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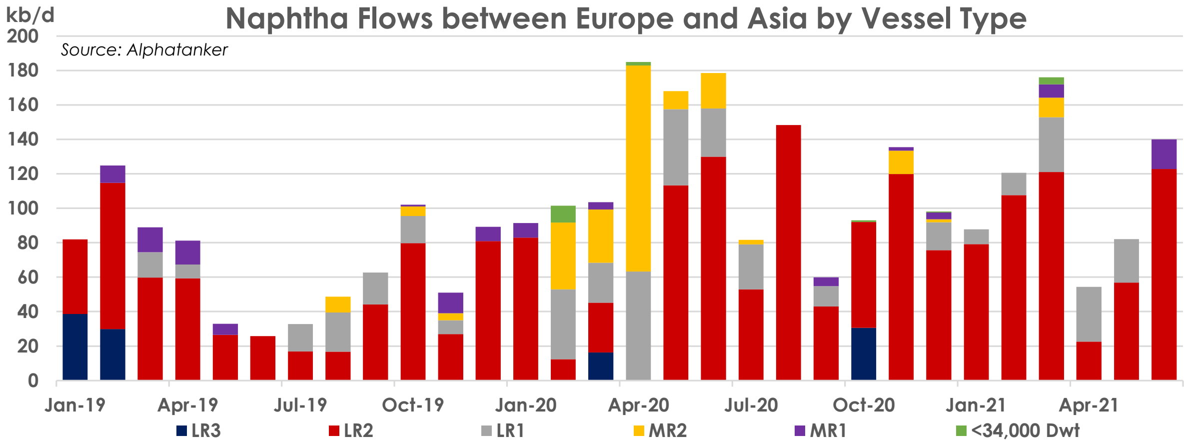
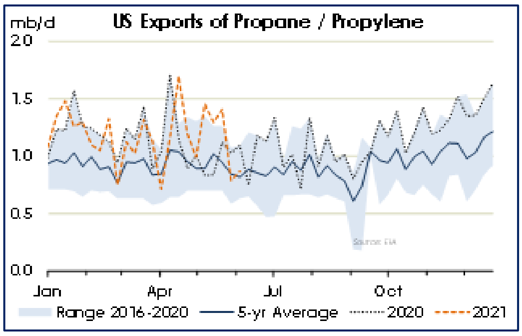
Impacts on shipping of Asia's insatiable appetite for naphtha

This year has so far largely been a lousy one for the clean tanker market. However, there has been one bright spot as Asia's seemingly insatiable appetite for naphtha has helped to pull in barrels from the Atlantic Basin which, in turn, has helped to support west – east CPP tanker demand. Considering that the west – east naphtha trade is normally seasonal, increasing in the winter and decreasing in the summer, this might suggest that west – east CPP tanker demand is likely to fall back over the coming months. However, we believe that this might not be the case this year. In this week's *Newsletter* we discuss the assumptions behind this statement.

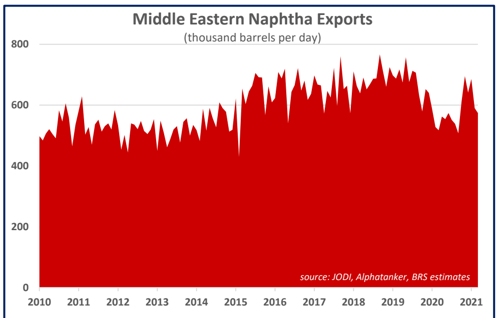


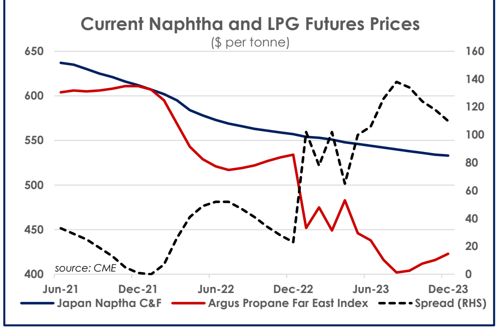
Petrochemical power. Although global oil demand remains in the doldrums around 2 mb/d (2%) below its pre-Covid level, demand from the petrochemical sector has been one of the standout performers so far this year. This has been led by Asia as the region's factories have been churning out packaging and medical equipment. In turn, this has driven persistently strong demand for the two main feedstocks run by crackers; naphtha and LPG. Accordingly, we estimate that Asia's naphtha demand is now above its pre-pandemic level with inflows from the Middle East – Asia's largest regional naphtha supplier – insufficient to cover demand and thus forcing traders to look further afield for additional barrels. In turn, this has seen European naphtha flows to Asia soar to exceed 100 kb/d over the past year, double the level of 2019, which, as the chart above indicates, has been a source of western LR2 demand so far this year.



Arbitrage. Considering that crackers run on both LPG and naphtha, their use of each fuel depends on price plus the relative petrochemical feedstock (ethylene, propylene, butadiene etc) yields of each fuel. Therefore, to a large extent, the arbitrage between naphtha and LPG exerts a large influence over the demand for each fuel. LPG prices tend to be seasonal with higher prices coinciding with the northern hemisphere space heating season. To a large extent, this is driven by US LPG exports, as during the winter, LPG is used for heating across the US midcontinent which leaves less available for export, supporting prices. Therefore, petrochemical crackers tend to use more naphtha in winter and more LPG in summer.

Higher crude prices diminishing naphtha's economics. The recent surge in crude prices to two-year highs has eroded the economics of naphtha versus LPG. Considering the potential that crude prices could rise further as oil markets tighten, there remains the possibility that crude prices could exceed $80/bbl by the end of this year. In contrast, LPG prices are projected to remain relatively flat until 4Q21. This is borne out by current futures curves which suggest that naphtha will remain more expensive than LPG until November.





Asian naphtha demand to remain supported over the summer. This may seem counterintuitive given the previous paragraphs. However, global oil demand is not expected to adhere to its usual seasonal patterns this year and we project that this will be reflected in Asian naphtha demand over the coming months. Although demand for LPG in the Asian petrochemical sector will increase over the coming months in line with it becoming more economic versus naphtha, we also project that naphtha demand will remain relatively strong over the short-term. This will be driven by the commissioning of new petrochemical cracker capacity which should more-than-offset the loss of market share to LPG. These start-ups include Gulei Petrochemical's (China) start up its new naphtha-fed cracker in Zhangzhou in 3Q21 while in South Korea, GS Caltex and Hyundai Chemical are slated to start new crackers in June and August, respectively. Furthermore, demand should also rise as cracker maintenance ends in China, South Korea and Taiwan.

More Middle Eastern naphtha stays at home. In addition to the 'Asian pull', it should be noted that less Middle Eastern naphtha and LPG is now available for export. This has come as the Middle East has built out its own petrochemical capacity over the past decade with sites such as the giant Sadara complex in Saudi Arabia now requiring to be fed with both LPG and naphtha. Indeed, latest data imply that over 1Q21, Middle Eastern naphtha exports dropped by around 80 kb/d compared with 1Q19. On the other hand, as Saudi Aramco's new 400 kb/d Jizan refinery is steadily ramped up over the summer, based on its recent exports, we anticipate that this plant's naphtha will be shipped to Asia rather than remain in the Middle East.

European barrels looking less attractive. A further factor in determining naphtha's price is the pull from the gasoline pool. Naphtha is used for gasoline blending and one of the drivers behind particularly low European prices earlier in the year was that there was low demand from refiners to blend it into the gasoline pool. The picture has shifted over the past couple of months as European refiners have hiked gasoline output in tandem with increasing demand as movement restrictions have been relaxed and as demand to ship barrels to the US Atlantic Coast has strengthened. The upshot is that European naphtha prices have recently been supported versus Asian prices which has narrowed the arbitrage to ship naphtha from Europe to Asia. Over the short-term, we believe that European naphtha should remain supported as the Northern Atlantic driving seasons moves into full swing. This should more-than-offset the negative price impact of rising European naphtha supply as refiners exit shutdowns and hike runs.

Shifting flows. Despite the demand to ship naphtha eastwards this year, there has been little impact on CPP tanker rates with rates for an LR2 voyaging on TC15 (Mediterranean – Far East) remaining stubbornly low. Although this demonstrates the fact that this route is viewed as a backhaul which permits LR tankers to cover their costs rather than ballasting east, it also demonstrates the impact of long western LR2 tonnage lists. Considering that there is the potential for Middle Eastern naphtha exports to rebound slightly going forward and that European prices should remain supported, this should see a reduction in European flows eastwards over the summer, although we doubt that they will drop towards 2019's lows. However, when considering the longer-term picture of rising Asian demand, this should only be a blip and that flows will have to take off again later in the year, potentially surpassing the volumes shipped over 1Q21. Furthermore, considering that Asian petrochemical demand is expected to be one of the main engines of growth over the next decade, this should help to support a steady stream of European naphtha being shipped to Asia which can only be to the benefit of LR owners.