AA View

Oil flows into the void?

Summary

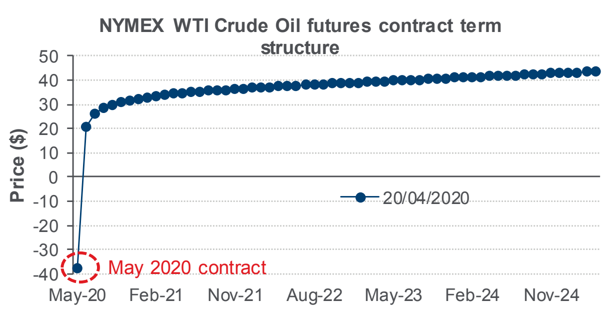
- Oil prices started to fall when the virus outbreak triggered a sharp fall in oil demand while supply stayed unchanged. Saudi Arabia and Russia were too slow in agreeing production cuts to balance an oversupplied market.
- However, the advent of negative prices in WTI Crude oil was driven by technical factors rather than fundamentals.
- Record storage levels continue to weigh on prices, distorting the WTI futures market
- Near-term, oil prices are likely to stay under pressure as long as storage capacity is nearly full.
- The US oil industry will be the first casualty, especially shale producers
- Though some recovery from very depressed levels should occur as lockdowns lift, the limits to oil price upside appear increasingly important as we look forward.
- The COVID crisis is shortening global production chains which will limit demand. More important is the likelihood that climate-aware policy makers will use the aftermath of the COVID crisis as a window to further limit fossil fuel use. Pre-COVID demand conditions are unlikely to be reached, which puts a lower ceiling on the oil price.

What happened to oil prices?

For a few hours last week, WTI Crude oil was trading at a negative price, reaching -$40.32 per barrel, settling at $-37.63 on the 20th of April. This was the first time that prices have gone into negative territory since WTI futures contracts started trading in 1983. We are not referring to spot prices here, but prices for delivery in the future – the New York Mercantile Exchange (NYMEX) futures contract.

As a reminder, oil futures contracts are an agreement to buy a specific quantity of oil at a predetermined price at a specified time in the future. In other words, whoever buys an oil futures contract has the obligation not only to buy but also to physically receive the crude oil when the futures contract expires. On the NYMEX, there are WTI crude oil futures contracts available for many months ahead, and it is only the May 2020 contract price that fell into negative territory (Chart 1 below).

Chart 1 - Only the May 2020 Futures contract went negative



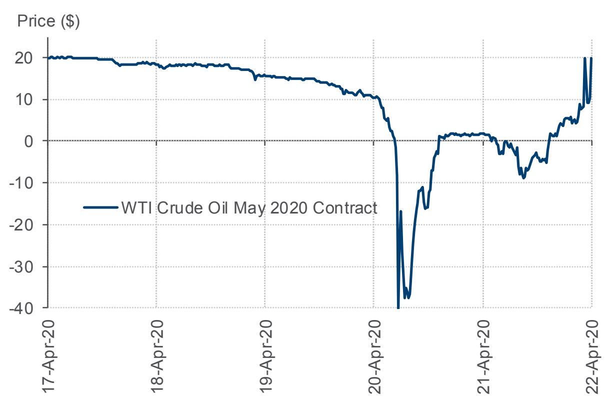
Source: Bloomberg, Aon

Usually when a futures contract buyer wants to avoid the delivery of the corresponding physical oil, he must sell the contract before expiry. This is usually a smooth operation but selling oil has not been quite so easy this time!

On the 20th of April, the market was overwhelmed by supply

According to the CME Group, the total open interest for the May 2020 contract was slightly more than 108,000 as at Friday 17th, and the final trading day for this contract was on April 21. This meant that a total of 108 million barrels needed to find a home before April 21. The issue on the 20th of April was that holders of long contracts could not find buyers who wanted to receive or was able to store that delivery. Because of this, the only available option was to compensate the buyer for storage costs. This eventually resulted in the holder paying the buyer to take on the costs, hence the negative price (chart 2).

Chart 2 – Contract holders pay the buyer to close their positions before expiry

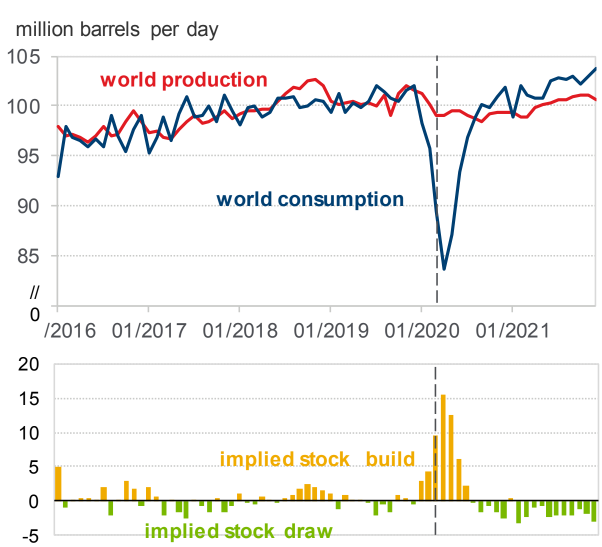


Source: Bloomberg, Aon

Demand, Supply, and Storage…

Since the Covid-19 outbreak, oil consumption has collapsed - it is estimated that it has caused an approximately 20%-30% of aggregate oil demand at a time when producers have continued to pump record levels of oil (see chart 3).

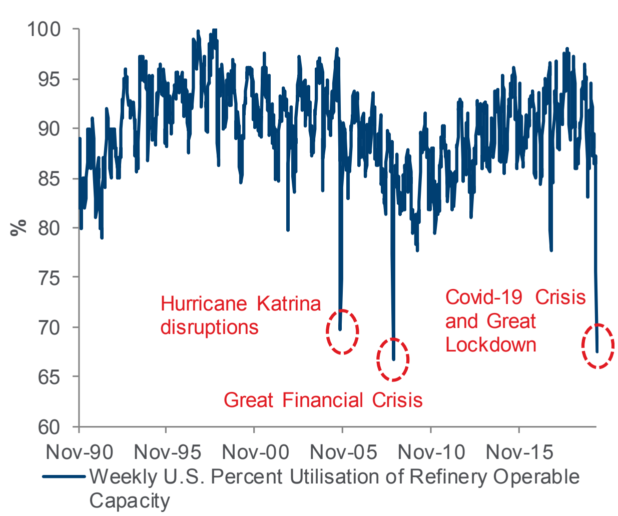
Chart 3 - Oil consumption falls sharply in the space of 3 months



Source: U.S. EIA, Short-term Energy Outlook, April 2020

Clear evidence of this fall in consumption can be seen from the US refiners' utilisation as a percentage of operable capacity. This has fallen from 95% to 68% from the end of 2019 to the 17th of April 2020. These levels have been seen only twice over the last 30 years - In the aftermath of Hurricane Katrina and during the Great Financial crisis. In volume terms, this fall represents almost 5 million b/d (see chart 4).

Chart 4 - US refiners' activity fell by more than 25% in just a few weeks



Source: Factset, US Energy Information Administration, Aon

This sharp decrease in consumption was not enough on its own to explain negative pricing. The other side of the coin has been substantial supply, even in the face of large cuts in production. On the 9th of April, OPEC and non-OPEC allies agreed to cut their production output by 9.7 mbd, a record amount, from May the 1st for a two-month period. While this amount is substantial, it was insufficient against the estimated 20-25mbd loss in demand due to the Great Lockdown. We had, and continue today to still have, an over supplied market.

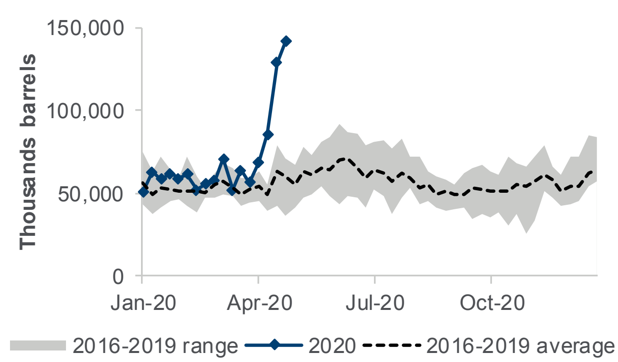
Oil is a physical commodity, so when the market is oversupplied it must be stored. Oil producers have continued to pump so much oil so that global inventories have been rising very quickly (see chart 5) and storage capacity is becoming stretched, especially in the US. Any additional storage comes with logistical difficulties and higher costs. This has been a big driver in prices turning negative. Three examples illustrating the situation are:

1.The amount of oil stored on ships at sea has increased by more than 150% between the end of March and the 24th of April, reaching 141 million barrels (see Chart 4).

2. Data as of the 24th of April were showing that the Oklahoma Cushing storage hub was 83% full and we estimate that there was space for only 13 million barrels or, put another way, there is only 3-4 weeks' worth of storage capacity remaining, given current inventory growth.

3. Bloomberg reported that "*refiners in India, the world's third-biggest oil consumer, have filled 95% of about 85 million barrels of fuel storage capacity*".

Chart 5 - Global Oil Floating Storage is off the chart



Source: Bloomberg, Aon

Looking forward, these three factors, demand, storage, and supply look unlikely to alter significantly. Demand will be driven by the evolution of lockdowns and the virus. Storage will likely remain constrained as it cannot be magically created in short amounts of time. This leaves supply as the swing factor. Here we believe that the likelihood of further immediate cuts to production could be limited. Firstly, cutting production is not as simple as flicking a switch – it is very technical, costly, and can damage the assets' future production capacity. Second, further geographic cooperation to achieve agreed cuts might be limited. We should not forget the tensions between Saudi Arabia and Russia during the March OPEC meeting which led to a price war. We think that the oil market is now entering a new phase of heightened geopolitical tensions, since the US, Russia and Saudi Arabia are likely to hold their ground.

With another large supply cut unlikely to come to the rescue in the near-term, continued demand weakness and storage limitations, it means that we cannot remove the possibility of seeing negative WTI crude oil prices again for the June 2020 contract. At least, prices are likely to continue to be under pressure near-term.

It takes two to Tango, not three

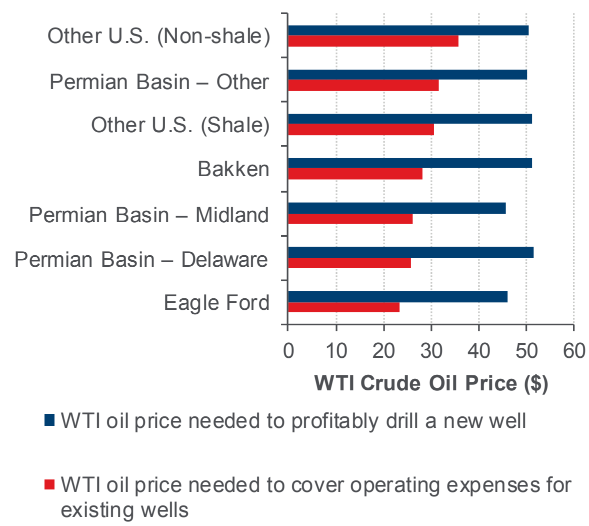
The consumer is the clear-cut winner from the situation except that this only helps mute the hit from the Corona virus to jobs and incomes. From the oil industry point of view, there are no winners from this situation. Saudi Arabia, Russia and other oil producing countries will face severe economic consequences from the price collapse and could be forced to reduce public spending or accept big increases in budget deficits. Brent prices are currently trading slightly above $20 per barrel, a level significantly below their estimated fiscal breakevens, which are around $40 for Russia and $80 for Saudi Arabia. Because the US oil industry is now no longer a negligible share of its economy, there is a hit here as well. According to the American Petroleum Institute, the Oil & Gas industry now represents more than 10 million jobs and 8% of US GDP.

In only a few years, the US has become not only energy independent but also the world's largest oil producer, reaching a record level of output of 13mbd. This has shaken the prevailing order in the black gold market.

However, weak oil prices have exposed the US Shale industry to major difficulties today. US oil producers have already started to scale back massively – between the 20th of March and the 24th of April the number of active oil rigs has fallen from 664 to 378. This is the first sign of further reduction in US production.

Furthermore, we estimate that aggregate US exploration & development capital expenditures will fall by 30-40% this year. Financing difficulties may well mount for the key players now, according to an early March Dallas Fed survey. The current oil price is too low, not only to drill new wells but also to cover operating expenses for existing wells for shale oil producers (see chart 6). In this context, even if the Trump administration is considering aid for oil firms, highly leveraged US producers cannot survive a long period of depressed oil prices.

Chart 6 – Shale oil producer are in big trouble with the WTI price below $20



Source: Dallas Fed Energy Survey March 2020, Aon

There is no doubt that if prices stay low long enough, most of the supply adjustment will come from the US as oil production and exports will continue to decline. Ultimately, we think that the US will lose market share, which should restore some pricing power to OPEC, and Russia to some extent.

What next?

Even if WTI and Brent prices are down almost 70% and 60% respectively year-to-date, we believe that the oil market will remain volatile and under pressure over the near term. Indeed, we do not see any change to this until there is some loosening in lockdowns. Once we have more clarity on when the economy is likely to restart, this could trigger a rise in oil prices on the back of rebalancing expectations. That being said, this rebalancing is likely to be slow as it will take time to absorb the large inventories that will have been built. We believe Saudi Arabia and Russia will continue to manage their production output carefully so as not to weaken further the oil price. Any additional cut from OPEC+ could accelerate the rebalancing, but we may need to wait for the June OPEC meeting before we see any material change on this front. Over the medium-term, we expect a more balanced market, which will ultimately support the oil price.
Nonetheless, although we believe oil prices are likely to start creeping higher during the second half of the

year, over the next 12 to 18 months any upside would still be limited to a range of $35-$45.

COVID's aftermath likely to limit crude upside significantly

Price upside from today's levels is, however, taking only a partial view of the demand-supply balance in the oil market based on pre-COVID, i.e. 'normal' conditions. However, the aftermath of the COVID crisis brings two potentially important effects which are working to limit the demand and price upside for crude oil.

- First, the COVID crisis has highlighted the risk of strong dependency on international supply chains. It is very likely that production chains will shorten, which would localise production and reduce crude oil demand from international aviation and transport and generally make global production (across most product lines) less energy intensive.

- Second, and more important from a somewhat longer horizon of the next 5-10 years, there is an impact from the marked change in public policy over the urgency of the need to act on climate change. Governments could use the COVID crisis as an opportunity to ensure that at least some part of the decline in emissions we are now seeing remains in place even as lockdowns lift. This means a higher possibility of a stepped-up transition to a low carbon economy than before the crisis. This will very likely lower the demand for oil going forward, creating strengthening headwinds for the oil price and the oil industry over time.

Both these factors suggest that though some price recovery from current very low levels will still likely occur as the COVID crisis eases, over the medium to long term a lower 'equilibrium' price will prevail. The climate change issue and policy measures to limit fossil fuel use will likely be the stronger factor limiting oil price rises as we look forward.

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