The Disruptive Discoveries Journal

Analysis of how disruption in commodities, geopolitics, and macroeconomics converge to create opportunities

January 26, 2016

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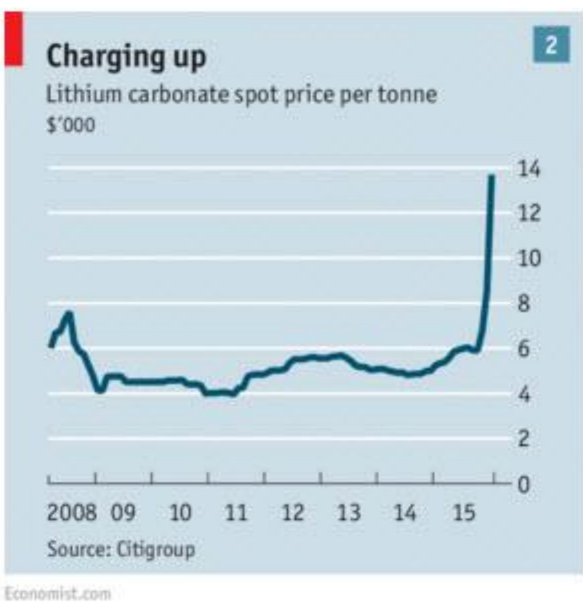
Forecasting Lithium in 2016: What are the Salient Issues?

If recent mainstream media, sell side, and newsletter writer coverage wasn't enough to convince you, it is all but obvious that lithium has emerged as an investible asset class for 2016 and beyond as the broader commodity sector continues to struggle with overcapacity and slack demand. While the excitement is born of strong growth in technologies requiring lithium (mainly electric vehicles and energy storage), the real reason for investor excitement boils down to one issue: price.

As The Economist shows, the lithium carbonate spot price has gone parabolic.



In a recent note, we opined:

"Lithium prices have spiked alarmingly of late and this gives us pause as historically any parabolic price spike typically ends in tears for investors. That said, while prices could soften somewhat, strong demand and increasing questions around supply lead us to believe that lithium price downside is limited."

The real positive here is that even if prices to moderate, which they will, higher lithium chemical prices should remain with us through 2017 until adequate supply can enter the market. This will most likely come from Australian spodumene sources or South American brines each of which likely have similar odds of success. Rather than drone on about supply tightness and healthy demand (which we have discussed many times before here, here, here, here, and here), the point of this note is more philosophical and intended to offer insights into how to view the lithium space out over the next 18 to 24 months. In short, what are the salient points in the lithium industry currently?

- The first point (and this will no doubt drive economists crazy) is that price doesn't matter. Specifically, a focus on the rising lithium price is misplaced. While it's encouraging to see lithium carbonate and hydroxide prices spiraling upwards, the oligopolistic market structure ensures that only the established players like SQM (SQM:NYSE), Albemarle (ALB:NYSE), and FMC (FMC:NYSE) should see margin expansion from higher prices as their fixed cost structures are in place and variable costs are falling due to a mixture of lower oil prices and currency depreciation. The only lithium plays that will join this oligopoly in the future are those that can prove their project economics can match or beat the established producers.

- A major question concerns China and thankfully the question doesn't revolve around the country's slowing economic growth rate. Rather, a grasp of the situation with Chinese lithium producers and converters is crucial as the supply pinch and resulting price spike is due to the inability of Chinese converters to get their hands on adequate lithium supply. With ALB and Sichuan Tianqui (002466:SHE) controlling the Greenbushes hard rock deposit in Australia in a 49%-51% split (through ALB's acquisition of Rockwood), the product from the mine that formerly went to converters in China, now stays within the ALB/Tianqui supply chain. This means that longer-term security of supply is an issue and is also no doubt why Galaxy Resources (GXY:ASX) and Mitsubishi and Neometals (NMT:ASX) and Jiangxi Gangfeng Lithium Co (002460:SHE) have consummated off take deals in the recent past. You can expect to see more like these as the lithium market tightens. Gaining a familiarity with the Chinese lithium value chain (the players, market penetration, supply chains) is a must.

- Third: Where else along the lithium value chain can one invest? A brief look at the operating margins of the lithium ion battery manufacturers tells you batteries are a terribly low margin business driven by volume. What about other parts of that supply chain? The separator business looks appealing at first glance and we are conducting more due diligence on the sector currently. For those unaware, the separator in a battery is a porous membrane which "separates" the two electrodes in a battery while also providing for electrical conductivity. As the need to transfer lithium ions between the positive and negative anodes is a crucial function for a battery, we see the separator as equally, if not more, crucial to the successful build out of lithium ion supply chains. More to come on this…

- Further to this last point, keeping tabs on technological advances in battery chemistry is a must. It has been interesting to note how phone calls I receive nowadays have shifted from pitches on various mineral properties to pitches on various technologies. There are at least a dozen battery chemistries all competing for attention (and dollars) and the challenging issue is that some chemistries are better suited for certain end uses than others. They each have their place, but demand that you do your homework on the relative size of each end market. We do think that the new form of "discovery" in the current economic environment going forward won't be based on high grade resources, but will be based on technologies that lower production costs. Technology is indeed deflationary in nature and will continue to redefine how energy is generated, used, and stored.

While there are more issues that come to mind, these appear to be the most salient at this point in the cycle. We still believe lithium, cobalt, and scandium - late cycle commodities - offer the most exciting prospects as the worlds of natural resources and technology converge going forward. Seemingly endless streams of bad economic and geopolitical data won't change that as we think these industries are small enough to weather the volatility. We will be writing more shortly about the macro forces serving as both headwinds and tailwinds amidst this convergence.