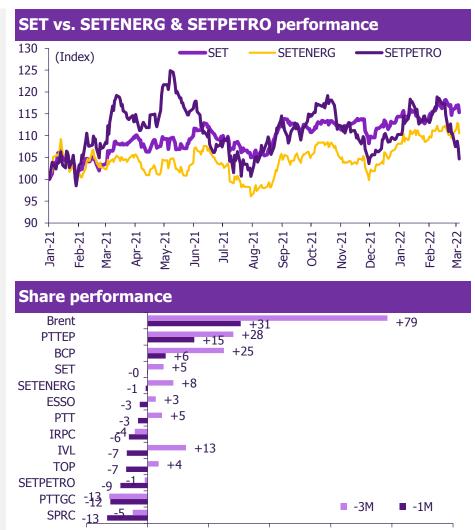


Finding a better spot in the midst of uncertainty

Chaipat Thanawattano chaipat.thanawattano@scb.co.th March 2022

## **Investment summary**

- Key investment theme is the increasing concern over the near-term surge in oil price as Europe's geopolitical risk heightens. This implies more volatile oil price and demand destruction after a brief recovery from COVID.
- While the situation in Ukraine remains fluid, we believe upstream plays are a better spot as risk remains skewed to the upside.
- High oil price and fading stimulus packages could worsen demand in the medium term.
   Further, a wider crude premium could wipe out higher GRM for oil refineries in the near term and high oil price will raise processing cost (fuel use and loss) and burden on working capital.
- Petrochemical companies will be hurt by more costly naphtha and processing cost while global demand could be eroded by lower purchasing power caused by high oil price.



20

(% chg) -20

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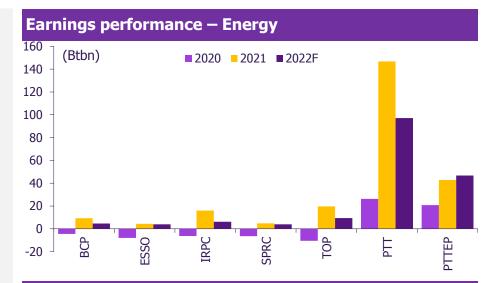
Source: Bloomberg Finance LP, SCBS Investment Research

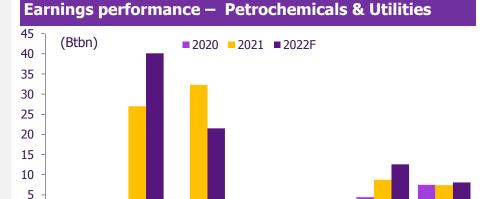


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## **Energy and petrochemical sectors in review**

- Power business: IPPs are shielded from higher fuel cost, but SPPs will have to bear the higher cost while tariff adjustment for IUs is slow to catch up.
- Top picks:
  - PTTEP Direct beneficiary of higher oil price
  - PTT Diversified play amidst oil price uncertainty
  - IVL Strong earnings growth expected
  - GULF Moving beyond power
- Key risks: prolonged Ukraine crisis, slower than expected global oil demand growth





**3GRIM** 

PTTGC

GGC

-5

Ζ

Source: Bloomberg Finance LP, SCBS Investment Research

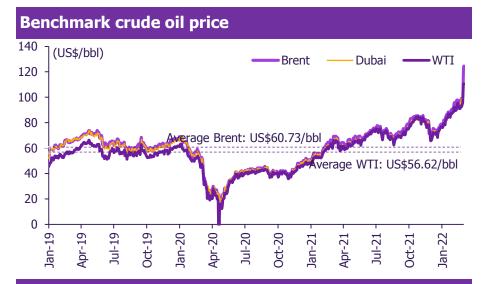


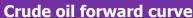
**GPSC** 

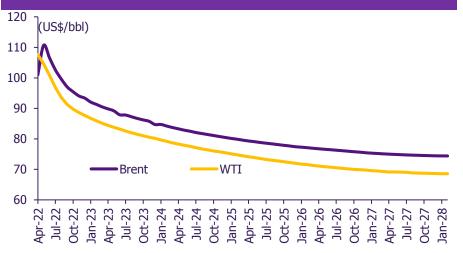
GULF

## Oil price review

- Average oil price (Brent) rose 67% YoY to US\$71/bbl in 2021 (US\$69/bbl for Dubai), back to the level in 2018 before the US-China trade war hurt market sentiment and activities.
- Faster-than-expected demand recovery and more gas-to-oil switching led to the surge in price in 2H21. The upward trend continued in early 2022 with average Brent oil price up to US\$85/bbl before pushed up further by the crisis in Ukraine.
- The Russian invasion of Ukraine deepens market anxiety about a supply shortage, but OPEC+ still plans to raise production as outlined, claiming global oil supply remains sufficient.
- Although oil price backwardation in the forward curve suggests that oil price will stay high in the near term, it also suggests that the market still expects high oil price to be short-lived before gradually declining due to higher supply.





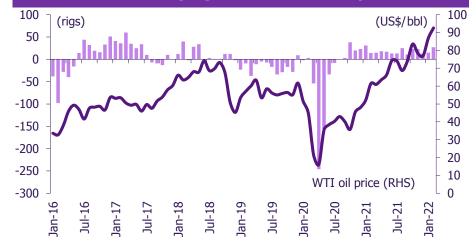




## Oil demand-supply outlook

- IEA expects demand growth to slow down to 3.2mb/d in 2022F to reach 100.6mb/d, a record high on an annualized basis, after a strong increase in 2021 (+6.5mb/d).
- Oil demand is expected to be driven by a rise to pre-COVID level in 2022.
- Higher demand will catch up with more supply in 2H22 after OPEC+ supply returns to pre-COVID level. If OPEC+ cuts are fully unwound, world oil output could rise by 6.3 mb/d in 2022.

### North America rotary rig count vs. WTI oil price

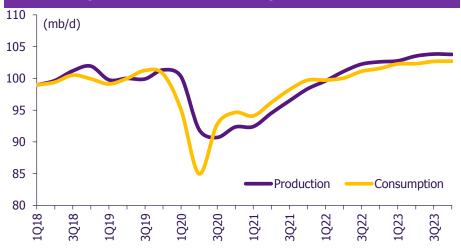


Source: IEA, EIA, OPEC, Bloomberg Finance LP, Industry data, SCBS Investment Research

### Global oil demand growth (annual change)



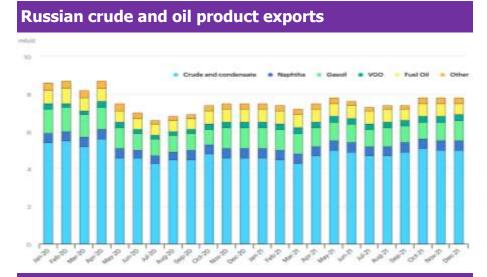
### Global oil production vs. consumption

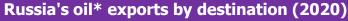


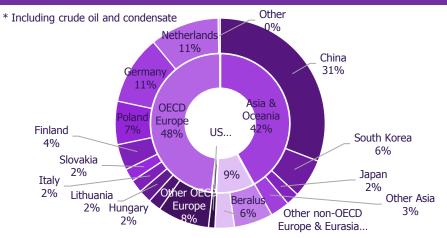


## Oil supply - oil supply from Russia

- Although Russia's invasion of Ukraine has not yet cut oil supply on the market, oil price surged from<US\$95/bbl to >US\$120/bbl in only one week.
- This was driven by market expectations that sanctions against Russia will cripple energy exports. It is currently unclear what the impact of sanctions will be on energy flows and how long any potential supply losses will last.
- Russia is the world's third largest oil <u>producer</u> behind the United States and Saudi Arabia. According to IEA, in Jan 2022, Russia's total oil production was 11.3mb/d, of which 10mb/d was crude oil, 960kb/d condensates and 340kb/d NGLs, compared to US total oil production of 17.6mb/d and Saudi Arabia's of 12mb/d.
- Russia is the world's largest <u>exporter</u> of oil to global markets and the second largest crude oil exporter behind Saudi Arabia. It exported 7.8mb/d, of which crude and condensate accounted for 5mb/d, or 64% in Dec 2021, not including refined oil exports of 2.85mb/d, mainly gasoil (40% of total).



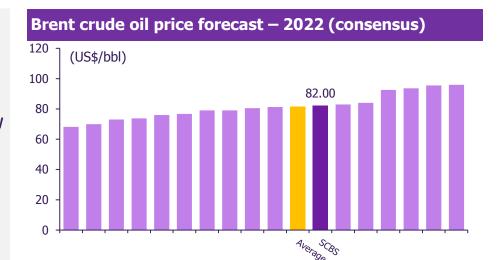


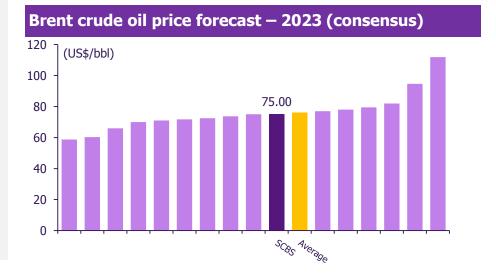




## Oil price view

- We raise SCBS oil price assumptions to reflect market anxiety on supply disruption caused by geopolitical tension in Europe with 2022F Brent at US\$82/bbl, slightly higher than the consensus average US\$81/bbl but slightly below EIA's forecast of US\$83/bbl.
- 2023F: US\$75/bbl more balanced demandsupply is expected in 2023 given continuous increase of oil supply from OPEC+ and more supply from the US, attracted by the current strong market.
- 2025F-long-term: assume more sustainable level at US\$65/bbl, not too high to dampen demand or attract new supply.
- US\$2/bbl discount is applied to derive Dubai crude oil price, US\$80/bbl for 2022F and L/T at US\$63/bbl.

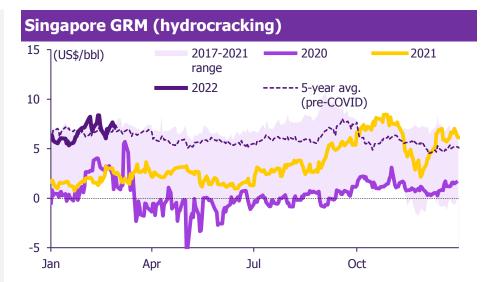




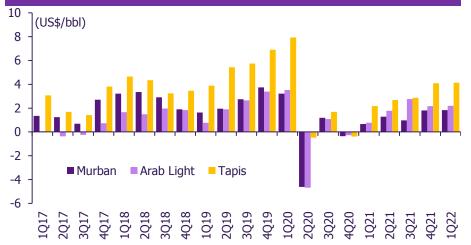


## Oil refinery view

- Singapore GRM improved sharply in 2021 (+386% YoY) to US\$3.5/bbl, back to pre-COVID but not the 5-year average of US\$6.1/bbl (pre-COVID).
- Market GRM was driven by higher demand for gasoline and diesel given higher mobility after the lockdown was eased. Gas-to-oil switching in response to high gas price also boosted GRM during the winter season.
- But without full recovery of demand for jet fuel, high GRM cannot be sustained. This is expected to come to full recovery in 2023.
- Higher oil price benefits oil refineries in terms of stock gains, but it is premature to include this in their earnings forecasts as oil prices are by nature volatile.
- The foreseeable risk is wider crude premium, up from US\$2±/bbl to >US\$5/bbl in 2Q22 while market GRM (hydrocracking margin over Dubai) is still in a range of US\$6-8/bbl.



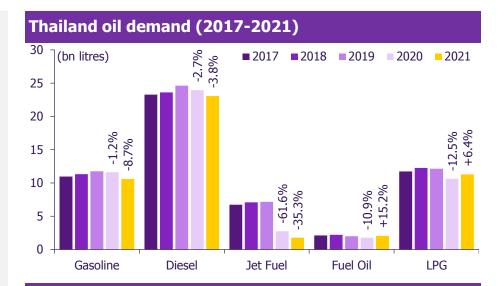


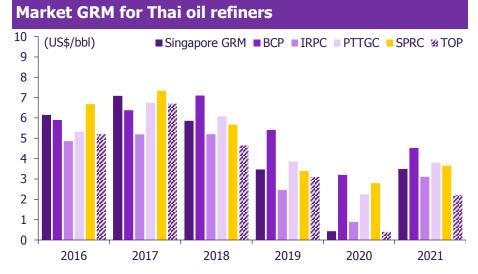




## Oil refinery view

- Gasoline demand has fallen 8.7% YoY in Thailand due to a lengthy lockdown and high oil price. More switching to LPG was seen in 2021 with a rise of 6.4% YoY.
- Demand for diesel also fell 3.8% YoY in 2021, still below pre-COVID level as industrial demand was still weak. In late 2021, demand increased markedly on more consumption for electricity generation.
- Higher oil price may also hurt demand, as purchasing power will decline and spill over to other industrial sectors. We believe that the market can absorb a price of <US\$70/bbl despite strong demand recovery post-COVID.
- The supply side remains positive as the market expects net additional CDU capacity of 1.1mb/d, though higher YoY, vs. demand growth of >2mb/d in 2022 in Asia-Pacific markets.

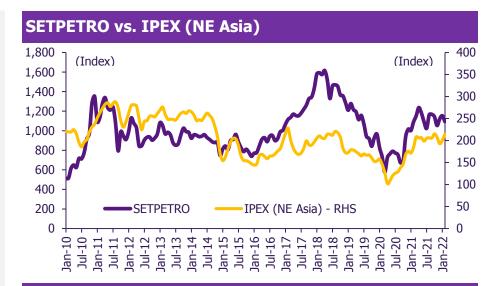




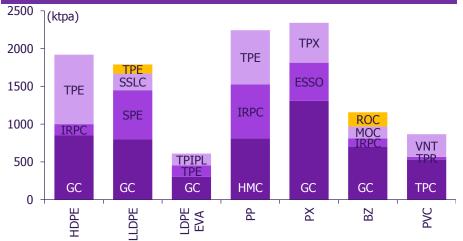


### **Petrochemical sector**

- ICIS Petrochemical Index (IPEX) has been recovering after bottoming out in Apr 2020. This was supported by higher oil price, container shortage and demand recovery, mainly for packaging relating to online shopping and hygiene products.
- Petrochemical and plastic markets have continued to rally globally in early 2022 amid rising feedstock crude oil and energy prices.
- Market sentiment toward the petrochemicals will sour during the oil price surge due to concern on high feedstock cost and negative impact on demand.



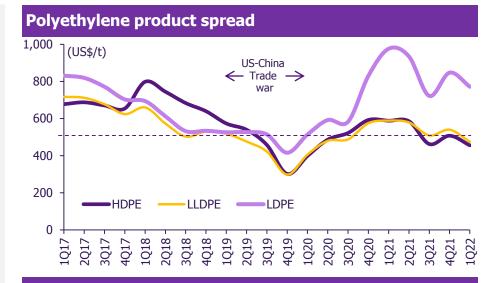


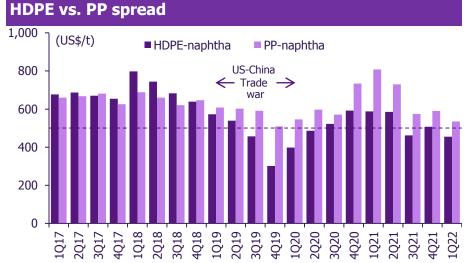




## **Petrochemical price & spread**

- PE/PP: product price is expected to rise in tandem with oil price, but product spread could be adversely affected by costly naphtha in the near term.
- We expect demand for PE/PP to remain solid in 1H22 as overall steeper demand growth will be seen once economies pick up post COVID-19 vaccinations, with demand to jump 4mtpa in Asia.
- The rising trend for online shopping will continue to drive demand for packaging for home delivery; another upside is that the ban on single-use plastic is likely to be put off until the pandemic is largely contained.
- The ongoing logistics constraint is expected to continue in 2022, hence average PE/PP spread is expected to remain solid at >US\$500/t unless the naphtha price surge is prolonged. This is still far higher than cash cost of US\$300-350/t for integrated players (Platts). Although regional capacity will be increased by the startup of 7mt by end-2022, the Asian market will remain in deficit (Platts), mainly for HDPE.
- While higher oil price generally increases feedstock cost competitiveness for gas-based producers, it will be different this time given lower gas supply from the Gulf of Thailand due to gas shortfall from Erawan field.

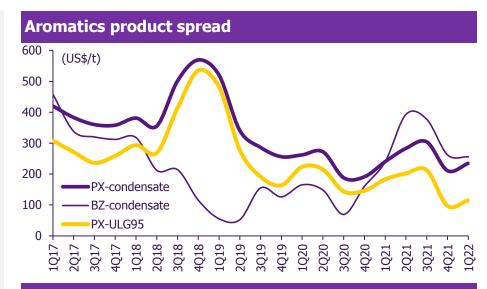


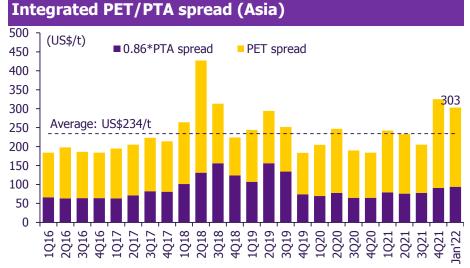




## **Petrochemical price & spread**

- Aromatics: PX spread is expected to be pressured by increasing supply driven by China's intensive PX capacity expansion. Attractive demand for gasoline has led oil refiners to switch from PX feedstock to gasoline blending to optimize profit.
- Although there is downstream capacity expansion in PTA, concerns over polyester demand raise the question about PX price performance in 2022. New PX capacity expansion in China is expected to flood the market with ~9mtpa in 2022. This should be absorbed mostly by 8.2mtpa new PTA plants started in 2021 and >3mtpa to come online in 2022.
- Demand for benzene, the key feedstock for PS and ABS, is expected to improve once the supply chain disruption in the automotive and appliance industries is resolved.
- PET/PTA: PET demand is expected to improve further upon more outdoor activities after the lockdowns ease. Integrated PET/PTA spread in 2021 rose 22% YoY in Asia and 64% YoY in western markets, driven by logistics problems, which is expected to continue in 2022. This could sustain a premium in the western market over Asia in 2022.







## **Company section – Top picks**



## **PTT Exploration & Production (PTTEP)**

## (OUTPERFORM)

**Direct beneficiary of higher oil price** 

### **Investment Theme**

- PTTEP remains a top pick in the energy space as it will continue to benefit from higher oil price although the proportion of liquid product will decline intentionally from a 5-year average of 30% to 24% by 2026.
- Key volume growth driver is a full-year operation of the Sabah H project in Malaysia and Oman Block 61. Sales volume is expected to rise 12% YoY in 2022 and 5% p.a. over the next five years.
- Average gas price is likely to decline when the PSCs of Block G1/61 (Erawan) and Block G2/61 start from 2022-23, but this will be offset by lower unit cost.
- PTTEP continues to diversify from E&P to other arenas in the new s-curve, including four businesses under a subsidiary in AI and robotics – ARV, new energy and carbon capture and storage (CCS).
- Strong balance sheet with net interest-bearing debt to equity of 0.1x (end-2021). This will allow room for new M&As in target countries outside Thailand.
- Our DCF-based TP at Bt182/share is based on LT Dubai of US\$63/bbl and Brent of US\$65/bbl from 2025F onwards.

Forecasts a	and valua	tion				
Year to 31 Dec	Unit	2020	2021	2022F	2023F	2024F
Revenue	(Btmn)	160,401	219,068	243,407	231,478	228,514
EBITDA	(Btmn)	111,422	160,693	178,160	172,050	168,503
Core profit	(Btmn)	20,760	42,888	61,818	59,566	58,397
Reported profit	(Btmn)	22,664	38,864	61,818	59,566	58,397
Core EPS	(Bt)	5.23	10.80	15.57	15.00	14.71
DPS	(Bt)	4.25	5.00	6.00	7.00	7.25
P/E, core	(x)	28.8	13.9	9.7	10.0	10.2
EPS growth, core	(%)	(57.5)	106.6	44.1	(3.6)	(2.0)
P/BV, core	(x)	1.7	1.4	1.3	1.2	1.2
ROE	(%)	5.8	11.1	14.2	12.7	11.7
Dividend yield	(%)	2.8	3.3	4.0	4.7	4.8
FCF yield	(x)	8.8	(0.6)	5.2	3.3	1.0
EV/EBIT	(x)	12.7	6.8	5.6	5.8	6.1
EBIT growth, core	(%)	(39.8)	95.8	20.9	(3.1)	(1.4)
EV/CE	(x)	1.1	0.9	0.9	0.8	0.8
ROCE	(%)	4.3	6.6	9.5	8.6	7.9
EV/EBITDA	(x)	5.3	3.8	3.4	3.6	3.8
EBITDA growth	(%)	(20.1)	44.2	10.9	(3.4)	(2.1)

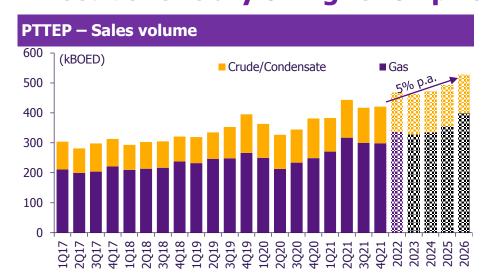
#### PTTEP - PBV Band 1.8 PBV (x) +2SD = 1.6x1.6 1.4 +1SD = 1.3x1.2 Avg. = 1.1x1.0 -1SD = 0.9x0.8 0.6 -2SD = 0.6x0.4 0.2 0.0 Jul-18 Jan-19 Jul-19 Jan-20 Jul-20 lan-21 Jul-21

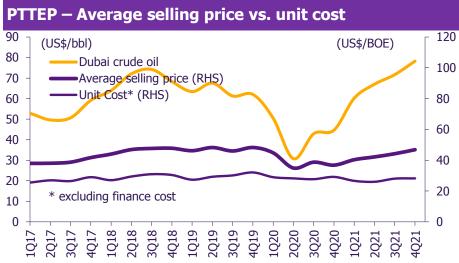


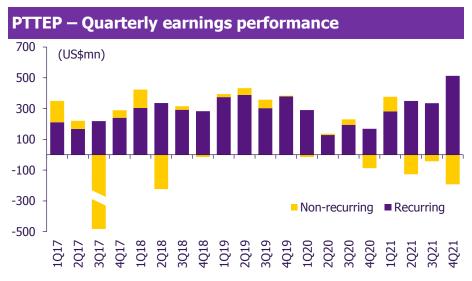


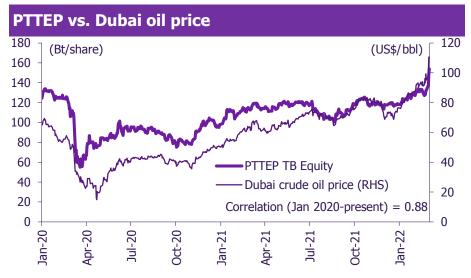
# PTT Exploration & Production (PTTEP) Direct beneficiary of higher oil price

TP Bt182
(OUTPERFORM)









Source: Company data, SCBS Investment Research

### PTT (PTT)

## **Diversified play amidst oil price uncertainty**

# TP Bt52 (OUTPERFORM)

### **Investment Theme**

- PTT is a preferred play amidst the uncertainties surrounding oil price outlook. It has proven earnings resilience during a volatile oil price environment.
- Key earnings driver is its upstream business, whose profit is boosted by strong oil price. We view that there remains upside from higher oil price and gas price adjustment to drive E&P profit.
- Oil price rise could enhance PTT's core earnings at a 3year CAGR of 4%, in large part brought by its downstream businesses, oil refining and petrochemicals, accounting for one-third of its EBITDA.
- Share price performance (-3% in the past month) still lags the SET Index (flat) and notably oil price (+20%). We believe market pessimism on its outlook as overdone.
- We value PTT based on sum-of-the-parts with PTTEP and P&R associates as key contributors. At our TP, the stock trades at 13.5x (-0.2SD) 2022 PE. Key risks to our forecast and valuation are: 1) volatile oil and petrochemical prices and spreads; 2) lower gas demand than expected and more intense competition in the oil marketing business.

Forecasts a	nd valua	ation				
Year to 31 Dec	Unit	2020	2021	2022F	2023F	2024F
Revenue	(Btmn)	1,615,665	2,258,818	2,446,483	2,354,493	2,465,799
EBITDA	(Btmn)	217,819	424,028	396,972	418,154	426,883
Core profit	(Btmn)	26,230	146,790	110,248	119,773	124,167
Reported profit	(Btmn)	37,766	108,363	110,248	119,773	124,167
Core EPS	(Bt)	0.92	5.14	3.86	4.19	4.35
DPS	(Bt)	1.00	2.00	2.20	2.20	2.35
P/E, core	(x)	41.9	7.5	10.0	9.2	8.9
EPS growth, core	(%)	(66.4)	459.6	(24.9)	8.6	3.7
P/BV, core	(x)	1.2	1.1	1.0	1.0	0.9
ROE	(%)	2.0	10.6	7.3	7.5	7.3
Dividend yield	(%)	2.6	5.2	5.7	5.7	6.1
FCF yield	(x)	2.9	(6.0)	14.9	13.9	14.3
EV/EBIT	(x)	18.3	5.9	6.0	5.0	4.4
EBIT growth, core	(%)	(51.9)	255.7	(10.4)	9.4	3.4
EV/CE	(x)	0.8	0.7	0.7	0.6	0.6
ROCE	(%)	1.6	8.0	7.0	7.8	8.0
EV/EBITDA (x)		6.5	3.8	3.7	3.3	2.9
EBITDA growth	(%)	(26.3)	94.7	(6.4)	5.3	2.1

#### PTT - PBV Band



Source: SCBS Investment Research

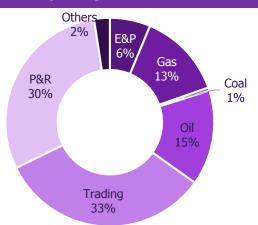


## PTT (PTT)

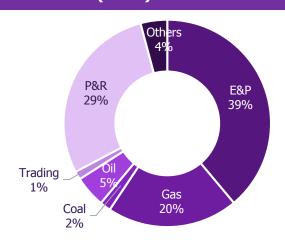
### **Diversified play amidst oil price uncertainty**

# TP Bt52 (OUTPERFORM)

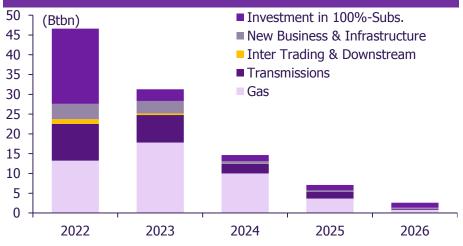
### Revenue breakdown (2021)



### EBITDA breakdown (2021)

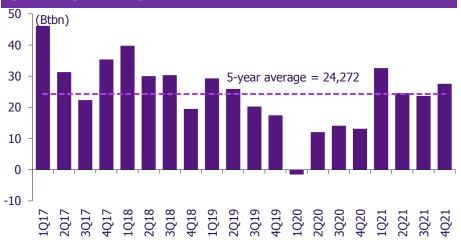


### 5-year capital expenditure plan



Source: Company data, SCBS Investment Research

### **Quarterly earnings**





# **Indorama Ventures (IVL) Strong earnings growth expected**

# TP Bt55 (OUTPERFORM)

### **Investment Theme**

- We stand by the view that PET demand will be more resilient than other plastics for packaging due to its recyclability. We expect demand for PET to be most resilient after COVID-19 due to concerns of hygiene. (integrated PET and hygiene fiber contributes >60% of core EBITDA)
- IVL's challenging target core EBITDA of US\$4.7bn by 2030, up from US\$1.8bn in 2021 and US\$2.9bn in 2024 is seen to be achievable given its good track record and the increase in installed capacity to 33mtpa (CAGR 7%), up from 17.4mtpa in 2021 and capex (2025-30) of US\$18.3bn.
- The S/T to M/T outlook is also promising, with 3-year CAGR of 17% for core EBITDA, driven by new acquisitions, mainly Oxiteno, and the recycling business, and cost transformation. This will boost IVL's ROCE from 12.2% in 2021 to 15-17% in 2024.
- Its financial position should continue to strengthen with net D/E of only 0.6x by end-24, down from 1.4x (1Q22) or post-completion of Oxiteno acquisition.
- TP of Bt55 is based on an average PBV multiple of 1.7x vs. 5-year average of 1.8x. The current valuation at 1.3x PBV (2022) or -1SD is undemanding.

Forecasts a	ınd valua	tion				
Year to 31 Dec	Unit	2020	2021	2022F	2023F	2024F
Revenue	(Btmn)	331,513	468,108	570,767	596,944	621,388
EBITDA	(Btmn)	28,328	64,338	81,098	83,585	84,151
Core profit	(Btmn)	1,168	26,972	40,123	42,934	49,545
Reported profit	(Btmn)	2,414	26,288	40,123	42,934	49,545
Core EPS	(Bt)	0.21	4.80	7.15	7.65	8.82
DPS	(Bt)	0.70	1.00	2.40	2.30	3.20
P/E, core	(x)	215.2	9.3	6.3	5.9	5.1
EPS growth, core	(%)	(77.6)	2,210.1	48.8	7.0	15.4
P/BV, core	(x)	2.0	1.6	1.3	1.1	1.0
ROE	(%)	0.9	18.9	23.1	21.0	21.0
Dividend yield	(%)	1.6	2.2	5.4	5.1	7.2
FCF yield	(x)	(14.0)	3.2	19.7	23.9	26.6
EV/EBIT	(x)	55.5	10.6	7.1	5.9	5.0
EBIT growth, core	(%)	(31.6)	443.3	36.0	4.3	0.9
EV/CE	(x)	1.4	1.2	1.2	1.1	1.0
ROCE	(%)	12.7	8.4	12.8	14.0	16.7
EV/EBITDA	(x)	15.4	7.0	5.0	4.3	3.6

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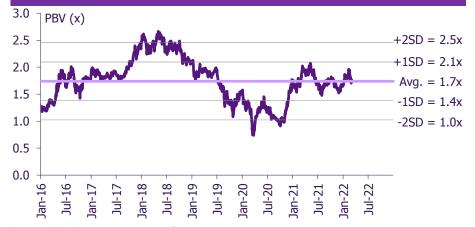
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#### IVL - PBV Band

EBITDA growth



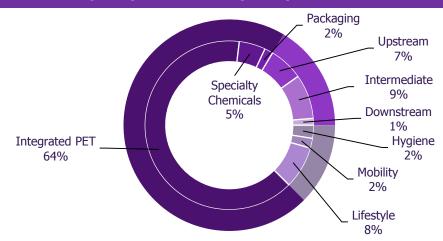
Source: SCBS Investment Research



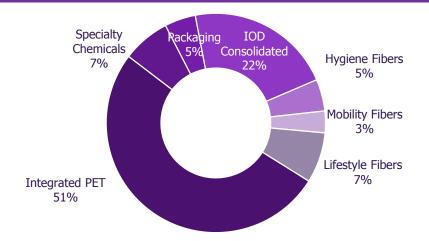
# Indorama Ventures (IVL) Strong earnings growth expected

# TP Bt55 (OUTPERFORM)

### Effective capacity breakdown (2021)



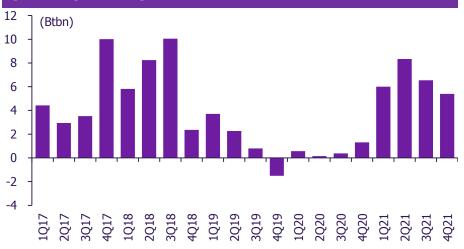
### EBITDA breakdown (2021)



Source: Company data, SCBS Investment Research

#### **Core EBITDA/t** (US\$/ton) (US\$/ton) Core EBITDA/t (RHS) -•-CPET -•-IOD -•-Fibers

### **Quarterly earnings**





## **Gulf Energy Development (GULF)**

### **Moving beyond power**

## TP Bt57 (OUTPERFORM)

#### **Investment Theme**

- GULF's earnings outlook is promising with core profit to rise 46% YoY in 2022F on a full-year contribution from GSRC's first two units, which started up in 1Q21 and 4Q21. The remaining two units will start up in Mar 2022 and Oct 2022. Another driver is equity income from INTUCH (42.25% interest) of an estimated Bt4.75bn± in 2022.
- The digital business will be more exciting in 2022 with investment in a data center via a JV with Singtel and ADVANC to be concluded soon. Further, a joint study with Binance to set up a crypto currency exchange should be concluded in the next few months.
- All investment projects continue to progress as planned, including new IPPs, Laem Chabang deep sea port and Map Tha Phut Phase 3. These will be growth engines for the next five years.
- GULF is only marginally affected by higher gas cost and a mismatch of tariff adjustment to reflect higher fuel cost given limited exposure to IUs.
- It is seeking more investment in the renewable business in Thailand given the government's target for the country to be net-zero GHG emission by 2060.

Forecasts a	nd valua	tion				
Year to 31 Dec	Unit	2020	2021	2022F	2023F	2024F
Revenue	(Btmn)	32,863	47,467	73,890	92,092	93,354
EBITDA	(Btmn)	11,020	18,287	19,457	23,633	27,150
Core profit	(Btmn)	4,416	8,745	12,589	16,162	19,293
Reported profit	(Btmn)	4,282	7,670	12,589	16,162	19,293
Core EPS	(Bt)	0.40	0.75	1.07	1.38	1.64
DPS	(Bt)	0.38	0.44	0.48	0.55	0.66
P/E, core	(x)	123.5	66.7	46.4	36.1	30.3
EPS growth, core	(%)	10.7	85.0	44.0	28.4	19.4
P/BV, core	(x)	9.1	6.0	5.6	5.1	4.6
ROE	(%)	8.6	10.9	12.6	14.8	16.1
Dividend yield	(%)	0.8	0.9	1.0	1.1	1.3
FCF yield	(x)	(11.0)	(11.0)	1.3	(1.7)	2.2
EV/EBIT	(x)	92.7	59.0	55.5	44.6	38.1
EBIT growth, core	(%)	30.0	75.2	5.8	26.8	16.3
EV/CE	(x)	6.4	787.2	168.9	91.0	43.5
ROCE	(%)	6.2	1,033.0	275.0	187.1	105.9
EV/EBITDA	(x)	63.9	42.9	40.1	33.6	29.1
EBITDA growth	(%)	33.2	66.0	6.4	21.5	14.9

### **GULF – PBV Band**



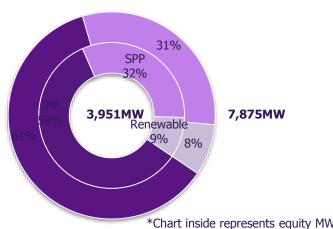
Source: SCBS Investment Research



## **Gulf Energy Development (GULF) Moving beyond power**

(OUTPERFORM)

### Capacity breakdown (end-2021)

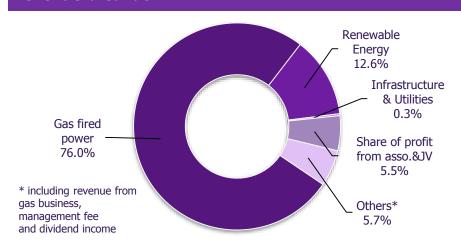


\*Chart inside represents equity MW.

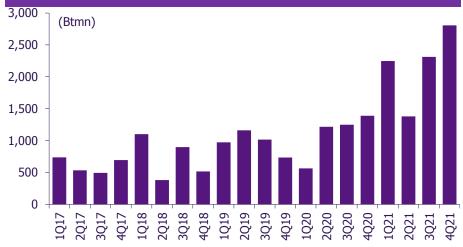


Source: Company data, SCBS Investment Research

### Revenue breakdown



### Quarterly net profit (excluding FX & extra items)





## **Company section – others**



# Bangchak Corporation (BCP) Earnings prospects look better

## TP Bt36 (NEUTRAL)

#### **Investment Theme**

- We are more positive on earnings for BCP's key businesses, oil refining, E&P and power, on a more favorable oil price and market conditions.
- BCP's oil refinery is running at a crude run of >120kbd although demand for jet fuel has not yet returned to normal, thanks to more favorable demand for UCO in North Asia. This helped its market GRM to outperform others in 2020-21. BCP plans to increase the production yield of UCO from 9% in 2021 to 12-13% in 2022.
- The major turnaround in 2021 has enabled it to extend the turnaround cycle to every four years, which will smooth earnings in the long term.
- Expansion in non-oil business will continue with Inthanin stores reaching 1,000 by end 2022. Also, EV charging infrastructure will be expanded to cover major routes across the country.
- Outlook for OKEA is also bright given high gas price currently. OKEA plans to double production by end-2022 from new licenses. The expansion of OKEA will be financed by its abundant cash on hand.
- Our TP of Bt36/share is based on sum-of-the-parts valuation of Bt18 for the oil business and Bt18/share for power.

Forecasts a	and valua	tion				
Year to 31 Dec	Unit	2020	2021	2022F	2023F	2024F
Revenue	(Btmn)	136,450	199,417	248,019	245,095	189,697
EBITDA	(Btmn)	4,541	25,357	17,702	17,377	16,341
Core profit	(Btmn)	(4,450)	9,301	4,699	5,633	6,140
Reported profit	(Btmn)	(6,967)	7,624	4,699	5,633	6,140
Core EPS	(Bt)	(3.23)	6.75	3.41	4.09	4.46
DPS	(Bt)	0.40	2.00	1.80	1.70	1.80
P/E, core	(x)	n.a.	4.6	9.2	7.6	7.0
EPS growth, core	(%)	n.a.	n.a.	(49.5)	19.9	9.0
P/BV, core	(x)	0.9	0.8	0.8	0.7	0.7
ROE	(%)	(9.1)	18.6	8.6	9.9	10.1
Dividend yield	(%)	1.3	6.4	5.8	5.4	5.8
FCF yield	(x)	(0.4)	26.5	63.0	27.9	(2.0)
EV/EBIT	(x)	(37.1)	5.2	6.8	6.0	7.1
EBIT growth, core	(%)	n.a.	n.a.	(44.9)	(3.9)	(11.3)
EV/CE	(x)	1.2	1.0	1.0	0.9	0.9
ROCE	(%)	(2.6)	13.0	9.2	9.9	7.9
EV/EBITDA	(x)	18.6	3.6	3.7	3.2	3.5
EBITDA growth	(%)	(44.2)	458.4	(30.2)	(1.8)	(6.0)

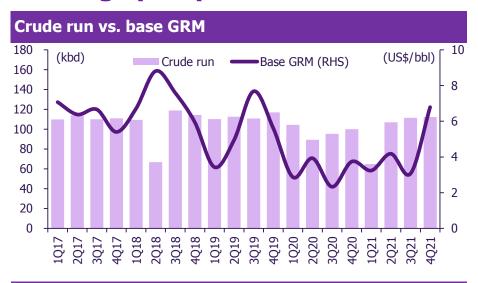
#### **BCP - PBV Band** 1.8 PBV (x) 1.6 +2SD = 1.6x1.4 +1SD = 1.3x1.2 Avg. = 1.0x1.0 0.8 -1SD = 0.8x0.6 -2SD = 0.5x0.4 0.2 0.0 Jul-16 Jul-18 Jan-19 Jul-19 lan-21 Jul-21

Source: SCBS Investment Research



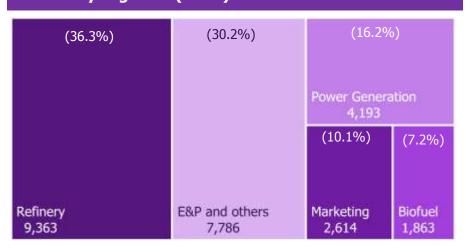
# **Bangchak Corporation (BCP) Earnings prospects look better**

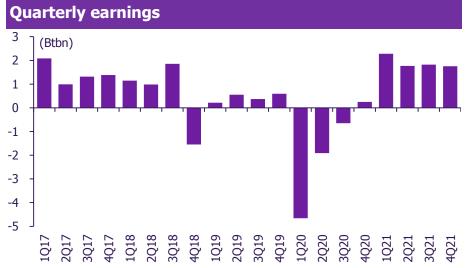
# TP Bt36 (NEUTRAL)





### **EBITDA by segment (2021)**





Source: Company data, SCBS Investment Research

## **Esso (Thailand) (ESSO)** No new share price catalyst

## (NEUTRAL)

#### **Investment Theme**

- ESSO's decision to suspend production of PX and maximize gasoline helped support earnings in 2021. This strategy is likely to continue in 2022 given the threat of new supply from China.
- ESSO will continue to tap into market share in Thailand to enable its refinery to increase crude intake and reduce unit cost. Service stations increased by 35 (net) to 731 stations (+5%) by end-2021 and the network expansion continues.
- ESSO maintains a strategy to grow via expanding its retail network through partnering with smaller petrol station operators, which will allow it to maintain refinery utilization at a more optimal level and reduce operating cost/bbl.
- ESSO's balance sheet improved in 2021 with retained earnings back to the black at end-2021. We expect this to allow it to pay some dividend on 2021.
- We assign a PBV of 1.4x to derive ESSO's TP at Bt8.50 as its operations are better. Though valuation looks more interesting, there is no new share price catalyst in sight. Key risks: oil price volatility, lower than expected refining margin.

Forecasts a	and valua	tion				
Year to 31 Dec	Unit	2020	2021	2022F	2023F	2024F
Revenue	(Btmn)	126,672	172,878	164,736	165,275	153,614
EBITDA	(Btmn)	(7,297)	8,404	8,053	9,682	10,744
Core profit	(Btmn)	(7,911)	4,443	3,940	5,596	6,476
Reported profit	(Btmn)	(7,911)	4,443	3,940	5,596	6,476
Core EPS	(Bt)	(2.29)	1.28	1.14	1.62	1.87
DPS	(Bt)	0.00	0.60	0.60	0.80	0.90
P/E, core	(x)	n.a.	6.0	6.7	4.7	4.1
EPS growth, core	(%)	n.a.	n.a.	(11.3)	42.0	15.7
P/BV, core	(x)	1.8	1.4	1.3	1.1	0.9
ROE	(%)	(43.4)	26.5	19.6	24.5	24.5
Dividend yield	(%)	0.0	7.8	7.8	10.5	11.8
FCF yield	(x)	(3.2)	0.8	43.9	24.3	39.1
EV/EBIT	(x)	(6.1)	11.6	11.0	7.3	5.4
EBIT growth, core	(%)	n.m.	n.m.	(10.0)	39.9	14.8
EV/CE	(x)	1.5	1.3	1.3	1.3	1.2
ROCE	(%)	(19.5)	9.0	9.6	13.9	17.9
EV/EBITDA	(x)	(8.3)	7.7	6.9	5.3	4.0
EBITDA growth	(%)	n.a.	n.a.	(4.2)	20.2	11.0

### 2.5 PBV (x +2SD = 2.2x2.0 +1SD = 1.8x

**ESSO - PBV Band** 

Source: SCBS Investment Research

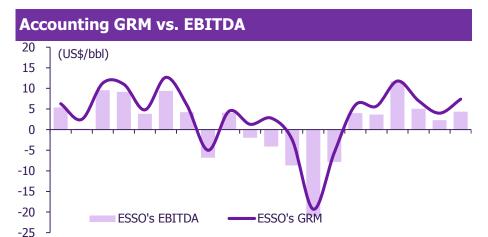




# **Esso (Thailand) (ESSO) No new share price catalyst**

1Q18 2Q18 3Q18 4Q18 1Q19

# TP Bt8.50 (NEUTRAL)

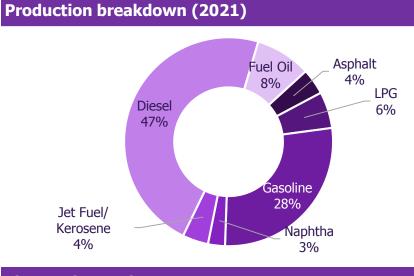


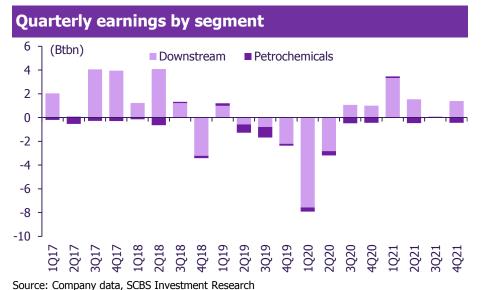
2Q19 3Q19 4Q19

1Q20 2Q20

3Q20 4Q20 1Q21

2Q21 3Q21







## Planned major turnaround to drag on profit

#### **Investment Theme**

- 2022 will be a challenging year for IRPC given its planned refinery turnaround in 4Q22. We expect IRPC's net profit to fall 61% YoY in 2022F because of the maintenance, with a 54-day major turnaround for both crude distillation units in 4Q22.
- IRPC is expected to maximize its crude run ahead of the shutdown, if the market situation allows, to minimize the negative impact on full-year performance.
- Market GIM will be aided by better crack spread for petroleum products, gasoline and diesel. Management guides that IRPC's market GIM will hover at US\$13-14/bbl in 2022, based more conservative product spread than the current level.
- The key challenge is the outlook for petrochemicals given new capacity at a time when demand growth is unable to catch up, mainly for ABS. IRPC expects global ABS operating rate to fall to 80% in 2022 from 88% in 2021. Supply growth of PP should peak in 2022.
- We value IRPC based on 1.1x PBV (2022F) and derive a TP of Bt4.8/share. Key risks are volatile oil price and wider crude premium.

Forecasts a	and valua	tion				
Year to 31 Dec	Unit	2020	2021	2022F	2023F	2024F
Revenue	(Btmn)	174,463	255,115	256,969	256,831	243,828
EBITDA	(Btmn)	2,651	28,017	17,731	19,590	19,868
Core profit	(Btmn)	(6,338)	16,021	6,220	8,122	8,632
Reported profit	(Btmn)	(6,152)	14,505	6,220	8,122	8,632
Core EPS	(Bt)	(0.31)	0.78	0.30	0.40	0.42
DPS	(Bt)	0.06	0.22	0.15	0.20	0.21
P/E, core	(x)	(11.9)	4.7	12.1	9.3	8.7
EPS growth, core	(%)	n.a.	n.a.	(61.2)	30.6	6.3
P/BV, core	(x)	1.0	0.9	0.8	0.8	0.8
ROE	(%)	(8.0)	19.6	7.0	8.8	8.9
Dividend yield	(%)	1.6	6.0	4.1	5.4	5.7
FCF yield	(x)	10.4	7.0	23.8	8.3	9.6
EV/EBIT	(x)	(20.4)	6.4	11.6	8.8	7.7
EBIT growth, core	(%)	n.a.	n.a.	(52.9)	20.3	2.5
EV/CE	(x)	1.1	1.0	1.0	0.9	0.9
ROCE	(%)	(4.9)	12.5	5.4	7.2	7.9
EV/EBITDA (x)		48.4	4.5	6.0	4.9	4.4
EBITDA growth	(%)	(47.9)	956.9	(36.7)	10.5	1.4

#### IRPC — PBV Band



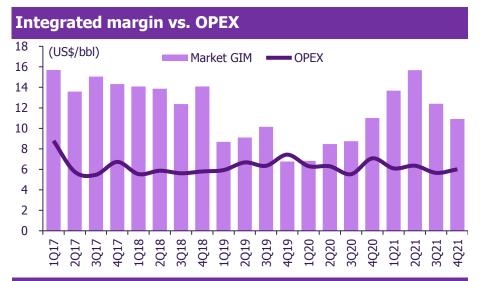
Source: SCBS Investment Research

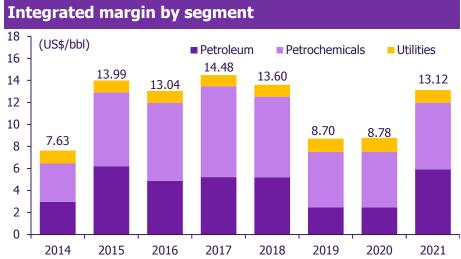


## IRPC (IRPC)

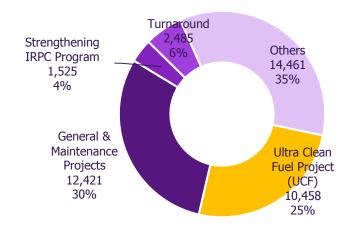
# TP Bt4.80 (NEUTRAL)

### Planned major turnaround to drag on profit

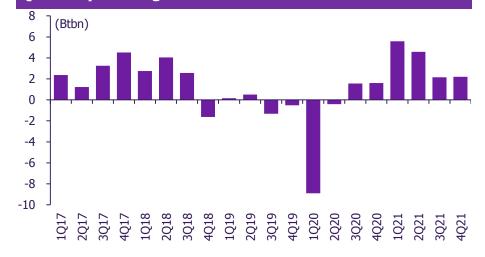




### 5-year capital expenditure breakdown



### **Quarterly earnings**



Source: Company data, SCBS Investment Research

## **PTT Global Chemical (PTTGC)**

## TP Bt80 (NEUTRAL)

### Lower gas supply to hit competitive feedstock cost

#### **Investment Theme**

- Less gas from the Gulf of Thailand will weaken PTTGC's feedstock competitiveness in 2022F. This has already been accounted for in its business via deferring planned maintenance of ethane crackers to 2022. Management says the overall operating rate of its olefins crackers will be maintained, implying more naphtha proportion.
- Earnings contribution from allnex will continue to deliver strong earnings in 2022 as planned after 25% growth in adjusted EBITDA in 2021 and EBITDA margin of 16% vs. 12% of PTTGC (pre-allnex). Net profit contribution will be affected by higher financing cost and amortization of intangible assets of allnex (mainly patents, customer base and developing R&D).
- Demand for its key products will improve in line with global GDP, though challenges persist, including high freight cost, logistics constraints and ongoing supply chain disruption (automotive industry). Concerns on new capacity exist, mainly for the PX/PTA/MEG chain.
- Outlook for performance chemicals, mainly allnex and Vencorex, will remain resilient given stable margin and a strong foothold in the market.
- TP of Bt80 is based on 1.1x PBV (2022).

Forecasts a	and valua	tion				
Year to 31 Dec	Unit	2020	2021	2022F	2023F	2024F
Revenue	(Btmn)	329,291	468,953	464,488	470,514	469,950
EBITDA	(Btmn)	19,891	61,952	59,720	64,780	65,216
Core profit	(Btmn)	(932)	32,313	21,497	27,061	28,395
Reported profit	(Btmn)	200	44,982	21,497	27,061	28,395
Core EPS	(Bt)	(0.21)	7.17	4.77	6.00	6.30
DPS	(Bt)	1.00	3.75	2.40	3.00	3.10
P/E, core	(x)	n.a.	7.0	10.6	8.4	8.0
EPS growth, core	(%)	n.a.	n.a.	(33.5)	25.9	4.9
P/BV, core	(x)	0.8	0.7	0.7	0.7	0.6
ROE	(%)	(0.3)	10.5	6.5	7.9	7.9
Dividend yield	(%)	2.0	7.4	4.8	5.9	6.1
FCF yield	(x)	(2.8)	(34.6)	0.3	3.9	18.8
EV/EBIT	(x)	(785.9)	9.2	16.5	13.7	12.5
EBIT growth, core	(%)	n.a.	n.a.	(33.3)	20.4	2.4
EV/CE	(x)	1.0	1.0	1.3	1.3	1.3
ROCE	(%)	(0.8)	8.3	6.5	8.3	8.8
EV/EBITDA (x)		15.8	5.8	7.2	6.7	6.2
EBITDA growth	(%)	(27.0)	211.5	(3.6)	8.5	0.7

#### **PTTGC - PBV Band** 1.8 PBV (x) +2SD = 1.6x1.6 1.4 +1SD = 1.4x1.2 Avg. = 1.1x1.0 -1SD = 0.9x8.0 -2SD = 0.6x0.6 0.4 0.2 0.0 Jul-18 Jul-19 lan-21 Jan-22 Jul-21

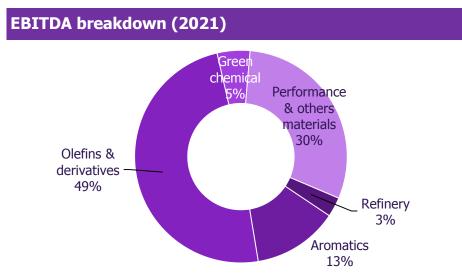




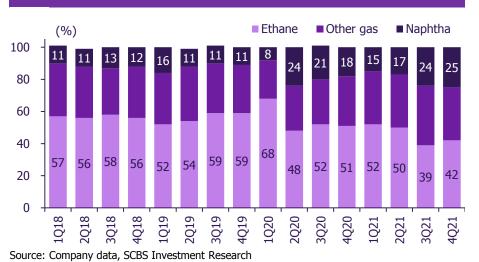
# PTT Global Chemical (PTTGC)

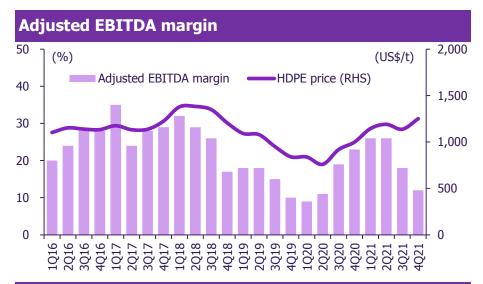
TP Bt80
(NEUTRAL)

Lower gas supply to hit competitive feedstock cost

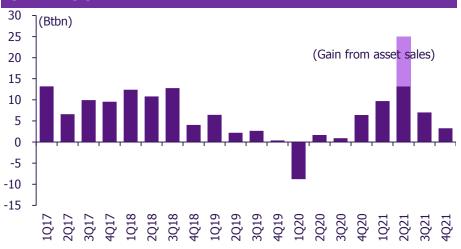


### **Proportion of feedstock for olefins segment**





### **Quarterly profit**





## **Star Petroleum Refining (SPRC)**

### Sentiment is clouded by oil spill

## TP Bt9.40 (UNDERPERFORM)

#### **Investment Theme**

- Earnings prospects are improved by a favorable outlook for market GRM, driven by high crack spread for gasoline and diesel due to more demand for transport fuel. SPRC expects 2022 GRM at US\$5-7/bbl vs. US\$3.66/bbl in 2021.
- SPRC plans to increase crude run in 2022 to 160-165kbd from 135kbd in 2021 in response to a more favorable market. Its refinery is currently operating at an optimal crude run.
- At 160-165kbd, SPRC is able to maximize the operation of upgrading units and gasoline and diesel production to capture the stronger GRM.
- The potential impact on SPRC's earnings from the oil spill at single point mooring is still unclear. Management is confident that its current financial status will enable it to manage this incident responsibly.
- The key challenge for the business in 2022 is higher crude premium but the debottlenecking in 2019 has increased its crude selection flexibility.
- TP of Bt9.4/share is based on average 1.3x PBV (2022F).

Forecasts a	and valua	tion				
Year to 31 Dec	Unit	2020	2021	2022F	2023F	2024F
Revenue	(Btmn)	130,163	172,484	189,816	178,205	179,996
EBITDA	(Btmn)	(5,014)	8,843	7,702	8,012	8,465
Core profit	(Btmn)	(6,468)	4,821	3,941	4,241	4,909
Reported profit	(Btmn)	(6,005)	4,746	3,941	4,241	4,909
Core EPS	(Bt)	(1.49)	1.11	0.91	0.98	1.13
DPS	(Bt)	0.00	0.18	0.46	0.50	0.60
P/E, core	(x)	(5.9)	8.0	9.7	9.0	7.8
EPS growth, core	(%)	n.a.	n.a.	(18.3)	7.6	15.8
P/BV, core	(x)	1.5	1.1	1.0	1.0	0.9
ROE	(%)	(22.0)	15.9	11.0	11.1	12.1
Dividend yield	(%)	0.0	2.0	5.2	5.6	6.8
FCF yield	(x)	(4.5)	10.8	24.4	14.9	19.1
EV/EBIT	(x)	(6.0)	7.0	7.0	5.9	4.6
EBIT growth, core	(%)	n.a.	n.a.	(18.4)	6.1	8.4
EV/CE	(x)	1.4	1.1	1.0	1.0	0.9
ROCE	(%)	(18.8)	12.3	11.5	12.8	15.9
EV/EBITDA	(x)	(9.4)	4.9	4.6	4.0	3.1
EBITDA growth	(%)	n.a.	n.a.	(12.9)	4.0	5.7

### **SPRC – PBV Band**



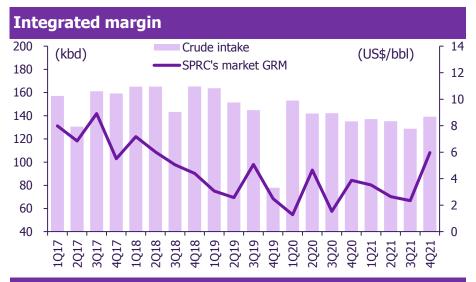
Source: SCBS Investment Research

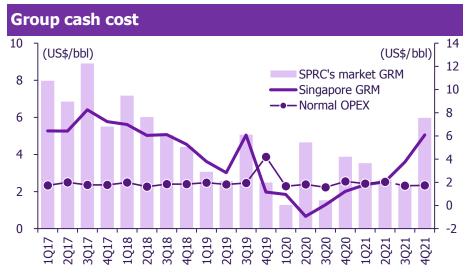


## **Star Petroleum Refining (SPRC)**

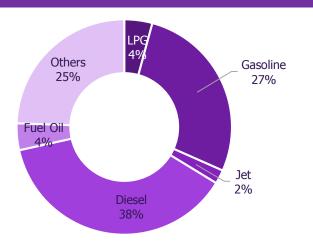
## Sentiment is clouded by oil spill

TP Bt9.40 (UNDERPERFORM)

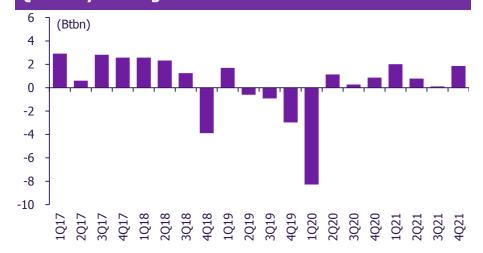




### Production breakdown (2021)



### **Quarterly earnings**



Source: Company data, SCBS Investment Research



## **B.Grimm Power (BGRIM)**

### Concern about higher gas price hit sentiment

# (NEUTRAL)

### **Investment Theme**

- We believe market pessimism about higher gas cost for SPPs while Ft adjustment is unable to catch up will continue to shadow investor appetite for BGRIM, the largest SPP operator in the market. This will adversely affect 23% of BGRIM's gas power plants (~575MW).
- SPP gas price in 2022 is expected to rise 40-60% YoY to Bt380-430/mmbtu, peaking in 1Q22 and declining later on a lower proportion of imported LNG from the spot market.
- This will be partially offset by a higher Ft rate from Jan-Apr 2022. Management expects more Ft adjustment for the rest of the year.
- BGRIM reaffirms that it has continued to improve efficiency of its power plants amidst high gas cost.
- BGRIM will start importing LNG in 2023 under a guota of 500ktpa for electricity sales to IU. It expects this will shave 7-10% off gas cost as price is more competitive than the pooled price of gas from PTT.
- BGRIM targets securing at least 1GW new PPA in 2022 and an increase in its operating MW of 10-15% from both M&A and startup of new capacity, including those in the SPP Replacement scheme. Management reaffirms its financial discipline with net D/E of 2x.
- TP of Bt55/share is based on DCF of committed capacity.

Forecasts a	and valua	tion				
Year to 31 Dec	Unit	2020	2021	2022F	2023F	2024F
Revenue	(Btmn)	44,087	46,628	60,075	58,753	60,347
EBITDA	(Btmn)	13,040	12,422	15,053	18,316	18,830
Core profit	(Btmn)	2,509	1,520	2,710	4,231	4,471
Reported profit	(Btmn)	2,175	2,276	2,710	4,231	4,471
Core EPS	(Bt)	0.96	0.58	1.04	1.62	1.72
DPS	(Bt)	0.45	0.42	0.42	0.80	0.90
P/E, core	(x)	35.1	57.9	32.5	20.8	19.7
EPS growth, core	(%)	14.4	(39.4)	78.3	56.1	5.7
P/BV, core	(x)	3.2	3.0	2.8	2.6	2.4
ROE	(%)	9.0	5.3	8.9	13.0	12.8
Dividend yield	(%)	1.3	1.2	1.2	2.4	2.7
FCF yield	(x)	(11.2)	(5.9)	(5.4)	7.1	10.6
EV/EBIT	(x)	23.2	26.8	21.9	15.8	14.5
EBIT growth, core	(%)	9.1	(3.5)	30.6	33.8	4.8
EV/CE	(x)	2.1	2.2	2.1	2.1	2.1
ROCE	(%)	8.3	7.1	8.2	11.2	12.0
EV/EBITDA (x)		13.4	15.7	13.8	10.9	10.3
EBITDA growth	(%)	12.6	(4.7)	21.2	21.7	2.8

### **BGRIM – PBV Band**



Source: SCBS Investment Research

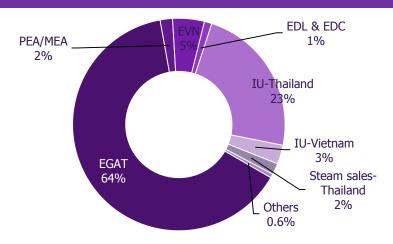


## **B.Grimm Power (BGRIM)**

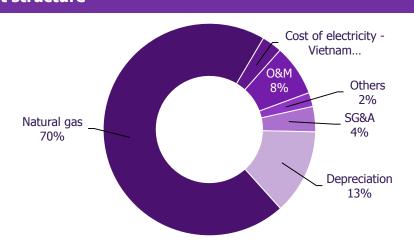
### **Concern on higher gas price hit sentiment**

## TP Bt55 (NEUTRAL)

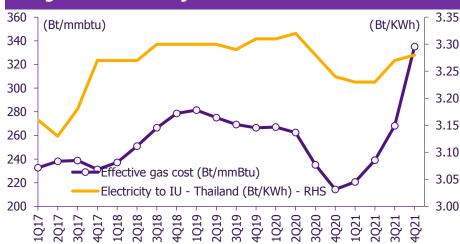
### Revenue breakdown



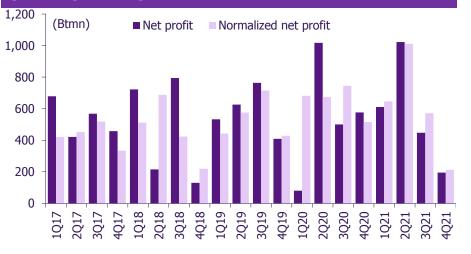
#### **Cost structure**



### SPP gas cost vs. Ft adjustment







Source: Company data, SCBS Investment Research



# **Global Power Synergy (GPSC) Building up its renewable portfolio**

# TP Bt95 (OUTPERFORM)

#### **Investment Theme**

- We expect profit to recover in 2022F upon full-year operation of GHECO-One, resumption of GE phase 5 (Mar 2022) and more profit from Avaada upon full-year profit contribution and incremental capacity.
- Management expects high fuel cost to continue in 1Q22 and decline from 2Q22 on lower gas price from the new PSC (G1/61) and lower LNG price after winter ends.
- Its tariff for electricity sold to IU will be revised up given a higher Ft rate, which is likely to increase further to Bt0.18/kWH by end-2022.
- GPSC's future investment will focus on four key markets: Thailand, Taiwan, Vietnam and India. More investment projects will be announced this year to expand renewable capacity, which will increase from 26% (end-2021) to 37% (end-2023).
- Investment in Avaada will be a platform for more investment in India's high-potential market. Profit from Avaada will be increased gradually by new capacity (under development) and loan refinancing to reduce interest cost.
- Investment into a battery business will be concluded this year after the pilot project is proved to be feasible.
- TP of Bt95/share is based on DCF valuation of its committed capacity.

Forecasts a	and valua	tion				
Year to 31 Dec	Unit	2020	2021	2022F	2023F	2024F
Revenue	(Btmn)	69,578	74,874	85,988	87,489	88,850
EBITDA	(Btmn)	21,290	20,681	19,810	21,968	29,028
Core profit	(Btmn)	7,509	7,412	8,078	9,418	10,305
Reported profit	(Btmn)	7,508	7,319	8,578	9,418	10,305
Core EPS	(Bt)	2.66	2.63	2.86	3.34	3.65
DPS	(Bt)	1.50	1.50	1.50	1.70	1.80
P/E, core	(x)	26.3	26.6	24.4	21.0	19.2
EPS growth, core	(%)	28.2	(1.3)	9.0	16.6	9.4
P/BV, core	(x)	1.9	1.8	1.8	1.7	1.6
ROE	(%)	7.4	7.0	7.3	8.2	8.6
Dividend yield	(%)	2.1	2.1	2.1	2.4	2.6
FCF yield	(x)	6.7	(1.9)	8.3	1.5	11.8
EV/EBIT	(x)	22.2	24.6	25.5	22.5	19.8
EBIT growth, core	(%)	23.0	(9.0)	(6.7)	13.7	5.3
EV/CE	(x)	2.6	3.1	3.2	3.0	3.4
ROCE	(%)	9.3	7.7	9.9	11.0	13.8
EV/EBITDA (x)		13.1	13.6	13.7	12.4	8.7
EBITDA growth	(%)	23.0	(2.9)	(4.2)	10.9	32.1

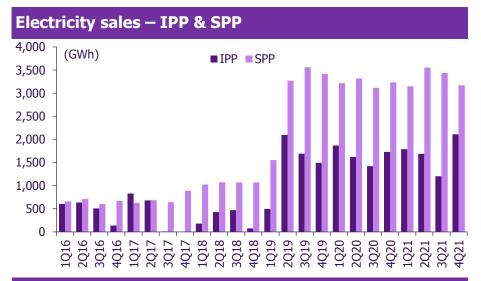
### **GPSC – PBV Band**



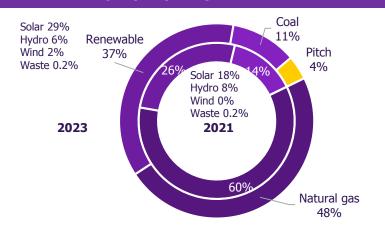


# **Global Power Synergy (GPSC) Building up its renewable portfolio**

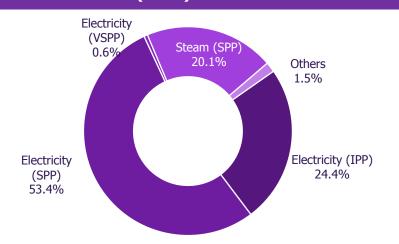
TP Bt95 (OUTPERFORM)



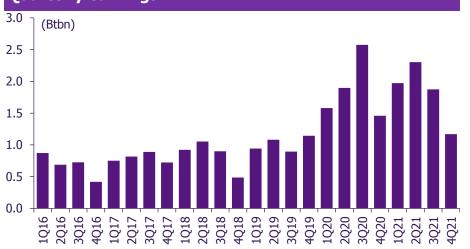
### **Committed equity capacity**



### Revenue breakdown (2021)



### **Quarterly earnings**



Source: Company data, SCBS Investment Research



# Thank you



## **Sector summary**

Ener	gy sector																					
	Rating	Price	Target	ETR	P/	/E (x)		EPS g	rowth (	%)	P/	BV (x)	)	RO	E (%)	)	Div. \	rield (	%)	EV/EI	BITDA	(x)
		(Bt/Sh)	(Bt/Sh)	(%)	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F
ВСР	Neutral	31.25	36.00	21.0	4.6	9.2	7.6	n.m.	(49.5)	19.9	0.8	0.8	0.7	18.6	8.6	9.9	6.4	5.8	5.4	3.6	3.7	3.2
<b>ESSO</b>	Neutral	7.65	8.50	19.0	6.0	6.7	4.7	n.m.	(11.3)	42.0	1.4	1.3	1.1	26.5	19.6	24.5	7.8	7.8	10.5	7.7	6.9	5.3
IRPC	Neutral	3.68	4.80	34.5	4.7	12.1	9.3	n.m.	(61.2)	30.5	0.9	0.8	0.8	19.6	7.0	8.8	7.3	4.1	5.4	4.5	6.0	5.0
PTT	Outperform	38.50	52.00	40.8	7.5	10.0	9.2	459.6	(24.9)	8.6	1.1	1.0	1.0	10.6	7.3	7.5	5.2	5.7	5.7	3.8	3.7	3.3
PTTEP	Outperform	150.50	182.00	24.9	13.9	9.7	10.0	106.6	44.1	(3.6)	1.4	1.3	1.2	11.1	14.2	12.7	3.3	4.0	4.7	3.8	3.4	3.6
SPRC	Underperform	8.85	9.40	11.4	8.0	9.7	9.0	n.m.	(18.3)	7.6	1.1	1.0	1.0	15.9	11.0	11.1	2.0	5.2	5.6	4.9	4.6	4.0
TOP		50.00		43.5	5.2	10.9	9.8	n.m.	(52.3)	11.1	0.8	0.8	0.8	16.2	7.5	7.9	5.2	3.5	4.6	8.0	11.2	10.5
Average	e				7.1	9.7	8.5	283.1	(24.8)	16.6	1.1	1.0	0.9	16.9	10.7	11.8	5.3	5.2	6.0	5.2	5.7	5.0

Utilit	Utilities sector																					
	Rating	Price	Target	ETR	P	/E (x)		EPS g	rowth (	<b>%</b> )	P/	BV (x)	)	RO	E (%)	)	Div.	rield (	%)	EV/E	BITDA	(x)
		(Bt/Sh)	(Bt/Sh)	(%)	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F
ACE	Outperform	3.22	5.00	57.5	24.5	14.5	10.7	(10.7)	68.7	36.0	2.5	2.2	1.9	10.6	15.9	18.9	0.6	2.2	2.8	16.3	11.1	8.6
BGRIM	Neutral	33.75	55.00	64.2	57.9	32.5	20.8	(39.4)	78.3	56.1	3.0	2.8	2.6	5.3	8.9	13.0	1.2	1.2	2.4	15.7	13.8	10.9
GPSC	Outperform	70.00	95.00	37.9	26.6	24.4	21.0	(1.3)	9.0	16.6	1.8	1.8	1.7	7.0	7.3	8.2	2.1	2.1	2.4	13.6	13.7	12.4
GULF	Outperform	49.75	57.00	15.5	66.7	46.4	36.1	85.0	44.0	28.4	6.0	5.6	5.1	10.9	12.6	14.8	0.9	1.0	1.1	42.9	40.1	33.6
Average					43.9	29.4	22.1	8.4	50.0	34.3	3.3	3.1	2.8	8.5	11.2	13.7	1.2	1.6	2.2	22.1	19.7	16.4

Petro	Petrochemical sector																					
	Rating	Price	Target	ETR	P/	E (x)		EPS g	rowth (	%)	P/	BV (x	)	RO	E (%)	)	Div.	Yield (	%)	EV/E	BITDA	(x)
		(Bt/Sh)	(Bt/Sh)	(%)	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F
GGC	Neutral	13.20	12.40	(3.3)	17.6	18.4	14.9	39	(4.6)	23.3	1.4	1.3	1.2	7.7	7.2	8.5	2.7	2.7	3.3	8.1	8.7	6.7
IVL	Outperform	44.75	55.00	28.3	9.3	6.3	5.9	>1,000	48.8	7.0	1.6	1.3	1.1	18.9	23.1	21.0	2.2	5.4	5.1	7.0	5.0	4.3
PTTGC	Neutral	50.50	80.00	63.2	7.0	10.6	8.4	n.m.	(33.5)	25.9	0.7	0.7	0.7	10.5	6.5	7.9	7.4	4.8	5.9	5.8	7.2	6.7
Average	•				11.3	11.8	9.7	1,125	3.6	18.7	1.2	1.1	1.0	12.4	12.3	12.5	4.1	4.3	4.8	7.0	7.0	5.9

Source: Company data, SCBS Investment Research



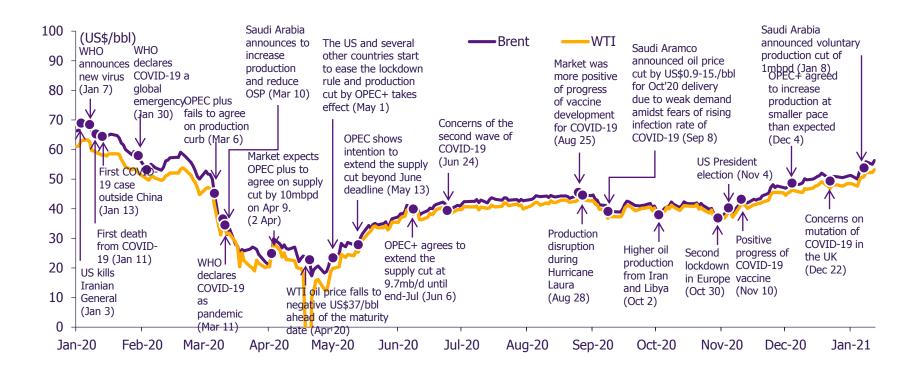
## **Appendix: Maintenance shutdown plan 2022**

Company	1Q	2Q	3Q	4Q
IRPC	Lube (11 days) PP (8 days)	PP (4 days) HDPE (6 days)	-	ADU 1&2 (31&28 days) RDCC (54 days) Lube (36 days) EBSM (32 days) HDPE (6 days) PS (30 days)
PTT		ESP Major SD & GSP#2&3 TD (23 days)	GSP#4 Major SD (20 days)	GSP#5 SD (15 days)
PTTGC	Olefins cracker (OLE4) (19 days) EO/EG (35 days) EA (35 days)	Olefins cracker (OLE3) (39 days) LDPE (24 days) LLDPE I (7 days) LLDPE II (20 days) PS (15 days) Aromatics I	Olefins cracker (OLE2/1, 2/3) (16 days) BPA (30 days) BPE 1 (28 days) BPE 1 (15 days) (30 days)	Olefins cracker (OLE2/2) (27 days) HDPE (38 days) Phenol II (11 days) Refinery (50 days) PO (56 days)

Source: Company data, SCBS Investment Research

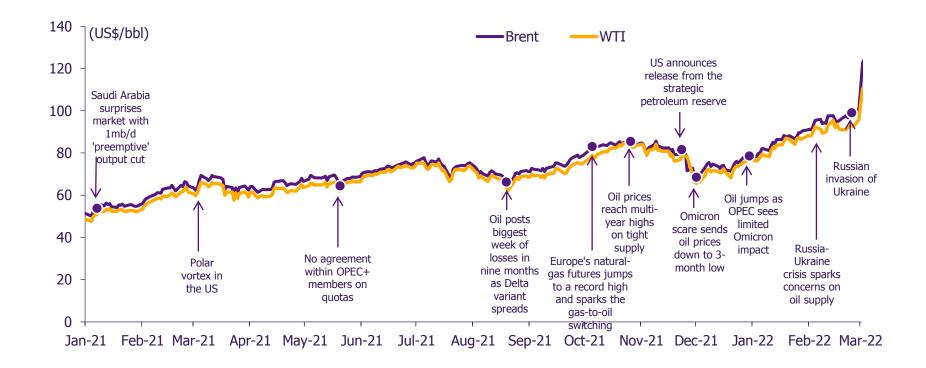


## **Appendix: Oil price and key events (2020)**



Source: Company data, Bloomberg Finance LP, SCBS Investment Research

## **Appendix: Oil price and key events (2021-present)**



Source: Company data, Bloomberg Finance LP, SCBS Investment Research



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#### **Companies with Good CG Scoring**

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(Not including listed companies qualified in the "no announcement of the results" clause from 1 January 2020 to 26 October 2021) is publicized.

- 1 TIP was voluntarily delisted from the Stock Exchange of Thailand effectively on July 24, 2021
- 2 RCI was voluntarily delisted from the Stock Exchange of Thailand, effectively on July 16, 2021
- \* บริษัทหรือกรรมการหรือผับริหารของบริษัทหมีีข่าวด้านการกากับดูแลกิจการ เช่น การกระทาผิดเกี่ยวกับหลักทรัพย์ การทจริต คอร์รัปชัน เป็นต้น ซึ่งการใช้ข้อมูล CGR ควรตระหนักถึงข่าวดังกล่าวประกอบด้วย

#### Anti-corruption Progress Indicator

#### Certified (ได้รับการรับรอง)

#### Declared (ประกาศเจตนารมณ์)

7UP, ABICÒ, AJ, ALT, APCO, AŚ, BEC, BKD, CHG, CPL, CPR, CPW, CRC, DDD, DHOUSE, DOHOME, ECF, EKH, ETC, EVER, GULF, III, INOX, J, JMART, JMT, JR, KEX, KUMWEL, LDC, MAJOR, MATCH, MILL, NCL, NOVA, NRF, NUSA, PIMO, PR9, RS, SAK, SCGP, SCM, SIS, SSS, STECH, STGT, SUPER, TQM, TSI, VCOM, VIBHA, WIN, YUASA, ZIGA

#### N/A

#### **Explanations**

Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of October 24, 2021) are categorised into: companies that have declared their intention to join CAC, and companies certified by CAC.

