



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.

The views and opinions expressed in this article are solely those of World Steel Dynamics and not necessarily those of AIST.

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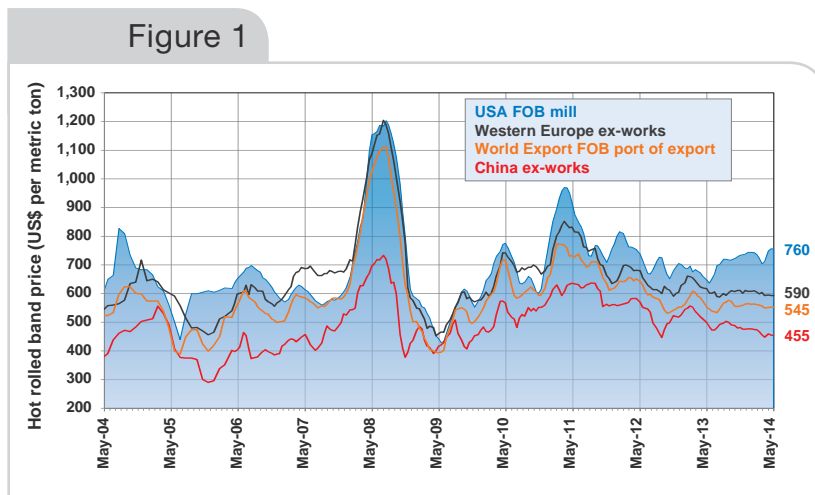
## Out-of-Whack Steel Pricing Relationships

WSD believes that steel pricing anomalies are occurring — i.e., pricing spreads that are not sustainable. The following are some examples:

- The huge price premium for hot rolled band (HRB) in the U.S. versus the world price and the Chinese mills' ex-works price. The figures per metric ton are US\$760, US\$545 and US\$455, respectively. If there was a liquid futures market for these products, WSD suspects that many investors would seek to play these spreads (Figure 1).

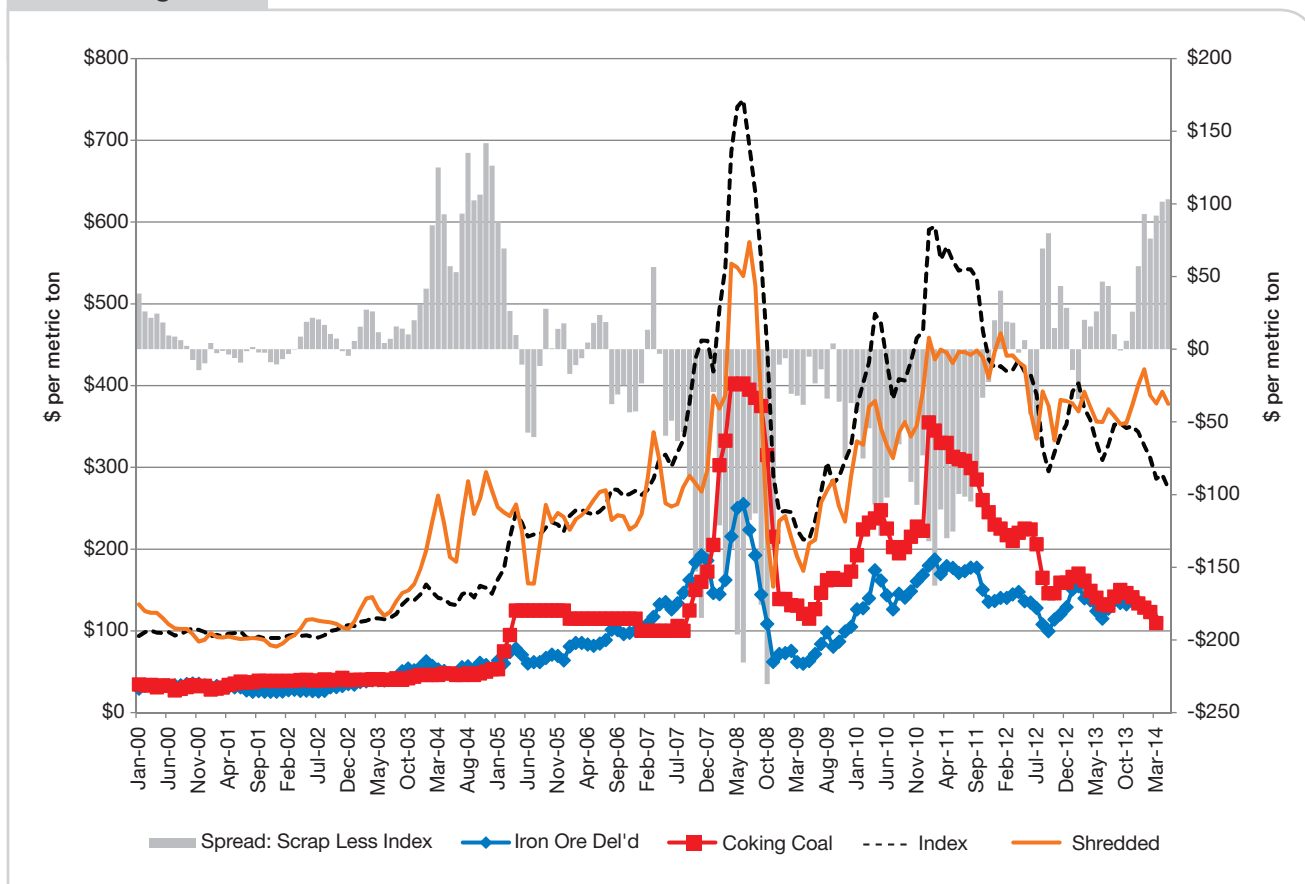
- Steel scrap and merchant pig iron prices appear quite high versus the international prices of iron ore and coking coal. As indicated in Figure 2, the premium for the steel scrap price at about US\$100/metric ton is lofty. (Note: Might the spread narrow because iron ore and coking coal rise in price and the steel scrap price stays flat?)

U.S. shredded steel scrap appears at least US\$50/metric ton, if not US\$75/metric ton, overpriced relative to the aggregated value of iron ore and coking coal.



SteelBenchmarker™ HRB price.

Figure 2



U.S. shredded scrap versus weighted iron ore and coking coal price index.

As indicated in Figure 2, steel scrap appears to be substantially overpriced based on this analysis (which is theoretical).

- Steel slab is priced high on the world market relative to the export price of hot rolled band. For example, the price of slab delivered to the Far East may be about US\$535/metric ton, say WSD’s contacts, while the price of slab delivered to the U.S. may be closer to US\$555/metric ton. Currently, the world export price for hot rolled band is only about US\$10–30/metric ton above this figure. How does the strong slab price occur? One reason is that some sellers have held back their offerings. Also, the ArcelorMittal plants in Brazil and western Mexico are now providing up to 3 million metric tons of slab annually

to AM/NS Calvert LLC, the former ThyssenKrupp Steel USA facilities in Alabama. And it takes at least six months for a new supplier of a specialized slab product to become qualified.

- The rebar and wire rod offering prices on the world market by the Chinese steel mills — and, perhaps, in the future by Russia/Ukraine steel mills — are about US\$485–500/metric ton, FOB the port of export, which is US\$50–70/metric ton less than the offering price by steel-scrap-using EAF steelmakers who make these products in Turkey, Japan, South Korea and, to some extent, India. This condition is called “disintermediation steel industry style” because the high-cost providers are being eliminated from the supply chain.

### The “Iron Pancake”: How Flat Will It Get?

The World Cost Curve for HRB is flattening this year, and a further flattening seems likely by 2017 if global steel demand growth is only moderate. In such a condition, the prices of iron ore and steel scrap may be far

lower than in the recent past. (Note: A risk for the steel mills is what might be called the “Iron Pancake,” which is a World Cost Curve so flat that price competition is promoted.)

In Table 1, WSD portrays operating cost globally to produce hot rolled band given different price inputs. WSD's findings are as follows:

- **April 2014** = Median global HRB cost at US\$505/metric ton. The difference between the operating cost of the average first and fourth quadrant mills is US\$147/metric ton (Figure 3).
- **Near-term forecast** = Late 2014. The median global HRB cost is US\$482/metric ton. The difference between the operating cost of the average first and fourth quadrant mills is US\$125/metric ton.
- **Long-term forecast** = Perhaps 2017 (in 2014 U.S. dollar terms). The median global HRB cost is US\$460/metric ton. The difference between the operating cost of the average first and fourth quadrant mills is US\$95/metric ton. ♦

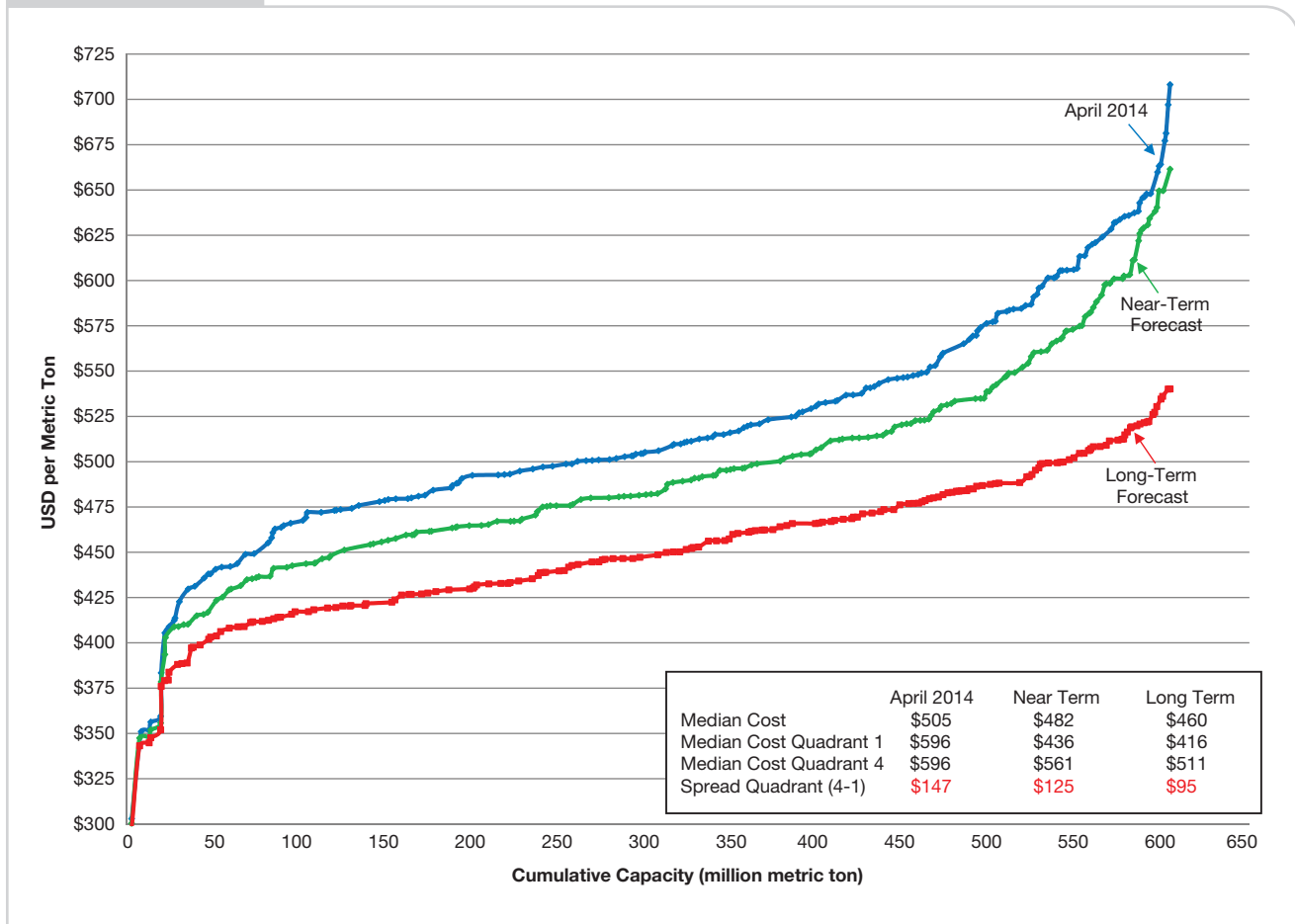
Table 1

Raw Material Assumptions and Forecast (US\$ per metric ton)

	April 2014	Near term	Long term
Iron ore fines FOB Brazil	96	80	65
Iron ore fines FOB Australia	107	90	75
Lump, FOB Australia	126	110	95
Pellets, FOB Brazil	132	117	100
Coking coal, FOB Australia	110	110	100
U.S. heavy melt scrap	383	305	230
U.S. prime	409	330	250
Turkey heavy melt scrap	380	318	245

Source: WSD estimates

Figure 3



World Cost Curve: hot rolled band with overhead, April 2014 versus near- and long-term forecast.