11.2%
Selling & administration expenses	15,309	15,699	15,362	16,037	16,037
Operating profit	**(4,847)**	**5,302**	**1,853**	**7,578**	**10,388**
% operating margin	-3.2%	2.3%	0.7%	3.2%	4.4%
Depreciation & amortization	8,952	8,587	7,863	8,891	8,921
EBITDA	**4,105**	**13,889**	**9,716**	**16,469**	**19,309**
% EBITDA margin	2.7%	5.9%	3.7%	6.9%	8.2%
Non-operating income	2,177	1,967	2,121	2,214	2,214
Non-operating expenses	0	0	0	0	0
Interest expense	(1,847)	(1,699)	(1,576)	(1,658)	(1,519)
Pre-tax profit	**(4,517)**	**5,570**	**2,398**	**8,134**	**11,083**
Income tax	(1,554)	2,351	1,560	1,695	2,284
After-tax profit	**(2,963)**	**3,219**	**838**	**6,439**	**8,798**
% net margin	-1.9%	1.4%	0.3%	2.7%	3.7%
Shares in affiliates' Earnings	339	719	339	339	339
Minority interests	(22)	(28)	(32)	(29)	(28)
Extraordinary items	(3,506)	10,595	5,063	0	0
NET PROFIT	**(6,152)**	**14,505**	**6,208**	**6,750**	**9,109**
Normalized profit	**(2,646)**	**3,910**	**1,146**	**6,750**	**9,109**
EPS (Bt)	(0.3)	0.7	0.3	0.3	0.4
Normalized EPS (Bt)	(0.1)	0.2	0.1	0.3	0.4

BALANCE SHEET

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
ASSETS:					
Current assets:	43,371	67,200	72,297	64,345	65,552
Cash & cash equivalent	8,851	11,236	14,000	12,699	15,421
Account receivables	9,626	13,785	14,315	12,955	12,690
Inventories	21,169	33,766	34,480	30,090	29,017
Others	3,725	8,413	9,502	8,600	8,424
Investments & loans	8,071	8,603	8,603	8,603	8,603
Net fixed assets	114,551	109,067	121,896	123,615	119,093
Other assets	7,498	5,622	6,222	5,725	5,628
Total assets	**173,491**	**190,492**	**209,018**	**202,287**	**198,876**
LIABILITIES:					
Current liabilities:	44,059	47,543	54,099	48,526	47,518
Account payables	23,983	28,671	33,297	29,058	28,022
Bank overdraft & ST loans	0	0	0	0	0
Current LT debt	13,335	10,585	10,304	10,730	10,859
Others current liabilities	6,741	8,287	10,498	8,738	8,637
Total LT debt	**48,597**	**50,494**	**57,914**	**53,711**	**46,232**
Others LT liabilities	5,169	4,743	5,422	4,928	4,832
Total liabilities	**97,825**	**102,780**	**117,435**	**107,165**	**98,582**
Minority interest	140	217	248	277	305
Preferreds shares	0	0	0	0	0
Paid-up capital	20,434	20,434	20,434	20,434	20,434
Share premium	28,554	28,554	28,554	28,554	28,554
Warrants	0	0	0	0	0
Surplus	(110)	(112)	(112)	(112)	(112)
Retained earnings	**26,648**	**38,619**	**42,458**	**45,968**	**51,113**
Shareholders' equity	75,526	87,496	91,335	94,845	99,989
Liabilities & equity	**173,491**	**190,492**	**209,018**	**202,287**	**198,876**

Sources: Company data, Thanachart estimates

IRPC Public Co Ltd

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2020A	2021A	2022F	2023F	2024F
Earnings before tax	(4,517)	5,570	2,398	8,134	11,083
Tax paid	1,554	(2,351)	(1,560)	(1,695)	(2,284)
Depreciation & amortization	8,952	8,587	7,863	8,891	8,921
Chg In w orking capital	4,412	(12,068)	3,383	1,510	302
Chg In other CA & CL / minorities	3,510	(1,040)	1,461	(518)	414
Cash flow from operations	**13,911**	**(1,302)**	**13,545**	**16,322**	**18,436**
Capex	(2,434)	(3,104)	(20,692)	(10,610)	(4,400)
Right of use	(198)	(26)	0	0	0
ST loans & investments	0	0	0	0	0
LT loans & investments	1,596	(531)	0	0	0
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	(8,440)	11,210	5,142	4	1
Cash flow from investments	**(9,476)**	**7,549**	**(15,550)**	**(10,606)**	**(4,399)**
Debt financing	2,958	(1,326)	7,139	(3,777)	(7,350)
Capital increase	0	0	0	0	0
Dividends paid	(2,041)	(2,857)	(2,369)	(3,239)	(3,965)
Warrants & other surplus	463	322	0	0	0
Cash flow from financing	**1,380**	**(3,862)**	**4,770**	**(7,017)**	**(11,315)**
Free cash flow	**11,477**	**(4,406)**	**(7,147)**	**5,712**	**14,036**

VALUATION

FY ending Dec	2020A	2021A	2022F	2023F	2024F
Normalized PE (x)	na	18.6	63.5	10.8	8.0
Normalized PE - at target price (x)	na	23.0	78.5	13.3	9.9
PE (x)	na	5.0	11.7	10.8	8.0
PE - at target price (x)	na	6.2	14.5	13.3	9.9
EV/EBITDA (x)	30.7	8.8	13.1	7.6	5.9
EV/EBITDA - at target price (x)	34.8	10.1	14.8	8.6	6.8
P/BV (x)	1.0	0.8	0.8	0.8	0.7
P/BV - at target price (x)	1.2	1.0	1.0	0.9	0.9
P/CFO (x)	5.2	(55.9)	5.4	4.5	3.9
Price/sales (x)	0.5	0.3	0.3	0.3	0.3
Dividend yield (%)	1.7	2.2	4.3	4.6	6.3
FCF Yield (%)	15.8	(6.1)	(9.8)	7.9	19.3
(Bt)					
Normalized EPS	(0.1)	0.2	0.1	0.3	0.4
EPS	(0.3)	0.7	0.3	0.3	0.4
DPS	0.1	0.1	0.2	0.2	0.2
BV/share	3.7	4.3	4.5	4.6	4.9
CFO/share	0.7	(0.1)	0.7	0.8	0.9
FCF/share	0.6	(0.2)	(0.3)	0.3	0.7

Sources: Company data, Thanachart estimates

IRPC Public Co Ltd

FINANCIAL RATIOS

FY ending Dec	2020A	2021A	2022F	2023F	2024F
Growth Rate					
Sales (%)	(29.7)	54.4	13.0	(9.5)	(2.0)
Net profit (%)	na	na	(57.2)	8.7	35.0
EPS (%)	na	na	(57.2)	8.7	35.0
Normalized profit (%)	na	na	(70.7)	489.1	35.0
Normalized EPS (%)	na	na	(70.7)	489.1	35.0
Dividend payout ratio (%)	(19.9)	11.3	50.0	50.0	50.0
Operating performance					
Gross margin (%)	6.9	8.9	6.5	9.8	11.2
Operating margin (%)	(3.2)	2.3	0.7	3.2	4.4
EBITDA margin (%)	2.7	5.9	3.7	6.9	8.2
Net margin (%)	(1.9)	1.4	0.3	2.7	3.7
D/E (incl. minor) (x)	0.8	0.7	0.7	0.7	0.6
Net D/E (incl. minor) (x)	0.7	0.6	0.6	0.5	0.4
Interest coverage - EBIT (x)	na	3.1	1.2	4.6	6.8
Interest coverage - EBITDA (x)	2.2	8.2	6.2	9.9	12.7
ROA - using norm profit (%)	na	2.1	0.6	3.3	4.5
ROE - using norm profit (%)	na	4.8	1.3	7.3	9.4
DuPont					
ROE - using after tax profit (%)	na	3.9	0.9	6.9	9.0
- asset turnover (x)	0.9	1.3	1.3	1.2	1.2
- operating margin (%)	na	3.1	1.5	4.1	5.4
- leverage (x)	2.2	2.2	2.2	2.2	2.1
- interest burden (%)	169.2	76.6	60.3	83.1	87.9
- tax burden (%)	na	57.8	35.0	79.2	79.4
WACC (%)	8.9	8.9	8.9	8.9	8.9
ROIC (%)	(3.5)	2.4	0.5	4.1	5.6
NOPAT (Bt m)	(4,847)	3,064	648	5,999	8,247
invested capital (Bt m)	128,607	137,339	145,553	146,586	141,659

Sources: Company data, Thanachart estimates

General Disclaimers And Disclosures:

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

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

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

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

Note: Thanachart Securities Public Company Limited act as a Market Maker and Derivative Warrants Issuer. At present, TNS has issued 77 Derivative Warrants which are AMAT16C2206A , AOT16C2204A , AOT16C2206A , AWC16C2207A , BAM16C2204A , BAM16C2206A , BAM16C2207A , BANP16C2204A , BANP16C2205A , BANP16C2207A , BBL16C2204A , BCH16C2207A , BEC16C2204A , BEC16C2207A , BGRI16C2205A , BLA16C2208A, BLA16C2205A , CBG16C2204A , CBG16C2205A , CBG16C2207A , CHG16C2207A , COM716C2205A , CPAL16C2204A , CPF16C2205A , CRC16C2204A , DOHO16C2207A , EA16C2205A , EA16C2206A , EA16C2207A , GPSC16C2205A , GPSC16C2206A , GPSC16C2207A , GULF16C2205A , GULF16C2207A , GUNK16C2205A , GUNK16C2206A , GUNK16C2207A , HANA16C2204A , HANA16C2205A , HANA16C2207A , INTU16C2205A , IRPC16C2205A , IVL16C2206A , JMAR16C2205A , JMAR16C2206A , JMT16C2205A , JMT16C2207A , KBAN16C2208A, KBAN16C2204A , KBAN16C2206A , KCE16C2208A, KCE16C2204A , KCE16C2205A , KCE16C2205B , MEGA16C2207A , MINT16C2204A , MINT16C2207A , MTC16C2204A , OR16C2205A , PTT16C2205A , PTTG16C2207A , RCL16C2205A , RS16C2205A , S5016C2206A , S5016P2206A , S5016P2206B , SAWA16C2204A , SAWA16C2205A , SCC16C2204A , STEC16C2204A , SYNE16C2206A , TOP16C2206A , TRUE16C2205A , TRUE16C2205B , TTA16C2207A , TU16C2204A , WHA16C2204A (underlying securities are AMATA , AOT , AWC , BAM , BANPU , BBL , BCH , BEC , BGRIM , BLA , CBG , CHG , COM7 , CPALL , CPF , CRC , DOHOME , EA , GPSC , GULF , GUNKUL , HANA , INTUCH , IRPC , IVL , JMART , JMT , KBANK , KCE , MEGA , MINT , MTC , OR , PTT, PTTGC , RCL , RS , SAWAD , SCC , SET50 , STEC , SYNEX , TOP, TRUE, TTA, TU , WHA). before making investment decisions.

Note: Our major shareholder TCAP (Thanachart Capital Pcl) which holding 50.96% of Thanachart Securities and also TCAP holding 100% of Thanachart SPV1 Co. Ltd. TCAP and Thanachart SPV1 Co. Ltd has stake in THANI for 60% and being the major shareholder of THANI.

Note: Thanachart Capital Public Company Limited (TCAP), TMBThanachart Bank Public Company Limited (TTB), are related companies to Thanachart Securities Public Company Limited (TNS). Thanachart Securities Pcl is a subsidiary of Thanachart Capital Pcl (TCAP) which holds 23% of the shareholding in TMBThanachart Bank Pcl.

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

Disclosure of Interest of Thanachart Securities

Investment Banking Relationship

Within the preceding 12 months, Thanachart Securities has lead-managed public offerings and/or secondary offerings (excluding straight bonds) of the securities of the following companies: SCG Packaging Pcl (SCGP TB)

Recommendation Structure:

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

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

Thanachart Securities Pcl.

Research Team
19 Floor, MBK Tower
444 Phayathai Road, Pathumwan Road, Bangkok 10330
Tel: 662 - 779-9119
Email: thanachart.res@thanachartsec.co.th

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

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

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

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

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

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

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

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

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

Sittichet Rungrassameephat
Analyst, Quantitative
Tel: 662-483-8303
sittichet.run@thanachartsec.co.th

Chak Reungsinpinya
Thematic Research, Paper
Tel: 662-779-9104
chak.reu@thanachartsec.co.th

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

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

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

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