C-MACC

Chemical Market Analysis & Consulting Company

June 7, 2020

Products Mentioned This Week

- *Oil*
- *Natural Gas*
- *Ethane*
- *Naphtha*
- *Ethylene*
- *Propylene*
- *Butadiene*
- *Caustic Soda*
- *Ethylene Di-Chloride (EDC)*
- *Polyvinyl Chloride (PVC)*
- *Polyethylene*
- *Polypropylene*
- *Methanol*
- *Acetic Acid*
- *Styrene*

Companies Mentioned This Week

- *Dow*
- *LyondellBasell*
- *Westlake*
- *Olin*
- *Braskem*
- *SABIC*
- *CP Chem*
- *ExxonMobil*
- *Reliance*
- *PetroChina*
- *Total*
- *Borealis*
- *Formosa*
- *Shintech*
- *Methanex*
- *SCC*
- *Celanese*
- *Shell*
- *Ineos*
- *SCC*
- *Arkema*

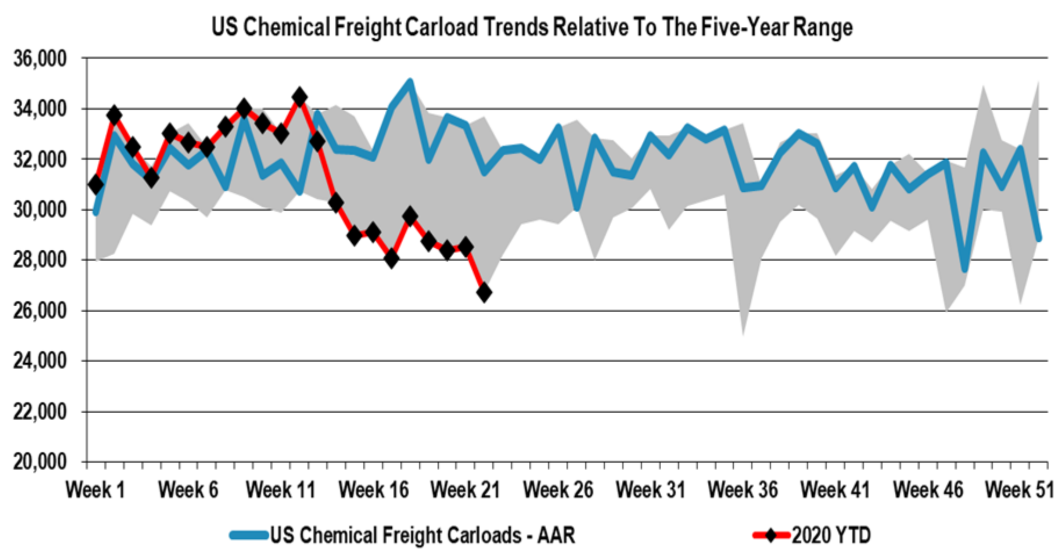
C-MACC Sunday Recap

Is There A Disconnect? We Don't Think So

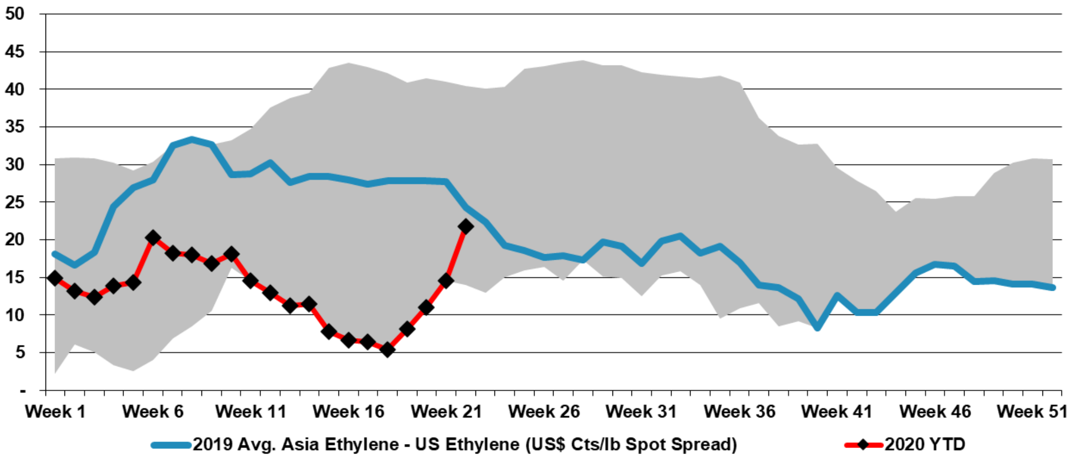
- **The medium-term caution on margins that we continue to discuss in our daily and thematic work is currently at odds with what is happening in the stock market (relatively easy to explain) and at odds with recent price moves for oil and for some chemicals. We expected significant volatility in 2Q20 and into 2H20, and it is happening – in some cases more than anticipated.**
- **The stock market is forward looking and is pricing in a strong economic bounce back from the 2Q lows – Materials sectors like Chemicals tend to be early movers, down and up, because of the anticipated leverage in commodity pricing. Macro data is mixed, but as we have said in prior work, the good news is getting more coverage than the less good news and the jobs number is clearly a positive surprise.**
- **Chemical margins should be weaker everywhere – reflecting the lower demand - and spot prices should reflect how hard it should be to find an incremental buyer. This is true in some cases (butadiene), but it is certainly not broad – yet.**

Overall, we welcome the more positive news and hope that the recovery can continue. **But we focus on commodity and commoditizing industries, where relative cost and capacity utilization always rule the day**. Right now, we have a price and margin scenario for many chemicals around the world that should encourage almost everyone to operate, with only a few product exceptions, such as butadiene.

While the economics say run, the demand backdrop suggests otherwise – hence the disconnect and our expectation that 2H20 is going to be a problem. The terribly weak butadiene market suggests that the synthetic rubber industry and its end markets are operating well below normal. The low rail car movements in the US (below) are at odds with chemical and polymer pricing which suggest that producers should be operating at full rates, and recent rises in Asia only amplify the incentive to ramp up operating rates in the US. Asia ethylene pricing relative to the US in the second chart.



Source: AAR and C-MACC Analysis



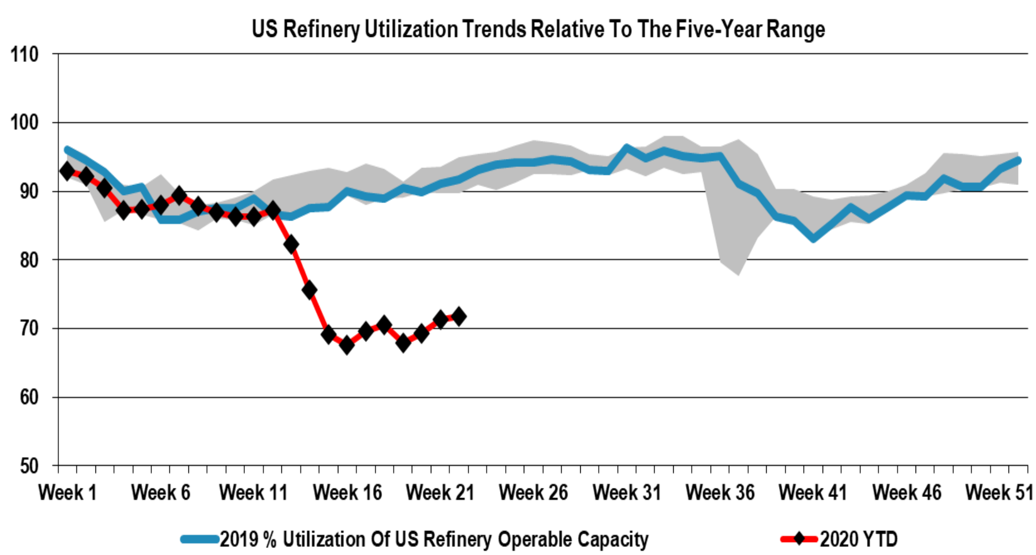
Source: Bloomberg and C-MACC Analysis

When the dust settles, and once the many ethylene maintenance turnarounds are completed, we expect global ethylene and derivative demand, as well as polypropylene, to settle well below global capacity to produce for the rest of year and at rates which imply significantly lower profitability across the board. The volatility may continue, but if margins remain high at these lower operating rates it will be **unprecedented, and we expect a correction in 2H20**. Note that we are focused on margins – pricing may stay high if oil prices continue to recover.

Because of this view we remain very cautious with respect to commodity profitability in 2H20 and company earnings. The short-term pricing volatility may open trading windows for products and stocks, but we would want to hedge any trade in this market.

Weak Demand Remains A Concern

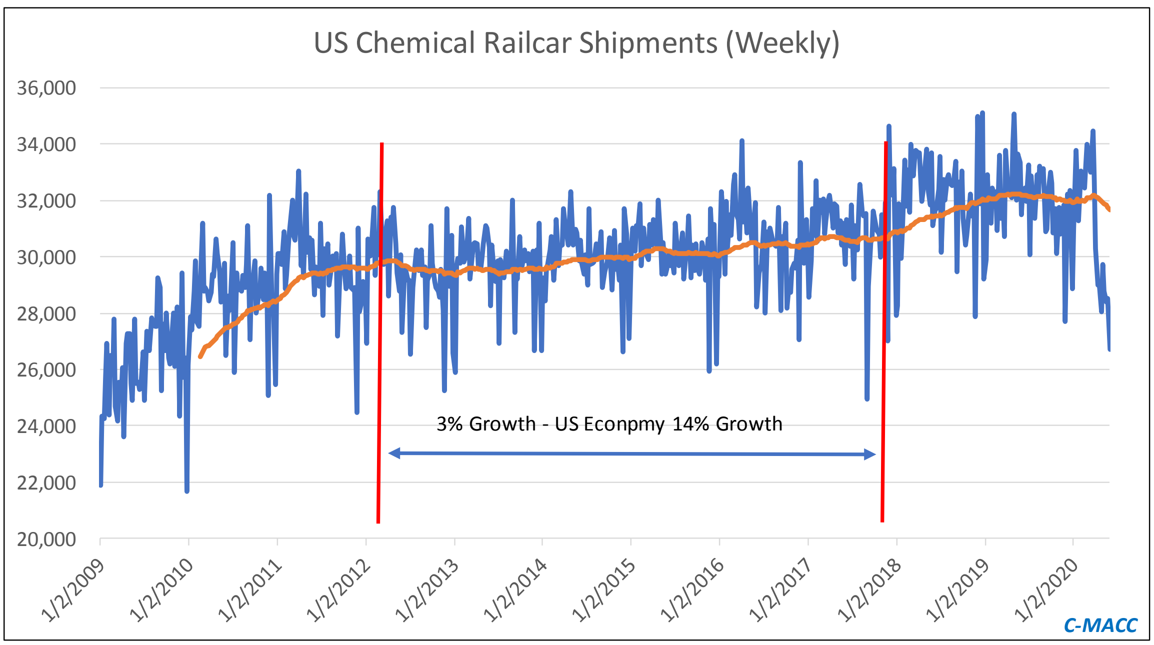
Most of the macro data screams that we still have a demand problem. Even if some trends are improving – like refinery operating rates (**first chart below**) and unemployment – others are not, such as rail car movements (**chart above and second chart below**). But even the better data needs to be put into perspective and also into the context of many chemical producers acknowledging cuts to operating rates to manage supply and inventory with an uncertain demand backdrop – the lack of visibility on this front tends to promote volatility, especially if physical traders are quickly trying to cover positions that they have misjudged.



Source: Bloomberg, EIA & C-MACC Estimates, June 2020

Higher refinery rates are incremental, and not enough to celebrate. Refiners will lose money, and some will face insolvency, with prolonged rates below 85%, and gasoline demand will need to spike in order to offset what are inevitable longer-term issues with jet fuel and some shipping fuel (Cruise Liners). The implications for crude oil demand in these operating rates explain why we remain very cautious on crude pricing, especially given that we should now see a US supply response – many Permian operators generate cash at WTI prices above $30-32 per barrel.

We highlighted the near-term chemical rail car movements (shown in the first chart) in a daily last week. They are now 24% off their peak in March 2020. For context, we have seen a rising trend in rail car movements over the last two years which is coincident with, and as expected, given the level of new investment in chemicals in the US over the last 5-6 years. As new capacity has come on line – starting in late 2017/early 2018, liquid products like ethylene glycol have been leaving the US by ship, directly from the producing site or from a nearby export terminal, connected by pipeline, but most polymers (especially polyethylene) move by rail to container ports. With further new polyethylene capacity coming online in late 2019 and early 2020, the early 2020 increase in railcar movements makes sense. The 24% drop since the March high is more likely a function of falling domestic consumption of chemicals and plastics associated with the lock downs as, despite lower oil prices, the US export window has remained open, albeit at lower margins for many products. In the chart the orange line is a 60-day moving average.

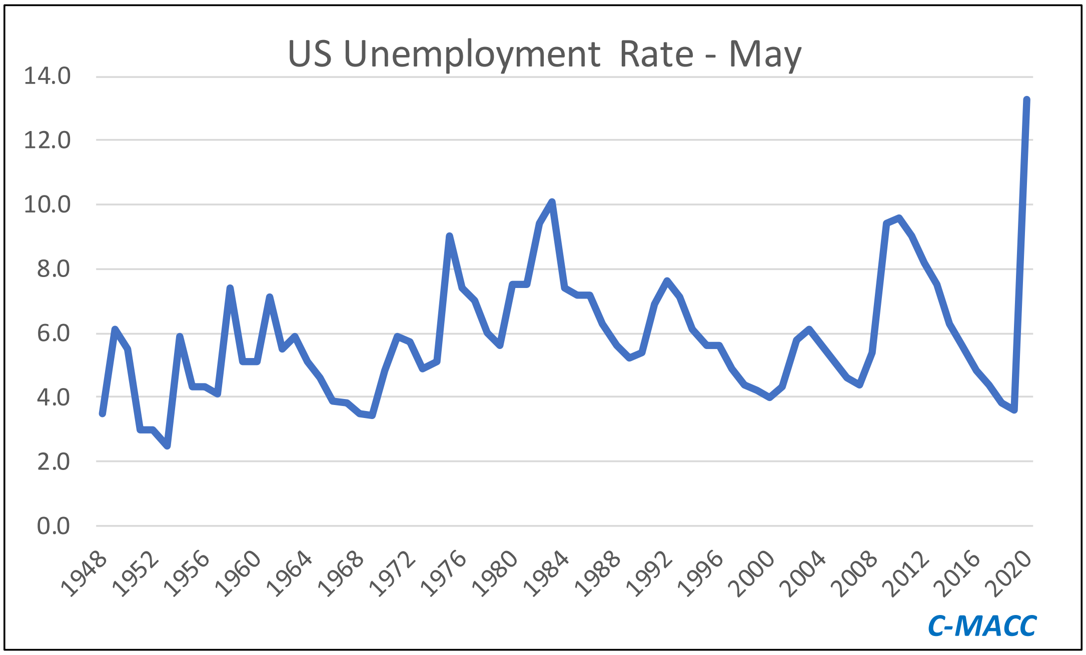


Source: AAR and C-MACC Analysis

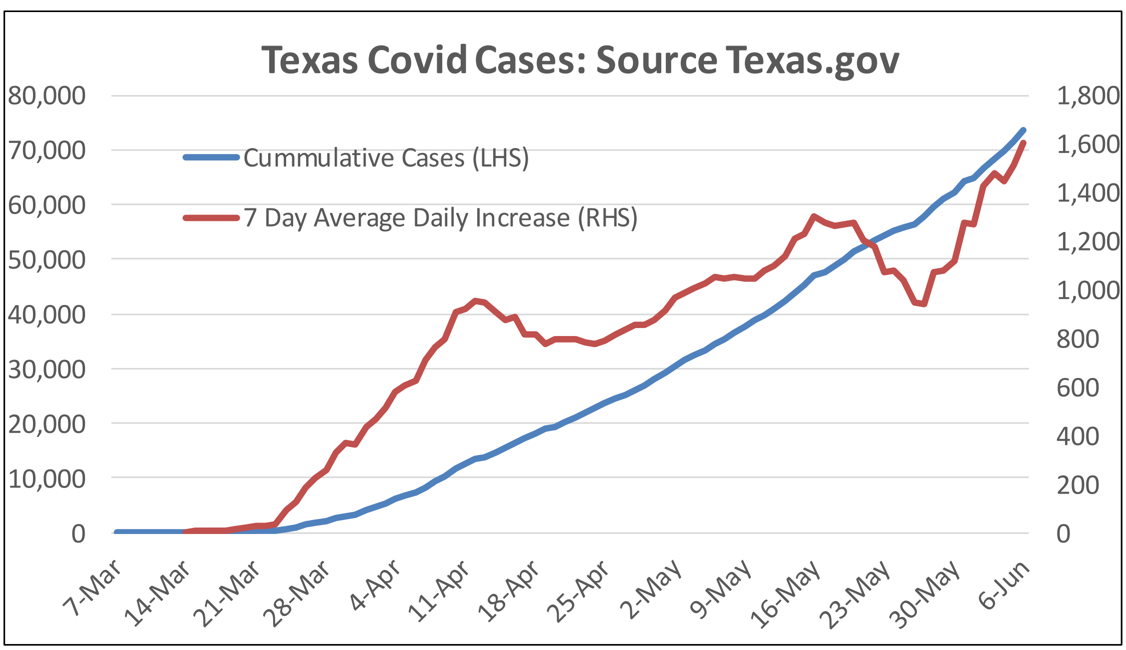
It would be consistent with the enthusiasm around reopening the US economy and with the jobs report for the rail car data to begin to reverse (as well as for operating rates at refineries to improve). The risk for the rail car indicator is that as we see better domestic consumption in 2H 2020 we also see overcapacity globally – see the last two dailies linked below – and the US export window narrows. In the chart above the data suggests that the growth since 2018 has been the result of investment and the increase in US exports. Prior to that the growth was anemic when compared to the overall US economy. While this is not a complete measure of US chemical activity as significant volumes of liquids are moved by barge and there are also truck movements, it is an indicator of the very slow rate of underlying domestic growth.

Other indicators are mixed – unemployment is recovering but remains high – first chart below. Anecdotally, there are far more headlines about companies laying off workers than companies hiring, but that is likely explained by the fragmented nature of the restaurant and hotel industry, and the return of some furloughed workers. The unemployment news this week is good, and we would not want to distract from that, but the announced layoffs from larger companies are likely more permanent and higher paying than the leisure and retail sector, which is driving the near-term reversal. The May unemployment rate is still the highest May rate since the Great Depression.

The other wild card is the re-emergence of COVID - see CNBC article from Friday that highlights where the growth is returning and features Texas, and a Texas chart that we have shown previously, below (note that the last couple of days, not in the CNBC article, have been much worse than previous days). We do not believe that rising rates of infection will change local and federal government plans to re-open (unless rates accelerate dramatically) as the political will to foster economic recovery remains very strong. Rising infection rates may, however, change consumer behavior, slowing returns to restaurants, air travel and hotels.



Source: BLS



Source: Texas.Gov

The Week of June 1 – the link to each piece is on the day/date line & available by clicking on the title

Monday – Weekly Margin and Pricing Analysis

Global Chemical Update – The Chain Gang

- Asia monomer shifts tell a broadly different story than derivative trends. The more obvious explanation points to olefin plant shutdowns in Asia rather than a major bump in consumption
- We discuss shifts in global integrated margins, vinyls and methanol WoW.

Tuesday

When The Levee Breaks – US Methanol Margin Pressure Inevitable; PE & PP Thoughts

- USGC per unit methanol margins have faced downward pressure since March – we see more downward pressure ahead and present our argument.
- Other commodity items discussed today include US polyethylene contract nominations for June and a sizable USGC 2H20 polypropylene addition.
- Other items of note today range from oil-and-gas commentary, to multiple supply chain items worth note, to China demand lagging expectations.

Wednesday

Positive Sentiment Gains Steam With Crude – Most 2H20 Sector Headwinds Remain Stiff

- Brent Crude Oil prices are rising relative to natural gas values – a plus for the US chemical industry and likely to quicken production restarts into 2H20.
- We provide takeaways from the Braskem 1Q20 release and earnings call – we discuss management Q&A comments about petrochemical oversupply.
- Other items of note today range from oil-and-gas commentary, to efforts to re-shore some US supply chains, to the May US ethylene contract settlement.

Thursday

Bracing For A Kick To The PP; China PVC Strength, Methanol Weakness

- We examine the US polypropylene (PP) market ahead of planned increases in US and Asia production and amid mounting propylene supply.
- We discuss increases in China polyvinyl chloride (PVC) spot values since the start of the week and comment to developments in the methanol market.
- Other items of note range from commentary on propane, to length in butadiene, to our keeping an eye on USGC tropical storm Cristobal.

Friday

Firing the Jets – USGC Production Should Surge as Skies Improve in Asia; Lifts Odds of 2H Turbulence

- **Multiple factors (expanding oil-to-gas ratio, surging Asia ethylene spot markets, etc.) move in favor of USGC petrochemical production and export hikes – the current landscape as notably favorable for US vinyl producers.**
- **We discuss supply/demand mismatches leading to commodity price/margin volatility and our view that 2H20 per-unit profit headwinds will remain stiff.**
- **Other items of note today range from oil-and-gas commentary, to concerns with Asia butadiene oversupply, to a possible Westlake vote of confidence.**

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All data for this publication sourced from Corporate Reports, Bloomberg, Government Publications.