

Energy Sector – Neutral

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News Update

Crude oil maintains bullish momentum

- **First US crude inventory build since Nov 21**
- **Potentially more oil supply disruptions**
- **Total withdraws from Myanmar; Chevron is likely to follow**
- **Integrated naphtha spreads turn negative**

Despite crude inventory build, oil prices are quickly approaching US\$90/bbl as geopolitical uncertainties continue to mount. In turn, higher oil price pressures naphtha cracker margins and several Asian plants announced cut run by 5-15%.

More potential supply disruptions

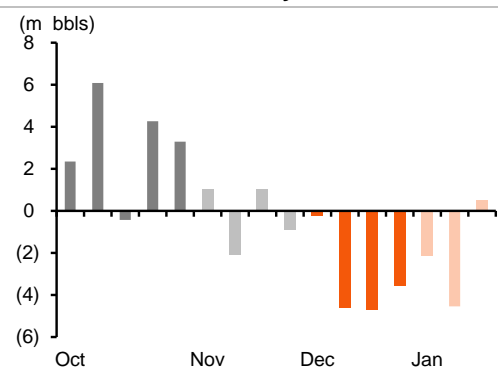
- **First US crude build in the past 7 weeks.** Energy Information Administration reported the first US crude build of 0.5M bbl since November 2021, while gasoline inventories hit a 11-month high.
- **Drone attack at UAE facilities.** Last week, three tanker trucks carrying oil products were bombed during an air drone strike in the Musaffah ICAD-3 area, near oil tanks operated by Adnoc. Another attack against the UAE also claimed by the Houthi rebels in Yemen was a minor fire, that occurred in the new construction area of Abu Dhabi International Airport. If tensions escalate, other UAE oil facilities could be at risk. The country is producing crude oil of 3m b/d and it's the fourth largest oil producer among OPEC+ nations.
- **Fears of Russia invading Ukraine grows.** The fear comes in response to a meeting between Russia's Foreign Minister and it's US counterpart, discussing the 100,000 troops deployed near the Ukrainian border, however Russia denies intentions to invade Ukraine. According to SP Platts, half of Russia's crude oil exports, or about 6.5m b/d go to Europe which represents about a quarter of all European oil and other product imports. Even though US-Russia tensions could affect Russia's oil supply to Europe, the news report that major supply disruptions are unlikely, as crude flows into Europe were largely unaffected by the retaliatory US sanctions on Moscow at the time, when Russia seized Crimea in 2014.

Total withdrawing from Myanmar field; Chevron is likely to follow.

Total Energies has decided to initiate the contractual process of withdrawing from the Yadana field in Myanmar, both as operator and as shareholder. This is following Total announcement against human right violations by the Burmese government.

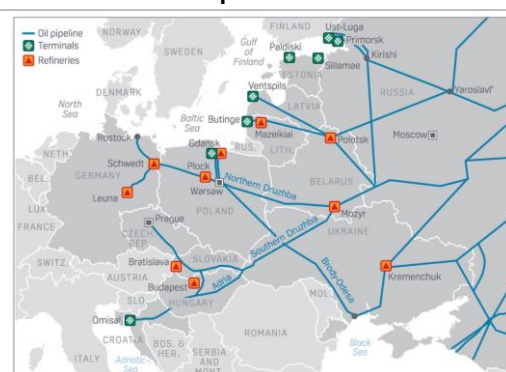
- **Limited production impact.** Total will remain an operator for the next 6 months. The risk of the CAPEX slowdown during the withdrawal period also appears minimal as the field does not have any significant exploration activity planned for 2022. According to PTTEP's guidance, the project contributes around 8KBOED (2% of total sale volume) and 5% to profit. Yadana PSC contract is expected to end 2028.

Ex 1: US crude inventory



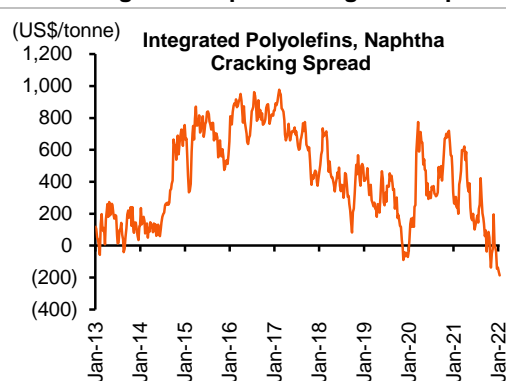
Source: EIA

Ex 2: Central Europe's Oil Infrastructure



Source: SP Platts

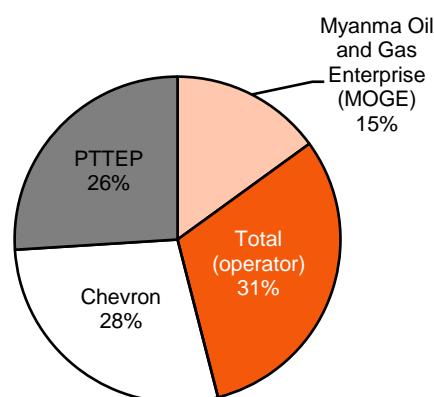
Ex 3: Integrated Naphtha Margin Collapse



Source: Bloomberg

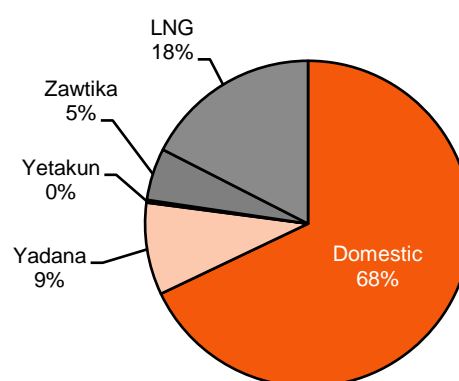
- **Total's interest will be shared among partners.** Total said it will withdraw from the Yadana field (Blocks M5 and M6) and from the pipeline company Moattama Gas Transportation Co. (MGTC) in Myanmar without any financial compensation. PTTEP Total Energies' stake will be shared between the current partners (PTTEP holds 25.5%, Chevron 28.3% and MOGE 15%), unless they object to such allocation, and that the role of operator will be taken over by one of the partners. However, Chevron, another key shareholder, also reported to withdraw from the field.
- **Amplify operational risk.** Despite limited impact at this stage, we see the operational risk in Myanmar rising significantly. The total income from Myanmar accounts for 20% of PTTEP's profit and the reserve accounts for around 10%.

Ex 4: Yadana Major Shareholder



Sources: Company, Thanachart

Ex 5: Thailand Gas Supply Breakdown



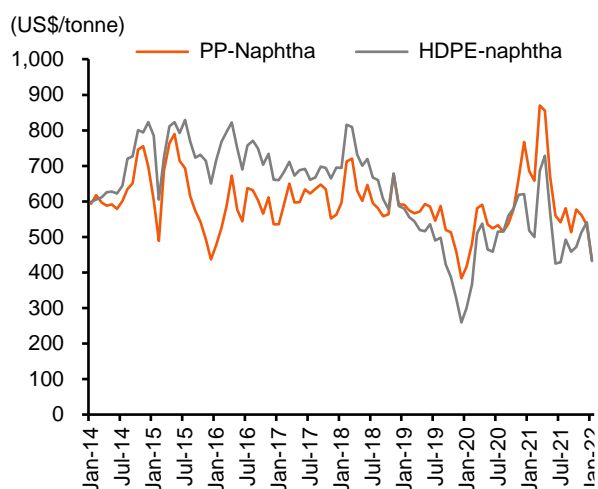
Sources: EPPO Thanachart

Asian naphtha crackers face pressure

With the strong surge in crude oil price, driving higher naphtha cost, and coupled with the collapse of Butadiene margins, integrated naphtha cracker margins turned negative to -US\$186/t, which is near the last trough during the end of 2019, when the first wave of new Chinese new supply hit the market.

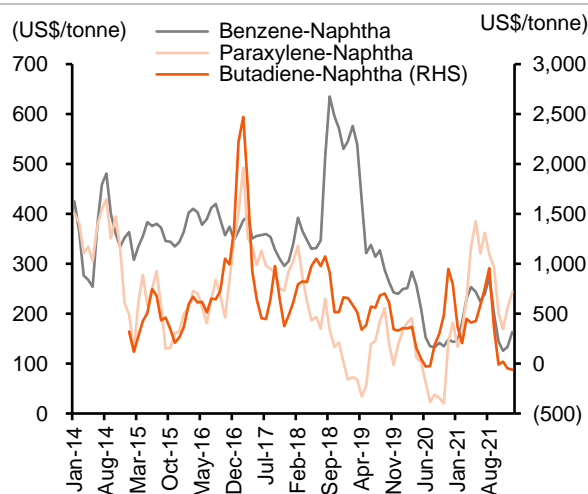
- **Asian cracker announced cut run.** Based on Argus media, South Korean petrochemical producer KPIC plans to reduce operating rates from 100% to 85% by the end of this month. This is following LG chemical reduced run rates at all of its three crackers in Yeosu and Dsaesan from 90% in December to 80% in January. Cracker operators in Southeast Asia are also expected to further reduce run rates.
- **Supply pressure in 2022.** We see the spreads decline is to be expected after a strong year in 2021, driven by supply disruption due to China's dual control policy and severe weather, as well as strong pent up demand. However, those factors are expected to fade this year. Additionally, IHS data suggests that there could be about 10mtpa of new polyethylene supply in 2022 which is more than the normal demand growth of 5-6mtpa. Therefore, petrochemical margins could remain under pressure, but we see further downside is limited, given margins are already in a negative territory.

Ex 6: PE and PP Naphtha



Sources: Bloomberg, Thanachart

Ex 7: Butadiene, Benzene, Px margins



Sources: Bloomberg, Thanachart

Ex 8: Prices And Spreads

(US\$/bbl)	1Q21	2Q21	3Q21	4Q21	QTD	Oct-21	Nov-21	Dec-21	MTD	Last
Oil prices										
Dated Brent	60.84	68.63	72.94	78.40	83.92	83.65	80.75	74.27	83.92	88.18
Dubai	59.70	66.43	71.31	76.02	81.58	81.22	79.78	72.69	81.58	85.62
WTI	58.07	66.10	70.52	76.08	81.55	81.22	78.65	71.69	81.55	85.14
Crack spreads over Dubai										
Gasoline	7.49	10.67	12.41	15.59	14.56	16.28	16.31	14.49	14.56	14.18
Jet fuel	4.25	5.36	5.80	11.02	11.99	10.71	9.17	10.37	11.99	12.53
Diesel	5.37	6.09	7.48	10.12	11.30	11.55	8.89	10.71	11.30	9.81
High-sulfur fuel oil	(4.28)	(6.80)	(5.42)	(5.83)	(7.46)	(5.14)	(8.88)	(6.45)	(7.46)	(7.40)
Refining margins										
FCC / Dubai	1.21	0.95	0.85	5.81	5.89	4.44	4.21	5.78	5.89	6.13
Hydrocracking / Dubai	0.71	0.77	1.11	6.11	6.72	5.19	4.50	6.19	6.72	7.16
FCC / Espo	1.47	1.55	1.24	6.20	6.28	4.83	4.60	6.18	6.28	6.52
FCC / Arab Light	0.56	(0.51)	(0.64)	4.32	4.40	2.95	2.72	4.30	4.40	4.64
Hydrocracking / Murban	2.29	2.81	3.41	8.41	9.01	7.48	6.80	8.49	9.01	9.46
(US\$/tonne)										
Aromatics spreads										
PX-naphtha	185	232	229	127	173	143	112	119	173	171
BZ-naphtha	191	367	350	231	258	260	193	223	258	251
Olefin spreads										
HDPE-naphtha	583	576	462	505	428	490	510	536	428	416
LDPE-naphtha	959	936	821	920	778	914	962	918	778	766
PP-naphtha	771	709	557	562	448	604	565	538	448	456
Ethylene-naphtha	416	406	304	321	170	350	307	319	170	141
Propylene-naphtha	461	436	294	242	235	252	228	254	235	231
Henry Hub Gas (US\$/mmbtu)	2.73	2.97	4.32	3.72	4.07	5.57	5.12	3.86	4.07	4.00
Coal (Newcastle) (US\$/tonne)	87.47	106.49	165.89	169.60	201.65	235.44	153.53	164.42	201.65	224.60

Source: Bloomberg

Ex 9: Valuation

	Rating	Current	Target	Upside/	Market	Norm EPS growth		— Norm PE —		EV/EBITDA		— Yield —	
		price	price	(Downside)		cap	2021F	2022F	2021F	2022F	2021F	2022F	2021F
		(Bt)	(Bt)	(%)	(US\$ m)	(%)	(%)	(x)	(x)	(x)	(x)	(%)	(%)
BANPU	BUY	10.80	22.00	103.7	2,217	na	(0.3)	4.6	4.6	4.1	3.7	7.1	7.4
BCP	SELL	27.00	21.00	(22.2)	1,128	na	na	na	24.8	8.9	6.9	0.0	2.2
ESSO	SELL	7.70	6.90	(10.4)	809	na	na	na	141.1	36.7	20.8	0.0	0.4
IRPC	BUY	3.94	5.10	29.4	2,443	na	9.6	14.1	12.8	8.9	8.1	4.3	4.7
IVL	BUY	46.25	52.00	12.4	7,878	169.1	(0.9)	15.0	15.1	8.7	9.4	2.3	2.3
PTG	BUY	14.60	22.00	50.7	740	(3.6)	11.8	13.6	12.2	6.8	6.4	3.7	4.1
PTT	BUY	38.75	50.00	29.0	33,581	182.0	5.2	10.3	9.8	4.6	4.2	4.8	5.1
PTTEP	BUY	127.00	140.00	10.2	15,297	68.1	15.8	14.0	12.1	4.4	3.9	4.3	5.0
PTTGC	BUY	57.25	92.00	60.7	7,832	355.8	1.8	7.4	7.3	7.6	6.1	6.7	6.9
SPRC	HOLD	10.90	8.80	(19.3)	1,434	na	na	na	52.8	36.2	14.1	0.0	0.7
SUSCO	BUY	3.54	4.80	35.6	118	3.0	23.4	16.6	13.4	6.9	5.6	3.1	3.7
TOP	HOLD	52.50	57.00	8.6	3,249	na	(11.7)	20.0	22.6	15.5	16.9	2.3	2.0

Sources: Company data, Thanachart estimates

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