

# Volatility, low interest rates, risk of deflation and Chinese REE defiance of WTO

✘ **InvestorIntelReport:** The markets continued to be marked by volatility in the week, ending on January 9 due to several reasons including continuously declining oil prices, heightened fears of international terrorism and lower wages – as has emerged from labor market data released by the US Government. In Europe, fears of deflation and a Greek exit from the Euro added to the market jitters. Greeks will be heading to the polls in less than two weeks and pollsters are unanimous in predicting that Leftist opposition leader Alexis Tsipras will defeat the Centrist Antonis Samaras. Greek citizens seem confident that a victorious Left gives them the best chance for economic recovery; however, the plan includes Greece's departure from the Euro currency, which is sure to add to volatility in European – and world – markets. Germany, meanwhile, has been so concerned about keeping inflation in check that it now risks deflation – a problem that also looms over Japan. Meanwhile, tensions between Ukraine and Russia continue, maintaining a heightened risk of conflict escalation. The presidents of France and Russia, Francois Hollande and Vladimir Putin, are expected to meet the President of Ukraine by the end of this week to diffuse tensions, possibly leading to a repeal of some sanctions, which should be well received by European markets.

In the United States, investors could grow concerned by stagnant wage levels but it may also persuade the Federal Reserve to maintain low interest rates in order to reduce the risk of deflation (meaning no growth) in the United States as well. The collapse of oil prices continues to defy market fundamentals – it has simply been too fast – and it appears to be politically motivated –perhaps to hurt Russia, Venezuela

and Iran. Such is the general background against which the first 2015 season of quarterly earnings reports shall begin next week. The general market summary for the week ending on January 9 is not great but it is not bad either: futures on Wall Street turned upward (+ 0.20% to the S&P 500 and the Nasdaq + 0.35%). The US Dollar was up with the euro / dollar now standing at 1.1782, close to a nine-year minimum. InvestorIntel members overall dropped 2.93% last week and there were no major market fluctuations. The Graphite sector dropped 1.33% and the Agribusiness sector was rather steady losing only 0.32%. The gold and precious metals sector was also rather steady as the sector (based on InvestorIntel members) lost only 0.31%.

Some of last week's rare earth sector highlights include US Rare Earths' ('USRE', OTCBB: UREED), will focus its efforts on developing a europium-rich rare earth deposit based on 'dark monazite' and that production should begin by late 2017. Last week, there was also speculation on how China would respond to the WTO ruling demanding that export tariffs for rare earths to be dropped. Following its conviction before the World Trade Organization (WTO), China has abolished its system of fixed quotas for rare earths. The measures also concern export quotas of tungsten, molybdenum and fluorspar. In other words, the elimination of export quotas could mean that supply of REE's for buyers outside of China will continue to remain uncertain, leading to higher prices in the long term. Jack Lifton has his own view of the situation in this article published on January 5. Ultimately, this means that the United States, EU and Japan (and any other emerging economic power) have all the reasons to continue developing new rare earths resources beyond China.

The first full market week of 2015 also bodes well for uranium as NexGen Energy ('NexGen', TSXV: NXE) announced that it has accumulated additional holdings at its Rook I property in the Athabasca Basin. NexGen's property has tremendous

'closeology' potential given that Fission Uranium JV has purchased the Patterson Lake South property and Alpha Minerals and itself. Uranium prices saw a string rally from all time lows last summer thanks to a Japanese economic recovery and the Chinese nuclear program ( as well as other ongoing programs, including India, South Africa, Slovakia and even the Republic of Ireland) could push up the price of uranium by 20% in 2015, topping USD 50/lb.

As for the precious metals sector, the risk of deflation and stagnant wages, will cause the Fed to postpone increasing interest rates, which should translate into better market performance for gold and silver. Moreover, geopolitical tensions could flare up at any time and, historically, every time there is a serious geopolitical crisis, gold prices have soared by 8 or 10%. And there is no shortage of potential outbreaks of chaos and tension from Russia and Ukraine and beyond to the Middle East, Japan and China. At worst the precious metals sector in 2015 should be, after all, pretty quiet; after the turmoil of the past two years, maybe it's a good thing.

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**India fuels the issue of resource security as the**

# Chinese restrict rare earths and tungsten exports

*India discovers the strategic price of an inadequate critical materials supply – a lesson for the US*

✘ The development of countries like China, Brazil, India, Turkey, Mexico, or Indonesia has generated a shift in the global economic map thanks to the rise of so called “South-South” cooperation. The formation of the BRICS (Brazil, Russia, India, China and South Africa) is perhaps the most startling example of this phenomenon. Of course, Europe and the United States remain pillars of global technology, trade and finance but they face much greater competition, especially when it comes to resources, than was the case in the 1950’s or 60s. In fact, over the past two decades the rise of the BRICS and similar powers has substantially and permanently changed the map of the supply and demand for raw materials. China, in particular, accounted for over 50% of the increase in global consumption of industrial metals between 2002 and 2005.

Beyond this overall increase in demand, changes in technology have given cause for rare earths (essential for the advancement of many ‘green’ technologies) to be especially vulnerable to geopolitical whims and strategies. Tantalum is widely used in the electronics industry. Such minerals, given their uneven geographical distribution, difficulty of extraction and processing or the concentration of their production chain, represent a challenge for rising and existing economic powers alike. This has fueled the issue of resource security: the growing demand for unprocessed metals and the consequent difficulties in access to raw materials will generate an ever more complex international struggle over the exploration, extraction, processing of raw materials.

Millions of jobs depend on access to raw materials and there

has been an increase in demand for minerals and metals, accompanied by significant difficulties in the supply of certain raw materials, such as price volatility and market distortions – i.e. China's rare earth export restrictions. Countries and companies have invested billions in research to promote technological innovation in the value chain of raw materials through a wide range of initiatives such as new concepts and technologies for exploration efficient in terms of costs and identifying alternatives for critical raw materials even as research will help to improve processing and waste management technology to make mining and recovering critical materials more socially and environmentally acceptable. However, in the face of growing demand, supply is becoming problematic due to the concentration of supply in very few countries: China, Russia, the Democratic Republic of Congo and Brazil; add to this the low 'substitutability' and rudimentary recycling technology and it is not hard to see why the European Commission in 2010 identified 14 raw materials as having strategic importance. **They are antimony, beryllium, cobalt, fluorspar, gallium, germanium, graphite, indium, magnesium, niobium, platinum group metals, rare earths, tantalum and tungsten – in short known as 'moly' products.** Such is the context in which China has decided to continue applying export duties on several such materials including rare earths and tungsten, even though it had been expected to lift them on January 1 of this year to comply with the World Trade Organization (WTO) ruling deeming that export controls on such critical materials (including REE's, molybdenum and tungsten) were illegal. China has until 1 May 2015 to comply and its decision to uphold them is borne out of geo-strategic concerns.

On December 31, it was reported that China would restrict rare earth and tungsten supplies to India, presumably to contrast the rise of India's military industrial complex. Indeed, moly products are essential in the manufacturing of stealth radar evading technology, in targeting mechanisms and temperature

resistant magnets and materials used in jet engines and aerofoil components in manned aircraft and increasingly in unmanned drone aircraft, which are playing an ever more important role in special operations. Missiles use samarium-cobalt (Sm-Co) magnets as do the ion plasma propulsion engines of future spacecraft. Neodymium-iron-boron magnets are able to withstand extremely high temperatures and are used in special munitions. Cerium and other REE are used to produce phosphors in lighting, radars and night vision equipment; even the 'humble' smart-phone can become an invaluable piece of defense equipment, facilitating communication. While not a rare metal in the chemical sense, rhenium is a highly temperature resistant element that is needed to produce the Joint Strike Fighter (JSF) aircraft to be supplied to the US and many of its NATO partners.

The REE industry has become extremely lopsided in China's favor and many countries, India increasingly so, need to invest more in securing dependable supplies of critical metals. India, for the time being, lacks the technological capability or the right rare earth ores to avoid reliance on raw material imports; just as the US and Japan were caught off guard in 2010, when China restricted exports of critical minerals, India too has been drawn to the need to develop buffer reserves. India has been especially keen to develop its aerospace technology sector – as has China in recent years – but it lacks the materials to develop the advanced alloys needed to make aerospace frames and engines alike. It is not enough that titanium, tungsten and chromium (among others) are hard to find in India (essential to produce high-stress components from special bearings to turbine and compressor blades), modern aerospace technology is experimenting with materials able to withstand extreme temperatures and stress such as ceramic composites and borides and zirconium for the leading edges of wings.

Rare earths today represent what titanium and tungsten were in

the 1930's and 40's and it is essential that reliable supplies of these essential materials be available. One of the most important development initiatives launched by Indian Prime Minister Narendra Modi is known as "Make in India". A shortage of critical materials for the defense and high technology sectors will severely limit the impact of the campaign according to Avinash Chander, Scientific Adviser to the Defense Minister and Director-General of the Defense Research and Development Organization. India has sought Japanese help in improving extraction and processing. India does have some rare earth production capability; it is minimal when compared to China, but the partially State owned 'Indian Rare Earths Ltd' sells some ore material such as monazite and a few value added products for magnets. Japan has already made investments in India. A subsidiary of Toyota Tsusho called Toyotsu Rare Earths India Pvt. Ltd. is based in Vishakapatnam, in the state of Andhra Pradesh, and is involved in the production of some rare earth elements. The company operates a base in which it is produced monazite sand, rare earth element, and is responsible for the preparation of rare earths such as neodymium, lanthanum and cerium; receives the supply of monazite sand from Indian Rare Earths Ltd (IRE), which falls within the jurisdiction of the Department of Atomic Energy.

Recently, IRE has requested authorization to extract rare earths from the sand along a coastal stretch of approximately 2500 hectares in Brahmagiri (Puri district). Japan is said to have contributed at least a half billion dollars for the development of alternative sources of rare earths in India, which wants to attract Japanese investment.

Both India and Japan understand that the rare earth industry offers trade, strategic and diplomatic advantages. At the same time, ensure regular supply of rare earths will be a process that will take a long time. If you invest today in various projects, then it may take about five years to double or triple production. Over the years, many countries in the world

had stopped investing in the extraction of rare earths because, from a financial standpoint, it was more feasible to import from China. However, this had led China to develop a monopoly in this area. For countries like India there is much to learn from the experience of the rare earths. It is important to understand that with regard to critical materials and essential minerals, planning is vital. India has learned the hard way that dependence on other countries – especially other competing economic and military powers such as China – should be minimal with respect to strategic materials required in the energy, aerospace, nuclear power and in defense sectors. In addition, there is a constant need to monitor trends in progress in areas such as semiconductors, silicon technology, production of microcircuits, thin films, nanotechnology, and so on. The presence or absence of strategic materials are two factors that have an impact in the short and long term on the economy of the country, as well as on military preparedness. The United States may be caught equally unprepared in this matter and India's lessons apply to it as well.

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## **WTO ruling fails to alleviate European concern over China's rare earth dominance**

☒ China has increased its efforts to limit the illegal mining and export of rare earths (REE). The Government has launched a five-month campaign, which has the specific goal of preventing prices of this commodity from dropping further in prices. Since the beginning of October until the end of March 2015 five authorities are working together to track down and

punish illegal and smuggling REE operations. This is not the first time that the Chinese government has tried to tamper with (if not modernize) its rare earth industry, first by trying to rationalize resource management by shifting more control to state mining companies and then by setting production quotas for an ever smaller number of authorized companies. However, none of these measures were able to curb pollution, smuggling and illegal mining in the Chinese rare earth industry. The People's Republic has insisted that it holds 23% of the world's rare earths reserves even if it is widely held to have 40% of the reserves, addressing 90% of global demand.

The United States, Japan and Europe have filed a complaint with the WTO (World Trade Organization) – and obtained validation – that China's production and export quotas limited rare earth supplies for the global market, giving Chinese companies an excessive competitive advantage. However, Beijing has started to comply with the WTO ruling because it is facing internal environmental and social pressure. The European Union (EU) is very concerned that China may revive the REE trading restrictions that prompted the WTO to intervene in the past few years. In fact, just over a week ago, in Milan, Italy, European leaders met at the final stage of the ERECON conference. The European Commission has formed a panel of rare earth experts known as the European Rare Earths Competency Network (ERECON). They are addressing the security of rare earth supplies in Europe as well as the primary production of rare earths, resource efficiency and alternatives to raw materials in the form of recycling.

ERECON's goal is to address the entire value chain challenge of rare earths in Europe, which are a key resource for its industry even though Europe is almost totally dependent on China, which covers 97% of total requirements – making the EU even more dependent on Chinese REE than the United States or Japan. Inevitably, this situation of strong imbalance in favor

of China has led to consequences which continue to raise the importing countries 'concerns, given the precedent of the Chinese government's decision to impose the cap on exports of rare earths in 2009, which caused their prices to rise by as much as 1000%, sparking protests from the US, Europe and Japan – the latter facing geopolitical and economic consequences that may have hurt its economy. These countries then presented an appeal to the WTO, of which China is a member, but before it was incorporated in March, the Chinese government took precautions by further raising the share of exports and, therefore, forcing REE down. ERECON and other forums, however have shown that the EU's concerns about China's virtual REE monopoly have not ceased – and not just for economic motives.

Rare earths are used in many areas, including military drones, laser technology and latest generation communications among other things. The EU, in fact all Western powers, have reason to suspect that China is using REE to upgrade and modernize its military industry and equipment at low cost while exploiting its military rivals' need to upgrade theirs. If there is any doubt, recent interest by Chinese investors in recently discovered rare earth mines in Greece suggests that China is in no way interested in relinquishing its REE supremacy. Another factor of concern is China's rapid rapprochement with Russia, a country which is also very interested in re-entering the rare earths market. There are plans that would see ambitious projects starting to operate in Yakutia and the Kola Peninsula by 2020. The evolving Ukrainian crisis and the growing distance between the West and Russia has raised fears that the recently formed Russian-Chinese gas supply arrangements may extend to REE's as Russia seeks ways to confront the embargo imposed by most EU member states and NATO members. This should be encouraging news for the various REE mining operations under development In North America, South Africa, Tanzania and even Vietnam or Afghanistan – and there no assurances that the new operations will be able to deliver all of the rare earths that are in most demand such as

neodymium, dysprosium or europium – among others. Efforts to recycle rare earths have yet to achieve any worthwhile results, which means that the REE challenge continues.

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## **Russia returns to the global REE scene with new processing technology**

✘ Scientists at Russia's Ural Federal University have developed a method to extract rare earths from uranium mines. The new technology will be tested over the next three years as researchers believe that it could reduce the demand for rare earth imports in Russia by a third. The new process can be applied to most uranium mining operations and could, by extension, be applied worldwide. The newly developed method involves the injection of sulfuric acid into the soil, which dissolves uranium and rare earth metals. The revolutionary thing about this process is that the sorbent can allow for the selective extraction of uranium, rare earth metals or scandium, without affecting the quality of the uranium. The Russians have been working specifically on the sorbent. Researchers hope to develop the complicated technology so that it can be used in industry and beyond the extraction of rare earth metals, but also for the production of the whole range of their concentrates in the form of oxides and compositions, metals, alloys and finished products.

Today, China controls 97 percent of rare earth metals (REE) exports and efforts by such companies as Lynas Corp (ASX: LYC) and Molycorp (NYSE: MCP) have not had significant impact on reducing the world's reliance on Chinese rare earths. Often,

the People's Republic was suspected of exploiting its quasi-monopoly and to manipulate prices and it was formally asked by the World Trade Organization to abide by international trade rules in response to American, European and Japanese accusations of unfair trade practices. Russia is one of the countries that has identified rare earths resources that could be extracted to compete with China but its production is still limited at about 100 tons – there are ongoing efforts to increase this – out of an estimated annual production of 120,000 tons worldwide. Until the 1970's, the Soviet Union was the undisputed world leader in this field. However, a new Russian developed technology could enable Russia to quickly ramp up REE production in the coming years to 1,000 tons annually.

Ural Federal University believes its new technology will play a very important role in helping Russia replace Chinese imports of REE raw materials and finished products. The Russian government and a private Moscow energy firm (ZAO Energetitscheskie Projekty) have contributed about USD\$ 18 million toward testing and developing the new process. Russia developed REE's in the 1970's to advance its aerospace and military technology. It was the first country to use scandium – an element that is very similar to REE's – to develop stronger alloys. Scandium, when added to aluminum, increases the resulting alloy's strength and durability by 50% (almost twice as strong as aluminum series 6061 or 7005), in turn allowing for the use of less material to achieve the desired characteristics, translating to less weight. Interest in the mining of rare earth metals in Russia for a long time was low. This new development along with the IST group's joint venture with the state-owned Rostekh (planning to invest at least a billion dollars, by 2018, to exploit of an area of about 250 square kilometers in the Yacuzia region in to extract 154 million tons of minerals containing yttrium, niobium, scandium and terbium) are putting Russia back on the trail of the former Soviet Union's rare earths leadership. The new

technology will make REE processing more efficient and it can certainly be exported – geopolitical and military considerations aside.

Russia can use the new technology to produce rare earth metals and scandium for the defense industry, the radio electronics, equipment manufacturing, nuclear engineering, mechanical engineering, chemical industry and metallurgy, including metals, oxides, phosphors, magnets and other applications. The Russian defense industry has so far kept very close watch, but Western European electronics manufacturers have also expressed high interest in the hopes of reducing their reliance on Chinese imports especially where neodymium is concerned, which is used in the electronics industry and in mechanical engineering.

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## China and the WTO – The Dawn of Passive Aggression?

✘ “The Fox and the Grapes” is one of Aesop’s fables and is one of the earliest illustrations of the concept of cognitive dissonance or put more simply “sour grapes”.

*“Driven by hunger, a fox tried to reach some grapes hanging high on the vine but was unable to, although he leaped with all his strength. As he went away, the fox remarked ‘Oh, you aren’t even ripe yet! I don’t need any sour grapes’”.*

The fox that covets the inaccessible grapes is taken to stand for a person who attempts to hold incompatible ideas simultaneously. The disdain the fox expresses for the grapes

at the conclusion to the fable serves at least to diminish the dissonance, even if the behaviour in fact remains irrational.

Sympathy for China from me is rare indeed and even now in the wake of the WTO decision on China and Rare Earths it would not be sympathy that I offer but somewhere deep inside I must say I agree with the Chinese pleading in this specific case. I don't feel the Westerners have much of a leg to stand on. Usually WTO cases are brought because of import restrictions (i.e. a country blocking competitors selling products into a specific economy and running local producers out of business) or dumping (where predatory pricing of a product enables an exporter to enter competing markets utilizing non-commercial pricing to gain a foothold and out-compete existing domestic players. In some ways these two "traditional" WTO grounds for complaint are the two sides of the same (or a similar) coin.

The complaint in this case was initiated at the WTO by the U.S., the EU and Japan on March 13, 2012, after China drastically reduced its rare earths export quotas and ostensibly caused a spike in world prices and considerable disruption to the global rare earths market. However, that is the version that suits the Western playbook because some would closer to the REE space would blame speculative hoarding by end-users AND hedge fund operators and other financial intermediaries/traders for the rise in prices beginning back in 2010. It might be said that scaremongering in the New York Times and Wall Street Journal did as much as Chinese quotas to hike the REE prices.

While the complaint reads as "China is kicking sand in our faces by toying with the REE export quotas and thus prices" to us it reads more like "we were happy for forty years to bask in cheap REEs as the Chinese indulged in predatory pricing but now the Chinese have woken up this is not in their best interest and they have a finite resource, we in the West want to keep getting cheap REEs, not invest in our own industries and have the Chinese subsidise our short-termism". When read

in this light the crocodile tears begin to flow. The West didn't complain when China was selling at cheap prices (the obverse of traditional WTO griping) now they are complaining that the Chinese are price fixing (upwards).

Ironically if one regards China Inc. as an enormous corporation then the closest parallel to China's attempt to institute RPM (Retail Price Maintenance) in the REE space is actually the iron grip that Apple Inc. has on the marketing, distribution and pricing of its products.

### **All Stick and No Carrot**

Last week the WTO Appellate Body affirmed a WTO dispute settlement panel's March 2014 finding and rejected China's appeal, therefore finding for the U.S., Japan and the European Union, which had jointly filed the original complaint with the organization. The decision claimed that the country's restraints against exports of rare earth minerals, tungsten and molybdenum violated international trade rules.

China had argued that its imposition of export duties and quotas were justified under exceptions in the General Agreement on Tariffs and Trade 1994, specifically as environmental protection measures and as measures related to the conservation of exhaustible natural resources. Both of which have veracity in the evidence that REE observers have noted in recent years.

The WTO panel found that China failed to justify its REE export duties and quotas as legitimate conservation or environmental protection measures. The panel also found the export quota requirements were inconsistent with WTO rules.

### **Forelock Tugging to the WTO**

In the wake of China losing its appeal officials from the Ministry of Commerce (MOC) said the China would adopt measures in accordance with WTO rules. The official state news agency

Xinhua reported an MOC official stating that “China regretted the WTOs’ final ruling that China’s export duties, quotas, and administration of rare earths, tungsten and molybdenum products were inconsistent with WTO rules and China’s Accession Protocol”.

Somewhat laughably, U.S. Trade Representative Michael Froman was reported as saying, “This report makes the end of the line for this dispute. ...We have sent a clear signal to our trading partners that we will be tenacious in protecting American businesses, American workers, and the role of law.” The irony clearly escapes him.

Upon a U.S. request, the WTO Dispute Settlement Body will adopt the panel and appellate body reports within 30 days and call for China to bring its measures into compliance with its WTO obligations. We can be sure the Chinese are burning the midnight oil working out ingenious ways to get around the ruling. This may end up leaving Western players (particularly the EU and Japan) wishing they had not been inveigled into this complaint process in the first place.

### **National Champions**

Capitalism has evolved in China over the last twenty years in a way that Mussolini would be very familiar with. The Italian fascist economy (and those of other fascists in pre-war Europe) were ruled by corporatist thinking basically where the government dealt with the many economic players by reducing their numbers by forcing them into associations or enforcing mergers that meant that less levers had to be tugged on to have the maximum economic effect. On the eve of the latest WTO appellant ruling, China’s government revealed it had approved the creation of two regional REE monopolies with the mergers to take place by the end of this year. The West might gripe, but how can one deny Chinese entities the right to merge in the same way that a Freeport, Glencore or BHP might do in the West.

In this latest move the Inner Mongolia Baotou Steel Rare-Earth Hi-Tech. Co. and Xiamen Tungsten Co. Ltd. were supposedly approved, by the Ministry of Industry and Information Technology, to lead the formation of the two REE groups, one in the north and the other in the south. The northern combine is led by the Baogang Group, Baotou's parent, will handle the establishment of China North Rare Earth High Tech, consolidating mining (including Bayan Obo), smelting, separation and utilization companies in the Northern region of Inner Mongolia and will include Gansu Rare Earth Group. Meanwhile Xiamen Tungsten will build a conglomerate covering the southern part of the country, with all related REE companies in Fujian Province, except for state-owned China Minmetals.

### **Backwards Looking**

As with so many international bodies, the ruling and the appeal by the WTO are so much like "old news" it is risible. The appeal, when lodged, was already out of date as the price of REEs had corrected down heavily from their 2010/11 highs. In recent times the market has been flooded by cheap Lanthanum and Cerium emanating from Lynas and Molycorp. If anything one might muse that these two are dumping La and Ce on the market by over-producing these minerals as a means of having a greater output of their lesser volume REEs (for which they receive higher prices). Think about it, if La and Ce were all these two produced they would have shut down by now as the outlook for usage of these two products is torpid to say the least. Ironically the Chinese could say that their REE production from Bayan Obo over the decades was also a "mere" by-product of the much bigger volume iron ore output from that mine.

In any case, the WTO is fighting a battle that is long over. True, the Chinese have still kept a grip on the export quotas (though this is routinely undermined by illegal exports and imports of REEs) but prices are certainly not something that

Western users can complain about as they are massively off from the levels that had prompted the complaints in the first place.

## **Conclusion**

It is now that the real fun begins. China will stop announcing publicly its export quotas. Instead, in some smoky back room of a resort in China's most obscure province, the five or six heavies (pardon the pun) from the Chinese Rare Earth world will gather together and be told what they can and cannot do on a quarterly basis. What goes on will be hermetically sealed with loose lips rewarded by a spell in a re-education camp or even worse, involuntary organ donation!

If the WTO and its claimants think that China will be browbeaten into submission by the latest appeal ruling they are sadly mistaken. REE's have gone from an obscure object of desire to a strategic playing piece on a chessboard that has as its end-game a millennial struggle to reestablish China's place in the world after 150 years of humiliations and second-rate status. Churlish complaints from "do-nothing" Western nations about access to a mineral that is not rare only go to reinforce whatever internal view is held in China that the WTO is just a cat's paw of the West. The Western nations have had five years since the REE crisis first blew up to secure financing for any one of a myriad of mines. The Japanese in particular were very vocal about their vulnerability to Chinese machinations but have steadily withdrawn from the backing they initially offered to quite a number of REE wannabes.

I would suggest that the REE market will be less transparent as a result of this ruling rather than more so. The WTO and its friends may have won the battle but they stand now an even greater chance of losing the war if they rest on their laurels and think the tiger has been tamed.

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# Congress ponders legislation to encourage rare earth production

✘ On June 17 of this year, US House Representative, Steve Stockman, introduced Bill HR 4883 “to provide for the establishment of a National Rare-Earth Refinery Cooperative, and for other purposes. The Bill was referred to the House Committee on Armed Services. It is a House companion bill to legislation introduced earlier in the year by Sen. Roy Blunt, (R-M). Both bills intend to reduce the United States’ reliance on Chinese rare earths by encouraging an increase in US production. Specifically, the Bills propose establishing “a thorium bearing rare-earth refinery cooperative to provide for the domestic processing of thorium-bearing rare-earth concentrates as residual unprocessed and unrefined ores.” Rep. Stockman was adamant that the United States “needs to establish this cooperative so that American corporations no longer have to relocate their manufacturing facilities and jobs to China and relinquish control of their intellectual property rights to have access to a rare-earth supply chain.”

Rep. Stockman and those who support HR 4883 are concerned by the growing possibility that the United States risks long term political and economic risks if it allows for foreign interests, business or political as they may be, to acquire or access critical US technology. China is clearly the main target of the Bill, given its dominant role in the rare earths industry and its economic threats due to their failure to honor fair industrial and trade practices such as China. Therefore, HR 4883 has been drafted to protecting American national interests such that the US government and industry

will have guaranteed access to any and all strategic technologies and materials needed to thrive in the global economy and maintaining a leadership in military technology. The problem, today, is the proliferation of the 'outsourcing' mantra, such that many of the USA has to source for critical materials (at the raw and processed stage) abroad and even beyond the confines of the NATO alliance. Meanwhile, the main suppliers, such as China, have been more than willing and capable of using quotas to control exports of strategic materials in order to advance their own political and geo-strategic interests. Publicly traded companies are also paying more attention to non-tangible business risks, sometimes included under the umbrella of 'corporate sustainability', which preclude their involvement in supplying technologies that have military applications. So many technologies today can address dual civilian/military needs with mere software or configuration changes.

HR 4883 would also encourage continued investment and promotion of domestic American technologies also encouraging the sourcing of domestic – or allied nation, given geological constraints – mineral resources and materials such as rare earths (critical in advancing batteries, missile guidance systems, radars, wind turbines, solar panels and more). The law would encourage industry to source from domestic or allied areas and easing some current mining restrictions. The rare earths mining industry has suffered as a result of China's dominant role in this sector. Few of these resources are mined in the United States to the extent needed by American industry and much of what is mined in the USA has to be processed in China. While HR 4883 is being proposed by a Republican Representative, Democrats cannot ignore it and President Obama himself has been candid in his concern over China's rare earths dominance. In the weeks leading up to the ruling from World Trade Organization (WTO) demanding China scrap its rare earths export quotas, the White House clearly stated that these minerals are of strategic importance to the United

States, given their demand for military and national security applications. Rare metals are also crucial for the advancement of battery and electric motors and so-called 'green' technology in general. This suggests that it is in neither the interests of President Obama or Congress to 'fool around' with strategic resources.

The United States is, rather quickly, pursuing a path of more direct confrontation with Russia and even with China. Washington, Moscow and Beijing are conducting foreign policy in an atmosphere that echoes the now forgotten Cold War. Surprisingly, the US Dept. of Defense (DoD) has acted rather moot about the fact that little is being done in the United States to help address the materials shortfall. The failure to follow the spirit of HR 4883 is to leave China's rare earths and critical materials virtual monopoly intact, compromising American competitiveness (as well as that of its allies) and security. Apart from Molycorp, there are emerging US rare earths companies with very interesting prospects that would certainly benefit from HR 4883 being passed such as Texas Rare Earth Resources Corp. and U.S. Rare Earths, Inc. – as there is virtually no place where the critical and heavy rare earths are being processed into something useful except for China.

Texas Rare Earth Resources Corp. ('TRER', OTCQX: TRER) is one of the contenders to become a major US domestic rare earths supplier. It has a world class deposit (including beryllium and a 70% heavy rare earth concentration) with outstanding infrastructure in Texas at the Round Top rare earth minerals project. Molycorp's difficulties have, somehow, diminished the expectations of investors and government officials that the United States might become rare earths resource independent. Yet, Molycorp represents a 'specific' case: its stock volatility and problems are not endemic to the entire industry. Molycorp is concentrating on light rare earths, even though it built its case on the premise of being able to deliver the much in demand 'heavies'. TRER's deposit,

nevertheless, shows a very clear mineralogical pattern which has proven to be heap leachable, which is similar to what might be found in China. As a result, TRER is working on a special metallurgical process to deliver looking for a strategic partner in its next phase of development. TRER's land and the China clay deposits are the only REE deposits in the world to use simple heap leach processing. TRER can also boast low CAPEX and significant profitability. TRER is a "multi-trick pony" comprising of at least 25 minerals, 15 of which rare earths along with thorium and uranium. TRER can also capitalize on its beryllium (298,000 ton historical resource estimate) and niobium resources. TRER is also mining on state land therefore its licensing pathway I through the State of Texas not the Federal Government and Texas is most definitely resource friendly State – which implies several advantages from the time needed to make decisions to the friendlier mentality toward resources.

U.S. Rare Earths, Inc. ('USRE', OTCBB: UREE) is another contender thanks to its mining Lemhi Pass property (western Montana and eastern Idaho) showing high concentrations of critical rare earths. USRE expects to begin processing by 2017 and the Company expects to do so in the United States. The exploration record at Lemhi Pass suggests that it may hold the highest concentrations of rare earths elements in the U.S. USRE intends to revisit existing horizontal mines extending underground more than 400 meters, which have already proven to contain mineralized veins of critical rare earths. Lemhi Pass has having some of the highest concentrations of rare earth elements in North America. USRE is one of the companies outside of China presenting itself as a comprehensive critical rare earth supplier from mining to processing. USRE can rely on a very experienced management and exploration team with many and successful years of experience in the sector and their determination to create an wholly American complete supply-chain solution, which will include a separation mill for the critical and heavy rare earth elements in the

continental United States.

Molycorp and Lynas Corp are processing outside of China (California and Malaysia respectively) but, so far, this activity has been limited to light rare earths (LREE). In the U.S. and in the rest of the world there is high pressure to develop new deposits and new processing facilities as China's production share has started to drop in response to some new capacity and – mostly – to internal restrictions related to intensifying environmental controls. Nobody has offered any alternative to the processing of rare earths even while China's share of the global production is expected to drop significantly if the government continues to enforce tougher environmental regulations affecting both the extraction of the raw materials and their transformation into marketable products.

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## **China pondering retaliation to recent US and WTO moves**

Great Britain and France had the largest empires in the  world, dominating the world economy in the 19th century thanks to their primary role in the inception of the Industrial Revolution. They were the superpowers of the recent past, whose rivalry has filled annals of history. The digital revolution has promoted the USA and China as the world's true superpowers. Like France and Britain, the US and China have also been indulging in an all out economic war and while diplomacy has masked rivalries, the events of the past few months have revealed many fractures in their bilateral relationship. Very different positions on the Syrian civil war, Russia, Ukraine, Iran, expansion in the South China Sea

and the Pacific and the dispute over the now Japanese controlled Senkaku Islands have generated diplomatic tensions. Recent revelations of intense Chinese industrial espionage in the United States have lit the fuse to an already explosive scenario. China has become a crucial player in the world of high technology and electronics, despite its reputation as a country with a pronounced tradition of industrial counterfeiting.

Telecommunications equipment manufacturer Huawei is competing with Ericsson, Nokia and Motorola for first place in the sector. Foxconn is the leading manufacturer of high-tech devices including such iconic brands as Apple. Even in the software department, Chinese based search engine Baidu is putting up a valiant fight against Google. The Chengdu technology park will be the world's largest with over a million square meters at its disposal. The United States has, so far, had few shots to fire to re-establish pre-eminence. The US considers Huawei as a threat to security because of its ties to the Chinese Communist Party according to China's Minister Chinese Commerce. The House's Intelligence Committee has claimed that Beijing could be using Huawei, the second largest manufacturer of routers and telecommunications equipment, for espionage purposes to the extent that Chinese investment activity in the United States is suspected as being a "potential Trojan horse".

Rare earths may be at the heart of the US-Chinese economic war; without them there would not be flat screen TV's, hard drives, smart-phones, hybrid engines, wind turbines and solar panels – not to mention missile guidance systems and laser cannons. These minerals are strategic and China still controls 95% of their production and sale while owning less than a third of the world's known reserves. Having managed to secure a virtual monopoly on rare earths – thanks in no small way to shortsighted policies in the West – China has exploited the opportunity to impose export quotas, undermining the needs of

Western industries. China's trading partners have accused China, through the World Trade Organization (WTO) of trying to raise prices and force foreign companies in the sector to relocate to China to secure access to rare earths. Meanwhile, amid suspicion of espionage, in 2012 China filed more patents than the United States. Surely, many of these were trivial and filed in response to Chinese government 'quota fill' requests; however, the UN's World Intellectual Property Organization (WIPO) has conducted a study, demonstrating that the level of Chinese patents is improving and a fast growing number are up to world class.

A week ago, the US-Chinese 'conflict' achieved a new peak as the U.S. Justice Department accused several Chinese hackers suspected of industrial espionage. The five suspects belonged to the military and were spying in the metal and solar energy industry and a union. In turn, Germany's investigative journal 'Der Spiegel' claimed that last March U.S. spies had managed to infiltrate China's IT company Huawei. Doubtless, China will not take the accusations lightly, given the tense geopolitical timing of their revelation. China has a number of economic artillery options in its arsenal from establishing tougher standards for American made products to throwing bureaucratic spanners such as unscheduled inspections. China could also find cyber-espionage accusations of its own against the West and it can certainly make it put up a strong challenge against the WTO ruling demanding it drop unfair quotas and restrictions to exports of rare earths.

This being a period of 'reflection' in China, as the country is trying to confront the environmental damage caused by years of haphazard industrial growth, China's retaliation will be guarded and delivered to strike maximum effect when it feels it is in a stronger position. For the time being, the US and the WTO are 'winning'. On May 22, the WTO ruled that China may not enforce punitive tariffs on cars (having engine displacement of 2.5 liters or more). China had been charging

21.5% duty on these largely General Motors (GM), Ford and Chrysler cars namely such models as the Jeep Grand Cherokee, Cadillac Escalade and Buick Enclave. China had justified the punitive tariffs claiming that U.S. carmakers are backed by Washington and, as such, have been able to sell their cars at low prices in the People's Republic. Overall, the United States exported in the year vehicles in the amount of \$ 8.6 billion in the People's Republic. The Obama administration continues, for some time now, has aggressively pursued efforts against trade barriers and industrial espionage, holding China responsible. China and the EU have their own fair share of trade issues and conflicts. In 2013, the EU had imposed punitive tariffs on Chinese solar panels while China then examined European wine imports and was considering its part to raise tariffs on large displacement European cars. Because the two sides agreed on a minimum price for solar cells, however, the conflict was resolved at that time.

Following the decision of the WTO, it is very likely that China will raise tariffs on exports. The current system of export quotas was "invisible" in recent years because the actual export volumes were below quota. In 2013, the prices of these minerals were low, affecting the Chinese producers. At Baotou in the Inner Mongolia Autonomous Region, where 34 major producers are based, industry revenues reached Yuan 1.81 billion (290 million U.S. dollars) last year, down 25.3%. Profits meanwhile fell 4.7 % to Yuan 210 million, while exports plunged 47.2% to Yuan 31 million. Chinese authorities may deal with the WTO by imposing higher taxes on producers of rare earths on the basis of the value of minerals, rather than the volume, as is the case now. This change will result in higher production and, of course, export prices. But China's revenge will be brewing in a slow process, designed to hurt much deeper.