



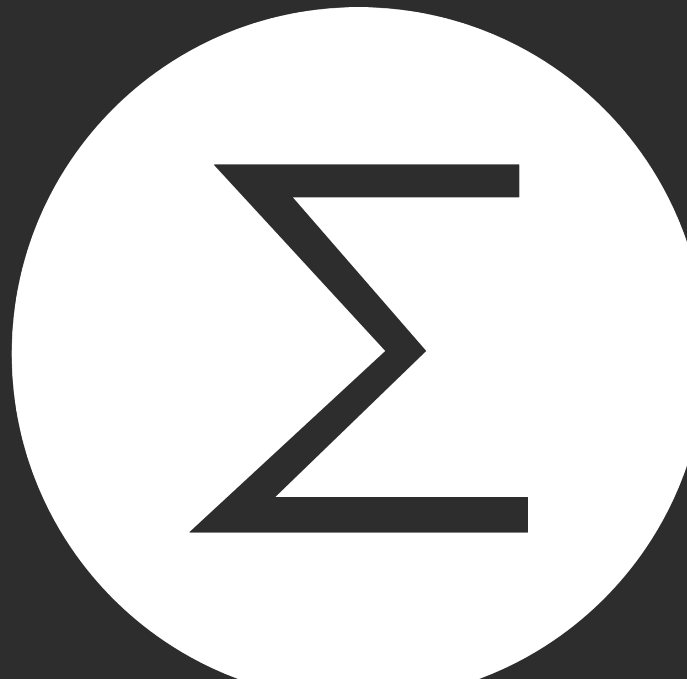
SUMZERO

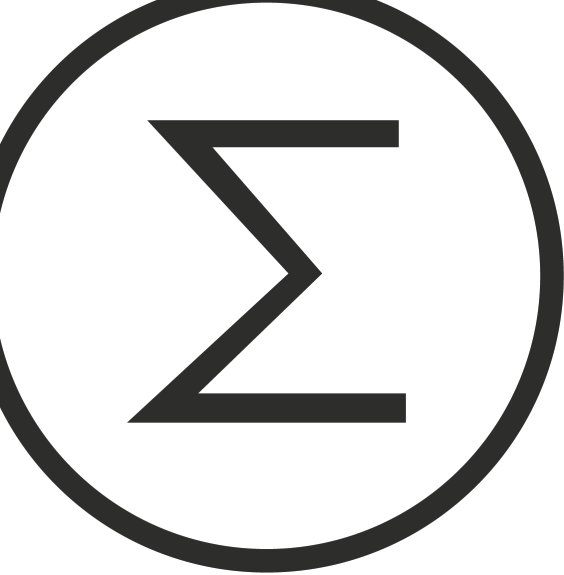
MANAGER ROUNDTABLE



RARE EARTH METALS: CHINA'S BACK POCKET TRADE WEAPON

JULY 2019





INTRODUCTION

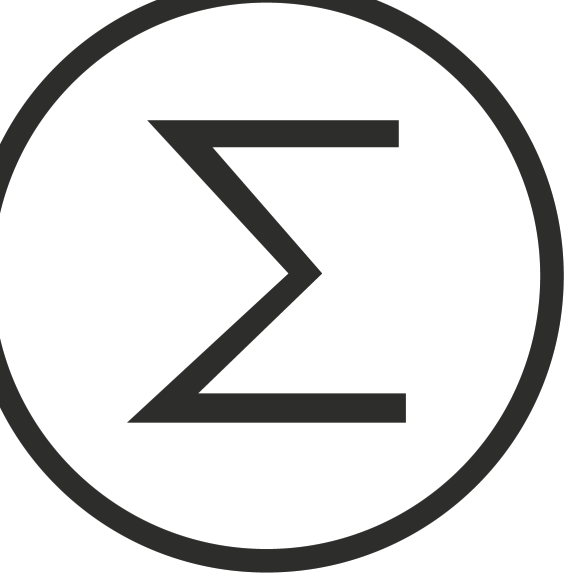
China commands over 95% of the rare earth elements (REEs) market worldwide. The US imports over 80% of these minerals from China alone for technological and manufacturing applications such as wind turbines, lithium batteries, military defense technology, magnets, and electric vehicles. As such, China has near-monopolistic control over a critical corner of the industrial metals supply chain.

As the trade war continues with no clear resolution in sight and increased sanctions by the Trump administration push China to strike back, many predict that China will leverage its rare earths dominance on some level. Xi Jinping's highly publicized visit to a magnet factory in Ganzhou bears an implicit threat: **China recognizes the levers at their disposal.**

China's **six state-owned suppliers have been steadily consolidating the industry since 2010** and acquiring smaller mines across the country. China could rationalize an official embargo on rare earths as a justified response to the US technology ban on Huawei.

That said, the true impact and likelihood of such a move remains to be seen. China's control over rare earths is likely more powerful as a brinkmanship device than it would be in execution. **While few in number, alternate suppliers do exist** and would certainly benefit from the higher price environment created by a Chinese embargo on rare earths. Metal substitution and technological redesigns also stunt the lasting power of this threat.

SumZero gathered a select group of Cap Intro fund managers to opine on the situation at hand. These managers were invited to participate for their unique perspective on the Chinese investment landscape and the industrial metals & mining sectors. In the below roundtable, our participants discuss the trade war's origins and hypothetical outcomes, investment opportunities and promising alternatives to Chinese supply. These featured funds/managers are:



PARTICIPANTS

Will Thomson, Massif Capital

Mr. Thomson is the Founder and Managing Partner of Massif Capital, LLC. Mr. Thomson has experience in private equity and credit/political risk insurance, in addition to having served as a strategic and economic adviser to NATO/ISAF in Afghanistan. Mr. Thomson is a Graduate of Trinity College and holds a Masters in Government from Harvard University.



Massif Capital is a long/short equity fund focused on global opportunities in liquid real assets and industrials. The team's work experience with governments in frontier markets, operational experience with growing energy companies, and time spent managing downside risk for project finance lenders gives them a unique edge.

Joshua Hall, True Vine Investments

Joshua Hall is the owner of True Vine Investments. Before starting True Vine, Joshua spent 10 years at JP Morgan Asset Management, the last several of which he was Vice President & Client Onboarding Manager for the Global Liquidity business. He holds a Bachelors degree in Finance from Susquehanna University and the Chartered Financial Consultant (ChFC) designation.

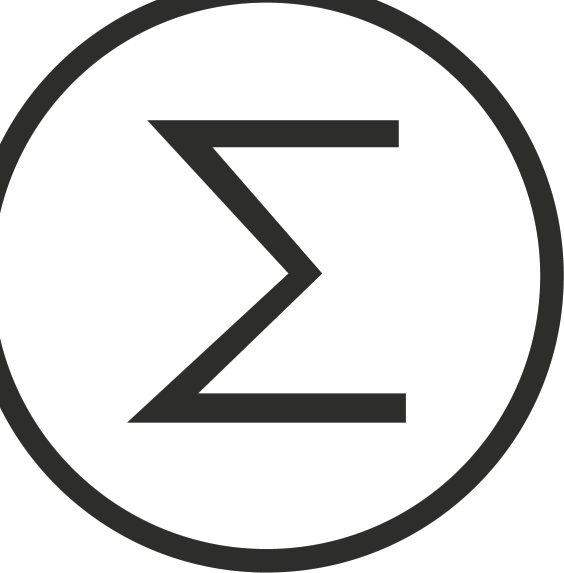


True Vine's Industrial & Technology Metals Miners strategy invests across the spectrum of junior, mid-tier, and major miners involved in the production & development of industrial & technology metals where the manager sees the most potential for outperformance.

Hugh Dyus, Navis Capital Partners

Dyus established The Navis Jockey Fund in 2015. He has almost 3 decades of investment experience across the Asian region in a variety of roles. Dyus has been living in Hong Kong for almost 30 years. He has a Bachelor of Economic Science and a Master of Business Administration, both from the University of the Witwatersrand in South Africa.





The Navis Jockey Fund invests in a concentrated portfolio of carefully selected listed Asian equities, all of which fall within the listed portion of portfolio companies held by reputable private equity or venture capital firms.

Jian Chen, Tangram Capital Advisors

Tangram Capital Advisors is a value-oriented and fundamental research-driven investment manager focusing on exploring investment opportunities created by structural market inefficiencies due to idiosyncratic events, cognitive biases and informational frictions.

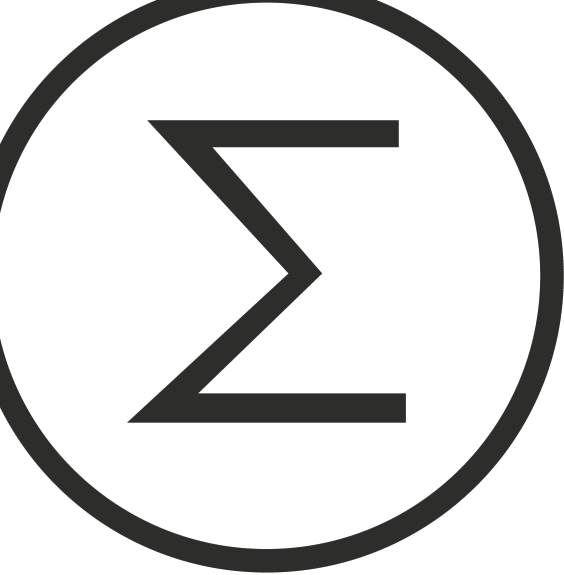


After spending over fifteen years on Wall Street with experience at both sell-side and buy-side firms, Mr. Chen founded Tangram Capital Advisors in 2015. Chen earned his MBA from Goizueta Business School of Emory University and a BA from East China University of Science & Technology. He received his CFA designation in 2002.

Brian Laks, Old West Opportunity Fund

Last year, the Old West management team launched Old West Opportunity Fund, LP as a thematic fund to gain exposure to the most compelling areas of the market as identified by the manager. The fund is currently focused on the uranium industry, which Old West believes presents a rare opportunity with numerous near-term catalysts.

Brian Laks, CFA, is the Portfolio Manager for the Old West Opportunity Fund, LP. Prior to joining Old West, Brian was a Research Analyst at NWQ, an affiliate of Nuveen Investments. At NWQ, Brian was an energy and materials analyst. He earned his undergraduate degree and MBA from the Marshall School of Business at the University of Southern California.



BACKGROUND ON THE TRADE WAR

AVERY PAGAN, SUMZERO: *Sino-US relations have swung from hostility to strategic cooperation and back again in the last 60 years. Can the US and China ever reach a point of sustainable economic convergence?*

JIAN CHEN, TANGRAM: Sustainable economic convergence remains a possible scenario if both countries heed former Secretary of State Henry Kissinger's warn that "the only alternative to positive relations between Washington and Beijing is global destruction." We see a wide range of possibilities for the future U.S.-China relations biased more towards conflict than cooperation. Even if President Trump and President Xi can reach some form of agreement, the tit-for-tat of trade conflict over the past eighteen months has been a huge setback of the U.S.-China relations that will take years to recover. It would be mistaken to view the U.S.-China trade conflict as a personal war waged by President Trump and a few of his hawkish advisors. Fundamental conflicts exist between China's global ambitions and the U.S.' eroding global leadership. If anything, President Trump merely accelerated the timetable of inevitability.

HUGH DYUS, NAVIS: Political relations and rhetoric are far more variable than economic relations between the US and China. The political systems of the two countries are very different and unlikely to converge. Economic relations are mutually beneficial and sustainable but affected by changes in political relations.

PAGAN: *Is China's economic growth agenda primarily driven by a desire for global primacy or by the country's increasing debt burden?*

JOSHUA HALL, TRUE VINE: Neither. The Chinese want to grow for the same reasons you or I would want to grow our own business.

“Fundamental conflicts exist between China's global ambitions and the US' eroding global leadership.”

CHEN: We think they are not mutually exclusive. For thousands of years, China has always had a hierarchical view of the world in which China commands the central position. In fact, the word "China" in Chinese (中国) means "the country in the center". Throughout its history, peace and commerce with China often meant that neighboring countries had to acknowledge China's cultural superiority that was backed by its massive economy and military power. As the world marveled China's explosive growth in the past few decades, it is easy to forget that

China was the largest economy in the world as recent as the late 19th century and has been the world's number one or number two economy for the majority of the last two millennia.

Even though China had been operating its international affairs under Deng Xiaoping's famous doctrine of "hiding our strength and biding our time" (韬光养晦) since the late eighties, it shouldn't be surprising that China has the ambition to reclaim its rightful position in the world at some time. That time arguably has arrived when President Xi Jinping, in his speech at the 19th Party National Congress in October 2017, claimed that "socialism with Chinese characteristics has crossed the threshold into a new era" and that "it will be an era that sees China moving closer to center stage and making greater contributions to mankind."

“Effective deleveraging of the Chinese economy can only come from real economic growth. Simply put, China needs to lead the fourth industrial revolution.”

Among many things that stand between China and such ambition is a weakening domestic economy, particularly the systemic risks posed by its growing debt problem. China's attempt to delever has proved to be ineffective. In a market economy, a deleveraging process typically involves in a combination of

defaults, inflation and real economic growth. In China, the need to maintain social stability and market confidence and the fear of capital flight mean that defaults and inflation are not viable options for the government. In fact, the initial effort started in late 2017 to rein in its shadow banking system was enough to send the domestic stock market into a tailspin. Compliance deadlines of certain regulatory measures had to be extended due to strong pushback by financial institutions. Just over a year into such deleveraging effort, total social financing would hit a monthly record of RMB4.6 trillion or \$680 billion in January this year.

As a result, effective deleveraging of the Chinese economy can only come from real economic growth. Given the sheer size of China's debt load and an increasingly challenging demographic trend, technology-driven productivity gains appear to be only path to economic growth substantial enough to tackle the rising debt to GDP from the denominator. Simply put, China needs to lead the fourth industrial revolution. Made in China 2025 is the plan and timetable China set out to get there.

PAGAN: *Does this conflict boil down to a digital technology race?*

DYUS: No. Global trade has not been a level playing field for decades. China has enjoyed relatively free access to global markets for decades whilst restricting foreign access to its own markets. As China has grown and become more assertive, this benevolence towards China has come to be seen as inappropriate. China has been good at copying or acquiring advanced technology from abroad and official policy generally required the contribution of advanced technology as a condition for access to the Chinese domestic market. Digital technology has become a source of

frustration for the US because the “student” has in some areas overtaken the “teacher”. However, the core reason for the conflict is the inequitable and unbalanced trading relationship between the US and China. US imports from China are ~4.5x larger than US exports to China and this imbalance is not the natural result of free market forces.

PAGAN: *How does the US-China trade war directly affect your investment strategy and current portfolio?*

HALL: As it relates to industrial & technology metals miners, the base metals tend to take the bulk of the negative sentiment. Interestingly though, this has come at a time when most of the base metals are in structural deficits. Inventories remain low across the board. The negative trade war overhang has added more caution to already cautious group of Majors and the shares of junior developers have really been punished. If the trade war gets resolved and the global economy begins to strengthen, we are looking at a strong bull market because some new supplies that may have otherwise began to show up are being delayed.

My strategy has been to stay the course with low cost producers who are growing their production organically and can thrive even if prices remain subdued. Other metals like iron ore and vanadium that have had their own siloed bull markets have provided areas to focus on. The periodic table is broad enough that the saying, “there is always a bull market somewhere,” very much rings true here.

CHEN: We are a bottom-up stock picker and have a relatively long investment horizon. Geopolitical events alone typically don’t sway our investment decisions one way or the other. The escalation of the U.S.-China economic

conflict has certainly raised the probability of more draconian market scenarios. Our investment universe is primarily the U.S. and other developed markets. The trade conflict has promoted us to reexamine our portfolio’s China-related exposure. Fair to say, our portfolio has had some “homecoming” over the past year.

We assign a meaningful probability to the scenario in which the U.S.-China relations and the broader and established global economic order will be further tested in coming years, which will challenge conventional investment wisdoms and present interesting opportunities

“The periodic table is broad enough that the saying, ‘there’s always a bull market somewhere’ very much rings true.”

DYUS: The Navis Jockey Fund has substantial exposure towards Chinese stocks listed on international stock exchanges, including in sectors like IT and healthcare where technology is a key factor in stock picking. The Fund holds no export-oriented Chinese stocks and none of the Fund’s technology stocks are hardware companies or companies in the hardware supply chain. These are the sectors most likely to be severely affected by an intensification of the trade “war”. Companies in these sectors typically also have low gross margins and returns on invested capital, so they are not in any event attractive businesses that create

lots of value. The valuations of all Chinese stocks have been affected by negative sentiment and fear that the trade “war” may intensify. This creates an opportunity to invest in Chinese companies with market leadership positions in growing domestic markets with high gross margins and returns on invested capital at compelling valuations.

GAUGING CHINA’S RARE EARTHS THREAT

PAGAN: *What is the likelihood of an explicit rare earths threat levered by China? Are we overestimating its potential impact?*

WILL THOMSON, MASSIF: We have little insight into the likelihood of China initiating a threat, but if they do, pundits are almost certainly overestimating the impact.

Market power over critical commodities is nice leverage to have, but it is very difficult to wield effectively. Scarcity is often self-correcting through price. Attractive margins from high prices will induce investment and increase supply, leading to eventual price decreases and a loss of market power. Importantly, metal substitution and recycling capabilities are significantly undervalued.

Let’s take neodymium as an example. Neodymium is a rare earth metal used in permanent magnets and has uses in both wind turbines and electric vehicles. If the price of neodymium were to quadruple in a supply squeeze (either due to export bans or large increase in demand), wind turbines and electric vehicles would not cease to exist. Short term disruptions in production may occur, but in the medium to long-term, metal substitution is often an optimal outcome. Permanent magnets

are a feature of motors, not a requirement. For example, an induction motor, such as those used by Tesla today, do not rely on permanent magnets but instead utilize modern control software and power electronics made from silicon.

“Market power over critical commodities is nice leverage to have, but very difficult to wield.”

Another example would be compact fluorescent lamps which used to rely heavily on europium. Today, fluorescent lamps have been largely replaced by white LED’s that use 96% less europium. Often the most effective substitute is not another exotic material, but an improved design of the product. This is an area where the US needs to focus its attention to leverage our comparative strengths in knowledge-intensive industries.

HALL: China’s leverage stems from their dominance of the world’s rare earths processing capabilities and their large domestic resources which allow them to maintain a high level of production that keeps prices low making it difficult for foreign deposits to be developed economically. With the exception of mainly just Lynas Corp’s Mt Weld deposit in Australia, most of the world’s deposits outside of China are uneconomic at current prices.

Given this background, I think observers are overestimating China acting on this threat. Ironically, China not acting on this

threat prolongs its ability to extend the overhang of it into the future because it keeps new foreign sources from being developed. If they act on it, prices will explode higher and new projects outside of China will be developed. There is one project that I know of in Australia that is almost fully financed and essentially just waiting for a higher price environment which the company is expecting due to the rising demand from new technology applications.

From my vantage point, China's current rare earth dominance is living on borrowed time. Lynas Corp has what is probably the best rare earths deposit in the world and they are steadily increasing production which is making Japan less reliant on China. Given current supply & demand trends, China is actually expected to become a significant importer of high demand praseodymium and neodymium oxide next decade while their exports to Japan decline (NdPr oxide is used in magnets for electric vehicles and wind turbines)

“From my vantage point, China's current rare earth dominance is living on borrowed time.”

CHEN: If the U.S.-China trade conflict continues to escalate, we believe the risk of China retaliating by restricting exports of rare earth minerals is very real. Some industry observers cited China's somewhat ineffective 2010 rare earth embargo on Japan arisen from a maritime dispute as the reason to treat China's recent warning as more or less an empty

threat. Such view ignored a few important distinctions between the 2010 embargo and the current situation. First of all, China officially denied that the 2010 rare earth embargo on Japan existed. It was probably because China didn't want to be seen as weaponizing trade in a diplomatic dispute. As a result, the execution of the alleged embargo was lacking. Smuggling was so rampant that Japanese companies set up processing facilities in northern Vietnam to process rare earth minerals smuggled across border from southern China. There was also an administrative loophole that allowed producers to circumvent the embargo by exporting rare earth alloys instead.

By contrast, an official embargo by China could be more easily justified this time as a proportionate response to what amounted to a U.S. technology embargo by adding Huawei and several other Chinese companies to the Bureau of Industry and Security Entity List. It was reported that Ministry of Commerce had a plan of rare earth ban ready to go. If China intends to use rare earths to inflict economic wound on the U.S., it is more likely to accept collateral damages from extending export restrictions to rare earth alloys or even downstream products. In addition, Chinese government has tightened its control of the rare earth industry since 2010 by cracking down undocumented production and consolidating the industry. Six state-controlled producers have been acquiring smaller mines and now account for nearly all the rare earth production in China. Therefore, black market supply is unlikely to be available in significant quantity.

DYUS: “Rare” earths are not in fact “rare”, but processing them is environmentally unfriendly. China is the dominant producer of rare earths because economic objectives have long been seen as far more important than the environment. The threat by China is short sighted because execution of the threat

would shift supply chains to alternative sources, with some temporary disruption and higher costs.

PAGAN: *This is not the first time China has wielded rare earth minerals as an economic weapon against the US. How does the 2012 WTO dispute inform the current situation? Will the same WTO principles work against any move to restrict REE exports?*

CHEN: In the 2012 WTO case, it took the WTO panel two years to issue a ruling which China agreed to comply with a year later. Since the complaining state in a WTO dispute case can't seek damages, a victory in a WTO dispute case is largely empty calories. Frankly, if WTO were effective in enforcing its rules, we wouldn't have found ourselves in the trade conflict with China right now.

PAGAN: *In an interesting reversal, how do domestic mining companies like Mountain Pass actually benefit from prolonged trade tensions with China?*

BRIAN LAKS, OLD WEST: To the extent that export threats spur the search for alternative sources of supply, the few areas outside China that can potentially provide them become much more attractive. Mountain Pass is an interesting case because of its long history as a producer and being recently bought out of bankruptcy by a private party. We own a number of companies with rare earth exposure in our uranium-focused fund, as often the deposits are found together, and there has been a lot of interest lately in what are usually thinly-traded issues. Texas Mineral Resources (TMRC) is one example that doubled in a matter of weeks but has since retraced most of the move as it appeared the Chinese were willing to negotiate.

HALL: We are going to see the re-establishment of domestic processing capabilities in the United States. Miners with economic deposits stand to benefit from a new policy focus which will include things like geological mapping, faster permitting, etc., potentially easier access to capital, and domestic offtake partners. There are entrepreneurs working on varying aspects of this.

Deposits that are less economically attractive can become more viable if they are integrated with (newly available) processing capabilities to ultimately produce a higher value product.

“A victory in a WTO dispute case is largely empty calories.”

THOMSON: Although it is possible that increased concern with the security of US supply helps potential domestic producers, there are very few companies in the near term that are in a position to take advantage of any tension. There are several junior minors with undeveloped rare earth metals deposits in various places throughout North America, and there is the Mountain Pass deposit, but the mining is really a secondary issue. The primary issue is refining the rare earth metals into usable products.

Mountain Pass, for example, which is now operated by MP Materials, is not only 10% owned by a Chinese company (Leshan Shenghe Rare Earth) but must ship semi-processed rare earth metals to China for refining into a finished product. It would seem unlikely that they will be a beneficiary until they develop domestic refining capabilities.

MP Materials would like to build domestic US refining capabilities and have a goal of starting construction on a refinery in 18 months. We would be very skeptical of their ability, even under the current administration, to execute on that plan, and its economic feasibility is in question

“Even though Mountain Pass is expected to benefit from higher ore prices...its reliance on Chinese processing puts it in a tenuous position.”

in the absence of government support in the form of tariffs on imported Rare Earths. Refining and processing of rare earth metals is a nasty process that produces not only significant toxic waste but also toxic radioactive waste. A smooth permitting process domestically in the US for a facility of that kind would seem unlikely.

CHEN: It's important to understand that China's dominance in rare earths stems primarily from its near monopoly in rare earth refining capability rather than its control of mine production and reserves. Currently, there is no rare earth processing facilities in the U.S. Ore from Mountain Pass mine is shipped to China for processing and is subject to import tariff.

Even though Mountain Pass is expected to benefit from higher ore prices if China substantially restricts exports of rare earth, its reliance on Chinese processing

capacity puts it in a tenuous position which MP Materials, the owner of Mountain Pass, plans to alleviate with the opening of its own processing facility, the first one in the U.S., next year. It should also be noted that Mountain Pass produces only mineral concentrates of cerium, lanthanum, neodymium and europium, the relatively more abundant four of the seventeen rare earth elements.

INDUSTRIES IN THE CROSSHAIRS

PAGAN: *What industries and/or companies would be most heavily impacted by a threat to the global rare earths supply?*

HALL: Automotive, defense, renewable energy, technology.

CHEN: The impact and its severity from a global supply shock of rare earths will depend on the breath and duration of China's export ban. Due to the low presence of rare earth materials in a bill of materials of many downstream applications, price increases can be passed through to customers without much difficulty. The availability of rare earth materials and components will be the key. We suspect defense industry will be less impacted as it often enjoys supply priority and stockpiles critical components due to its long production lead time. Commercial applications such as electronics, automobiles and health care are likely to experience more severe disruption.

PAGAN: *Where do you see bright spots of investment opportunity in this landscape?*

LAKS: Any companies that have attractive projects with large scale and favorable jurisdiction should be considered. We are fans of Greenland Minerals (GGG AU) which is sitting on a massive rare earth deposit. With over a billion tons of resource, it would be one of the largest producers in the world. Ironically, a Chinese company is the largest shareholder. Apparently even they are looking to diversify supply! We of course are also happy to see the nearly 600 million pounds of uranium that is available as a byproduct.

THOMSON: There are many metals and minerals, including Rare Earth Metals, that need to see production growth and supply chain expansion. We believe that many of the biggest opportunities within the broader energy metals/rare earth metals categories are to be found in the processing and refining of these metals though, rather than just the production.

The story with each individual metal is complex, nuanced, and metal specific, so it's very hard to make any general macro comments about the investment opportunity landscape. Take for example lithium: one of the reasons we have seen a precipitous fall in the price of lithium brine or spodumene over the last six months is because the major Chinese companies who control most of the chemical conversion capacity (or middle of the supply chain), simply cannot process lithium any faster than they are.

For this reason, within the lithium industry, we believe there is an opportunity in companies that are vertically integrated or companies that control the key bottlenecks and thus can set prices.

Additionally, understanding that prices of lithium are falling today due oversupply in one part of the supply chain, when in fact the supply chain from rare unfinished

good to finished good is quite constrained, can allow the savvy investor to pick up assets at cheap prices when many are choosing to sell on implied market weakness resulting from only a partial understanding of the intricate supply chains.

“Within the lithium industry, there is an opportunity in companies that are vertically integrated or control key bottlenecks.”

HALL: Many new technology metals like cobalt, lithium, nickel, and also rare earths (until very recently) have been in bear markets for other reasons, but the current rare earths discussion is beginning to open the eyes of some to the importance of having controlled access to the metals that are critical to emerging technologies. Elon Musk even talked about getting into mining. This is creating some attractive buying opportunities for those willing to take a bit longer view.

CHEN: Regardless whether China carries through its rare earth threat or not, we expect a substantial amount of new rare earth mining and processing capacity to be announced and/or built outside China in the next few years. Since the total market size of the rare earth minerals is quite small, less than \$10B a year in rare earth oxides, investment opportunities

with direct exposure to rare earths are mostly in the small and micro-cap names.

“A rare earth metals industry in the US will struggle...the reality is that rather than fighting it, we should lean into it.”

We prefer the less speculative Australia based Lynas Corporation, the largest rare earth miner and processor outside China. Lynas has a proven operating track record and a solid balance sheet. It prudently manages its commodity price risks with long-term contracts with end users and upstream manufacturers.

BUILDING SELF-RELIANCE AND EXPLORING SUBSTITUTES

PAGAN: *The US is making some clear steps to domesticate mining and manufacturing operations as trade tensions mount. But is the U.S. equipped to assume the expensive and resource-intensive process of converting rare earth oxides to metals?*

THOMSON: There is no question that if someone had the money and the inclination they could develop domestic

rare earth metals. We are not confident however that the venture would prove to be profitable. Furthermore, there has been a loss of intellectual capital since the industry faded in the US which would increase the lead time necessary to assemble a team. This is not a new issue and was noted as far back as 2010 in a US congressional hearing at which the then CEO of Molycorp Minerals testified.

We think rare earth metals are just a single example of an issue our political leadership is going to be grappling with for some time. China still has a comparative advantage in production relative to the US and so if trade remains relatively free (which we strongly support) a rare earth metals industry in the US will struggle. This is probably true of many industries though, and the reality is that rather than fighting it, we should lean into it. This means focusing on areas where we can excel.

In the case of rare earth metals that means developing new uses for the metals, developing better processing methods, advances in permanent magnet science, etc. Rather than focusing on trying to insulate ourselves from the potential negative externalities of Chinese superiority in parts of the rare earth supply chain, why not focus on areas where we can become indispensable to the Chinese? A Chinese monopoly on the upstream supply chain is only an issue if the US does not control the essential components of the downstream supply chain. Knowledge-intensive areas of the supply chain within processing and materials sciences is where our focus should be.

PAGAN: *Canadian companies like Defense Metals have discovered all four elements needed for defense and clean energy applications like lithium batteries in British Columbia. Can we expect increased cooperation between non-*

Chinese suppliers and more exploration in the rare earths market as China's threat looms?

HALL: The United States' reliance on China for rare earths was known prior to the most recent escalation. Notably, the same day that video was "released" of Chinese President Xi Jinping visiting a rare earths plant, Lynas Corp announced a joint venture with Texas-based Blue Line to build a rare earths processing facility in Texas. It is not a coincidence that this JV will initially focus on the separation of dysprosium and terbium and other heavy rare earths. Tomahawk cruise missiles require lots of dysprosium and terbium and certain Naval vessels require thousands of pounds of rare earths. Helping the U.S. military is the first priority of this joint venture.

The U.S. government is implementing strategies through its agencies to establish a domestic rare earths supply chain. Lynas' announcement reveals a level of U.S. - Australian allied cooperation that was already underway. Lynas' management has made it clear that they are going to assist the U.S. military through its mine supply and processing capabilities and know-how. In fact, on a recent conference call, Lynas' CEO, Amanda Lacaze, blatantly said that the difficulties the company has faced at its Malaysian facility have come from within the Chinese community in Malaysia.

THOMSON: There is a reasonable chance you see companies trying to take advantage of this opportunity. Often the easiest way to do that is through a joint effort. The first case of this has already come down the pipeline in the form of a joint venture between Lynas Corp (an Australian firm) and Blue Line Corporation (a Texas-based Chemicals company) to try and build a rare earth separation facility in Texas. At this stage,

the project is just a signed memorandum of understanding but assuming financing could be found, something in the realm of \$650-\$750 million, it might move forward.

"Lynas' [joint venture] announcement reveals a level of US-Australian allied cooperation that was already underway."

PAGAN: *On July 14, Trump voted on Section 232 in favor of domestic uranium production in the US. How does this decision factor into the trade war at large?*

LAKS: This is an area we have spent a lot of time researching since it was our work on uranium that originally led us to take positions in some of the rare earth companies. We believe resource nationalism is on the rise and increasing trade tensions are forcing countries to take stock of what they have on their own soil and not take for granted the continued availability of imports. We view the 232 decision as one of the most important near-term catalysts for our uranium portfolio, and one that will emphasize the necessity of self-reliance when it comes to critical minerals. Companies like Energy Fuels (UUUU), which control critical domestic processing infrastructure, stand to be major beneficiaries of a positive decision.

WHO WINS? HOW DOES THE TRADE WAR END?

PAGAN: *Is widespread decoupling inevitable - with opposing US and China blocs and a widening moat of forced alliances between them?*

CHEN: Trade deal or not, we see the U.S.-China relations staying strained for some time. However, it's too early to call whether widespread decoupling is inevitable. Many of China's trading partners will be forced to take sides. Whether to deploy Huawei's equipment in the 5G network buildout is likely to be the first of many tough decisions American allies will have to make.

“Whether to deploy Huawei’s equipment in the 5G buildout is likely to be the first of many tough decisions American allies will have to make.”

DYUS: The economies of the US and China are strongly coupled. Decoupling is not feasible, but the trend towards greater integration could be reversed. Most third countries do not want to pick sides and prefer to trade with both the US and China.

There has been minimal coupling in the digital payments space. China has kept foreign players out of the digital payment space and domestic players are very strong and expanding aggressively into international markets. Coupling in the digital payments space is generally limited to co-operation to handle cross border payments, which will still be required going forward.

PAGAN: *Though seemingly unlikely, could Russia and China’s tenuous alliance deepen with the US as a common adversary? If so, what does this partnership mean for the US?*

LAKS: Yes, in fact this looks to already be the case. We’ve seen a number of bilateral agreements signed and the relationship between the two countries appears to have only grown stronger as the US has ramped up its rhetoric. Both have sought to reduce dependence on the US dollar as well. Russia has been promoting an alternative to the SWIFT system to maintain access to the global financial system in the face of US sanctions. The Chinese have launched a yuan-denominated futures exchange for crude oil which has quickly grown to be a substantial force in the global market. The two countries have also been aggressively acquiring gold, which many view as a prerequisite to distancing themselves from a dollar-centric world. We have a substantial allocation to gold across our various funds, and think it should be a meaningful part of every investor’s portfolio.

