

# STRATEGIC METALS

*Your monthly guide to the latest information on the world's strategic metals*

## 2011: A Year of Volatility

### Iron & Steel

2011 saw iron ore prices seesawing from record highs to abysmal lows. The declining demand for steel in spite of China's strong economy was a major factor influencing the trend. Investments in both new and expansion projects however, continued unabated and iron ore producers are optimistic that the steel market will change for the better.

Late October recorded the sharpest fall (7.2%) in iron ore prices. Several Chinese steel making companies stopped buying iron ore and instead focused on depleting their stocks. Some shut down for maintenance during that period in an effort to tide over the phase. This was in sharp contrast to the steel market in May, when China produced a record 60.25 million tons of steel to meet the needs of its booming housing and infrastructure sectors.

Asia's weak demand for steel also brought losses to two of Japan's largest steel making companies—JFE Holdings Inc and Nippon Steel Corp. The losses in Japan were of course multiplied by the effects of the catastrophic earthquake and tsunami earlier in the year. South Korea meanwhile glutted the market with steel and that did not help the price fall at all.

The iron ore industries presently attracting the highest interest are those in the Pilbara region of Western Australia, the Gulf of Guinea, and India.

### Rare Earths

Sliding rare earth prices are likely to stabilize in the near future given the various measures taken by China and several non-Chinese rare earth companies to remedy the situation. The slowing demand has been the primary cause for the declining prices over the latter part of 2011. During the January to September period, China exported 11,000 tons of rare earth metals, which is only 40% of the export quota.

Several large Chinese rare earth companies have reduced or stopped production completely for a short period in an effort to improve the price curve. The government is also considering making regulatory changes to stabilize the rare earth market. Rumors indicate that to push prices up, China might create a special value added tax invoice and also add an export duty on neodymium-praseodymium stritcast alloy (NdFeB).

Another factor triggering the declining demand and the

consequent price fall is the fact that European, Japanese and American companies that use rare earth metals are exploring and developing alternate materials to free themselves from the strong hold that China has over the global rare earth market. Germany's auto parts manufacturer Continental AG, Germany's wind turbine manufacturer Enercon, and US based GE are a few examples.

### Manganese

China's lower demand for steel has affected the manganese market as well—prices of both manganese flake and silico-manganese have been low since September. The possibility of South Africa beginning production at several world class manganese deposits over the next two years has also kept prices low. China on the other hand, has been building its stockpiles of manganese.

In addition to the steel industry, manganese in various forms has found other markets to conquer. Lithium-manganese batteries are already used in automobiles such as the Nissan Leaf and the Chevy Volt. Nanotechnology has showed ways to dramatically improve the performance of manganese-based super conductors. Studies are underway at the Ames Laboratory to explore the possibility of using electrolytic manganese as a replacement for rare earth elements in magnets.

### Magnesium

China's production of primary magnesium increased by about 3% during the first nine months of 2011 and exports increased by almost 7%. The Netherlands, Japan and Canada are the biggest buyers of China's magnesium and prices rose accordingly. However, prices are now sliding down because of lower global demand and lower prices being quoted by China's suppliers.

### Molybdenum

In June this year, analysts believed that the molybdenum market would have surplus supply this year. The positive outlook for steel meant a positive outlook for molybdenum also. However, October records show that the relation between the two is not so simple. In spite of steel and iron ore prices being stable in summer, molybdenum prices showed a decline. It is possible that China's decision to no longer remain a net importer of molybdenum may have resulted in the strange divergence in steel and molybdenum prices.

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# As Goes Steel...

Falling iron ore prices had reached their lowest point over 22 months in late October. Since then, prices have been rising and they reached \$147.60 per tonne—a rise of 26%—over the last few weeks. However, market observers are not celebrating yet; in fact they have cautioned investors that steel demand is still subdued so the rising iron prices could be a reflection of purchases made by metal traders and not steel making companies.

A physical iron ore trader from Singapore remarked, "I don't think real demand has increased in China. Most of the buying is done by traders who are stocking up on iron ore, wanting to take positions."

In mid-December, Chinese steel mills boosted their stockpiles and that drove spot prices up by about 4%. An iron ore buying official from a small-sized steel mill said, "There should be another wave of restocking before the new lunar year, but it's hard to say for sure as steel prices are still weak."

India's iron ore exports fell by 25% between the April to

October period and chances are they will fall by 33% and reach 65–70 million tonnes by March 2012. China has been India's largest iron ore importer for many years now, importing almost 50% of India's production. The trend changed in July 2010 when the Indian state of Karnataka introduced a ban on shipments because of various domestic legal challenges. This has forced China to look for alternate sources to meet its domestic demand.

The United States has been observing rising numbers in the sale of cars, oil drilling equipment and farm gear and that has triggered an increase in both steel production and prices. Steel prices had declined in early 2011 but prices began rising in the later months and rose by almost 25% in the last 6–7 weeks.

However, like all other nations, steel producers are being cautious. Construction and a few other markets are still weak, profit margins are low and energy and raw material costs are still high—all of which do not paint a very positive picture. High production and increased imports could in fact cause a further dip in prices.

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## 2012: A Year of Transition for Strategic Metals

China announced its rare earth export quota for 2012 on December 27. The initial quantity has been reduced by 27% in comparison to 2011 but the whole year's quota is slated to remain almost unchanged from 2011 levels. Officials have launched a new system whereby the export quota would be split among the different types of rare earths—such a move is expected to better match supply and demand. China has, for the first time, split its export quota into light and medium-to-heavy categories. Mining companies that cannot meet the environmental standards of the government would be excluded from the quota.

In an official statement, the concerned ministry said, "In order to protect international demand and maintain the basic stability of rare earth supplies, the total export quotas for 2012 and 2011 will be basically the same." In 2011, China's export quota limit was set at 30,184 tons but only 14,750 tons were actually shipped out until November.

Outside China and India, there are now over 350 rare earth mining projects that are being developed across 35 countries by about 200 companies. According to a recent report from Roskill, non-Chinese projects are expected to add 56,000–57,000 tonnes of rare earth oxide to global supplies by 2015. Such a development would reduce China's share of the global market to 70%.

The state-owned China Securities Journal has estimated that China's steel products consumption would reach 646 million tonnes in 2012, which would be about 6% higher than 2011 estimates. Steel production is estimated to increase by 5.8% and touch a very high 728 million tonnes. Steel demand from the construction sector is expected to reach 350 million tonnes, up about 4% from this year. The auto and machinery sectors are expected to consume 44 million tonnes and 128 million tonnes respectively in 2012. That would translate to a rise of 10% and 8.5% respectively.

The US steel sector has been continually challenged by low capacity utilization rates and rising raw material prices. Although it showed signs of recovery in 2011, the industry is unlikely to recover fully until 2013. According to Fitch reports, demand is growing in the heavy-equipment manufacturing sector, the auto sector and the energy sector. Demand from the construction is at record lows and is not expected to gain much momentum until 2015. Demand from the auto sector is expected to continue rising all through 2012. However, the constant fear of a downturn is making steel producers extremely cautious about building inventories.

The steel industry is also the largest consumer of molybdenum. Steel alloys that contain molybdenum are corrosion resistant and can hold much higher heat—both of which are critical in nuclear reactors. Steel alloys used to build nuclear reactors contain more than 7% of molybdenum, so each new reactor will use at least 400,000 pounds of molybdenum. Since the steel will be used to retrofit existing nuclear facilities as well, the prospects of molybdenum are quite positive over the next few years.

The last few months has seen an upward trend in magnesium prices with a large number of companies based outside China showing interest in the metal. This trend should continue even while some analysts indicate that using magnesium and certain other metals in place of steel in the auto industry may not be as energy efficient as believed. However, auto makers still prefer magnesium to build car parts because of its inherent light weight and durability.

On the other hand, China's domination of the magnesium market and its tendency to restrict export quotas continue to raise concerns about the metal's continuous supply over the next few years. Political friction between China and the rest of the world over the metals market is unlikely to surprise many market observers.

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