

THEMATIC INVESTING: URANIUM

THE END OF THE BEAR MARKET

We believe the **uranium** market currently presents one of the best asymmetric risk/reward payoffs we have seen in commodity markets. The unprecedented level of supply curtailment is likely to have significant upward pressure on the uranium price in the coming years. For the reasons outlined below, we have allocated a sizable portion of the funds assets towards this thematic and believe our investors will see strong performance as the supply/demand forces push the uranium price higher.

Major Catalysts for Price Increase

- 1. Cameco McArthur River is currently closed. It's highly likely it will be put into care and maintenance until price recovery ($\sim 10\%$ of global uranium production).
- 2. Cameco needs to buy \sim 8m pounds of Uranium in the spot market to fill their long-term contracts (\sim 4% of global uranium production).
- **3.** YellowCake IPO raised US\$200m to buy physical uranium, taking around 5% of global supply out of the market.
- **4.** KazAtomProm have cut production by 20% (they control 40% of global uranium) and are looking at an IPO in 2018/19.
- 5. Japanese reactors are turning back on along with strong demand from China who are building new reactors.
- **6.** Long Term Uranium contracts rolling off will see significant buying from utilities looking to stock pile uranium.
- **7.** S232 Petition in the US likely to see tariffs or further tightening in uranium market as national security could see US focusing on stockpiling uranium.

Investment Thesis

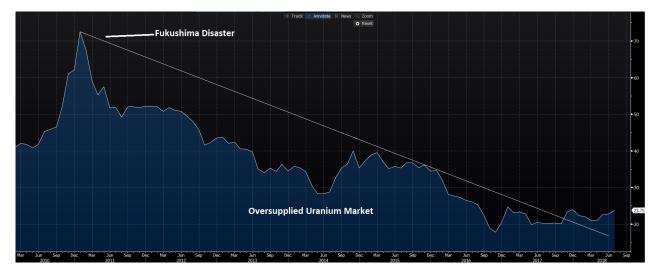
Commodity markets always trade in cycles and are driven by either supply, demand, or both. After a bear market, a bull market follows and it's about having the foresight and fortitude to capitalise on these opportunities. Right now, we believe Uranium will be the next commodity to see significant price appreciation.

Often it can be quite hard to feel the bottom of a market as it can be quite subtle, but after a brutal 7year bear market in Uranium, the supply side has, and is continuing to tighten. It is this contraction on the supply side that should primarily drive higher prices in the spot market for uranium. The sheer magnitude of these supply cuts should have a dramatic impact on the uranium price in the coming years.

It is estimated that between 20-25% of the world's supply of uranium has been removed from the overall market from mine closures and hedge fund vehicles such as Yellowcake buying and storing physical uranium. The size of this supply curtailment is almost unheard of in commodity markets. When other commodities such as zinc, coal or oil see $\sim 5\%$ supply cuts, the underlying commodity price can rise by anywhere from 50% to 300+% in the coming years. We believe a similar move is forthcoming in the uranium market.



As the chart below shows, the bear market for uranium appears to be bottoming as the next cycle begins to evolve.

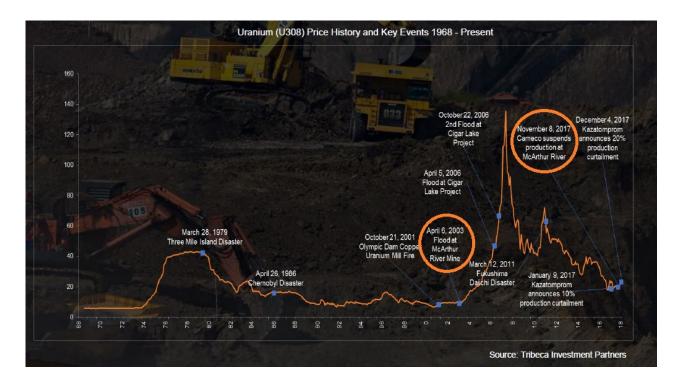


Oversupplied Uranium Market

The below graph is a longer-term view of the Uranium market with previous supply/demand events. We have circled the last time McArther River was closed due to flooding and the current production being suspended in November 2017.

Uranium previous supply/demand events



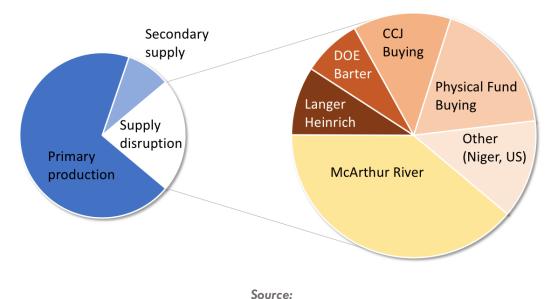


Supply & Demand

Before the Fukushima disaster, prices of uranium touched as high as 140/lb. Yet the current price of uranium in the spot market is around \sim 23/lb. With average mining costs of around 40/lb needed to profitably mine uranium – there has been no incentive to invest in the sector. Now that long term supply contracts are rolling off, the miners are refusing to write new contracts at these price levels. Instead, they have taken a unified stance and curtailed supply, put mines on care and maintenance to limit the available supply and force prices higher. As the supply of a mine is finite, you can only dig it up once. It doesn't take a genius to work out that you can't run a business profitably if you sell material at \$20 when it costs \$40 to produce.

Without investment in new mines, the supply side is looking extremely thin and there are several disruptions set to tighten this supply even further. The below image shows the anticipated global supply disruption that is forthcoming to the uranium market. Major mine closures and buying of physical uranium in the sport market will further diminish the available supply - forcing prices higher.





https://www.linkedin.com/pulse/uranium-supply-catalysts-price-inertia-extreme-volatility-munro/

Forecast & Cycles

We are big on cycles, and these supply/demand imbalances don't resolve overnight. Mines take many years to get through the exploration, development and ultimately production phase. It is this lag between supply and demand that causes rapid price increases in a commodity as buyers scramble to purchase what supply is available in the current market. This typically sees commodity prices 'run' for around 2-3 years from the low to highs, obviously depending on the supply response.

The below charts show some of the more recent 'hot' commodities. The typical run from low to high is around 2 years. During this period the market realises the supply/demand imbalance and new mines begin construction, old mines refurbish, and more material eventually becomes available to the market. However, higher prices are needed to encourage investment in the sector and this is why the uranium price could quite comfortably see 200-300% price appreciation back towards \$60-\$70/lb in the near term.

'Hot Commodoties' 2 year run



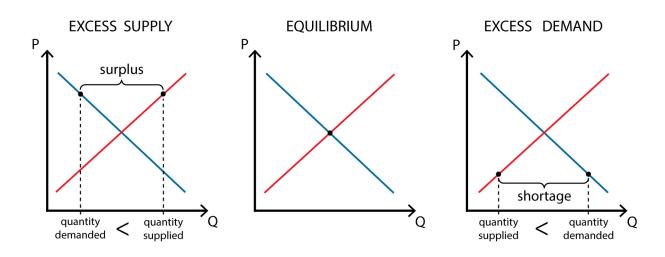


Looking specifically at the Zinc market, it's a clear supply/demand response. As supply increases, the price falls. As this supply is absorbed, the price increases. While this is a simple view, we believe it demonstrates the supply/demand drivers at work in commodity markets.

Economics 101







A deficit, when it comes, is going to need that new supply quickly and there is no new supply that can come on in a short period of time to meet it.

Utilities & Buying

The major purchasers of uranium are utilities (power plants). These utilities typically contract over longer periods (7-10 year cycles), many of which are rolling off. With steadily increasing demand for uranium, it is this contracting cycle that could see rapidly appreciating uranium prices.

A material fact is that the cost of uranium as an input to run a nuclear reactor is estimated to be below 5% of the cost in operating a reactor. However, these power stations are unable to turn a reactor off and the ramifications on the power grid would also be material. Therefore, as an input the price a utility pays for their supply of uranium is not as important as having the available supply. These utilities will typically hold 2 - 3 years of uranium fuel in supply. With the current constrained supply environment, a frenzy of buying may materialise as these contracts roll off and utilities begin to panic buy.

The fact that price is not a material input means the price of uranium can appreciate many times over before it would see demand decrease. Typically the uranium market is driven from the availability of supply.

Conclusion

We believe that the uranium market presents one of the best asymmetric risk/return set ups to investors. The fact utilities must have supply of uranium available, right at the time when supply has tightened, it's very difficult to imagine the price weakness in uranium will continue.

This thematic is beginning to receive a lot more publicity and as more investors begin to catch on, the underlying price of uranium and related mining stocks should appreciate. Our fund has focused investing across physical uranium as well as low cost restart mines, while having some smaller exposure to developers in good jurisdictions (Canada/US/Namibia). We believe some of the best gains will be made in the Canadian and US names due to the potential for the S232 proposal being approved. This would likely cause a significantly higher spot price being achieved in the US and potentially Canadian mines, as utilities are forced to purchase from domestic suppliers.



For new investors interested in having exposure to this thematic through our fund, you can invest by contacting us directly $- \frac{admin@fiftyonecapital.com}{admin@fiftyonecapital.com}$.