

World Steel Dynamics (WSD) is a leading steel information service in Englewood Cliffs, N.J. WSD's steel experience, steel database and availability of steel statistics are the principles for performing steel forecasts, studies and analysis for international clients. WSD seeks to understand how the "pricing power" of steel companies the world over will be impacted by changes in the steel industry's structure.



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**Q. Steel prices were rising rapidly at the start of 2011. In the post-financial-crisis steel market environment, what conditions cause steel prices to surge, and which factors can work to suppress prices?**

**A1.** The mills' high cost to produce the "last tonne." Based on WSD's analysis, in January 2011, steel mills paying current spot prices for iron ore, coking coal and steel scrap had an average operating cost of about \$820 per tonne – up about \$100 per tonne versus the fall of 2010. WSD's *World Cost Curve* analysis as of October 2010 indicated that the average operating cost to produce hot rolled band globally was \$600 per tonne – including \$498 per tonne on average for those mills in the lowest-cost quadrant and \$653 per tonne on average for those mills in the highest-cost quadrant.

- This immense rise in costs impacts behavior patterns in the steel industry. Steel mills outside of China may be reluctant to increase production, turning perhaps to increased purchases of slab from outside sources. Steel buyers may seek to place orders further ahead in order to beat expected price increases. Everyone fears the future because of unacceptable inventory value and supplier/customer relationship risks.
- When finished steel product prices rise sharply, the integrated steel mills have a strong incentive to purchase more steel scrap in order to boost shipments because the additional scrap may account for only an extra 10% of their metallics charge. For example, if the steel scrap price is up \$200 per tonne, this is a penalty of \$40 per tonne if the scrap represents 20% of the metallics charge in the steelmaking furnace; yet the HRB price may be up \$200 per tonne. We call this the "price pull" phenomenon.
- With Chinese steel production recovering quickly in 2011, iron ore was in tight supply in the country. The spot price for Indian iron ore delivered to the

country was about \$189 per tonne in mid-January, while the domestic spot price delivered to the steel mills in Hebei Province (the biggest iron ore and steel producing province) was about \$213 per tonne, including the 17% VAT. Changes in the steel scrap and iron ore spot price (which impact the steel scrap price) have proven to be the best leading indicators of forthcoming change in the steel marketplace. The trade press indicated the Indian government may impose a 20% export tax effective 1 Apr 2011. The *Metal Bulletin* daily spot iron ore price in China for foreign ore was \$190 per tonne in mid-January versus \$175 per tonne in December 2010.

**A2.** Forces opposing the high price typically include the following:

- Reduced orders due to the high price.
- More supply – i.e., higher production.
- As the steel price rises, it becomes more difficult for middleman companies – service centers, processors and traders – to obtain working capital loans because their lenders fear the markdown of steel inventory values.
- Steel scrap generation rises exponentially as the scrap price rises (creating a global surplus for steelmakers' metallics).
- Seasonal changes in steel demand prevent it from consistently rising from quarter to quarter. ♦

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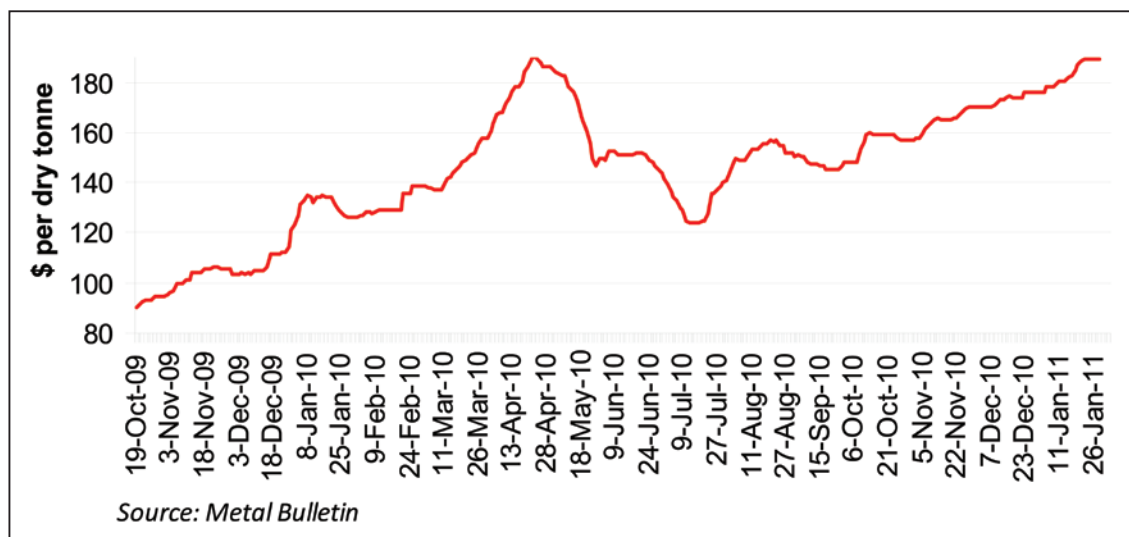



Figure 1 — Iron ore fines, cost and freight China port (daily average price).

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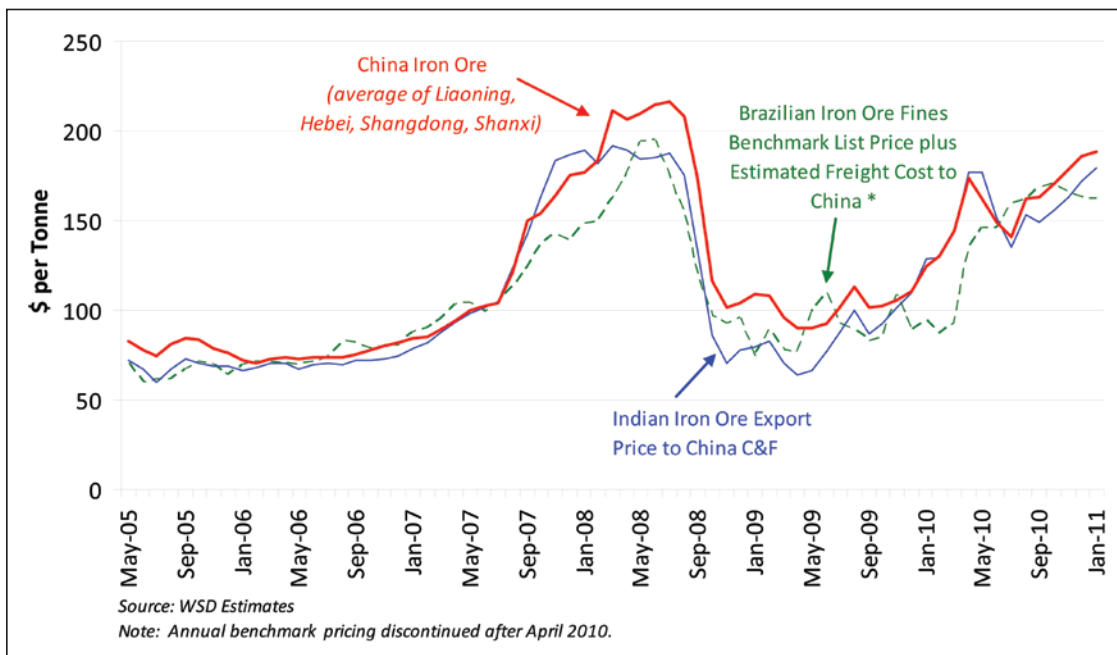


Figure 2 — China iron ore, Indian iron ore export price to China (cost and freight), and Brazilian iron ore fines.

To submit your questions for WSD, e-mail [WSD@aist.org](mailto:WSD@aist.org).

Please include your full name, company name, mailing address and e-mail in all correspondence.