Rare Earths: The Issue and Some Investment Implications

The years of the Great Moderation had lulled us to sleep. The modern, dynamic, global economy has many vulnerabilities. The ongoing crisis demonstrates the fragility of the financial sector. High food and energy prices are also threats. Another vulnerability has come to the forefront in recent weeks. Many goods that use modern technology - such as hybrid cars, computers, mobile phones, precision-guided weapons, radar, fluorescent light bulbs, and wind turbines - require chemical elements that are scarce and expensive. The growing global dependence on these elements is not well appreciated by most; including many policy makers and investors.

Rare Earths

There are about seventeen elements known as "rare earths". Currently China is the primary source, supplying approximately 95% of all the rare earths being mined. China has understood the significance of its supply of these elements, even as the advanced industrialized countries built economies and life styles based on them. Deng Xiaoping observed in 1992 that while "the Middle East has its oil, China has rare earth." Where ever he is, he must be scowling when foreign officials (and pundits) lecture China about what is in its interest.

China's domestic consumption of rare earth's has risen in recent years, now aborbing about 2/3 of the world's production. Mining these elements, primarily in the Southeastern part of the country, has taken a horrible toll on the environment. Some Chinese officials argue that greater regulation/control of the rare earths is needed to avoid environmental ruin and reduce illegal exports. In some reports, there is also a mention that given their importance, the price of the real earths should be higher. Other reports suggest that China should move up the value-added chain. Rather than exporting its excess supply, it should instead manufacture the motors and magnets and other products that require the rare elements.

In 2009, a draft policy document was reportedly circulated that called for a ban on exporting some of the rare earths that are in the shortest supply. A few months ago, China's Commerce Ministry announced a cut in export quotas for rare earths by 72% in the second half of the year. In a recent dispute with Japan, for example, reports indicated that China had stopped loading shipments of rare earths headed for Japan. Of course Chinese officials have denied this, suggesting that it was more a case of local customs officials acting independently.

Fist in a Velvet Glove

In some ways, intentions do not matter. China's power was nakedly exposed. Now there must be a response, and therein lies the space for policy makers and investors. The US was already moving in this direction. Six months ago the Government Accounting Office, an arm of Congress, warned of the potential national defense problems stemming from the lack of a secure (that is domestic) supply of rare earths. The Pentagon itself has been conducting a study of these issues, a report is likely in the coming weeks. The House of Representatives Armed Services Committee has a hearing on rare earths tentatively scheduled on October 5, which will focus on the Pentagon's dependence on rare earths imports from China. However, many policy makers and investors are often skeptical that a government can pick winners better than the collective wisdom of the market. And yet the US, Europe and Japan's dependency on foreign supplies of rare earths is greater than their dependency on foreign oil.

Molycorp used to be the largest supplier of rare earths. Its largest mine, west of Las Vegas in the Mojave Desert, was closed in 2002 under competitive pressure from China and rising cost pressure from the environmental concerns stemming from its wastewater spills.

Some suggest that this was part of China's long-term strategy. First, drive prices down and squeeze competitors. Second, increase control of the industry by acquiring foreign mines. Then limit supplies and raise prices. The logic of China's development puts it on a similar path with that of the US and Europe, regardless of intentions. In their early stages, exports of raw materials and commodities funded economic development. Businesses grew, expanded and "went global".

China is now at the developmental stage of trying to move up the value-added chain. It wants to manufacture the motors, magnets and other components that use the rare earths rather than selling the rare earths themselves. Moreover, as China develops its domestic needs for the rare earths will grow, consume an ever increasing portion of their production.

Clarion Call

After all, China's intentions do not matter. What has happened here is a wake-up call on the historic proportions of Sputnik. Alternative supplies must be secured. The higher prices for the rare earths have produced the beginnings of a market response. There are two rare earth mining projects underway, though reportedly they are almost two years away from ramping up output. Although it has struggled to raise $500 mln and has turned to the Department of Energy for a loan guarantee program, Molycorp is, in fact, the first that is being resurrected.

The second is Lynas Corp of Australia, which recently announced the signing of a contract with an unnamed Japanese company. Ironically in light of the environmental impact of mining rare earth elements, many energy efficient products require them. There is a suspicion that Lynas struck the deal with an auto company (each hybrid car can require as much as 30 pounds of rare earths).

To be sure, this should not be read to be a recommendation to buy either of these mining companies. The point here is simply to explore the possible impacts of geopolitical developments in an industry that looks poised to boom based on the increasingly likely demand that alternative sources be developed. And because national security is involved, governments can be expected to support rare earth producers, even if it does not appear to be cost-efficient.

Some people think that the best way to "play" the rare earths is to go to the source and buy Chinese resource companies. However, it seems that in terms of market share, China is near its peak. Additionally, from the point of view of country's national defense points of view, it is simply not wise to allow a single country to dominate a critical chokepoint of a resource that is so important to an increasingly technologically driven world.

In addition to China, the United States, Australia,and a handful of other countries have rare earth capabilities. Rising prices themselves, as well as technological developments, may make exploration and R&D more attractive to other producers. For instance, Canada, Russia, Brazil, Congo, Vietnam, and India are thought to have rare earth deposits. Greenland, too, may be a point of interest. And finally, Denmark recently relinquished sovereign claim on Greenland's mineral rights, which creates fresh opportunities for private investors.

Indeed, the rising price of rare earths may change the economics of some existing businesses. Aerospace and defense are heavy users of rare earths. Windmills, low-energy light bulbs, and as we have seen, hybrid autos will become more expensive to produce if the rare earths rise in price. Rising rare earth prices could in turn slow the "green movement" if there is no forthcoming additional assistance. On the other hand, it could spur

recycling and recycling technology. In the future, an increasingly important source of the rare earths could very well come from cannibalizing existing products. The US lags behind Japan and Europe in this space.

Over the last couple of years, rising base and precious metal prices have risen. This, coupled with the enhanced accessibility that securitization of some commodities in the form of exchange trade funds, has seen many investors invest into some of the metals, like gold, which is also used in computers, cell phones and other electronic goods. And yet investors who own shares in mining companies should keep in mind that they may already have some exposure to the rare earths.

Keep the Eyes on the Prize

The US House of Representatives approved a bill that seeks to make it easier for US companies to win Commerce Department permission to slap countervailing duties on Chinese-made products due to the under-valued yuan. The currency is only a side show in a much larger and more significant drama.

Even if China modestly accelerates the pace of yuan appreciation, there is no guarantee that Chinese trade practices will change. The US and Europe made a formal complaint to the WTO against China last year over raw materials trade. The claim is that China's export quotas and taxes are in violation of the agreement China signed in 2001, when it joined the WTO. At that time China agreed to limit export taxes to 84 product categories, yet according to reports, this year there are taxes on over four times the number of product categories.

Neither the left's response of not antagonizing China; nor the right's response to confront China is going to change the fact that it has a near monopoly of a set of elements that are simply critical for modern life. In 1951, US President Truman appointed the Paley Commission to "study the broader and longer range aspects of the nation's material problems…" including "all major aspects of the problem of assuring an adequate supply of production materials for our long-range needs". Nothing less is needed now.

China's ability, if even not its willingness, to embargo deliveries of rare earths to Japan, from whom the US incidentally imports products such as magnets that use rare earths, is a game changer. As policy makers and industry responds, there will be investment opportunities in this space: directly and indirectly- that may not have existed a month ago.