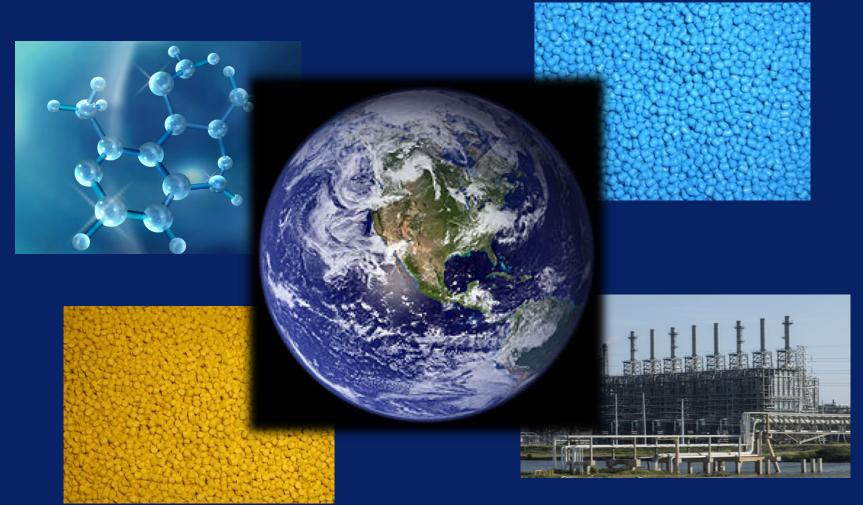
Brainfood for the Plastics Industry

Issue 22.07 – Mar 2022





Market Update

Crude Oil

"It is our opinion that the fundamental supply of crude remains extremely tight and... we expect WTI pricing to average north of \$100/barrel for the next couple of months" (From Brainfood 22.06 two weeks ago when WTI prices were \$96/barrel)

Since March 16, WTI prices climbed to a high closing price of \$115/barrel on March 23 but have since retreated to \$102/barrel as of Tuesday March 29.

When Russia invaded Ukraine many companies decided either voluntarily or through sanctions to stop transacting with Russia for crude oil. These firms included companies and countries that buy Russia's crude oil, the shipping companies that carries the crude oil, the banks that finance the deals and the insurance companies that insure the product. An interesting piece of information is that it usually takes about 3 to 4 weeks from when a deal is booked until the product is loaded. So many firms honored deals booked before Russia's invasion on Feb 24 and therefore large amounts of crude oil continued to flow out of Russia that past few weeks. Now 4 weeks after Russia's invasion, the exports of Russian oil by sea fell to its lowest level in 8 months. Some estimates have Russian crude oil supply down by 2 million barrels/day with some forecasts reaching 3 million barrels/day in the near future. A loss of 3 million barrels/day of Russian crude oil represents 3% of global supply. Russia is the 3rd largest oil producer behind the USA and Saudi Arabia.

Crude oil prices jumped in late February, early March on the news of Russia sanctions and decreased oil output, despite barrels continuing to flow out of Russia over that time frame. Now today, four weeks later, prices have started to retreat despite finally starting to see a significant decline in Russian oil supply to the global market. In our opinion, this makes the market prime for price spikes over the next several weeks. Our estimate is that crude oil will remain over \$100/barrel for the next couple of months.

Natural Gas

Natural Gas prices are up almost 20% to \$5.40/mmbtu on strong exports and solid domestic demand as a result of much colder weather across parts of the USA.

Natural Gas went from being a fossil fuel that the Biden administration looked down upon to one of its greatest stars as a way for the developed world to move away from Russian energy dependence. For example, more than half of Germany's gas imports come from Russia. The Biden administration is working with Europe to shift to USA based natural gas imports and move away from Russia. This has increased the stock price for many USA based natural gas producers.

Market Update

Plastics Feedstocks (Naphtha, Ethane, and Propane)

- Major plastic global feedstock prices are higher over the past two weeks
- Naphtha prices (CIF Japan) are up about 2% to \$960/mt
- Ethane prices are up 6% to 43.5 cents per gallon (cpg)
- Propane prices are up about 8% over the past two weeks to a spot physical price of 141.25cpg in Mont Belvieu, TX.

<u>Ethylene</u>

Ethylene prices in the Enterprise system in Mont Belvieu, TX are lower by 6cpp from two weeks ago to a spot physical price of 24cpp. With ethane prices
remaining high and ethylene prices coming off the past month, ethylene cracker gross margins have reduced to about 5cpp from levels of about 20cpp a month
ago.

Propylene

- Physical PGP prices in Enterprise's system in Mont Belvieu, TX last traded at 65cpp on March 25. Over the past two weeks, physical prices traded in a range between 61cpp and 68cpp.
- The March contract PGP price settled up 10cpp from February for a contract price of 72cpp. BlueClover had previously estimated up 12 cpp for March.
- The month to date calendar average for physical PGP in March is 68.6cpp according to the PetroChem Wire. This brings the spread between physical PGP monthly average and the monthly contract price more in line as contract PGP usually prices at 2 to 3cpp over the physical monthly average.
- BlueClover still believes there remains upside risk for PGP as a result of upside crude price risk, potential for higher propane pricing, and incredibly strong PP demand this month.
- BlueClover estimates 70cpp for the April physical PGP monthly average and therefore estimate up 1 to 2cpp for April contract monomer.

Polypropylene

- Polypropylene prices continue to climb as product is extremely tight. Most producers are sold out of generic prime and there is limited widespec polypropylene in the market. Quality higher melt wide spec Homopolymer resin is trading in the mid 90s for domestic railcars while generic prime is in a range of \$1.10 - \$1.15 with extremely limited offerings.
- Heartland Polymers remains on track to commence production in the later part of the 2nd quarter. Also, Exxon is on schedule to double its PP production in Baton Rouge, LA by the end of this year. These 2 projects, when combined, will add over 2 bil lbs of PP into the market. This is an increase of about 12% to the USA polypropylene market and while these projects are certainly needed over the long-term there should be large amounts of additional supply as they turn on.

Feedstock "Spot" Prices:

Product	Location	Price as of Mar 29	Price as of Mar 15	<u>Unit</u>
Brent Crude	North Sea, Europe	107.15	99.8	USD/barrel
WTI Crude	Cushing, OK	101.12	95.56	USD/barrel
Natural Gas	Henry Hub, LA	5.4	4.51	USD/MMBtu
Naphtha	C&F Japan	960	945	USD/mt
Ethane	Mont Belvieu, TX	43.5	41.125	Cents/Gal
Propane	Mont Belvieu, TX	141.25	131.5	Cents/Gal
Ethylene (Enterprise system)	Mont Belvieu, TX	24.5	30	Cents/Lb
PG Propylene (Enterprise)	Mont Belvieu, TX	65	67.25	Cents/Lb

* Sources – CME, Bloomberg

Inventory

HERO PRIME™				
Grade	Description	Location		
	SOLD OUT			

HERO FLEX™				
Grade	Description Location			
HG3040	30-40 melt Grey PCR CopolymerPP	Midwest		



Trader Toolbox – History tells us that Consumer Price Index over 5% leads to Recessions

Peak Inflation Pre-Recession	Recession Timeline	Length	Magnitude
13.2%	Feb 1945 - Oct 1945	8 Months	-12.7%
19.7%	Nov 1948 - Oct 1949	11 Months	-1.7%
9.3%	July 1953 - May 1954	10 Months	-2.6%
5.8%	Dec 1969 - Nov 1970	11 Months	-0.6%
11.8%	Nov 1973 - Mar 1975	1 Year, 4 Months	-3.2%
14.8%	Jan 1980 - July 1980	6 Months	-2.2%
11.0%	July 1981 - Nov 1982	1 Year, 4 Months	-2.7%
6.3%	July 1990 - Mar 1991	8 Months	-1.4%
5.6%	Dec 2007 - June 2009	1 Year, 6 Months	-5.1%
7.9%	???	???	???

Source: National Bureau of Economic Research (NBER)

There has been a lot of concern recently about how the Federal Reserve will need to increase interest rates faster than they would hope in an all-out effort to stem inflation. Many feel this will force the economy into a recession but that its still necessary. See an interesting op-ed from former head of the Federal Reserve of New York <u>here.</u>

This led us to do a little exploration into inflation and recessions. The above table lists each time year on year Consumer Price Index was over 5% and the ensuing recession that followed. Sometimes inflation would peak directly before the recession and other times it would peak more than a year prior, so its difficult to read too much into the timing.

The most recent print of 7.9% Consumer Price Index year on year comparison was for Feb 2022. The figure for March 2022 (which is due out in April) is sure to pass the 8% mark. This is the highest inflations since the late 1970s which led to an almost 3 year recession in the early 1980s.

Why BlueClover?

BlueClover is the informed sourcing solution—bridging the gap between upstream knowledge, resin procurement and price risk management.



Trusting relationship with a professional distribution company that trades polypropylene across a wide range of qualities at a multitude of price points for both spot and contract business.

Full access to our Price Risk Management Team.

- Work closely with our price risk management team with decades of commodity trading experience to determine when fixed pricing programs make sense for your business.
- Access to BlueClover's internal research and analysis on pricing and industry economics.

Please visit our website <u>here</u> for more information.

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