

Mid-Year Review

International Crude Oil Markets

1 July 2020

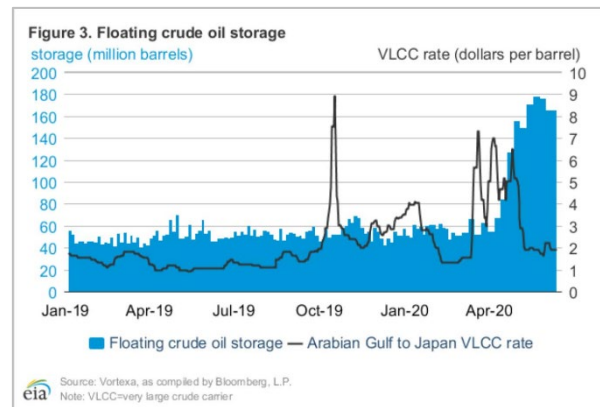
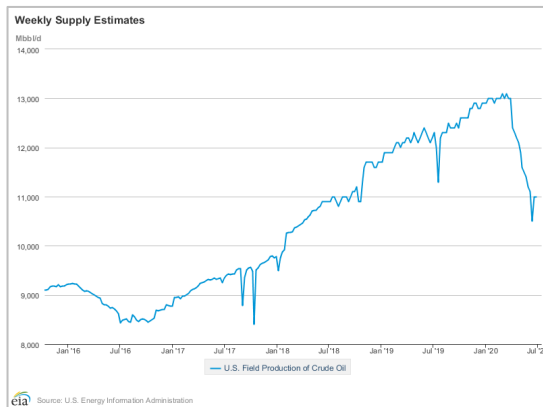
It is an opportune time, having reached the mid-point of the calendar year, to review the current state of the international crude oil markets. Looking back at our report issued at the start of Q4 2019, our analysis is replete with references to typical market drivers like OPEC+ production levels and compliance, expected global economic growth, Iranian sanctions, and US shale oil production levels. In the report we concluded that crude prices would most likely decline in 2020 due to decelerating global economic growth. At the time, we, like many other institutions, did not foresee the occurrence of a global pandemic.

The advent of the COVID-19 pandemic and the resulting global lockdown implemented to slow the spread of the virus was completely unexpected. In short, it is a textbook black swan event. The impact of the global lockdown was a precipitous and widespread drop in the demand for crude oil. During the early part of the pandemic, the US benchmark, West Texas Intermediate (WTI), went negative as incredulous investors scrambled to unwind financial contracts prior to their impending expiration and the requirement to take physical delivery. As the world slowly, and cautiously, begins the process of re-opening, market participants (producers, consumers, and speculators) have turned their focus on the steepness of the expected recovery. Clearly, the steeper the recovery, the faster global crude oil demand will recover. Conversely, the shallower the recovery, the longer, and slower, global oil demand will rebound.

Prior to analyzing the potential recovery scenarios, it is worthwhile to reflect and review the supply side of the market. There can be little doubt that the world's principal suppliers of crude have significantly reduced their daily levels of production: some voluntarily and others involuntarily. The OPEC+ group, which had been curtailing output for the past three years, significantly increased the size of their production cuts due to the COVID pandemic. Moreover, Saudi Arabia (the group's de facto leader) has placed increased emphasis on enforcing compliance amongst the group's notorious overproducers – threatening to re-open the taps should group members fail to make good on their commitments. The United States, the world's largest crude producer, has also seen its daily production levels decline. The drop in US production has not been the result of a coordinated policy, but as a consequence of shale companies capping wells or reducing production levels due to low prices. In short, economics has been the principal driver behind the steep drop in United States production.

On the whole, global production levels have declined substantially; however, the demand destruction caused by COVID has far outstripped these supply-side adjustments. At the peak of the pandemic, it was reported that global crude demand fell by 25 to 30 percent or 25 to 30 million b/d. Clearly, the supply side of the market could not, and cannot, adjust to such a dramatic drop in demand. As a result, excess supply flooded both on-

shore and off-shore storage. By way of example, despite US production dropping by roughly 2 million b/d in the past three months (see, chart below), US crude inventories recently struck an all-time record of 540m barrels – 65m barrels more than a year ago. This increase occurred even though, in this same time period, the US government restarted crude purchases for the country's Strategic Petroleum Reserve (SPR). Another important data point is floating storage. According to Bloomberg reports (see, chart below), floating storage which in Q1 2020 averaged approximately 60m barrels stood at roughly 175m barrels in April. This flood of crude swelling global storage will create a significant overhang for the foreseeable future.



In short, it is clear crude producers will not be able to cut production fast or deep enough to rebalance the global market. As a consequence, the answer to the problem lies with demand. Crude demand must rebound to meet or exceed supply in order to rebalance the market. Resolving the market imbalance is the reason the market participants are focused, mainly to the exclusion of other typical drivers, on the shape of the economic rebound from the COVID pandemic. However, projecting the steepness of the future recovery is the treacherous endeavor. There are too many unknowns. The principal one is the issue surrounding the development and manufacture of a potential vaccine. Putting aside this unknowable (and binary) question, COVID has raised several other important (and quantifiable) issues that will impact the market in the future.

The first is the issue of the changing concept of work in the future. A significant amount of transportation fuel is burned every day, transporting people to and from their places of work. Due to COVID, companies around the world allowed employees to work from home out of necessity. This was the ultimate stress or pressure test of companies' IT and HR systems. Over the course of the past months, what has become clear to many businesses is that for certain employees, there is no real need to have them work from the office. Allowing employees to continue to work from home post-COVID will be viewed as a positive by most employees and provide significant cost savings (rent, equipment, transport costs, etc.) for the employers. The second is the issue of business travel. Pre-COVID, it was customary, and in some countries culturally required, to hold face-to-face or in-person meetings. As a result, businesses spent vast sums annually supporting employee travel, which was one of the most lucrative verticals for travel related companies – i.e., airlines, hotels, etc. The COVID pandemic forced businesses to adopt video conferencing (Zoom, Teams, WebEx, etc.) solutions and accelerated the global acceptance of these business communication tools. As a result, global air travel is not expected to rebound to prior (2019) levels for several years. Finally, the COVID pandemic has refocused many governments and businesses on the importance of sustainability. A simple example is the fact that many

government support programs for businesses impacted by COVID include strict sustainability as well as financial and governance policies.

Taking all of these factors discussed above into consideration, we believe that even in the best case, a robust recovery from COVID due to a break-through therapeutic or vaccine, the global crude market will most likely remain fairly subdued trading between \$55 to \$65 per barrel in the second half of 2020 and into 2021. Our view is based on the view that even under these circumstances the market will be weighted down by the significant overhang of global crude storage and demand will not rebound to prior levels due to changes in accepted business norms (i.e., more employees working from home, less travel due to video conferencing, etc.) and accelerating sustainability initiatives.

In the event of a progressive or gradual recovery, which is our base-case scenario since handicapping the likelihood of the development and manufacture of a vaccine is outside our area of expertise, we would expect the global crude market to trade in the range of \$35 to \$45 per barrel.

Finally, where there is a second wave of COVID spread or the global economy finally succumbs to the record increase of both public and private debt, we project that crude prices would trade in the range of \$20 to \$35 per barrel. We have summarized each scenario below.

Recovery Type	Description/Trigger	Expected Price Range (2H2020 and 2021)
Robust (v-shaped)	A sharp, fast rebound caused by the early discovery of a therapeutic or vaccine to defend against COVID-19.	\$55 to \$65
Progressive (nike-swoosh)	A slow, gradual recovery as the globe adjusts to a Post-COVID world.	\$35 to \$45
Flat (reverse square-root)	A resurgence of COVID infections (second wave in the fall) or global economy finally succumbs to record public and private debt.	\$20 to \$35

As you will note, presently, we do not foresee a recovery scenario where for the remainder of 2020 and 2021 crude oil prices approach, or eclipse, the \$100 per barrel level. After decades of observing the international crude markets, we have learned to never say never – however, we could only see crude prices regaining this elevated price level in the event of a far-reaching geopolitical event materially impacting supply of crude from the Gulf region.