

More on the Battle for Rare Earths & Critical Minerals

Because this topic is such a major national security and macroeconomic concern, we wanted to follow up on last weekend's <u>T-Report</u> and our latest <u>SITREP</u>. The change of mindset to one where nations and companies feel the "need" to control processes and inventories much better is real and has only just begun. We will, over time, see much of the "globalization" of the past few decades reversed as nations and companies identify what is critical to their mission and demand more "control" over certain things including rare earths, critical minerals, and chips.

It will be inflationary as the capacity is developed and more of the overall environmental impact is considered, but the cost will be worth it as supplies will be more "secure."

An Anecdote

I want to start with an anecdote from a participant (ESG specialist) at a recent Academy Geopolitical Summit.

- 1. Australia mined lithium.
- 2. Australia shipped the lithium to China to process.
- 3. China processed the lithium into a form that can be used in batteries and other things.
- 4. China shipped the processed lithium to Australia.

Just think about some of the risk factors:

- International shipping can be more time consuming and expensive than domestic freight, especially as ports get "backlogged" more frequently. That is a risk at the best of times, let alone when a country refuses access for some reason (like China during COVID).
- International shipping likely requires more energy consumption (relying heavily on fossil fuels), which goes against what many countries and companies are trying to achieve.
- The inability to process means that you are "captive" to a nation (or company) that you have no control over. The processing of this and many other rare earths and critical elements into a useable format is often quite "dirty" (energy and water use, etc.) from an environmental standpoint. If you are truly concerned about the environment, wouldn't you want more control over the processing and to work with countries and companies that will enforce strict environmental standards?

Now, Australia mines the lithium, processes it domestically, and then uses it in products that it is making domestically.

While possibly more expensive, at least initially, many of the risks (that could not be controlled or hedged against) were eliminated by Australia.

This "anecdote" is happening and will happen 100s of times in the coming years.

Cost and Control

- "Cost" is not the only factor.
 - Cost cannot be narrowly defined. Risks (especially unhedgeable risks) need to be factored in better than they are.



- Attribution, even when the work is done by third parties, is a concern for companies and a lack of control is bad.
- **Control.** No one wants to feel as handcuffed as they did during COVID. Working with countries and companies that you can trust (or control) is increasingly important. The first time that this breakdown of supply chains occurred, everyone was in the same boat. However, if it happens again, companies (and countries) that are prepared will be in the driver's seat.

Nations and companies gave up significant control during this period of unprecedented globalization. There will be a slow unwinding of globalization because the "trust" in the system has been broken and will not be mended easily.

Acquisition

Let's start this section, meant to be about the ability to acquire supplies of rare earths and critical minerals, with a discussion about "blood diamonds." It isn't entirely clear how we segue from "cost and control" and "Australian lithium" to "blood diamonds," but it is worth spending a minute or two on this topic.

Nations and companies want to be able to secure <u>and</u> process the resources.

That sounds simple on the surface (especially the acquisition part). We can extract them ourselves from our own land or we can acquire them from some other country that has access to them.

But let's just look at something as "obvious" as blood diamonds.

We (in the "West") can choose to avoid blood diamonds. We can also feel better about ourselves because our jewelry doesn't come from the horrifying world of blood diamonds (I assume that there is an industrial equivalent to this argument).

But the blood diamonds don't go away because we won't buy them.

The Wagner Group allegedly benefits from the blood diamond trade. The Wagner Group offers "protection" and is supposedly paid at least in part with blood diamonds (seems entirely plausible). The West decreases the value of those blood diamonds by not buying them, which ironically (or sadly) probably means that the bad people have to collect more blood diamonds to pay the other bad people for their services.

I am not saying that our stance on blood diamonds is wrong, but so long as a market of sufficient size remains for them, it may be naïve to think that we've "solved" anything.

No one in the West wants blood diamonds, but blood diamonds probably helped the Wagner Group (and Russia) in the war in Ukraine. Life is complicated!

I mention "blood diamonds" because unfortunately, in the battle to secure rare earths and critical minerals, countries and companies are likely to face many moral dilemmas. These are dilemmas that our main competitor (China) and our enemies (Russia, Iran) don't have.

Being brutally honest, we probably had to deal with many moral issues related to petroleum, but over time we have figured out a way to get the resources we need (by having a strong domestic industry for example). However, we will have to deal with these issues again.

It would be nice if the acquisition of rare earths and critical minerals was a "walk in the park" and every source came from an area with an impeccable human rights record, a democratic political system, and



a low Gini coefficient (a high Gini coefficient represents wealth inequality). However, they won't all be found in countries like this and I'm not sure that many such countries even exist. It would also be nice if all the resource could be extracted in an environmentally friendly manner with no impact on the workers or regions from which the resources are being extracted. While that just isn't likely, we can still make the efforts to make it happen (even if this will likely drive prices higher).

There will be a real challenge for countries and nations to secure resources in a world that isn't on a level playing field.

We know what we will do when one nation invades another, but do we know what we will do when we lose mineral rights to players that just don't care about the same things that we value?

I don't know the answer, but this subject will come up over and over again in many forms, and is something that we will need to grapple with as we try to balance the need for control/security with maintaining our ethical and moral standards.

This is definitely a wildcard in my thought process, but I am optimistic that there are enough "good" sources in "good" countries that we can acquire and process what we need.

Processing

Taking control of the processing seems like a "no-brainer" to me.

While rare earths and critical minerals are important, they are relatively useless compared to the refined products.

- We want the control and security of being able to process them into those refined products.
- We want the control and security to oversee the refining process because then we can control the level of environmental risk associated with that processing.

Seems easy, but there are many things that seem like no-brainers to me that get bogged down in politics or the courts, so one can only hope that we get there.

Bottom Line

Deglobalization.

Steady inflation.

More "security" for us, our allies, and our companies.

It is difficult to put a cost on "control" and "security," but it is imperative on us (as nations and companies) to be prepared to pay that cost to "win" in the long run.



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