

Equities

8 February 2012 | 19 pages

JSW Steel (JSTL.BO)

Upgrade To Buy: More Light At The End Of The Tunnel

- Company Update
- Rating Change
- Target Price Change
- Estimate Change

■ **Receding uncertainties** — We upgrade JSW Steel (JSTL) to Buy from Neutral as: 1) Ore availability should improve gradually on positive Karnataka developments – helping reduce average ore procurement costs; 2) Capacity utilisation should continue the uptrend – helping reduce costs and improve profitability; 3) Falling raw material costs; 4) Better domestic steel demand which has rebounded to 7.7% in 3QFY12. While JSTL has rallied from its bottom, we see further upside from current levels and it is now our Top Pick in the steel space.

■ **Earnings revision & increased TP** — We raise FY12E/FY13E consolidated PAT 6%/9%, but cut FY14E 21% (mainly due to higher raw material costs & lower profits from subs). We value the India business at 5.5x EV/EBITDA, JSW Ispat at 5x EV/EBITDA, the US business (operating at 15-40% utilization levels) at 1.5x EV/Sales (prev. 3x; higher volumes but continued losses), and Chilean iron ore at 8x PE (prev. 7x; shipping commenced). Roll forward to Mar-13E (prev. Sep-12E) for a TP of Rs920 (prev. Rs631).

■ **Expansion: Lower costs & higher value** — Current expansion plans will help reduce costs and increase value-add. Cost savings from: 1) Captive power to rise by 300MW to 830MW by Mar-12 (meeting 100% at Vijaynagar); 2) Iron ore beneficiation from 10mtpa to 20mtpa by Sep-12 (more usage of lower quality ore); 3) Own coking coal (10-15% of usage in FY13-14); 4) Own iron ore mine restart (taken at 50% utilisation; upside risk in FY13). Value-add from: 1) Hot rolled coil capacity rising 1.5mtpa to 8.2m tpa by Sep-12; 2) Gain from cold rolled steel capacity rising in stages by end-FY14 (2mtpa to 4.3mtpa).

■ **Ore availability to improve** — Press articles indicate the CEC has recommended that ~45 mines (of ~166 in Karnataka) be allowed to mine as soon as the mining ban is lifted and some more (~70) after paying penalties. As JSTL has limited captive ore, the Supreme Court decision on re-start of Karnataka mines is key to future output as e-auction stocks will soon be exhausted, making alternative ore essential.

■ **Downside risks** — Lower volumes/higher costs; Delays in captive raw materials; Deterioration of performance in US plates/pipes business; Delays in Ispat cost-cutting.

Buy	1
<i>from Neutral</i>	
Price (08 Feb 12)	Rs758.10
Target price	Rs920.00
<i>from Rs631.00</i>	
Expected share price return	21.4%
Expected dividend yield	1.1%
Expected total return	22.4%
Market Cap	Rs169,145M US\$3,443M

Price Performance (RIC: JSTL.BO, BB: JSTL IN)



Figure 1. JSW Steel (Consolidated) – Statistical Abstract

YE 31 Mar	Net Profit (RsM)	EPS (Rs)	EPS Growth (%)	P/E (x)	EV/EBITDA (x)	ROE (%)
FY09	11,254	58.4	-26%	12.7	10.2	4%
FY10	12,985	67.9	16%	10.9	7.4	18%
FY11	15,187	66.8	-2%	11.1	6.6	11%
FY12E	9,324	40.5	-39%	18.3	7.1	6%
FY13E	19,443	85.9	112%	8.6	5.1	11%
FY14E	27,104	120.2	40%	6.2	4.0	13%

*Price as of 7 Feb 2012

Source: Company Data, Citi Investment Research and Analysis Estimates

Pradeep Mahtani

+91-22-6631-9882
pradeep.mahtani@citi.com

Raashi Chopra, CFA

+91-22-6631-9862
raashi.chopra@citi.com

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

Citi Investment Research & Analysis is a division of Citigroup Global Markets Inc. (the "Firm"), which does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

JSTL.BO: Fiscal year end 31-Mar						Price: Rs758.10; TP: Rs920.00; Market Cap: Rs169,145m; Recomm: Buy					
Profit & Loss (Rsm)	2010	2011	2012E	2013E	2014E	Valuation ratios	2010	2011	2012E	2013E	2014E
Sales revenue	188,970	238,616	326,235	359,830	407,016	PE (x)	11.2	11.3	18.7	8.8	6.3
Cost of sales	-161,852	-207,972	-298,756	-315,690	-351,481	PB (x)	1.6	1.0	1.0	0.9	0.8
Gross profit	27,118	30,644	27,478	44,140	55,535	EV/EBITDA (x)	8.2	6.7	6.6	4.9	4.0
Gross Margin (%)	14.4	12.8	8.4	12.3	13.6	FCF yield (%)	4.2	-15.4	-4.3	3.5	18.4
EBITDA	40,105	46,241	46,756	66,031	79,303	Dividend yield (%)	1.3	1.6	1.1	1.5	1.8
EBITDA Margin (%)	21.2	19.4	14.3	18.4	19.5	Payout ratio (%)	14	18	20	13	12
Depreciation	-12,987	-15,597	-19,277	-21,891	-23,767	ROE (%)	15.4	11.8	5.6	11.1	13.6
Amortisation	0	0	0	0	0	Cashflow (Rsm)	2010	2011	2012E	2013E	2014E
EBIT	27,118	30,644	27,478	44,140	55,535	EBITDA	40,105	46,241	46,756	66,031	79,303
EBIT Margin (%)	14.4	12.8	8.4	12.3	13.6	Working capital	-4,710	-13,137	-3,889	-46	930
Net interest	-11,042	-9,454	-12,939	-15,351	-17,000	Other	-1,934	-4,802	-5,627	-10,014	-12,838
Associates	0	0	0	0	0	Operating cashflow	33,461	28,302	37,240	55,970	67,395
Non-op/Except	1,768	2,604	1,425	1,331	2,146	Capex	-27,537	-54,433	-44,564	-50,000	-36,250
Pre-tax profit	17,845	23,794	15,965	30,119	40,681	Net acq/disposals	-206	-22,268	0	0	0
Tax	-6,467	-7,823	-5,640	-10,114	-12,938	Exploration exp/Other	-1,580	370	230	3,394	8,114
Extraord./Min.Int./Pref.div.	1,318	-1,063	-1,280	-842	-919	Investing cashflow	-29,323	-76,331	-44,335	-46,606	-28,136
Reported net profit	12,695	14,908	9,045	19,164	26,825	Dividends paid	-570	-2,397	-2,887	-1,676	-2,346
Net Margin (%)	6.7	6.2	2.8	5.3	6.6	Financing cashflow	-6,201	65,479	3,827	-13,148	-19,906
Core NPAT	12,695	14,908	9,045	19,164	26,825	Net change in cash	-2,063	17,450	-3,268	-3,783	19,354
Per share data	2010	2011	2012E	2013E	2014E	FCF ex acquisns & explorn	5,719	-48,399	-7,325	5,970	31,145
Reported EPS (Rs)	67.87	66.81	40.54	85.89	120.22						
Core EPS (Rs)	67.87	66.81	40.54	85.89	120.22						
DPS (Rs)	9.50	12.25	8.00	11.00	14.00						
CFPS (Rs)	178.89	126.85	166.90	250.85	302.06						
FCFPS (Rs)	31.67	-117.12	-32.83	26.76	139.59						
BVPS (Rs)	479.99	728.32	725.86	824.58	942.05						
Wtd avg ord shares (m)	187	223	223	223	223						
Wtd avg diluted shares (m)	187	223	223	223	223						
Growth rates	2010	2011	2012E	2013E	2014E						
Sales revenue (%)	19.0	26.3	36.7	10.3	13.1						
EBIT (%)	39.4	13.0	-10.3	60.6	25.8						
Core NPAT (%)	16.3	17.4	-39.3	111.9	40.0						
Core EPS (%)	16.3	-1.6	-39.3	111.9	40.0						
Balance Sheet (Rsm)	2010	2011	2012E	2013E	2014E						
Cash & cash equiv.	3,030	20,480	17,212	13,428	32,782						
Accounts receivables	6,964	9,333	11,918	11,911	13,321						
Inventory	28,667	44,097	66,910	64,135	69,719						
Net fixed & other tangibles	284,090	323,183	348,470	376,579	389,062						
Goodwill & intangibles	8,992	10,932	10,932	10,932	10,932						
Financial & other assets	22,320	50,878	50,729	56,707	56,707						
Total assets	354,063	458,903	506,171	533,693	572,523						
Accounts payable	78,078	102,019	129,244	126,315	134,140						
Short-term debt	0	0	0	0	0						
Long-term debt	161,730	164,744	184,396	188,276	187,716						
Provisions & other liab	19,497	24,489	25,405	29,845	35,200						
Total liabilities	259,305	291,251	339,045	344,436	357,056						
Shareholders' equity	92,572	165,293	164,744	186,771	212,980						
Minority interests	2,187	2,358	2,382	2,485	2,487						
Total equity	94,758	167,652	167,126	189,256	215,467						
Net debt	158,700	144,264	167,184	174,848	154,934						
Net debt to equity (%)	167.5	86.0	100.0	92.4	71.9						

*Note: Numbers previously shown on a standalone basis and are now shown on a consolidated basis.

For further data queries on Citi's full coverage universe please contact CIRA Data Services Asia Pacific at CIRADataServicesAsiaPacific@citi.com or +852-2501-2791

Estimate Changes

Figure 2. JSW Steel – Estimate Revisions, FY12-14E

	FY12E			FY13E			FY14E		
	Old	New	% chg	Old	New	% chg	Old	New	% chg
Rs/US\$ FX rate	47.1	48.5		47.1	51.1		46.1	49.1	
HRC (US\$/t)	770.0	736.0	-4%	738.0	683.0	-7%	745.0	689.0	-8%
HRC Rs/t	36,975	36,722	-1%	35,254	35,806	2%	34,752	35,029	1%
Sales volumes (m tonnes)	7.18	7.52	5%	8.17	8.36	2%	9.72	9.72	0%
Standalone									
Revenues (Rs bn)	296.0	307.5	4%	318.5	332.3	4%	370.8	374.6	1%
EBITDA (Rs bn)	40.6	44.0	8%	56.5	63.5	12%	79.3	77.2	-3%
Net Profit (Rs bn)	10.3	12.6	22%	18.8	23.1	23%	35.1	31.1	-11%
Number of shares (m)	241	223	-7%	241	223	-7%	241	223	-7%
EPS (Rs)	41.7	55.3	33%	76.9	102.2	33%	144.7	138.1	-5%
Consolidated									
EBITDA (Rs bn)	54.1	46.8	-14%	70.7	66.0	-7%	93.4	79.3	-15%
Net Profit (Rs bn)	8.8	9.3	6%	17.8	19.4	9%	34.1	27.1	-21%
EPS (Rs)	35.4	40.5	14%	72.9	85.9	18%	140.7	120.2	-15%

Source: CIRA Estimates

- We incorporate updated trends in steel price forecasts, updated FX rates, and slightly higher sales volumes. As a result, we raise consolidated PAT by 6% for FY12E and 9% for FY13E, but cut FY14E by 21% mainly due to higher raw material costs than we assumed earlier and lower profits from subsidiaries. There could be some upside to our volume estimates if iron ore availability is better than we expect.
- There is a decrease in the number of shares outstanding versus our earlier estimates. This is because we had assumed exercise of the 17.5m warrants issued to the promoters at a conversion price of Rs1,200/share by 15 December 2011. The promoters have decided not to exercise the warrants and instead forfeited the 25% already paid (Rs5.3bn) upon issue of the warrants.
- Our earlier EBITDA forecast for JSTL included EBITDA from JSW Ispat, in which it has a 47% stake. However, we have now excluded this in our forecasts as JSTL has decided to treat JSW Ispat as an associate company. If we had continued to include JSW Ispat EBITDA in consolidated EBITDA, the change on our consolidated EBITDA (vs previously) would have been +4% for FY12E, +9% for FY13E and -3% for FY14E.
- There is a risk to overall steel growth in India as GDP growth has come in slower than expected at 6.9% due to issues such as lack of approvals, coal shortages, and slower investment. However, after a slow start to FY12, steel demand has rebounded to 7.7% in 3QFY12 (9-month demand growth 4.4%). According to our India economist, the turn in the interest rate cycle and on-going measures to resolve issues in the investment space should lead to FY13 growth coming in at 7%. This should help steel demand grow at 8-9% in FY13.

Figure 3. JSW Steel – SOTP Valuation

	Old (based on Sep-12)	New (based on Mar-13)
JSW Steel Standalone		
EBITDA (Rs m)	48,542	63,484
Target EV/EBITDA (x)	5.5	5.5
EV (Rs m)	266,981	349,159
Net debt (Rs m)	108,238	130,415
Net debt for West Bengal/Amba River Coke (Rs m)	-	4,010
Preference share capital (Rs m)	2,790	2,790
Implied market value (Rs m) - (A)	155,953	211,944
US Plate and Pipe Mill (90% stake)		
Sales (Rs m)	13,363	17,441
Target EV/Sales (x)	3.0	1.5
EV (Rs m)	40,089	26,162
Net debt (Rs m)	43,588	31,605
Implied market value (Rs m) - (B)	-3,498	-5,444
JSW Ispat (47.3% stake)		
EBITDA (Rs m)	5,193	5,325
Target EV/EBITDA (x)	5.0	5.0
EV (Rs m)	25,966	26,626
Net debt (Rs m)	36,697	32,792
Implied market value (Rs m) - (C)	-10,731	-6,166
Chile Iron Ore (70% stake)		
PAT (Rs m)	1,450	613
Target PE (x)	7.0	8.0
Implied market value (Rs m) - (D)	10,150	4,904
Total implied market value - (A) + (B) + (C) + (D)	151,873	205,238
Number of shares (m)	241	223
Implied price per share (Rs)	631	920

Source: Citi Investment Research and Analysis Estimates

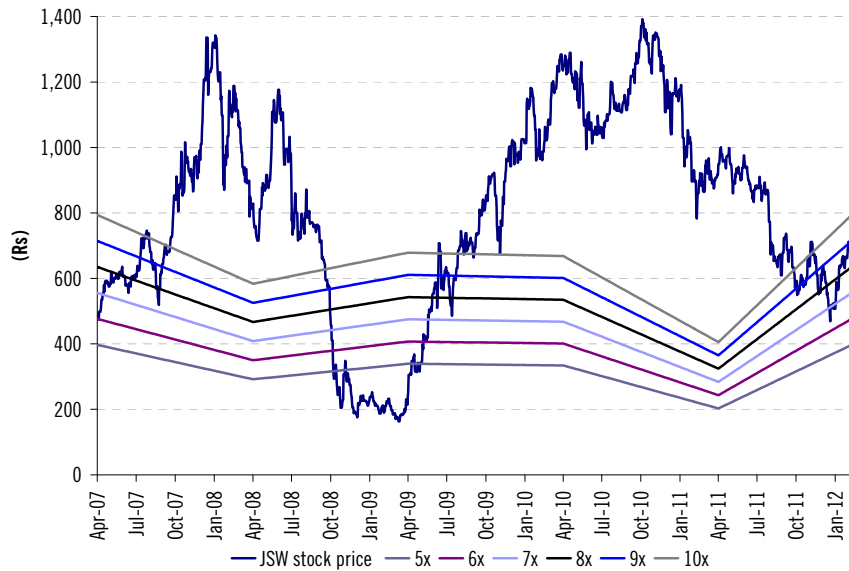
- EV/EBITDA is our preferred valuation metric for JSTL due to its high debt-equity levels. Our revised target price of Rs920 is based on SOTP. We value the standalone business at 5.5x Mar-13E EV/EBITDA – resulting in a value of Rs950/sh. The target EV/EBITDA multiple we use for JSTL is at a discount to the target multiple of 6x that we use for Tata Steel consolidated, justified in our view as Tata Steel is less vulnerable to uncertainties on raw material availability.
- We value its US Plates and Pipe operations at 1.5x EV/Sales. We use 1.5x EV/Sales as the US business continues to make losses and operates at low utilisation of 13% for pipes and 38% for plates. This gives a negative value of Rs24/sh.
- We incorporate the Ispat valuation and the Chilean iron ore asset separately. We value Ispat at 5x Mar-13E EV/EBITDA (slightly below JSTL's valuation in view of Ispat's lower profitability) which gives a negative value of Rs28/sh. The Chilean iron ore mine is valued at 8x Mar-13E P/E (versus global peers at 8-10x) giving a value of Rs22/sh for JSTL's 70% holding in that company. We have rolled forward our valuation to Mar-2013E from Sep-2012E.
- All the above result in a target price of Rs920/sh (from Rs631). At our revised target price, JSTL would trade at a consolidated Mar-13E EV/EBITDA of 5.7x and P/E of 10.7x. Following the upgrade to Buy (from Neutral) JSTL is now our Top Pick in the steel space.

Figure 4. JSW Steel (Consolidated) – 1-yr Fwd EV/EBITDA



Source: Citi Investment Research and Analysis estimates

Figure 5. JSW Steel (Consolidated) – 1-yr Fwd PE



Source: Citi Investment Research and Analysis estimates

Company Detail

JFE Stake in JSW Steel

JFE Steel Corp, Japan signed a collaboration agreement in 2010 and acquired a 14.8% stake in JSW Steel at an investment of Rs54bn (Rs1500/share). The collaboration agreement covers production of value-added products for the auto and construction industry, energy reduction and environmental technology. The wide range of agreements will help JSW Steel produce better quality steel at the new 2.3m tpa Cold Rolling Mill (CRM, completion in two phases by end FY14). The positives for JSTL as a result of the JFE collaboration are: 1) Access to more advanced technologies; 2) Access to the fast growing auto market (replacing imports of high-end auto grade steel); 3) Reduction in cost of production through higher efficiencies. The equity investment by JFE has helped reduce the consolidated debt of JSW Steel.

Raw Material Subsidiaries

■ Coking Coal Mines in the US

JSTL has acquired 100% stakes in coking coal mines in West Virginia in the US and is working towards getting permits and clearances to start operations. Management's target is to gradually raise output at these mines to 3mtpa in over three years (we currently assume 0.5m tpa of production in FY13 and 1m tpa in FY14). Higher production at the US mines would add upside risk to our estimates as we assume the coal will be used by JSW Steel in India.

■ Iron Ore in Chile

JSW Steel has commenced operations at its 70% subsidiary in Chile where it plans to produce and ship 1m tpa. The production in 1H FY12 has been 379,500 tonnes. Production is continuing but shipments have been curtailed in November and will remain so until mid-February 2012 due to the fruit season. JSTL plans to enhance output at Chile to 3mtpa but this will need additional investments for a wet beneficiation plant and a bigger port facility and would take about 2-3 years.

Figure 6. Chile Operations – 2QFY12 Results

(US\$M)	2QFY12	1QFY12	%chg (QoQ)
Production (Tonnes)	202,507	176,859	15%
Sales (Tonnes)	147,807	194,347	-24%
Net Sales	25.7	34.3	-25%
EBIDTA	7.2	11.5	-37%
Depreciation	1.1	1.4	-21%
Interest	0.6	0.6	0%
PBT	5.5	9.6	-43%
Tax	0.9	1.7	-47%
Tax Rate (%)	16%	18%	
PAT	4.6	7.9	-42%

Source: Company Reports

Projects Update

■ Commissioned during FY11

- 3.2m tpa expansion at Vijaynagar in Karnataka, taking crude steel capacity to 10m tpa and overall capacity to 11m tpa. The ramp up was slower than expected due to an iron ore shortage in JSTL's home state of Karnataka but has been rising and overall utilisation reached 82% in December 2011.
- 3.5m tpa Hot Strip Mill (phase one) which was commissioned in April 2011 and has helped JSTL produce more Hot Rolled Coil (HRC).
- 10 mtpa of iron ore beneficiation capacity (phase one).
- 300MW of captive power (CPP3) taking total power capacity to 530MW at Vijaynagar.

■ Planned projects for FY12 and beyond

- Second phase of the Hot Strip Mill taking capacity of this plant to 5m tpa.
- 4.2m tpa of pellet capacity taking total pellet capacity to 9.2m tpa.
- 300MW of captive power capacity taking capacity to 830MW at Vijaynagar.
- Phase two of the iron ore beneficiation plant, taking total beneficiation capacity to 20m tpa and which would allow the company to increase its usage of low grade ore. JSTL already completed its slurry pipeline project in December 2011 as part of this expansion.
- JSTL is setting up a new Cold Rolling Mill (CRM-2) which will have a capacity of 2.3m tpa in two phases. The capex of Rs40bn (2:1 debt equity ratio) includes 2.3m tpa of cold rolling capacity, 1.9m tpa of continuous annealing capacity, and 0.4m tpa of galvanizing and galvannealing capacity. The two phases are expected to be completed by end FY14.
- JSTL plans to enhance crude steel capacity by 2m tpa to 13m tpa by early FY15. The capex is expected to be Rs27bn (using a debt equity ratio of 2:1).

Figure 7. JSW Steel – Projects Update

Plant	Capacity	Capex (RsM)	Expected Date of Completion
HSM - 2 phase II	1.5 MTPA	45,000	Sept 2012
Beneficiation plant - II	10.0 MTPA	11,000	Sept 2012
Cold Rolling Mill - 2	2.3 MTPA	40,250	March 2014
Vijaynagar Crude Steel expansion	2.0 MTPA	26,950	March 2014
JSW Bengal	3.0 MTPA	160,000	March 2015
CPP-4	300 MW		March 2012

Source: Company Reports

Subsidiaries/Associate Companies

■ JSW Bengal

There are two greenfield projects planned by JSTL, one in West Bengal and the other in Jharkhand. In West Bengal, there is a plan to set up 3m tpa of capacity in phase 1 at a capex of Rs160bn. The company has taken possession of the land required for the project and boundary wall work has been completed. Work on the residential complex has begun.

■ US Plate and Pipe Mill

The US Plate and Pipe Mill continues to face difficult times. Utilization levels in FY11 were 11% for plates (119,887 net tonnes) and 8% for pipes (42,148 net tonnes). While utilisation levels improved in 2QFY12 to 37% for plates (100,811 net tonnes) and 12% for pipes (16,855 net tonnes), the business continues to report net losses. Volumes in the US Mill are likely to be impacted in 3QFY12 and utilisation fell to ~28% due to a 25-day shutdown taken in December 2011. However, going forward the operations and profitability should improve due to the capex of ~US\$10m which will help produce high-end plates and pipes.

The auditors have drawn attention to the company's statement in the 3Q FY12 results on its assessment of the carrying amounts of long-term strategic investments and loans extended to its subsidiary JSW Steel (USA) Inc. of Rs20bn, which is dependent on the fructification of business plans and future cash flows. The company has stated that a new valuation for the Plate and Pipe Mill is expected to be done shortly. However, JSTL has stated that while the gestation period is longer than envisaged, particularly given the US economic environment, the decline is temporary. Despite the continuing losses, JSTL does not expect any write-down in the value of its investments after the revamp of the unit and revised business plans for the unit. However, assumptions for the estimates will be monitored on a periodic basis and adjustments made for non-temporary adverse effects.

Figure 8. US Plate & Pipe Mill – 2QFY12 Results

	2QFY12	2QFY11	%chg (YoY)	1QFY12	%chg (QoQ)
Production (net tonnes)					
Plate Mill	100,811	37,699	167%	56,815	77%
Utilization (%)	37%	15%		22%	
Pipe Mill	16,855	9,575	76%	8,986	88%
Utilization (%)	12%	7%		7%	
Sales (net tonnes)					
Plate Mill	68,818	23,040	199%	46,875	47%
Pipe Mill	16,369	11,970	37%	9,716	68%
Net Sales (US\$M)	100.51	34.79	189%	61.95	62%
EBITDA incl. other income (\$m)	6.46	0.85	660%	3.67	76%
PAT (US\$M)	-7.62	-13.14		-9.36	

Source: Company Reports

■ JSW Ispat

JSW Steel has become the majority shareholder (47.3% stake) and acquired control of Ispat Industries Ltd. The company has since been renamed JSW Ispat (JSWI) and it is now an associate company of JSW Steel. It has a capacity of 3.3m tpa with Twin Shell ConArc furnace, Thin Slab Casting facility, and an in-house jetty with a cargo handling capacity of 12m tpa. JSWI had been incurring losses due to a combination of factors such as inadequate working capital, lack of captive inputs, and expensive debt.

The new management of JSWI is working towards improving the profitability of the company with the help of the following measures:

- Sales rationalization which has helped report a positive EBITDA for the past three quarters (Mar, Jun and Sep 2011).
- Cheaper power from JSW Energy which has commenced and the benefit will be visible in the quarter ended Mar 2012.
- Getting cheaper pellets and iron ore for JSWI. Cheaper pellets from Vijaynagar has not materialized because of a shortage of ore from Bellary. Also the plan to replace iron ore purchases from Chattisgarh has not been possible due to the mining ban in Karnataka.
- The debt of JSWI has been refinanced and additional debt arranged for meeting its long-term working capital requirements. There is a one year moratorium for repayment which is back-ended. It has made an application to exit the Corporate Debt Restructuring (CDR) Scheme. JSW Steel has not given any guarantee for the refinanced debt.

■ New Projects by JSTL for JSW Ispat

JSW Steel has decided to set up cost reduction integration projects for JSWI in a wholly owned special purpose vehicle named Amba River Coke Ltd. The total capex for the projects is Rs21.4bn and completion is likely in the next two years (by March 2014). The first part of the project expected to be completed is the 1m tpa coke oven plant by December 2013.

Figure 9. JSW Ispat – Quarterly Results for March/June/September

(RsM)	Sep11	Sep10	% chg	Jun11	Jun10	% chg	Mar11	Mar10	% chg
Net Sales	26,334	21,550	22%	24,634	23,499	5%	26,473	23,495	13%
Total Expenditure	25,672	22,421	14%	22,128	20,708	7%	23,151	19,361	20%
EBITDA	663	-871		2,507	2,791	-10%	3,321	4,133	-20%
-EBITDA Margin (%)	3%	-4%		10%	12%		13%	18%	
Other income	1,114	296	276%	1,662	781	113%	746	1,339	
Interest	2,791	2,836	-2%	2,240	2,744	-18%	1,880	2,602	-28%
Depreciation	1,486	1,544	-4%	1,473	1,492	-1%	1,483	1,457	2%
Exceptional items	952	0		11,806	0		0	0	
PBT	-3,453	-4,955		-11,351	-664		705	1,413	
Tax	0	-1,639		0	29		3	1,189	
% effective tax	31%	33%		31%	-4%		31%	43%	
PAT - reported	-3,453	-3,316		-11,351	-693		702	224	213%
Adjusted PAT	-2,501	-3,316		455	-693		702	224	213%

Source: Company Reports

Figure 10. JSTL – Projects Planned for JSW Ispat

Plant	Capacity	Capex (RsM)	Expected Date of Completion
Coke Oven Plant	1.0 MPTA	9,750	Dec 2013
Pellet Plant	4.0 MPTA	8,350	21 months from zero date
CRM Mill	0.8 MTPA	3,300	18 months from zero date

Source: Company Reports

Balance Sheet Update

■ Net debt levels fall in FY12

Rapid expansion and the expensive acquisition of the US Plate and Pipe Mill, coupled with the steel downturn in FY09, led to a sharp expansion in consolidated net debt to equity to 2.1x for JSTL. A better steel market helped reduce this to 1.7x in FY10. Infusion of funds by JFE in FY11 (Rs54bn) and issuance of warrants to the promoters (Rs5.4bn) led to consolidated net debt to equity falling to 0.9x in FY11 and it is likely to be 1x in FY12E. The consolidated financials do not include the financials of JSW Ispat, which is being treated as an associate. If we include the proportionate share of debt of JSWI, net debt to equity rises to 1.2x in FY12E. JFE Steel, Japan, holds 14.78% of equity in JSTL.

■ Foreign Currency Convertible Bonds (FCCBs)

In FY08, JSTL issued 3,250 Zero Coupon FCCBs of US\$100,000 each totaling US\$325m to part finance its capex plans. Each bond is convertible into equity shares of Rs10 each at a conversion price of Rs953.4/share anytime from 7 August 2007 until 21 June 2012. Those bonds which are still outstanding are redeemable on 28 June 2012 at an amount equal to the principal amount multiplied by 142.801% (i.e. at Rs1,361.5/share). The principal amount outstanding after repurchases and conversions so far is US\$274.4m.

Figure 11. JSW Steel Peer Valuations (as of 8 February 2012)

Company	Code	Rating	Market Cap	CCY	Current Price	Target Price	P/E (x)			P/B (x)			EV/EBITDA (x)		
							2011E	2012E	2013E	2011E	2012E	2013E	2011E	2012E	2013E
ArcelorMittal	ISPA.AS	1	34,559	EUR	16.7	20.0	8.4	9.9	6.5	0.5	0.6	0.5	4.2	4.8	3.8
Salzgitter AG	SZGG.DE	1	3,729	EUR	46.8	63.0	16.6	16.0	12.4	0.5	0.6	0.6	5.9	6.0	5.0
voestalpine AG	VOES.VI	1	6,193	EUR	27.6	35.0	7.0	9.0	7.5	0.7	0.9	0.8	4.9	5.6	4.9
Baoshan Iron & Steel	600019.SS	2H	13,860	CNY	5.0	6.13	13.5	10.0	8.0	0.8	0.8	0.7	5.6	4.7	3.9
Tata Steel	TISC.BO	2	8,943	INR	452	442	19.0	9.7	5.8	1.1	1.0	0.9	6.7	5.6	4.7
Jindal Steel and Power	JNSP.BO	1	10,887	INR	572	645	13.1	10.5	9.9	3.0	2.4	1.9	10.0	8.0	7.8
JSW Steel	JSTL.BO	1	3,373	INR	743	920	18.3	8.6	6.2	1.1	1.0	0.8	7.1	5.1	4.0
Steel Authority of India	SAIL.BO	1	8,908	INR	106	130	8.0	7.1	6.5	1.1	1.0	0.9	5.4	5.0	4.2
POSCO	005490.KS	1	31,832	KRW	408,000	470,000	8.6	8.8	7.9	0.8	0.8	0.7	5.2	6.2	5.2
China Steel	2002.TW	1	15,005	TWD	29.5	30.4	22.4	20.8	18.7	1.5	1.5	1.5	12.1	12.0	10.5

Note: For the Indian companies, data for 2011 pertains to FY12 (y/e March), 2012 for FY13 and 2013 for FY14.

Source: Citi Investment Research and Analysis Estimates.

Quants View – Contrarian

Paul Chanin
+65-6432-1153
paul.chanin@citi.com

Data as of: 03-Feb-12

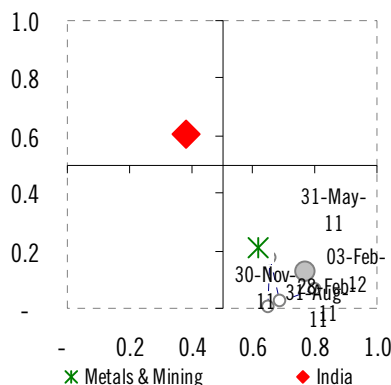
Radar Screen Quadrant Definitions

Glamour <i>Poor relative value but superior relative momentum</i>	Attractive <i>Superior relative value and superior relative momentum</i>
Unattractive <i>Poor relative value and poor relative momentum</i>	Contrarian <i>Superior relative value but poor relative momentum</i>

JSW Steel currently lies in the Extreme corner of the Contrarian quadrant of our Value-Momentum map with relatively weak momentum but strong value scores, having been a resident there since the past 11 months. Compared to its peers in the Metals & Mining sector, JSW Steel fares better on the valuation metric but worse on the momentum metric. Similarly, compared to its peers in its home market of India, JSW Steel fares better on the valuation metric but worse on the momentum metric.

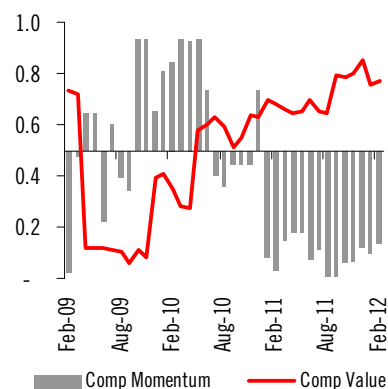
From a macro perspective, JSW Steel has a high Beta to the region so is likely to rise (or fall) faster than the region. It is also likely to benefit from Small cap outperformance, tightening US credit spreads, falling Commodity (ex-oil) prices, falling EM yields, and a weaker US Dollar.

Figure 12. Radar Quadrant Chart History



Source: CIRA

Figure 13. Radar Valuation and Momentum Scores



Source: CIRA

Figure 14. Radar Model Inputs

IBES EPS (Actual and Estimates)			
FY(-2)	55.37	Implied Trend Growth (%)	3.77
FY(-1)	83.29	Trailing PE (x)	7.75
FY0	83.33	Implied Cost of Debt (%)	6.63
FY1	57.15	Standardised MCap	0.04
FY2	82.06		

Note: Standardised MCap calculated as a Z score – (mkt cap - mean)/std dev – capped at 3

Source: Citi Investment Research and Analysis, Worldscope, I/B/E/S

Figure 15. Stock Performance Sensitivity to Key Macro Factors

Region	1.61	Commodity ex Oil	(0.27)
Local Market	1.31	Rising Oil Prices	0.14
Sector	0.94	Rising Asian IR's	0.25
Growth Outperforms Value	1.00	Rising EM Yields	(0.93)
Small Caps Outperform Large Caps	1.22	Weaker US\$ (vs Asia)	2.64
Widening US Credit Spreads	(0.56)	Weaker ¥ (vs US\$)	0.17

Source: Citi Investment Research and Analysis

JSW Steel

Company description

JSTL is one of India's largest integrated steel producers with crude steel capacity of 11mtpa (10mtpa in Karnataka). Of this, 1.6mtpa uses the Corex process and the rest uses blast furnace technology. JFE Steel Corp., Japan, holds a 14.78% stake in JSTL and in 2010 the companies signed a collaboration agreement covering production of value-added products for the auto and construction industry, energy reduction and environmental technology. JSTL holds 47.3% equity in JSW Ispat which has a capacity of 3.3m tpa. JSTL also owns 90% of Plate (1.1m tpa) and Pipe Mill (0.5mtpa) capacity based in the US. JSTL has no captive coking coal and limited levels of captive iron ore for its Indian operations. In order to improve its captive sources of iron ore and coking coal, JSTL has acquired coking coal mines in West Virginia, USA and iron ore mines in Chile. Capex plans in the medium-term are focused towards setting up capacities to cut costs. JSTL has started the process of setting greenfield steel capacity in West Bengal (3m tpa in phase 1).

Investment strategy

We rate JSTL as Buy (1) due to: 1) Ore availability should improve gradually on positive Karnataka developments – helping reduce average ore procurement costs; 2) Capacity utilisation should continue the uptrend – helping reduce costs and improve profitability; 3) Raw material costs are expected to fall in coming quarters; 4) Domestic steel demand is improving and has rebounded to 7.7% in 3QFY12. Current expansion plans will help reduce costs and increase value-add. Cost savings expected from: 1) Captive power to rise by 300MW to 830MW by Mar-12; 2) Iron ore beneficiation from 10mtpa to 20mtpa by Sep-12; 3) Own coking coal; 4) Own iron ore mine restart. Value-add from: 1) Hot rolled coil capacity rising 1.5mtpa to 8.2m tpa by Sep-12; 2) Gain from cold rolled steel capacity rising in stages by end-FY14 (2mtpa to 4.3mtpa). In addition, infusion of equity by JFE and initial amount on warrants issued to promoters have led to increase the net worth of JSTL and will help bring down consolidated net debt to equity to 1x as of Mar-2012E.

Valuation

EV/EBITDA is our preferred valuation metric for JSTL due to its high debt-equity levels. Our Rs920 target price is based on SOTP. We value the standalone business at 5.5x Mar-13E EV/EBITDA – a discount to the Tata Steel multiple (we view Tata Steel as less vulnerable to uncertainties on raw material availability) – resulting in a value of Rs950/sh. We value US pipe and plate operations at 1.5x EV/Sales, as utilization levels are quite low and it continues to make losses, imputing a negative value of Rs24/sh. We incorporate the Ispat valuation and the Chilean iron ore asset separately. Ispat at 5x Mar-13E EV/EBITDA (slightly below JSTL's valuation in view of Ispat's lower profitability) gives us a negative value of Rs28/sh. The Chilean iron ore mine is valued at 8x Mar-13E P/E (vs. global peers at 8-10x) giving a value of Rs22/sh. The resultant target price is Rs920/sh, at which JSTL would trade at a consolidated Mar-13E EV/EBITDA of 5.7x and P/E of 10.7x.

Risks

Key downside risks to our JSTL target price are: 1) Weaker-than-expected steel prices; 2) Higher raw material costs; 3) Lower volumes; 4) FX trends. Upside risks include: 1) Higher iron ore availability from Karnataka; 2) Lower raw material costs; 3) Higher steel prices than forecast; 4) Higher-than-expected volumes; 5) FX trends.

Appendix A-1

Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

IMPORTANT DISCLOSURES

JSW Steel (JSTL.BO)
Ratings and Target Price History
Fundamental Research
Analyst: Pradeep Mahtani



	Date	Rating	Target Price	Closing Price
1	16-Feb-09	3H	*185.00	215.05
2	6-Jul-09	*1M	*756.00	576.60
3	25-Oct-09	1M	*1,027.00	852.40
4	17-May-10	1M	*1,450.00	1,170.30

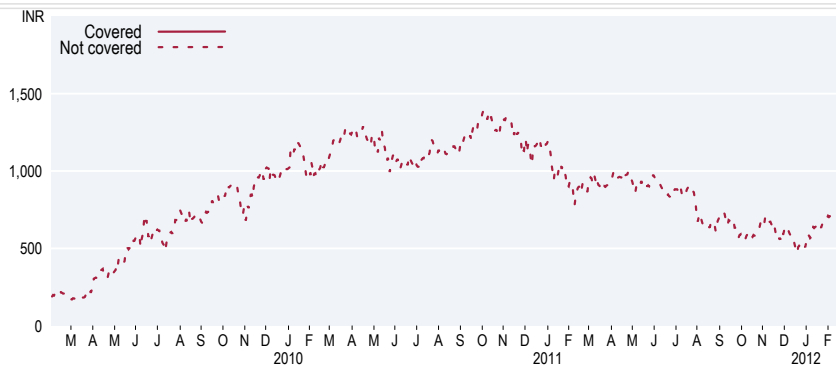
	Date	Rating	Target Price	Closing Price
5	20-Apr-11	1M	*1,254.00	969.90
6	31-Jul-11	*3M	*612.00	774.20
7	30-Sep-11	3M	*592.00	591.30
8	5-Oct-11	3M	*565.00	553.75

	Date	Rating	Target Price	Closing Price
9	7-Oct-11	Stock rating system changed		
10	7-Oct-11	*2	565.00	564.45
11	23-Oct-11	2	*631.00	580.45

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

JSW Steel (JSTL.BO)
Ratings and Target Price History
Best Ideas Research
Relative Call (3 Month)
Analyst: Pradeep Mahtani



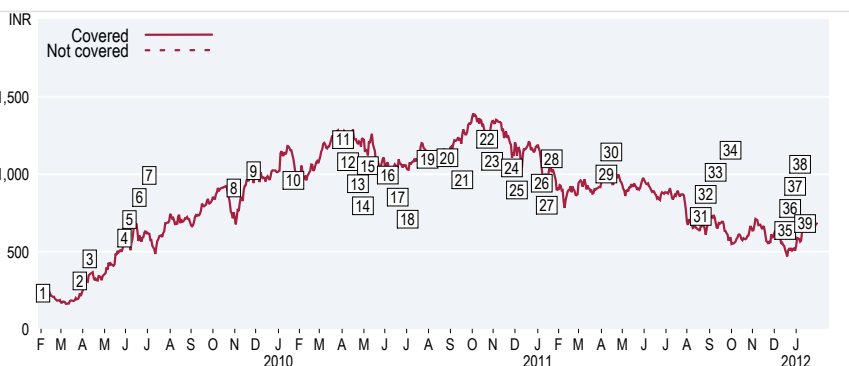
* Indicates change

Rating/target price changes above reflect Eastern Standard Time

JSW Steel Ltd (JSTL.NS)

Rating History
Global Quantitative Research
Asia Radar Screen

Analyst: Paul R Chanin



Date	Rating	Target Price	Closing Price	
1	2-Feb-09	*4	-	196.75
2	27-Mar-09	*2	-	230.50
3	10-Apr-09	*5	-	347.55
4	29-May-09	*4	-	553.15
5	5-Jun-09	*5	-	585.80
6	19-Jun-09	*4	-	604.50
7	3-Jul-09	*5	-	615.60
8	30-Oct-09	*3	-	755.50
9	27-Nov-09	*4	-	942.40
10	22-Jan-10	*2	-	1,097.65
11	2-Apr-10	*3	-	1,250.65
12	9-Apr-10	*2	-	1,227.75
13	23-Apr-10	*1	-	1,198.25

* Indicates change

Date	Rating	Target Price	Closing Price	
14	30-Apr-10	*2	-	1,227.60
15	7-May-10	*1	-	1,121.30
16	4-Jun-10	*2	-	1,075.85
17	18-Jun-10	*1	-	1,038.90
18	2-Jul-10	*2	-	1,029.75
19	30-Jul-10	*3	-	1,117.30
20	27-Aug-10	*2	-	1,114.10
21	17-Sep-10	*3	-	1,256.95
22	22-Oct-10	*1	-	1,255.10
23	29-Oct-10	*3	-	1,341.95
24	26-Nov-10	*2	-	1,107.70
25	3-Dec-10	*3	-	1,120.05
26	7-Jan-11	*1	-	1,029.95

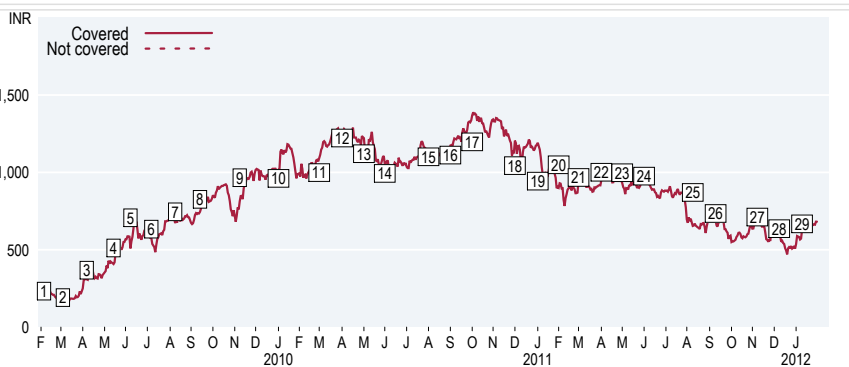
Date	Rating	Target Price	Closing Price	
27	14-Jan-11	*3	-	969.55
28	21-Jan-11	*4	-	1,012.95
29	8-Apr-11	*3	-	978.95
30	15-Apr-11	*4	-	958.25
31	19-Aug-11	*5	-	665.95
32	26-Aug-11	*4	-	609.15
33	9-Sep-11	*3	-	687.65
34	30-Sep-11	*4	-	592.00
35	16-Dec-11	*2	-	509.50
36	23-Dec-11	*3	-	512.95
37	30-Dec-11	*4	-	507.20
38	6-Jan-12	*3	-	564.60
39	13-Jan-12	*4	-	638.05

Rating/target price changes above reflect Eastern Standard Time

JSW Steel Ltd (JSTL.BO)

Rating History
Global Quantitative Research
World Radar Screen

Analyst: Chris Montagu
Covered since May 23 2009



Date	Rating	Target Price	Closing Price	
1	5-Feb-09	*6	-	196.25
2	4-Mar-09	*7	-	177.95
3	7-Apr-09	*1	-	311.55
4	14-May-09	*4	-	407.45
5	8-Jun-09	*1	-	508.60
6	7-Jul-09	*2	-	576.20
7	10-Aug-09	*5	-	672.45
8	14-Sep-09	*4	-	744.90
9	9-Nov-09	*1	-	812.95
10	1-Jan-10	*4	-	1,012.65

* Indicates change

Date	Rating	Target Price	Closing Price	
11	1-Mar-10	*3	-	1,071.00
12	1-Apr-10	*5	-	1,251.55
13	1-May-10	*2	-	1,227.65
14	1-Jun-10	*1	-	1,055.35
15	1-Aug-10	*3	-	1,116.55
16	1-Sep-10	*4	-	1,173.40
17	1-Oct-10	*5	-	1,369.05
18	1-Dec-10	*6	-	1,205.45
19	1-Jan-11	*1	-	1,176.20
20	1-Feb-11	*5	-	900.40

Date	Rating	Target Price	Closing Price	
21	1-Mar-11	*6	-	944.20
22	1-Apr-11	*3	-	949.60
23	1-May-11	*6	-	948.60
24	1-Jun-11	*7	-	965.45
25	9-Aug-11	*5	-	654.05
26	9-Sep-11	*2	-	687.80
27	8-Nov-11	*7	-	702.90
28	8-Dec-11	*5	-	600.65
29	10-Jan-12	*1	-	629.25

Rating/target price changes above reflect Eastern Standard Time

Citigroup Global Markets Korea Securities Limited (CGMK) performs the role of liquidity provider on the warrants of which the underlying asset is POSCO. As at 08 Feb 12, CGMK holds 3,376,470 Citi ELW 1798, 3,396,000 Citi ELW 1917, 3,400,000 Citi ELW 1960, 3,600,000 Citi ELW 2007, 3,400,000 Citi ELW 2008 Call warrants & 182 shares of POSCO.

Citigroup Global Markets Inc. or its affiliates beneficially owns 1% or more of any class of common equity securities of JSW Steel, POSCO, ArcelorMittal. This position reflects information available as of the prior business day.

Within the past 12 months, Citigroup Global Markets Inc. or its affiliates has acted as manager or co-manager of an offering of securities of POSCO, ArcelorMittal, Tata Steel, voestalpine AG.

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from POSCO, Baoshan Iron & Steel, ArcelorMittal, Jindal Steel and Power, Steel Authority of India, Tata Steel.

Citigroup Global Markets Inc. or its affiliates expects to receive or intends to seek, within the next three months, compensation for investment banking services from Baoshan Iron & Steel, Steel Authority of India.

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from JSW Steel, POSCO, China Steel, Baoshan Iron & Steel, ArcelorMittal, Jindal Steel and Power, Steel Authority of India, Salzgitter AG, Tata Steel, voestalpine AG in the past 12 months.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as investment banking client(s): Tata Steel, Steel Authority of India, JSW Steel, POSCO, Baoshan Iron & Steel, ArcelorMittal, Jindal Steel and Power.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, securities-related: JSW Steel, POSCO, China Steel, Baoshan Iron & Steel, ArcelorMittal, Jindal Steel and Power, Steel Authority of India, Tata Steel, voestalpine AG.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, non-securities-related: JSW Steel, POSCO, China Steel, Baoshan Iron & Steel, ArcelorMittal, Jindal Steel and Power, Steel Authority of India, Salzgitter AG, Tata Steel, voestalpine AG.

Analysts' compensation is determined based upon activities and services intended to benefit the investor clients of Citigroup Global Markets Inc. and its affiliates ("the Firm"). Like all Firm employees, analysts receive compensation that is impacted by overall firm profitability which includes investment banking revenues.

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Investment Research & Analysis product ("the Product"), please contact Citi Investment Research & Analysis, 388 Greenwich Street, 28th Floor, New York, NY, 10013, Attention: Legal/Compliance [E6WYB6412478]. In addition, the same important disclosures, with the exception of the Valuation and Risk assessments and historical disclosures, are contained on the Firm's disclosure website at www.citigroupgeo.com. Valuation and Risk assessments can be found in the text of the most recent research note/report regarding the subject company. Historical disclosures (for up to the past three years) will be provided upon request.

Citi Investment Research & Analysis Ratings Distribution

<i>Data current as of 31 Dec 2011</i>	12 Month Rating			Relative Rating		
	Buy	Hold	Sell	Buy	Hold	Sell
Citi Investment Research & Analysis Global Fundamental Coverage	57%	34%	9%	10%	79%	10%
<i>% of companies in each rating category that are investment banking clients</i>	45%	41%	40%	49%	43%	41%
Citi Investment Research & Analysis Quantitative World Radar Screen Model Coverage	30%	40%	30%			
<i>% of companies in each rating category that are investment banking clients</i>	22%	24%	21%			
Citi Investment Research & Analysis Quantitative Decision Tree Model Coverage	52%	0%	48%			
<i>% of companies in each rating category that are investment banking clients</i>	54%	0%	44%			
Citi Investment Research & Analysis Asia Quantitative Radar Screen Model Coverage	20%	60%	20%			
<i>% of companies in each rating category that are investment banking clients</i>	21%	22%	20%			
Citi Investment Research & Analysis Australia Radar Model Coverage	41%	0%	59%			
<i>% of companies in each rating category that are investment banking clients</i>	22%	0%	17%			

Guide to Citi Investment Research & Analysis (CIRA) Fundamental Research Investment Ratings:

CIRA's stock recommendations include an investment rating and an optional risk rating to highlight high risk stocks.

Risk rating takes into account both price volatility and fundamental criteria. Stocks will either have no risk rating or a High risk rating assigned.

Investment Ratings: CIRA's investment ratings are Buy, Neutral and Sell. Our ratings are a function of analyst expectations of expected total return ("ETR") and risk. ETR is the sum of the forecast price appreciation (or depreciation) plus the dividend yield for a stock within the next 12 months. The Investment rating definitions are: Buy (1) ETR of 15% or more or 25% or more for High risk stocks; and Sell (3) for negative ETR. Any covered stock not assigned a Buy or a Sell is a Neutral (2). For stocks rated Neutral (2), if an analyst believes that there are insufficient valuation drivers and/or investment catalysts to derive a positive or negative investment view, they may elect with the approval of CIRA management not to assign a target price and, thus, not derive an ETR. Analysts may place covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and / or trading in the company's securities (e.g. trading suspension). As soon as practically possible, the analyst will publish a note re-establishing a rating and investment thesis. To satisfy regulatory requirements, we correspond Under Review and Neutral to Hold in our ratings distribution table for our 12-month fundamental rating system. However, we reiterate that we do not consider Under Review to be a recommendation.

Relative three-month ratings: CIRA may also assign a three-month relative call (or rating) to a stock to highlight expected out-performance (most preferred) or under-performance (least preferred) versus the geographic and industry sector over a 3 month period. The relative call may highlight a specific near-term catalyst or event impacting the company or the market that is anticipated to have a short-term price impact on the equity securities of the company. Absent any specific catalyst the analyst(s) will indicate the most and least preferred stocks in the universe of stocks under consideration, explaining the basis for this short-term view. This three-month view may be different from and does not affect a stock's fundamental equity rating, which reflects a longer-term total absolute return expectation. For purposes of NASD/NYSE ratings-distribution-disclosure rules, most preferred calls correspond to a buy recommendation and least preferred calls correspond to a sell recommendation. Any stock not assigned to a most preferred or least preferred call is considered non-relative-rated (NRR). For purposes of NASD/NYSE ratings-distribution-disclosure rules we correspond NRR to Hold in our ratings distribution table for our 3-month relative rating system. However, we reiterate that we do not consider NRR to be a recommendation.

Prior to October 8, 2011, the firm's stock recommendation system included a risk rating and an investment rating. **Risk ratings**, which took into account both price volatility and fundamental criteria, were: Low (L), Medium (M), High (H), and Speculative (S). **Investment Ratings** of Buy, Hold and Sell were a function of CIRA's expectation of total return (forecast price appreciation and dividend yield within the next 12 months) and risk rating. Additionally, analysts could have placed covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and/or trading in the company's securities (e.g. trading suspension). Stocks placed "Under Review" were monitored daily by management and as practically possible, the analyst published a note re-establishing a rating and investment thesis. For securities in developed markets (US, UK, Europe,

Japan, and Australia/New Zealand), investment ratings were: Buy (1) (expected total return of 10% or more for Low-Risk stocks, 15% or more for Medium-Risk stocks, 20% or more for High-Risk stocks, and 35% or more for Speculative stocks); Hold (2) (0%-10% for Low-Risk stocks, 0%-15% for Medium-Risk stocks, 0%-20% for High-Risk stocks, and 0%-35% for Speculative stocks); and Sell (3) (negative total return). For securities in emerging markets (Asia Pacific, Emerging Europe/Middle East/Africa, and Latin America), investment ratings were: Buy (1) (expected total return of 15% or more for Low-Risk stocks, 20% or more for Medium-Risk stocks, 30% or more for High-Risk stocks, and 40% or more for Speculative stocks); Hold (2) (5%-15% for Low-Risk stocks, 10%-20% for Medium-Risk stocks, 15%-30% for High-Risk stocks, and 20%-40% for Speculative stocks); and Sell (3) (5% or less for Low-Risk stocks, 10% or less for Medium-Risk stocks, 15% or less for High-Risk stocks, and 20% or less for Speculative stocks).

Investment ratings are determined by the ranges described above at the time of initiation of coverage, a change in investment and/or risk rating, or a change in target price (subject to limited management discretion). At other times, the expected total returns may fall outside of these ranges because of market price movements and/or other short-term volatility or trading patterns. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management. Your decision to buy or sell a security should be based upon your personal investment objectives and should be made only after evaluating the stock's expected performance and risk.

Guide to Citi Investment Research & Analysis (CIRA) Quantitative Research Investment Ratings:

CIRA Quantitative Research World Radar Screen recommendations are based on a globally consistent framework to measure relative value and momentum for a large number of stocks across global developed and emerging markets. Relative value and momentum rankings are equally weighted to produce a global attractiveness score for each stock. The scores are then ranked and put into deciles. A stock with a decile rating of 1 denotes an attractiveness score in the top 10% of the universe (most attractive). A stock with a decile rating of 10 denotes an attractiveness score in the bottom 10% of the universe (least attractive).

CIRA Asia Quantitative Radar Screen model recommendations are based on a regionally consistent framework to measure relative value and momentum for a large number of stocks across regional developed and emerging markets. Relative value and momentum rankings are equally weighted to produce a global attractiveness score for each stock. The scores are then ranked and put into quintiles. A stock with a quintile rating of 1 denotes an attractiveness score in the top 20% of the universe (most attractive). A stock with a quintile rating of 5 denotes an attractiveness score in the bottom 20% of the universe (least attractive).

CIRA Australia Quantitative Radar Screen model recommendations are based on a robust framework to measure relative value and momentum for a large number of stocks across the Australian market. Stocks with a ranking of 1 denotes a stock that is above average in terms of both value and momentum relative to the stocks in the Australian market. A ranking of 10 denotes a stock that is below average in terms of both value and momentum relative to the stocks in the Australian market.

CIRA Quantitative Decision Tree model recommendations are based on a predetermined set of factors to rate the relative attractiveness of stocks. These factors are detailed in the text of the report. The Decision Tree model forecasts whether stocks are attractive or unattractive relative to other stocks in the same sector (based on the Russell 1000 sector classifications).

For purposes of NASD/NYSE ratings-distribution-disclosure rules, a Citi Investment Research & Analysis (CIRA) Quantitative World Radar Screen recommendation of (1), (2) or (3) most closely corresponds to a buy recommendation; a recommendation from this product group of (4), (5), (6) or (7) most closely corresponds to a hold recommendation; and a recommendation of (8), (9) or (10) most closely corresponds to a sell recommendation. An (NR) recommendation indicates that the stock is no longer in the screen.

For purposes of NASD/NYSE ratings distribution disclosure rules, a CIRA Asia Quantitative Radar Screen recommendation of (1) most closely corresponds to a buy recommendation; a CIRA Asia Quantitative Radar Screen recommendation of (2), (3), (4) most closely corresponds to a hold recommendation; and a recommendation of (5) most closely corresponds to a sell recommendation. An (NR) recommendation indicates that the stock is no longer in the screen.

For purposes of NASD/NYSE ratings-distribution-disclosure rules, a CIRA Quantitative Research Decision Tree model or Quantitative Research Australia Radar Screen recommendation of "attractive" (1) most closely corresponds to a buy recommendation. All other stocks in the sector are considered to be "unattractive" (10) which most closely corresponds to a sell recommendation. An (NR)/(0) recommendation indicates that the stock is no longer in the screen.

Recommendations are based on the relative attractiveness of a stock, thus can not be directly equated to buy, hold and sell categories. Accordingly, your decision to buy or sell a security should be based on your personal investment objectives and only after evaluating the stock's expected relative performance.

NON-US RESEARCH ANALYST DISCLOSURES

Non-US research analysts who have prepared this report (i.e., all research analysts listed below other than those identified as employed by Citigroup Global Markets Inc.) are not registered/qualified as research analysts with FINRA. Such research analysts may not be associated persons of the member organization and therefore may not be subject to the NYSE Rule 472 and NASD Rule 2711 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. The legal entities employing the authors of this report are listed below:

Citigroup Global Markets India Private Limited	Pradeep Mahtani; Raashi Chopra, CFA; Atul Tiwari, CFA
Citigroup Global Markets Ltd	Anindya Mohinta
Citigroup Global Markets Taiwan Securities Co. Limited	Timothy Chen
Citigroup Global Markets Korea Securities Ltd	Sungmee Park, CFA
Citigroup Global Markets Asia	Scarlett Y Chen, CFA

OTHER DISCLOSURES

The subject company's share price set out on the front page of this Product is quoted as at 08 February 2012 01:09 PM on the issuer's primary market.

Citigroup Global Markets Inc. and/or its affiliates has a significant financial interest in relation to ArcelorMittal, Tata Steel. (For an explanation of the determination of significant financial interest, please refer to the policy for managing conflicts of interest which can be found at www.citigroupgeo.com.)

Citigroup Global Markets Inc. or its affiliates beneficially owns 2% or more of any class of common equity securities of JSW Steel, ArcelorMittal.

Citigroup Global Markets Inc. or its affiliates beneficially owns 10% or more of any class of common equity securities of POSCO.

For securities recommended in the Product in which the Firm is not a market maker, the Firm is a liquidity provider in the issuers' financial instruments and may act as principal in connection with such transactions. The Firm is a regular issuer of traded financial instruments linked to securities that may have been recommended in the Product. The Firm regularly trades in the securities of the issuer(s) discussed in the Product. The Firm may engage in securities transactions in a manner inconsistent with the Product and, with respect to securities covered by the Product, will buy or sell from customers on a principal basis.

Securities recommended, offered, or sold by the Firm: (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including Citibank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. Although information has been obtained from and is based upon sources that the Firm believes to be reliable, we do not guarantee its accuracy and it may be incomplete and condensed. Note, however, that the Firm has taken all reasonable steps to determine the accuracy and completeness of the disclosures made in the Important Disclosures section of the Product. The Firm's research department has received assistance from the subject company(ies) referred to in this Product including, but not limited to, discussions with management of the subject company(ies). Firm policy prohibits research analysts from sending draft research to subject companies. However, it should be presumed that the author of the Product has had discussions with the subject company to ensure factual accuracy prior to publication. All opinions, projections and estimates constitute the judgment of the author as of the date of the Product and these, plus any other information contained in the Product, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice. Notwithstanding other departments within the Firm advising the companies discussed in this Product, information obtained in such role is not used in the preparation of the Product. Although Citi Investment Research & Analysis (CIRA) does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of CIRA to provide research coverage of the/those issuer(s) mentioned therein, including in response to news affecting this issuer, subject to applicable quiet periods and capacity constraints. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security. Any decision to purchase securities mentioned in the Product must take into account existing public information on such security or any registered prospectus.

Investing in non-U.S. securities, including ADRs, may entail certain risks. The securities of non-U.S. issuers may not be registered with, nor be subject to the reporting requirements of the U.S. Securities and Exchange Commission. There may be limited information available on foreign securities. Foreign companies are generally not subject to uniform audit and reporting standards, practices and requirements comparable to those in the U.S. Securities of some foreign companies may be less liquid and their prices more volatile than securities of comparable U.S. companies. In addition, exchange rate movements may have an adverse effect on the value of an investment in a foreign stock and its corresponding dividend payment for U.S. investors. Net dividends to ADR investors are estimated, using withholding tax rates conventions, deemed accurate, but investors are urged to consult their tax advisor for exact dividend computations. Investors who have received the Product from the Firm may be prohibited in certain states or other jurisdictions from purchasing securities mentioned in the Product from the Firm. Please ask your Financial Consultant for additional details. Citigroup Global Markets Inc. takes responsibility for the Product in the United States. Any orders by US investors resulting from the information contained in the Product may be placed only through Citigroup Global Markets Inc.

Important Disclosures for Morgan Stanley Smith Barney LLC Customers: Morgan Stanley & Co. LLC (Morgan Stanley) research reports may be available about the companies that are the subject of this Citi Investment Research & Analysis (CIRA) research report. Ask your Financial Advisor or use smithbarney.com to view any available Morgan Stanley research reports in addition to CIRA research reports.

Important disclosure regarding the relationship between the companies that are the subject of this CIRA research report and Morgan Stanley Smith Barney LLC and its affiliates are available at the Morgan Stanley Smith Barney disclosure website at www.morganstanleysmithbarney.com/researchdisclosures. For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to www.morganstanley.com/researchdisclosures and https://www.citigroupgeo.com/geopublic/Disclosures/index_a.html.

This CIRA research report has been reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval was conducted by the same person who reviewed this research report on behalf of CIRA. This could create a conflict of interest.

The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by. The Product is made available in **Australia** through Citigroup Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992), participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in Australia to Private Banking wholesale clients through Citigroup Pty Limited (ABN 88 004 325 080 and AFSL 238098). Citigroup Pty Limited provides all financial product advice to Australian Private Banking wholesale clients through bankers and relationship managers. If there is any doubt about the suitability of investments held in Citigroup Private Bank accounts, investors should contact the Citigroup Private Bank in Australia. Citigroup companies may compensate affiliates and their representatives for providing products and services to clients. The Product is made available in **Brazil** by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários, BACEN - Brazilian Central Bank, APIMEC - Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBID - Associação Nacional dos Bancos de Investimento. Av. Paulista, 1111 - 11º andar - CEP. 01311920 - São Paulo - SP. If the Product is being made available in certain provinces of **Canada** by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite 1100, Toronto, Ontario M5J 2M3. This product is available in **Chile** through Banchile Corredores de Bolsa S.A., an indirect subsidiary of Citigroup Inc., which is regulated by the Superintendencia de Valores y Seguros. Agustinas 975, piso 2, Santiago, Chile. The Product is made available in **France** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 1-5 Rue Paul Cézanne, 8ème, Paris, France. The Product is distributed in **Germany** by Citigroup Global Markets Deutschland AG ("CGMD"), which is regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin). CGMD, Reuterweg 16, 60323 Frankfurt am Main. Research which relates to "securities" (as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong)) is issued in **Hong Kong** by, or on behalf of, Citigroup Global Markets Asia Limited which takes full responsibility for its content. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Research is made available through Citibank, N.A., Hong Kong Branch, for its clients in Citi Private Bank, it is made available by Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citibank N.A. is regulated by the Hong Kong Monetary Authority. Please contact your Private Banker in Citibank N.A., Hong Kong, Branch if you have any queries on or any matters arising from or in connection with this document. The Product is made available in **India** by Citigroup Global Markets India Private Limited, which is regulated by Securities and Exchange Board of India. Bakhtawar, Nariman Point, Mumbai 400-021. The Product is made available in **Indonesia**

through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations. The Product is made available in **Israel** through Citibank NA, regulated by the Bank of Israel and the Israeli Securities Authority. Citibank, N.A, Platinum Building, 21 Ha'arba'ah St, Tel Aviv, Israel. The Product is made available in **Italy** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. Via dei Mercanti, 12, Milan, 20121, Italy. The Product is made available in **Japan** by Citigroup Global Markets Japan Inc. ("CGMJ"), which is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Shin-Marunouchi Building, 1-5-1 Marunouchi, Chiyoda-ku, Tokyo 100-6520 Japan. If the Product was distributed by SMBC Nikko Securities Inc. it is being so distributed under license. In the event that an error is found in an CGMJ research report, a revised version will be posted on the Firm's Global Equities Online (GEO) website. If you have questions regarding GEO, please call (81 3) 6270-3019 for help. The Product is made available in **Korea** by Citigroup Global Markets Korea Securities Ltd., which is regulated by the Financial Services Commission, the Financial Supervisory Service and the Korea Financial Investment Association (KOFIA). Citibank Building, 39 Da-dong, Jung-gu, Seoul 110-180, Korea. KOFIA makes available registration information of research analysts on its website. Please visit the following website if you wish to find KOFIA registration information on research analysts of Citigroup Global Markets Korea Securities Ltd. <http://dis.kofia.or.kr/fs/dis2/fundMgr/DISFundMgrAnalystPop.jsp?companyCd2=A03030&pageDiv=02>. The Product is made available in **Malaysia** by Citigroup Global Markets Malaysia Sdn Bhd (Company No. 460819-D) ("CGMM") to its clients and CGMM takes responsibility for its contents. CGMM is regulated by the Securities Commission of Malaysia. Please contact CGMM at Level 43 Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia in respect of any matters arising from, or in connection with, the Product. The Product is made available in **Mexico** by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, Integrante del Grupo Financiero Banamex ("Accival") which is a wholly owned subsidiary of Citigroup Inc. and is regulated by Comision Nacional Bancaria y de Valores. Reforma 398, Col. Juarez, 06600 Mexico, D.F. In **New Zealand** the Product is made available to 'wholesale clients' only as defined by s5C(1) of the Financial Advisers Act 2008 ('FAA') through Citigroup Global Markets Australia Pty Ltd (ABN 64 003 114 832 and AFSL No. 240992), an overseas financial adviser as defined by the FAA, participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in **Pakistan** by Citibank N.A. Pakistan branch, which is regulated by the State Bank of Pakistan and Securities Exchange Commission, Pakistan. AWT Plaza, 1.1. Chundrigar Road, P.O. Box 4889, Karachi-74200. The Product is made available in the **Philippines** through Citicorp Financial Services and Insurance Brokerage Philippines, Inc., which is regulated by the Philippines Securities and Exchange Commission. 20th Floor Citibank Square Bldg. The Product is made available in the Philippines through Citibank NA Philippines branch, Citibank Tower, 8741 Paseo De Roxas, Makati City, Manila. Citibank NA Philippines NA is regulated by The Bangko Sentral ng Pilipinas. The Product is made available in **Poland** by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Nadzoru Finansowego. Dom Maklerski Banku Handlowego S.A. ul.Senatorska 16, 00-923 Warszawa. The Product is made available in the **Russian Federation** through ZAO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gasheka Street, 125047 Moscow. The Product is made available in **Singapore** through Citigroup Global Markets Singapore Pte. Ltd. ("CGMSPL"), a capital markets services license holder, and regulated by Monetary Authority of Singapore. Please contact CGMSPL at 1 Temasek Avenue, #39-02 Millenia Tower, Singapore 039192, in respect of any matters arising from, or in connection with, the analysis of this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., Singapore Branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Please contact your Private Banker in Citibank N.A., Singapore Branch if you have any queries on or any matters arising from or in connection with this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). This report is distributed in Singapore by Citibank Singapore Ltd ("CSL") to selected Citigold/Citigold Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigold/Citigold Private Client Relationship Manager in CSL if you have any queries on or any matters arising from or in connection with this report. This report is intended for recipients who are accredited investors as defined under the Securities and Futures Act (Cap. 289). Citigroup Global Markets (Pty) Ltd. is incorporated in the **Republic of South Africa** (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. The Product is made available in **Spain** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 29 Jose Ortega Y Gassef, 4th Floor, Madrid, 28006, Spain. The Product is made available in the **Republic of China** through Citigroup Global Markets Taiwan Securities Company Ltd. ("CGMTS"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan and/or through Citibank Securities (Taiwan) Company Limited ("CSTL"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan, subject to the respective license scope of each entity and the applicable laws and regulations in the Republic of China. CGMTS and CSTL are both regulated by the Securities and Futures Bureau of the Financial Supervisory Commission of Taiwan, the Republic of China. No portion of the Product may be reproduced or quoted in the Republic of China by the press or any third parties [without the written authorization of CGMTS and CSTL]. If the Product covers securities which are not allowed to be offered or traded in the Republic of China, neither the Product nor any information contained in the Product shall be considered as advertising the securities or making recommendation of the securities in the Republic of China. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security or financial products. Any decision to purchase securities or financial products mentioned in the Product must take into account existing public information on such security or the financial products or any registered prospectus. The Product is made available in **Thailand** through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 18/F, 22/F and 29/F, 82 North Sathorn Road, Silom, Bangrak, Bangkok 10500, Thailand. The Product is made available in **Turkey** through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Buyukdere Caddesi # 209 Kat 2B, 23294 Levent, Istanbul, Turkey. In the **U.A.E.**, these materials (the "Materials") are communicated by Citigroup Global Markets Limited, DIFC branch ("CGML"), an entity registered in the Dubai International Financial Center

("DIFC") and licensed and regulated by the Dubai Financial Services Authority ("DFSA") to Professional Clients and Market Counterparties only and should not be relied upon or distributed to Retail Clients. A distribution of the different CIRA ratings distribution, in percentage terms for Investments in each sector covered is made available on request. Financial products and/or services to which the Materials relate will only be made available to Professional Clients and Market Counterparties. The Product is made available in **United Kingdom** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. This material may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB. The Product is made available in **United States** by Citigroup Global Markets Inc, which is a member of FINRA and registered with the US Securities and Exchange Commission. 388 Greenwich Street, New York, NY 10013. Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is regulated by Financial Services Authority. Pursuant to Comissão de Valores Mobiliários Rule 483, Citi is required to disclose whether a Citi related company or business has a commercial relationship with the subject company. Considering that Citi operates multiple businesses in more than 100 countries around the world, it is likely that Citi has a commercial relationship with the subject company.

Many European regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of investment research. The policy applicable to CIRA's Products can be found at www.citigroupgeo.com.

Compensation of equity research analysts is determined by equity research management and Citigroup's senior management and is not linked to specific transactions or recommendations.

The Product may have been distributed simultaneously, in multiple formats, to the Firm's worldwide institutional and retail customers. The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted.

Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product.

With the exception of our product that is made available only to Qualified Institutional Buyers (QIBs), CIRA concurrently disseminates its research via proprietary and non-proprietary electronic distribution platforms. Periodically, individual CIRA analysts may also opt to circulate research posted on such platforms to one or more clients by email. Such email distribution is discretionary and is done only after the research has been disseminated via the aforementioned distribution channels. CIRA simultaneously distributes product that is limited to QIBs only through email distribution.

The level and types of services provided by CIRA analysts to clients may vary depending on various factors such as the client's individual preferences as to the frequency and manner of receiving communications from analysts, the client's risk profile and investment focus and perspective (e.g. market-wide, sector specific, long term, short-term etc.), the size and scope of the overall client relationship with Citi and legal and regulatory constraints.

© 2012 Citigroup Global Markets Inc. Citi Investment Research & Analysis is a division of Citigroup Global Markets Inc. Citi and Citi with Arc Design are trademarks and service marks of Citigroup Inc. and its affiliates and are used and registered throughout the world. All rights reserved. Any unauthorized use, duplication, redistribution or disclosure of this report (the "Product"), including, but not limited to, redistribution of the Product by electronic mail, posting of the Product on a website or page, and/or providing to a third party a link to the Product, is prohibited by law and will result in prosecution. The information contained in the Product is intended solely for the recipient and may not be further distributed by the recipient to any third party. Where included in this report, MSCI sourced information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, disseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are services marks of MSCI and its affiliates. The Firm accepts no liability whatsoever for the actions of third parties. The Product may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the Product refers to website material of the Firm, the Firm has not reviewed the linked site. Equally, except to the extent to which the Product refers to website material of the Firm, the Firm takes no responsibility for, and makes no representations or warranties whatsoever as to, the data and information contained therein. Such address or hyperlink (including addresses or hyperlinks to website material of the Firm) is provided solely for your convenience and information and the content of the linked site does not in anyway form part of this document. Accessing such website or following such link through the Product or the website of the Firm shall be at your own risk and the Firm shall have no liability arising out of, or in connection with, any such referenced website.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST
