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The Opportunity For Supply Chain Evolution Amidst the Oil Price Crash and a Halted Economy

Amidst the once in a lifetime events we've endured in recent weeks, the simultaneous crash in prices across asset classes is one of the most notable. The US Dollar has been the singular beneficiary of the volatility and the worsening COVID-19 pandemic. Extreme levels of fear in financial markets indicate that this is likely to continue. The breathtaking collapse in the oil price, ignited by the desire of the Saudis and Russians to control the oil price and wipe out US shale, is also indicative of stagnant growth in the global economy. It remains to be seen if lower oil prices really are the "tax cut" consumers receive via lower gasoline prices given the sudden stop in the global economy.

This geopolitical tussle is an important one as the oil price, perhaps one of the most watched metrics in the world, holds sway over costs in just about any industry. Forecasts for oil prices on the downside range from

the mid-teens or, at an extreme, single digits with an upside target in the \$40/bbl range that would make most of the major players content. The trajectory of prices is dependent upon the ability of OPEC members and Russia to play nice and the ability of the global economy to get back on its feet after the worst of COVID-19 has passed.

WILL LOWER OIL PRICES FINALLY KILL EVs?

As discussed two weeks ago, this is the second in a series of posts about the themes of de-globalization and the re-building of supply chains in a world irreparably changed by trade wars and post-COVID-19 economics. EV skeptics have re-emerged, calling the one-two punch of a collapsed oil price (down 60% YTD) and global economy on the verge of a deflationary bust a mortal blow to the transition towards increased EV penetration.

EV sales in China fell 77% in February and it's clear that wider EV adoption will now be delayed (but not denied) by a timeframe measured in months to years. EV sales numbers should disappoint in the rest of the world in the coming months as concerns over emissions take a back seat to consumer concerns around their household balance sheets. More broadly, global auto sales in 2020 are forecast at roughly 78 million units, down from a previous forecast of 90 million, a decrease of 15%. So as the entire market for automobiles shrinks, EVs, with their higher price points, ought to see demand contract at a similar rate. The other side of this coin is that when the demand for automobiles does recover EVs should be able to gain additional market share due to superior ownership economics (discussed below).

Labeling the EV thesis discredited is shortsighted for two main reasons: oil price volatility which affects total cost of ownership (TCO) and relentless cost deflation in batteries.

Volatility in oil pricing can translate to pain at the pump. Oil prices at \$140/bbl and oil prices at \$20/bbl are two very different scenarios and can alter your value proposition on the purchase of a new car significantly. Crude oil is one of the worst performing commodities in 2020 and the volatility is there for all to see. Should we really expect booming auto sales or increased gasoline consumption thanks to lower oil prices? Volatility breeds uncertainty.



Source: Bloomberg

The five-year chart of WTI (above) shows what happens when a cartel controls the pricing of a critical commodity. Add in the disruptive effects of US shale on the global market and volatility in pricing becomes much easier to understand. Though this has pulled down gasoline prices (the EIA shows a blended gasoline price of \$2.12 per gallon, down 20% from a year ago), this isn't the reason behind the

sales slowdown in EVs, with the main factors being the spread of COVID and EV subsidy cuts in China.

THE DOWNWARD SPIRAL

The other argument in defense of EVs (and more broadly energy storage) is that the lithium ion battery price in \$ per KWh continues to fall.

While lithium ion battery prices won't fall to zero, a deflationary cost crash of 85% since 2010 according to BNEF is clear evidence of the trend. Low raw materials pricing in the coming years and Megafactory-scale buildouts indicate that the TCO will likely be more advantageous for EVs versus their competitors in internal combustion engine cars (ICE) in the long run, perhaps by mid-decade.

To be fair, the low oil price and stresses on consumer balance sheets mean that "cost parity" or that moment where an EV is cheaper to own than an ICE has been delayed perhaps by a couple of years, but it's hard to see how it could be denied with a veritable armada of national governments and auto manufacturers intent on decarbonizing transport in all its forms.

As the battery accounts for around 30% of the cost of the EV, lower battery pricing through scale and improving technology ought to make a compelling case for fleet-level sales of EVs and longer-term individual consumer demand.

Improvements in battery technology continue apace with news recently of LFP batteries in China, left for dead as recently as a year ago, now looking like they won't be pushed into obscurity as shorter-range EVs in the country can utilize the improving battery technology despite not qualifying for state subsidies.

With more predictable pricing along the EV supply chain for raw materials and batteries, the rationale for rebuilding supply chains regionally becomes stronger.

THE SILVER LINING

If there is any silver lining to the twin humanitarian effects of COVID-19 and a global economy almost certain to buckle under a sustained recession, it is this:

Companies and investors along the electrification supply chain now have a window to properly allocate capital and fund a robust and localized supply chain centered on resilient and cleaner transportation and energy use.

The shocks from COVID-19 and the oil price collapse will be felt for some time. One surprise could be a smaller automotive sector and a slower uptake of EVs, led first by fleet sales. It is impossible to know with certainty what the world will look like when we emerge from the current lockdown and longer-term effects of a potentially lengthy recession, but the opportunity now is to fund critical parts of the supply chain including raw material suppliers and technology providers that can push the limits of battery technology while lowering costs, proving again that technology is indeed a beneficial deflationary force.