

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. Now that raw material prices, and subsequently, steel producers' costs, are changing more rapidly, what impact will this have on the industry investment cycle? What capital outlays are required for the industry to keep pace with rising global demand?

A: Steel Industry Capital Outlay Needs

WSD derives that the non-Chinese steel industry needs to spend about \$60 billion per year to maintain existing capacity and to add to capacity about 4% per year — including new and expanded facilities to replace and/or offset those closed down or downsized:

- *Net capacity gain:* WSD submits the non-Chinese steel industry needs to add about 30 million tonnes per annum to its capacity. This gain is on a steel product delivery base of about 700 million tonnes per year.
- *Plus capacity reductions:* Closed and downsized facilities equal about 20 million tonnes per year. (Note: increased M&A activity tends to accelerate plant closedowns.)
- *Equals:* Gross capacity increase requirement = about 50 million tonnes per year.
- *Capital cost to add to capacity:* Assuming an average investment cost of \$800 per tonne of new capacity, including brownfield and greenfield expansions,

the capital outlay requirement is \$40 billion per annum for expansion.

- *Plus:* Capital cost to maintain and improve existing steelmaking and rolling mill facilities = \$30 per tonne x 700 million tonnes = \$21 billion per annum.
- *Total non-Chinese capital spending requirement on steel outside of China* = \$60 billion divided by about 700 million tonnes of steel finished product output = \$86 per tonne per year.

In comparison, capital outlays by the non-Chinese steel industry in 2008 and 2009 were about \$41 billion and \$42 billion, respectively, or \$50 and \$64 per tonne of crude steel produced, respectively. (Note: Chinese capital outlays in 2008 and 2009 were \$46 billion and \$47 billion, respectively, or \$92 and \$82 per tonne of crude steel produced, respectively.)

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

WSD World Financial Dynamics (Year Ended December 31)

	1995	2000	2005	2006	2007	2008	2009e	2010e	2011e
TOTAL STEEL INDUSTRY (MILLION OF TONNES)									
WORLD STEEL PRODUCTION	752.20	849.53	1,143.83	1,247.08	1,345.68	1,326.13	1,229.58	1,434.56	1,512.42
NON-CHINESE STEEL PRODUCTION	656.84	721.03	790.59	827.93	856.39	825.82	653.58	794.81	852.11
YIELD (%) = SHIP/PROD	93.1%	92.4%	92.7%	92.6%	92.6%	92.7%	92.7%	92.7%	92.7%
WORLD STEEL SHIPMENTS	700.64	785.34	1,059.85	1,154.84	1,246.73	1,229.07	1,140.12	1,329.96	1,401.92
YEAR-OVER-YEAR CHANGE		8%	5%	9%	8%	-1%	-7%	17%	5%

(US\$): STEEL INDUSTRY INCOME STATEMENT (MILLION DOLLARS)

REVENUE									
SALES	477,834	462,154	741,956	825,281	961,050	1,255,796	872,063	1,161,907	1,258,875
OTHER INCOME	11,242	5,784	10,278	12,419	15,415	14,865	9,804	12,717	14,486
TOTAL REVENUE	489,075	467,938	752,234	837,700	976,465	1,270,661	881,867	1,174,624	1,273,361
EXPENSES									
LABOR	89,921	66,480	79,353	86,194	92,655	93,688	79,130	96,708	104,887
MATERIAL & OTHER	315,906	339,463	531,292	607,928	726,020	1,009,675	733,022	955,626	973,268
INTEREST EXPENSE	11,949	11,398	10,718	11,626	12,330	18,875	20,652	21,495	21,518
DEPRECIATION EXPENSE	38,921	28,917	38,955	46,562	55,275	64,035	67,337	69,143	71,390
TOTAL	456,697	446,258	660,318	752,310	886,280	1,186,272	900,141	1,142,973	1,171,063
PRETAX INCOME	32,378	21,680	91,916	85,390	90,186	84,388	-18,274	31,652	102,298
NON-RECURRING ITEMS	-584	-2,232	0	0	0	0	0	0	0
TOTAL PRETAX INCOME	31,794	19,448	91,916	85,390	90,186	84,388	-18,274	31,652	102,298
PRO FORMA TAX RATE	23%	27%	29%	29%	29%	29%	31%	28%	29%
PRO FORMA TAXES	7,239	5,306	26,866	24,888	26,036	24,604	-5,612	8,943	29,536
CAPITAL OUTLAYS	47,425	31,157	60,826	75,010	77,797	87,671	87,650	76,473	73,127
TOTAL ASSETS	693,726	617,072	612,963	667,897	693,543	720,264	744,106	754,469	758,659

(US\$): PER TONNE SHIPPED

REVENUE									
SALES	682	588	700	715	771	1,022	765	874	898
OTHER INCOME	16	7	10	11	12	12	9	10	10
TOTAL REVENUE	698	596	710	725	783	1,034	773	883	908
EXPENSES									
LABOR	128	85	75	75	74	76	69	73	75
MATERIAL & OTHER	451	432	501	526	582	821	643	719	694
INTEREST EXPENSE	17	15	10	10	10	15	18	16	15
DEPRECIATION EXPENSE	56	37	37	40	44	52	59	52	51
TOTAL	652	568	623	651	711	965	790	859	835
PRETAX INCOME	46	28	87	74	72	69	-16	24	73
NON-RECURRING ITEMS	-1	-3	0	0	0	0	0	0	0
TOTAL PRETAX INCOME	45	25	87	74	72	69	-16	24	73
CAPITAL OUTLAYS	68	40	57	65	62	71	77	58	52
TOTAL ASSETS	990	786	578	578	556	586	653	567	541

(US\$): STEEL INDUSTRY FREE CASH FLOW ANALYSIS (MILLION DOLLARS)

EBITDA	83,249	61,995	141,589	143,578	157,790	167,298	69,715	122,290	195,206
LESS: INTEREST EXPENSE	11,949	11,398	10,718	11,626	12,330	18,875	20,652	21,495	21,518
LESS: INCOME TAXES	7,239	5,306	26,866	24,888	26,036	24,604	Neg	8,943	29,536
LESS: CAPITAL OUTLAYS	47,425	31,157	60,826	75,010	77,797	87,671	87,650	76,473	73,127
EQUALS: FREE CASH FLOW	16,636	14,134	43,179	32,053	41,627	36,149	-38,587	15,379	71,025

(US\$): PER TONNE SHIPPED

EBITDA	119	79	134	124	127	136	61	92	139
LESS: INTEREST EXPENSE	17	15	10	10	10	15	18	16	15
LESS: INCOME TAXES	10	7	25	22	21	20	0	0	21
LESS: CAPITAL OUTLAYS	68	40	57	65	62	71	77	58	52
EQUALS: FREE CASH FLOW	24	18	41	28	33	29	-34	12	51

Note: Shipment figures are derived from WSD's Global Steel Alert system.

Note: 2010/2011 results are based on WSD's mid-case.

Source: WSD's Global Steel Finance system