

# **BUY**

Price	Rs935
Target Price	Rs1,170
Investment Period	12 Months

Stock Info	
Sector	Steel
Market Cap (Rs cr)	18,777
Beta	1.2
52 Week High / Low	1390 / 445
Avg Daily Volume	188090
Face Value (Rs)	10
BSE Sensex	15,761
Nifty	4,746
BSE Code	500228
NSE Code	JSWSTEEL
Reuters Code	JNDL.BO
Bloomberg Code	JSTL IN

Shareholding Pattern (%)				
Promoters	46.5			
MF / Banks / Indian FIs	6.3			
FII / NRIs / OCBs	29.0			
Indian Public / Others	18.2			

Abs.	3m	1yr	3yr
Sensex (%)	(21.3)	25.8	131.4
JSW (%)	(30.1)	106.4	140.5
	3m	1yr	3yr
Rel.to Sen. (9	80.6	9.1	

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# 'Capacity' to ride

JSW Steel is one of the largest steel producers in India with a current capacity of 3.8mtpa and is also one of the largest exporters of galvanized products. We believe that significant capacity expansions, enriched product mix (through US acquisitions & SISCOL merger) and backward integration initiatives into key inputs like coking coal and iron ore will be the key positives for JSW Steel's growth going ahead. We expect JSW Steel to record a 28.9% CAGR in consolidated Bottomline over FY2007-10E. At CMP of Rs935, on consolidated basis, JSW Steel is trading at an EV/EBIDTA of 4.7x on FY2010 EBIDTA and P/E of 6.8x on FY2010E consolidated fully diluted EPS. The company is trading at 20-30% discount to both its domestic and international peers, which we believe is not justified. We Initiate Coverage on the stock, with a Buy recommendation and 12 month Target Price of Rs1,170, translating into an upside of 25%.

- Capacity Expansions to fuel growth: JSW is expanding its slab capacity from 3.8mtpa in FY2007 to 6.8mtpa by FY2009 and again to 10mtpa by FY2011. With the slab capacity, HR Coil capacity will also increase to 5.2mtpa in FY2009 and to 8.2mtpa in FY2011 from 2.5mtpa in FY2007. On the back of capacity expansions, we expect JSW Steel to post a CAGR volume growth of 28.8% over FY2007-10E.
- Backward Integration initiatives to improve margins: JSW Steel is having 30% captive iron ore while it sources 100% of its requirements of coking coal from outside. JSW Steel has been awarded iron ore and coal mines in India and abroad. We believe these mines will be operational in next 2-3 years of time after which company would save substantial costs and improve its margins. Further, the company is setting up a iron ore beneficiation plant with a capacity of 10mtpa by FY2008, which will result in an iron ore cost saving of 30% to the market price of iron ore.
- Robust Industry Outlook: We expect the steel prices to remain firm in the short to medium term period due to strong demand from Emerging countries like India and China. Also, the recent spike in the raw material prices is expected to support steel prices going ahead. The Chinese initiatives to curb exports and shutting in-efficient mills are also expected to aid a favourable demand/supply balance in the global steel market.

Key Financials (Consolidated)						
Y/E March (Rs cr)	FY2007	FY2008E	FY2009E	FY2010E		
Net Sales	8,594	12,106	19,018	23,169		
% chg	38.3	40.9	57.1	21.8		
Net Profit	1,292	1,660	2,210	2,770		
% chg	50.8	28.5	33.1	25.4		
FDEPS(Rs)	79	83	110	138		
OPM (%)	32.8	26.8	26.1	26.2		
P/E(x)	11.9	11.3	8.5	6.8		
P/CEPS(x)	8.1	7.9	6.0	4.8		
P/BV(x)	2.7	2.2	1.8	1.5		
RoE (%)	26.0	23.7	23.7	24.5		
RoCE (%)	16.9	15.1	16.0	16.3		
EV/EBITDA(x)	6.8	7.5	5.3	4.7		

Source: Company, Angel Research; Note: Numbers are consolidated including SISCOL & US Operations

### **Business Overview**

JSW Steel is one of the largest steel producers in India with current capacity of 3.8mtpa and also the largest exporters of galvanized products from India JSW Steel is part of the prestigious \$4bn O PJindal group and is one of the largest steel companies in India, with crude steel capacity of 3.8mtpa (FY2007). JSW Steel has presence in all forms of flat products and is also one of the largest exporters of galvanised products to over 50 countries. The company is straddled across the value chain from mining, power, pellets to value-added steel products.

JSW's upstream facility of 5mtpa of pellets and 3.8mtpa of flat steel is located in the iron-ore rich belt of Bellary District in Karnataka. JSW also has 0.28mtpa of HR plate, 1mtpa of CR coils/sheets, 0.9mtpa of GP/GC and 0.1 mtpa of colour coating lines at Vasind and Tarapur in Maharashtra.

The chart below depicts the current and future business mix of JSW Steel.

<b>Exhibit 1: Changing Busine</b>	ss Mix (Stan	dalone)	
Present		FY2011	
Value Addition	Mtpa	Value Addition	Mtpa
CR Coils	1.0	CR Coils	2
Galvanised Coils/Sheets	0.9	Galvanised Coils/Sheets#	0.675
Galvalume	-	Galvalume	0.225
Colour Coating Coils / Sheets	0.1	Colour Coating Coils / Sheets	0.1
Steel Making		Steel Making	
Slabs	3.8	Slabs	10.0
Long Products	-	Long Products	1.5
HR Coils	2.5	HR Coils	8.2
HR Plates	0.28	HR Plates	0.28
Raw Materials		Raw Materials	
Iron ore*	1.5	Iron ore*	6.4
Beneficiation	-	Beneficiation	10.0
Pellet Plant	5.0	Pellet Plant	5.0
Coking Coal*	-	Coking Coal*	5.0
Coke Over Battery	1.5	Coke Over Battery	5.0
Power (MW)	230	Power (MW)	860

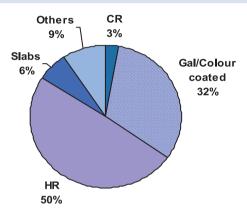
Source: Company, Angel Research; Note: \* The company has been allotted iron ore and coal mines in India and abroad. # 25% of Galvanised Coils/Sheets capacity is getting converrted into Galvalume capacity

### **Product revenues**

Currently Value added products Contribute almost 35% in the total standalone revenue

JSW mainly manufactures flat steel products and has presence right from slab manufacturing to colour coated products. Currently, HR products contribute almost 50% of sales, while Slabs and others account for 15% of Total sales. However, value-added products contribute 35% to total standalone revenues.

Exhibit 2: Product Mix (FY2007 Standalone Revenues)



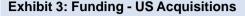
Source: Company, Angel Research

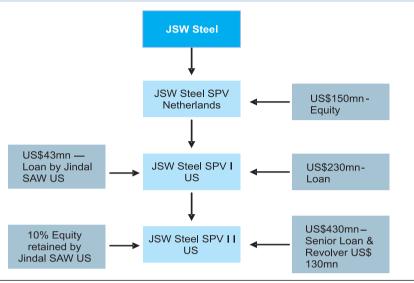
## **Acquisition of US Operations**

Acquisition of US Plate & Pipe mills to enrich product mix, raw materials synergy and leveraging on highly lucrative pipes segment

In November, 2007, JSW Steel had acquired a 90% stake in 1.2mtpa plate mill, 0.5mtpa pipe mill and 0.3mtpa of double jointing and coating facilities from Jindal United Steel Corporation, Saw Pipes USA and Jindal enterprises LLC respectively. The facilities are situated in Baytown, Texas, US respectively and the assets were owned by Jindal SAW limited, a group company of Jindal group.

The funding requirement for the acquisition (90% stake) was a total of US\$940mn including US\$130mn towards the takeover cost of inventory. JSW Steel contributed US\$150mn of equity and US\$230mn will be raised as debt guaranteed by JSW Steel. The remaining US\$430mn will be raised as non-recourse debt on the balance sheet of the target company.





Source: Company, Angel Research

Margins to improve on increasing Capacity utilisation and sourcing of API grade slabs from India

The company made the acquisition to enter the highly lucrative Pipe Segment, enrich its product mix and increase utilisation of plates and pipe mills by sourcing slabs from India. Management is targeting to significantly improve its Margins from current levels, primarily by increasing capacity utilisation and improving yields by sourcing slabs from Indian operations.

On a conservative basis, we expect the company's US operation to generate EBIDTA of US \$37mn for the five months of FY2008, while EBDITA is expected at US \$118mn and US \$140mn in FY2009 and FY2010, respectively. At full capacity utilisation, Management expects EBIDTA from US operation to be at US \$200mn

### SISCOL Merger- Entry into the growing Long Products Segments

Merger with SISCOL provides entry into growing long products segments JSW has merged Southern Iron & Steel Company Limited (SISCOL) with itself at the share swap ratio of 1 equity share for every 22 held in SISCOL. This merger would be effective from April 1, 2007 and High court has already approved the merger on February 22, 2008.

SISCOL is primarily into long products and we believe that this merger is timely as JSW does not have a presence in the Long Products Segment, whereas the long product prices are outpacing flat product prices on the back of burgeoning domestic construction activities.

SISCOL billets capacity increased to 1 mtpa in December, 2007 from 0.3 mtpa

SISCOL has already expanded its billet capacity to 1mtpa in December 2007 from 0.3mtpa. Also, it is adding coke facilities, captive power plants and an oxygen plant to become a fully integrated and cost efficient player. SISCOL is also increasing its rolling capacity from currently 0.5mtpa to

Rolling capacity will also go up to 0.9 mtpa by FY2009.

0.9mtpa by FY2009. With the SISCOL's merger and JSW's 1.5mtpa long product capacity by FY2009, the total long product capacity would be 2.5mtpa out of total capacity 11mtpa in FY2011.

Some of the merger synergies in our view would be additional scale due to integration of operations in a single entity, enhancement of the product portfolio and cost cutting leveraging on SISCOL's existing customer base.

### **Equity Dilution of 8%**

Equity issuance on account of merger (equity dilution of 8%).

Equity dilution on account of merger would be around 8% due to issuance of 1.5cr shares taking the total fully diluted share count to 20.1cr shares for the merged entity.

Exhibit 4: SISCOL Financials					
	FY2007	FY2008E	FY2009E	FY2010E	
Billet Capacity (mtpa)	0.3	1.0	1.0	1.0	
Rolling Capacity (mtpa)	0.3	0.5	0.9	0.9	
Total Sales volumes (mtpa)	0.3	0.4	0.8	0.9	
Net Sales (Rs cr)	688.4	1,044.9	2,089.5	2,117.9	
EBIDTA (Rs cr)	121.2	182.8	334.3	360.0	
PAT (Rs cr)	56.9	45.8	134.9	155.5	

Source: Company, Angel Research

# **Investment Argument**

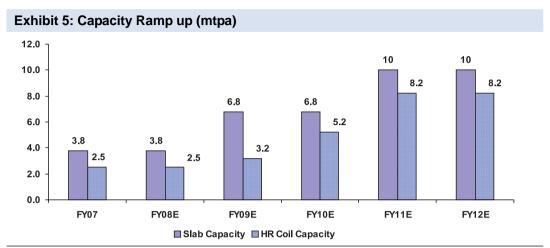
### Capacity Expansions to leverage on Steel cycle

Slab capacity to go up to 10mtpa by FY2011 from current 3.8mtpa

To leverage on the strong steel demand in the country and rising steel prices, JSW Steel is on the verge of rapid capacity expansions. JSW Steel's crude steel capacity is set to increase by 163% while HR Capacity would increase by 228% over the next four years. Crude steel capacity to go up from the current 3.8mtpa to 6.8mtpa by FY2009 and again to 10mtpa by FY2011. However, HR Coil capacity is expected to increase from the current 2.5mtpa to 3.2mtpa by FY2009 and to 8.2mtpa by FY2011.

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HR capacity will also increase to 8.2mtpa with the increase in slab capacity



Source: Company, Angel Research

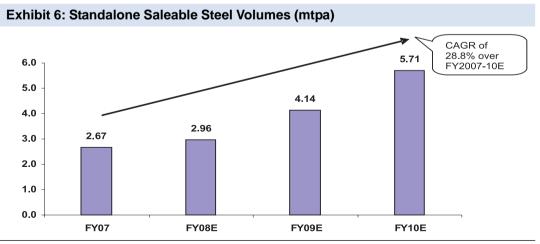
## CR Coil capacity expanded to 2mtpa

CR Capacity increased to 2mtpa from 1mtpa in September 2007 JSW has also enhanced its CR Coil capacity from 1mtpa to 2mtpa on September 30, 2007. We expect around 30,000 tonnes of extra production to come in from this new cold rolling mill. Expansion in the CR capacity will also help JSW improve its product mix going forward

# Robust Capacity expansions to fuel volume growth

Due to the significant increase in the capacity of different products, and strong demand in the market, we expect JSW Steel to clock in CAGR volume growth of 28.8% over FY2007-10E in standalone saleable steel. Also product mix is set to improve due to addition of capacity in CR as well as HR. Exporting slabs to the US Plate mill, which JSW acquired in November 2007 from Jindal SAW will also improve its share of value-added products in consolidated product portfolio.

Saleable steel volumes to grow at a CAGR of 28.8% over FY2007-10E



Source: Company, Angel Research

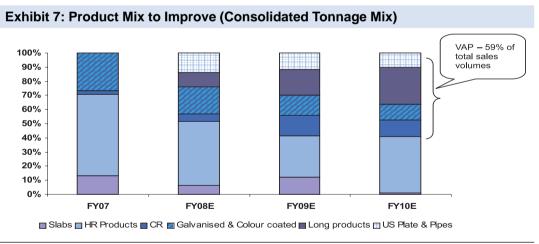
# Aims to be a 31mtpa company by 2020

Apart from the brownfield expansions in Karnataka, company also embarked on the Greenfield capacities in West Bengal & Jharkhand, with a capacity of 10mtpa each. With the Greenfield capacities, the total capacity of JSW would be at 31mn tonnes by 2020. The first phase of West Bengal project with a capacity of 3mtpa is expected to come on stream by FY2011 and the project would be set up under the banner of JSW Bengal Steel Ltd, a newly formed company in which the Jindals hold 89% stake and 11% by the West Bengal Industrial Development Corporation Ltd.

### Moving up the value chain to improve Product Mix

US Plates & Pipes mill acquisition, SISCOL merger, foray into long products and new CR mill of 1mtpa to enrich product mix going forward JSW Steel acquired US Plate & Pipe Mill from Jindal SAW in November 2007 with a capacity of 1.2mtpa and 0.55mtpa, respectively. JSW plans to increase capacity utilisation of US Mills, which is currently very low, by exporting surplus API grade slabs from India to the US and convert into HR plates. Addition of US Plate & Pipes in JSW's product mix, SISCOL's 1mtpa long products and introduction of 1.5mtpa capacity of long products by FY2009 and a new CR mill of 1mtpa is expected to improve JSW's consolidated product mix going forward. We expect the consolidated share of value-added products (sales tonnage) to improve to 58% in FY2009 and 59% in FY2010 from 29% in FY2007. We also believe that the enriched product mix will help to improve company's blended realisations going forward and to some extent protect from any downside in the international prices.

We expect the consolidated share of value added products (sales tonnage) to improve to 58% in FY2009 and 59% in FY2010 from 29% in FY2007



Source: Company, Angel Research

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# Improved Realization due to value additions

Value-added products command a premium to the slabs and HR products. Hence, even though the prices remain same yoy, due to value addition, the blended realisation improves for the company. Despite assuming the benchmark steel prices to remain constant over FY2007-10E, with the new product mix of 59% VAP as against 29% in FY2007, JSW's blended realisations improve by 2-3%. Hence, JSW is targeting to improve its product mix to mitigate the impact of a decline in prices in FY2010.

## **Capex and Funding**

JSW has chalked out a capital expenditure programme of around Rs18,500cr to be incurred over the next four years.

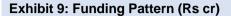
Exhibit 8: Capex & Timeline						
	Current	Expanded	Completion	Investments		
Particulars	Capacity (mtpa)	Capacity (mtpa)	date	(Rs cr)		
Crude Steel	3.8	6.8	Dec,2008	5,300		
Crude Steel	6.8	10	June,2010	7,000		
BF 1 Upgradation	0.9	1.2	FY09	150		
Cold Rolling Mill	1	2	Sept,2007	1,000		
New HSM-Phase I	0	2	Oct,2009			
New HSM-Phase II	2	5	Oct,2010	2,000		
Galvalume	0	0.15	March,2008	109		
Galvalume	0.15	0.6	Sept,2008	75		
Captive Power Plant Phase	I 230	560	Sept,2008	922		
Captive Power Plant Phase	II 560	860	Nov,2009	825		
Iron ore Beneficiation	0	10	FY2008	850		

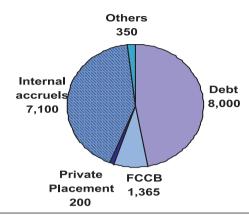
Source: Company, Angel Research

The capex would be funded through a mix of Debt and Equity. The company has tied up domestic and foreign debt, total of Rs8,000cr at an interest cost of 9.5% and LIBOR + 1.5%, respectively. The Equity portion will be funded through conversion of FCCB, promoter's warrants and internal accruals.

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Equity dilution of 22.5% on account of SISCOL merger, FCCB & promoter's warrants. We have factored fully diluted equity of Rs 200.8cr for our estimates





Source: Company, Angel Research

Exhibit 10: Equity Dilution	(Rs cr)
Current Equity	163.9
Additions	
Warrants to Promoters	8.0
FCCB	13.8
SISCOL Merger	15.0
Fully Diluted Equity	200.8

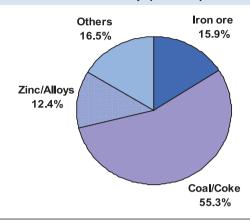
Source: Company, Angel Research

# Integration – A key for JSW with low level of integration & rising input costs

To insulate itself from appreciating iron ore and coking coal prices, the company is embarked on its backward integration programme to reduce cost risks of its key raw materials. Iron ore and coking coal are the major inputs used in the manufacture of steel and constituted almost 70% of JSW Steel's total raw material costs in FY2007. JSW plans to have 50% integration in iron ore and coking coal in 3 years from the current 30% integration in iron ore and 0% in coking coal.

Iron ore & Coking coal constitute 70% of Raw material Cost

Exhibit 11: Raw Material Cost Break-up (FY2007)



Source: Company, Angel Research

# **Iron Ore Mining**

JSW is 30% integrated in iron ore, while 0% in coking coal Currently, JSW Steel buys around 70% of its iron ore requirements from the Spot market and 30% comes from its own mines. The iron ore prices have been rising since the last few years, with the Spot iron ore prices rising to as high as US\$180/tonne CIF in China. Recently contract iron ore prices got negotiated at 65% higher levels and hence the integration becomes important for JSW Steel, with low level of integration.

JSW would save approximately US\$50/tonne of iron ore after the full integration, as its cost of mining a tonne of iron ore in **US\$10** 

We believe that once the mines (mentioned in exhibit12) start producing; there will be substantial savings in iron ore costs for the company. Its own cost of mining a tonne of iron ore is US\$10 compared to the market price of more than US\$50/tonne and recently negotiated price of US\$80-85/tonne. JSW would save approximately US\$50/tonne of iron ore after the full integration.

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JSW is moving towards self sufficiency in iron ore by acquiring several mines in India and abroad

			Potential				
		Area	Output	Allotment Status	Remarks	Time	
State	Location	(ha)	(mtpa)			Frame	
Karnataka	VMPL		1.5	Right to Mine rest with	Operational		
				JV Co. ( MML &			
				JSW Group.)			
	Hadimmapade	200	2.0	Allotted to JSW Steel Ltd.	Statutory & Forest	6-12	
					Approvals are	months	
					under progress		
	DonimalaiMines	553	3.0	Recommended to	Approvals are	12-24	
				JSWSL, VMPL,SWML	under progress	months	
Tamil Nadu	Kanjamalai	630	1.0	Allotted to TIMCO( JV	Statutory & Forest		
				Co. Of JSW SL &	approvals are	12-18	
				TIDCO)	under process	months	
	Kavuthimalai	325	1.0	Recommended to			
				TIMCO( JV Co. Of JSW	Approvals are	12-24	
				SL & TIDCO)	under progress	months	
Jharkhand	Ankua	1388	8.0		Statutory & Fores		
				Prospecting License to	approvals are	15.24	
				JSW Steel Itd.	under process	months	
Over Seas	South		20.0	JV Co. under			
	America/Chile			DiscussionAcquired	Mine development		
				concessions on 1200	work is under	12-36	
				hectares	progress.	months	
Total			36.5				
	NMDC (LTA)		2.5-8	JSW Steel Ltd	MoU for 25 Years	Ongoin	

Source: Company, Angel Research

## **Coal Mining**

The company is planning 50% backward integration in coking coal over the next 3-4 years from the current 0%

Currently, JSW Steel sources its entire coking coal requirements from outside, the prices of which have gone through the roof. The company is planning 50% backward integration over the next 3-4 years from the current 0%. JSW has been awarded several coking coal mines in India and abroad production from which are expected to start flowing in next 2-3 years of time. We believe once these mines become operational, JSW will be able to achieve 50% self sufficiency in coking coal and get insulated from price volatilities to this extent. JSW Steel has won some concessions in Mozambique for coking and non-coking coal with the reserves of 188mn tones, the production of which start flowing FY2009 onwards.

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Exhibit 13	Exhibit 13: Moving towards Coal self sufficiency					
	Location	Coking	Non-		Mineable	
State	/Coal	Coal	Coking	Allotment	Resources	Time
/Country	Block	(mtpa)	Coal (mtpa)			Frame
Jharkhand	Rohne	3	=	Allotted to JVCo.		
				(JSW SL 69%,		
				Bhushan Steel 24%,		
				Jai Balaji 7%)	250	FY2011
West Bengal	Kulti/	5	-	Allotted to		
	Sitarampur/			WBMDTCLTA with		
				JSW at Cost + basis.	150	FY2012
Mozambique	TeteProvince	2	2.5	Secured by JSW		
				Steel Itd.	188	FY2009
Total		10	2.5		588	
Markets	LTA	10	2.5			

Source: Company, Angel Research

## **Robust Industry Outlook**

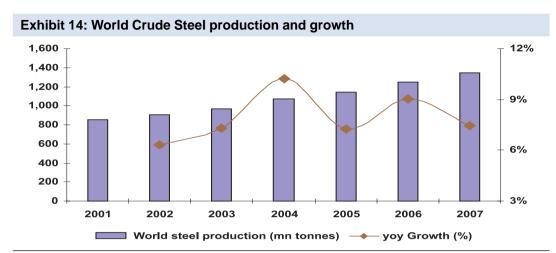
### World steel output - Slow down in growth in 2007

The world's steel production grew 7.5% at 1.34 bn tones in 2007 as against yoy growth of 9% in 2006.

The world steel production grew at a sluggish 7.5% to 1.34bn tonnes in 2007 as against the 9% yoy growth registered in 2006. While the overall output continued to be high, 2007 witnessed a marginal slowdown in the production growth rate. This slowdown in growth was seen in nearly all the major steel producing countries and regions including China, EU, CIS and the US. The exception was the Middle East where production growth accelerated during the second half of the year.

Steel production in the EU (27) from the second quarter was stable and ended the year at 210.3mn tonnes, a yoy growth of 1.7%. In the US, steel production clocked negative growth in the first three quarters but showed a turn-around in the fourth quarter. Total crude steel production for the US in FY2007 stood at 97.2mn tonnes, a yoy de-growth of 1.4%.

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Source: IISI, Angel Research

China remains numero uno in the World steel production, while India moved up to fifth position from eighth position in 2003

Exhibit 15: Top Steel-producing countries (2007)					
Country	Rank	Crude Steel Prod. (mtpa)	% Share		
China	1	489.0	36.4		
Japan	2	120.2	8.9		
USA	3	97.2	7.2		
Russia	4	72.2	5.4		
India	5	53.1	4.0		
South Korea	6	51.4	3.8		
Germany	7	48.5	3.6		
Ukraine	8	42.8	3.2		
Brazil	9	33.8	2.5		
Italy	10	32.0	2.4		
Total		1,040.2	77.4		

Source: IISI, Angel Research

## China holds the key-Controls one-third of the global market

China holds the key in the global steel industry and controls more than 30% of the steel demand and production

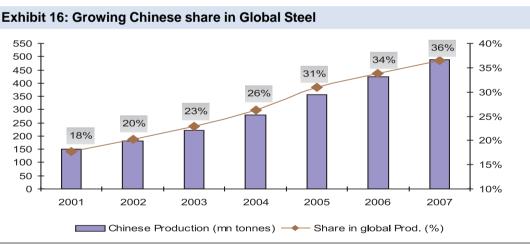
China holds the key in the global steel industry and determines the trend as it controls more than 30% of the steel production and consumption in the global steel market. Any surplus capacity in China or substantial fall in demand exerts pressure on the prices as it is also the largest consumer of steel globally.

China remains the driving force behind the strong world production figures. Without China, world crude steel production would have only grown at 3.3% The world's total steel production stood at 1.34bn tonnes in 2007 while Chinese production touched 489mn tonnes, a yoy increase of 15.7%. This however, represents a slowdown in growth from 18.8% achieved in 2006, 26.8% in 2005 and 26.1% in 2004. The slowdown in 2007 was most apparent in the last quarter of FY2007, with a growth of 8.6%. *However, China continues to be the driving force behind the strong world production figures. Without China, the world's crude steel production would have grown at 3.3%.* 

## Chinese share growing

China's share in global production is growing every year having increased from 18% in 2001 to 36% in 2007. Chinese steel production is growing at a much faster rate than global production. In the last five years, Chinese steel production grew at a CAGR of 21.8% v/s the 8.5% CAGR growth recorded by world steel production.

Share of china in the global production is growing every year and increased from 18% in 2001 to 36% in 2007

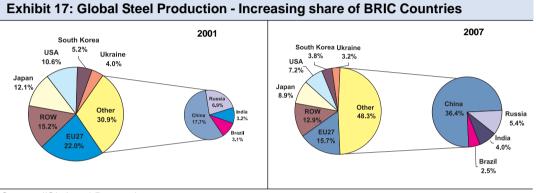


Source: IISI, Angel Research

### Increasing importance of BRIC countries

BRIC countries are gaining importance in the Global Steel industry. This is apparent from the increase in the share in total production, which has increased to 48.2% in 2007 from 31% in 2001. Other BRIC countries also maintained relatively high growth, with India and Brazil recording 7.3% and 9.3% increase in production, respectively in 2007. Russia reported flat production growth from the end of the second quarter leading to an annual growth figure of 2%.

Share of BRIC in the total production increased to 48.2% in 2007 from 31% in 2001

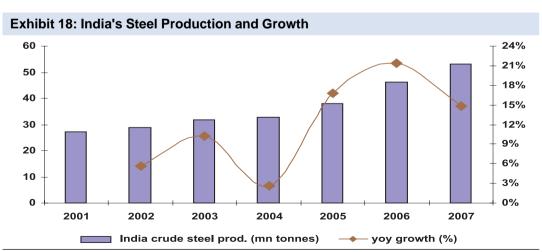


Source: IISI, Angel Research

## India growth story remains intact

India gained fifth position in 2007 from eighth in 2003

India is the fifth largest steel producer in the world, with a crude steel capacity of 56.8mn tonnes in 2007 (eighth position in 2003). India's crude steel production grew 14.8% yoy to 53.1mn tonnes (46.3mn tonnes) in 2007. India's steel production has recorded CAGR growth of 13.7% over the last five years as against the world's CAGR growth in steel production of 8.5% in the mentioned period.



Source: Cris Infac, IISI, Angel Research



Domestic finished steel demand grew 13.1% in 2007 to 48.8mn tonnes. However, finished steel production grew 6.6% to 46mn tonnes in 2007. This demand-supply gap has resulted in imports increasing and India turning a net importer of steel after almost 10 years. Over the next three years, the country would have to import 10mn tonnes of steel. To cater to the growing consumption of steel, India should add 5 to 10mn tonnes of capacity each year either through green-field or brown-field expansion, which was not happening due to land acquisition problems and lack of a transparent Mineral Policy. Per capita consumption of Steel in India remains at relatively low levels of nearly 46kgs against the world average of 150kgs.

Steel consumption in India is presently growing at 10-12% and keeping in view of the anticipated growth in the Infrastructure and Manufacturing Sectors, demand is likely to further grow by 12-13% over the next few years.

### Chinese initiatives to curb exports - a positive step for global steel

China has taken many measures to reduce export of steel and other products to manage its burgeoning trade surplus with the US China has adopted various measures to reduce export of steel and other products to manage its burgeoning trade surplus with the US. It started with a 10% export tax on semi-finished steel products such as billets and slabs in November 2006. With exports showing no signs of slowing down, China reduced the export duty rebate on various products, increasing the export taxes and other non-monetary measures such as licensing of steel exports between April - June 2007. This saw an immediate rise in exports to beat the deadline for implementing the measures. However, with the measures coming into effect, exports started declining.

As a result of export taxes, Chinese steel exports declined steadily from 6.4mn tonnes in June 2006 to 4.1mn tonnes in November 2007. The decline in steel production in November 2007 was in line with the changes in steel product exports.

Chinese government also introduced export tariffs on new products and increased tariffs on the existing products with effect from January 1, 2008

The Chinese government also introduced export tariffs on new products and increased tariffs on the existing products with effect from January 1, 2008. A new 10 - 15% tariff on stainless steel sheets has been imposed along with a new 15% levy on steel tubes and 15% tariff on cold-rolled sheets. The tariff on steel wire and rod export is also raised to 15% from 10%, and duties on semi finished steel products and pig iron increased to 25% from 15%. The European Union (EU) has threatened the Chinese steel players about the dumping of steel in the European markets.

Chinese monthly yoy exports growth has been positive since 2004 and every year the exports have been growing substantially with the highest yoy export growth of 230% being registered in December 2006. However, due to the several measures initiated by the Chinese government, monthly exports have been declining yoy from December 2007, wherein exports are showing a negative yoy growth of 12% and from thereafter the exports have been declining month on month.

Chinese exports showing negative growth month on month from December 2007



Source: Bloomberg, Angel Research

## Shutting down inefficient mills

The Chinese government also proposes to shut down almost 100mn tonnes of inefficient steel capacity. The rising iron ore and coking coal prices are anticipated to depress mill's margins and profitability, which would drive small, low-efficiency producers out of business.

Rising input costs which leads to shutting down inefficient mills in china is positive for steel industry Shutting down 100mn tonnes of inefficient steel capacity will also have positive impact on the demand-supply condition in the Chinese markets. This will further reduce exports and support the domestic market prices. China Iron & Steel Association recently announced that the production cost in the large-sized steel enterprises in China have risen by a sharp 30% in 2007 (pig iron products costs as high as US\$400/tonne currently) due to the hike in iron ore and ocean freight.

This huge jump in China's steel cash cost structure is extremely positive for sustenance of the present steel cycle as it would limit any downside in the steel prices.

### Chinese demand to remain strong

There exists strong demand for structural steel products from the Chinese property market. Rapid growth in the Chinese shipbuilding industry is generating continuous strong demand for ship plates and silicon steel products with the rapid growth of power plants and grids in the country. Rapid expansion of the national railway in China, which is targeting 90,000 kilometers of railways by 2010 will also add to the demand for steel.

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Steel consumption is china is expected to grow by around 12% at 485mn tones in 2008, while the crude steel production is expected to be at 520mn tones, up by just 6.3% in 2008

US accounts for just 7% of the global steel production and approximately 10% of the global steel consumption.

According to the China Iron & Steel Association (CISA), steel consumption in China is expected to grow by 12% to 485mn tonnes in 2008. While crude steel production is expected to be at 520mn tonnes, up by a mere 6.3% in 2008 and exports to be at 53mn tonnes, down 27% yoy.

We believe that the Chinese government's initiatives to curb exports to manage trade surplus, cutting down inefficient production, rising input costs and strong demand will be the key positives for global steel industry.

### US Slowdown- no major impact on steel industry fortunes

The US influence over the fortunes of the global Steel industry has been reducing drastically over the last few years following consolidation in the industry and a consistent and substantial annual jump in China's steel demand and supply. Now, the US accounts for a mere 7% of the global steel production and approximately 10% of the global steel consumption. Decline in the US domestic steel demand was substantial last year. However, US steel price levels were maintained at reasonable levels and had little impact on the global steel prices, which increased significantly. This was possible due to reduced US steel production, higher exports and lower import as the Dollar kept depreciating.

# Rising input costs globally - lifting the price base

### Iron ore to cost 65% more in FY2009

The contract price of iron ore has risen to touch record levels in the last five years as Chinese steel output increased substantially.

The iron ore prices are set on a yearly basis through negotiations between the major Asian and European steel mills and the mining trio of Vale, Rio Tinto and BHP, who account for 65% of the world's iron ore market. Traditionally, all steel mills accept the first price agreed as the accepted level for the next 12 months.

This year's Iron ore contract price has been negotiated at 65% higher from the previous price.

In the first deal, Nippon Steel, the world's second largest steelmaker and JHE Steel along with its partner Posco agreed to pay US\$78.9 per tonne for Itabira fine iron ore, higher by 65% from the previous year's contract price of US\$47.8. The 65% surge will be the benchmark used by the other miners and mills to decide their iron ore contracts for the following year. This 65% increase was preceded by a 9.5% increase in 2007, 18.6% in 2006 and a substantial 71.5% spike in 2005.

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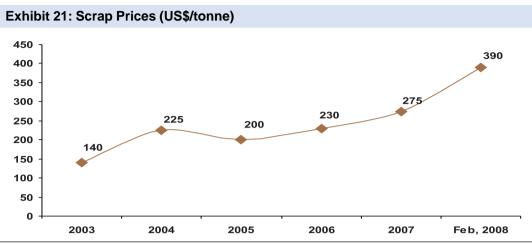
Source: Bloomberg, Angel Research

## China driving demand

The huge jump in the iron ore prices has been driven by the soaring demand in China for steel. This year, China's steel production is expected to exceed 500mn tonnes, five times its level of a decade ago, and five times US and Japanese production levels. Mining giant BHP Billiton predicts about 75% of future iron ore demand growth will be driven by China. That means, in as little as two years, China will be consuming about half the world's iron ore production.

### Scrap prices also went through the roof

Scrap prices have also spiked due to strong global demand and a weak US Dollar is boosting exports. Scrap prices are currently hovering in the range of US\$390-400 from US\$300/tonne one-year back.



Source: steelonthenet, Angel Research

## Coke prices touch record highs of US\$500/tonne

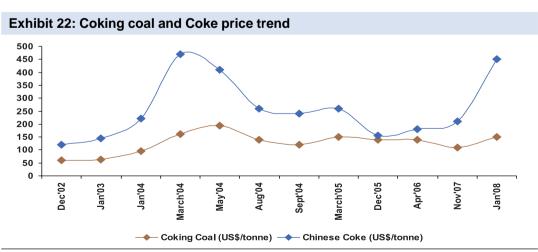
# Global Coke Market l controlled by China

Globally, China controls the coke market as it is the largest steel and coke producer, coke consumer and coke exporter in the world. Chinese coke prices are the benchmark for coke industry. In April –May 2004, the Chinese coke prices rose as high as US\$450 - 480 /tonne due to the demand-supply mismatch. However, after bottoming out at US\$120/tonne in september 2004, spot prices presently ruling at US\$450-500/ tonne.

### Coke prices highly volatile

No correlation between coking coal and Coke prices

Coke prices are highly volatile since the prices are controlled only by China. Thus, any sudden increase in the Chinese coke production can exert downward pressure on the prices. However, there is no strong correlation between the coke and coking coal prices globally.



Source: steelonthenet, Angel Research

Steel

# Chinese coke market to remains tight leads to higher prices

In the Chinese coke market, prices have remained at elevated levels of US\$350-360/tonne FOB for the end of 2007. However the prices are now trading at record highs of US\$500/tonne. Prices have not been this high since May 2004. It was in April 2004 that prices hit their zenith, at an incredible US\$450/tonne.

China's New export guidelines to bring down exports going forward

China has laid out guidelines for next year's coke exports. Producers with trading volumes of less than 2,50,000 tonnes in 2006 or less than 2,00,000 tonnes each year during 2004-2006, will not be permitted to export. Only producers with annual coke exports of over 2,00,000 tonnes and domestic trading houses, with an average annual trading volume of over 4,00,000 tonnes over 2004-2006 will be eligible to apply for a share in the export quota.

Coke prices to remain strong in the short to medium term

There is a general tightness of coal and therefore of coke which will inevitably apply upward pressure on prices. Supply side constraints, huge demand from countries like India (which is already a net importer of coke), huge steel capacity expansion in India and declining exports from China are some of the positives for the coke prices. We therefore expect the prices to remain strong in the short to medium term.

### **Coking Coal Prices to remain strong**

Global coking coal prices have been ruling firm and are expected to continue to do so, thanks to the robust demand from the steel-making segments, primarily from India. We expect the supply-demand fundamentals in the Coking Coal Segment to remain strong due to which demand is expected to remain robust going ahead. The Chinese steel makers are finding it difficult to meet its entire demand through the domestic sources. On the other hand, the Indian steel makers have always relied on the overseas suppliers for coking coal supplies. Taking into consideration these two major important coking coal consuming markets, prices are likely to rule firmer.

Port and rail congestion in Australia, the world's largest exporter of coal, have restricted supply as Asian demand surges. Also that the steel market's utilization rates are improving, and will create higher demand for high quality coking coal.

Metallurgical coal is typically sold on the basis of one-year contracts between producers and steelmakers around the world. The prices were record highs, back in the 2005 contract year and had a fall for two consecutive years.

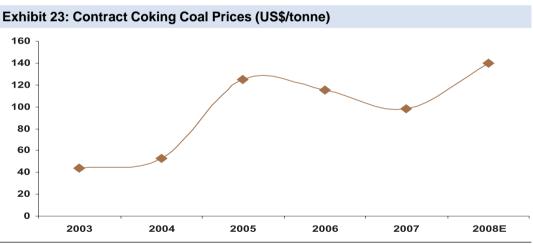
### Spot Prices are at above US\$200/tonne FOB from Australia

Spot hard coking coal prices are as high as US\$200/tonne

Spot prices have been on a continuous rise in recent times, but are now comfortably above the US\$200/tonne FOB level coming out of Australia. According to MBR, US high-volume metallurgical coal contracts have been signed with European customers in the range of US\$112-123/tonne FOB. ArcelorMittal and SAIL have recently purchased mid-vol coal from the spot market for US\$145-150/tonne FOB from the USA.

Recent supply side issues such as heavy rains in Indonesia, rail disruptions in South Africa and cuts to port allocations in Australia have led to a significant tightening in the global coal market, which will lead to an increase in the contract price negotiations for the producers. Increasing imports into China and a corresponding decline in the export of coking coal from China is strengthening expectations of an upward move in the coking coal prices. Moreover, demand from other Asian economies, mainly India, is likely to remain robust. Overall, the market will remain in the higher price band based on strong fundamentals. We therefore expect coking coal contract prices to rise significantly by 33% to US\$130/tonne in FY2009 and around US\$110/tonne in FY2010 from US\$98/tonne in FY2008.

Coking coal prices to rise to US\$130/tonne in FY09 from current contract price of US\$ 98/tonne



Source: Industry, Angel Research

### Rising input costs impacting the non-integrated players

Shortage of steel had turned India into a net importer for the first time after almost 10 years, while surging input costs squeezed the third quarter profit margins of several domestic firms that have no ore mine of their own. Iron ore is a key ingredient in making steel. Iron ore costs have risen 150% in the last six months from US\$60 to US\$150 now. Coking coal costs have similarly climbed 75% in the last six months. Ferro manganese has shot up by 40% from Rs43,000 to Rs62,000 a

Increase in the cost of various inputs increased the production cost for steel by almost US\$120-150/tonne.

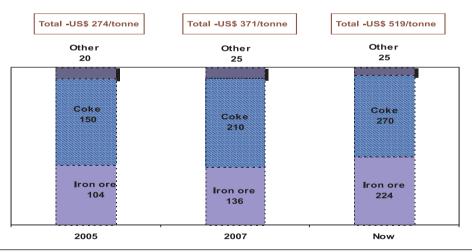
tonne. Recently, National Mineral Development Corp. Limited raised prices of ore fines and lumps by 47% and 22-33%, respectively. Steel scrap, used by induction and electric arc furnaces as input, prices have also shot up 36% while coke, obtained from coking coal for use in furnaces, prices have increased from US\$290/tonne in mid 2007 to US\$500/tonne in 3QFY2008.

Increase in the cost of various inputs increased the production cost for steel by almost US\$120-150/tonne.

### Shift in the cost base globally

Cost base for steel making has been shifted upwards from just US\$275/tonne in 2005 to US\$520/tonne currently Rising input costs in the recent past has resulted in the steel prices strengthening globally. We believe that the spike in the steel prices has mainly been on account of the shift in the cost base for non-integrated player globally. The cost of production has increased to US\$520/tonne now from US\$370 at the start of 2007 and just US\$275/tonne in 2005. The cost-push is beyond US \$150/tonne on steel making, that is the kind of gap which is available between what the cost of production was at the start of 2007 versus the cost of production now, which will have to be bridged. Perhaps not fully, but a part of it will have to be absorbed by the companies and part of it will have to be passed on to customers. That is what is reflected in the recent price hike done by several companies globally.

Exhibit 24: Shifting of Cost Base (US\$/tonne)



Source: Industry, Angel Research

### Steel prices riding globally

On an average, the steel prices have increased by US\$50-100/ tonne from December 2007 to now

Steel prices are on their way up across the world on the back of the price hikes announced by several players globally. On an average, the steel prices have increased by US\$50- 100/ tonne from December 2007 to now. Average Hot-rolled steel sheet prices have jumped from an average US\$544 in December, 2007 to US\$565 in January and US\$579 for February deliveries. The average price of hot rolled coils (HRC) in Europe is around US\$670/tonne and that of cold rolled coils (CRC) is US\$766/tonne. Average HRC prices in China have increased by US\$58/ tonne in the last one-and-a-half months, from US\$402 to US\$460/tonne, whereas average CRC prices have increased by US\$18, from US\$529 to US\$547/tonne.

The CIS HRC prices have increased by a hefty US\$100/tonne in February 2008 and is currently hovering in the range of US\$690-700/tonne. Even in the sluggish US market, the price of HRC has registered an average increase of US\$30/tonne in February 2008.



Source: Bloomberg, Angel Research

### **Robust Industry Outlook**

Demand from Emerging markets like India and China is expected to remain strong. We expect strong global demand for steel and U.S. slowdown alone would not be enough to upset the global steel pricing mechanism. Strong demand in regions like the Middle East could offset some softening in US demand. Slowdown in the US will not have much impact on the steel industry overall because of low US inventories, which led to recent recovery in US prices.

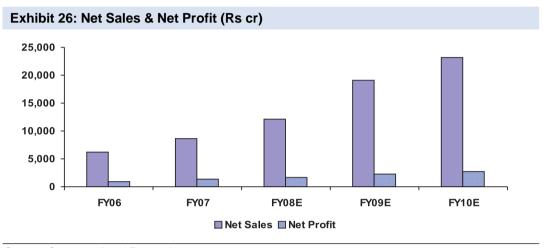
Change in the cost base globally will also keep the prices strong in the short to medium-term. China's initiatives to curb exports and shutting down of inefficient steel mills will also be positive for the global steel industry.

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### **Financial Performance**

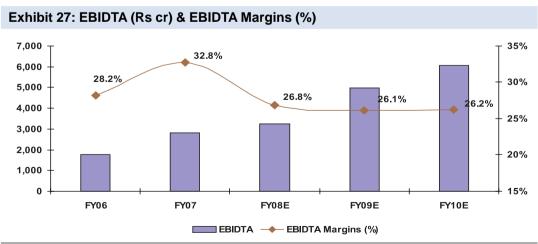
We expect JSW Steel's consolidated Revenues to grow at a CAGR of 39.2% over FY2007-10E mainly due to saleable steel volume growth of 28.8% CAGR during the same period and strong pricing scenario in the short to medium term. However, we expect Bottomline to grow at a CAGR of 28.9% over FY2007-10E.

Topline & Bottomline to grow at a CAGR of 39.2% & 28.9% respectively over FY2007-10E



Source: Company, Angel Research

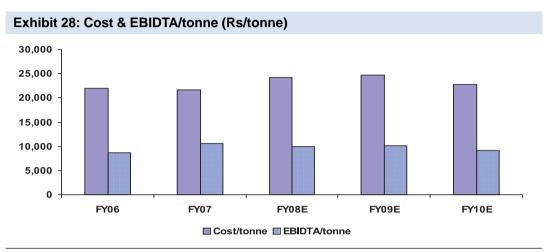
We expect EBITDA Margins to decline to 26.2% in FY2010E from current levels of 32.8% We estimate EBITDA Margins to decline marginally due to acquisition of the US operation, SISCOL merger and the sky rocketing raw material prices. We expect EBIDTA Margins to decline to 26.1% in FY2009E and remain stable at 26.2% in FY2010E from current levels of 32.8%. However, we believe that the company's backward integration initiatives will start flowing from 2009 and provide some sort of cushion to the Margins.



Source: Company, Angel Research

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We expect cost per tonne of saleable steel to go up to Rs24,235 in FY2008E from Rs21,600 in FY2007, due to the increase in the cost of raw materials like iron ore and coal/coke. We expect the blended cost for iron ore to increase to Rs1,396/tonne in FY2008E from Rs1,156/tonne in FY2007. However, the coal/coke cost to go up to Rs6,600/tonne in FY2008E from Rs5,880/tonne in FY2007. However, we believe that the cost per tonne will decline to Rs22,860 in FY2010, mainly due to softening of raw material costs and higher level of integration into iron ore and coal.



Source: Company, Angel Research

### JSW Steel- Low integration

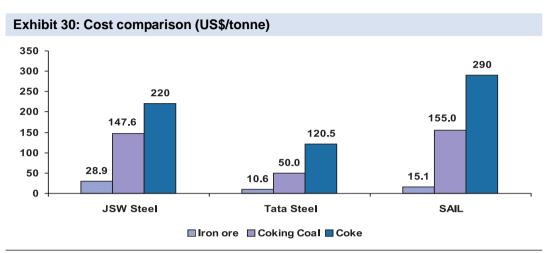
JSW Steel compared to SAIL and Tata Steel has low level of backward integration in terms of coking coal and iron ore. JSW Steel is only 30% backward integrated in iron as against 100% captive iron ore for SAIL and Tata Steel. JSW Steel as of now has no linkages for coking coal compared to 60% and 40% integration for Tata Steel and SAIL.

Exhibit 29: Level of Integration (%)				
	Iron Ore	Coking Coal		
JSW Steel	30	0		
SAIL	100	40		
Tata Steel	100	60		

Source: Company, Angel Research

We believe that JSW's cost per tonne will decline once its iron ore and coking coal mines start producing. JSW aims to be 50% integrated for 10mtpa capacity in both iron ore and coking coal by FY2010.

Despite low integration, JSW is one of the efficient players and the cost per tonne is also comparatively lower due to better man power productivity and other efficiencies.



Source: Company, Angel Research

JSW steel's earnings are highly sensitive to the price volatility due to low level of backward integration. As can be seen from the sensitivity table below, 5% decline in the average price realisation for the company will lead to decline in the EPS by 22%, keeping all other parameters constant.

Exhibit 31: EPS Sensitivity Analysis (Price v/s Iron ore cost) Average Price Realisation (Rs/tonne) 28,788 30,388 31,987 33,586 35,186 1,148 85 115 145 176 206 Iron ore cost (Rs/tonne) 1,275 80 110 141 171 201 1,343 77 107 138 168 199 1,410 74 105 135 166 196 1,551 69 99 130 160 191

Source: Company, Angel Research

Exhibit 32	Exhibit 32: EPS Sensitivity Analysis (Price v/s Coal/Coke cost)							
			Average Price Realisation (Rs/tonne)					
		28,788	30,388	31,987	33,586	35,186		
ost	5,872	104	134	165	195	226		
ne)	6,524	86	117	147	178	208		
Cok for	6,867	77	107	138	168	199		
Coal / Coke cost (Rs/tonne)	7,211	68	98	129	159	190		
Ö	7,932	48	79	109	140	170		

Source: Company, Angel Research

## **Key Concerns**

### Delay in Capacity Expansions

JSW has embarked on a significant capacity expansions and its crude steel capacity is expected to touch 10mtpa from the current 3.8mtpa by FY2011. Any delay in these plans will change volumes and revenue estimates.

### **Delay in Mining Operations**

The company has been allotted several iron ore and coal mines at different location in India and abroad. Any delay in mining operations will change our estimates for costs.

### Volatility in the Product Prices

Domestic steel prices are linked with the international prices. Thus, considerable increase in the production globally or fall in demand for steel products might exert pressure on the prices.

#### Increase in Raw Material Costs

Since JSW is not a fully integrated player, its Margins are vulnerable to raw material costs like iron ore and met coke. Greater than expected increase in these raw materials prices due to global trends will affect our estimates adversely.

### **Exchange Rate Fluctuations**

JSW's export contribution is almost 30% to total sales and it exports to various countries like China, UK, Europe & Middle East & Africa. Hence, any fluctuations in the exchange rate will have an impact on the company's Earnings.

# **Outlook & Valuation**

Demand from Emerging markets like India and China is expected to remain strong. We expect strong global demand growth for Steel to continue and believe the US slowdown will not be enough to upset the global steel pricing mechanism. Slowdown in the US will not have much impact on the steel industry overall because of low US inventories, which also leaded to recent recovery in US prices. Strong demand in countries like Middle East could partially offset any softening in US demand.

Change in the cost base globally will also keep the prices strong in the short to medium term. Also, Chinese initiatives to curb exports and shutting down of inefficient steel mills will be positive for global steel industry.

As far as JSW Steel is concerned, we believe that significant capacity expansion, enriched product mix and backward integration initiatives into key inputs like coking coal and iron ore will be the key positives for JSW's growth going ahead. We expect JSW to record a 28.9% CAGR growth in Bottomline over FY2007-10E. However, we expect EBITDA Margins to decline to 26.2% in FY2010E from current levels of 32.8%, primarily due to the US acquisitions and SISCOL merger.

At the CMP of Rs935, on consolidated basis, the stock is trading at EV/EBIDTA of 4.7x on FY2010E EBIDTA and P/E of 6.8x FY2010E consolidated fully diluted EPS. As is apparent, JSW is trading at a 20% and 10% discount to SAIL and Tata Steel. SAIL is trading at a premium mainly on account of higher level of backward integration compared to JSW and Tata Steel consolidated. Post the Corus acquisition, Tata Steel is only 20% backward integrated into key raw materials, prices of which have been on a sustained uptrend.

We believe that the high discount that the JSW stock is getting is not justified in view of its robust Earnings outlook, strong volume growth, stable steel prices, improved product mix and the company's move towards becoming self sufficient in raw materials. We Initiate Coverage on the stock, with a Buy recommendation and 12 month Target Price of Rs1,170, translating into an upside of 25%.

Exhibit 33:	Exhibit 33: Comparative Valuation - Domestic Peers								
Company	CMP P/E EV/EBIDTA			P/E			EV/tonne	EBIDTA	
	(Rs)	FY08E	FY09E	FY10E	FY08E	FY09E	FY10E	(US\$/tonne)	(%)
Tata Steel*	717	7.4	6.8	6.6	6.6	5.9	5.2	988	15.6
SAIL	202	11.0	9.4	10.1	6.5	5.6	5.8	1,268	27.5
JSW Steel	935	11.3	8.5	6.8	7.5	5.3	4.7	973	26.2

Source: Angel Research, Bloomberg; Note: \*consensus estimates

12.0

Steel

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Exhibit 34: Comparative Valuation - Global Peers							
Company	CMP	MK Cap					
	(US\$)	(US\$ bn)	P	Æ	EV/E	BIDTA	EBIDTA (%)
			FY08E	FY09E	FY08E	FY09E	FY09E
POSCO	444	38.7	10.9	8.7	6.6	6.3	20.0
China Steel	1.46	16.8	13.0	9.8	7.8	7.4	22.0
Arcelor Mittal	79	114.5	10.4	9.9	7.2	6.7	14.5
Nippon steel*	4.43	30.2	8.0	9.0	5.9	5.9	15.0

13.4

7.0

6.6

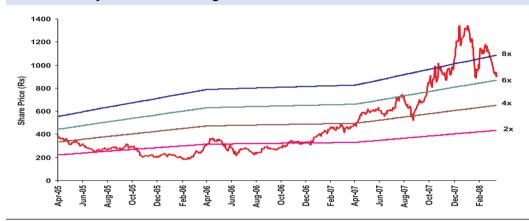
Source: Angel Research, Bloomberg; Note: \* March ending, others - December ending.

16.0

33.8



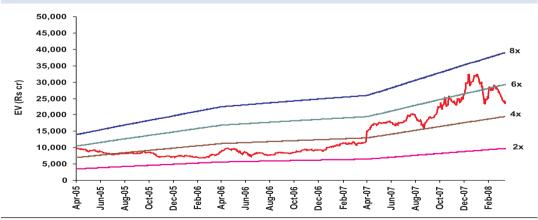
1.93



Source: Company, Angel Research

Baoshan steel

## Exhibit 36: 1-year forward rolling EV/EBIDTA Band



Source: Company, Angel Research

## **Profit & Loss Statement (Consolidated)**

### Rs crore

# **Balance Sheet (Consolidated)**

### Rs crore

Tont & Loss Statement (Consolidated) 13 Cro					
Y/E March	FY2007	FY2008E	FY2009E	FY2010E	
Net Sales	8,594	12,106	19,018	23,169	
% chg	38.3	40.	9 57.1	21.8	
Total Expenditure	5,778	8,859	14,053	17,097	
EBITDA	2,817	3,247	4,965	6,073	
(% of Net Sales)	32.8	26.8	26.1	26.2	
Other Income	105	360	367	464	
Depreciation	607	724	926	1,151	
Interest	400	560	1,109	1,251	
PBT	1,915	2,322	3,298	4,134	
(% of Net Sales)	22.3	19.2	17.3	17.8	
Tax	623	662	1,088	1,364	
Effective Tax Rate (%)	32.5	28.5	33.0	33.0	
Adj. PAT	1,292	1,660	2,210	2,770	
% chg	50.8	28.5	33.1	25.4	
(% of Net Sales)	15.0	13.7	11.6	12.0	
FDEPS	79	83	110	138	

Y/E March	FY2007 FY	/2008E	FY2009E	FY2010E
SOURCES OF FUNDS				
Equity Share Capital	164	201	1 201	201
Reserves & Surplus	5,430	8,243	9,997	12,196
Shareholders' Funds	5,594	8,444	4 10,198	12,397
Total Loans	4,173	9,173	3 11,673	13,173
Deferred Tax Liability	1,013	1,013	3 1,013	1,013
Total Liabilities	10,780	18,629	22,883	26,583
APPLICATION OF FUNDS				
Gross Block	10,513	15,013	3 18,513	23,013
Less: Acc. Depreciation	2,324	2,933	3,914	5,063
Net Block	8,189	12,080	14,599	17,950
Capital Work-in-progress	2,003	3,303	3 4,303	5,803
Investments	193	193	3 193	193
Current Assets	2,486	7,109	9,156	9,256
Current Liabilities	2,286	4,25	5,562	6,814
Net Current Assets	200	2,859	3,594	2,442
Mis.expenses	195	198	5 195	195
Total Assets	10,780	18,629	22,883	26,583

# **Cash Flow Statement (Consolidated)**

### Rs crore

# **Key Ratios**

	•			
Y/E March	FY2007	FY2008E	FY2009E	FY2010E
Profit before tax	1,915	2,323	3,298	4,134
Depreciation	607	724	926	1,151
Change in working capital	(464)	(713)	390	(347)
Income taxes paid	623	662	1,088	1,364
Cash from operations	2,364	3,098	2,746	4,268
Change in Fixed assets	2,285	5,800	4,500	6,000
Free cash flows	78	(2,702)	(1,754)	(1,732)
Change in Investments	108	0	0	0
Change in Share capital	212	1,531	0	0
Change in Debt	77	5,000	2,500	1,500
Dividend & dividend tax	266	342	455	571
Cash from fin. activities	131	6,189	2,045	929
Other adjustments	30	(115)	55	(2)
Net inc./(dec.) in cash	239	3,372	345	(805)
Opening cash balance	99	338	3,710	4,055
Closing cash balance	338	3,710	4,055	3,250

Y/E March	FY2007	FY2008E	FY2009E	FY2010E
Per Share Data (Rs)				
EPS(Fully Diluted)	78.9	82.7	110.0	137.9
Cash EPS	116.0	118.7	156.1	195.2
DPS	16.3	17.0	22.7	28.4
Book value per share	341.5	420.4	507.8	617.3
Operating Ratios (%)				
Sales growth	38.3	40.9	57.1	21.8
EBITDA margins	32.8	26.8	26.1	26.2
Net profit margins	15.0	13.7	11.6	12.0
Debt/Equity (x)	0.9	1.2	1.2	1.1
Return ratios (%)				
RoE	26.0	23.7	23.7	24.5
RoCE	16.9	15.1	16.0	16.3
Dividend payout	20.6	20.6	20.6	20.6
Valuation ratios (x)				
P/E	11.9	11.3	8.5	6.8
P/E( Cash EPS)	8.1	7.9	6.0	4.8
P/BV	2.7	2.2	1.8	1.5
EV/Sales	2.2	2.0	1.4	1.2
EV/EBITDA	6.8	7.5	5.3	4.7

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