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Argus White Paper:

The impact of coronavirus on propylene

What will be the impact on propylene — for production and consumption — of the continued escalation of the coronavirus crisis and the increasingly stringent measures put in place by governments to control its spread?

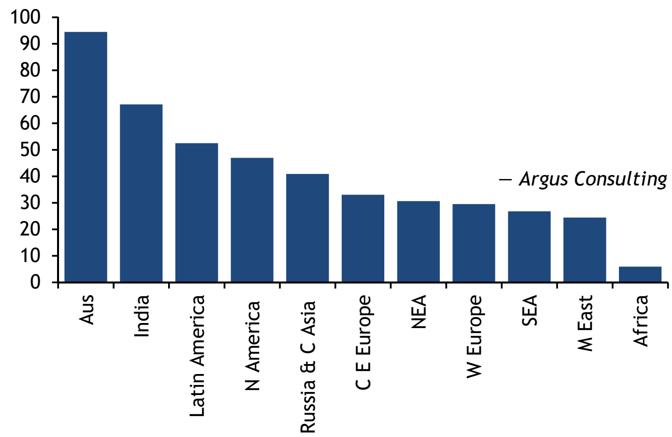
The coronavirus has now infected around 180,000 people and resulted in 7,000 deaths, and the World Health Organisation has declared the disease a global pandemic. The impact of the virus on commodity markets continues to extend beyond Asia-Pacific, with ex-China cases now ahead of those in China. The impact on the wider macroeconomic environment is unclear, but a lengthier and steeper knock to GDP both locally and globally seems inevitable.

Propylene supply from refineries will be affected as demand for oil products such as jet fuel, gasoline and diesel falls, reducing operating rates. The US is particularly exposed to refinery-sourced propylene, which represents 45pc of capacity but 55pc of production, Argus estimates. In Europe, the exposure to lower refinery rates is also high, with refineries accounting for 29pc of propylene capacity, but all regions have a level of exposure that is fundamental to their supply balance. The huge reduction in air travel and increasing restrictions to all but essential travel in Europe, the US and many other regions will reduce operating rates.

Operating rates at steam crackers and other propylene producing units were reduced by approximately a quarter in China at the height of the lockdown, as demand fell. In other regions operating rates remain reasonable but are likely to fall, as the measures taken to control the spread of the virus impact consumer demand.

Producers are also likely to experience issues with operator availability, either through illness or through more extensive restrictions limiting the movement of people. All chemical plants are vulnerable to logistical interruptions, either through a lack of drivers or movement restrictions. Either of these issues has the potential to further disrupt propylene supply. This is a factor for short term business but also for capital projects.

Percentage of capacity from refineries by region -2019



All the evidence from previous downturns — albeit dynamics of this one is unique — is that a drop in demand is more damaging and more difficult for the petrochemical industry to manage than over-supply. At the peak of the coronavirus restrictions in China, Argus estimates that propylene operating rates were reduced by 25-30pc, and this could be an indicator for other regions. So far in Europe, the US and elsewhere — excluding northeast Asia — demand has been stable, but we expect this to change as the measures put in place by governments to restrict movement and ban people gathering together will reduce consumption, dampen sentiment and reduce the GDP outlook. European propylene derivative producers rely on export demand which is likely to be affected by both global demand but also freight restrictions and delays. If Europe's derivative exports drop then propylene imports – substantially from the US – will also fall. The hope will be that the economy bounces back, but there is likely to be some lasting damage.

China, we hope, has been through the toughest period and is in the process of restarting but the situation is not normal. There are still social restrictions, school closures and people are cautious, so consumption remains reduced. The government is pushing construction and infrastructure projects to restart to help boost growth, but only around 60pc of construction workers have returned to their work sites. Inventory levels for most chemicals including the major propylene derivative product polypropylene (PP) remain high. Refinery based propylene operating rates fell to 30-40pc in early February but have now increased to around 70pc.This week the domestic price of propylene in China fell as production is ramping up at a faster rate than consumption.

Some industries look more vulnerable to the impact of the virus than others — tourism, air travel and social spending have been hit hard across all regions. Even if governments mitigate the worst of any long-term implications, in the short term there are likely to be job cuts and income reduction for the people affected. In a wider sense, the uncertainty is likely to breed caution among consumers and delay the purchase of bigger ticket items such as cars — a major consumer of propylene derivatives. Groupe PSA, a manufacturing group incorporating Peugeot, Citroën, Vauxhall/Opel and DS, announced that it will pause car manufacturing at its European plants for a week, citing supply disruptions and a decline in demand. But there are some sectors seeing an upturn in consumption, notably food packaging, medical supplies and isopropyl-alcohol, a raw material for anti-viral hand wash.

At the same time as the world is struggling to come to terms with the widening fallout from the coronavirus outbreak, the collapse of the Opec+ producer agreement has apparently set the stage for a new oil price war. The fall in oil prices will affect the whole of the upstream, but there is no sign yet of a compromise, with Saudi Arabia leading the charge to drop prices and pump more oil. The implications for propylene are for lower prices, but with no one region having a long-term cost advantage over the others, the cost reductions will be reasonably evenly spread.

Of more concern is that lower oil prices will significantly impact the capital investment plans of oil companies that have increasingly extended their portfolios into petrochemical products, specifically propylene. Argus forecasts a lengthening propylene supply and demand balance in 2020 and beyond, driven by a weaker growth outlook, increased recycling and the over-investment of oil companies looking for future revenue sources as demand for oil products declines. The combination of lower oil prices and weaker GDP growth puts many of these investment programmes in doubt. Slight delays to PP projects are expected in Vietnam and Malaysia are anticipated while, longer term, PP projects in Algeria, Turkey and Egypt are likely to be delayed or potentially cancelled. Saudi Aramco, which is pursuing a significant programme of diversification into petrochemicals, says it will cut capital spending to $25bn-30bn in 2020, down from a previously planned $35bn-40bn and actual spending of almost $33bn in 2019, and it will not be alone.

Questions remain about the long-term implications for propylene supply and demand, there is potential for this issue to change behaviour and alter global supply-chains. A global crisis of this magnitude also has the potential to bring people together and solve problems - such as the various trade disputes – which up to this point seemed intractable.

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