CEPS POLICY BRIEF
Thinking ahead for Europe

Time for a Common European Effort on Raw Materials

Roderick Kefferpütz*

No. 261, December 2011

At long last commodity prices have declined from their pre-summer highs. Many raw materials are now trading at significantly lower prices, giving temporary respite to industry. Red-hot copper, the bellwether of the metals sector, for example, has pulled back from its peak of $10,000 a tonne. Even the astronomical rise of the previously little-known rare earth elements has reversed.

The prices of these much-coveted minerals spiked during the summer. In July, China, which produces over 97% of rare earths, announced its export quotas for the second half of 2011. This set the total annual quota at 30,246 tonnes. At first glance this appeared to be no different from the 2010 export allowance, which stood at roughly 30,258 tonnes. But appearances are deceptive. The July announcement was in fact a thinly disguised reduction, as ferrous alloys containing heavy rare earths were added to the quotas for the first time. In the past, companies had partially been able to circumvent Beijing's quota system by exporting these alloys. This loophole has now been closed. According to the Australian rare earth miner Lynas, the 2011 quota is therefore actually a 7% reduction compared with 2010.[1]

A mistaken optimism surrounding rare earths…

In this context, prices skyrocketed. Neodymium metal hit $450/kg, a massive increase from its 2008 price of $27/kg. Since September, however, many of the rare earth elements have followed the trend of declining commodity prices. This stems from a number of factors. First, with the eurozone on the brink of dissolution, fears of another economic crisis have emerged, creating a bear market and leading to a commodities sell-off. Second, high prices for rare earths have caused many companies to redouble their substitution efforts, thus decreasing demand. Manufacturers have switched to more available samarium-cobalt permanent magnets rather than the more effective but pricey neodymium-iron-born ones. Toyota and General Electric are also planning to build vehicles with induction motors, which can be built without rare earth magnets. Third, there are high hopes that the rare earth supply base is expanding. Rarely a week goes by without the discovery of a new rare earth deposit, most recently in the US, Brazil and Afghanistan. These new discoveries have hyped the supply situation, fuelling the belief that the tight supply–demand balance is easing.

[1] "EU says China is tightening rare-earth access even as sale quotas increase", *Bloomberg*, 15 July 2011.

* Roderick Kefferpütz is an Associate Research Fellow at CEPS and a Brussels-based political adviser. He is also an Associate of the Stiftung Neue Verantwortung as well as a 2011 Fellow of the Bertelsmann Foundation's CEPI Initiative on energy security and natural resources.

Decreasing commodity prices, particularly for rare earths, have regrettably made the outlook for raw materials appear far rosier than it is. This has led to the emergence of a certain optimism, which is sapping the little sense of political urgency that there once was.

With regard to the rare earth elements, for example, Goldman Sachs claims that there will be a surplus by 2013. Given the pace at which new deposits continue to be discovered and mothballed mines are restarting operations, this is a conclusion that many now share. But as is often the case, the picture is actually somewhat more complicated.

First, the claim that there is an imminent rare earths glut fails to distinguish among the different rare earths. While there may indeed be a surplus in light rare earths, such as cerium and gadolinium, there is still an acute supply risk for the rare earths used, for example, in the production of permanent magnets, such as neodymium and dysprosium.

Second, the decrease in prices could make many new mines uneconomical. According to industry expert Jack Lifton, only a fraction of the new rare earth mines will actually prove profitable.[2]

Third, the entire supply chain has to be taken into account. It is not sufficient to simply consider upstream mining developments. If downstream processing cannot keep up, bottlenecks appear. As previously highlighted, China is not only dominant in the mining and refining of rare earths (around 97%), it also leads in alloying and even the manufacture of magnet parts and components (up to 80% globally).[3] There is currently a dearth of non-Chinese processing plants. Two small separation plants exist outside of China, one in the US and one in Europe, which have a limited capacity (so far less than 10,000 tonnes of rare earth oxides). In addition, Lynas is currently developing a new facility in Malaysia. This plant, which was expected to come into operation at the end of 2011, is facing stiff local resistance, however. Initially bankrolled by a number of Chinese organisations, campaigners opposed to the plant are putting up a tough fight. As a result, its opening has now been pushed back to next year. Building a downstream infrastructure outside of China with sufficient capacity to handle the expected output from new rare earth mines will take time. According to some estimates, it could take up to 15 years to have an effective rare earths supply chain in place that runs from mine to magnet. This is an important choke point not to be ignored.

In the meantime, what will rare earth miners do once they have the relevant ores above ground? Send them to China for separation and refining?

Finally yet importantly, the extreme volatility of the sector, the fate of which still remains largely in the hands of Beijing, is a wildcard that likewise cannot be ignored. As an example, northern China's Inner Mongolia Baotou Steel Rare Earth Group, which is responsible for nearly half of the world's light rare earth production, suddenly declared a one-month suspension of its smelting and separation work in mid-October in order to boost prices. Others were quick to jump on the bandwagon, including China's southern producer, Ganzhou Rare Earth Mineral Industry. With falling demand (and with it prices) it is extremely likely that Beijing will announce even stricter export quotas for 2012 at the end of this year. The indication given by China's Ministry of Commerce that it will not provide the largest rare earths producer, Baotou Steel Rare Earth Group, with an export license for 2012 supports such thinking.

…impedes common efforts

Regrettably, the mistaken optimism surrounding supplies, coupled with the eurozone chaos, is hampering the establishment of important European initiatives in this field. President Nicolas Sarkozy's grand plan to stem the speculative tide in commodity markets met a rather unsuccessful end, with the latest G-20 summit in Cannes overshadowed by Greece's short-lived intention to hold a referendum on the

[2] "Decoupling the rare earth junior mining market from emphasis on Molycorp and Lynas", Jack Lifton's Instablog, 3 December 2011.

[3] Roderick Kefferpütz, *Unearthing China's Rare Earths Strategy*, CEPS Policy Brief No. 218, Centre for European Policy Studies, Brussels, November 2010.

country's bailout terms.[4] While Germany, with a handful of other G-20 members, fought hard to include a single paragraph on the supply of critical raw materials in the final G-20 communiqué, it ultimately failed to do so. These efforts are likely to be redoubled during Mexico's G-20 presidency. Given Mexico's involvement alongside the US and EU in a WTO case against China regarding raw materials, the chances of including wording on critical raw materials in the G-20 communiqué in 2012 might be better.

Earlier this year, in its February 2011 strategy document on raw materials, the European Commission committed itself to identifying priority actions for its critical raw materials. Yet ten months on these priority actions remain unannounced.

In 2010, the European Commission proposed the establishment of a European Innovation Partnership on Raw Materials. This partnership would bring EU stakeholders together to pool resources and set an innovation and R&D agenda. The Commission's intention to publish a communication on this partnership in October 2011, however, has yet to bear fruit, and indeed its future is now hanging in the balance. During the European Competitiveness Council meeting in September, a number of EU member states were highly critical of the initiative, putting it on ice. Berlin in particular has opposed the partnership, in spite of it enjoying strong support from German industry. Interestingly, a parliamentary resolution put forward by the governing coalition in the German Bundestag also supported the initiative, indicating that the government is less united in its opposition than first appearances suggest. Be that as it may, the European Commission has had to continuously postpone the communication on this partnership, which has been lying in a drawer ready to come out since autumn 2010. Currently, the Commission hopes to make its communication public in January 2012. Even if that should be the case, such a partnership is only likely to become operational sometime around 2014. That is rather late, given that other countries, such as Japan, are marching ahead in R&D and innovation with regard to raw materials.

In the absence of such a partnership, the European Parliament has fortunately taken up the slack to some degree. The Parliament's proposal for the EU's 2012 budget includes a commitment of €1 million for the establishment of a European Competency Network on Rare Earths. This network would bring together European industry and academia to share information, pool resources and identify research gaps in relation to rare earths, leading to a concrete research agenda that could be financed under the new Horizon 2020 R&D programme in 2014. In this context, the network could act as a precursor to the Innovation Partnership, which has continued to be blocked by member states, and eventually flow into the latter once it is operational. Industry Commissioner Antonio Tajani has already announced his support for this initiative. Given that China can boast over 6,000 scientists and researchers working exclusively on rare earths, it is important that Europe does not fall behind in this technology race.

Member states go it alone

Part of the reason EU member states are wary of pooling resources and rallying behind the Innovation Partnership on Raw Materials seems to be that they are still guided by the mistaken belief that they can go it alone. Germany, the Netherlands, France, Austria and Finland have all put into place their own separate resource strategies, and others are expected to follow suit. Furthermore, in spite of the European Commission's announcement of its intention to pursue European diplomacy on resources, Germany has taken a step further by initiating its own efforts in this sphere, with Chancellor Angela Merkel inking a framework agreement on raw materials with Mongolia several weeks ago. Namibia and Kazakhstan have also been identified by the German Resource Agency as countries with which to launch a raw materials partnership. None of this seems to have been concretely shared with the European Commission or the other EU member states in the Council formations. In addition, German companies supported by the government are

[4] This in no way suggests that the eurozone should not be (or have been) given priority; it simply recognises that when dealing with urgent issues, other important subjects can fall by the wayside.

coming together to create a so-called 'Resource Alliance' that would act as an import consortium.

There might, however, be a number of drawbacks to the pursuit of national interest at the expense of consolidated European action in this area.

First, member states lose out on the potential efficiency gains that could be made through the pooling of resources. This is increasingly pertinent in the current context of tough budgetary restraints.

Second, member states could actually be working at cross-purposes. The pursuit of national interest by one member state could jolt others into action, exacerbating a rush for resources. This could lay the groundwork for a state of affairs that – compounded by lacking intra-EU coordination – could be exploited by third countries willing to play member states off against each other. This has been particularly problematic in relation to energy supplies, leading the European Commission to take a number of precautions in this field. These include a recent legislative proposal that would require member states to give prior notification of any proposed energy deals with third countries, a mechanism that might usefully be extended to critical raw materials. The Commission has also been given a mandate, for the first time, to start commercial negotiations for gas supplies, in this case from the Caspian region. One might consider whether, under certain circumstances when market forces alone are unable to provide the necessary raw materials, the Commission could be given a similar mandate elsewhere.

Third, individual actions by member states to some degree undermine EU competencies in the field of trade or with regard to the new European External Action Service.

The lull in the raw materials markets, while bringing a welcome respite from high prices, has inadvertently led to a certain underestimation of the intricate challenge of securing future supplies. Important initiatives are being put on ice while member states are starting to pursue their own agendas with, in many cases, little regard to existing European competencies and efforts. Europe has had enough wake-up calls. It is time for member states and the European Commission to come together and face the resource challenge head-on.

ABOUT CEPS

Founded in Brussels in 1983, the Centre for European Policy Studies (CEPS) is widely recognised as the most experienced and authoritative think tank operating in the European Union today. CEPS acts as a leading forum for debate on EU affairs, distinguished by its strong in-house research capacity, complemented by an extensive network of partner institutes throughout the world.

Goals

- Carry out state-of-the-art policy research leading to innovative solutions to the challenges facing Europe today,
- Maintain the highest standards of academic excellence and unqualified independence
- Act as a forum for discussion among all stakeholders in the European policy process, and
- Provide a regular flow of authoritative publications offering policy analysis and recommendations,

Assets

- Multidisciplinary, multinational & multicultural research team of knowledgeable analysts,
- Participation in several research networks, comprising other highly reputable research institutes from throughout Europe, to complement and consolidate CEPS' research expertise and to extend its outreach,
- An extensive membership base of some 132 Corporate Members and 118 Institutional Members, which provide expertise and practical experience and act as a sounding board for the feasibility of CEPS policy proposals.

Programme Structure

In-house Research Programmes

Economic and Social Welfare Policies
Financial Institutions and Markets
Energy and Climate Change
EU Foreign, Security and Neighbourhood Policy
Justice and Home Affairs
Politics and Institutions
Regulatory Affairs
Agricultural and Rural Policy

Independent Research Institutes managed by CEPS

European Capital Markets Institute (ECMI)
European Credit Research Institute (ECRI)

Research Networks organised by CEPS

European Climate Platform (ECP)
European Network for Better Regulation (ENBR)
European Network of Economic Policy Research Institutes (ENEPRI)
European Policy Institutes Network (EPIN)