

Deeper cut on our steel view

■ Macro outlook deteriorating fast

UBS Steel analysts, Andrew Snowdowne and Timna Tanners believe that the rapid fall in steel prices is a reflection of lack of demand as well as the credit crunch, which has become worse as we face potentially the slowest rate of global economic expansion since 1982 at 1.3% for 09E.

■ Apparent consumption in India; production cuts and price reductions

Within our lower global apparent steel demand forecast, we have also brought down our Indian consumption estimate from c.8.5% growth to 6.1% growth in 09. We now have factored an average steel price realization of Rs 32,000/tn of basic HRC grade steel down from Rs 34,000/tn built in earlier. We assume Indian companies cut production by 3.5% and 5% in 10/11E, respectively.

■ EPS downgrades; significantly below consensus

We cut 09E/10E EPS for the entire Indian steel sector by 5% and 28% respectively as we believe global weakness will be felt on Indian shores as well, despite the relative resilience of steel demand in the country. We believe the near term visibility is negative as we not only expect production cuts and falling prices but also slowing consumption growth within the country as new projects get no or delayed financial closures.

■ Valuation: We use DCF to arrive at our 12-month target prices

We rate SAIL Buy, Tata Steel Neutral and JSW Sell – lowering our 12-month price targets from Rs 180 to Rs 125 for SAIL, from Rs450 to Rs230 for Tata Steel and from Rs450 to Rs300 for JSW Steel.

3 November 2008
www.ubs.com/investmentresearch
Sunita Sachdev

 Analyst
sunita.sachdev@ubs.com
 +91-22-2286 2059

Nupur Agarwal

 Associate Analyst
nupur.agarwal@ubs.com
 +91-22-2286 2105

Table 1: Valuation comparison

	EV/EBITDA(x)			Pre-exp PE(x)			P/BVPS (x)		
	FY08	FY09E	FY10E	FY08	FY09E	FY10E	FY08	FY09E	FY10E
SAIL	2.2	2.3	2.6	4.6	5.0	6.2	1.5	1.2	1.1
Tata Steel	3.0	2.8	3.0	2.7	2.2	2.9	0.4	0.4	0.4
JSW Steel	5.4	4.4	3.5	3.5	4.0	4.6	0.8	0.7	0.6
Average	3.2	2.9	2.6	4.0	3.9	3.6	1.1	1.0	0.8

 Source: Company data, UBS estimates; Priced on close of 31st Oct 2008

This report has been prepared by UBS Securities India Private Ltd

ANALYST CERTIFICATION AND REQUIRED DISCLOSURES BEGIN ON PAGE 10.

UBS 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.

Steel Price Outlook

Andrew Snowdowne and Timna Tanners are lowering steel price forecasts used in modelling steel company earnings for 2009 and 2010, to reflect a weaker macroeconomic outlook and lower forecast raw material prices for iron ore and coking coal. They have looked at margins above material costs in past downturns as a guide to how far prices may fall. They believe UBS prices estimates are now considerably below consensus views for steel prices, iron ore, and coking coal.

We show the forecast changes in Table 2 below:

Table 2: Change in EU steel price estimates

	Old Prices			New Prices			Change %		
	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E
EU export HRC (US\$/t)	939	768	735	805	474	544	-14.2%	-38.3%	-26.0%
EU domestic HRC (€/t)	677	593	573	619	427	483	-8.5%	-28.0%	-15.7%
EU domestic CRC (€/t)	733	650	631	676	485	541	-7.9%	-25.5%	-14.3%
EU domestic HDG (€/t)	762	685	666	705	520	576	-7.6%	-24.2%	-13.5%

Source: UBS estimates

In the short term UBS believes steel prices could fall more sharply than the market (particularly the sell-side) is currently forecasting. Key concerns include:

- Falling production is reflecting a lack of demand, partly fuelled by the credit crunch, rather than proactive supply cuts to avoid steel price falls. We think it is too late to think about pre-emptive cutbacks and we are seeing mills shutter facilities due simply to an absence of orders.
- Despite the recent stimulus package in China, we believe that the deceleration in steel demand can continue in the near term. Inventories in China and many recently robust economies have quickly become bloated relative to the sharp drop in demand internally and for export.
- We are concerned there has been no proactive effort by major mining companies to curtail iron ore and coking coal production, even as steel mills cut output. Downward pressure is now being felt on all inputs into production processes. As a result, operating costs may provide a lower floor than current prices. This is evidenced through lower scrap prices and raw materials bought on the spot market and also falling energy and freight costs.
- History tells us that prices in a recession can fall well below the level where high cost producers fail to cover their costs. Ideally, producers could quickly curtail production in a slowing demand environment in order to bring a market back to balance. We think the suddenness of demand weakness made it hard for mills to respond in a timely manner and now we think cutbacks largely reflect a lack of demand rather than pre-emptive cuts by the industry.

Raw material outlook

As detailed in *UBS Global I/O™: Commodity Compass* dated 31 October 2008, our commodity team has also lowered price expectations for iron ore and coking coal. While large suppliers will likely cut production in order to mitigate some of the loss in demand, we expect they will also need to cut pricing, effectively giving up the price increase achieved in 2008. We now forecast a 40% yoy decline in both iron ore and coking coal contract prices effective as of 1 April 2009. The table below shows a summary of our latest raw material price assumptions applied to our models calendarized for March year ending.

Table 3: Iron ore and coking coal contract price forecasts (\$/t)

Particulars	Old Prices			New Prices			Change %		
	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E
Iron ore contract prices	86	73	62	86	54	52	0.0%	-25.7%	-17.0%
Coking coal	300	250	230	300	180	130	0.0%	-28.0%	-43.5%

Source: UBS estimates

In India, we reduce our benchmark HRC price estimate from Rs 34,000/tn to Rs 32,000 /tn for FY10 - all prices net of excise duty in INR. These are not comparable to the declines the UBS steel team has made in the EU and US regions primarily due to:

- The decline in steel prices in USD terms is higher than the INR terms that we are forecasting, due to INR depreciation against the USD.
- The relatively resilient demand in the Indian steel space.

In our steel update report, dated 6th October 2008 we highlighted that:

- Indian steel producers enjoy relatively higher raw material integration and therefore lower cash costs of production;
- India should remain a net importer of steel into FY11E or till large capacity expansion plans get executed.
- Indian industry fundamentals support expansion given lower production costs which provide a cushion during periods of expansions and down cycles.

Change in steel price expectations

Following our global steel price downward revisions, we are making downward revisions to the steel realizations for the Indian steel companies using Rs32,000/t as the base case estimate for HRC ex-factory for Indian producers.

We expect SAIL to experience the sharpest decline in average realizations given its product mix is skewed to lower end steel compared to Tata and JSW Steel.

Table 4: Change in Indian steel price assumptions (Rs/t)

Steel realizations Rs/t	New estimates			Old estimates			% change		
	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E
SAIL									
Saleable steel	36,917	32,000	32,000	37,432	36,684	38,518	-1.4%	-12.8%	-16.9%
Average	35,724	31,554	31,686	36,175	35,600	37,247	-1.2%	-11.4%	-14.9%
JSW Steel									
HRC, including excise duty	38,324	32,205	33,161	38,324	35,475	37,249	0.0%	-9.2%	-11.0%
Average	35,788	31,661	32,019	35,289	34,158	35,359	1.4%	-7.3%	-9.4%
Tata Steel (domestic)									
HRC, excluding excise duty	35,530	33,754	32,741	35,530	35,530	34,465	0.0%	-5.0%	-5.0%
Average *	40,813	38,006	36,857	40,813	39,143	38,006	0.0%	-2.9%	-3.0%
Tata Steel consolidated									
Average	46,718	35,419	39,634	53,028	46,395	46,693	-11.9%	-23.7%	-15.1%

Source: UBS estimates

As mentioned earlier, we have reduced our production estimates for the three Indian steel companies under UBS coverage – SAIL, Tata Steel (standalone) and JSW Steel – that account for c.47-48% of total steel production in India. With all three companies having capacity expansion coming on stream towards end FY10E and in FY11E we have therefore estimated that the production cuts will be harsh in the ensuing years.

Corus production cuts that have been announced for Q4 have been estimated to continue into FY10E and FY11E.

Table 5: Production cuts built into UBS estimates

Particulars		New estimates			Old estimates			Change		
		FY09E	FY10E	FY11E	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E
SAIL - Saleable steel production	000 tns	12,372	13,372	14,372	12,372	13,622	15,122	0.0%	-1.8%	-5.0%
JSW - MF Slabs	000 tns	4,830	5,540	7,540	5,300	6,040	8,040	-8.9%	-8.3%	-6.2%
Tata Steel (India) Steel Sales	000 tns	5,890	7,557	9,149	5,890	7,796	9,437	0.0%	-3.1%	-3.1%
Corus - Longs	000 tns	8,319	7,819	7,819	9,084	9,084	9,084	-8.4%	-13.9%	-13.9%
Corus - Flats	000 tns	12,007	11,007	11,007	13,007	13,007	13,007	-7.7%	-15.4%	-15.4%
Production - India	000 tns	23,092	26,469	31,060	23,562	27,458	32,599	-2.0%	-3.6%	-4.7%

Source: UBS estimates

Given new iron ore and coking coal price estimates, we have factored these changes into our models. Table 5 below gives the detailed EBITDA/t estimates for our steel companies.

JSW Steel is the non-integrated player and hence despite the cut in HRC prices and the production cuts built in on an EBITDA/t basis JSW is a key beneficiary of the reduction in iron ore and coking coal prices.

Table 6: EBITDA/t estimates (Rs/t)

EBITDA Rs/t	New estimates			Old estimates			% change		
	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E
SAIL	8,282	6,866	8,448	8,602	9,388	9,175	-3.7%	-26.9%	-7.9%
JSW Steel	7,736	8,355	6,833	7,475	7,708	6,454	3.5%	8.4%	5.9%
Tata Steel standalone	17,220	16,157	15,083	17,484	16,750	15,334	-1.5%	-3.5%	-1.6%
Tata Steel consolidated	7,114	5,199	6,962	7,787	7,789	7,339	-8.6%	-33.3%	-5.1%

Source: UBS estimates

Table 7: Preference in India

	Raw material integration	Gearing	Expansion Plan Ordered out	Δ on product mix	Δ on cost savings	Execution strength
SAIL	√	√	x	√	√	√
Tata	x	x	√	√	√	√
JSW	x	x	√	x	x	√

Source: UBS estimates

SAIL

Table 8: Change in estimates for SAIL

Particulars	New forecasts			Old forecasts			Change in forecasts		
	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E
Revenue	441,976	421,934	455,395	447,553	484,939	563,250	-1.2%	-13.0%	-19.1%
EBITDA	112,459	100,806	130,411	116,423	136,881	147,744	-3.4%	-26.4%	-11.7%
EBITDA margin	25.4%	23.9%	28.6%	26.0%	28.2%	26.2%			
Net profit	70,358	57,059	63,198	73,695	85,698	91,140	-4.5%	-33.4%	-30.7%
EPS	17.0	13.8	15.3	17.8	20.7	22.1	-4.5%	-33.4%	-30.7%

Source: UBS estimates

We have reduced our base HRC price estimate for SAIL in FY09 / 10 / 11 and corresponding changes to the entire product basket. Our revenue forecasts have been adjusted down 13% and 19% for FY10/FY11. Our operating profit estimates for those years have also been brought down by 26% and 12%.

SAIL's net profit estimates have been reduced by 33% for FY10, and 30% for FY11 given the new lower steel price estimates we have built in and the production cuts.

Table 9: SAIL – UBS vs. Consensus

Particulars	UBSe			Consensus			UBS vs. Consensus		
	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E
Revenue	441,976	421,934	455,395	501,554	485,201	553,199	-11.9%	-13.0%	-17.7%
EBITDA	112,459	100,806	130,411	113,159	106,705	130,582	-0.6%	-5.5%	-0.1%
EBITDA margin	25.4%	23.9%	28.6%	22.6%	22.0%	23.6%			
Net profit	70,358	57,059	63,198	72,836	66,398	78,883	-3.4%	-14.1%	-19.9%

Source: UBS estimates, Reuters data

We are below consensus in our estimates across the board for steel companies.

We have brought down our DCF based price target for SAIL from Rs180 to Rs125 under the new scenario- while maintaining our BUY rating for SAIL.

SAIL is our top-pick in the Indian steel universe as:-

1. It remains the most inward looking company – and hence should gain the most from the resurgence of infrastructure spending in the country
2. It is the least expensive stock in the space, quoting at 2.3x EV/EBITDA FY09E
3. It is the most integrated of the Indian steel companies
4. It is expected to expand operations, while remaining the least levered of all the steel names.

Tata Steel

Table 10: Change in estimates for Tata consolidated

	New forecasts			Old forecasts			Change in forecasts		
	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E
Revenue	1,553,438	1,281,146	1,414,604	1,709,308	1,613,917	1,698,483	-9.1%	-20.6%	-16.7%
EBITDA	187,758	177,227	199,429	192,359	207,269	207,328	-2.4%	-14.5%	-3.8%
EBITDA margin	12.1%	13.8%	14.1%	11.3%	12.8%	12.2%			
Net profit	68,368	59,880	70,620	71,437	81,479	75,897	-4.3%	-26.5%	-7.0%
EPS	93.6	72.8	85.9	97.8	99.1	92.3	-4.3%	-26.5%	-7.0%

Source: UBS estimates

We have reduced our base HRC price estimate for Tata in FY09 / 10 / 11 and corresponding changes to the entire product basket. Our revenue forecasts have been adjusted down 9% for FY09 and 21% for FY10 as we have built in production cuts in Corus in FY10E as well. Our operating profit estimate has also been brought down by 15% in FY10.

Tata's net profit estimate has been reduced by 26% for FY10, given the new lower steel price estimates compared with earlier.

Table 11: UBS vs. Consensus for Tata Steel

	UBSe			Consensus			UBS vs. Consensus		
	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E
Revenue	1,553,438	1,281,146	1,414,604	1,653,606	1,603,798	1,728,372	-6%	-20%	-18%
EBITDA	187,758	177,227	199,429	199,845	201,513	197,164	-6%	-12%	1%
EBITDA margin	12.1%	13.8%	14.1%	12.1%	12.6%	11.4%			
Net profit	68,368	59,880	70,620	94,256	97,578	75,897	-27%	-39%	-7%

Source: UBS estimates, Reuters data

Our estimates are now lower than consensus numbers across all heads, primarily due to the change in steel price assumptions for the UK business. We have also not built in additional improvements in cost savings from the European businesses.

We have brought down our DCF based price target for Tata from Rs450 to Rs230 under the new scenario- while maintaining our Neutral rating. For Tata, with negative news on a weak Q4 in Europe the near-term news on the stock is not expected to be positive, despite good results expectations from Q209 results towards mid-November.

JSW Steel

Table 12: Change in estimates for JSW Steel

	New forecasts			Old forecasts			Change in forecasts		
	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E
Revenue	207,502	214,537	286,352	221,676	245,361	331,077	-6.4%	-12.6%	-13.5%
EBITDA	42,378	53,424	60,656	44,628	53,755	63,162	-5.0%	-0.6%	-4.0%
EBITDA margin	20.4%	24.9%	21.2%	20.1%	21.9%	19.1%			
Net profit	15,189	13,308	11,565	17,423	14,317	13,738	-12.8%	-7.0%	-15.8%
EPS	75.7	66.3	57.6	86.8	71.3	68.4	-12.8%	-7.0%	-15.8%

Source: UBS estimates

We have reduced our base HRC price estimates for JSW in FY09 / 10 / 11 and corresponding changes to the entire product basket. Our revenue forecasts have been adjusted down 13% for FY10/FY11. JSW is the only company in India that gains from the reduction in iron ore and coking coal prices despite the production cuts and the benchmark price of HRC being built in lower. Our operating profit estimates remain flat compared to our earlier estimates, as we build in weaker coking coal prices.

JSW's net profit estimate has been reduced by 7% for FY10, given we have maintained the higher interest costs, and build in lower other income.

Table 13: UBS vs. Consensus on JSW Steel

	UBSe			Consensus			UBS vs. Consensus		
	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E	FY09E	FY10E	FY11E
Revenue	207,502	214,537	286,352	207,229	246,733	322,938	0%	-13%	-11%
EBITDA	42,378	53,424	60,656	42,549	57,442	68,964	0%	-7%	-12%
EBITDA margin	20.4%	24.9%	21.2%	20.5%	23.3%	21.4%			
Net profit	15,189	13,308	11,565	17,465	24,199	29,399	-13%	-45%	-61%

Source: UBS estimates, Reuters data

Our estimates are now much lower than consensus numbers on profits as we have built in higher interest costs on the profit numbers.

We have brought down our DCF based price target for JSW from Rs 450 to Rs 300 under the new scenario- while we maintain our Sell rating.

JSW is our least preferred stock in the Indian steel universe as:-

1. Despite the fact that JSW's execution is among the best, progress in brownfield expansions is dependent on higher borrowing – while borrowing costs should increase from here;
2. It is the least integrated of all the steel names;
3. Its mining acquisitions are still some time away from making a meaningful difference to operations.

Valuation and Price targets

We value the steel companies based on DCF of cashflows on known expansion plans. The table below details our assumptions on cost of debt, interim growth rates, terminal growth rates and beta assumed for DCF valuation.

Table 14: DCF assumptions

	SAIL	JSW Steel	Tata Steel
WACC	13.2	13.1	13.5
Cost of Debt	10.0	13.0	12.5
Tax Rate	30%	30%	30%
Gearing	15%	30%	20%
Cost of Equity	14.3	14.8	15.3
Risk Free Rate	8.5	8.7	8.7
Beta	1.15	1.22	1.20
Market Risk Premium	5.0	5.0	5.0
Interim Growth Rate	12	12	10
Terminal Growth Rate	5%	5%	5%

Source: UBS estimates

Price targets

Table 15: Price target changes and upside (%)

	SAIL India	Tata Steel	JSW Steel
Old Price targets	180	450	450
New price targets	125	230	300
Current price	85	210	305
Upside potential %	47%	9%	-2%

Source: UBS estimates

Table 166 Valuation comparison

	EV/EBITDA(x)			Pre-exp PE(x)			P/BVPS (x)		
	FY08	FY09E	FY10E	FY08	FY09E	FY10E	FY08	FY09E	FY10E
SAIL	2.2	2.3	2.6	4.6	5.0	6.2	1.5	1.2	1.1
Tata Steel	3.0	2.8	3.0	2.7	2.2	2.9	0.4	0.4	0.4
JSW Steel	5.4	4.4	3.5	3.5	4.0	4.6	0.8	0.7	0.6
Average	3.2	2.9	2.6	4.0	3.9	3.6	1.1	1.0	0.8

Source: Company data, UBS estimates; Priced at close on 31st Oct 2008

■ **Statement of Risk**

Investing in Indian steel equities poses country, industry and company-specific risk. Valuations are impacted by the macroeconomic landscape as well as financial market stability and the dynamics of the underlying commodity.

■ **Analyst Certification**

Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers; and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

Required Disclosures

This report has been prepared by UBS Securities India Private Ltd, an affiliate of UBS AG. UBS AG, its subsidiaries, branches and affiliates are referred to herein as UBS.

For information on the ways in which UBS manages conflicts and maintains independence of its research product; historical performance information; and certain additional disclosures concerning UBS research recommendations, please visit www.ubs.com/disclosures. Additional information will be made available upon request.

UBS Investment Research: Global Equity Rating Allocations

UBS 12-Month Rating	Rating Category	Coverage ¹	IB Services ²
Buy	Buy	56%	36%
Neutral	Hold/Neutral	35%	33%
Sell	Sell	8%	27%
UBS Short-Term Rating	Rating Category	Coverage ³	IB Services ⁴
Buy	Buy	less than 1%	32%
Sell	Sell	less than 1%	14%

1:Percentage of companies under coverage globally within the 12-month rating category.

2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.

3:Percentage of companies under coverage globally within the Short-Term rating category.

4:Percentage of companies within the Short-Term rating category for which investment banking (IB) services were provided within the past 12 months.

Source: UBS. Rating allocations are as of 30 September 2008.

UBS Investment Research: Global Equity Rating Definitions

UBS 12-Month Rating	Definition
Buy	FSR is > 6% above the MRA.
Neutral	FSR is between -6% and 6% of the MRA.
Sell	FSR is > 6% below the MRA.
UBS Short-Term Rating	Definition
Buy	Buy: Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.
Sell	Sell: Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.

KEY DEFINITIONS

Forecast Stock Return (FSR) is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months.

Market Return Assumption (MRA) is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium).

Under Review (UR) Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation.

Short-Term Ratings reflect the expected near-term (up to three months) performance of the stock and do not reflect any change in the fundamental view or investment case.

EXCEPTIONS AND SPECIAL CASES

UK and European Investment Fund ratings and definitions are :

Buy: Positive on factors such as structure, management, performance record, discount; Neutral: Neutral on factors such as structure, management, performance record, discount; Sell: Negative on factors such as structure, management, performance record, discount.

Core Banding Exceptions (CBE) : Exceptions to the standard +/-6% bands may be granted by the Investment Review Committee (IRC). Factors considered by the IRC include the stock's volatility and the credit spread of the respective company's debt. As a result, stocks deemed to be very high or low risk may be subject to higher or lower bands as they relate to the rating. When such exceptions apply, they will be identified in the Company Disclosures table in the relevant research piece.

Company Disclosures

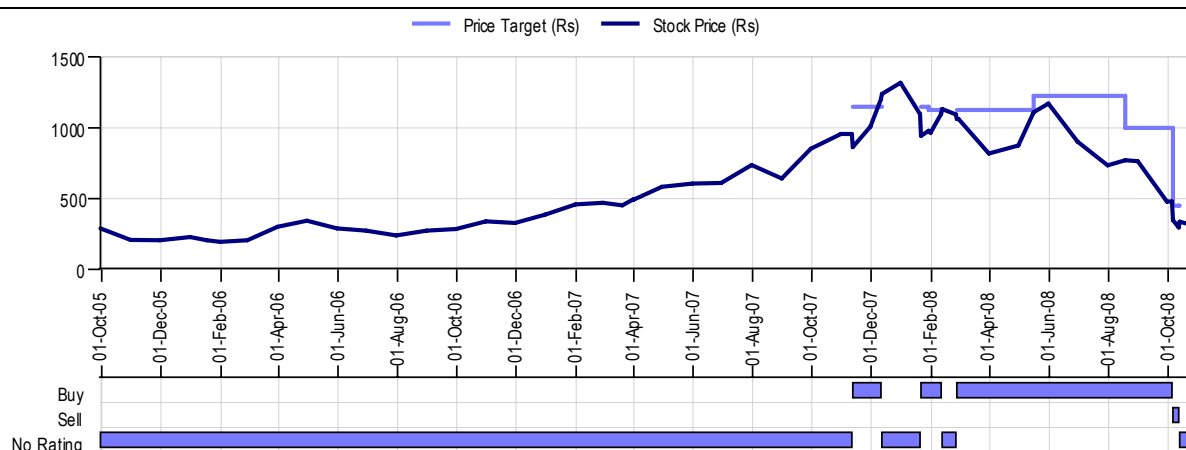
Company Name	Reuters	12-mo rating	Short-term rating	Price	Price date
JSW Steel	JSTL.BO	Suspended	N/A	Rs304.75	31 Oct 2008
Steel Authority of India	SAIL.BO	Buy (CBE)	N/A	Rs85.25	31 Oct 2008
Tata Steel Ltd.²²	TISC.BO	Neutral	N/A	Rs210.10	31 Oct 2008

Source: UBS. All prices as of local market close.

Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date

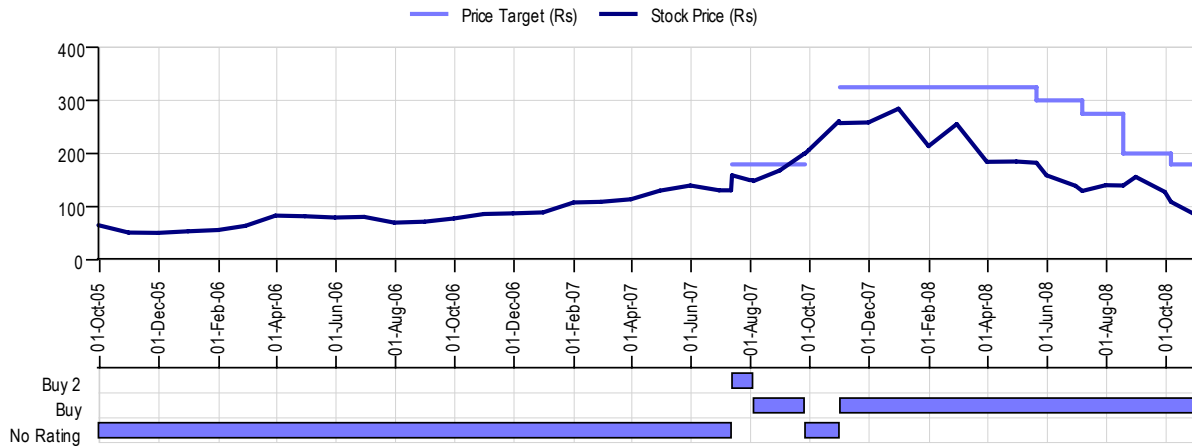
22. UBS AG, its affiliates or subsidiaries held other significant financial interests in this company/entity as of last month's end (or the prior month's end if this report is dated less than 10 working days after the most recent month's end).

Unless otherwise indicated, please refer to the Valuation and Risk sections within the body of this report.

JSW Steel (Rs)

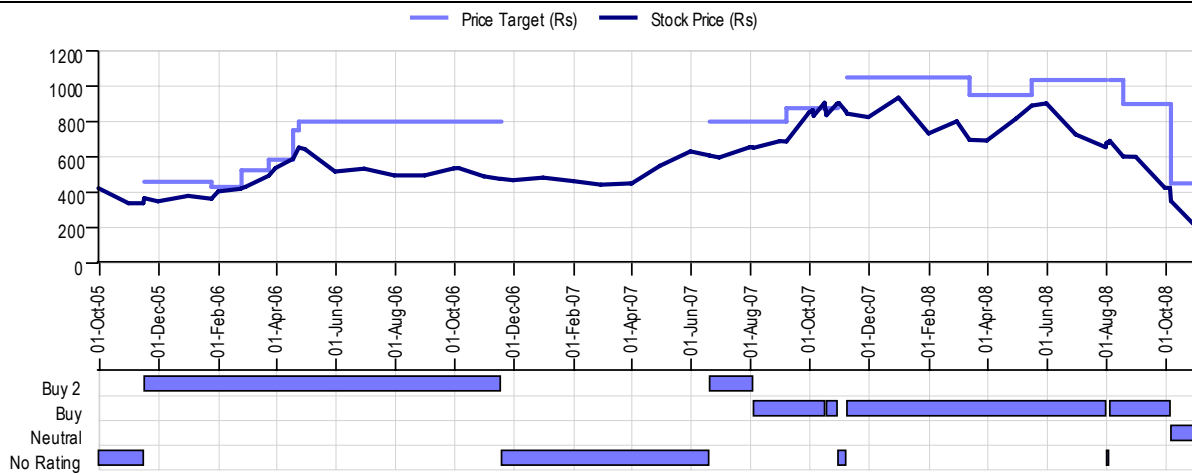
Source: UBS; as of 31 Oct 2008

Steel Authority of India (Rs)



Source: UBS; as of 31 Oct 2008

Tata Steel Ltd. (Rs)



Source: UBS; as of 31 Oct 2008

Note: On August 4, 2007 UBS revised its rating system. (See 'UBS Investment Research: Global Equity Rating Definitions' table for details). From September 9, 2006 through August 3, 2007 the UBS ratings and their definitions were: Buy 1 = FSR is > 6% above the MRA, higher degree of predictability; Buy 2 = FSR is > 6% above the MRA, lower degree of predictability; Neutral 1 = FSR is between -6% and 6% of the MRA, higher degree of predictability; Neutral 2 = FSR is between -6% and 6% of the MRA, lower degree of predictability; Reduce 1 = FSR is > 6% below the MRA, higher degree of predictability; Reduce 2 = FSR is > 6% below the MRA, lower degree of predictability. The predictability level indicates an analyst's conviction in the FSR. A predictability level of '1' means that the analyst's estimate of FSR is in the middle of a narrower, or smaller, range of possibilities. A predictability level of '2' means that the analyst's estimate of FSR is in the middle of a broader, or larger, range of possibilities. From October 13, 2003 through September 8, 2006 the percentage band criteria used in the rating system was 10%.

Global Disclaimer

This report has been prepared by UBS Securities India Private Ltd, an affiliate of UBS AG. UBS AG, its subsidiaries, branches and affiliates are referred to herein as UBS. In certain countries, UBS AG is referred to as UBS SA.

This report is for distribution only under such circumstances as may be permitted by applicable law. Nothing in this report constitutes a representation that any investment strategy or recommendation contained herein is suitable or appropriate to a recipient's individual circumstances or otherwise constitutes a personal recommendation. It is published solely for information purposes, it does not constitute an advertisement and is not to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments in any jurisdiction. No representation or warranty, either express or implied, is provided in relation to the accuracy, completeness or reliability of the information contained herein, except with respect to information concerning UBS AG, its subsidiaries and affiliates, nor is it intended to be a complete statement or summary of the securities, markets or developments referred to in the report. UBS does not undertake that investors will obtain profits, nor will it share with investors any investment profits nor accept any liability for any investment losses. Investments involve risks and investors should exercise prudence in making their investment decisions. The report should not be regarded by recipients as a substitute for the exercise of their own judgement. Any opinions expressed in this report are subject to change without notice and may differ or be contrary to opinions expressed by other business areas or groups of UBS as a result of using different assumptions and criteria. Research will initiate, update and cease coverage solely at the discretion of UBS Investment Bank Research Management. The analysis contained herein is based on numerous assumptions. Different assumptions could result in materially different results. The analyst(s) responsible for the preparation of this report may interact with trading desk personnel, sales personnel and other constituencies for the purpose of gathering, synthesizing and interpreting market information. UBS is under no obligation to update or keep current the information contained herein. UBS relies on information barriers to control the flow of information contained in one or more areas within UBS, into other areas, units, groups or affiliates of UBS. The compensation of the analyst who prepared this report is determined exclusively by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues, however, compensation may relate to the revenues of UBS Investment Bank as a whole, of which investment banking, sales and trading are a part.

The securities described herein may not be eligible for sale in all jurisdictions or to certain categories of investors. Options, derivative products and futures are not suitable for all investors, and trading in these instruments is considered risky. Mortgage and asset-backed securities may involve a high degree of risk and may be highly volatile in response to fluctuations in interest rates and other market conditions. Past performance is not necessarily indicative of future results. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related instrument mentioned in this report. For investment advice, trade execution or other enquiries, clients should contact their local sales representative. Neither UBS nor any of its affiliates, nor any of UBS' or any of its affiliates, directors, employees or agents accepts any liability for any loss or damage arising out of the use of all or any part of this report. For financial instruments admitted to trading on an EU regulated market: UBS AG, its affiliates or subsidiaries (excluding UBS Securities LLC and/or UBS Capital Markets LP) acts as a market maker or liquidity provider (in accordance with the interpretation of these terms in the UK) in the financial instruments of the issuer save that where the activity of liquidity provider is carried out in accordance with the definition given to it by the laws and regulations of any other EU jurisdictions, such information is separately disclosed in this research report. UBS and its affiliates and employees may have long or short positions, trade as principal and buy and sell in instruments or derivatives identified herein.

United Kingdom and the rest of Europe: Except as otherwise specified herein, this material is communicated by UBS Limited, a subsidiary of UBS AG, to persons who are eligible counterparties or professional clients and is only available to such persons. The information contained herein does not apply to, and should not be relied upon by, retail clients. UBS Limited is authorised and regulated by the Financial Services Authority (FSA). UBS research complies with all the FSA requirements and laws concerning disclosures and these are indicated on the research where applicable. **France:** Prepared by UBS Limited and distributed by UBS Limited and UBS Securities France SA. UBS Securities France S.A. is regulated by the Autorité des Marchés Financiers (AMF). Where an analyst of UBS Securities France S.A. has contributed to this report, the report is also deemed to have been prepared by UBS Securities France S.A. **Germany:** Prepared by UBS Limited and distributed by UBS Limited and UBS Deutschland AG. UBS Deutschland AG is regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin). **Spain:** Prepared by UBS Limited and distributed by UBS Limited and UBS Securities España SV, SA. UBS Securities España SV, SA is regulated by the Comisión Nacional del Mercado de Valores (CNMV). **Turkey:** Prepared by UBS Menkul Degerler AS on behalf of and distributed by UBS Limited. **Russia:** Prepared and distributed by UBS Securities CJSC. **Switzerland:** Distributed by UBS AG to persons who are institutional investors only. **Italy:** Prepared by UBS Limited and distributed by UBS Limited and UBS Italia Sim S.p.A.. UBS Italia Sim S.p.A. is regulated by the Bank of Italy and by the Commissione Nazionale per le Società e la Borsa (CONSOB). Where an analyst of UBS Italia Sim S.p.A. has contributed to this report, the report is also deemed to have been prepared by UBS Italia Sim S.p.A.. **South Africa:** UBS South Africa (Pty) Limited (Registration No. 1995/011140/07) is a member of the JSE Limited, the South African Futures Exchange and the Bond Exchange of South Africa. UBS South Africa (Pty) Limited is an authorised Financial Services Provider. Details of its postal and physical address and a list of its directors are available on request or may be accessed at <http://www.ubs.co.za>. **United States:** Distributed to US persons by either UBS Securities LLC or by UBS Financial Services Inc., subsidiaries of UBS AG; or by a group, subsidiary or affiliate of UBS AG that is not registered as a US broker-dealer (a 'non-US affiliate'), to major US institutional investors only. UBS Securities LLC or UBS Financial Services Inc. accepts responsibility for the content of a report prepared by another non-US affiliate when distributed to US persons by UBS Securities LLC or UBS Financial Services Inc. All transactions by a US person in the securities mentioned in this report must be effected through UBS Securities LLC or UBS Financial Services Inc., and not through a non-US affiliate. **Canada:** Distributed by UBS Securities Canada Inc., a subsidiary of UBS AG and a member of the principal Canadian stock exchanges & CIPF. A statement of its financial condition and a list of its directors and senior officers will be provided upon request. **Hong Kong:** Distributed by UBS Securities Asia Limited. **Singapore:** Distributed by UBS Securities Pte. Ltd or UBS AG, Singapore Branch. **Japan:** Distributed by UBS Securities Japan Ltd to institutional investors only. Where this report has been prepared by UBS Securities Japan Ltd, UBS Securities Japan Ltd is the author, publisher and distributor of the report. **Australia:** Distributed by UBS AG (Holder of Australian Financial Services License No. 231087) and UBS Securities Australia Ltd (Holder of Australian Financial Services License No. 231098) only to 'Wholesale' clients as defined by s761G of the Corporations Act 2001. **New Zealand:** Distributed by UBS New Zealand Ltd. An investment adviser and investment broker disclosure statement is available on request and free of charge by writing to PO Box 45, Auckland, NZ. **China:** Distributed by UBS Securities Co. Limited. **Portugal:** Prepared by UBS Limited and distributed by UBS Limited and UBS Bank, SA, Sucursal em Portugal. UBS Bank, SA, Sucursal em Portugal, is regulated by Comissão do Mercado de Valores Mobiliários (CMVM). Where an analyst of UBS Bank, SA, Sucursal em Portugal has contributed to this report, the report is also deemed to have been prepared by UBS Bank, SA, Sucursal em Portugal.

The disclosures contained in research reports produced by UBS Limited shall be governed by and construed in accordance with English law.

UBS specifically prohibits the redistribution of this material in whole or in part without the written permission of UBS and UBS accepts no liability whatsoever for the actions of third parties in this respect. © UBS 2008. The key symbol and UBS are among the registered and unregistered trademarks of UBS. All rights reserved.

