

Thailand Energy Sector

POSITIVE

ธุรกิจปลายน้ำกำลังรุ่ง

แนวโน้มดี แต่ราคาหุ้นยังถูก

เราเริ่มต้นบทวิเคราะห์หุ้นกลุ่มโรงกลั่น 4 ราย ได้แก่ BCP, TOP, SPRC และ IRPC ด้วยคำแนะนำ “ซื้อ” จากแนวโน้มอุตสาหกรรมเริ่มเป็นบวก ขณะที่ราคาหุ้นยังต่ำ เราประเมินแนวโน้มค่าการกลั่นจะเติบโตต่อเนื่องโดยคาดว่าอุปสงค์/อุปทานที่ตึงตัวจะมีความสมดุลมากขึ้นในอีก 3 ปีข้างหน้า ทว่า ราคาหุ้นยังคงอยู่ในระดับที่ถือว่าต่ำ โดยมีบางตัวที่เทรดกันในราคาที่สูงกว่าช่วงที่รุ่งแรงในช่วงโควิดระบาดเพียงเล็กน้อย ทั้งนี้ เราประเมินว่าค่าการกลั่น (GRM) ที่เพิ่มขึ้นจะเป็นปัจจัยหนุนให้ราคาหุ้นปรับตัวขึ้น เราเลือก BCP เป็นหุ้นเด่น

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เรามีมุมมองบวกต่อแนวโน้มค่าการกลั่นและประเมินค่าการกลั่นอ้างอิงตลาดสิงคโปร์ (Singapore GRM) จะเฉลี่ยอยู่ที่ 7 เหรียญสหรัฐต่อบาร์เรลในปี 2566-2568 ซึ่งอยู่ในกรอบบน โดยในช่วง 3 ปีที่ผ่านมา เราพบว่าอุปทานสะสมของผลิตภัณฑ์กลั่นยังขาดดุลอยู่ 1.4mbd ซึ่งจะช่วยให้โรงกลั่นทั่วโลกเพิ่มอัตราการใช้กำลังการกลั่นเป็น 82% ซึ่งเป็นเกณฑ์ที่ใช้กันในวัฏจักรขาขึ้น โดยหากมองในระดับภูมิภาคแล้ว ภูมิภาคเอเชียแปซิฟิก ไม่รวมจีน อาจมีการขาดดุลมากที่สุด (0.62mbd) โดยตะวันออกกลางและจีนมีอุปทานส่วนเกินเล็กน้อย ด้วยศักยภาพที่จีนจะยอมลดการส่งออกผลิตภัณฑ์น้ำมันภายในปี 2568 เพื่อให้บรรลุเป้าหมายด้านสิ่งแวดล้อม ภาวะอุปทานตึงตัวจึงอาจจะต่อเนื่องไปยาวนานเกินกว่าปี 68 สำหรับตอนนี้ เราคาดว่าค่าการกลั่นจะลดลงเหลือ 6.5 เหรียญสหรัฐต่อบาร์เรลในปี 2569 และ 5.5 เหรียญสหรัฐต่อบาร์เรลในระยะยาว (เทียบกับค่าเฉลี่ย 6.1 เหรียญสหรัฐต่อบาร์เรลในปี 2549-2562)

ปัจจัยหนุนระยะสั้นสำหรับค่าการกลั่น

ในระยะสั้น เราพบว่ามีหลากหลายปัจจัยที่จะหนุนค่าการกลั่นให้สูงขึ้นได้ 1) เพิ่มขึ้นตามปัจจัยฤดูกาล (เพิ่มขึ้นประมาณ 2mbd MoM ตั้งแต่ พ.ค.- มิ.ย.) เพื่อรองรับการเติบโตของอุปสงค์ 2) สต็อกผลิตภัณฑ์กลั่นยังคงอยู่ในระดับต่ำ โดยเฉพาะอย่างยิ่งในสหรัฐอเมริกา ซึ่งปริมาณน้ำมันเบนซินและน้ำมันกลั่นคงคลังต่ำกว่าค่าเฉลี่ย 5 ปี 7% และ 16% ตามลำดับ 3) จากโควตาการส่งออกที่ลดลง 53% โดยการส่งออกผลิตภัณฑ์น้ำมันของจีนมีแนวโน้มลดลงอีก หลังจากทีลดลง 34%/29% MoM ในเดือนมี.ค. และ เม.ย. นอกจากนี้ โรงกลั่นของไทยน่าจะได้ประโยชน์จากราคาน้ำมันดิบและค่าขนส่งที่ลดลง โดยในปี 2567 นี้ การอัปเดต EURO5 น่าจะทำให้โรงกลั่นของไทยมีกำไรเพิ่มขึ้น

แนะนำ “ซื้อ” หุ้นโรงกลั่นไทย เราเลือก BCP เป็นหุ้นเด่น

จากที่เราแนะนำ “ซื้อ” หุ้นโรงกลั่นทั้งหมดที่เราวิเคราะห์ เราเลือก BCP เป็นหุ้นเด่น เนื่องจากมีศักยภาพในการเติบโตจากการเข้าซื้อกิจการ ESSO Thailand (ESSO TB ไม่ได้จดทะเบียนในตลาดหลักทรัพย์) BCP ตั้งเป้ากำไรปกติเติบโต 36% ในปี 2567 โดยมีอัตรากำไรสูงถึง 29% จากการ Synergy ขณะที่ P/BV ปี 2567 ที่ 0.7 เท่า ถือว่ายังต่ำกว่าช่วงที่หุ้นอยู่ในช่วงขาขึ้นด้วยซ้ำ โดยที่ P/BV ก่อนการควบรวมกิจการอยู่ที่ 1.4 เท่า นอกจากนี้ BCP ยังมีราคาถูกที่สุดในบรรดาคู่แข่งที่ 5 เท่าในปี 2567 ในขณะที่ให้อัตราผลตอบแทนจากเงินปันผลสูงสุดที่ 7-9% ในปี 2566-67 ดาวรุ่งจะอยู่ที่การชะลอตัวของเศรษฐกิจโลกและการเปลี่ยนแปลงนโยบายการส่งออกเชื้อเพลิงของจีน

Stock	Bloomberg code	Mkt cap (USD'm)	Rating	Price (LC)	TP (LC)	Upside (%)	P/E (x)		P/B (x)		Div yld (%)	
							23E	24E	23E	24E	23E	24E
Thai Oil	TOP TB	2,913	Buy	45.25	59.00	33	7.7	7.8	0.6	0.6	3.3	3.2
IRPC	IRPC TB	1,320	Buy	2.24	2.90	36	10.5	8.3	0.6	0.5	6.6	8.4
BCP	BCP TB	1,251	Buy	31.50	49.00	63	7.1	5.3	0.8	0.7	7.0	9.5
Star Petroleum	SPRC TB	1,088	Buy	8.70	12.40	49	10.4	7.6	1.0	0.9	6.0	6.0

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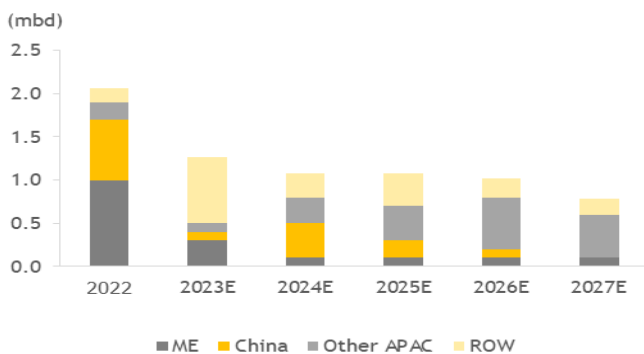
1. Refining market to tighten through 2025E

1.1 Slower pace of new capacity start-ups

From 2.1mbd new capacity in 2022 to 1mbd p.a. in 2023-27E

We expect the pace of new capacity addition to slow down in the coming years. 2022 saw a massive 2.1mbd of new refining capacity coming on line. However, a sizable portion of this capacity start-up was simply delayed from 2020-21 due to pandemic supply chain disruptions and/or accidents during the start-up process. Looking ahead, we expect the pace of supply addition to slow down significantly to less than 1.3mbd in 2023E and further to 1.0-1.1mbd p.a. in 2024-26E. In 2027E, new capacity start-up is expected to reach just 0.7mbd, based on announced projects.

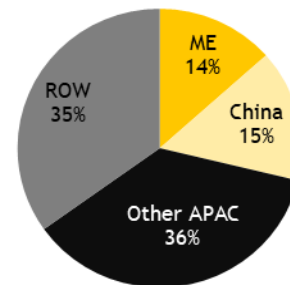
Fig 1: Refining capacity addition 2022-27E



Source: WOO, MST

Fig 2: Refining capacity addition by region 2023-27E

Refining capacity addition 2023-27E



Source: WOO, MST

Shifting geographies

Over the past few years, the bulk of new capacity was added in China and the Middle East. In 2022, the two countries accounted for to 34% and 49% of new capacity, respectively. Going forward, however, capacities are likely to be added in other regions, notably Africa, India, and other APAC countries. China and the Middle East, on the other hand, will account for only 15% and 14%, respectively, of new capacity additions in 2023-27E.

Fig 3: Recent and upcoming refinery start-ups

Country	Project	Capacity (kbd)	Start-up
China	ZPC Rongsheng	400	1Q22
Saudi Arabia	Jizan	400	1Q22
Kuwait	Al Zour	615	1Q22
China	Shenghong Lianyungang	320	2Q22
Malaysia	Pengerang	300	2Q22
France	Donges (re-start)	222	2Q22
China	Jieyang	400	3Q22
Iraq	Karbala	140	3Q22
Oman	Duqm	230	2023
Nigeria	Dangote (Lagos)	650	2023
Mexico	Dos Bocas	340	2023
India	HPCL Visakha	135	2023
US	Exxon Beaumont	250	2023
US	Valero Port Arthur	102	2023
China	Huajin	300	2024
China	Yulong	400	2024

Source: Reuters, IEA, OPEC, MST

1.2 Refinery closures to offset capacity additions

We believe the impact of refinery closures over the past three years will further compound the supply tightness.

Capacity closure accelerated during 2020-22

During 2020-22, we estimate that as much as 4.3mbd of global refining capacity was permanently shut down. The pace of closure during these three years (1.4mbd p.a.) was nearly double the average during 2012-19 when an estimated 6mbd of capacity was shut down (0.75mbd pa). This came as a result of the collapse in fuel demand during the pandemic and changing environmental policies by major oil companies. Much of the capacity closure in these three years was concentrated in the US and Europe.

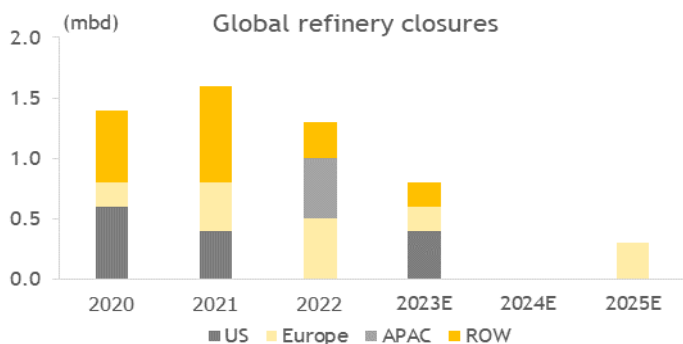
In the US, we estimate that over 1mbd of capacity was permanently shut down in the past three years. This includes LyondellBasell’s 268k Houston refinery after the company announced it would exit the refinery business altogether. Phillips 66 also shut down its refinery in Rodeo, California and is turning the site into a renewable fuels facility with USD850m investment.

In Europe, capacity closure has long been a part of the industry landscape. In 2020-22, about 1.1mbd of refining capacity was shut down in Europe. These include Shell’s Wesseling refinery in Germany, ENI’s refinery in Livorno, and Repsol’s Puertollano refinery in Spain.

Significant capacities were also closed in China, most of which were small and independent refineries (so-called “teapots”). These amounted to about 0.5mbd of closure in the past three years. Elsewhere, about 1.7mbd of capacities were closed in New Zealand, South Africa, and Japan.

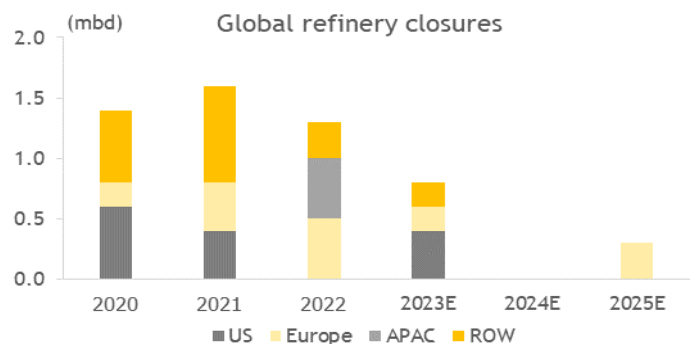
We note that once refineries are shut down, it is difficult and costly to bring them back on line. As such, we generally assume that once refineries are shut down, their capacities will be taken off-line permanently even though physically they may remain intact.

Fig 4: Refining capacity closure 2020-25E



Source: WOO, MST

Fig 5: Refining capacity closure by region 2023-25E



Source: WOO, MST

More closures are forthcoming

We expect more refinery closures in 2023-25E, although the pace of closure will likely slow compared to the past three years. We estimate the US will see a further 0.4mbd of refining capacity permanently closed in 2023-25E. We believe this could be just the beginning of a new wave of closures as US oil majors follow up on their pledge to reach net zero carbon emissions by 2050. In Europe, an additional 0.5mbd of capacity is slated for closure in 2023-25E. Outside of the US and Europe, about 0.2mbd of capacity (mostly in Japan) is slated to be shut down. We note that because capacity closures

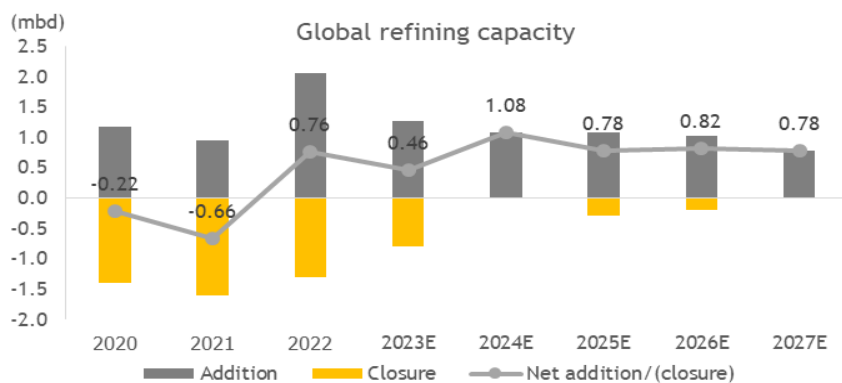
are less certain than capacity additions (which have a 5-year lead time), we refrain from projecting closures beyond 2025E.

Because of the impact of EU’s sanctions on Russian crude oil and fuel imports, we could see additional capacity reduction in both Europe and Russia. While it may not be categorised as closures, some of those capacities may be running at sub-optimal levels for years to come. China could also further pressure the teapot refineries into shutting down and/or running at much lower utilisation rates as newer, more efficient refineries start up. These will help further limit refined product supplies than headlines capacity would entail.

Net capacity addition to slow in 2023E but pick up in 2024E

Including the impacts of closure, net new capacity will drop to about 0.5mbd in 2023E from about 0.7mbd in 2022. With little closure expected, net addition is set to climb to 1mbd next year before leveling out at about 0.7-0.8mbd in 2025-27E. We note that capacity addition is different from new supply as new refineries can take 6 months to a year to ramp up. As such, the actual impact of start-ups on crude throughputs are often delayed by 6 months to a year.

Fig 6: Global refining nameplate capacity net additions/(closures) in 2020-27E



Source: WOO, IEA, MST

Throughput increases to peak in 2023E before tapering off

We note that capacity addition is different from refined product supply growth. For one, new refineries can take 6 months to a year to ramp up. As such, the actual impacts of start-ups on crude throughputs are often delayed by 6 months to a year. Moreover, refineries do not always run at 100% and therefore additional product supplied may not reach the nameplate capacity growth. On this basis, we estimate throughput increase to be just over 1.1mbd in 2023E (which is more than nameplate capacity growth of 0.5mbd) before leveling off at about 0.7-0.85mbd in 2024-27E.

Fig 7: Global refining throughput growth 2023-27E



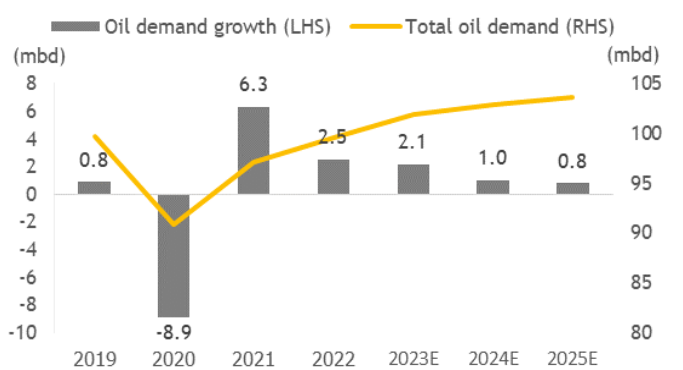
Source: WOO, MST

1.3 Demand/supply balance to tighten

Strong demand growth continues

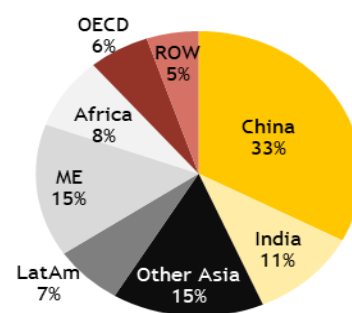
We expect global oil demand growth to remain strong in 2023E. Based on the IEA’s figures, oil demand collapsed to just 91mbd in 2020 from over 100mbd in 2019. It then recovered sharply in 2021-22, jumping by 6.5 and 2.4mbd, respectively. This puts 2022 global oil demand at just shy of 100mbd and slightly below the 2019 level. We expect oil demand to grow by over 2mbd in 2023E to a new record. This growth is driven mainly by China’s reopening and normalisation of air travel. By region, China and other Asia Pacific countries are likely to account for more than half of the demand growth whereas developed (OECD) countries account for just 6%, essentially all of which comes from the US. In 2024E, we still expect global oil demand to grow by 1mbd with growth normalising thereafter.

Fig 8: Global oil demand growth



Source: OPEC, EIA, IEA, MST

Fig 9: Contribution to global oil demand growth in 2023E

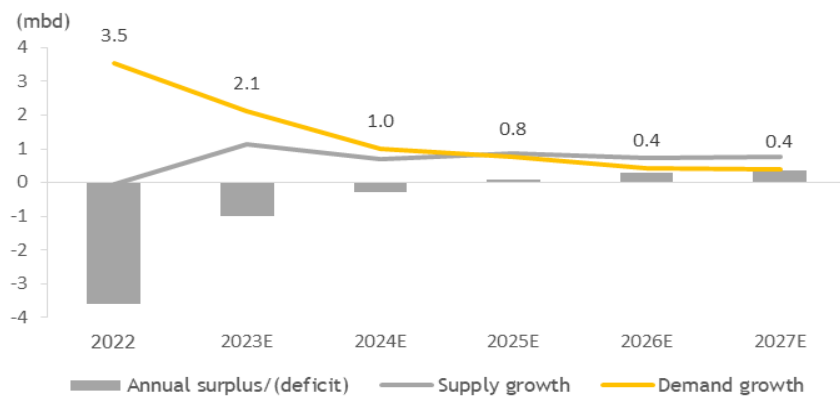


Source: OPEC, EIA, IEA, MST

Refining demand/supply balance to tighten through 2025E

With the above demand growth expectation and based on planned supply additions/closures, we believe refining demand/supply balance will continue to tighten through at least 2025E. The annual supply deficit (that is, demand growth exceeding supply growth) has been building since 2021 and accelerated in 2022. Because of the strong demand growth and slowdown in capacity addition, we expect to see supply deficit of 1mbd and 0.3mbd in 2023-24E, respectively. The market could be balanced in 2025E but if China decides to eliminate the oil product export due to environmental reasons (more discussion below), then the market would once again be tipped into a deficit.

Fig 10: Global refining capacity annual surplus/(deficit) 2022-27E

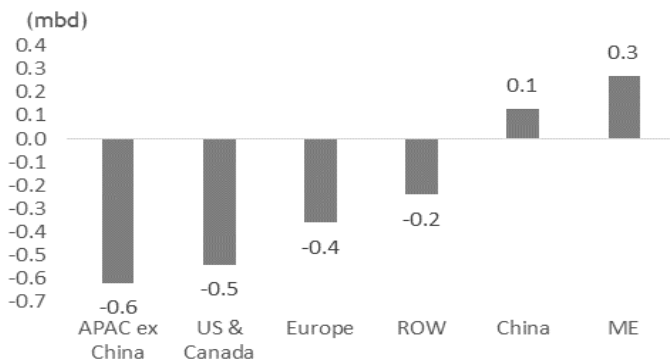


Source: IEA, Reuters, MST

Regional imbalance: APAC ex China to see biggest supply deficit

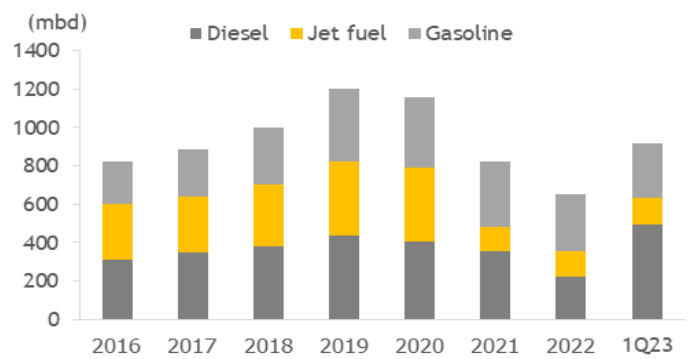
Not only do we expect to see tightening supply of refining capacity, we also expect the impact to be uneven across the regions. Notably, Asia Pacific ex China will see the most cumulative supply deficit in 2023-25E (0.6mbd). This will likely be followed by the US and Europe (mostly due to capacity closures). On the other hand, China and the Middle East will continue to see large surpluses. As such, these regions will likely continue to act as major exporters for the rest of the world. However, we see risks that China, because of its environmental policy, may no longer be a major fuel exporter from 2025E onwards.

Fig 11: Cumulative capacity surplus/(deficit) 2023-25E



Source: OPEC, EIA, IEA, MST

Fig 12: China’s oil product exports



Source: GACC, MST

China’s export policy could lead to further shortfall

Global refining markets could tighten much further if China follows through with its pledge to phase out oil product exports by 2025E. In its 14th five-year plan, environmental policies took front and centre stage. One of the key elements towards China reaching peak carbon emission by 2030 and net zero emissions by 2060 is the phasing out of oil product exports by 2025E.

Over the past five years, China has been a big exporter of fuels. It averaged over 1mbd of diesel, kerosene, and gasoline exports in 2019-20. At its peak in 4Q19-1Q20, China exported as much as 1.3mbd of fuels. After a period of relative restraint in 3Q21-2Q22 when it exported just 0.5mbd of these products, exports once again surged to an average of 0.9mbd in 1Q23.

As such, if China were to follow through with its pledge to eliminate all oil product exports by 2025E, it could lead to significant supply deficits globally. This would come on top of the already tightening global market where China itself was set to deliver a net surplus; in other words, it would be a dramatic

shift to zero exports when, on purely a demand/supply balance, it could export 0.1-0.2mbd more than the current level.

1.4 Rising utilisation rate to support GRM

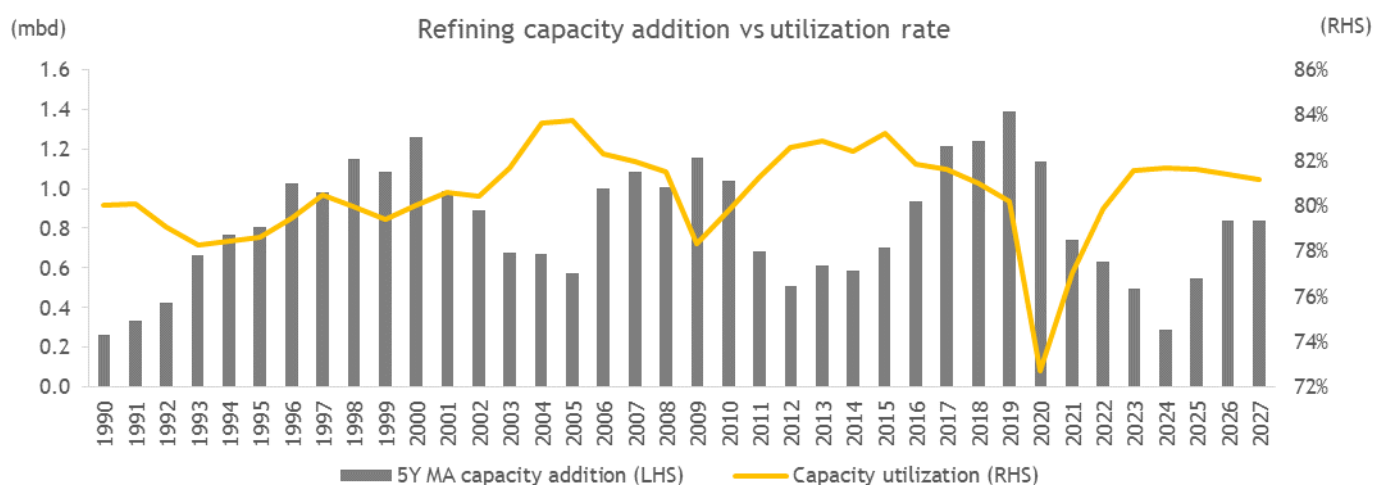
Global refining utilisation rate to reach 82% in 2023-25E

We believe the strong demand growth in 2023-24E together with slower pace of supply addition will help lift global refining utilisation rate to 82% in 2023-25E. This is typically the average utilisation rate for an up-cycle in the refining market. Since 1990, global utilisation rate hovered in the range of 73-84% with 73% being the lowest level and only occurred in 2020 due to the pandemic. Excluding this once-in-a-generation event, the typical down-cycle utilisation rates were 77-78%. At the opposite end, during an up-cycle, utilisation rates typically max out at around 82-83%. A mid-cycle utilisation rate would then be around 80%.

Relationship between capacity addition and utilisation rate

We see a strong relationship between refining utilisation rate and 5-year moving average global capacity addition. Almost invariably, the peak of capacity addition occurs at the same time as the cyclical low in utilisation rate. Conversely, the lowest point of capacity addition occurs in the same years that utilisation rate peaks. The figure below clearly shows the inverse and cyclical relationship between the two and the typical 5-year lag between peaking refining market tightness and supply response.

Fig 13: Relationship between capacity addition and utilisation rate



Source: Company, MST

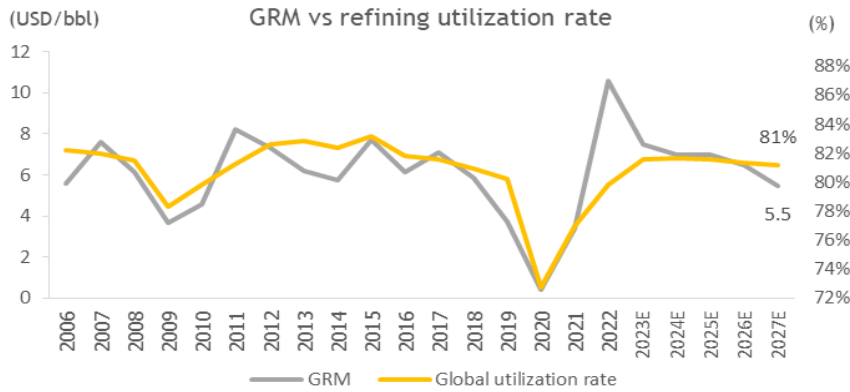
Looking forward, we expect 2023-25E to be at the cyclical bottom of new supply addition, based on a 5-year moving average. This was a direct result of the down-cycle that began in 2019, the pandemic-induced capacity closure and the reluctance of private oil companies to keep adding new capacity with ESG issues and net-zero goals being much higher on the agenda than in the past.

Up-cycle GRM looks well supported in 2023-25E

Based on the projected supply addition and refining utilisation rate, we believe GRM will likely hover at the upper end of its historical range in 2023-25E, and likely beyond. We forecast the Singapore GRM benchmark to average USD7.0/bbl in 2023-25E, partly helped by the lingering impacts of the EU’s sanctions on Russian oil product exports as well as shifting trade flows. We expect GRM to decline slightly to USD6.5/bbl in 2026E. Our long-

term assumption is for GRM to average USD5.5/bbl (below average of USD6.1/bbl during 2006-19). We think our assumption is conservative given the reluctance of oil companies to add new refining capacity, potential acceleration in closure rates in the US, as well as China’s environmental goal that could limit its fuel exports by 2025E.

Fig 14: Singapore GRM vs global refining utilisation rate

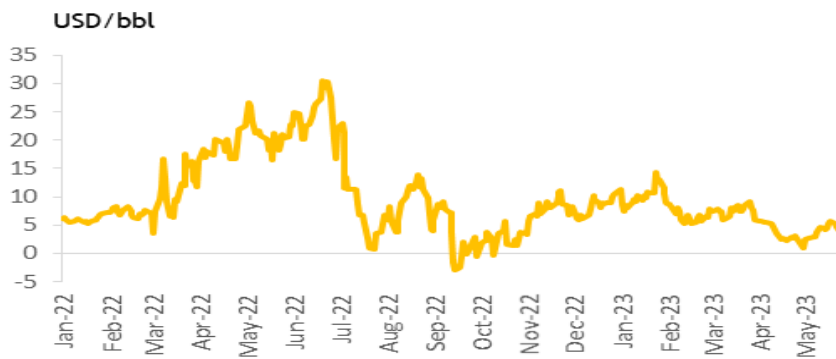


Source: IEA, Reuters, MST

2. Near-term tailwinds for GRM

We expect the recent weakness in GRM to be temporary. We think the main reason GRM has been so weak recently is because Russia continues to disrupt the market by placing its products illegally into Europe, and likely at a steep discount. We expect Russian exports to decline as its domestic demand picks up seasonally and the EU enforces more stringent measures to prevent illegal barrels flowing into its borders. We also see multiple near-term tailwinds for GRM, including lower Chinese export, normalising maintenance activities (from abnormally low levels) and a seasonal demand pick-up in the summer.

Fig 15: Singapore GRM

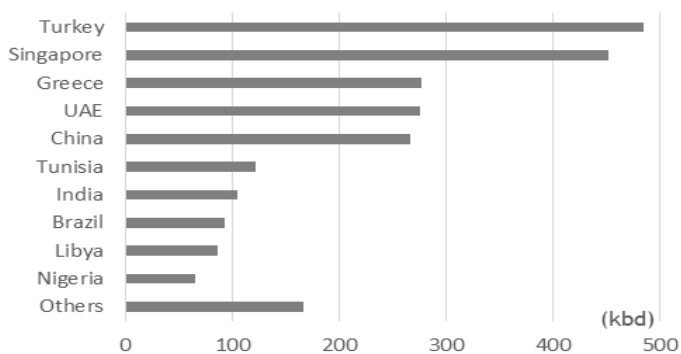


Source: IEA, Reuters, MST

2.1 Russian product flows could decline

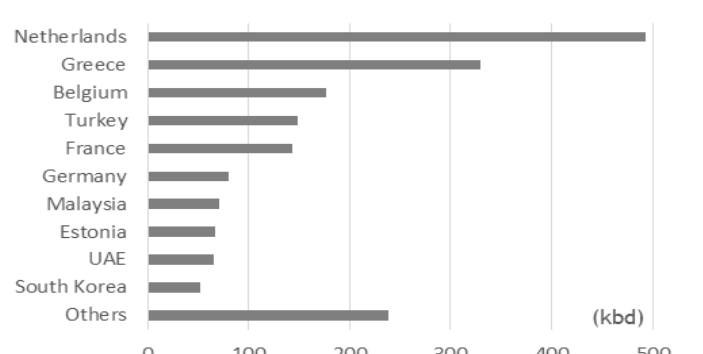
We think one of the main reasons for the recent correction in refining margin is the disruption from Russian product flows. EU’s sanctions on Russian oil product imports took effect in February, but illegal flows of Russian oil products into Europe continue. This is done by blending with products from other sources at third-party countries (for instance, Turkey and the UAE). These barrels were also trading at a discount, thus weighing on market prices.

Fig 16: Russia oil product exports by destination March 2023



Source: Vortexa, MST

Fig 17: ...has changed dramatically from March 2022

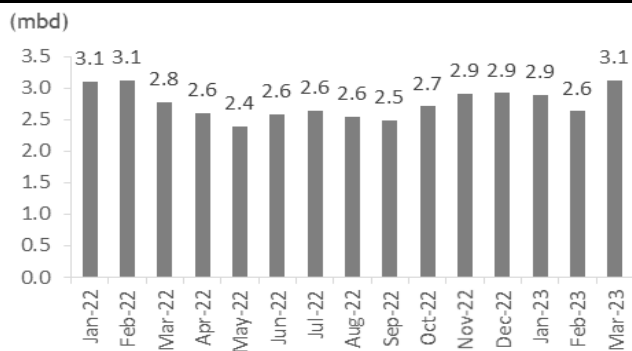


Source: Vortexa, MST

We think exports of Russian oil product will likely decline in the near future. Seasonal upticks in Russia’s own demand could mean fewer barrels are available for export. Russian refiners themselves are also heading into the maintenance season, which could further reduce output. We also see chances that the EU will step in to intervene and prevent illegal barrels from entering through its border. While it’s difficult to trace the origin of

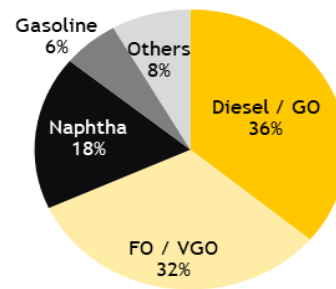
refined oil product, we believe an added layer of regulation will at least discourage such imports and may help reduce actual flows.

Fig 18: Russia oil product export volume



Source: Energy Intelligence, MST

Fig 19: Russia oil product export breakdown (2022)



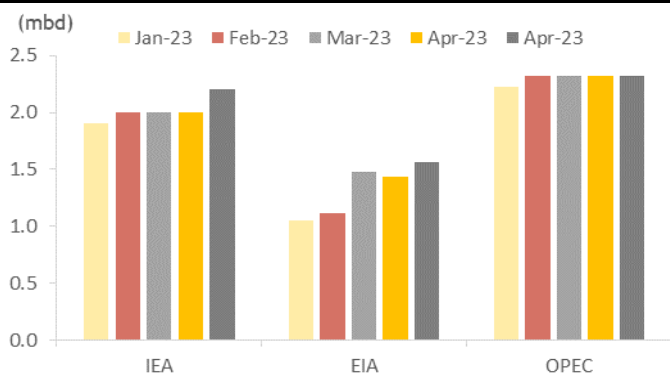
Source: Energy Intelligence, MST

2.2 Limited signs of demand destruction

So far in 2023E, we see limited signs of demand destruction that the market is concerned with. In fact, major forecasters such as the EIA, the IEA and OPEC have all raised their global oil demand growth forecasts YTD. The IEA—the most conservative of the three—started the year forecasting just 1mbd oil demand growth in 2023E. That figure has risen to 1.56mbd growth by May. Likewise, the IEA has gradually raised its demand growth expectation from 1.9mbd at the beginning of the year to 2.3mbd in its May Oil Market Report update. OPEC—the most bullish forecaster to begin with—has also marginally upgraded its oil demand growth forecast, from 2.2mbd at the beginning of the year to 2.3mbd by May.

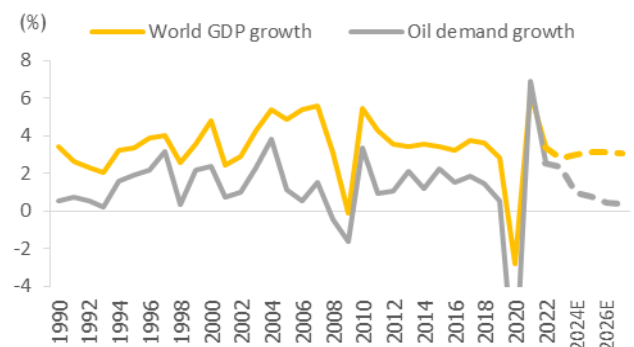
Longer term, we think the existing demand growth expectation already seems modest in light of global GDP growth forecasts. The IMF expects global GDP growth to decelerate from 3.4% in 2022 to 2.8% in 2023E but forecasts a rebound in growth to 3.0% in 2024E. Historically, 3% growth in global GDP would typically lead to about 1% growth in oil demand. This is what is embedded in our and likely most forecaster models. Should GDP growth slip below expectation, we estimate it will take a more than 0.7% global GDP downgrade pa in 2023-24E to turn refining capacity deficit in these two years into a surplus. As such, we think the market concern over demand slowdown is overdone.

Fig 20: Revisions to 2023E oil demand growth forecasts



Source: EIA, MST

Fig 21: Global GDP vs oil demand growth forecasts

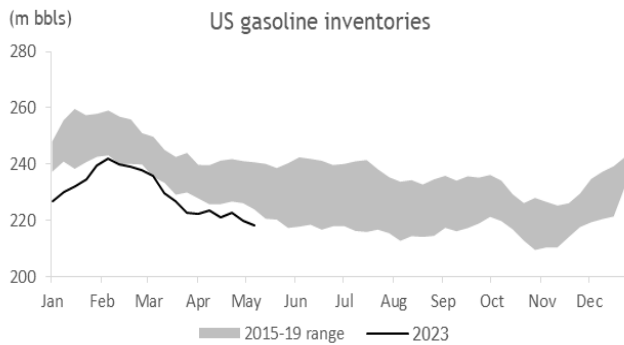


Source: IMF, WOO, MST

2.3 Multi-year low inventories provide favourable backdrop

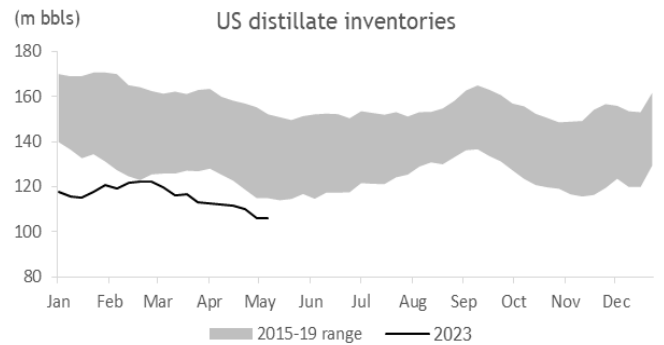
We believe low global inventories relative to history provide a strong backdrop for margin improvements. Gasoline inventories in the US have been on the decline since last year and they remain well below historical level for this time of year. Shortages in middle distillate (diesel, kerosene/jet fuel) are even more pronounced with inventories level as much as 12% below their historical average for this time of year. We do not see the situation changing soon given refineries there are already maximising their throughputs while demand is set to pick up.

Fig 22: US gasoline inventories



Source: EIA, MST

Fig 23: US middle distillate inventories

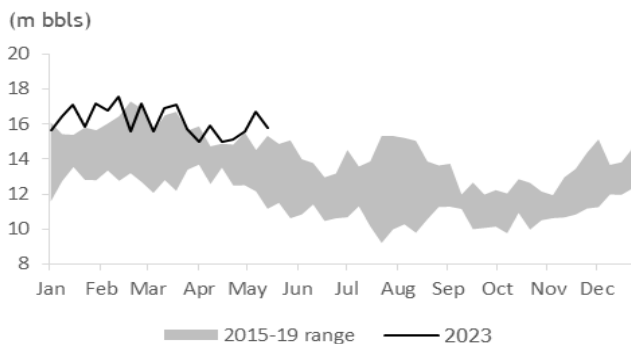


Source: EIA, MST

Stockpiles of light distillates (naphtha, gasoline) in Singapore have been higher than the pre-Covid range but we think this is likely temporary. For one, we expect demand in the region to pick up as travel activity continues to normalise. We also expect the slowdown in China’s exports to reduce pressure on inventory build. Lastly, the price of gasoline in the US is now much higher than in Singapore, suggesting an arbitrage opportunity.

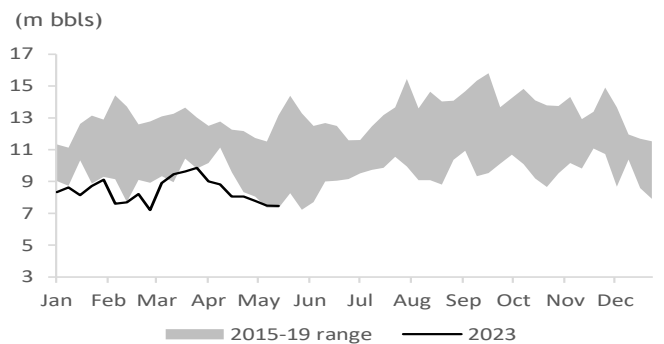
On the other hand, inventories of middle distillate (diesel, jet fuel) remain well below their seasonal average. This will likely continue as supplies remain very tight globally.

Fig 24: Singapore gasoline/naphtha inventories



Source: Enterprise Singapore, MST

Fig 25: Singapore middle distillate inventories



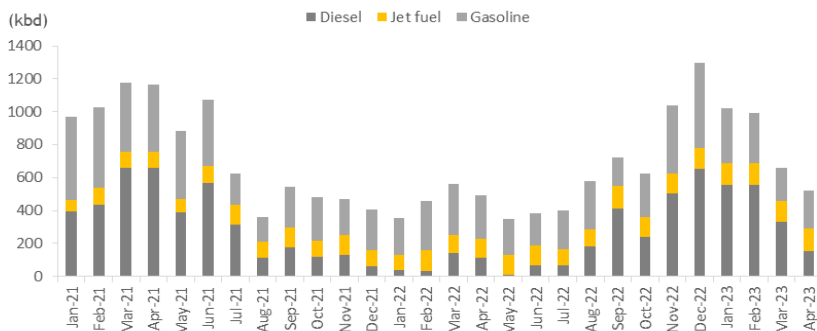
Source: Enterprise Singapore, MST

2.4 Slowdown in China’s oil product exports

China reversed its policy of restraint and ramped up oil product export starting in September of last year, which continued through 1Q this year. However, there are signs that China’s exports of gasoline, diesel, and jet fuel will soon slow down. Firstly, domestic demand is picking up with OPEC estimating that China’s oil demand grew by 400kbd YoY in 1Q23. This will

further accelerate for the rest of the year as OPEC pegs China’s annual demand growth at 800kbd. Secondly, we believe domestic price is trading at a premium to international price, thereby offering little incentive for Chinese oil companies to export. Lastly, the Chinese government itself is favouring restraint and has reduced the 2nd batch of oil export quota to 9m tonnes compared to 19m tonnes for the 1st batch.

Fig 26: China’s oil product export



Source: GACC, Reuters, MST

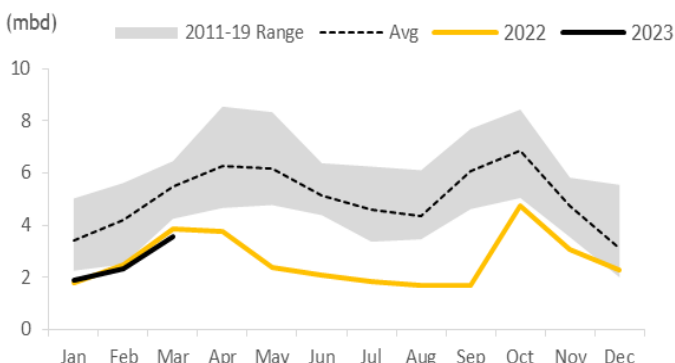
We have begun to see signs that export is starting to slow down. China’s total export of gasoline, diesel and jet fuel averaged over 1mbd in November 2022 - February 2023 but has since declined to 0.7mbd in March and 0.5mbd in April (a nine-month low). Product that saw the biggest drop was diesel, down by 77% from its peak in December 2022.

2.5 Maintenance shutdowns likely to be higher than in 2022

We expect upticks in refinery maintenance, especially when compared to the unusually low level last year. In 2022, we believe many refiners have likely postponed their scheduled maintenance to take advantage of the very high refining margins last year. As such, average refinery outage (2.6mbd full-year average) was half that of the average seen during 2011-19 (5mbd).

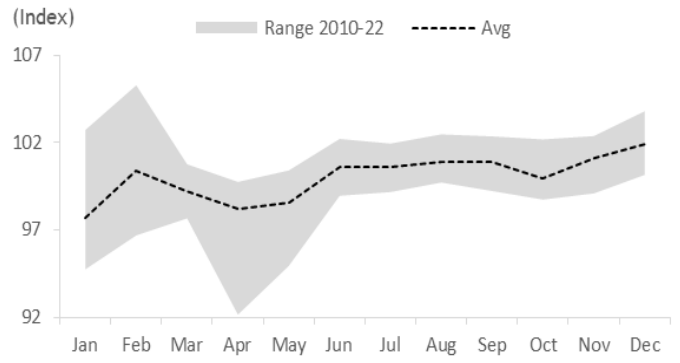
So far this year, maintenance activities were also limited in 1Q23 likely due to favorable refining margin backdrop. However, activities likely pick up in April-May, which is seasonally the peak period for maintenance. We also think outages during the summer months could also revert back to a more normal level as refiners cannot postpone maintenance activities indefinitely. If outages in 2023E return to normal levels, we could see 2-2.5mbd less effective capacity compared to 2022.

Fig 27: Global CDU outage



Source: Bloomberg, MST

Fig 28: Monthly oil demand indexed to full-year avg (2010-22)



Source: EIA, MST

2.6 Seasonal demand growth amid slowdown in capacity addition

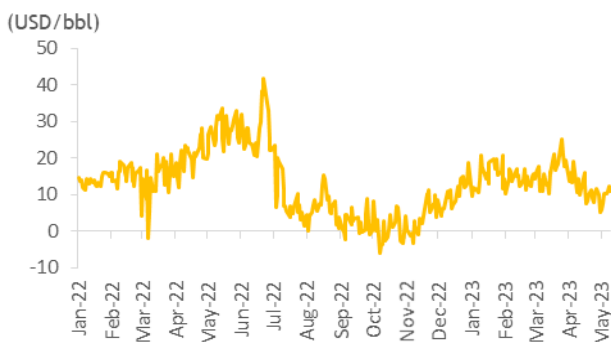
We expect refined product demand to pick up seasonally from June onwards. April and May typically is the low demand season due to limited driving, air travel, and little heating/cooling requirements. Once the driving season begins in June, however, we expect to see demand pick up by c.2% MoM, equating to about 2mbd in the current environment. We think seasonal demand impacts could be even stronger this year due to China’s reopening. In fact, the IEA forecasts YoY oil demand growth to accelerate from 0.7mbd in 1Q23 to 2.6mbd in 4Q23.

On the supply side, we expect the pace of new capacity addition to slowdown markedly in 2H23E compared to 1H23E. In Asia Pacific and the Middle East, we estimate there is over 1.1mbd of new capacity start-ups in 1H23E. However, this will slow down to just 0.1mbd new capacity in 2H23E. At the same time, we believe there could be more capacity closure (about 0.1mbd) in 2H23E. This means the refined product market could tighten significantly in 2H23E compared to 1H23E.

2.7 Gasoline, fuel oil crack spreads to drive GRM

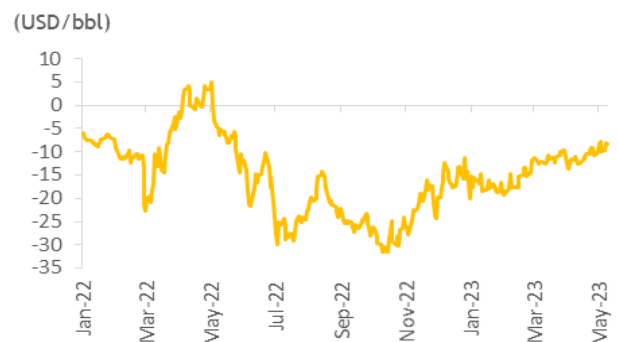
We expect gasoline, jet fuel, and fuel oil crack spread improvements to be key drivers for GRM in the next 3-6 months. For gasoline, the seasonal demand growth in the US coupled with already low inventories could help push crack spreads back toward USD20/bbl or higher. For fuel oil, we see two drivers. The first one is OPEC+ production cut. We think the member countries will choose to cut the cheapest barrels first, and these are usually heavier crude oil that yield more fuel oil output. As such, less heavy feedstock could lead to lower fuel oil output from refineries globally. Another reason is the strong fuel oil import by Chinese independent refiners. These “teapot” refineries have had difficulty securing crude oil supplies (mostly dominated by state-owned oil companies) and have resorted to importing fuel oil as feedstock instead.

Fig 29: Gasoline crack spreads



Source: Bloomberg, MST

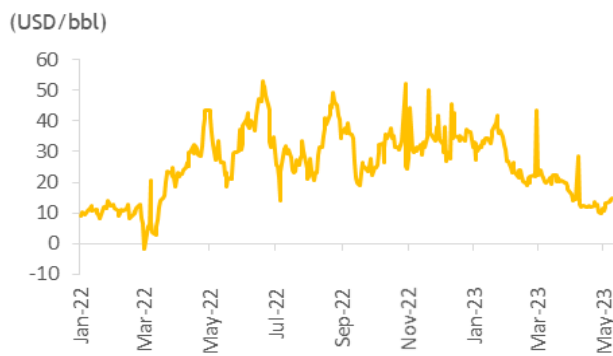
Fig 30: Fuel oil crack spreads



Source: Bloomberg, MST

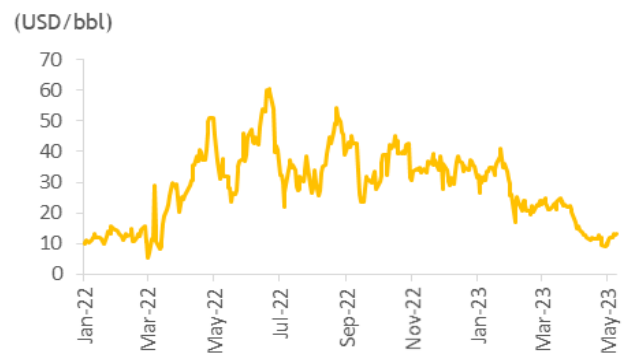
Middle distillate (diesel and jet fuel), which took centre stage last year, may not see such drastic margin improvements. One of the reasons is the lack of gas-to-oil switching this year given the sharp decline in global gas and coal prices. We also think the slowdown in manufacturing activities relative to service activities could mean slower demand growth for diesel relative to gasoline. While jet fuel demand could see significant growth in 2H23E, we think most refiners can increase jet fuel production from the middle distillate pool.

Fig 31: Diesel crack spread



Source: Bloomberg, MST

Fig 32: Jet fuel crack spread



Source: Bloomberg, MST

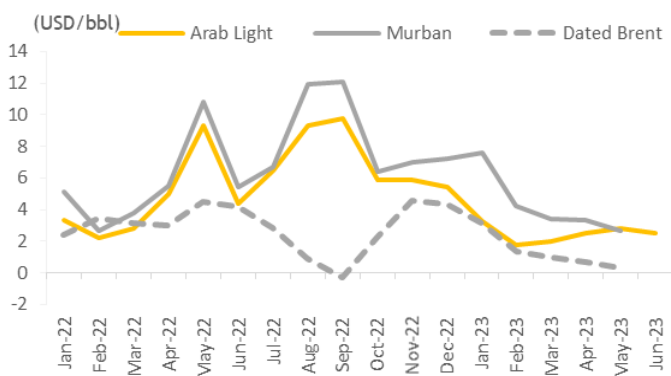
2.8 Falling crude premiums and transportation costs

While product crack spreads have fallen from their record-high levels last year, we expect refiners’ cost of crude procurement to also come down. The so-called “crude premium” is the actual price crude oil refiners pay compared to the Dubai crude oil benchmark. If this premium is high, it means the actual feedstock cost is high and margins that refineries earn will be lower than the benchmark crack spreads, and vice versa.

Over the past several months, we have begun to see crude premiums for major crude grades falling. For example, Murban (a light-sour crude oil from the UAE) has seen its premium over Dubai falling to less than USD3/bbl in May 2023 from as much as USD12/bbl in September 2022. Likewise, Arab Light (a key medium-sour crude from Saudi Arabia) has seen its premium over Dubai falling to USD2.55/bbl for June 2023 loading from a recent peak of USD9.8/bbl in September 2022. For light sweet grade, the premium of dated Brent over Dubai has fallen to just USD0.3/bbl in May 2023 compared to about USD4.6/bbl in November 2022.

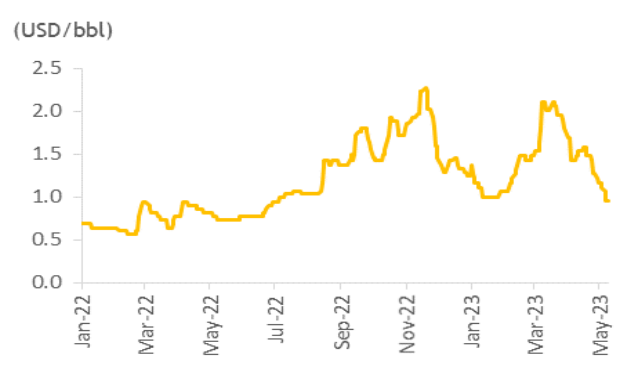
The cost of transporting crude oil has also been coming down. The benchmark Arabian Gulf to Singapore route has seen the cost per barrel decline to about USD1/bbl currently compared to peak of over USD2/bbl in November 2022 and as recently as March 2023. This is partly driven by lower time-charter rates for crude oil carriers but also lower fuel costs due to falling crude oil price.

Fig 33: Falling crude premiums



Source: Maybank IBG Research

Fig 34: Shipping costs also coming down



Source: Maybank IBG Research

2.9 Euro5 investment could lead to extra margin

Thailand has adopted Euro4 fuel emission standard since 2012 but the country is upgrading to Euro5 emission standards beginning 1 January 2024. The regulation has been postponed from 2021 due to Covid, but we do not foresee any further delay. Local refineries have been making large investments to upgrade their facilities in order to produce fuels that would comply with this standard. Based on our estimate, the total cost to upgrade all refineries in Thailand for Euro5 fuel production could amount to THB50b or more. For instance, IRPC, which accounts for about 18% of Thailand's refining capacity, is investing over THB13b into this upgrade. Historically, whenever Thailand had fuel standard upgrades, refineries would get to earn extra margins to compensate them for the investments. This is to prevent refineries from not complying and instead choose to export lower-specification fuels. With the upcoming Euro5 standard adoption, we expect the government will also allow a similar margin expansion.

3. Buy Thai refiners; BCP is our Top Pick

3.1 Up-cycle earnings, down-cycle valuation

We see a strong disconnect between Thai refiners’ earnings potential in 2023-25E and their valuations. While we forecast earnings declines in 2023E (due to very high base in 2022), we expect earnings to grow in 2024-25E for most names with TOP being the exception in 2024E due to the transition period for its upgrade.

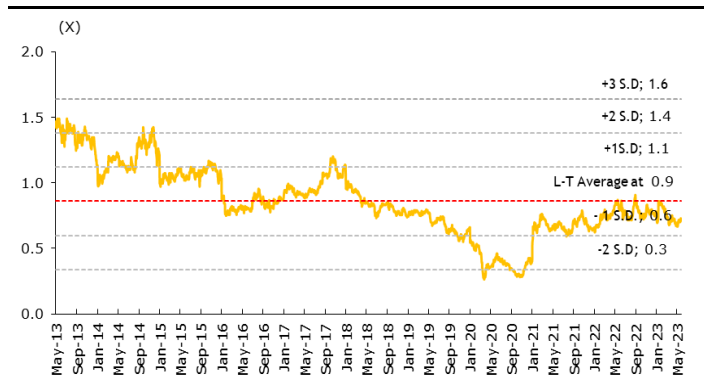
Fig 35: Thai refiner valuations

Stock	Bloomberg code	Mkt cap (USD'm)	Rating	Price (LC)	TP (LC)	Upside (%)	P/E (x)		P/B (x)		Div yld (%)	
							23E	24E	23E	24E	23E	24E
Thai Oil	TOP TB	2,913	Buy	45.25	59.00	33	7.7	7.8	0.6	0.6	3.3	3.2
IRPC	IRPC TB	1,320	Buy	2.24	2.90	36	10.5	8.3	0.6	0.5	6.6	8.4
BCP	BCP TB	1,251	Buy	31.50	49.00	63	7.1	5.3	0.8	0.7	7.0	9.5
Star Petroleum	SPRC TB	1,088	Buy	8.70	12.40	49	10.4	7.6	1.0	0.9	6.0	6.0

Source: Company data, MST

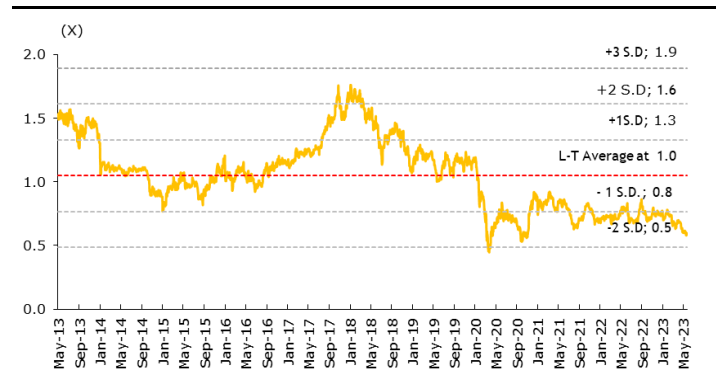
Despite their strong earnings outlooks, most refiners are priced barely above their Covid-lows on P/BV. The most depressed names, valuation-wise, is IRPC, followed by TOP. Both are trading at close to their Covid-lows of 0.5-0.6x P/BV. While we think the market is right to be concerned with petrochemical exposure for these two names, we think the de-rating has been overdone. For BCP and SPRC, while valuation is less depressed, they are still well below the mid-cycle level. We also think current market prices fail to capture the potential growth opportunities from on-going acquisitions for both of these names.

Fig 36: BCP P/BV



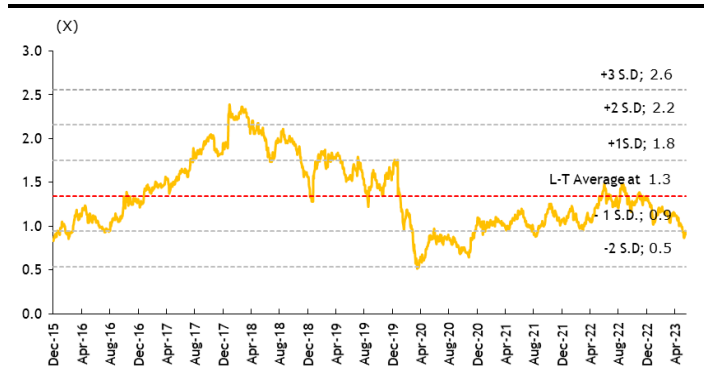
Source: Bloomberg, MST

Fig 37: TOP P/BV



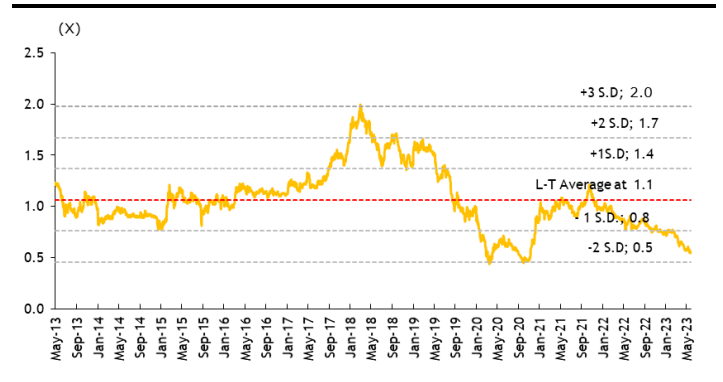
Source: Bloomberg, MST

Fig 38: SPRC P/BV



Source: Bloomberg, MST

Fig 39: IRPC P/BV



Source: Bloomberg, MST

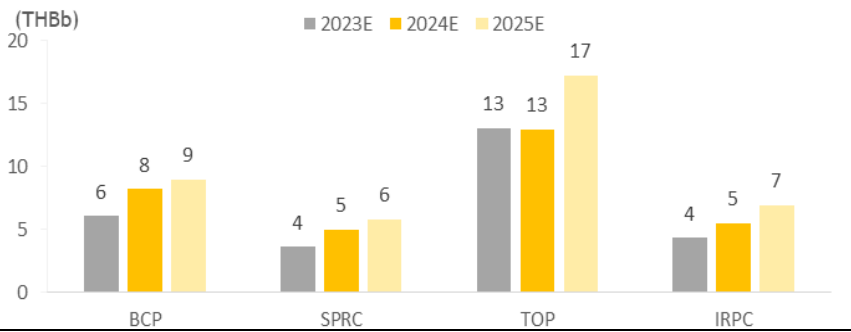
3.2 BCP is our Top Pick

BCP is our Top Pick among Thai refiners. We like it mainly for its business mix (no chemical exposure, strong retail presence) and potential earnings accretion from the acquisition of ESSO.

Strong earnings growth outlook with upside risks from synergies

On our forecasts, BCP is likely to deliver among the strongest earnings performances in 2024E with 36% growth. This is due mainly to BCP’s acquisition of ESSO where we estimate the merger will lead to over 40% earnings accretion for BCP in 2024-25E, net of additional interest expenses. Given we have not factored in any synergy from the deal, there is also potential upside risk if management can deliver the expected cost savings and operational improvement worth up to THB3b (pre-tax) p.a. Net of tax, this would equate to 29% and 27% of our current 2024-25E earnings forecasts, respectively.

Fig 40: Thai refiners earnings growth

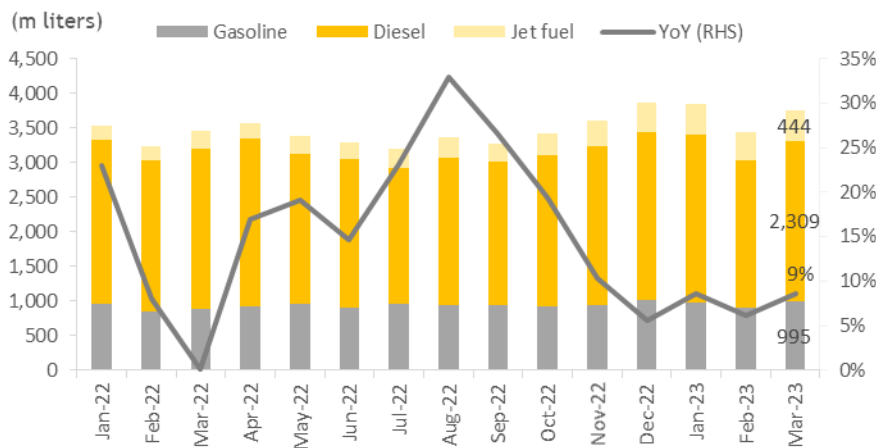


Source: Company data, MST

Retail presence; no exposure to chemical downturn

We also like BCP for its large oil marketing presence and no exposure to petrochemicals. We see a strong outlook for Thailand’s oil demand given accelerating economic growth (4% in 2023E vs 2.6% in 2022) and normalisation of air travel. In 1Q23, Thailand oil demand grew by 8% YoY, driven by 90% growth in jet fuel demand. Gasoline and diesel demand, on the other hand, grew by about 2% YoY. We think the pace of demand growth will remain high in 2Q23E given the low base. While the growth rate could slow down in 2H23E, we think it would still be above-average at around 5%.

Fig 41: Thailand oil demand



Source: DOEB, MST

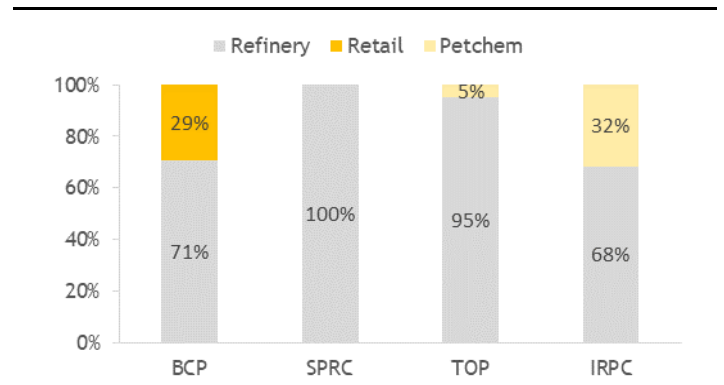
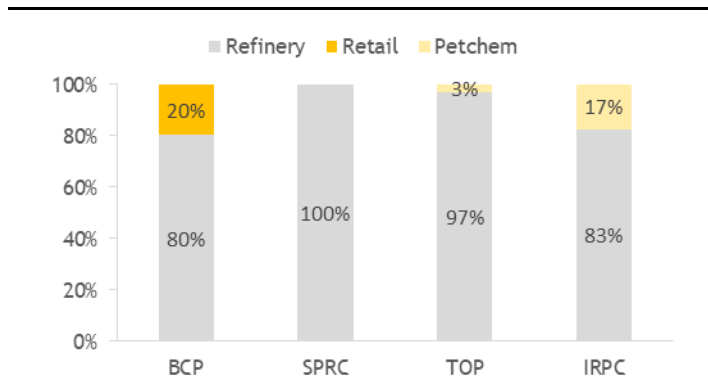
Another driver for marketing business earnings recovery is the rise in marketing margins. Last year, oil marketing margins in Thailand came under pressure as the sharp rise in global fuel prices coupled with the government’s policy to cap retail pump prices put a squeeze on oil retailers’ margin. This year, with oil prices coming down and a strengthening THB, we see little risk that marketing margin will come under a similar squeeze. 1Q23 saw a more normal marketing margin of THB1.75/litre compared to about THB1.6-1.65/litre last year. We think margin can normalise towards THB1.8-1.9/litre during the rest of 2023E.

Of the four refiners we cover, BCP is the only one that currently has strong retail and marketing presence. BCP commands 16% market share while ESSO could add another 13%. Together, they will become a number two player with almost 30% market share, just behind PTTOR (OR TB, not rated). This is another reason why we prefer BCP over the other refinery names.

SPRC is in the process of acquiring marketing business (under “Caltex” brand) from its main shareholder Chevron. However, we do not expect this acquisition to be completed before the end of 2023, and hence any contribution will only come next year. We also note that Caltex in Thailand is relatively small compared to the size of SPRC’s refinery. Caltex commands about 4% market share even though SPRC’s refinery (165kbd) is bigger than either BCP’s (125kbd) or ESSO’s (135kbd throughput).

Fig 42: GIM breakdown 2022

Fig 43: GIM breakdown 2023E



Source: Bloomberg, MST

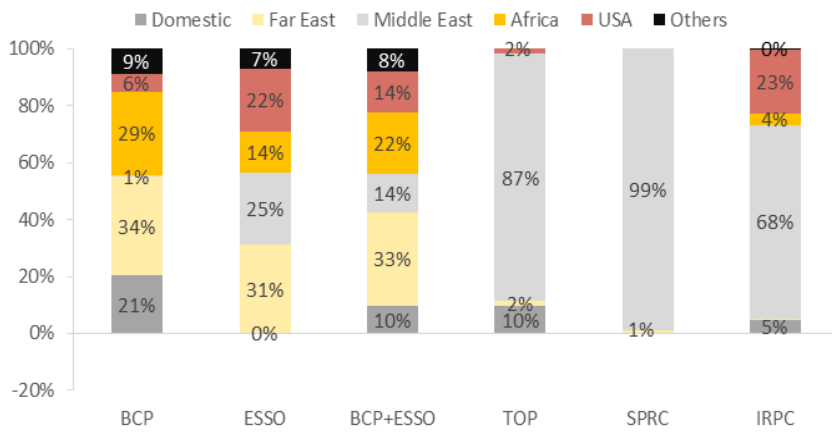
Source: Bloomberg, MST

At the opposite end, we believe exposure to petrochemicals could be headwinds for TOP and IRPC. While several petrochemical spreads are at or near cash costs, we think it will take some time for spreads to recover to mid-cycle levels. This is because of the significant new capacity start-up. We also think declining natural gas prices in the US could once again make US gas-based crackers more competitive than Asian naphtha crackers. This means potentially more US exports into the region, which would keep spreads lower for longer.

BCP and ESSO less susceptible to OPEC+ production cut

BCP is one of the Thai refiners least susceptible to the impact of OPEC+ production cut. BCP relies mostly on domestic, Far East, and African crude oils and it processes virtually no crude from the Middle East. Even when combined with ESSO, Middle Eastern crude would account for less than 15% of total intake. This is in contrast to most other Thai refiners that rely on Middle Eastern crude oils for the vast majority of their intake. TOP, SPRC, and IRPC rely on Middle Eastern crude for more than 70% of their feedstocks.

Fig 44: Thai refineries' crude intake by origin

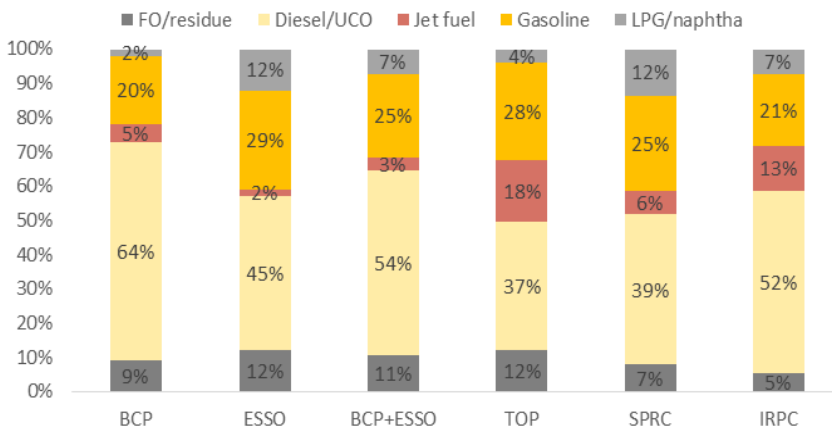


Source: DOEB, MST

Product yield is not a major differentiator

We do not think refined product yield/mix is a major differentiator among Thai refiners. All refiners here produce significantly more middle distillate (jet fuel, diesel) than gasoline. Even SPRC and ESSO, which have the highest gasoline yields among all refineries at 25-29%, still produce more diesel and jet fuel (45-47%). TOP and BCP have even more middle distillate yields (55-69%). At the same time, the ratio of fuel oil / residue output is roughly 10% across the board. IRPC's FO yield is slightly less given it uses FO as feedstock for its propylene production.

Fig 45: Thai refineries' product yield



Source: DOEB, MST

Bangchak Corporation (BCP TB)

BUY

An underrated growth story

Share Price THB 31.50
12m Price Target THB 49.00 (+63%)

Our refinery Top Pick

We initiate coverage of BCP with a BUY rating and TP of THB49. BCP is our Top Pick among the 4 refining stocks we cover. First, we expect a 36% YoY earnings growth in 2024E, driven by its merger with ESSO. Second, we see potential upside risk of up to 29/27% to our 2024/25E earnings forecasts from potential synergy post-merger. Last but not least, BCP's valuation remains attractive at just 0.7x 2024E P/BV compared to the last up-cycle, pre-merger valuation of almost 1.4x. Strong gross refining margins (GRM) and earnings growth post-merger are key catalysts, in our view. A slowdown in the global economy and reversal in China's fuel export policy represent potential downside risks to our view.

Segment-leading growth in 2024E

We believe BCP's acquisition of ESSO (Thailand) is a game-changer that is still underestimated by the market, in our view. The deal will double BCP's refining capacity and domestic sales volume and help drive 36% YoY earnings growth in 2024E (one of the highest among peers). We are not concerned with BCP's leverage and see potential asset revaluation as a way for BCP to reduce its D/E ratio and avoid capital raising (which we see as unlikely to begin with).

Potential upside of up to THB3bn pa in synergies

We have not factored in any potential synergy although we see many areas for efficiency improvement and cost savings. These include procurement, refinery operation, marketing (retail business) and back office operation. In total, BCP's management guides for up to THB3bn pre-tax in annual cost savings, equating to 29/27% of our 2024/25E profit forecasts.

Attractive valuation

We view BCP as attractively valued, trading at just 0.7x 2024E P/BV. While its discount to past average is not as steep as other refiners, we think this is justified given its better growth outlook and highest ROE in the sector (14% in 2024E). It is also the cheapest on P/E at 5x 2024E while offering sector-leading dividend yield of 7-9% in 2023-24E. Given the potential refining up-cycle, we see room for the stock to re-rate. Our TP implies 1.1x 2024E P/BV vs last up-cycle high of 1.4x.

FYE Dec (THB m)	FY21A	FY22A	FY23E	FY24E	FY25E
Revenue	199,417	312,202	263,135	421,886	413,752
EBITDA	19,175	47,214	25,212	31,625	32,230
Core net profit	3,119	17,993	6,068	8,228	8,958
Core EPS (THB)	2.27	13.07	4.41	5.98	6.51
Core EPS growth (%)	nm	476.9	(66.3)	35.6	8.9
Net DPS (THB)	2.00	2.25	2.20	2.99	3.25
Core P/E (x)	11.1	2.4	7.1	5.3	4.8
P/BV (x)	0.8	0.8	0.8	0.7	0.7
Net dividend yield (%)	7.9	7.1	7.0	9.5	10.3
ROAE (%)	19.1	26.1	11.2	14.2	14.3
ROAA (%)	1.8	8.1	2.5	3.1	3.2
EV/EBITDA (x)	6.8	2.9	7.1	5.8	5.4
Net gearing (%) (incl perps)	79.4	53.3	94.1	85.6	65.6
Consensus net profit	-	-	7,075	7,361	8,125
MIBG vs. Consensus (%)	-	-	(14.2)	11.8	10.3

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Company Description

BCP's primary businesses are oil refining, oil marketing, and power generation. It also engages in E&P activities and has biofuel operation

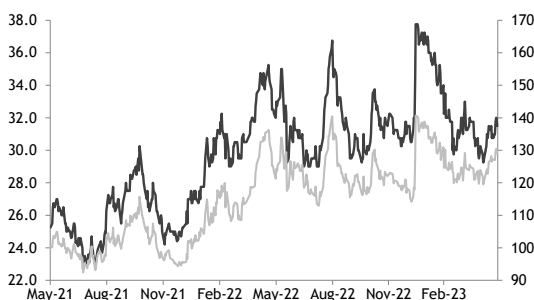
Statistics

52w high/low (THB)	37.75/29.00
3m avg turnover (USDm)	6.4
Free float (%)	59.4
Issued shares (m)	1,377
Market capitalisation	THB43.4B USD1.3B

Major shareholders:

Vayupak Fund 1	19.8%
Social Security Office	14.4%
Ministry of Finance	4.8%

Price Performance



	-1M	-3M	-12M
Absolute (%)	7	(6)	(3)
Relative to index (%)	8	0	3

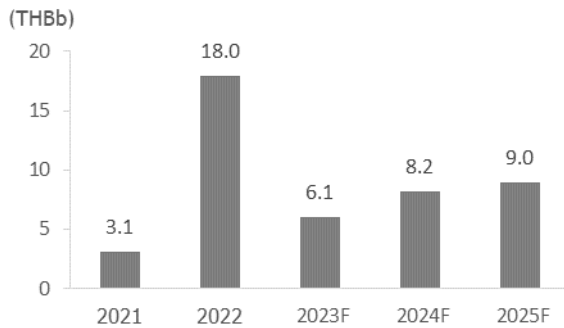
Source: FactSet

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Tear Sheet Insert

Value Proposition

- BCP operates a 120kbd refinery in Thailand, accounting for about 12% of Thailand’s total capacity. It also operates a network of service stations and commands about 16% of oil retail market share in Thailand
- Through its 57%-owned subsidiary BCPG, BCP has diversified into the renewable energy business with 542MW capacity in operation and a further 718MW under development. Solar makes up 70% of portfolio with wind and hydro contributing a further 21% and 9%, respectively.
- BCP also holds a 45% interest in OKEA ASA, a Norwegian E&P company with total oil & gas production of 22KBOED.
- BCP has announced it is acquiring ESSO (Thailand) from ExxonMobil. Once the deal is completed (expected 4Q23E), BCP will add 130kbd to its refining capacity as well as gain a further 13% market share in the Thai oil retail business. Management expects up to THB3bn in potential synergies.

BCP’s normalised profit

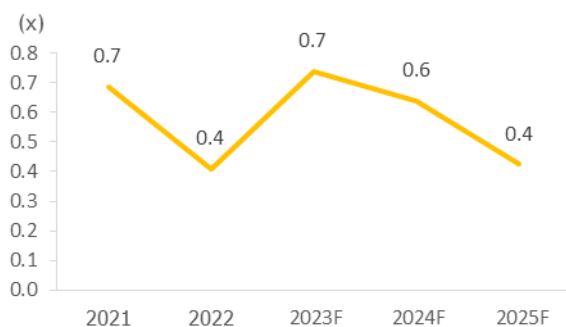


Source: Company

Financial Metrics

- We expect earnings to normalise in 2023E following an exceptionally strong 2022 results (large oil product shortages due to the war in Ukraine). We expect earnings to grow 36% and 9% in 2024-25E on merger impact, high GRM.
- Net gearing (based on interest-bearing debt only) will likely rise to 0.74x post acquisition of ESSO (Thailand). However, this is still below covenant and we expect net D/E to decline to 0.64x at the end of 2025E.

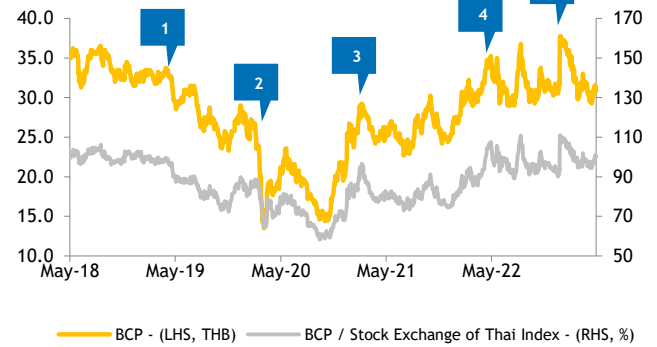
BCP Net D/E



Source: Company

Price Drivers

Historical share price trend



Source: Company, MST

- Start of down-cycle as China’s oil product export pressured GRM.
- Share price collapsed as Covid decimated global oil demand.
- Oil demand started to recover post lockdowns
- War in Ukraine and unofficial ban on Russian oil products caused fuel shortages and drove up refining margins to record high
- Share price jumped after announcement of acquisition of ESSO (Thailand).

Swing Factors

Upside

- Stronger-than-expected oil demand recovery especially in China will help lift GRM.
- Potential delay to major new refinery start-ups could tighten refined product market further
- Potential synergies with ESSO (Thailand) could lead to material upside risks to our earnings forecasts.

Downside

- Slow oil demand growth in the US and Europe could weigh on GRM.
- China’s export of oil products could weigh on Asian refined product spread.
- BCP’s diversification into new businesses could be short-term negative to earnings.

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Risk Rating & Score¹	29.9 Medium Risk
Score Momentum²	-1.5
Last Updated	21 Apr 2023
Controversy Score³ (Updated: 21 Apr 2023)	Category 1 Low

Business Model & Industry Issues

- BCP’s core operation of oil refining, retailing and E&P have come under intense scrutiny and could be significantly impacted by ESG issues going forward.
- However, the company has prepared for such changes and was one of the earliest investors in renewable energy in Thailand. The majority of capex for the next 8 years will go towards renewable energy as well as bio-based fuels. We think BCP is well placed to make the transition towards net zero carbon emission.
- Among its peer group, we think BCP is at the fore-front when it comes to addressing concerns over ESG issues. It also has among the highest earnings contribution from renewable energy.

Material E issues

- BCP aims to be carbon neutral by 2030 and achieve net-zero GHG emission by 2050.
- The company was one of the earliest investors in large-scale solar projects in Thailand and continues to invest heavily in renewable energy, expanding its portfolio into wind and hydro power projects. The company invests both in Thailand and abroad.
- BCP aims to reduce tap water consumption by 30% by 2025 compared to 2015 base year. As of 2021, the company achieved a cumulative 20% reduction. The company also limits fresh water intake for its refinery to 0.062 m3 per thousand barrels of oil production.
- BCP targets zero waste to incineration process that does not have energy recovery. As of 2021, the company still sends 6.6 tons of such waste.

Material S issues

- BCP places high emphasis on occupational health, safety and security. Through program such as Safety Culture Transformation, the company targets zero work-related illness for employee/contractor and no significant oil and chemical spill. The company achieved 5 million man-hour without Lost Time Injury.
- BCP places high importance on employee development. The company aims to improve employee capability through Individual Development Plan (IDP) as well as plan for succession in the management/executive positions. BCP has an in-house knowledge management (BCP-KMS) for critical organization knowledge.
- BCP participates in social outreach and development program in areas where it operates. It achieves 94% satisfaction rate of participants in the community.

Key G metrics and issues

- Board of Directors consist of 11 directors, 7 of whom are independent directors. There is no woman on the board.
- KPMG Phoomchai Audit Ltd is the company’s auditor.
- BCP has a zero tolerance policy when it comes to anti-corruption. The company developed Good Corporate Governance Policy Manual for all employees.
- For risk management, BCP adopts enterprise-wide risk management system based on COSO ERM and ISO 31000. This has been part of the company for more than 18 years. BCP groups its risk management framework into 1) corporate risk management, 2) project investment risks and 3) business continuity management.
- BCP established Bangchak Initiative and Innovation Center (BiiC) to help drive various innovations with a focus on green energy and bio-based products. The company engages in academic cooperation and project development with leading research institutions in Thailand including NANOTEC, Chulalongkorn University and AIT.
- For information technology, BCP follows international safety and security standards including ISO/IES27001:2013 and ISO/IES 27032: 2012. It also abides by government regulations, including Thailand’s Cybersecurity Act of 2019 and Personal Data Protection Act of 2019.

¹**Risk Rating & Score** - derived by Sustainalytics and assesses the company’s exposure to unmanaged ESG risks. Scores range between 0 - 50 in order of increasing severity with low/high scores & ratings representing negligible/significant risk to the company’s enterprise value, respectively, from ESG-driven financial impacts. ²**Score Momentum** - indicates changes to the company’s score since the last update - a **negative** integer indicates a company’s improving risk score; a **positive** integer indicates a deterioration. ³**Controversy Score** - reported periodically by Sustainalytics in the event of material ESG-related incident(s), with the impact severity scores of these events ranging from Category 0-5 (0 - no reports; 1 - negligible risks; ...; 5 - poses serious risks & indicative of potential structural deficiencies at the company).

Quantitative Parameters (Score: 40)						
	Particulars	Unit	2020	2021	2022	TOP (2022)
E	Scope 1 GHG emissions	tCO2e	883,878	819,696	932,378	3,260,000
	Scope 2 GHG emissions	tCO2e	4,554	5,487	5,099	0
	Total	tCO2e	888,432	825,183	937,477	3,260,000
	Scope 3 GHG emissions	tCO2e	279,038	422,077	600,788	27,300,000
	Total	tCO2e	1,167,470	1,247,260	1,538,265	30,560,000
	GHG intensity (Scope 1 and 2)	tCO2e/m bbls	25,042	19,686	18,498	29,772
	Electricity consumption	MWh/m bbls	100,577	81,045	N/A	9,674
	Water consumption	m3/m bbls	57,500	50,099	34,530	28,402
	Exposure to coal, mining, oil & gas and plantation	%	91%	91%	94%	100%
	Green, Social, sustainable products & serv.	THBb	12,374	18,764	18,778	0.0
S	% of women in workforce	%	31%	31%	N/A	26%
	% of women in management roles	%	36%	38%	36%	43%
	Average training hours per employee	number	23.3	28.0	N/A	62.0
	Lost Time Injury Frequency Rate (LTIFR)	Per million man-hours	0	0	0	0
	Attrition rate	%	3.2%	5.1%	N/A	5.0%
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	NMF	0.8%	0.5%	0.1%
	Independent directors (tenure <10 years) as % of the Board	%	57%	53%	67%	57%
	Profits distributed to shareholders	% of net profit	NMF	36.1%	24.6%	23.7%
	Female directors on the Board	%	7%	15%	13%	7%

Qualitative Parameters (Score: 100)	
a) is there an ESG policy in place and whether there is a standalone ESG committee or is it part of a risk committee?	<i>Yes, BCP has Sustainability and Corporate Governance Committee.</i>
b) Does the performance evaluation of the board and senior mgt include a review of the performance of the board and senior management in addressing the company's material sustainability risks and opportunities?	<i>Yes.</i>
c) Does the company follow TCFD framework for ESG reporting? Is it signatory to responsible banking initiative or other such initiatives?	<i>Yes</i>
d) Does the company capture or plan to capture Scope 3 emissions including from financing activities?	<i>Yes.</i>
e) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?	<i>BCP aims to achieve Carbon Neutrality by 2030 and Net Zero emissions by 2050.</i>
f) Does carbon offset form part of the net zero/carbon neutrality target of the company?	<i>Yes</i>

Target (Score: 100)		
Particulars	Target	Achieved
Net zero emission by 2050	by 2050	N/A
Zero waste to landfill by 2025	0.0%	0.0%
Waste disposed through 3R	100%	99%
Total recordable injury rate (TRIR)	0.00	0.00
Improve water efficiency by 2025 (m3 per bbl)	54	63
Impact		
NA		
Overall Score: 55		
As per our ESG matrix, Bangchak Corp (BCP TB) has an overall score of 55.		

ESG score	Weights	Scores	Final Score
Quantitative	50%	40	20
Qualitative	25%	100	25
Target	25%	40	10
Total			55

As per our ESG assessment, BCP is a leader in its industry in terms of establishing ESG framework and making progresses towards net zero emissions by 2050. This is reflected in its overall ESG score of 55, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

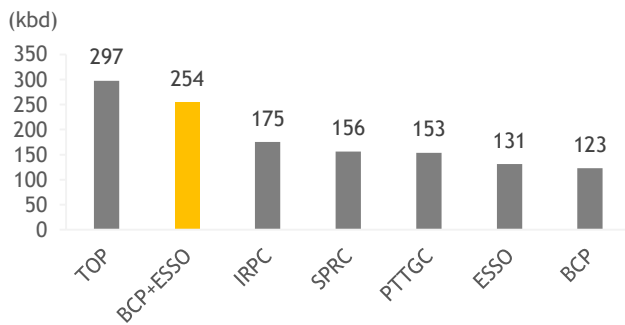
1. Segment-leading earnings growth in 2024E

1.1 Doubling oil refining capacity, oil retail presence

BCP has announced it will acquire ESSO (Thailand) (ESSO TB, not rated) from ExxonMobil and make a tender offer for all remaining shares. While the purchase price of ESSO shares is yet to be finalised, the deal has been structured such that BCP will pay THB55bn in enterprise value for the entire company. We expect the deal to close by the end of this year at the latest.

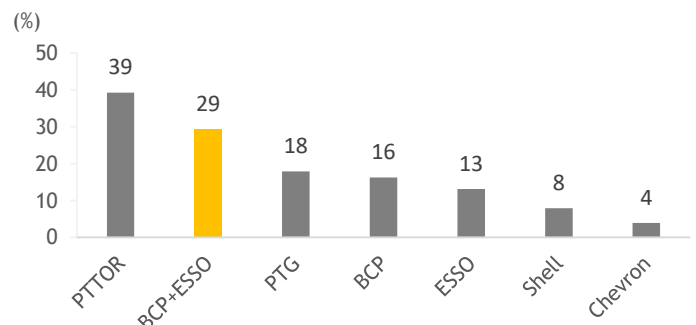
Combination with ESSO will help to double BCP’s refining throughput, from about 123kbd to more than 250kbd (based on 2022 actual throughput). This means BCP will be behind only TOP when it comes to refining capacity in Thailand. On the retail side, the combined market share for both BCP and ESSO will be 29%. Again, this makes it second only to PTTOR (OR TB, not rated) which has a 39% market share (4Q22 actual). Most importantly, the merger will enable BCP to deliver a strong 36% YoY earnings growth in 2024E, among the strongest within its peer group.

Fig 1: BCP and ESSO combined refining capacity



Source: Company data, MST

Fig 2: BCP and ESSO combined retail market share



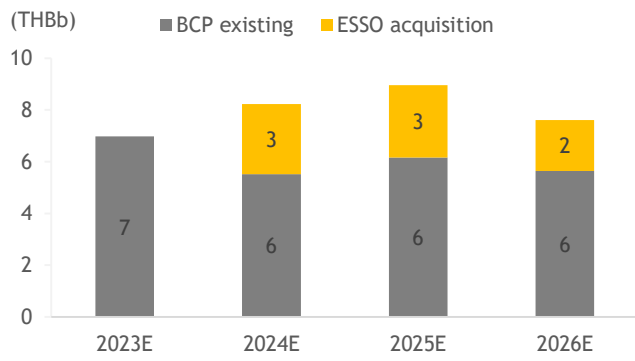
Source: Company data, MST

1.2 Earnings accretion

We assume that BCP will be able to purchase 100% of ESSO shares given the indicative purchase price (almost THB10/sh) is much higher than the prevailing market price. In terms of earnings impact, we estimate the ESSO acquisition is contributing over 30% earnings accretion for BCP in 2024-25E, adjusted for additional interest expense. For 2023E, we conservatively assume no earnings contribution from ESSO.

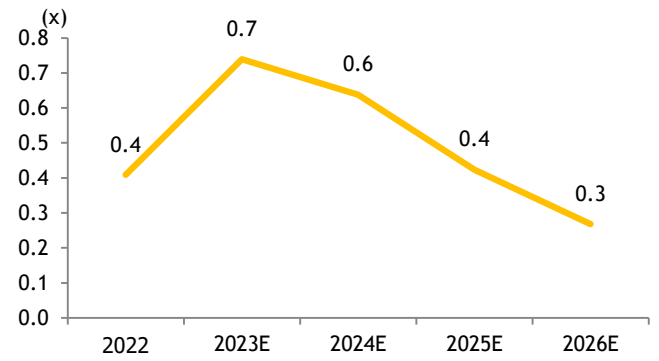
We believe the market so far has underestimated the impact of this combination as Bloomberg consensus assumes flat earnings growth in 2024-25E. Additionally, we think the market may be overly concerned on BCP’s leverage. We see little likelihood of a capital raising as we forecast net D/E (interest-bearing debt only) to peak at below 0.8x. We also believe potential asset revaluation could lead to gain on bargain purchase. This would increase BCP’s equity base and reduce its D/E ratio further.

Fig 3: BCP earnings contribution from ESSO acquisition



Source: Company data, MST

Fig 4: BCP net D/E*



Note: * Interest-bearing debt only

Source: Company data, MST

2. Potential upside of up to THB3bn pa in synergies

We have yet to incorporate any potential synergies into our forecasts. However, we see several areas where the combined entity can improve operations and achieve cost savings.

2.1 Procurement

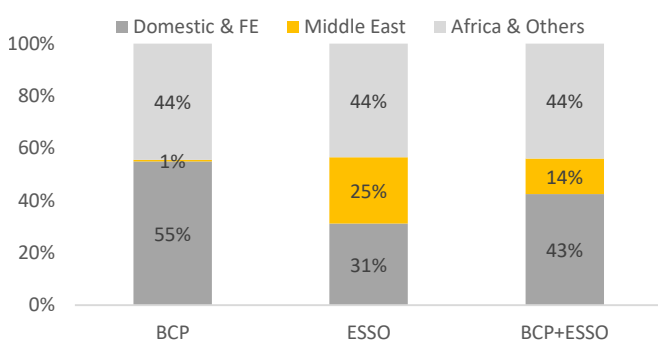
On crude oil procurement, we see potential cost savings if the two refineries can combine their purchases and load it on one big crude carrier. This is cheaper on a per-barrel basis than carrying it on smaller vessels. We also believe it will be easier for BCP to source a wider range of crude oils given bigger purchase volume.

2.2 Refinery optimization

By combining with ESSO, BCP will reduce its dependence on middle distillate and achieve a more balanced product yield. Currently, almost 70% of BCP’s refinery output is middle distillate (jet fuel, diesel, unconverted oil) whereas only 9% of its output is light distillate (gasoline, naphtha). With ESSO’s refinery, the dependence on middle distillate will be reduced to about 58% and its yield of light product will increase to 13%.

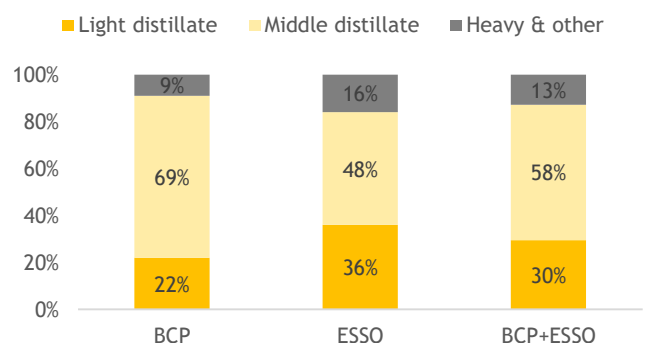
We also think ESSO’s excess gasoline and diesel production can be sold domestically via BCP’s network. Currently, BCP’s marketing arm is selling more than its refinery can produce. By taking excess barrels from ESSO’s refineries (which would otherwise be exported), BCP can achieve USD2-3/bbl higher margin on those barrels. BCP also aims to increase ESSO’s utilisation rate from about 130kbd to 150kbd. This is achievable given BCP’s wider marketing presence. BCP can also co-ordinate maintenance shutdowns for the two refineries to minimise impact on the company.

Fig 5: Refinery crude intake by source



Source: Company data, MST

Fig 6: Refinery yield by type of product



Source: Company data, MST

2.3 Marketing and retail business

BCP’s stations are mostly in provincial areas whereas ESSO has relatively high concentration of service stations in Bangkok and vicinity. By combining the two, BCP will improve its reach into the urban market. Higher gas station density will also mean lower distribution cost per litre. We also think BCP can leverage its brand and know-how in the non-oil retail business on ESSO’s service stations. This will help improve overall non-oil revenue and earnings.

Fig 7: BCP and ESSO 4Q22 production and domestic sales by product (in millions of litres)

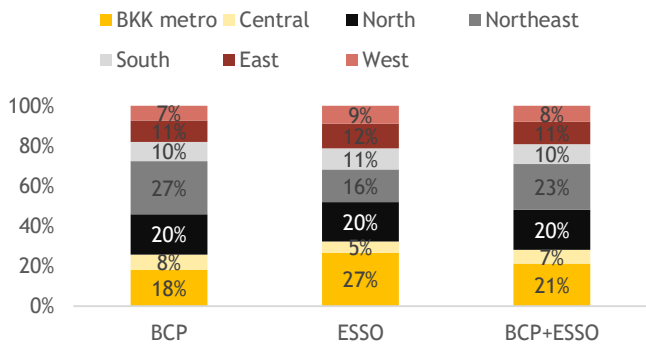
Product	ESSO			BCP			ESSO+BCP		
	Production	Local sales	Surplus/ (deficit)	Production	Local sales	Surplus/ (deficit)	Production	Local sales	Surplus/ (deficit)
Gasoline	495	344	150	443	452	-10	938	797	141
Jet fuel	59	101	-42	123	88	35	182	189	-7
Diesel	863	824	39	942	1015	-73	1805	1839	-34

Source: DOEB, MST

2.4 Back office operation

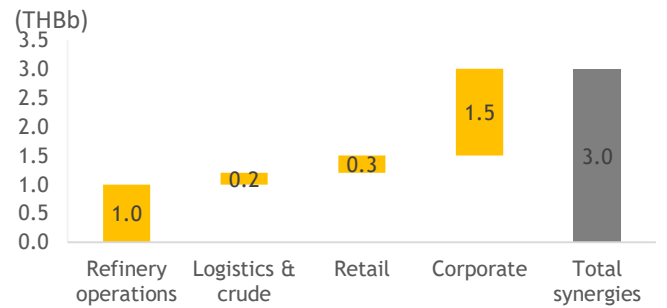
This is an area where BCP’s management sees the biggest potential cost synergies. BCP can reduce any redundant functions and reduce costs for the combined entity. Management sees up to THB1.5bn of potential cost savings pa from this area.

Fig 8: BCP and ESSO retail stations by location



Source: DOEB, MST

Fig 9: BCP’s management sees up to THB3bn pa in synergies



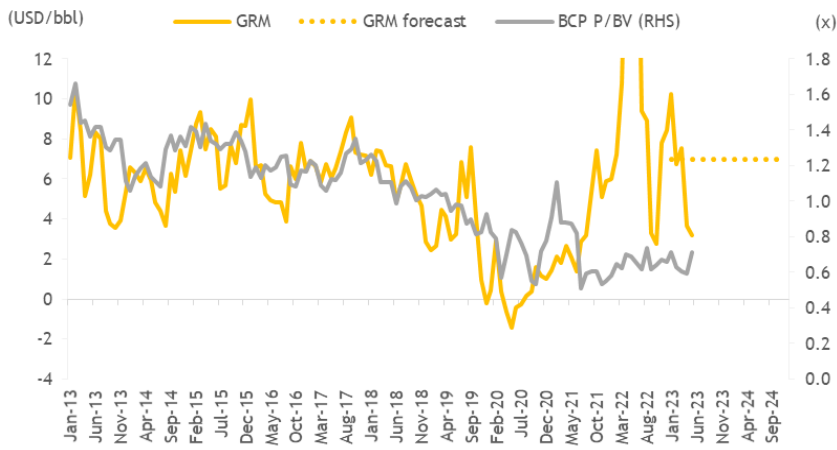
Source: BCP, MST

In total, BCP’s management estimates about THB3bn pa in potential synergies. Even if just half of this figure is realised, it will represent significant upside to our earnings forecasts and TP.

3. Attractive valuation

We rate BCP a BUY with a TP of THB49. We view BCP as attractively valued, trading at just 0.7x 2024E P/BV. While its discount to past average is not as steep as other refiners, we think this is justified given its better growth outlook and highest ROE in the sector (14% in 2024E). It is also the cheapest on P/E at just 5x 2024E. Given the potential refining up-cycle, we see room for the stock to re-rate. Our TP implies 1.1x 2024E P/BV vs last up-cycle high of 1.4x.

Fig 10: BCP P/BV vs GRM



Source: Bloomberg, MST

FYE 31 Dec	FY21A	FY22A	FY23E	FY24E	FY25E
Key Metrics					
P/E (reported) (x)	4.7	3.4	7.1	5.3	4.8
Core P/E (x)	11.1	2.4	7.1	5.3	4.8
P/BV (x)	0.8	0.8	0.8	0.7	0.7
P/NTA (x)	0.8	0.8	0.8	0.7	0.7
Net dividend yield (%)	7.9	7.1	7.0	9.5	10.3
FCF yield (%)	nm	12.5	nm	27.9	50.8
EV/EBITDA (x)	6.8	2.9	7.1	5.8	5.4
EV/EBIT (x)	11.7	3.6	12.6	10.5	9.6
INCOME STATEMENT (THB m)					
Revenue	199,417.0	312,202.4	263,135.4	421,886.1	413,752.3
EBITDA	19,175.1	47,214.4	25,212.2	31,624.9	32,230.3
Depreciation	(8,074.9)	(10,003.6)	(10,971.1)	(14,082.5)	(14,038.9)
Amortisation	0.0	0.0	0.0	0.0	0.0
EBIT	11,100.2	37,210.8	14,241.1	17,542.4	18,191.4
Net interest income / (exp)	(2,539.5)	(3,976.7)	(4,142.6)	(4,299.0)	(4,259.3)
Associates & JV	1,042.1	188.1	39.3	38.2	36.9
Exceptionals	4,504.9	(5,417.9)	0.0	0.0	0.0
Other pretax income	0.0	0.0	0.0	0.0	0.0
Pretax profit	14,107.8	28,004.3	10,137.8	13,281.5	13,969.1
Income tax	(4,263.0)	(12,851.8)	(2,019.7)	(2,648.7)	(2,786.4)
Minorities	(2,220.9)	(2,577.3)	(2,050.5)	(2,405.2)	(2,225.1)
Discontinued operations	0.0	0.0	0.0	0.0	0.0
Reported net profit	7,623.8	12,575.2	6,067.6	8,227.6	8,957.5
Core net profit	3,118.9	17,993.1	6,067.6	8,227.6	8,957.5
BALANCE SHEET (THB m)					
Cash & Short Term Investments	32,829.4	47,168.8	11,236.8	11,436.8	11,640.8
Accounts receivable	15,233.6	22,199.0	18,710.1	29,998.0	29,419.7
Inventory	18,497.0	29,532.5	26,731.3	43,404.6	42,400.4
Property, Plant & Equip (net)	69,233.3	73,018.4	119,577.8	110,036.6	100,549.7
Intangible assets	0.0	0.0	0.0	0.0	0.0
Investment in Associates & JVs	13,670.0	1,852.3	1,852.3	1,852.3	1,852.3
Other assets	52,322.0	68,573.3	65,998.1	88,400.9	90,745.6
Total assets	201,785.3	242,344.3	244,106.4	285,129.2	276,608.5
ST interest bearing debt	10,737.7	10,732.3	4,060.5	3,836.2	2,918.1
Accounts payable	15,650.8	28,947.6	26,201.8	42,544.9	41,560.6
LT interest bearing debt	77,305.1	80,907.6	90,430.1	89,355.4	75,887.1
Other liabilities	28,532.0	38,379.0	34,984.0	53,903.0	53,867.0
Total Liabilities	132,226.0	158,966.3	155,676.2	189,639.9	174,232.8
Shareholders Equity	53,467.1	62,703.8	65,705.5	70,359.3	75,020.5
Minority Interest	16,092.2	20,674.3	22,724.8	25,130.0	27,355.1
Total shareholder equity	69,559.3	83,378.1	88,430.3	95,489.3	102,375.7
Total liabilities and equity	201,785.3	242,344.3	244,106.4	285,129.2	276,608.5
CASH FLOW (THB m)					
Pretax profit	14,107.8	28,004.3	10,137.8	13,281.5	13,969.1
Depreciation & amortisation	8,074.9	10,003.6	10,971.1	14,082.5	14,038.9
Adj net interest (income)/exp	263.4	447.7	0.0	0.0	0.0
Change in working capital	(3,883.3)	(13,794.6)	4,896.8	(8,058.1)	1,348.8
Cash taxes paid	(4,263.0)	(12,851.8)	(2,019.7)	(2,648.7)	(2,786.4)
Other operating cash flow	(4,504.9)	5,417.9	0.0	0.0	0.0
Cash flow from operations	11,715.6	19,231.7	23,986.0	16,657.3	26,570.3
Capex	(22,741.2)	(13,788.6)	(57,530.6)	(4,541.2)	(4,552.0)
Free cash flow	(11,025.6)	5,443.1	(33,544.6)	12,116.0	22,018.3
Dividends paid	(2,672.2)	(4,260.8)	(3,065.9)	(3,573.8)	(4,296.3)
Equity raised / (purchased)	0.0	0.0	0.0	0.0	0.0
Change in Debt	6,101.9	(13,624.6)	31,290.2	(4,431.8)	(17,523.1)
Other invest/financing cash flow	18,774.3	26,781.7	(30,611.8)	(3,910.4)	5.1
Effect of exch rate changes	0.0	0.0	0.0	0.0	0.0
Net cash flow	11,178.3	14,339.4	(35,932.1)	200.0	204.0

FYE 31 Dec	FY21A	FY22A	FY23E	FY24E	FY25E
Key Ratios					
Growth ratios (%)					
Revenue growth	46.1	56.6	(15.7)	60.3	(1.9)
EBITDA growth	322.3	146.2	(46.6)	25.4	1.9
EBIT growth	nm	235.2	(61.7)	23.2	3.7
Pretax growth	nm	98.5	(63.8)	31.0	5.2
Reported net profit growth	nm	64.9	(51.7)	35.6	8.9
Core net profit growth	nm	476.9	(66.3)	35.6	8.9
Profitability ratios (%)					
EBITDA margin	9.6	15.1	9.6	7.5	7.8
EBIT margin	5.6	11.9	5.4	4.2	4.4
Pretax profit margin	7.1	9.0	3.9	3.1	3.4
Payout ratio	36.1	24.6	50.0	50.0	50.0
DuPont analysis					
Net profit margin (%)	3.8	4.0	2.3	2.0	2.2
Revenue/Assets (x)	1.0	1.3	1.1	1.5	1.5
Assets/Equity (x)	3.8	3.9	3.7	4.1	3.7
ROAE (%)	19.1	26.1	11.2	14.2	14.3
ROAA (%)	1.8	8.1	2.5	3.1	3.2
Liquidity & Efficiency					
Cash conversion cycle	26.2	23.9	28.8	21.4	26.6
Days receivable outstanding	19.5	21.6	28.0	20.8	25.8
Days inventory outstanding	34.2	32.3	41.8	32.1	40.2
Days payables outstanding	27.6	30.0	41.0	31.5	39.4
Dividend cover (x)	2.8	4.1	2.0	2.0	2.0
Current ratio (x)	2.0	2.3	1.7	1.6	1.6
Leverage & Expense Analysis					
Asset/Liability (x)	1.5	1.5	1.6	1.5	1.6
Net gearing (%) (incl perps)	79.4	53.3	94.1	85.6	65.6
Net gearing (%) (excl. perps)	79.4	53.3	94.1	85.6	65.6
Net interest cover (x)	4.4	9.4	3.4	4.1	4.3
Debt/EBITDA (x)	4.6	1.9	3.7	2.9	2.4
Capex/revenue (%)	11.4	4.4	21.9	1.1	1.1
Net debt/ (net cash)	55,213.4	44,471.1	83,253.8	81,754.8	67,164.4

Source: Company; Maybank IBG Research

Thai Oil (TOP TB)

A valuation disconnect

Refining proxy

We initiate coverage of TOP with BUY and TP of THB59. We view TOP's current valuation of just 0.6x 2024E P/BV (barely above its Covid-low) as compelling and a clear disconnect to the strong refining outlook and potential recovery in aromatics chemicals. We are also positive on TOP's CFP refinery upgrade in the long term. Improving gross refining margin (GRM) and chemical spreads are potential catalysts. A slowdown in the global economy and reversal in China's fuel export policy represent potential downside risks to our view.

Strong refining helps cushion chemical downturn

We see a strong outlook for refining margins in 2023-25E given tightening demand/supply balance. For TOP, we expect refining to contribute the majority of its gross integrated margin (GIM) in these 3 years. We forecast total GIM of USD7.5, 9.2, and 10.4 per bbl in 2023-25E. While this is down from 2022, when the war in Ukraine helped boost GIM to record-high USD13.4/bbl, the outlook for the next 3 years still sees GRM higher than 10-year average of USD7.2/bbl. We note that we incorporate potential uplift from CFP project into our forecast from 2025E onwards.

CFP start-up: short-term drag, long-term boost

We are positive on TOP's CFP refinery upgrade. The project will expand TOP's nameplate capacity to 400kbd from 275kbd now. It will also enable TOP to process heavier crude and improve product yield. This is long-term positive to margins but in the short term, start-up costs, shutdowns for tie-ins and potential delays could hurt earnings. This explains a 1% normalised profit drop in 2024E followed by strong recovery in 2025E.

Valuation approaching Covid-low

We view TOP as attractively valued, trading at just 0.6x 2024E P/BV, which is barely above its Covid-low. We see a disconnect between potential GRM up-cycle and down-cycle valuation. We see GRM recovery as a key driver for the stock's re-rating. Note that during the last up-cycle in late 2017, TOP traded as high as 1.8x P/BV. Our TP implies 0.8x P/BV.

FYE Dec (THB m)	FY21A	FY22A	FY23E	FY24E	FY25E
Revenue	345,496	529,589	444,543	452,850	520,452
EBITDA	15,777	49,264	26,182	32,382	42,400
Core net profit	4,579	45,125	13,045	12,935	17,236
Core EPS (THB)	2.24	21.61	5.84	5.79	7.72
Core EPS growth (%)	nm	862.6	(73.0)	(0.8)	33.3
Net DPS (THB)	2.60	3.70	1.48	1.47	1.95
Core P/E (x)	22.1	2.6	7.7	7.8	5.9
P/BV (x)	0.8	0.8	0.6	0.6	0.5
Net dividend yield (%)	5.3	6.6	3.3	3.2	4.3
ROAE (%)	10.6	23.6	8.2	7.7	9.6
ROAA (%)	1.4	11.2	3.0	3.0	3.9
EV/EBITDA (x)	18.5	6.1	11.2	9.3	7.1
Net gearing (%) (incl perps)	139.7	97.1	96.1	91.1	81.0
Consensus net profit	-	-	13,362	13,692	19,308
MIBG vs. Consensus (%)	-	-	(2.4)	(5.5)	(10.7)

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BUY

Share Price THB 45.25
 12m Price Target THB 59.00 (+34%)

Company Description

TOP is the largest refinery in Thailand. It also has exposure to aromatics and olefin chemicals

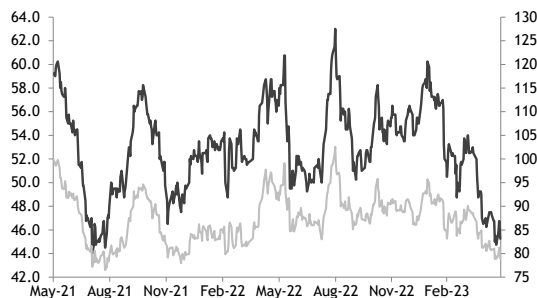
Statistics

52w high/low (THB)	63.00/44.75
3m avg turnover (USDm)	15.0
Free float (%)	52.0
Issued shares (m)	2,232
Market capitalisation	THB101.0B USD2.9B

Major shareholders:

PTT PCL	45.0%
Thai NVDR	12.0%
Citibank Nominees Singapore PTE	3.0%

Price Performance



	-1M	-3M	-12M
Absolute (%)	(4)	(13)	(19)
Relative to index (%)	(3)	(7)	(14)

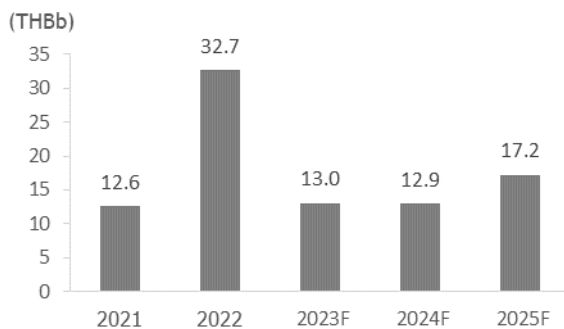
Source: FactSet

ESG@MAYBANK IBG
 Tear Sheet Insert

Value Proposition

- Thai Oil operates Thailand’s largest refinery with capacity of 275kbd (nameplate). Its complex includes an aromatic plant (paraxylene, benzene, toluene) with annual capacity of 838k tons as well as a lube base plant.
- Thai Oil is expanding and upgrading its refinery at a cost of USD4.8b. Once completed (expect in 2024E), its capacity will increase to 400kbd. The complex will also be able to process heavier crude while increasing yield of high-margin products. This will enable TOP to reduce its feedstock cost and increase refining margin.
- TOP recently invested USD1.18b for 15% stake in Chandra Asri, Indonesia’s largest integrated olefin chemical player.

TOP norm profit

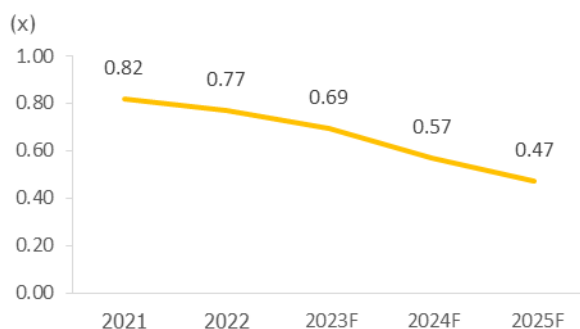


Source: Company

Financial Metrics

- We expect TOP’s earnings to normalise in 2023-24E following an exceptionally strong result in 2022, which was boosted by the impact of the war in Ukraine on global fuel trade flows.
- TOP has already completed a round of capital raising in late 2022 that helped lower its near gearing. Despite high capex, we expect net D/E to continue falling over the next two years.

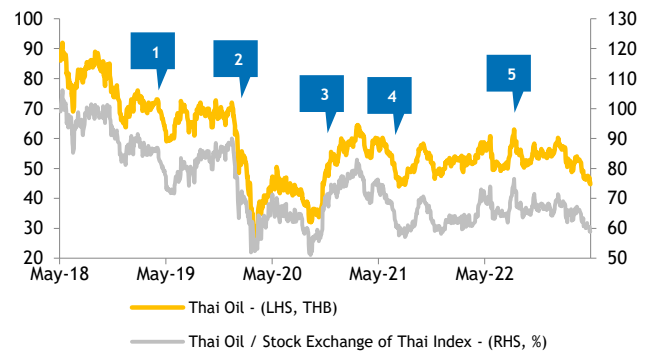
TOP net D/E



Source: Company

Price Drivers

Historical share price trend



Source: Company, MST

1. Refining margin weakness following large oil product exports from China.
2. Covid sell-off.
3. Recovery in oil demand.
4. Announcement of investment in PT Chandra Asri.
5. Fuel shortages following the war in Ukraine drove up refining margins to record high.

Swing Factors

Upside

- Stronger than expected refining margin and/or recovery in aromatics chemical spreads present potential upside risk to our forecasts.
- We are conservative on potential uplift from refinery upgrade. As such, if early results post-upgrade are encouraging, it could present upside risk to our view.

Downside

- A global economic slowdown could negatively impact oil product demand and therefore refining margin.
- China could continue to expand its aromatic chemical production. This would delay spread recovery.
- A narrowing diesel-fuel oil spread and light-heavy crude oil spread would reduce potential uplift from the refinery upgrade. This would be downside risks to our view.

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Risk Rating & Score ¹	29.7 Medium Risk
Score Momentum ²	+5.3
Last Updated	13 April 2023
Controversy Score ³ (Updated: 13 April 2023)	Category 1 Low

Business Model & Industry Issues

- TOP’s core business of oil refining leaves it exposed to ESG issues, particularly concerning the environment. Nevertheless, the company has commitment to achieve carbon neutrality by 2050 and net-zero emission by 2060.
- Among its peer group, TOP stands at the forefront in terms of its leadership in tackling ESG issues.

Material E issues

- TOP targets to achieve carbon neutrality by 2050 and net zero GHG emissions by 2060. In the short term, it has annual tCO₂e, NOX, and SOX emission reduction target annually. In 2022, it reduced NOX emission by 2.2% YoY and SOX emission by 26% YoY.
- To mitigate its environmental impacts, TOP focuses on selling more environmentally friendly products such as bio-based products as well as products that reduce GHG emission (such as benzene-free solvent and low-sulphur fuel oil)
- TOP achieves zero incident of significant oil/chemical spill and is in full compliance with environmental regulations.
- TOP targets zero waste to landfill by 2030 (2022A 95%) and aims to reduce water consumption (target 1st quartile compared to 2nd quarter in 2022)

Material S issues

- All of TOP’s units and its tier-1 supplier have received human rights risk assessment. It received zero complaint by employees on human rights violation.
- TOP’s occupational health and safety record for employees and sub-contractors is on par with the top 10% in the oil and gas industry.
- TOP targets human capital index (HCI) of 85 for its employees by 2030 compared to 80 actual score for 2022. Its workforce productivity is in the 1st quartile compared to industry peers. Employee satisfaction rate is 95% (2022).
- TOP places great importance on engagement with communities in which it operates whereby it conducts a monthly 3-synchronization model meeting. It also spends about THB300m annually on community investment and charitable donations.

Key G metrics and issues

- TOP’s board of directors consists of 15 directors, 7 of whom are independent. Only 1 board member is female; however, 33% of TOP’s senior management positions are held by women.
- TOP integrates the business code of conduct into the CG Manual. These codes of conducts encompass areas such as procurement, intellectual property, anti-money laundering, conflict of interests, and information technology. There was no violation of business code of conduct or corruption among BOD, executives and employees in 2022. In 2022, TOP achieves Corporate Governance Report (CGR) of Thai Listed Companies score of 98.
- TOP has strategic plans for innovation development through 2030. It emphasizes employees’ awareness on organizational innovation development, including through weekly “Innovation Newsletter” and invitation of guest speakers on innovation to share knowledge with employees. These efforts have led to both new product and process developments.
- TOP is committed to enhance its competitiveness with digital transformation. It has a long-term target to be a leader in digital literacy (Level 4) compare to short term target of Level 2. It also places emphasis on cybersecurity and receives zero cyberattack in 2022.
- 80% of its critical suppliers have received ESG risk assessment in 2022; it targets 100% by 2026. TOP achieves more than 90% satisfaction rate from its suppliers; the target in 2026 is to achieve 95%.

¹**Risk Rating & Score** - derived by Sustainalytics and assesses the company’s exposure to unmanaged ESG risks. Scores range between 0 - 50 in order of increasing severity with low/high scores & ratings representing negligible/significant risk to the company’s enterprise value, respectively, from ESG-driven financial impacts. ²**Score Momentum** - indicates changes to the company’s score since the last update - a **negative** integer indicates a company’s improving risk score; a **positive** integer indicates a deterioration. ³**Controversy Score** - reported periodically by Sustainalytics in the event of material ESG-related incident(s), with the impact severity scores of these events ranging from Category 0-5 (0 - no reports; 1 - negligible risks; ...; 5 - poses serious risks & indicative of potential structural deficiencies at the company).

Quantitative Parameters (Score: 27)						
	Particulars	Unit	2020	2021	2022	BCP (2022)
E	Scope 1 GHG emissions	m tCO2e	3.03	3.15	3.26	0.93
	Scope 2 GHG emissions	tCO2e	0	0	0	5,099
	Total	m tCO2e	3.03	3.15	3.26	0.94
	Scope 3 GHG emissions	m tCO2e	26.50	26.80	27.30	0.60
	Total	m tCO2e	29.53	29.95	30.56	1.54
	GHG intensity (Scope 1 and 2)	tCO2e/m bbls	29,128	30,932	29,772	18,498
	Electricity consumption	MWh/m bbls	9,346	9,626	9,674	N/A
	Water consumption	m3/m bbls	41,528	38,985	28,402	34,530
	Exposure to coal, mining, oil & gas and plantation	%	100%	100%	100%	94%
	Green, Social, sustainable products & serv.	THBb	0	0	0	18,778
S	% of women in workforce	%	24%	25%	26%	N/A
	% of women in management roles	%	42%	43%	43%	36%
	Average training hours per employee	number	54.2	54.3	62.0	N/A
	Lost Time Injury Frequency Rate (LTIFR)	Employee	0.0	0.0	0.0	0
	Attrition rate	%	2.7%	2.7%	5.0%	N/A
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	NMF	0.2%	0.1%	0.5%
	Independent directors (tenure <10 years) as % of the Board	%	53%	53%	57%	67%
	Profits distributed to shareholders	% of net profit	NMF	42.0%	23.7%	24.6%
	Female directors on the Board	%	20%	20%	7%	13%

Qualitative Parameters (Score: 100)	
a) is there an ESG policy in place and whether there is a standalone ESG committee or is it part of a risk committee?	<i>Yes, Thai Oil has established Corporate Governance and Sustainability Committee.</i>
b) Does the performance evaluation of the board and senior mgt include a review of the performance of the board and senior management in addressing the company's material sustainability risks and opportunities?	<i>Yes.</i>
c) Does the company follow TCFD framework for ESG reporting? Is it signatory to responsible banking initiative or other such initiatives?	<i>Yes</i>
d) Does the company capture or plan to capture Scope 3 emissions including from financing activities?	<i>Yes.</i>
e) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?	<i>Thai Oil aims to reach Carbon Neutrality by 2050 and Net Zero emissions by 2060.</i>
f) Does carbon offset form part of the net zero/carbon neutrality target of the company?	<i>Yes</i>

Target (Score: 100)		
Particulars	Target	Achieved
Net zero emission by 2060	by 2060	N/A
Zero waste to landfill	0%	0%
Waste disposed through 3R by 2025	100%	95%
Total recordable injury rate (TRIR)	0.100	0.340
Impact		
NA		
Overall Score: 38		
As per our ESG matrix, Thai Oil (TOP TB) has an overall score of 38.		

ESG score	Weights	Scores	Final Score
Quantitative	50%	27	13
Qualitative	25%	100	25
Target	25%	0	0
Total			38

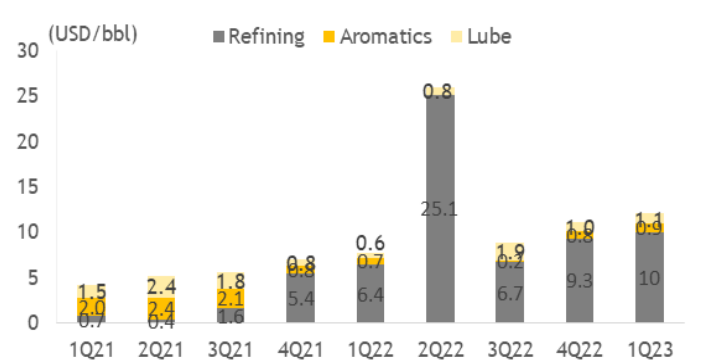
Our overall ESG score for TOP is 38, which makes its ESG rating below average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring). TOP has a Net Zero target by 2060 instead of 2050 and its recordable injury rate is still higher than its internal target. However, TOP scores highly on social impact assessments.

1. Strong refining helps cushion chemical downturn

1.1 Strong outlook for refining

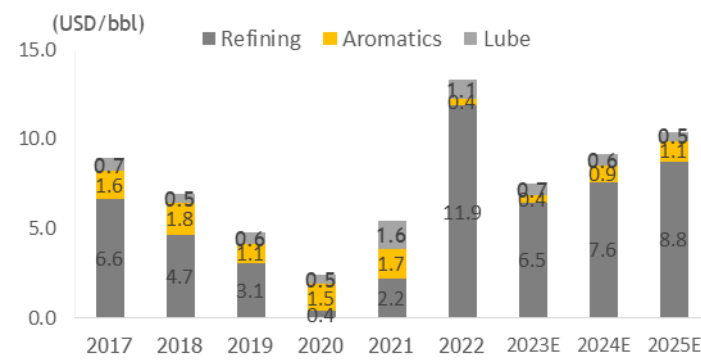
We see a strong outlook for refining margins in 2023-25E given tightening demand/supply balance. For TOP, we expect refining to contribute the majority of its gross integrated margin (GIM) in these 3 years. We forecast total GIM of USD7.5, 9.2, and 10.4 per bbl in 2023-25E. While this is down from 2022, when the war in Ukraine helped boost GIM to record-high USD13.4/bbl, the outlook for the next 3 years still see GRM higher than 10-year average of USD7.2/bbl. We note that we incorporate potential uplift from CFP project into our forecast from 2025E onwards.

Fig 1: TOP quarterly GIM



Source: Company data, MST

Fig 2: TOP annual GIM

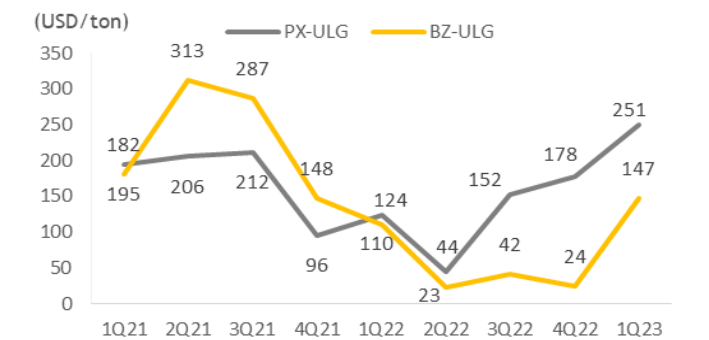


Source: Company data, MST

1.2 Aromatic spreads starting to recover

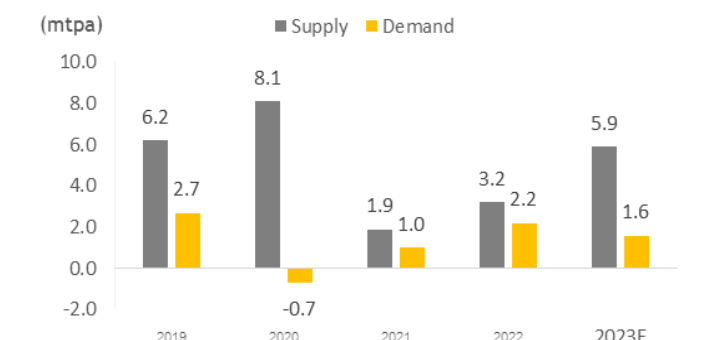
We believe aromatic spreads will continue to recover from the recent bottom in late 2022. While significant new capacity is starting up in China, the strong gasoline spread may have helped divert some of the aromatics feedstock to gasoline blending pool. This, in turn, has helped limit the supply of aromatics products. We also think the decline in freight rate may have enabled some of the PX-based products (such as PTA, polyester, PET) to be shipped out of Asia into Europe and the US. This may have also contributed to tighter aromatics market in Asia and led to spread improvement.

Fig 3: Aromatics spreads



Source: Company data, MST

Fig 4: PX demand/supply growth

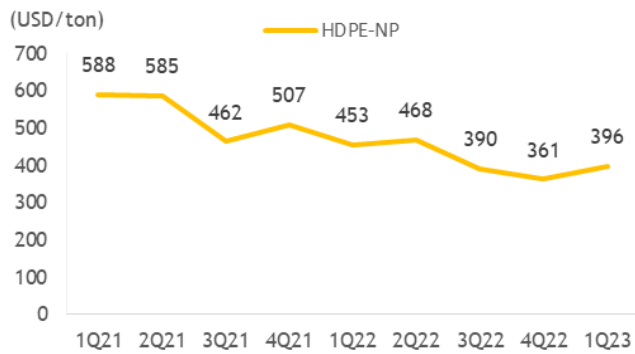


Source: Company data, MST

1.3 A long bottom for olefin

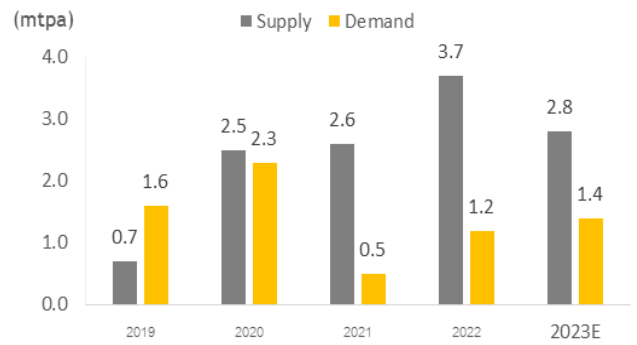
Unlike aromatics chain, we do not expect any meaningful recover in olefin spreads. Again, capacity start-ups in China has led to depressed margins across the region. We also think the decline in US gas price may have lowered cash cost for US-based olefin producers, making them more competitive vs naphtha-based producers. This could result in more petrochemical export from the US. At just over USD400/tonne HDPE-naphtha spread, we believe many naphtha crackers may have to cut run rates already. However, given the onslaught of new supply and rising competitiveness of US gas-based producers, we think spreads may continue to hover just above cash cost levels for the foreseeable future.

Fig 5: HDPE-naphtha spreads



Source: Company data, MST

Fig 6: HDPE demand/supply growth



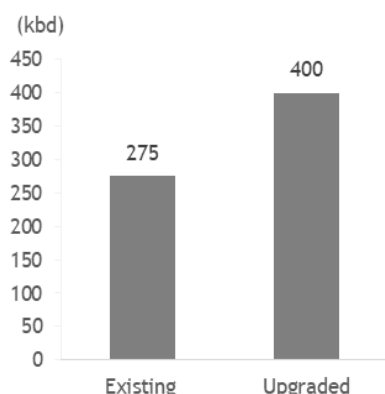
Source: Company data, MST

2. CFP start-up: short-term drag, long-term boost

2.1 Three key benefits won't be fully realised

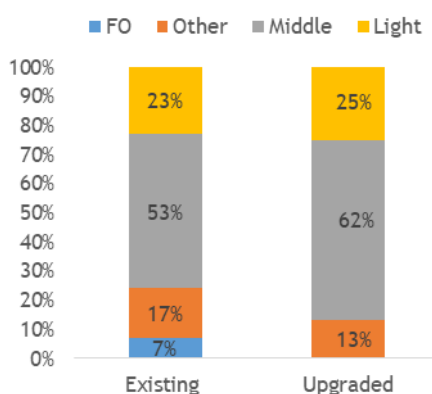
The investment in CFP (Clean Fuel Project) was to achieve three main objectives: capacity expansion, product yield improvement, and increased feedstock flexibility. TOP will see its nameplate capacity increased to 400kbd from 275kbd currently. In terms of product yield, TOP will almost entirely eliminate its fuel oil output. Instead, it will increase yield of middle distillate (diesel, jet fuel) further to 62% from about 53% currently. Yields of light distillate such as gasoline will also increase, to 25% from 23% currently. As for feedstock flexibility, TOP will be able to process up to 45% mix of heavy crude and 10% mix of medium crude compared to its 100% reliance on light crude at the moment.

Fig 7: Capacity expansion



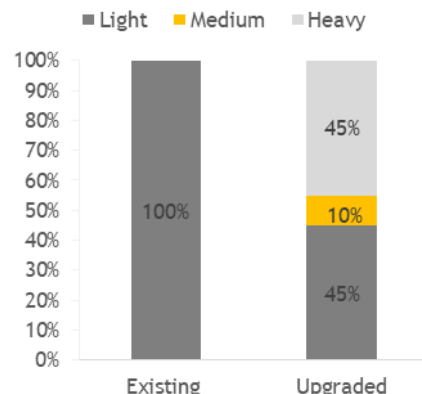
Source: Company data, MST

Fig 8: Improved product yields



Source: Company data, MST

Fig 9: Improved feedstock flexibility



Source: Company data, MST

While these upgrades will undoubtedly help TOP achieve higher gross integrated margin (GIM), they may not be able to achieve full benefits and may not be worth the additional expenses.

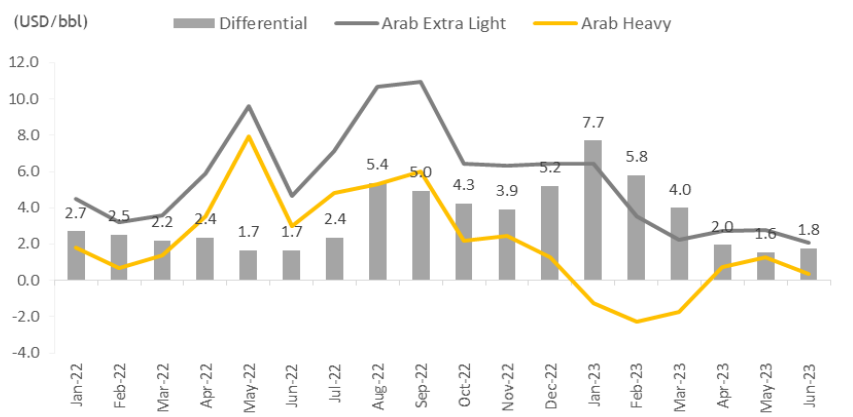
Firstly, the additional crude throughput may not be as high as the capacity upgrade would suggest. TOP has consistently been operating above 310kbd, so the actual volume uplift may be only around 30% compared to 45% increase in nameplate capacity.

Secondly, on the product yield, TOP will be increasing yield of middle distillates, whose spreads are coming down. Instead, products that we expect to see biggest spread improvements are light products (especially gasoline) and fuel oil. However, light product yield from the CFP upgrade will increase to just 25% from 23%, whereas fuel oil will decrease to 0% from 7%. As such, the potential GIM improvement may not be fully realised and worth the extra cost of CFP upgrade.

Thirdly, on crude oil flexibility, TOP will be able to process heavy and medium crudes, whose prices are lower than light crude it is currently processing. However, the savings from processing such crudes have dwindled, especially after OPEC+ announced extra production cuts. For example, the difference between Arab Heavy (a key heavy crude grade from Saudi Arabia) and Arab Extra Light (also from Saudi Arabia) have declined to USD1.6-1.8/bbl for May-June 2023 loadings. This is down significantly from USD4.8/bbl in the preceding six months. What this means is that the

savings TOP could expect to make from CFP upgrade has dwindled significantly.

Fig 10: Declining light-heavy crude differential to limit CFP benefit



Source: Bloomberg, MST

2.2 A potential boost to earnings from 2025E

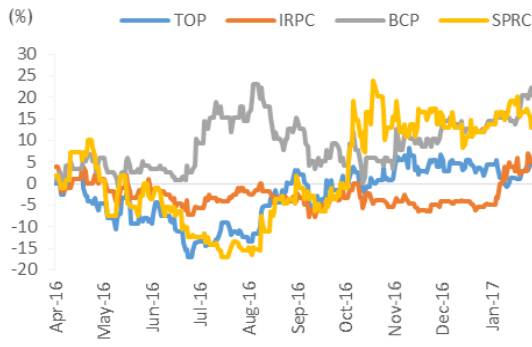
In our forecasts, we have conservatively assumed extra expenses related to the start-up (including down time for other units for mechanical tie-ins) to occur in 2024E. This explains an earnings “dip” next year despite our bullish view on refining margins and potential improvement in chemical spreads. Still, from 2025E onwards, we expect TOP to fully realise benefits of its CFP upgrade, both in the form of higher capacity and improved margin due to both better product yield and greater feedstock flexibility.

2.3 IRPC as a case study

TOP’s CFP upgrade parallels IRPC’s (IRPC TB, BUY) UHV upgrade back in 2016. The start-up of UHV project took about 1 year from mechanical completion in early 2016 to plant acceptance in early 2017. During that period (1Q16-1Q17), IRPC’s share price underperformed its peer group significantly. The stock was broadly flat against its peers’ 9-20% return. This is because of the delays to start-ups and benefits that IRPC would have realised from its upgrade. After the upgrade was complete and fully ramped up, however, IRPC started to outperform. It returned 37% during 2Q17-4Q17, matching TOP’s performance and outperforming both SPRC and BCP during that period.

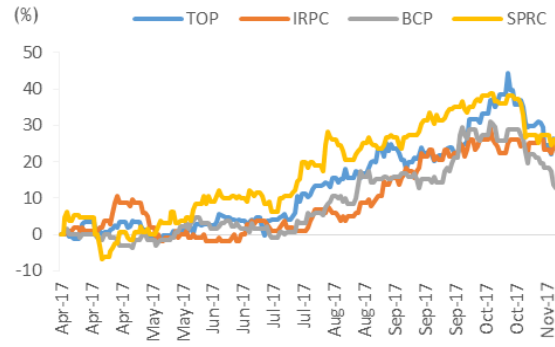
We believe a similar event could play out for TOP when its CFP upgrade is set to start up in 2024E. If the start-up process takes a long time or if the benefits to be realised are less than the additional costs, we see risks that TOP could underperform next year.

Fig 11: IRPC share price underperformed during its upgrade



Source: Bloomberg, MST

Fig 12: IRPC outperformed its peers once the upgrade finished



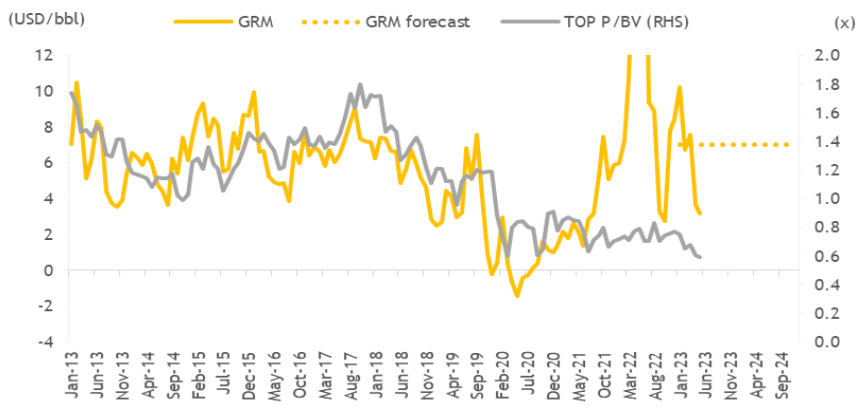
Source: Bloomberg, MST

3. Valuation approaching Covid-low

We have a BUY on TOP with a TP of THB59. We value TOP using DCF with WACC of 9.9% and terminal value growth rate of 0%.

Over the past two years, TOP’s share price has seen a significant de-rating. Now, at just 0.6x 2024E P/BV the stock is barely trading above its Covid low. We see this as a significant disconnect between the cyclical upturn in refining margins and depressed stock valuation. We think concerns over TOP’s investment in Chandra Asri is already overdone given this investment represents less than 14% of the company’s enterprise value.

Fig 12: TOP P/BV vs GRM



Source: Bloomberg, MST

FYE 31 Dec	FY21A	FY22A	FY23E	FY24E	FY25E
Key Metrics					
P/E (reported) (x)	8.8	3.4	7.7	7.8	5.9
Core P/E (x)	22.1	2.6	7.7	7.8	5.9
P/BV (x)	0.8	0.8	0.6	0.6	0.5
P/NTA (x)	0.8	0.8	0.6	0.6	0.5
Net dividend yield (%)	5.3	6.6	3.3	3.2	4.3
FCF yield (%)	nm	23.8	0.2	6.7	20.4
EV/EBITDA (x)	18.5	6.1	11.2	9.3	7.1
EV/EBIT (x)	35.0	7.2	16.5	14.1	10.6

INCOME STATEMENT (THB m)

Revenue	345,496.5	529,588.9	444,543.5	452,850.1	520,452.4
EBITDA	15,776.6	49,263.9	26,181.7	32,382.0	42,399.8
Depreciation	(7,424.3)	(7,744.3)	(8,325.9)	(10,981.1)	(13,916.9)
Amortisation	0.0	0.0	0.0	0.0	0.0
EBIT	8,352.2	41,519.6	17,855.8	21,400.9	28,482.8
Net interest income / (exp)	(3,594.7)	(3,860.0)	(3,333.7)	(7,050.6)	(10,686.5)
Associates & JV	1,674.6	(512.6)	619.1	649.1	650.7
Exceptionals	7,999.0	(12,457.3)	0.0	0.0	0.0
Other pretax income	605.4	17,334.4	605.4	605.4	2,100.0
Pretax profit	15,036.6	42,024.1	15,746.6	15,604.8	20,547.0
Income tax	(2,033.5)	(8,917.9)	(2,532.9)	(2,502.9)	(3,104.0)
Minorities	(425.1)	(438.1)	(168.9)	(166.9)	(207.0)
Discontinued operations	0.0	0.0	0.0	0.0	0.0
Reported net profit	12,578.0	32,668.1	13,044.8	12,934.9	17,236.0
Core net profit	4,579.0	45,125.4	13,044.8	12,934.9	17,236.0

BALANCE SHEET (THB m)

Cash & Short Term Investments	29,696.0	43,576.2	15,000.0	15,500.0	16,000.0
Accounts receivable	23,414.9	28,758.8	24,140.5	24,591.5	28,262.6
Inventory	39,576.0	55,343.1	48,373.4	48,709.8	55,619.9
Property, Plant & Equip (net)	178,399.5	206,475.8	224,703.9	225,418.8	220,001.9
Intangible assets	0.0	0.0	0.0	0.0	0.0
Investment in Associates & JVs	0.0	0.0	0.0	0.0	0.0
Other assets	91,057.7	110,427.0	108,696.2	116,446.4	130,218.8
Total assets	362,144.1	444,580.9	420,914.0	430,666.5	450,103.2
ST interest bearing debt	5,141.8	22,093.3	18,535.1	17,791.5	16,073.0
Accounts payable	23,000.5	74,154.2	64,815.5	65,266.1	74,525.0
LT interest bearing debt	196,557.2	175,517.5	155,832.8	157,357.3	152,642.0
Other liabilities	14,351.0	14,158.0	15,952.0	14,955.0	18,236.0
Total Liabilities	239,050.0	285,923.5	255,135.7	255,369.6	261,476.3
Shareholders Equity	120,880.7	156,034.3	162,986.3	172,338.0	185,460.9
Minority Interest	2,213.3	2,623.1	2,792.0	2,958.9	3,166.0
Total shareholder equity	123,094.1	158,657.4	165,778.3	175,297.0	188,626.9
Total liabilities and equity	362,144.1	444,580.9	420,914.0	430,666.5	450,103.2

CASH FLOW (THB m)

Pretax profit	15,036.6	42,024.1	15,746.6	15,604.8	20,547.0
Depreciation & amortisation	7,424.3	7,744.3	8,325.9	10,981.1	13,916.9
Adj net interest (income)/exp	(2,463.6)	998.4	(4,074.6)	(3,796.5)	0.0
Change in working capital	(17,381.4)	11,176.6	8,212.8	(1,249.3)	(2,812.9)
Cash taxes paid	51.1	(10,558.1)	(1,422.0)	(3,103.7)	(2,529.3)
Other operating cash flow	(7,999.0)	12,457.3	0.0	0.0	0.0
Cash flow from operations	(7,433.1)	63,814.2	26,788.8	18,436.3	29,121.7
Capex	(40,598.8)	(35,820.6)	(26,554.0)	(11,696.0)	(8,500.0)
Free cash flow	(48,031.9)	27,993.6	234.8	6,740.3	20,621.7
Dividends paid	(2,649.3)	(8,543.1)	(5,778.9)	(3,284.3)	(3,814.1)
Equity raised / (purchased)	0.0	10,180.5	(15.0)	0.0	0.0
Change in Debt	79,520.3	(22,893.6)	(2,135.8)	(6,239.0)	(13,761.8)
Other invest/financing cash flow	(70,497.2)	7,142.8	(20,881.3)	3,282.9	(2,545.8)
Effect of exch rate changes	0.0	0.0	0.0	0.0	0.0
Net cash flow	(41,658.1)	13,880.2	(28,576.2)	500.0	500.0

FYE 31 Dec	FY21A	FY22A	FY23E	FY24E	FY25E
Key Ratios					
Growth ratios (%)					
Revenue growth	39.4	53.3	(16.1)	1.9	14.9
EBITDA growth	nm	212.3	(46.9)	23.7	30.9
EBIT growth	nm	397.1	(57.0)	19.9	33.1
Pretax growth	nm	179.5	(62.5)	(0.9)	31.7
Reported net profit growth	nm	159.7	(60.1)	(0.8)	33.3
Core net profit growth	nm	885.5	(71.1)	(0.8)	33.3
Profitability ratios (%)					
EBITDA margin	4.6	9.3	5.9	7.2	8.1
EBIT margin	2.4	7.8	4.0	4.7	5.5
Pretax profit margin	4.4	7.9	3.5	3.4	3.9
Payout ratio	42.2	23.7	25.3	25.3	25.3
DuPont analysis					
Net profit margin (%)	3.6	6.2	2.9	2.9	3.3
Revenue/Assets (x)	1.0	1.2	1.1	1.1	1.2
Assets/Equity (x)	3.0	2.8	2.6	2.5	2.4
ROAE (%)	10.6	23.6	8.2	7.7	9.6
ROAA (%)	1.4	11.2	3.0	3.0	3.9
Liquidity & Efficiency					
Cash conversion cycle	34.7	16.9	6.4	5.4	5.2
Days receivable outstanding	18.8	17.7	21.4	19.4	18.3
Days inventory outstanding	33.4	35.2	44.1	41.0	38.5
Days payables outstanding	17.5	36.1	59.0	54.9	51.6
Dividend cover (x)	2.4	4.2	4.0	4.0	4.0
Current ratio (x)	2.6	1.5	1.2	1.2	1.2
Leverage & Expense Analysis					
Asset/Liability (x)	1.5	1.6	1.6	1.7	1.7
Net gearing (%) (incl perps)	139.7	97.1	96.1	91.1	81.0
Net gearing (%) (excl. perps)	139.7	97.1	96.1	91.1	81.0
Net interest cover (x)	2.3	10.8	5.4	3.0	2.7
Debt/EBITDA (x)	12.8	4.0	6.7	5.4	4.0
Capex/revenue (%)	11.8	6.8	6.0	2.6	1.6
Net debt/ (net cash)	172,003.0	154,034.6	159,367.9	159,648.8	152,715.0

Source: Company; Maybank IBG Research

IRPC (IRPC TB)

A left-field, high-beta play

Room for surprises

We initiate coverage of IRPC with BUY and DCF-based TP of THB2.9. We view IRPC as the most high-beta refining play for 2 reasons. First, we think the market is underestimating the benefits IRPC will receive from falling oil price and lower opex. Second, despite depressed chemical spreads, we see room for IRPC to outperform peers given lower crude premium. Last, valuation is the most depressed in the sector at just over 0.5x 2024E P/BV, matching its Covid-low. We see strong gross refining margin (GRM) and positive earnings surprises as key catalysts. A slowdown in the global economy and reversal in China's fuel export policy represent potential downside risks to our view.

Biggest beneficiary of falling oil price

We view IRPC as the biggest beneficiary of falling crude oil price and lower crude premium. Due to its long value chain, IRPC has the highest F&L (fuel and loss) at about 6-7% of crude intake vs 3-4% for other plays. This means every USD10/bbl drop in crude oil prices will lift GIM (gross integrated margin) by USD0.6-0.7/bbl. Opex has also been declining; we see this as another area where the company can positively surprise the market.

Lower crude premium offsets depressed chem spread

Of the four downstream names we cover now, IRPC relies the most on petrochemicals for its profit (as much as 70% back in 2019). While we see a long bottom for polypropylene (PP) and other olefin petrochemical spreads overall, IRPC – due to its crude oil feedstock rather than naphtha or gas – could benefit from lower crude premium. This cost decrease is unique among Thai olefin petrochemical producers and was most evident in 1Q23 when IRPC alone reported higher petrochemical realised margin.

Valuation the key attraction

At just over 0.5x P/BV, IRPC is trading at a similar valuation to its Covid-low even though the outlook for fuel demand and refinery margin is now much better. We think this low expectation leaves room for positive surprises to drive re-rating. On the other hand, any disappointment will likely not lead to a meaningful share price correction.

FYE Dec (THB m)	FY21A	FY22A	FY23E	FY24E	FY25E
Revenue	255,115	324,800	315,863	298,844	282,437
EBITDA	18,122	9,239	16,140	17,642	19,955
Core net profit	6,028	622	4,343	5,494	6,968
Core EPS (THB)	0.29	0.03	0.21	0.27	0.34
Core EPS growth (%)	nm	(89.7)	598.0	26.5	26.8
Net DPS (THB)	0.22	0.07	0.15	0.19	0.24
Core P/E (x)	13.0	99.2	10.5	8.3	6.6
P/BV (x)	0.9	0.8	0.6	0.5	0.5
Net dividend yield (%)	5.7	2.3	6.6	8.4	10.7
ROAE (%)	17.8	(5.2)	5.4	6.7	8.2
ROAA (%)	3.3	0.3	2.3	2.9	3.7
EV/EBITDA (x)	7.3	14.6	6.9	6.5	5.5
Net gearing (%) (incl perps)	61.6	91.3	79.0	80.1	73.3
Consensus net profit	-	-	3,336	4,330	5,946
MIBG vs. Consensus (%)	-	-	30.2	26.9	17.2

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BUY

Share Price THB 2.24
 12m Price Target THB 2.90 (+36%)

Company Description

IRPC operates a 215kbd refining and 1.6mtpa petrochemical complex

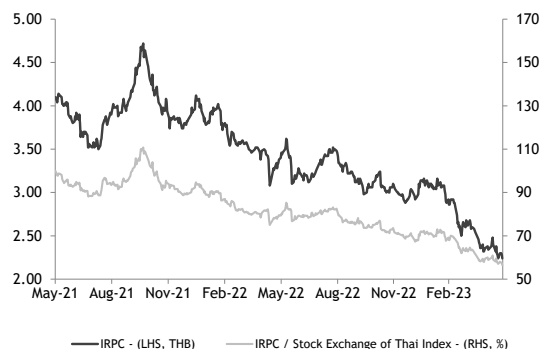
Statistics

52w high/low (THB)	3.62/2.24
3m avg turnover (USDm)	4.7
Free float (%)	51.9
Issued shares (m)	20,434
Market capitalisation	THB45.8B USD1.3B

Major shareholders:

PTT PCL	45.1%
Thai NVDR	5.3%
Siam Management Holding	3.0%

Price Performance



	-1M	-3M	-12M
Absolute (%)	(3)	(22)	(33)
Relative to index (%)	(3)	(17)	(28)

Source: FactSet

ESG@MAYBANK IBG
 Tear Sheet Insert

Value Proposition

- IRPC operates an oil refining and petrochemical complex. It has a relatively diverse product mix with the largest chemical exposure among the four Thai downstream names we cover.
- At current P/BV valuation, IRPC is trading close to its Covid-low, and we see room for significant potential re-rating with this earnings turnaround.
- This is in sharp contrast to the potential earnings turnaround and up-cycle for the oil refining industry. During the last up-cycle, IRPC traded as high as 1.9x P/BV, more than 3x higher than the current valuation.

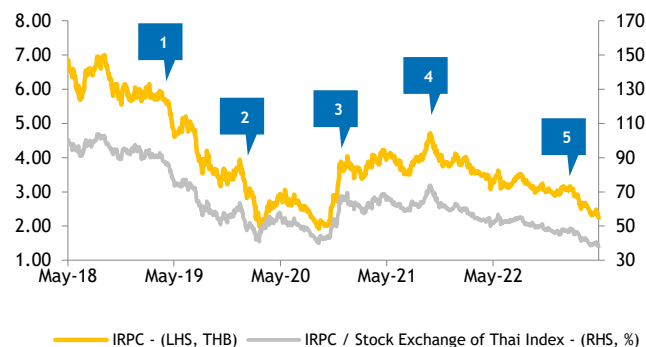
IRPC P/BV



Source: Company

Price Drivers

Historical share price trend



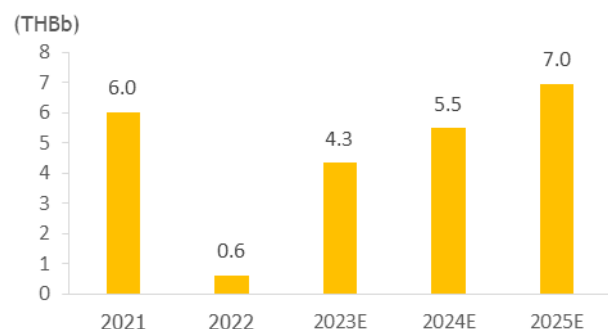
Source: Company, MST

1. Start of a refinery downturn.
2. Covid-driven selloff.
3. Oil demand recovery post-Covid.
4. Strong petrochemical spreads.
5. Disappointing results, weakening refining margins.

Financial Metrics

- We expect IRPC to enjoy strong earnings recovery in 2023E with further growth in 2024E.
- This growth is driven mainly by lower oil price (which lowers cash conversion cost) as well as lower crude premium, of which IRPC is most sensitive among Thai downstream names.
- We think the market is underestimating this growth potential and might be too concerned about spread compression.

IRPC net profit forecasts



Source: Company, MST

Swing Factors

Upside

- Lower crude premiums could present upside risks to our GIM forecasts
- Faster recovery in petrochemical spreads is a potential upside risk to our forecasts.
- IRPC has made good progress in terms of lowering opex costs. Further progress on this could lead to upside risks.

Downside

- Slowdown in global economy could negatively impact refining margins and petrochemical spreads
- Additional production cut by OPEC+ could mean pricing for Middle Eastern crude oils (for which IRPC rely on heavily) could see their premiums increased.
- Rising oil price could negatively impact IRPC's conversion cost.

Risk Rating & Score ¹	22.2 Medium Risk
Score Momentum ²	-0.2
Last Updated	13 April 2023
Controversy Score ³ (Updated: 13 April 2023)	Category 1 Low

Business Model & Industry Issues

- IRPC's core business of oil refining and petrochemical manufacturing leaves it heavily exposed to ESG risks.
- However, we think the company is handling the issues well and is one of the more active names when it comes to tackling ESG issues. It targets achieving carbon neutrality by 2050 and net zero emissions by 2060.
- The company has a strong track record in both social and governance issues.

Material E issues

- IRPC targets achieving Carbon Neutrality by 2050 and Net Zero emissions by 2060. For 2022, the company achieves its target of limiting GHG emission (scope 1 and 2) to 3.685m tons (vs target of below 4.18m tonnes). This is part of its effort to reduce GHG emission by 20% by 2030.
- IRPC achieves zero hazardous waste to landfill in 2022 and targets to maintain this achievement. The company targets waste utilization of greater than 95% by 2040.
- IRPC has reduced energy consumption by more than 8.5m gigajoules per year.

Material S issues

- IRPC achieved satisfaction score from the communities surrounding its site of 99% in 2022, which was an improvement from 2021.
- IRPC has extensive corporate social responsibility activities. These include the Health Promotion Fund for 35 projects that reached out to 20,000 households. IRPC also had over 20 activities to provide livelihood training and skills development for communities.
- IRPC has adopted the UN Universal Declaration of Human Rights as the basis of its human rights practices, encompassing respect for labour rights, women's rights, and others. 100% of its businesses and its critical feedstock suppliers have human rights assessment.

Key G metrics and issues

- IRPC's board of directors consist of 15 members, 7 of which are independent. There are only 2 female directors on the board.
- IRPC adopts the Thai Corporate Governance Code for Listed Companies 2017 issued by the SEC as a benchmark. The company has received "Excellent" CG Rating from the Stock Exchange of Thailand for 14 years running.
- IRPC's BOD set out concrete anti-corruption policies, including anti-graft, anti-corruption, anti-bribery and no-gift policy. These are applicable at every level of the company.
- IRPC has revised its latest Human Rights Policy in 2021 to ensure its business operations are free from any human right violation. The human rights policy is extended to contractors as well. Areas covered include compliance with labour law, safe working conditions, and appropriate welfare benefits.
- IRPC has put in place a risk management structure with the creation of Risk Management and Internal Control Committee. The Hedging Committee was also established to monitor/analyse market movements, and execute hedges against price volatilities. Key risks that IRPC manages include market price risk, operational risk, financial risk, and regulatory risk, among others.
- IRPC places great emphasis on innovation and has the Innovation Center which employs almost 7% of the company's workforce. The company has 19 registered patents in 26 countries with 25 other patents pending.
- IRPC implements cyber security based on ISO 27001 standard in combination with NIST Cyber Security Framework. The company targets zero cyberattack incident in 2020-30.

¹**Risk Rating & Score** - derived by Sustainalytics and assesses the company's exposure to unmanaged ESG risks. Scores range between 0 - 50 in order of increasing severity with low/high scores & ratings representing negligible/significant risk to the company's enterprise value, respectively, from ESG-driven financial impacts. ²**Score Momentum** - indicates changes to the company's score since the last update - a **negative** integer indicates a company's improving risk score; a **positive** integer indicates a deterioration. ³**Controversy Score** - reported periodically by Sustainalytics in the event of material ESG-related incident(s), with the impact severity scores of these events ranging from Category 0-5 (0 - no reports; 1 - negligible risks; ...; 5 - poses serious risks & indicative of potential structural deficiencies at the company).

Quantitative Parameters (Score: 27)						
	Particulars	Unit	2020	2021	2022	TOP (2022)
E	Scope 1 GHG emissions	m tCO ₂ e	3.72	3.95	3.27	3.26
	Scope 2 GHG emissions	m tCO ₂ e	0.34	0.40	0.42	0
	Total	m tCO₂e	4.06	4.35	3.69	3.26
	Scope 3 GHG emissions	m tCO ₂ e	16.56	14.91	N/A	27.30
	Total	m tCO₂e	20.62	19.25	N/A	30.56
	GHG intensity (Scope 1 and 2)	tCO ₂ e/m bbls	29,128	30,932	29,772	29,772
	Electricity consumption	MWh/m bbls	18,946	18,686	N/A	9,674
	Water consumption	m ³ /m bbls	213,220	213,706	N/A	28,402
	Exposure to coal, mining, oil & gas and plantation	%	100%	100%	100%	100%
	Green, Social, sustainable products & serv.	THBb	N/A	N/A	N/A	0
S	% of women in workforce	%	17%	15%	25%	26%
	% of women in management roles	%	23%	25%	25%	43%
	Average training hours per employee	number	14.3	28.0	40.8	62.0
	Lost Time Injury Frequency Rate (LTIFR)	Employee	0.2	0.1	0.0	0.0
	Attrition rate	%	2.3%	6.6%	N/A	5.0%
G	MD/CEO salary as % of reported net profit	%	-0.9%	0.3%	-1.4%	N/A
	Board salary as % of reported net profit	%	-0.4%	0.2%	-1.5%	0.1%
	Independent directors (tenure <10 years) as % of the Board	%	53%	57%	47%	57%
	Profits distributed to shareholders	% of net profit	NMF	31.0%	N/A	23.7%
	Female directors on the Board	%	7%	11%	11%	7%

Qualitative Parameters (Score: 67)	
a) is there an ESG policy in place and whether there is a standalone ESG committee or is it part of a risk committee?	Yes.
b) Does the performance evaluation of the board and senior mgt include a review of the performance of the board and senior management in addressing the company's material sustainability risks and opportunities?	No.
c) Does the company follow TCFD framework for ESG reporting? Is it signatory to responsible banking initiative or other such initiatives?	Yes.
d) Does the company capture or plan to capture Scope 3 emissions including from financing activities?	Yes.
e) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?	IRPC has invested in efficiency improvement products which have led to increased efficiency and reduced electricity and power consumption. The company has also invested in floating solar power project which helped reduced carbon emissions. For waste management, it emphasizes 3R (reduce, reuse, recycle).
f) Does carbon offset form part of the net zero/carbon neutrality target of the company?	Yes

Target (Score: 100)		
Particulars	Target	Achieved
Carbon Neutrality by 2050 and Net Zero by 2060	by 2060	N/A
It targets GHG emission reduction by 20% by 2030	20%	11%
IRPC achieves zero hazardous waste to landfill	0%	0%
Zero Lost Time Injury Rate (LTIR)	0%	0%
Impact		
NA		
Overall Score: 43		
As per our ESG matrix, IRPC (IRPC TB) has an overall score of 43.		

ESG score	Weights	Scores	Final Score
Quantitative	50%	27	13
Qualitative	25%	67	17
Target	25%	50	13
Total			43

IRPC's overall ESG score is 43, which makes its ESG rating below average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring). The company has established ESG framework and set many medium/long-term target, although its target for net zero emission is 2060, not 2050. IRPC scores relatively highly on social aspects.

1. Biggest beneficiary of falling oil price

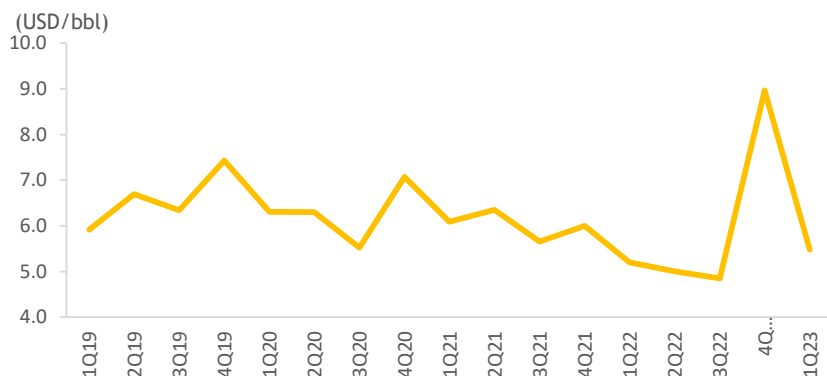
1.1 Longest chain

IRPC has the longest value chain among the 4 downstream names we cover. Moreover, all of its production, including petrochemical, is oil-based. We estimate its F&L (fuel and loss) ratio is about 6-7% of crude input compared to about 3% for other names. What this means is that for every tonne of crude oil feedstock, IRPC produces only 0.93-0.94 tonne of saleable products. The rest is either used up as fuel in the production process or gets converted into non-saleable by-products. Therefore, for IRPC, we estimate that every USD10/bbl increase/decrease in oil price will lead to USD0.6-0.7/bbl increase/decrease in operating cost. Given we forecast Brent oil price to come down from USD100/bbl in 2022 to 85/80/75 USD/bbl in 2023-25E, the cost savings over these 3 years relative to 2022 could amount to as much as USD1.5-1.8/bbl by 2025E. This would come in the form of GIM improvement.

1.2 Good progress on opex reduction

IRPC also has the highest operating costs (due in part to its long value chain) among Thai refineries. However, we note that its operating expense (opex) has been falling over the past few years. In 2019, its opex averaged USD6.6/bbl. This declined to 6.3, 6.0 and 5.7 USD/bbl in 2020-22. In 1Q23, OPEX averaged just USD5.5/bbl. We think this shows that the effort IRPC has made in cost reduction in the previous years have paid off.

Fig 1: IRPC opex per barrel



Note: *In 4Q22, IRPC underwent a major turnaround which reduced its throughput and therefore raised opex on a per barrel basis.

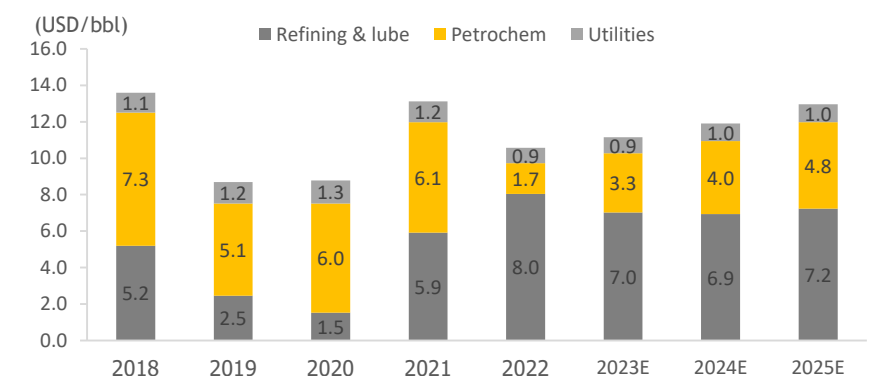
Source: Company data, MST

2. Lower crude premium offsets depressed chem spread

2.1 Large petrochemical weighting

Of the four downstream names we cover now, IRPC relies the most on petrochemicals for its profit. Back in 2019, as much as 70% of its gross integrated margin was derived from petrochemicals. This portion grew even more during 2020-21 when Covid decimated oil demand and led to very depressed refined oil product crack spreads. However, since 2022, petrochemical spreads have seen significant compression and many products' spreads remain just above cash breakeven point today.

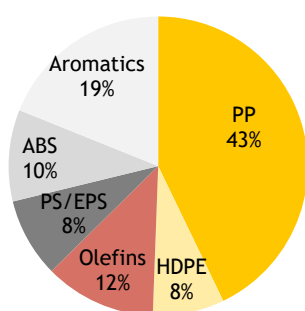
Fig 2: IRPC gross integrated margin (GIM)



Source: Company data, MST

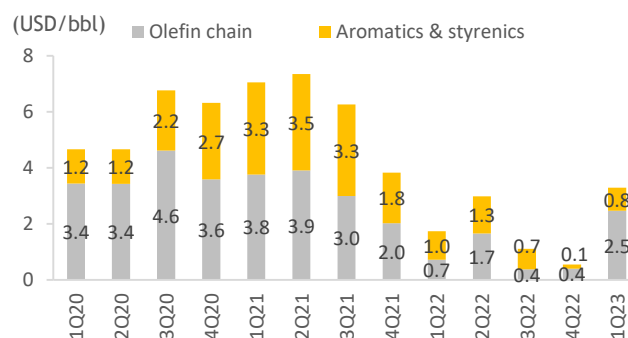
While IRPC produces many types of petrochemical products, the biggest by tonnage and potential profit contribution is polypropylene (PP). This plastic is used extensively in consumer durable products such as autos, electronics and appliances. Other major products for IRPC include HDPE and ABS, both of which are also seeing spread compression.

Fig 3: IRPC petrochemical product breakdown by tonnage



Source: Company data, MST

Fig 4: IRPC petrochemical contribution to GIM



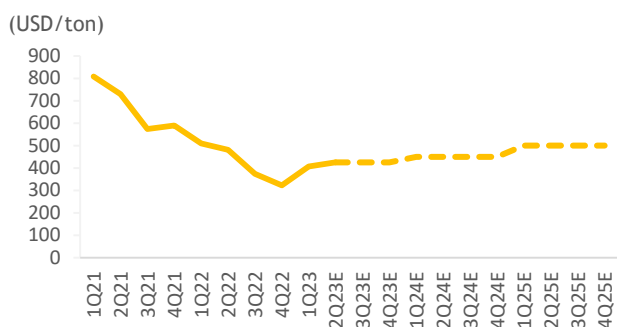
Source: Company data, MST

2.2 PP-naphtha spreads will take time to recover

We see a long bottom for petrochemical spreads overall given the slowdown in the global economy (which negatively impacts demand) and the onslaught of new supply. For PP, oversupply in 2023-25E (at 21m tpa based on ICIS estimate) will be one of the most severe of the past two decades. This means spreads could take a long time to recover. We forecast benchmark PP-naphtha spread to average USD425-450 per tonne in 2023-24E vs USD410/tonne last year, which was barely above cash conversion

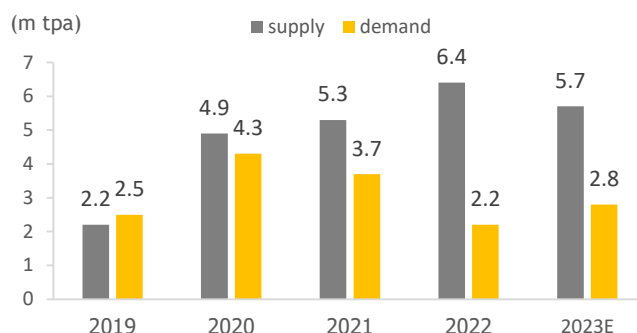
cost. We do not expect PP spread to recover to mid-cycle level (around USD500/tonne) until 2025E at the earliest.

Fig 5: PP-naphtha spreads and forecasts



Source: Company data, MST

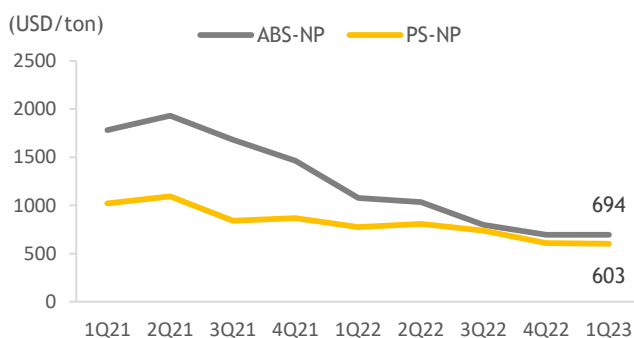
Fig 6: PP demand/supply growth



Source: Company data, MST

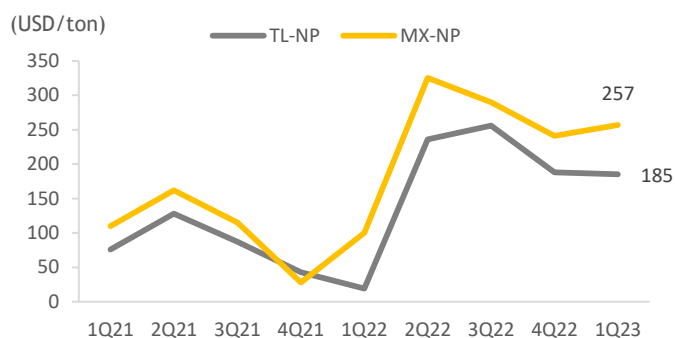
Spreads for other products will also likely take time to recover. For instance, HDPE-naphtha spread is following the same downcycle as PP as the two products are often produced together at naphtha crackers. Similarly, styrenic value chain (ABS, PS) are seeing spread compression. These two products are used extensively in auto production, and the slowdown in that industry is likely to negatively impact demand. For aromatic value chain, however, we believe the improvement in spread could come a bit sooner. The strength in gasoline crack spread meant that some of the feedstock typically used to produce aromatic chemicals is being diverted to gasoline blending pool, thereby limiting the supply of aromatics.

Fig 7: ABS, PS spreads



Source: Company data, MST

Fig 8: Aromatic spreads



Source: Company data, MST

2.3 Lower crude premium a unique cushion for IRPC

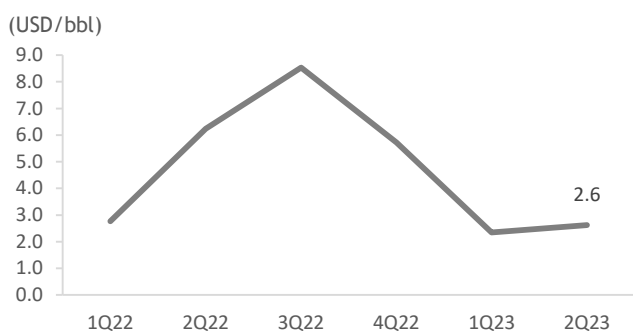
Unlike other olefin producers in Thailand, IRPC starts its production all the way from crude oil. This means it is benefiting from the falling crude premium over the past few months as Middle Eastern oil producers slash their crude oil pricing relative to Dubai benchmark. Arab Light, which is a benchmark grade for IRPC, has seen its OSP (official selling price) premium over Dubai/Oman benchmark falling to as low as USD1.8/bbl in February 2023 compared to a peak of almost USD10/bbl in September 2022. Even now, Arab Light crude premium remains at USD2.55/bbl for June 2023 loading. This is still relatively low compared to last year's average of USD5.8/bbl.

This advantage is unique for IRPC in the current environment. Siam Cement (SCC TB, HOLD, CP THB332, TP THB340), for example, relies almost exclusively on naphtha (a refined oil product) as feedstock with LPG

occasionally mixed in. Meanwhile, PTTGC (PTTGC TB, CP THB35.75, Not Rated) uses many types of feedstock, including ethane gas, LPG, and naphtha.

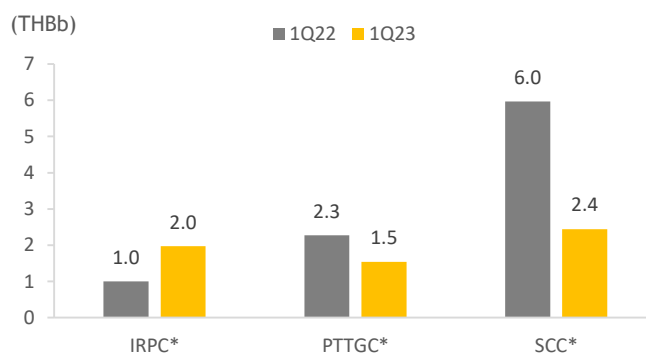
As such, while the key PP-naphtha spread remains depressed, IRPC has been able to expand its realized petrochemical product-to-feed (PTF) margins. For example, in 1Q23, even though PP-naphtha spread declined to USD435/tonne from USD489/tonne in 1Q22, IRPC’s realized olefins PTF improved to USD2.46/bbl in 1Q23 compared to USD0.71/bbl in 1Q22. We think this is the clearest illustration of the positive impact of declining crude premium.

Fig 9: Arab Light crude premiums



Source: Company data, MST

Fig 10: IRPC outperforming other olefin producers



Note: *GIM for IRPC; Adjusted polymers EBITDA for PTTGC, chemical EBITDA for SCC

Source: Company data, MST

3. Valuation the key attraction

3.1 DCF-based TP of THB2.9

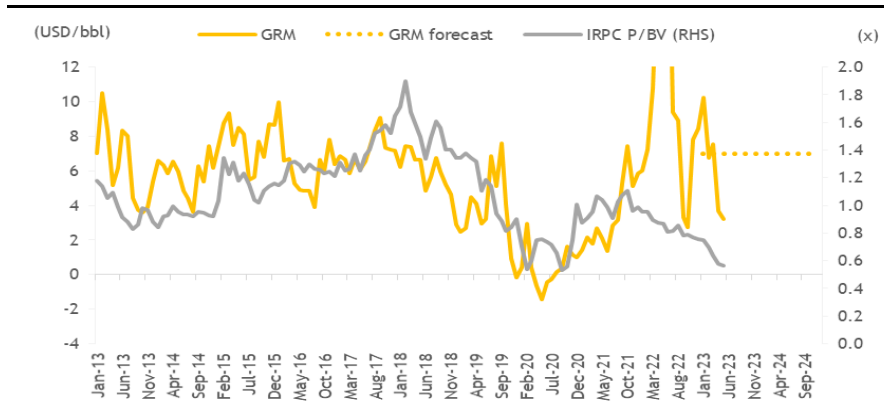
We initiate coverage of IRPC with BUY and a DCF-based TP of THB2.90. Our target price implies just 11x 2024E P/E and 0.7x 2024E P/BV, which we view as undemanding. During the last up-cycle, IRPC traded as high as 1.9x P/BV, although we see that as unlikely in the nearterm given a likely prolonged chemical down-cycle. Besides low multiple, IRPC also offers high FCF-yield at 14% in 2023-25E due to its limited capex.

In terms of earnings, IRPC is the only one that will likely see meaningful earnings growth YoY in 2023E from 2022. This is because the company's operating results last year were negatively impacted by both elevated crude premiums and major maintenance shutdowns. We also expected continued growth in 2024E given gradual recovery in chemical spreads and falling oil price.

3.2 Low P/BV leaves room for potential re-rating

We see potential for IRPC to re-rate given its depressed valuation of just over 0.5x 2024E P/BV, which was nearly as low as its lowest point during 2020 when the pandemic decimated global oil demand. While we expect a prolonged down-cycle for petrochemicals, we expect IRPC will still generate 7-8% ROE in 2024-25E thanks to refining up-cycle and potential decline in crude premiums. We expect positive earnings surprises (relative to consensus expectation) and improvement in GRM to help drive share price re-rating.

Fig 11: IRPC P/BV vs GRM



Source: Bloomberg, MST

FYE 31 Dec	FY21A	FY22A	FY23E	FY24E	FY25E
Key Metrics					
P/E (reported) (x)	5.5	nm	10.5	8.3	6.6
Core P/E (x)	13.0	99.2	10.5	8.3	6.6
P/BV (x)	0.9	0.8	0.6	0.5	0.5
P/NTA (x)	0.9	0.8	0.6	0.5	0.5
Net dividend yield (%)	5.7	2.3	6.6	8.4	10.7
FCF yield (%)	nm	nm	23.3	2.3	18.2
EV/EBITDA (x)	7.3	14.6	6.9	6.5	5.5
EV/EBIT (x)	14.1	nm	15.1	13.1	10.4
INCOME STATEMENT (THB m)					
Revenue	255,114.6	324,800.0	315,862.8	298,843.8	282,437.3
EBITDA	18,121.8	9,239.3	16,140.0	17,641.7	19,954.8
Depreciation	(8,586.5)	(8,058.8)	(8,611.8)	(8,819.0)	(9,219.6)
Amortisation	(142.0)	(145.0)	(145.0)	(145.0)	(145.0)
EBIT	9,393.3	1,035.5	7,383.2	8,677.7	10,590.2
Net interest income / (exp)	(1,698.7)	(1,835.2)	(2,371.3)	(2,236.0)	(2,314.1)
Associates & JV	712.6	283.6	336.9	343.6	350.5
Exceptionals	8,476.8	(4,985.8)	0.0	0.0	0.0
Other pretax income	0.0	0.0	0.0	0.0	0.0
Pretax profit	16,884.1	(5,501.8)	5,348.8	6,785.3	8,626.6
Income tax	(2,351.3)	1,141.8	(1,002.4)	(1,288.3)	(1,655.2)
Minorities	(28.2)	(3.6)	(3.5)	(3.3)	(3.1)
Discontinued operations	0.0	0.0	0.0	0.0	0.0
Reported net profit	14,504.6	(4,363.6)	4,342.9	5,493.7	6,968.2
Core net profit	6,027.8	622.1	4,342.9	5,493.7	6,968.2
BALANCE SHEET (THB m)					
Cash & Short Term Investments	11,236.0	3,230.4	3,141.6	2,972.3	2,809.1
Accounts receivable	13,785.4	15,051.1	13,846.0	13,100.0	12,380.8
Inventory	33,766.1	39,376.0	26,681.2	25,054.3	23,427.4
Property, Plant & Equip (net)	109,067.3	111,432.1	113,219.3	117,452.3	116,832.7
Intangible assets	0.0	0.0	0.0	0.0	0.0
Investment in Associates & JVs	9,294.3	9,472.1	9,472.1	9,472.1	9,472.1
Other assets	13,342.8	19,624.9	19,729.5	19,667.0	19,601.0
Total assets	190,491.9	198,186.8	186,089.8	187,718.0	184,523.2
ST interest bearing debt	10,584.8	19,762.4	16,943.4	17,474.8	16,410.7
Accounts payable	28,671.2	34,465.9	27,515.0	25,837.2	24,159.5
LT interest bearing debt	54,640.9	56,239.1	50,803.2	52,633.1	49,712.6
Other liabilities	8,688.0	7,812.0	8,822.0	7,731.0	7,606.0
Total Liabilities	102,584.7	118,279.5	104,083.8	103,675.9	97,888.7
Shareholders Equity	87,495.6	79,452.3	81,557.3	83,605.5	86,209.4
Minority Interest	216.7	225.5	225.5	225.5	225.5
Total shareholder equity	87,712.3	79,677.8	81,782.8	83,831.0	86,434.9
Total liabilities and equity	190,296.9	197,957.2	185,866.6	187,506.8	184,323.6
CASH FLOW (THB m)					
Pretax profit	16,884.1	(5,501.8)	5,348.8	6,785.3	8,626.6
Depreciation & amortisation	8,728.5	8,203.8	8,756.8	8,964.0	9,364.6
Adj net interest (income)/exp	0.0	0.0	0.0	0.0	0.0
Change in working capital	(15,704.7)	(5,903.4)	7,595.2	(205.0)	471.2
Cash taxes paid	(1,757.8)	556.1	(638.9)	(1,480.4)	(1,583.8)
Other operating cash flow	(8,476.8)	4,985.8	0.0	0.0	0.0
Cash flow from operations	(277.7)	2,345.6	21,085.5	14,102.9	16,932.7
Capex	(3,103.2)	(10,423.7)	(10,399.0)	(13,052.0)	(8,600.0)
Free cash flow	(3,380.9)	(8,078.1)	10,686.5	1,050.9	8,332.7
Dividends paid	(2,857.4)	(3,673.7)	(2,235.2)	(3,442.8)	(4,361.7)
Equity raised / (purchased)	0.0	0.0	0.0	0.0	0.0
Change in Debt	(3,237.2)	18,538.1	(4,286.8)	2,277.8	(4,059.3)
Other invest/financing cash flow	11,860.3	(14,791.9)	(4,253.4)	(55.1)	(74.9)
Effect of exch rate changes	0.0	0.0	0.0	0.0	0.0
Net cash flow	2,384.8	(8,005.6)	(88.9)	(169.3)	(163.2)

FYE 31 Dec	FY21A	FY22A	FY23E	FY24E	FY25E
Key Ratios					
Growth ratios (%)					
Revenue growth	46.2	27.3	(2.8)	(5.4)	(5.5)
EBITDA growth	202.3	(49.0)	74.7	9.3	13.1
EBIT growth	nm	(89.0)	613.0	17.5	22.0
Pretax growth	nm	nm	nm	26.9	27.1
Reported net profit growth	nm	nm	nm	26.5	26.8
Core net profit growth	nm	(89.7)	598.1	26.5	26.8
Profitability ratios (%)					
EBITDA margin	7.1	2.8	5.1	5.9	7.1
EBIT margin	3.7	0.3	2.3	2.9	3.7
Pretax profit margin	6.6	nm	1.7	2.3	3.1
Payout ratio	31.0	nm	70.0	70.0	70.0
DuPont analysis					
Net profit margin (%)	5.7	nm	1.4	1.8	2.5
Revenue/Assets (x)	1.3	1.6	1.7	1.6	1.5
Assets/Equity (x)	2.2	2.5	2.3	2.2	2.1
ROAE (%)	17.8	(5.2)	5.4	6.7	8.2
ROAA (%)	3.3	0.3	2.3	2.9	3.7
Liquidity & Efficiency					
Cash conversion cycle	18.2	21.6	18.9	15.2	15.2
Days receivable outstanding	16.5	16.0	16.5	16.2	16.2
Days inventory outstanding	41.3	41.4	39.1	32.6	32.7
Days payables outstanding	39.6	35.7	36.7	33.6	33.7
Dividend cover (x)	3.2	(3.1)	1.4	1.4	1.4
Current ratio (x)	1.4	1.1	1.1	1.1	1.1
Leverage & Expense Analysis					
Asset/Liability (x)	1.9	1.7	1.8	1.8	1.9
Net gearing (%) (incl perps)	61.6	91.3	79.0	80.1	73.3
Net gearing (%) (excl. perps)	61.6	91.3	79.0	80.1	73.3
Net interest cover (x)	5.5	0.6	3.1	3.9	4.6
Debt/EBITDA (x)	3.6	8.2	4.2	4.0	3.3
Capex/revenue (%)	1.2	3.2	3.3	4.4	3.0
Net debt/ (net cash)	53,989.6	72,771.0	64,605.1	67,135.6	63,314.2

Source: Company; Maybank IBG Research

Star Petroleum Refining (SPRC TB)

Earnings recovery on the way

BUY

Share Price THB 8.70
12m Price Target THB 12.40 (+49%)

Earnings turnaround to drive re-rating

We initiate coverage of SPRC with a BUY recommendation and DCF-based TP of Bt12.40. We think the stock has been overly punished following an oil spill which led to significant provisions for potential clean-up/damage payments and increased operating costs. Still, we expect this issue will be resolved by end-2023, returning operations to normal. We also expect acquisition of Chevron's fuel business in Thailand to be earnings-accretive. Together, this should drive 38% YoY earnings growth in 2024E. A slowdown in the global economy and reversal in China's fuel export policy represent potential downside risks to our view.

Operational issue still weighs; improvement in 2024E

SPRC is still grappling with the consequence of its oil spill. While provisions for clean-up and damages have been set aside, the company now has to use ship-to-ship transfer to unload crude oil to its refinery. This is a costly operation and effectively doubles its crude oil transport cost from about USD2/bbl to USD4/bbl. The company expects to resolve the issue by end-2023E and revert to using single point mooring (SPM) for crude unloading. This would help lift SPRC's realised gross refining margin by USD2/bbl.

Caltex acquisition to boost 2024E growth

We are positive on SPRC's acquisition of Chevron's retail fuel and distribution businesses in Thailand. The deal will see SPRC acquiring Caltex-branded stations as well as a stake in fuel pipeline and aviation fuel service company (BAFS TB, CP THB31.75, not rated). This will not only help increase earnings (we estimate 7-8% earnings accretion in 2024-25E) but also generate a less volatile earnings stream. We also view the purchase price as fair at about 10x trailing 3-year average earnings.

Attractive valuation

SPRC is the most expensive among Thai refiners on P/BV terms but it also has the smallest leverage. At 0.9x 2024E P/BV, the company trades below its historical average of 1.3x and well below its up-cycle high of almost 2.0x. We expect an earnings turnaround to help drive a re-rating.

FYE Dec (THB m)	FY21A	FY22A	FY23E	FY24E	FY25E
Revenue	172,484	285,264	217,166	207,793	207,141
EBITDA	3,854	14,349	7,268	9,343	10,137
Core net profit	(168)	9,510	3,617	4,993	5,801
Core EPS (THB)	(0.04)	2.19	0.83	1.15	1.34
Core EPS growth (%)	nm	nm	(62.0)	38.0	16.2
Net DPS (THB)	0.18	1.11	0.52	0.52	0.60
Core P/E (x)	nm	4.9	10.4	7.6	6.5
P/BV (x)	1.2	1.2	1.0	0.9	0.8
Net dividend yield (%)	1.8	10.4	6.0	6.0	6.9
ROAE (%)	15.6	21.0	9.3	12.4	13.4
ROAA (%)	(0.3)	15.6	6.0	9.2	11.6
EV/EBITDA (x)	12.5	4.0	6.2	3.9	3.1
Net gearing (%) (incl perps)	16.7	26.7	18.6	net cash	net cash
Consensus net profit	-	-	4,979	5,032	4,317
MIBG vs. Consensus (%)	-	-	(27.4)	(0.8)	34.4

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Company Description

SPRC, a subsidiary of Chevron, operates a 165kbd refinery in Thailand, accounting for 15% of country's total capacity

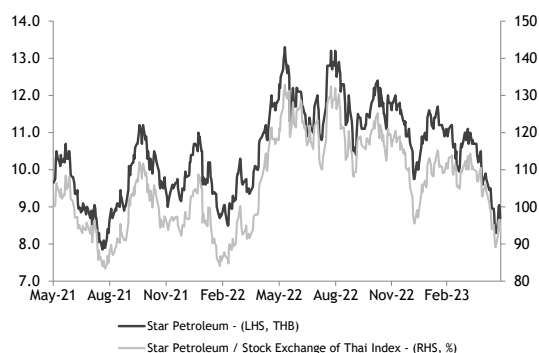
Statistics

52w high/low (THB)	13.30/8.30
3m avg turnover (USDm)	3.7
Free float (%)	39.4
Issued shares (m)	4,336
Market capitalisation	THB37.7B USD1.1B

Major shareholders:

Chevron South Asia Holdings PTE	60.6%
Thai NVDR	6.5%
South East Asia UK (Type C) Nominees	2.4%

Price Performance



	-1M	-3M	-12M
Absolute (%)	(10)	(20)	(26)
Relative to index (%)	(10)	(15)	(21)

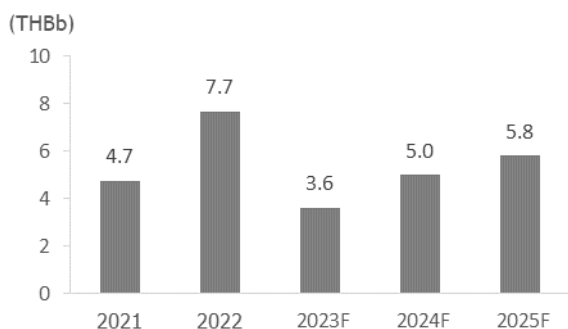
Source: FactSet

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Tear Sheet Insert

Value Proposition

- SPRC operates a 165kbd refinery located in Map Ta Phut on Thailand’s eastern seaboard.
- SPRC has announced the acquisition of Chevron’s fuel distribution business in Thailand, including stakes in its oil product pipeline and aviation fuel business.
- The acquisition will make SPRC a complete downstream operation with outlets to distribute its refinery output.

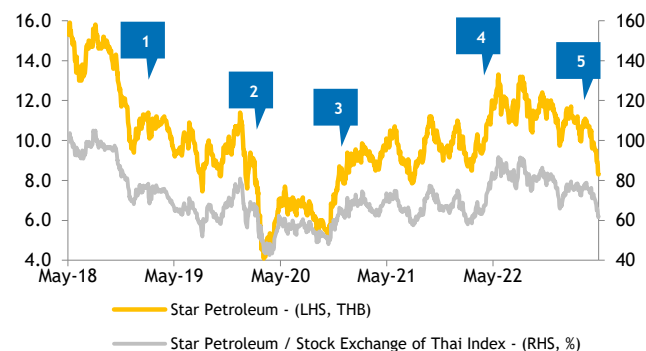
SPRC net profit



Source: Company

Price Drivers

Historical share price trend



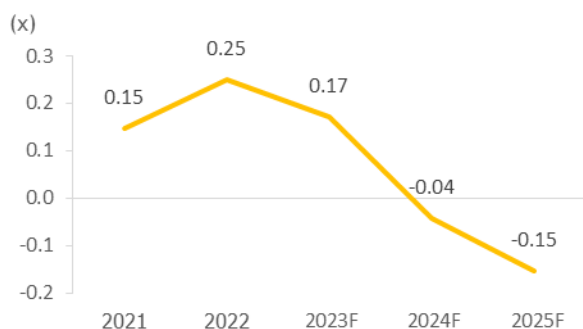
Source: Company, MST

1. Refining margins weakened with strong export growth from China
2. COVID sell-offs as global oil demand gets decimated
3. Recovery in oil demand and refining margins
4. Fuel shortages after many countries start banning Russian energy. This drove up margins for refined oil products.
5. Margins normalized, fear over global economic slowdown.

Financial Metrics

- We expect SPRC’s earnings to normalise in 2023E following an exceptionally strong 2022 when GRM benefited from fuel shortage and shifting trade flows due to the war in Ukraine.
- SPRC has a very strong balance sheet that could turn into a net cash position by the end of 2024E.
- Stock is more expensive than peers on P/BV but is cheaper than its own historical trading range.

SPRC net debt/(cash) to equity



Source: Company

Swing Factors

Upside

- Stronger-than-expected refining margin could present upside risks to our forecasts
- Acquisition of Chevron’s local fuel distribution business could help make SPRC an integrated downstream name. This could lead to synergies between the two units.
- We have conservatively assumed an elevated ship-to-ship transfer cost for SPRC following an oil spill incident. If this is resolved quickly, it could reduce operational cost and represent upside risks to our view.

Downside

- Weaker refining margins could negatively impact earnings outlook.
- Additional liability costs associated with oil spill incident could present potential downside risks to our forecasts.
- Lack of expertise on fuel distribution business could lead to near-term earnings hiccup post integration.

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Risk Rating & Score ¹	33.5 High Risk
Score Momentum ²	+2.6
Last Updated	21 April 2023
Controversy Score ³ (Updated: 21 April 2023)	2 Moderate

Business Model & Industry Issues

- SPRC’s core business of oil refining leaves it especially exposed to ESG risks. While we think the company has made significant efforts, we think it still lags behind its local peers on certain ESG issues. For example, the company has not declared its target year for carbon neutrality or net zero emissions.
- Over the past year, SPRC was involved in an oil spill which has led it to set aside significant provisions for the clean-up costs and potential environmental damages.

Material E issues

- SPRC does not have explicit GHG emission goals but it constantly monitors its emissions (volatile organic compounds, SO₂, and particulate matter) and finds ways to reduce these emissions. For example, it has used SO₂ reduction additives. This led to SO₂ emission declining by about 11% in 2022 compared to 2013 baseline.
- SPRC was implicated in oil spill incidents last year. The company has set aside budget to clean up the spill and improved operational procedure to avoid such incident in the future.
- SPRC waste management emphasizes “3R”: reduce, reuse and recycle. It targets zero waste to landfill and this was achieved in 2022. SPRC also targets reduction of waste at source by 5% by 2025.
- SPRC maintains Solomon Energy Intensity Index (EII) of 89.8, placing it in the 1st quarter in Asia Pacific.
- SPRC targets 5% reduction in water consumption per barrel of crude oil processed by 2025 compared to 2020 baseline.

Material S issues

- SPRC places great emphasis on employees’ health and safety. The company has established Environmental, Health and Safety (EHS) management system which goes well beyond regulatory standards. Its operation has been certified with ISO 9001, 14001 and 45001.
- SPRC recorded 0.18 Total Recordable Injury Rate (TRIR) per 200,000 hours worked in 2022. It has achieved 33.5 million man-hours without Day Away from Work Case (DAFW), with the last DAFW case occurring in 2013.
- SPRC participates in several community and social outreach programs. These include, for example, education and youth development program, community development, and ecosystems conservation.

Key G metrics and issues

- SPRC board of directors consists of 9 directors, 4 of whom are independent. There is only one female on the BOD.
- In 2022, SPRC received Excellence (5 stars) for Corporate Governance evaluation as assessed by the Stock Exchange of Thailand and the Thai Institute of Directors.
- SPRC has established Business Conduct Policy to provide guidelines for operation and emphasize the importance of honest, fair, and transparent operation and compliance with relevant laws and regulations.
- SPRC has established Anti-Corruption Policy and complies with all anti-corruption laws and regulations, including the U.S> Foreign Corrupt Practices Act (FCPA). The company did not receive any complaints through its whistleblowing channel in 2022. There was also no case of corruption reported.
- Corporate risk management is a core part of SPRC’s operation. Its Risk Management Policy defines process to review, assess risk factors and mitigate all fundamental risks across the operation and sustainability dimensions. Risk Management Committee consists of CEO, deputy CEO on operation, supply planning manager, CFO and the audit committee.
- For crisis and emergency, SPRC has in place Emergency Response Plan and Crisis Management process.

¹**Risk Rating & Score** - derived by Sustainalytics and assesses the company’s exposure to unmanaged ESG risks. Scores range between 0 - 50 in order of increasing severity with low/high scores & ratings representing negligible/significant risk to the company’s enterprise value, respectively, from ESG-driven financial impacts. ²**Score Momentum** - indicates changes to the company’s score since the last update - a **negative** integer indicates a company’s improving risk score; a **positive** integer indicates a deterioration. ³**Controversy Score** - reported periodically by Sustainalytics in the event of material ESG-related incident(s), with the impact severity scores of these events ranging from Category 0-5 (0 - no reports; 1 - negligible risks; ...; 5 - poses serious risks & indicative of potential structural deficiencies at the company).

Quantitative Parameters (Score: 40)						
	Particulars	Unit	2020	2021	2022	TOP (2022)
E	Scope 1 GHG emissions	m tCO ₂ e	1.33	1.26	1.32	3.26
	Scope 2 GHG emissions	tCO ₂ e	4,364	1,547	4,046	0
	Total	m tCO₂e	1.33	1.27	1.32	3.26
	Scope 3 GHG emissions	m tCO ₂ e	0	0	0	27.30
	Total	m tCO₂e	1.33	1.27	1.32	30.56
	GHG intensity (Scope 1 and 2)	tCO ₂ e/m bbls	25,527	25,661	23,144	29,772
	Electricity consumption	MWh/m bbls	371,761	381,192	345,554	9,674
	Water consumption	m ³ /m bbls	55,178	56,136	50,257	28,402
	Exposure to coal, mining, oil & gas and plantation	%	100%	100%	100%	100%
	Green, Social, sustainable products & serv.	THBb	N/A	N/A	N/A	0
S	% of women in workforce	%	24%	23%	25%	26%
	% of women in management roles	%	23%	21%	36%	43%
	Average training hours per employee	number	28.8	25.5	52.8	62.0
	Lost Time Injury Frequency Rate (LTIFR)	Employee	0.0	0.0	0.0	0.0
	Attrition rate	%	1.3%	1.8%	2.2%	5.0%
G	MD/CEO salary as % of reported net profit	%	N/A	N/A	N/A	N/A
	Board salary as % of reported net profit	%	NMF	0.0%	0.0%	0.1%
	Independent directors (tenure <10 years) as % of the Board	%	50%	50%	43%	57%
	Profits distributed to shareholders	% of net profit	0.0%	16.3%	62.7%	23.7%
	Female directors on the Board	%	25%	13%	14%	7%

Qualitative Parameters (Score: 33)	
a) is there an ESG policy in place and whether there is a standalone ESG committee or is it part of a risk committee?	Yes.
b) Does the performance evaluation of the board and senior mgt include a review of the performance of the board and senior management in addressing the company's material sustainability risks and opportunities?	Yes.
c) Does the company follow TCFD framework for ESG reporting? Is it signatory to responsible banking initiative or other such initiatives?	No.
d) Does the company capture or plan to capture Scope 3 emissions including from financing activities?	No.
e) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?	SPRC has EHS management system and continues to invest in new initiatives to improve efficiency and reduce emissions. SPRC reduces waste generated at the source through green supply chain.
f) Does carbon offset form part of the net zero/carbon neutrality target of the company?	Likely yes, as part of Chevron.

Target (Score: 100)		
Particulars	Target	Achieved
Net zero emission by 2050 (as part of Chevron's target)	2050	N/A
Zero recordable spill	0	2
80% customer satisfaction	80%	87%
Reduce raw water consumption	5%	11%
Zero total recordable injury	0	2
Impact		
NA		
Overall Score: 33		
As per our ESG matrix, Star Petroleum Refining (SPRC TB) has an overall score of 33.		

ESG score	Weights	Scores	Final Score
Quantitative	50%	40	20
Qualitative	25%	33	8
Target	25%	20	5
Total			33

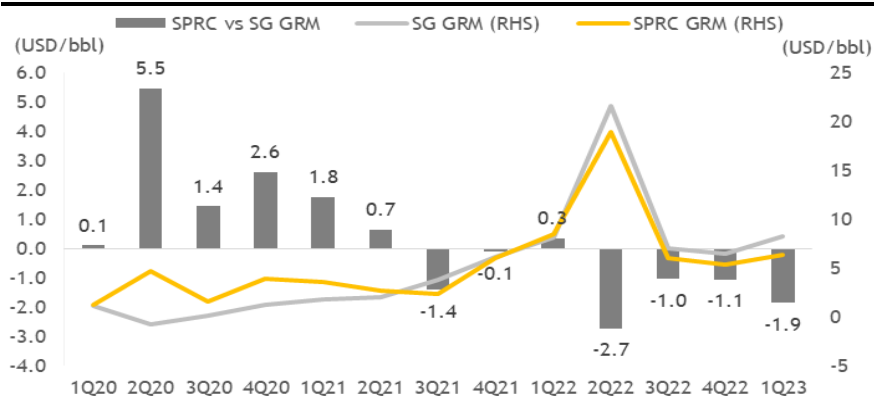
Our overall ESG score for SPRC is 33, which makes its ESG rating below average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring). This is due in part to two oil spill incidents last year. SPRC also underperformed its target on total recordable injury. However, SPRC scores highly on social aspect.

1. Operational issue still weighs; likely to resolve in 2024E

1.1 Ship-to-ship transfer caused GRM underperformance

SPRC’s operation continues to be hampered by its need to use ship-to-ship transfer for unloading crude oil. This follows an oil spill incidents at its offshore single point mooring (SPM) in early 2022. Since then, the company has had to transfer crude oil from a very large crude carrier (VLCC) to smaller vessels before unloading at its refinery. This extra logistical hurdle has added about USD2/bbl of extra cost—equivalent to the cost of shipping crude oil all the way from the Middle East to Thailand.

Fig 1: SPRC GRM has underperformed SG GRM in recent quarters



Source: Company data, MST

The impact of this cost is most evident in SPRC’s gross refining margin which has consistently underperformed Singapore GRM since 2Q22. Whereas SPRC used to generate an average of USD1.2/bbl extra margin over the benchmark during 1Q20-1Q22, the company’s market GRM now underperforms the Singapore benchmark by USD1.7/bbl on average in 2Q22-1Q23. We expect this underperformance to last until the end of the year, by which time management expects the company to once again be able to use its SPM for crude oil unloading.

1.2 Provision for oil spill liability already set aside

SPRC has already set aside USD42m in provisions for the oil spill incident. We believe this is enough to cover the clean-up cost and any future liability. Management does not expect to have to set aside additional cost in the future. Still, there is potential downside risks if any further damage is claimed by surrounding communities or the government.

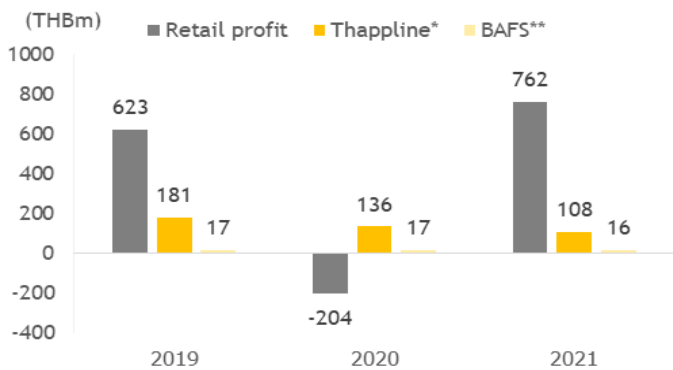
2. Caltex acquisition to boost 2024E growth

2.1 First foray into retail fuel business

SPRC’s planned purchase of Chevron (Thailand) Ltd (CTL) from its majority shareholder Chevron will mark its first foray into the retail fuel business. CTL operates 427 gas stations under the ‘Caltex’ brand. 403 of the stations are retail-owned and retailer-operated (RORO) stations whereas the company itself owns 24 company-owned, retailer-operated (CORO) stations. This gives it a 4-5% market share in Thailand’s retail fuel business.

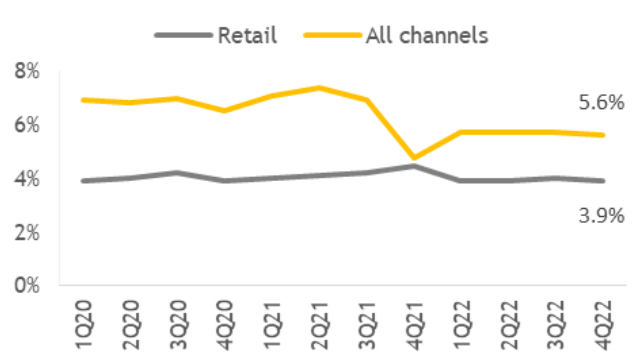
The acquisition will also see SPRC taking a 9.9% stake in Thappline, one of the largest fuel pipeline operators in Thailand as well as a 2.5% stake in Bangkok Air Fuel Services (BAFS TB, CP THB31.75, not rated), which is the main provider of aircraft refuelling services at both Suvarnabhumi Airport and Donmueang Airport in Bangkok.

Fig 2: Pro-forma profit of newly acquired assets



Note: * Assume 100% dividend payout, ** Based on actual dividends
Source: Company data, MST; Thappline and BAFS dividends

Fig 3: Caltex market share in Thailand



Source: PTG, MST

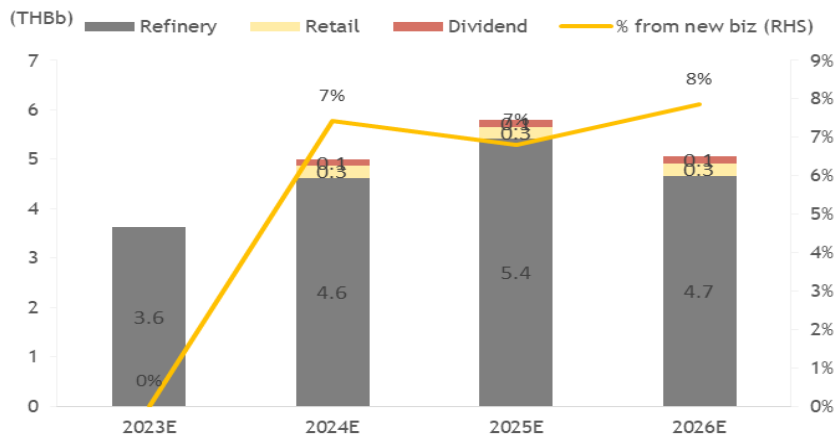
2.2 Attractive purchase price

We view the purchase price of THB5.56b as fair for SPRC shareholders. Based on disclosure of 2019-21 financial statements, we estimate the three assets would contribute earnings to SPRC of about THB550m pa during those three years. This implies a purchase price of just about 10x P/E, which we view as attractive given the relatively stable, high quality businesses SPRC is getting in return. We think the deal will also help create a less volatile, growing stream of earnings given we expect Thailand’s oil demand to continue growing for the foreseeable future whereas SPRC’s earnings from refining is limited by the size of its refinery.

2.3 Potential earnings accretion in 2024-25E

We estimate earnings contribution from the newly acquired business to reach THB371m and THB395m in 2024-25E. This is below average figures for 2019-21A as we see lower potential dividend income from Thappline and BAFS. We also think earnings in 2021 in particular had significant stock gain components. Still, the new earnings stream will help contribute about 7-8% in 2024-25E to SPRC’s bottom line. Longer term, given our conservative assumption on GRM and the relatively stable earnings from retail fuel business, contribution from the new businesses could make up over 10% of profit by 2027E.

Fig 4: Earnings contribution from newly acquired businesses



Source: Company data, MST

3. Attractive valuation

3.1 BUY with DCF-based TP of THB12.40

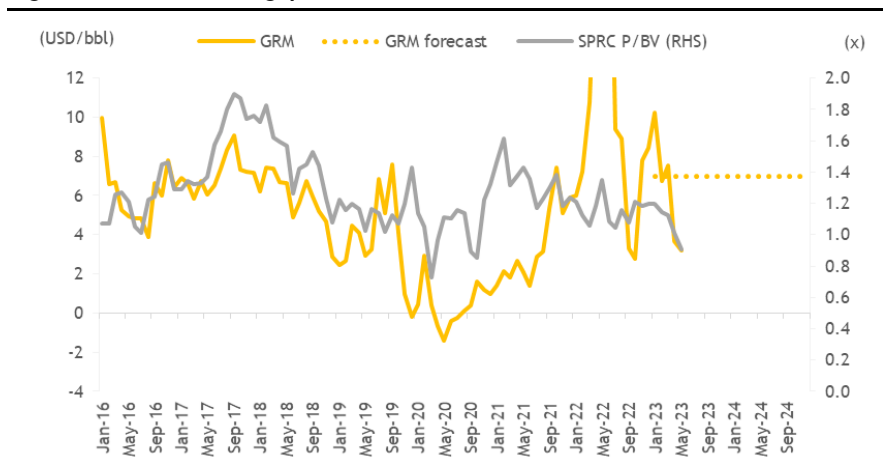
We initiate coverage of SPRC with a BUY recommendation and DCF-based TP of THB12.40. Our TP implies 1.3x 2024E P/BV, still well below last up-cycle valuation of almost 2.0x P/BV.

Operationally, we expect an earnings turnaround in 2024E following a 62% norm EPS decline in 2023E. The decline this year is due to both lower GRM (following record-high refining margin in 2022) and operational issues related to the oil spill. Our base-case assumption is for SPRC to be able to use SPM again next year, eliminating USD2/bbl in extra cost. Additional growth will come from its acquisition of the fuel retail business from Chevron.

3.2 More expensive than peers but cheap vs the past

SPRC trades at a premium to its peers on P/BV. At 0.9x 2024E P/BV, it is more expensive than the other three names we also cover. However, the stock is still trading at a discount to its long-term average of 1.3x P/BV. It is also one of the cheapest on P/E terms, trading at just 8x 2024E P/E. Because of its strong balance sheet, we also think that SPRC has the most room for increasing its dividend payout. We currently assume a 40%-45% payout over the next few years, consistent with its actual payout ratios pre-Covid.

Fig 5: SPRC P/BV vs Singapore GRM



Source: Company data, MST

FYE 31 Dec	FY21A	FY22A	FY23E	FY24E	FY25E
Key Metrics					
P/E (reported) (x)	8.6	6.3	10.4	7.6	6.5
Core P/E (x)	nm	4.9	10.4	7.6	6.5
P/BV (x)	1.2	1.2	1.0	0.9	0.8
P/NTA (x)	1.2	1.2	1.0	0.9	0.8
Net dividend yield (%)	1.8	10.4	6.0	6.0	6.9
FCF yield (%)	nm	2.6	16.4	28.1	19.9
EV/EBITDA (x)	12.5	4.0	6.2	3.9	3.1
EV/EBIT (x)	39.9	4.8	9.5	5.8	4.4
INCOME STATEMENT (THB m)					
Revenue	172,484.4	285,264.4	217,166.1	207,792.6	207,141.5
EBITDA	3,854.1	14,349.2	7,267.6	9,342.8	10,136.7
Depreciation	(2,602.2)	(2,557.0)	(2,505.8)	(2,950.9)	(2,906.7)
Amortisation	(41.8)	(45.7)	(45.7)	(45.7)	(45.7)
EBIT	1,210.1	11,746.5	4,716.1	6,346.2	7,184.3
Net interest income / (exp)	(211.8)	(316.4)	(194.6)	(135.2)	31.4
Associates & JV	0.0	0.0	0.0	0.0	0.0
Exceptionals	4,914.7	(1,835.7)	0.0	0.0	0.0
Other pretax income	0.0	0.0	0.0	0.0	0.0
Pretax profit	5,912.9	9,594.4	4,521.4	6,211.0	7,215.7
Income tax	(1,166.4)	(1,920.6)	(904.3)	(1,218.2)	(1,414.3)
Minorities	0.0	0.0	0.0	0.0	0.0
Discontinued operations	0.0	0.0	0.0	0.0	0.0
Reported net profit	4,746.5	7,673.8	3,617.2	4,992.8	5,801.3
Core net profit	(168.2)	9,509.5	3,617.2	4,992.8	5,801.3
BALANCE SHEET (THB m)					
Cash & Short Term Investments	2,944.8	75.5	75.5	75.5	75.5
Accounts receivable	13,219.2	14,328.1	10,907.7	10,436.9	10,404.2
Inventory	16,486.0	23,762.2	17,385.1	13,100.2	13,001.9
Property, Plant & Equip (net)	24,218.8	22,735.3	27,263.5	25,672.6	24,153.1
Intangible assets	0.0	0.0	0.0	0.0	0.0
Investment in Associates & JVs	0.0	0.0	0.0	0.0	0.0
Other assets	1,857.0	2,386.9	1,817.1	1,738.7	1,733.2
Total assets	58,725.9	63,288.1	57,448.9	51,023.9	49,368.0
ST interest bearing debt	4,679.7	9,730.6	4,824.3	(1,120.7)	(4,713.2)
Accounts payable	13,960.7	12,780.3	9,982.9	9,403.0	9,332.4
LT interest bearing debt	4,017.8	677.2	2,452.7	43.2	(1,400.9)
Other liabilities	1,697.0	1,393.0	1,406.0	1,180.0	1,258.0
Total Liabilities	24,355.2	24,581.1	18,665.5	9,505.3	4,476.7
Shareholders Equity	34,370.7	38,707.0	38,783.5	41,518.6	44,891.3
Minority Interest	0.0	0.0	0.0	0.0	0.0
Total shareholder equity	34,370.7	38,707.0	38,783.5	41,518.6	44,891.3
Total liabilities and equity	58,725.9	63,288.1	57,448.9	51,023.9	49,368.0
CASH FLOW (THB m)					
Pretax profit	5,912.9	9,594.4	4,521.4	6,211.0	7,215.7
Depreciation & amortisation	2,644.1	2,602.6	2,551.5	2,996.6	2,952.4
Adj net interest (income)/exp	(357.0)	(236.7)	0.0	0.0	0.0
Change in working capital	(6,107.5)	(9,573.8)	7,034.6	3,953.1	139.2
Cash taxes paid	(1,166.4)	(1,920.6)	(904.3)	(1,218.2)	(1,414.3)
Other operating cash flow	(4,914.7)	1,835.7	0.0	0.0	0.0
Cash flow from operations	(3,988.6)	2,301.7	13,203.2	11,942.5	8,893.0
Capex	(2,664.9)	(1,073.5)	(7,034.0)	(1,360.0)	(1,387.2)
Free cash flow	(6,653.5)	1,228.2	6,169.2	10,582.5	7,505.8
Dividends paid	0.0	(4,936.4)	(3,540.7)	(2,257.7)	(2,428.7)
Equity raised / (purchased)	0.0	0.0	0.0	0.0	0.0
Change in Debt	(3,493.1)	4,546.0	(2,969.0)	(8,332.3)	(5,035.1)
Other invest/financing cash flow	11,456.5	(3,707.0)	340.5	7.5	(42.0)
Effect of exch rate changes	0.0	0.0	0.0	0.0	0.0
Net cash flow	1,309.9	(2,869.2)	0.0	0.0	0.0

FYE 31 Dec	FY21A	FY22A	FY23E	FY24E	FY25E
Key Ratios					
Growth ratios (%)					
Revenue growth	32.5	65.4	(23.9)	(4.3)	(0.3)
EBITDA growth	nm	272.3	(49.4)	28.6	8.5
EBIT growth	nm	870.7	(59.9)	34.6	13.2
Pretax growth	nm	62.3	(52.9)	37.4	16.2
Reported net profit growth	nm	61.7	(52.9)	38.0	16.2
Core net profit growth	nm	nm	(62.0)	38.0	16.2
Profitability ratios (%)					
EBITDA margin	2.2	5.0	3.3	4.5	4.9
EBIT margin	0.7	4.1	2.2	3.1	3.5
Pretax profit margin	3.4	3.4	2.1	3.0	3.5
Payout ratio	16.3	62.7	62.7	45.0	45.0
DuPont analysis					
Net profit margin (%)	2.8	2.7	1.7	2.4	2.8
Revenue/Assets (x)	2.9	4.5	3.8	4.1	4.2
Assets/Equity (x)	1.7	1.6	1.5	1.2	1.1
ROAE (%)	15.6	21.0	9.3	12.4	13.4
ROAA (%)	(0.3)	15.6	6.0	9.2	11.6
Liquidity & Efficiency					
Cash conversion cycle	26.6	26.4	36.6	28.5	24.8
Days receivable outstanding	22.7	17.4	20.9	18.5	18.1
Days inventory outstanding	26.9	26.8	35.0	27.5	23.8
Days payables outstanding	23.0	17.8	19.4	17.5	17.1
Dividend cover (x)	6.1	1.6	1.6	2.2	2.2
Current ratio (x)	1.6	1.6	1.8	2.5	4.0
Leverage & Expense Analysis					
Asset/Liability (x)	2.4	2.6	3.1	5.4	nm
Net gearing (%) (incl perps)	16.7	26.7	18.6	net cash	net cash
Net gearing (%) (excl. perps)	16.7	26.7	18.6	net cash	net cash
Net interest cover (x)	5.7	37.1	24.2	46.9	na
Debt/EBITDA (x)	2.3	0.7	1.0	nm	nm
Capex/revenue (%)	1.5	0.4	3.2	0.7	0.7
Net debt/ (net cash)	5,752.8	10,332.2	7,201.5	(1,153.0)	(6,189.7)

Source: Company; Maybank IBG Research

APPENDIX I : TERMS FOR PROVISION OF REPORT, DISCLOSURES AND DISCLAIMERS

รายงานนี้ ถูกจัดทำขึ้นเพื่อเผยแพร่ และเพื่อเป็นการให้ข้อมูลเท่านั้น มิใช่การชักจูงให้ซื้อหรือขายหุ้นที่กล่าวถึงในรายงานนี้ นักลงทุนควรพึงตระหนักไว้เสมอว่า มูลค่าของหุ้นอาจมีความผันผวน มีการเพิ่มขึ้นและลดลงได้ตลอดเวลา ความเห็น หรือคำแนะนำต่างๆ จัดทำขึ้นบนพื้นฐานของเทคนิค และปัจจัยพื้นฐาน ซึ่งอาจมีความแตกต่างกัน การประเมินมูลค่าที่เหมาะสมทางเทคนิค อาจใช้วิธีการที่แตกต่างจากการวิเคราะห์เชิงปัจจัยพื้นฐาน โดยขึ้นอยู่กับปัจจัยทางด้านราคา และมูลค่าการซื้อขาย ซึ่งแตกต่างไปจากการวิเคราะห์เชิงปัจจัยพื้นฐาน ดังนั้นผลตอบแทนของนักลงทุนจึงอาจต่ำกว่าต้นทุนได้ และผลตอบแทนจากการลงทุนในอดีตไม่สามารถสะท้อนถึงผลตอบแทนในอนาคตได้ บทวิเคราะห์นี้ไม่ได้มีจุดประสงค์เพื่อแนะนำการลงทุนเพื่อบุคคลใดเป็นการเฉพาะ และเพื่อวัตถุประสงค์เฉพาะเจาะจงต่อการลงทุน ในฐานะทางการเงิน และความต้องการส่วนบุคคลของนักลงทุนที่ได้รับหรืออ่านบทวิเคราะห์ฉบับนี้ เพราะฉะนั้น นักลงทุนจึงควรใช้วิจารณญาณ ในการอ่านบทวิเคราะห์ฉบับนี้

การจัดทำรายงานฉบับนี้ ได้อ้างอิงมาจากแหล่งข้อมูลที่ได้รับยอมรับว่ามีคุณภาพ เชื่อถือได้ แต่ไม่ได้เป็นการรับรองจาก Maybank Investment Bank Berhad และ (บริษัทย่อยและในเครือ) รวมเรียก "Maybank IBG" ผลที่ตามมาทั้งในส่วนของคุณภาพแม่นยำ หรือเรียบเรียงสมบูรณ์จึงไม่ได้เป็นความรับผิดชอบจากทาง Maybank IBG ดังนั้น Maybank IBG และ เจ้าหน้าที่ ,กรรมการ ,บริษัทร่วม และหน่วยงานที่เกี่ยวข้อง และ/หรือพนักงาน รวมเรียกว่า "Representatives" จะไม่มีส่วนรับผิดชอบต่อการสูญเสียต่างๆ ที่เกิดขึ้นทั้งทางตรงหรือทางอ้อมจากการใช้รายงานฉบับนี้ ข้อมูล ,ความเห็น และคำแนะนำที่ปรากฏอยู่ในบทวิเคราะห์ฉบับนี้อาจมีการเปลี่ยนแปลงได้ตลอดเวลา โดยไม่ต้องแจ้งให้ทราบล่วงหน้า

บทวิเคราะห์นี้อาจมีการคาดการณ์ผลการดำเนินงานล่วงหน้า ซึ่งส่วนใหญ่จะเห็นได้จากการใช้คำต่างๆ เหล่านี้ เช่น "คาดว่า" "เชื่อว่า" "คาดการณ์ว่า" "มีแนวโน้มว่า" "มีแผนว่า" "ประมาณการ" หรือ การอธิบายว่า เหตุการณ์นี้ "อาจ" เกิดขึ้น หรือ เหตุการณ์นี้ "เป็นไปได้" ที่เกิดขึ้น เป็นต้น การคาดการณ์ล่วงหน้า จะอยู่บนพื้นฐานของสมมติฐานที่ตั้งขึ้นและอ้างอิงบนข้อมูลในปัจจุบัน และยังขึ้นอยู่กับความเสี่ยงและความไม่แน่นอนที่จะทำให้ผลการดำเนินงานที่แท้จริงแตกต่างไปจากที่คาดการณ์ได้อย่างมีนัยยะสำคัญ นักลงทุนจึงไม่ควรใช้การคาดการณ์ล่วงหน้านี้เป็นหลักในการตัดสินใจลงทุนหลังจากวันที่บทวิเคราะห์ถูกเผยแพร่ออกไป Maybank IBG ไม่ถือเป็นการผูกพันในการปรับประมาณการ หากมีข้อมูลใหม่หรือเหตุการณ์ที่ไม่คาดคิดขึ้น

Maybank IBG รวมถึงเจ้าหน้าที่ ,กรรมการ และพนักงาน ซึ่งรวมถึงหน่วยงานที่เกี่ยวข้องกับการจัดทำ หรือการเผยแพร่บทวิเคราะห์นี้ อาจมีส่วนร่วม หรือมีสิทธิลงทุนในหุ้นตัวนี้ หรือ มีส่วนได้เสียต่างๆ กับผู้ถือหลักทรัพย์นี้ นอกจากนี้ราคาหุ้นอาจเคลื่อนไหวไปตามสิ่งที่เสนอในบทวิเคราะห์นี้ Maybank IBG มีสิทธิใช้ข้อมูลในรายงานนี้ ก่อนที่รายงานนี้จะถูกเผยแพร่ออกไปภายใต้ขอบเขตที่กฎหมายรับรองเท่านั้น กรรมการ ,เจ้าหน้าที่ และ/หรือพนักงานของ Maybank IBG ท่านหนึ่งท่านใด หรือมากกว่าหนึ่งท่าน สามารถเป็นกรรมการในบริษัทจดทะเบียนนี้ได้

บทวิเคราะห์นี้ถูกจัดทำขึ้นเพื่อลูกค้าของ Maybank IBG และห้ามนำไปแก้ไข ตัดแปลง แจกจ่าย และนำไปจัดทำใหม่ ไม่ว่าจะเป็นบางส่วน หรือเต็มฉบับ หากไม่ได้รับอนุญาตจาก Maybank IBG เป็นการล่วงหน้า ทั้งนี้ Maybank IBG และตัวแทนที่เกี่ยวข้อง จะไม่รับผิดชอบต่อผลที่ตามมาจากการกระทำของบุคคลที่ 3 ที่กระทำสิ่งที่ถูกห้ามดังกล่าว

บทวิเคราะห์นี้ไม่ได้ทำขึ้นมาโดยตรง หรือมีจุดประสงค์เพื่อการแจกจ่าย หรือถูกใช้โดยสาธารณชนทั่วไป หรือประชาชนทั้งหมดที่อาศัยในประเทศท้องถิ่นที่ออกหลักทรัพย์นี้ หรือในท้องถิ่น เมือง หรือประเทศอื่นๆ ที่กฎหมายในประเทศนั้นไม่อนุญาต บทวิเคราะห์นี้ทำขึ้นมาเพื่อการใช้ในประเทศที่กฎหมายอนุญาตเท่านั้นหลักทรัพย์นี้อาจจะไม่ได้ถูกรับรองการซื้อขายโดยกฎหมายทุกกฎหมาย หรือทำการซื้อขายได้สำหรับนักลงทุนทุกระดับ นักลงทุนควรใช้วิจารณญาณอย่างยิงในการนำคำแนะนำ หรือคำเตือนต่างๆ ที่ได้กล่าวไว้ข้างต้นมาใช้ เนื่องจากความแตกต่างทางด้านภูมิศาสตร์ของแต่ละบุคคล และระยะเวลาในการได้รับบทวิเคราะห์นี้

มาเลเซีย

ความเห็นหรือคำแนะนำที่ปรากฏในบทวิเคราะห์ฉบับนี้เป็นผลการประเมินจากด้านเทคนิค และปัจจัยพื้นฐาน โดยความเห็นทางด้านเทคนิคอาจมีความแตกต่างจากปัจจัยพื้นฐาน เนื่องจากการประเมินด้านเทคนิคได้ใช้วิธีที่แตกต่างกัน โดยมุ่งเน้นข้อมูลด้านราคา และปริมาณการซื้อขายของหลักทรัพย์ที่ Bursa Malaysia Securities Berhad วิเคราะห์หลักทรัพย์

สิงคโปร์

รายงานฉบับนี้จะทำขึ้นบนวันและข้อมูลที่เกิดขึ้น ซึ่งอาจมีการเปลี่ยนแปลงได้ บริษัท Maybank Research จำกัด ("MRPL") ในสิงคโปร์ไม่มีเงื่อนไขที่ต้องปรับปรุงข้อมูลต่างๆ ให้แก่ผู้รับข้อมูลนี้ การเผยแพร่ในสิงคโปร์ ผู้รับรายงานฉบับนี้จะติดต่อกับ MRPL ในสิงคโปร์ ทั้งในแง่ของการแนะนำ หรือเกี่ยวข้องกับรายงานฉบับนี้ หากผู้รับรายงานฉบับนี้ไม่ได้เป็นนักลงทุน, ผู้เชี่ยวชาญทางการลงทุน หรือนักลงทุนประเภทสถาบัน (จำกัดความใน Section 4A ตามกฎหมาย Singapore Securities and Futures) ทั้งนี้ MRPL จะรับผิดชอบบนเนื้อหาที่ปรากฏในรายงานฉบับนี้ แต่เป็นการรับผิดชอบต่อจำกัดความเขตตามกฎหมายที่กำหนด

ไทย

เว้นแต่จะได้รับอนุญาตเป็นการเฉพาะ ไม่ว่าส่วนใดส่วนหนึ่งของรายงานฉบับนี้ ไม่อนุญาตให้มีการคัดลอก จัดทำสำเนา ลอกเลียน หรือในความหมายที่ใกล้เคียง หรือการเผยแพร่ด้วยตนเองโดยไม่ได้รับอนุญาตเป็นลายลักษณ์อักษรเป็นการล่วงหน้าจากบริษัท หลักทรัพย์เมย์แบงก์ (ประเทศไทย) จำกัด (มหาชน) ทั้งนี้ บริษัท หลักทรัพย์เมย์แบงก์ (ประเทศไทย) จำกัด (มหาชน) ("MST") จะไม่รับผิดชอบต่อผลที่ตามมาจากการกระทำของบุคคลที่ 3 ที่กระทำสิ่งที่ถูกห้ามดังกล่าว

ฝ่ายวิจัยหลักทรัพย์ของ บมจ. หลักทรัพย์ เมย์แบงก์ (ประเทศไทย) มี 2 ทีม คือ ฝ่ายวิจัย สำหรับนักลงทุนในประเทศ (MST Retail Research) และ ฝ่ายวิจัยนักลงทุนสถาบันต่างประเทศ (MST Institutional Research) อันมีเหตุผลมาจากลักษณะที่แตกต่างในด้าน ลักษณะผู้ลงทุน วัตถุประสงค์ และ กลยุทธ์ ทำให้คำแนะนำ และ/หรือ ราคาเป้าหมายอาจมีความแตกต่างกัน โดย MST Retail Research มีวัตถุประสงค์ที่จะทำบทวิเคราะห์เพื่อสนับสนุนข้อมูลการลงทุนแก่นักลงทุนในประเทศ (ท่านสามารถดูรายละเอียดได้จาก <http://kelive.maybank-ke.co.th>) ในขณะที่ MST Institutional Research สำหรับนักลงทุนสถาบันต่างประเทศเท่านั้น ทั้งนี้ MST Retail Research จัดทำทั้งรายงานฉบับภาษาไทยและภาษาอังกฤษ โดยฉบับภาษาอังกฤษของรายงานนี้เป็นฉบับแปลของบทวิเคราะห์ภาษาไทย

MST ขอสงวนสิทธิ์ในการเผยแพร่รายงานบทวิเคราะห์ของ MST Retail research แก่นักลงทุนสถาบันที่ขอมา อย่างไรก็ตาม บทวิเคราะห์บางส่วนจาก MST Retail Research ซึ่งจัดทำเป็นภาษาไทยก่อน อาจถูกแปลเป็นภาษาอังกฤษ ดังนั้นความล่าช้าอาจเกิดขึ้นในการส่งรายงานบทวิเคราะห์ฉบับภาษาอังกฤษให้กับนักลงทุนสถาบัน

MST อาจมีธุรกิจที่เกี่ยวข้องกับ หรือ มีความเป็นไปได้ที่จะเป็นผู้ออกตราสารอนุพันธ์ Derivatives Warrants บนหลักทรัพย์ที่ปรากฏอยู่ในบทวิเคราะห์ฉบับนี้ ดังนั้นนักลงทุนควรใช้วิจารณญาณพิจารณาถึงประเด็นนี้ ก่อนตัดสินใจลงทุน ทั้งนี้ MST หน่วยงานที่เกี่ยวข้อง กรรมการ และ/หรือ พนักงาน อาจมีส่วนเกี่ยวข้อง และ/หรือ การเป็นผู้รับประกันการจัดจำหน่ายในหลักทรัพย์ที่ปรากฏในรายงานฉบับนี้

การเปิดเผยผลการสำรวจของสมาคมส่งเสริมสถาบันกรรมการบริษัทไทย (IOD) ในเรื่องกำกับกับดูแลกิจการ (Corporate Governance) นี้ เป็นการดำเนินการตามนโยบายของสำนักงานคณะกรรมการกำกับหลักทรัพย์และตลาดหลักทรัพย์ โดยการสำรวจของ IOD เป็นการสำรวจและประเมินจากข้อมูล ของบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย และตลาดหลักทรัพย์ เอ็มเอไอ ที่มีการเปิดเผยต่อสาธารณะ และเป็นข้อมูลที่ผู้ลงทุนทั่วไปสามารถเข้าถึงได้ ดังนั้น ผลการสำรวจดังกล่าวจึงเป็นการนำเสนอในมุมมองของบุคคลภายนอก โดยไม่ได้เป็นการประเมินการปฏิบัติ และมีได้มีการใช้ข้อมูลดังกล่าว ทั้งนี้ บริษัทหลักทรัพย์ เมย์แบงก์ (ประเทศไทย) จำกัด (มหาชน) มิได้ยืนยันหรือรับรองถึงความถูกต้องของ ผลการสำรวจดังกล่าวแต่อย่างใด

การเปิดเผยการประเมินดัชนีชี้วัดความคืบหน้าการป้องกันความเสี่ยงที่เกี่ยวข้องกับการทุจริตคอร์รัปชัน (Anti-corruption Progress Indicators) ของบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทยที่จัดทำโดยสถาบันที่เกี่ยวข้องซึ่งมีการเปิดเผยโดยสำนักงานคณะกรรมการกำกับหลักทรัพย์และตลาดหลักทรัพย์นี้ เป็นการดำเนินการตามนโยบายและตามแผนพัฒนาความยั่งยืนสำหรับบริษัทจดทะเบียน โดยผลการประเมินดังกล่าว สถาบันที่เกี่ยวข้องอาศัยข้อมูลที่ได้รับการยอมรับจากบริษัทจดทะเบียนตามที่มีบริษัทจดทะเบียนได้ระบุในแบบแสดงข้อมูลเพื่อการประเมิน Anti-Corruption ซึ่งอ้างอิงข้อมูลมาจากแบบแสดงรายการข้อมูลประจำปี (แบบ 56-1) รายงานประจำปี (แบบ 56-2) หรือในเอกสารหรือรายงานอื่นที่เกี่ยวข้องของบริษัทจดทะเบียนนั้น แล้วแต่กรณี ดังนั้น ผลการประเมินดังกล่าวจึงเป็นการนำเสนอในมุมมองของสถาบันที่เกี่ยวข้องซึ่งเป็นบุคคลภายนอก โดยมิได้เป็นการประเมินการปฏิบัติของบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย และมีได้ใช้ข้อมูลภายในเพื่อการประเมิน เนื่องจากผลการประเมินดังกล่าวเป็นเพียงผลการประเมิน ณ วันที่ปรากฏในผลการประเมินเท่านั้น ดังนั้น ผลการประเมินจึงอาจเปลี่ยนแปลงได้ภายหลังวันดังกล่าว หรือรับรองความถูกต้องครบถ้วนของผลการประเมินดังกล่าวแต่อย่างใด

สหรัฐอเมริกา

บทวิเคราะห์ฉบับนี้จัดทำขึ้นเพื่อเผยแพร่ในสหรัฐฯ ("US") สำหรับลูกค้าสถาบันในสหรัฐฯ เป็นสำคัญ (ตามคำนิยามใน Rule 15a-6 ภายใต้กฎหมาย Securities Exchange Act of 1934) โดย Maybank Securities USA Inc ("MSUS") เท่านั้น ซึ่งถือเป็น Broker-Dealer ที่ได้จดทะเบียนในสหรัฐฯ (ตามกฎหมาย Section 15 ของ Securities Exchange Act of 1934) ทั้งนี้ความรับผิดชอบในการเผยแพร่รายงานฉบับนี้ อยู่ภายใต้ Maybank MSUS ในสหรัฐฯ เท่านั้น รายงานฉบับนี้ไม่สามารถจัดตั้งถึงท่านได้ หาก Maybank IBG ไม่อนุญาต หรือภายใต้ข้อกำหนดของกฎหมายหรือหลักเกณฑ์ที่ไม่สามารถจัดตั้งถึงท่านได้ ทั้งนี้ผู้ได้รับรายงานฉบับนี้จะต้องทำความเข้าใจด้วยว่า MSUS ได้นำเสนอบทวิเคราะห์นี้ภายใต้หลักเกณฑ์ของการลงทุนที่เกี่ยวข้องกับกฎหมาย และหลักเกณฑ์การกำกับ

อังกฤษ

เอกสารฉบับนี้ได้ถูกเผยแพร่โดย บริษัท Maybank Securities (London) จำกัด (“MSUK”) ซึ่งได้รับอนุญาตและอยู่ภายใต้การกำกับดูแลของ The Financial Services Authority และ Informational Purposes เท่านั้น เอกสารฉบับนี้ไม่ได้มีเจตนาที่จะเผยแพร่แก่บุคคลที่ถูกระบุว่าเป็นนักลงทุนรายย่อย (Retail Client) ตามความหมายของ The Financial Services and Markets Act 2000 ภายในประเทศอังกฤษ ข้อสรุปใดๆ ที่เกิดจากบุคคลที่ 3 เพื่อเป็นความสะดวกแก่ผู้ได้รับเอกสารฉบับนี้เท่านั้น ทั้งนี้บริษัทฯ ไม่มีส่วนรับผิดชอบต่อความเห็น หรือความถูกต้องดังกล่าว และการเข้าถึงข้อมูลดังกล่าวเป็นความเสี่ยงของผู้รับเอกสารเท่านั้น นอกจากนี้ผู้รับเอกสารฉบับนี้ควรปรึกษาที่ปรึกษาทางภาษีของตนเองเพื่อให้เกิดความถูกต้องในการแนวทางดังกล่าว เพราะเอกสารฉบับนี้ไม่ได้ประเมินถึงกฎหมายเฉพาะทาง, บัญชี หรือที่ปรึกษาทางด้านภาษี

DISCLOSURES

Legal Entities Disclosures

มาเลเซีย: เอกสารฉบับนี้ได้จัดทำและเผยแพร่ในประเทศมาเลเซีย โดย Maybank Investment Bank Berhad (15938-H) ซึ่งเป็นในกลุ่มเดียวกับ Bursa Malaysia Berhad และเป็นผู้ออกใบอนุญาต Capital Market and Services ที่ออกโดย The Securities Commission ในประเทศมาเลเซีย **สิงคโปร์:** เอกสารฉบับนี้จัดทำขึ้นและเผยแพร่ในประเทศสิงคโปร์ โดย MRPL (จดทะเบียนเลขที่ 197201256N) ภายใต้การกำกับดูแล Monetary Authority of Singapore **อินโดนีเซีย:** PT Maybank Securities (“PTMSI”) (จดทะเบียนเลขที่ KEP-251/PM/1992) เป็นสมาชิกของ Indonesia Stock Exchange และอยู่ภายใต้การกำกับของ BAPEPAM LK **ไทย:** MST (จดทะเบียนเลขที่ 0107545000314) เป็นสมาชิกของ The Stock Exchange of Thailand และอยู่ภายใต้การกำกับของกระทรวงการคลัง และกสท. **ฟิลิปปินส์:** MATRKES (จดทะเบียนเลขที่ 01-2004-00019) เป็นสมาชิกของ The Philippines Stock Exchange และอยู่ภายใต้การกำกับดูแลของ The Securities and Exchange Commission **เวียดนาม:** บริษัท Maybank Securities Limited (ใบอนุญาตเลขที่ 117/GP-UBCK) ซึ่งใบอนุญาตอยู่ภายใต้ The State Securities Commission of Vietnam **ฮ่องกง:** MIB Securities (Hong Kong) Limited (Central Entity No: AAD284) ภายใต้กำกับโดย The Securities and Futures Commission **อินเดีย:** บริษัท MIB Securities India Private จำกัด (“MIBSI”) เป็นส่วนหนึ่งของ The National Stock Exchange of India Limited and the Bombay Stock Exchange and is regulated by Securities and Exchange Board of India (“SEBI”) (จดทะเบียนเลขที่ INZ000010538) ทั้งนี้ MIBSI ได้จดทะเบียนกับ SEBI ประเภท 1 Merchant Broker (จดทะเบียนเลขที่ INM 000011708) and as Research Analyst (Reg No: INH000000057) **สหรัฐฯ:** Maybank KESUSA เป็นสมาชิกที่ได้รับอนุญาตและอยู่ภายใต้การกำกับดูแลของ FINRA – Broker ID 27861 **อังกฤษ:** Maybank KESL (จดทะเบียนเลขที่ 2377538) เป็นสมาชิกที่ได้รับอนุญาต และอยู่ภายใต้การกำกับดูแลของ The Financial Services Authority

Disclosure of Interest

มาเลเซีย: Maybank IBG และตัวแทนที่เกี่ยวข้อง อาจมีสถานะหรือมีความเกี่ยวข้องกับหลักทรัพย์ในเวลาใดเวลาหนึ่ง และอาจมีกิจกรรมที่มากขึ้นในฐานะ market maker หรือ อาจเป็นผู้รับประกันการจำหน่าย หรือเกี่ยวข้องกับหลักทรัพย์นี้ และอาจเป็นผู้ให้บริการด้านวาณิชธนกิจ, ให้คำปรึกษา หรือบริการอื่นๆ ที่เกี่ยวข้องกับหลักทรัพย์นี้

สิงคโปร์: ณ วันที่ 29 พฤษภาคม 2566, Maybank Research Pte. Ltd และนักวิเคราะห์ที่วิเคราะห์หลักทรัพย์นี้ไม่มีส่วนได้เสียกับการให้คำแนะนำหลักทรัพย์ที่ปรากฏในบทวิเคราะห์ฉบับนี้

ไทย: MST อาจมีธุรกิจที่เกี่ยวข้อง หรือ มีความเป็นไปได้ที่จะเป็นผู้ออกตราสารอนุพันธ์ Derivatives Warrants บนหลักทรัพย์ที่ปรากฏอยู่ในบทวิเคราะห์ฉบับนี้ ดังนั้นนักลงทุนควรใช้วิจารณญาณพิจารณาถึงประเด็นนี้ ก่อนตัดสินใจลงทุน ทั้งนี้ MST หน่วยงานที่เกี่ยวข้อง กรรมการ และ/หรือ พนักงาน อาจมีส่วนเกี่ยวข้อง และ/หรือ การเป็นผู้รับประกันการจำหน่ายในหลักทรัพย์ที่ปรากฏในรายงานฉบับนี้

ฮ่องกง: ณ วันที่ 29 พฤษภาคม 2566, MIB Securities (Hong Kong) Limited และนักวิเคราะห์ที่ได้รับอนุญาต ไม่มีส่วนได้เสีย ในการให้คำแนะนำหลักทรัพย์ที่ปรากฏในบทวิเคราะห์ฉบับนี้

ช่วง 3 ปีที่ผ่านมา Maybank IBG อาจมี หรือ ให้บริการแก่ผู้จัดการ หรือ ผู้ร่วมจัดการในการเสนอขายหลักทรัพย์ดังกล่าว หรือ ณ ปัจจุบัน อาจให้บริการแก่หลักทรัพย์ในตลาดแรก หรือหน่วยงานที่ได้มีการอ้างถึงในบทวิเคราะห์ฉบับนี้ หรืออาจให้บริการดังกล่าวภายใน 12 เดือนข้างหน้า ซึ่งเป็นการให้คำปรึกษา หรือบริการด้านการลงทุนที่มีนัยยะสำคัญ ที่อาจเกี่ยวข้องกับการลงทุนทางตรงหรือทางอ้อมได้

OTHERS

Analyst Certification of Independence

ความถูกต้องของมุมมองที่ผ่านบทวิเคราะห์ฉบับนี้ เป็นการสะท้อนถึงแนวความคิด และมุมมองของนักวิเคราะห์ และรวมถึงหลักทรัพย์หรือผู้ออกหลักทรัพย์เท่านั้น ผลตอบแทนของนักวิเคราะห์ที่ทั้งทางตรงหรือทางอ้อมของนักวิเคราะห์ ไม่ได้ขึ้นอยู่กับ การให้คำแนะนำ หรือมุมมองผ่านบทวิเคราะห์ฉบับนี้

คำเตือน

Structure Securities ซึ่งเป็นตราสารที่มีความซับซ้อน โดยเฉพาะอย่างยิ่งในส่วนของความเสี่ยงที่สูงขึ้นนั้น มีวัตถุประสงค์ที่จะเสนอขายให้แก่กลุ่มที่มีความรู้ความเข้าใจ รวมถึงสามารถรับความเสี่ยงได้เป็นอย่างดี ทั้งนี้มูลค่าตลาดของตราสารประเภทนี้ อาจเปลี่ยนแปลงไปตามสภาพเศรษฐกิจ ตลาดเงินตลาดทุน การเมือง (รวมถึงอัตราดอกเบี้ย Spot / ล่วงหน้า และอัตราแลกเปลี่ยน), Time to Maturity, ภาวะตลาด และความผันผวน รวมถึงคุณภาพ/ ความน่าเชื่อถือของผู้ออก หรือหลักทรัพย์อ้างอิงนั้นๆ นักลงทุนที่ให้ความสนใจในการลงทุนตราสารประเภทนี้ จะต้องเข้าใจและวิเคราะห์ถึงตราสารประเภทนี้ด้วยตนเอง และปรึกษากับผู้เชี่ยวชาญของตนในส่วนของความเสี่ยงที่อาจเกิดขึ้นจากการลงทุนในตราสารประเภทนี้

ทั้งนี้ไม่ว่าส่วนใดส่วนหนึ่งของรายงานฉบับนี้ ไม่อนุญาตให้มีการคัดลอก, จัดทำสำเนา, ลอกเลียน หรือในความหมายที่ใกล้เคียง หรือการเผยแพร่ด้วยตนเอง โดยไม่ได้รับความเห็นชอบจาก Maybank IBG

Definition of Ratings

Maybank IBG Research uses the following rating system

BUY	Return is expected to be above 10% in the next 12 months (including dividends)
HOLD	Return is expected to be between 0% to 10% in the next 12 months (including dividends)
SELL	Return is expected to be below 0% in the next 12 months (including dividends)

Applicability of Ratings

The respective analyst maintains a coverage universe of stocks, the list of which may be adjusted according to needs. Investment ratings are only applicable to the stocks which form part of the coverage universe. Reports on companies which are not part of the coverage do not carry investment ratings as we do not actively follow developments in these companies.

THAI INSTITUTE OF DIRECTORS ASSOCIATION (IOD) CORPORATE GOVERNANCE REPORT RATING 2023

▲▲▲▲▲						Score Range	Number of Logo	Description
AAV	BGRIM	EA	INTUCH	MOONG	PTT	90-100	▲▲▲▲▲	Excellent
ADVANC	BIZ	EASTW	IP	MSC	PTTEP	80-89	▲▲▲▲	Very Good
AF	BKI	ECF	IRC	MST	PTTGC	70-79	▲▲▲	Good
AH	BOL	ECL	IRPC	MTC	PYLON	60-69	▲▲	Satisfactory
AIRA	BPP	EE	ITEL	MVP	Q-CON	50-59	▲	Pass
AJ	BRR	EGCO	NVL	NCL	QH	Lower than 50	No logo given	N/A
AKP	BTS	EPG	JTS	NEP	QTC			
AKR	BTW	ETC	JWD	NER	RATCH			
ALLA	BWG	ETE	K	NKI	RBF			
ALT	CENDEL	FN	KBANK	NOBLE	RS	SIS	TFMAMA	TSTH
AMA	CFRESH	FNS	KCE	NSI	S	SITHAI	THANA	TTA
AMARIN	CGH	FPI	KEX	NVD	S&J	SMPC	THANI	TTB
AMATA	CHEWA	FPT	KGI	NYT	SAAM	SNC	THCOM	TTCL
AMATAV	CHO	FSMART	KKP	OISHI	SABINA	SONIC	THG	TTW
ANAN	CIMBT	FVC	KSL	OR	SAMART	SORKON	THIP	TU
AOT	CK	GC	KTB	ORI	SAMTEL	SPALI	THRE	TVDH
AP	CKP	GEL	KTC	OSP	SAT	SPI	THREL	TVI
APURE	CM	GFPT	LALIN	OTO	SC	SPRC	TIPCO	TVO
ARIP	CNT	GGC	LANNA	PAP	SCB	SPVI	TISCO	TWPC
ASP	COLOR	GLAND	LHFG	PCSGH	SCC	SSC	TK	U
ASW	COM7	GLOBAL	LIT	PDG	SCCC	SSSC	TKN	UAC
AUCT	COMAN	GPI	LOXLEY	PDJ	SCG	SST	TKS	UBIS
AWC	COTTO	GPSC	LPN	PG	SCGP	STA	TKT	UPOIC
AYUD	CPALL	GRAMMY	LRH	PHOL	SCM	STEC	TMILL	UV
BAFS	CPF	GULF	LST	PLANB	SCN	STGT	TMT	VCOM
BAM	CPI	GUNKUL	MACO	PLANET	SDC	STI	TNDT	VGI
BANPU	CPN	HANA	MAJOR	PLAT	SEAFCO	SUN	TNITY	VIH
BAY	CRC	HARN	MAKRO	PORT	SEAOL	SUSCO	TOA	WACOAL
BRK	CSS	HENG	MALEE	PPS	SE-ED	SUTHA	TOP	WAVE
BBL	DDD	HMPRO	MBK	PR9	SELIC	SVI	TPBI	WHA
BCP	DELTA	ICC	MC	PREB	SENA	SYMC	TQM	WHAUP
BCPG	DEMCO	ICHI	MCOT	PRG	SENAJ	SYNTEC	TRC	WICE
BDMS	DOHOME	III	METCO	PRM	SGF	TACC	TRUE	WINNER
BEM	DRT	ILINK	MFEC	PSH	SHR	TASCO	TSC	XPG
BEYOND	DTAC	ILM	MINT	PSL	SICT	TCAP	TSR	ZEN
BGC	DUSIT	IND	MONO	PTG	SIRI	TEAMG	TSTE	

▲▲▲▲						Score Range	Number of Logo	Description
2S	BCH	DCC	INGRS	MFC	PL	SAPPE	STC	TPS
7UP	BE8	DHOUSE	INSET	MGT	PLE	SAWAD	STPI	TQR
ABICO	BEC	DITTO	INSURE	MICRO	PM	SCI	SUC	TRITN
ABM	BH	DMT	IRCP	MILL	PMTA	SCAP	SVOA	TRT
ACE	BIG	DOD	IT	MITSIB	PPP	SCP	SVT	TRU
ACG	BJC	DPAINT	ITD	MK	PPPM	SE	SWC	TRV
ADB	BJCHI	DV8	J	MODERN	PRAPAT	SECURE	SYNEX	TSE
ADD	BLA	EASON	JAS	MTI	PRECHA	SFLEX	TAE	TVT
AEONTS	BR	EFORL	JCK	NBC	PRIME	SFP	TAKUNI	TWP
AGE	BRI	ERW	JCKH	NCAP	PRIN	SFT	TCC	UBE
AHC	BROOK	ESSO	JMT	NCH	PRINC	SGP	TCMC	UEC
AIE	BSM	ESTAR	JR	NETBAY	PROEN	SIAM	TFG	UKEM
AIT	BYD	FE	KBS	NEX	PROS	SINGER	TFI	UMI
ALUCON	CBG	FLOYD	KCAR	NINE	PROUD	SKE	TFM	UOBKH
AMANAH	CEN	FORTH	KIAT	NATION	PSG	SKN	TGH	UP
AMR	CHARAN	FSS	KISS	NDR	PSTC	SKR	TIDLOR	UPF
APCO	CHAYO	FTE	KK	NNCL	PT	SKY	TIGER	UTP
APCS	CHG	GBX	KOOL	NOVA	PTC	SLP	TIPH	VIBHA
AQUA	CHOTI	GCAP	KTIS	NPK	QLT	SMART	TITLE	VL
ARIN	CHOW	GENCO	KUMWEL	NRF	RCL	SMD	TM	VPO
ARROW	CI	GJS	KUN	NTV	RICHY	SMIT	TMC	VRANDA
AS	CIG	GTB	KWC	NUSA	RJH	SMT	TMD	WGE
ASAP	CITY	GYT	KWM	NWR	ROJNA	SNNP	TMI	WIJK
ASEFA	CIVIL	HEMP	L&E	OCC	RPC	SNP	TNL	WIN
ASIA	CMC	HPT	LDC	OGC	RT	SO	TNP	WINMED
ASIAN	CPL	HTC	LEO	ONEE	RWI	SPA	TNR	WORK
ASIMAR	CPW	HUMAN	LH	PACO	S11	SPC	TOG	WP
ASK	CRANE	HYDRO	LHK	PATO	SA	SPCG	TPA	XO
ASN	CRD	ICN	M	PB	SABUY	SR	TPAC	YUASA
ATP30	CSC	IFS	MATCH	PICO	SAK	SRICHA	TPCS	ZIGA
B	CSP	IIG	MBAX	PIMO	SALEE	SSF	TIPLI	
BA	CV	IMH	MEGA	PIN	SAMCO	SSP	TPIPP	
BC	CWT	INET	META	PJW	SANKO	STANLY	TPLAS	

▲▲▲						Score Range	Number of Logo	Description
A	BSBM	EMC	JMART	MORE	RAM	SVH	TTI	
A5	BTNC	EP	JSP	MPIC	ROCK	PTECH	TYCN	
AI	CAZ	EVER	JUBILE	MUD	RP	TC	UMS	
ALL	CCP	F&D	KASET	NC	RPH	TCCC	UNIQ	
ALPHAX	CGD	FMT	KCM	NEWS	RSP	TCJ	UPA	
AMC	CMAN	GIFT	KWI	NFC	SIMAT	TEAM	UREKA	
APP	CMO	GLOCON	KYE	NSL	SISB	THE	VARO	
AQ	CMR	GLORY	LEE	NV	SK	THMUI	W	
AU	CPANEL	GREEN	LPH	PAF	SOLAR	TKC	WFX	
B52	CPT	GSC	MATI	PEACE	SPACK	TNH	WPH	
BEAUTY	CSR	HL	M-CHAI	PF	SPG	TNPC	YGG	
BGT	CTW	HTECH	MCS	PK	SQ	TOPP		
BLAND	D	IHL	MDX	PPM	STARK	TPCH		
BM	DCON	INOX	MENA	PRAKIT	STECH	TPOLY		
BROCK	EKH	JAK	MJD	PTL	SUPER	TRUBB		

Source: Thai Institute of Directors (IOD)

คำชี้แจง : ข้อมูล CG Score ประจำปี 2565 จาก สมาคมส่งเสริมสถาบันกรรมการบริษัทไทย

Anti-Corruption Progress Indicator 2023

ประกาศเจตนารมณ์เข้าร่วม CAC

AH	CI	ECF	ILM	KEX	NRF	SAK	TKN	VARO
ALT	CPR	EKH	INOX	KUMWEL	NUSA	SIS	TMD	VCOM
APCO	CPW	ETC	J	LDC	OR	SSS	TMI	VIBHA
ASW	DDD	EVER	JMART	MEGA	PIMO	STECH	TQM	W
B52	DHOUSE	FLOYD	JMT	NCAP	PLE	SUPER	TRT	WIN
CHG	DOHOME	GLOBAL	JTS	NOVA	RS	SVT	TSI	

ได้รับการรับรอง CAC

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

N/A

3K-BAT	BH	CSP	HPF	M-CHAI	MACO	ONEE	SABUY	STGT	TPRIME
A	BIG	CSR	HTECH	MCS	MAJOR	OR	SAFARI	STHAI	TQM
AAI	BIOTEC	CSS	HUMAN	MDX	MANRIN	OSP	SAK	STI	TR
AAV	BIZ	CTARAF	HYDROGEN	MEGA	MATI	PACE	SAM	STPI	TRC
ACC	BJC	CTW	IFEC	MENA	MAX	PAF	SAMART	SUC	TRITN
ACE	BJCHI	CV	IHL	METCO	M-CHAI	PCC	SAMCO	SUN	TRUBB
ACG	BKD	CWT	III	MGT	MCS	PEACE	SAMTEL	SUPER	TSE
AEONTS	BKKCP	DCON	ILM	MICRO	MDX	PERM	SAUCE	SUPEREIF	TSI
AFC	BLAND	DDD	IMPACT	MIDA	MEGA	PF	SAWAD	SUTHA	TSR
AGE	BLISS	DIF	INETREIT	MITSIB	MENA	PIN	SAWANG	SVOA	TTI
AH	BOFFICE	DMT	INGRS	MJD	METCO	PLE	SCAP	SVT	TTLPF
AHC	BR	DOHOME	INOX	MK	MICRO	PLUS	SCI	SYNEX	TTT
AIMCG	BRI	DREIT	INSET	ML	MIDA	PMTA	SCP	TC	TTW
AIMIRT	BROCK	DTCENT	IT	MODERN	M-II	POLAR	SDC	TCC	TU-PF
AIT	BRRGIF	DTCI	ITC	MORE	MIPF	POLY	SEAFCO	TCCC	TWP
AJA	BTG	EASON	ITD	MPIC	MIT	POMPUI	SFLEX	TCJ	TWZ
AKR	BTNC	EE	J	MUD	MJD	POPF	SFP	TCOAT	TYCN
ALLA	BTSGIF	EGATIF	JAS	MVP	MJLF	PORT	SGC	TEAM	UAC
ALLY	BU	EKH	JASIF	NC	MK	POST	SHANG	TEAMG	UMI
ALT	B-WORK	EMC	JCK	NCAP	ML	PPF	SHR	TEGH	UNIQ
ALUCON	BYD	ERWPF	JCT	NCH	MNIT	PRAKIT	SHREIT	TEKA	UP
AMARIN	CBG	ESSO	JDF	NDR	MNIT2	PRECHA	SIAM	TFIF	UPOIC
AMATAR	CCET	ETC	JMART	NER	MNRF	PRIME	SIRIP	TFM	URBNPF
AMC	CCP	EVER	JMT	NETBAY	MODERN	PRIN	SIS	TGE	UTP
AMR	CGD	F&D	JTS	NEW	MOSHI	PRO	SISB	TGPRO	UVAN
ANAN	CH	FANCY	JWD	NEWS	M-PAT	PROSPECT	SKE	TH	VARO
AOT	CHARAN	FMT	KAMART	NEX	MPIC	PTL	SKN	THAI	VIBHA
APCO	CHAYO	FN	KBSPIF	NFC	M-STOR	QHHR	SKY	THE	VNG
APEX	CHG	FORTH	KC	NPK	NC	QHOP	SLP	THG	VPO
APURE	CI	FTI	KDH	NSL	NCAP	QHPF	SM	THL	VRANDA
AQ	CITY	FTREIT	KEX	KKC	NCH	RAM	SMT	TIF1	W
ASAP	CIVIL	FUTUREPF	KIAT	KPNPF	NER	RBF	SNNP	TIPH	WAVE
ASEFA	CK	GAHREIT	KISS	KTBSTMR	NEW	RCL	SO	TK	WFX
ASIA	CKP	GENCO	KWM	KTIS	NEX	RICHY	SOLAR	TKC	WGE
ASIMAR	CMAN	GIFT	KYE	KWC	NFC	RJH	SPCG	TKN	WHABT
ASW	CMR	GL	LALIN	KYE	NNCL	ROCK	SPG	TLHPF	WHAIR
AURA	CNT	GLAND	LEE	LALIN	NOVA	ROH	SPRIME	TLI	WHART
B52	CPH	GLOBAL	LEO	LEE	NRF	ROJNA	SQ	TMD	WIN
BA	CPL	GLOCON	LIT	LHHOTEL	NSL	RPC	SRIPANWA	TNPC	WORK
BAREIT	CPNCG	GRAMMY	LOXLEY	LHPF	NTV	RPH	SSC	TNPF	WORLD
BBGI	CPNREIT	GRAND	LPH	LHSC	NUSA	RS	SSPF	TOA	WP
BCT	CPT	GREEN	LST	LOXLEY	NV	RSP	SSTRT	TPAC	WPH
BDMS	CPTGF	GROREIT	MACO	LPF	NVD	RT	STANLY	TPBI	XPG
BEAUTY	CPW	GVREIT	MANRIN	LPH	NYT	S	STARK	TPIPL	
BEC	CRANE	GYT	MATI	LST	OHTL	S11	STEC	TPIPP	
BEM	CRC	HFT	MAX	LUXF	OISHI	SA	STECH	TPOLY	

Source : Thai Institute of Directors

คำชี้แจง ข้อมูลบริษัทที่เข้าร่วมโครงการแนวร่วมปฏิบัติของภาคเอกชนไทยในการต่อต้านทุจริต (Thai CAC) ของสมาคมส่งเสริมสถาบันกรรมการบริษัทไทย ข้อมูล ณ วันที่ 24 ตุลาคม 2565 มี 2 กลุ่ม คือ

- ได้ประกาศเจตนารมณ์เข้าร่วม CAC
- ได้รับการรับรอง CAC