

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. Now that the global financial crisis has apparently turned into an economic crisis, what does this mean for the global steel industry over the next several years?

A. The steel industry is so sensitive to changing economic conditions that, in the next year, changes in spot steel prices, and also steel scrap prices, may prove to be a good foreteller of developments in the general economy.

China continues to drive the steel industry's bus. Who could have imagined that, in the midst of a global economic collapse, China would be temporarily running short of steel today?

The unique characteristics of the global steel sheet-producing industry are giving steel buyers a big headache. They are finding the steel pricing environment so complex that they can barely cope with what's happening. As a consequence, notwithstanding the enormous oversupply of steel at the present time, "pricing power" is not shifting back to the steel buyers as substantially as would have been the case a decade ago during a period of sharply lower apparent steel demand. Steel buyers are confronted with:

- Growing concentration in the steel industry.
- Steel price stickiness from region to region relative to the huge swings in export prices.
- Massive and unpredictable swings in steel scrap prices.
- Huge variations in steel mills' pricing policies.
- Unpredictable swings in steelmakers' raw material prices.
- Seemingly irrational actions by the mills because of their high fixed costs.
- The steel industry's steep and undulating (snake-like) cost curve.
- The varying impact on steel mills' international cost positions due to exchange rate shifts.
- High steel price volatility.
- The difficulty of discerning a "dead cat bounce" from a real one.

Even in today's broken-down world – with confidence levels close to all-time lows for lenders, investors, consumers and entrepreneurs – the steel mills are in the driver's seat.

With that, WSD believes that the next couple of years may pose varying challenges for the global industry. We believe that the outlook will fall into one of three likely scenarios based on varying degrees of demand destruction and subsequent "resurrection." For reference, the detailed analysis behind Scenario #1 is included in the table on the following page.

### Scenario #1: Odds = 60%. Low point in the first half of 2009. Good industry conditions by 2011.

The non-Chinese economy bottoms out about June 2009, with industrial production off 15–20% from the peak in 2008. While global industrial production starts to recover, underlying steel demand continues to decline because about 80% of

steel demand is tied to construction and capital equipment markets, which are in a severe tailspin at present. However, apparent steel demand recovers somewhat in the second half of 2009 as steel buyers and users decide to no longer reduce their inventories.

Global apparent steel demand by 2011 rises about 2% above 2008 levels because of sizable gains in steel demand in China in the next few years and a good rebound in ROW (non-Chinese Developing World) demand. The steel demand recovery in the Advanced Countries lags that in the Developing World.

The steel mills are forecast to achieve high profits once again in 2011, in part because of a recurrence of a tight supply of steelmakers' metallics (which restrains output). Outside of China, much older and high-cost capacity will be eliminated in the next few years; hence, non-Chinese steelmaking capacity in 2011 is expected to be about flat versus 2008. In China, the mills engage in a major consolidation, which gives them more control over prices (and also makes it more attractive to merge with foreign steel companies).

### Scenario #2: Odds = 10%. Global depression.

The Chinese economy fails to expand due to its greater-than-anticipated interdependence with the economies outside of China. Outside of China, the crisis in confidence continues. Stock markets may fall further. Financial systems have problems coping with rising bad debts in the real estate and even the retail sectors. Even though governments attempt to boost aggregate demand in their countries via adding credit to the system, credit still declines as consumers, enterprises and banks seek to de-leverage. In other words, the velocity of money declines.

Global steel demand in 2011 is still about 20% below 2008.

Steel pricing comes under increasing pressure in the next few years. Pricing power shifts substantially to steel buyers. Steel mills fare poorly, including a rising number of bankruptcies.

### Scenario #3: Odds = 30%. Slower recovery, but no depression.

In this scenario, the Chinese economy grows less substantially, and it takes a longer time than in Scenario #1 for capital spending and construction activity to rebound strongly because of a lack of confidence, less availability of credit and mediocre enterprise profits.

Global steel demand in 2011 is 10–15% below 2008.

Sizable oversupply of steel through 2011 exerts continuing pressure on steel mills' prices and profits. ♦

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**Apparent Steel Consumption By Segment of the Economy — Scenario #1 (millions of tonnes)**

	2007				2008			
	Advanced countries	Developing world ex-China	China	Total	Advanced countries	Developing world ex-China	China	Total
GDP real	\$29,798	\$9,577	\$2,408	\$41,783	\$30,096	\$10,152	\$2,625	\$42,872
• % Growth	2.5%	7.1%	11.5%	5.2%	1.0%	6.0%	9.0%	2.6%
Investment	\$5,671	\$4,496	\$3,697	\$13,864	\$5,597	\$4,770	\$4,193	\$14,561
• % Change	1.2%	12.8%	14.6%	8.2%	-1.3%	6.1%	13.4%	5.0%
Ratio: investment to GDP	21.1%	25.1%	43.2%	26.0%	20.6%	25.1%	44.9%	26.2%
Consumer durables	99	63	45	207	98	57	51	206
• % Change					-1.1%	-9.2%	12.3%	-0.7%
Construction	174	188	214	576	170	187	214	571
• % Change					-2.2%	-0.6%	-0.2%	-0.9%
Infrastructure (public)	95	113	128	337	94	110	132	336
• % Change					-1.5%	-3.0%	3.0%	-0.3%
Private	78	75	86	239	76	78	81	235
• % Change					-3.0%	3.0%	-5.0%	-1.8%
Capital outlays	174	138	148	460	168	138	156	462
• % Change					-3.2%	-0.1%	5.4%	0.5%
Total apparent steel consumption	446	389	407	1,243	436	382	420	1,238
• % Change					-2.3%	-1.8%	3.2%	-0.4%
Ratio of total	0.359	0.313	0.328		0.352	0.309	0.339	
Crude steel needed by region on an ASC basis	482	421	440	1,343	471	413	454	1,339
Trade — imports (exports)	-12	62	-50	0	-15	61	-46	0
Crude steel produced by region	494	359	490	1,343	486	352	500	1,339

  

	2009				2010			
	Advanced countries	Developing world ex-China	China	Total	Advanced countries	Developing world ex-China	China	Total
GDP real	\$28,892	\$10,051	\$2,756	\$41,698	\$29,903	\$10,553	\$3,004	\$43,460
• % Growth	-4.0%	-1.0%	5.0%	-2.7%	3.5%	5.0%	9.0%	4.2%
Investment	\$4,392	\$4,166	\$4,464	\$13,022	\$4,703	\$4,460	\$5,063	\$14,226
• % Change	-21.5%	-12.7%	6.5%	-10.6%	7.1%	7.1%	13.4%	9.2%
Ratio: investment to GDP	17.5%	23.1%	46.9%	24.7%	17.9%	23.2%	48.0%	25.4%
Consumer durables	74	47	48	169	81	52	53	187
• % Change	-25.0%	-17.5%	-4.0%	-17.8%	10.5%	11.0%	10.0%	10.5%
Construction	139	171	217	528	151	186	242	579
• % Change	-17.9%	-8.5%	1.5%	-7.6%	8.2%	8.9%	11.6%	9.8%
Infrastructure (public)	86	111	143	339	95	123	163	381
• % Change	-9.0%	1.0%	8.0%	1.0%	11.5%	11.0%	14.0%	12.4%
Private	54	61	74	188	55	64	79	198
• % Change	-29.0%	-22.0%	-9.0%	-19.8%	3.0%	5.0%	7.0%	5.2%
Capital outlays	123	106	137	366	133	115	146	395
• % Change	-27.0%	-23.0%	-12.0%	-20.7%	8.5%	8.5%	6.7%	7.8%
Total apparent steel consumption	335	325	403	1,063	365	354	442	1,161
% Change	-23.0%	-15.1%	-4.2%	-14.2%	8.8%	9.1%	9.7%	9.2%
Ratio of total	0.316	0.305	0.379		0.314	0.305	0.381	
Crude steel needed by region on an ASC basis	363	351	435	1,149	395	383	478	1,255
Trade — imports (exports)	-10	48	-38	0	-26	50	-24	0
Crude steel produced by region	373	303	473	1,149	421	333	502	1,255

  

	2011			
	Advanced countries	Developing world ex-China	China	Total
DP real	\$31,099	\$11,397	\$3,274	\$45,771
• % Growth	4.0%	8.0%	9.0%	5.3%
Investment	\$5,044	\$4,801	\$5,594	\$15,439
• % Change	7.3%	7.6%	10.5%	8.5%
Ratio: investment to GDP	19.4%	24.3%	50.9%	27.2%
Consumer durables	88	56	58	202
• % Change	8.8%	6.5%	8.0%	7.9%
Construction	165	203	266	633
• % Change	9.2%	8.6%	9.7%	9.2%
Infrastructure (public)	106	135	180	420
• % Change	11.0%	9.5%	10.5%	10.3%
Private	59	68	86	212
• % Change	6.0%	7.0%	8.0%	7.1%
Capital outlays	145	124	157	426
• % Change	9.3%	7.5%	7.0%	7.9%
Total apparent steel consumption	398	382	480	1,260
• % Change	9.1%	8.0%	8.6%	8.6%
Ratio of total	0.316	0.303	0.381	
Crude steel needed by region on an ASC basis	431	413	519	1,362
Trade — imports (exports)	-17	55	-38	0
Crude steel produced by region	448	358	557	1,362

Source: WSD estimates.