

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



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## Q. What does WSD expect will happen to steel prices in 2009?

**A.** In August 2008, WSD provided details for five steel industry scenarios for 2009.

No matter what the scenario, WSD expects steel industry events leading up to next year will probably include: (a) a sizable pricing setback for hot rolled band on the world export market in the July-September time frame; (b) a decline in oil and commodity prices (already well under way); and (c) a HRB export price rally before year-end as buyers begin to purchase again because they perceive that steel is bargain-priced.

We place only 15% odds on Scenario I, a severe steel shortage, because WSD has observed over the years that it's rare to have back-to-back explosive shortages – i.e., those with massive price spikes. An explosive shortage occurred in 1973-74 (the shortage was inflation-driven due to President Nixon's devaluation of the U.S. dollar in 1971 and the consequential surge of oil prices in 1972-73). The next one happened in 2004 (a

demand-pull environment in which steel buyers feared the steel industry would be production-constrained due to raw material shortages). There was another one in 2008 (primarily a cost-push environment due to the steel mills' massive rise in costs starting in late 2007).

Here are some of the assumed conditions in Scenario II, our mild shortage scenario:

- Hot rolled band prices on the world export market will not return to 2008 highs. While there is a shortage, it's far less severe than the one in 2008.
- Integrated mills' costs in most cases are lower than in the summer of 2008 due to lower prices for iron ore (one-year international price is cut 10%) and coking coal.
- Steel scrap prices are a wild card. If they rise to 2008 peak levels, EAF-based mini sheet mills get squeezed.

### 2009 Global Steel Industry Outlook Under Stable Global Economics

	Industry condition	Odds	Key development
Scenario I	Severe shortage	15%	World HRB export prices soar to new highs. Scrap prices surge to new record levels. Global economy strengthens during the year.
Scenario II	Mild shortage	30%	World HRB export prices rebound substantially from H2 2008 levels, but don't match 2008's peak levels. Still good growth for global economy.
Scenario III	Approximate supply/demand balance	30%	Steel mills obtain good prices in home markets, but world steel export prices remain under some pressure. Steel mill profits are down versus 2008, but still robust.
Scenario IV	Moderate oversupply	15%	World HRB export prices settle in at levels well below peak 2008 prices. Prices of steelmakers' raw materials remain under pressure. Not much slowdown in Chinese economic expansion. Profits are disappointing.
Scenario V	Sizable oversupply	10%	World HRB export price far lower. Global steel demand is up just moderately. Capacity additions well outpace steel demand given today's huge capital outlays in steel. Steel scrap prices remain subdued. Steel mill profits are poor.

### Steel Production Outlook for 2009 (in million metric tons)

	China	Non-Chinese developing world	Advanced countries	Total
Scenario I	590	435	970	1,560
Scenario II	580	430	960	1,540
Scenario III	580	415	940	1,520
Scenario IV	570	405	890	1,460
Scenario V	560	390	870	1,430

- The Chinese economy will be strong, although less so than in 2008. Steel demand will be up at least 5–8%.
- The Chinese steel mills' exports are restrained due to higher export taxes.
- The Chinese RMB is much stronger versus the U.S. dollar.
- The U.S. dollar is stronger versus most currencies except the Chinese RMB. It appreciates versus the Euro.
- Industry conditions are generally favorable for the mills due to: (a) fair to good global steel demand growth; (b) a tight supply of steelmakers' metallics; (c) the slow pace at which "integrated

## 2009 Global Steel Industry Outlook Under Stable Global Economics (\$ per metric ton, FOB steel plant or port of export, where applicable)

Item	Scenario I	Scenario II	Scenario III	Scenario IV	Scenario V	August 2008	2008 price range to date
Odds	15%	30%	30%	15%	10%		
Industry condition	Severe shortage	Mild shortage	Status quo	Moderate oversupply	Sizable oversupply		
HRB world export price	1,250	1,100	1,000	825	725	1,000	693–1,077
HRB USA price	1,300	1,100	1,000	925	850	1,189	560–1,200e
HRB EU price	1,200	1,050	950	875	850	1,159	713–1,159
HRB China price	900	850	800	775	665	668	545–722
Oil price per barrel	125	100	85	75	65	112	77–147
U.S. dollars per Euro	1.25	1.25	1.25	1.25	1.25	1.47	1.49–1.56
Chinese RMB per U.S. dollar	6.40	6.40	6.40	6.40	6.40	6.88	6.85–7.18
Iron ore spot price, Hebei, China	140	120	110	100	90	198	196–237
Iron ore fines – One year int'l contract price	80	80	80	80	80	85.94	
Iron ore ocean freight – Brazil to China	75	65	60	55	45	85	63–109
Coking coal, spot price, Shanxi, China	300	250	240	200	180	293	114–291
Coking coal spot price, FOB Australia	250	230	200	180	150	360	125–360
Chinese coke export price	800	600	550	450	400	800	420–800
#1 HM steel scrap USA	580	525	400	325	275	452	320–510
Shredded scrap USA	650	575	440	365	310	536	
Prime industrial steel scrap	1,000	850	700	550	425	801	392–950
Pig iron Brazilian export	1,000	775	625	550	500	800	380–885
Slab export price	1,100	950	850	725	600	950	500–1,050
Billet export price	1,150	900	800	675	550	950	675–1,180
Median mill – HRB operating cost	680	670	650	630	620	668	
Median mill – HRB marginal cost	560	550	530	510	500		
Median mill – HRB export operating profit	570	380	250	195	105		
Inflation rate (CPI) – China	6.0	5.5	5.5	5.5	6.0	6.3 (Jun '08) 5.9 (2008e)	4.8 (2007)
Inflation rate (CRI) – Non-Chinese developing world	7.0	7.0	7.0	7.0	7.5	8.1 (2008e)	7.0 (2007)
Inflation rate (CPI) – Advanced countries	3.5	3.3	3.3	3.3	3.0	2.6 (2008e)	2.1 (2007)
Real GDP growth – China	9.5	9.5	9.5	9.5	9.0	9.7 (2008)	11.9 (2007)
Real GDP growth – Rest of developing world	7.0	7.0	6.8	6.5	6.0	6.2 (2008e)	7.1 (2007)
Real GDP growth – Advanced countries	2.6	2.5	2.3	2.3	2.1	1.7 (2008e)	2.7 (2007)
FAI/GDP China	0.53	0.53	0.52	0.52	0.52	0.488 (2008e)	0.432 (2007)
FAI/GDP – Rest of developing world	0.30	0.30	0.30	0.29	0.29	0.276 (2008e)	0.251 (2007)
FAI/GDP – Advanced countries	0.215	0.215	0.215	0.215	0.215	0.211 (2008e)	0.211 (2007)

e = estimate

with blast furnace” steel plants are being built outside of China; and (d) increased concentration of HRB-producing mills outside of China (which adds to the mills’ pricing power).

- Steel mills’ profits are good, but in many cases don’t match the peak annualized results achieved in the second and third quarters of 2008.
- Reflecting record capital spending, steelmaking and rolling mill capacity is sufficient to prevent an acute shortage of hot rolled band.
- Inflation rates in the three regions of the world aggregated by WSD – China, Rest of Developing World (ROW) and Advanced Countries – come down from mid-2008 levels because of lower prices for oil, commodities and, probably, food.

Hence, the global economy by the summer of 2009 starts to expand at a higher rate. Chinese central government officials already are seeking to stimulate their economy, in contrast to the restrictive measures (higher reserve ratios for banks and actions to restrict fixed asset investment growth) that were put in place in the second half of 2007. ♦

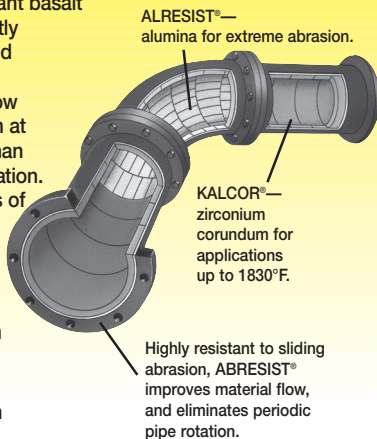
– *Peter F. Marcus*, managing partner, World Steel Dynamics, pmarcus@worldsteeldynamics.com, (201) 503-0902

– *Becky E. Hites*, managing partner, World Steel Dynamics, bhites@worldsteeldynamics.com, (201) 503-0935

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