Deutsche Bank
Markets Research

F.I.T.T.

Industry
India 2020: Steel & iron ore

Date
30 October 2014

Asia
India

Resources
Metals & Mining

Abhay Laijawala
Research Analyst
(+91) 22 7180 4031
abhay.laijawala@db.com

Anuj Singla
Research Analyst
(+91) 22 7180 4172
anuj.singla@db.com

F.I.T.T. for investors

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Direct beneficiary of East Asian economic model

The Modi administration's policy initiatives clearly point to India embarking on an East Asian economic model. We expect the steel sector to be a direct beneficiary of the two most important elements of the East Asian model (1) the move to materials intensive growth from an aggressive focus on heavy infrastructure build out and revitalizing manufacturing, and (2) a conscious attempt to keep the currency weak. Importantly, India's transition to materials intensive growth will coincide with a period of subdued raw material prices.

Foreword

The new government in India has promised a structural break from past economic performance. In a joint report ("India 2020: The Road to East Asia") earlier this month, our team of Strategists, Economists and Equity Analysts outlined the economic model likely to be relied upon to achieve the government's reform and growth objectives. We expect a focus on export oriented manufacturing, the development of heavy infrastructure and a push towards greater urbanisation. This in turn will have far-reaching implications for many of the sectors covered by our Equity Research team.

This report marks the continuation of the second stage of our "2020" work on India, where we will provide in-depth, longer-term analysis at the industry and stock level. We hope you enjoy reading our "India-2020" series and look forward to receiving your feedback.

Regards

David Clark

Head of Asia Equity Research

Abhay Laijawala

Head of India Research

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Our comprehensive 2020 analysis throws up three non consensus takeaways

(1) Indian steel consumption growth to reach an inflection point of 15% YoY in FY18, (2) Domestic production will significantly lag consumption despite large expansions by incumbent companies. India to emerge as a large net importer of steel by FY18 with imports constituting 17% of total consumption by 2020, (3) iron ore imports should peak in FY15 at an historic high of 15.5mt. Abating regulatory headwinds over next 2 years should ensure that India not only remains self sufficient in iron ore but also reverts back to being a net exporter from FY16, though at far lower levels compared to its historical averages.

Virtuous cycle of cash flow, profitability and balance sheet improvement

Our comprehensive 2020 analysis of steel stocks under coverage suggests (i) the combination of materials intensive growth, INR depreciation and a subdued raw material pricing outlook will expand RoEs (by 870bps to a sector average of 16.2%) and significantly improve cash flows of incumbent companies over the next 5 years resulting in material improvement in balance sheets which have been a key concern, (ii) we see compelling shareholder value creation over FY14-20 in SAIL, Tata Steel, and JSW Steel driven by volume growth, product mix improvement and balance sheet deleveraging.

SAIL – upgrading to Buy, NMDC – downgrading to Hold

SAIL's extensive expansion & modernization plan has faced inordinate delays, leading to a declining earnings trajectory. We believe that the worst of the delays are now behind and we should see an improving volume and profitability trajectory as newly commissioned, more efficient facilities ramp up and benefits of operating leverage begin to flow. For NMDC, we see pricing headwinds in FY16 driven by (i) weak international iron ore pricing outlook, which is likely to encourage substitution of domestic supplies by imports, (ii) improving iron ore supply situation in India as the regulatory headwinds abate.

Top picks: Tata Steel, JSW Steel

The proposed commissioning of the Odisha Greenfield plant within a twelve month period of achieving optimal ramp up of legacy Jamshedpur operation will be transformational for Tata Steel. Robust cash flow generation in India will allow company to fund Odisha Phase II from internal generation helping alleviate investor angst over perennially stretched balance sheet. Our positive investment thesis for JSW Steel is built around (i) Value harnessing initiatives at Dolvi, (ii) gains from value addition at Vijayanagar as company moves towards a product differentiation strategy.

Valuations and risks

We value Indian steel and mining stocks on EV/EBITDA basis. Key risks: rise in steel imports from China, continuing regulatory constraints on iron ore mining.

Key Changes

Company	Target Price	Rating
TISC.BO	665.00 to 675.00(INR)	-
JSTL.BO	1,542.00 to 1,578.00(INR)	-
SAIL.BO	92.00 to 100.00(INR)	Hold to Buy
NMDC.BO	214.00 to 173.00(INR)	Buy to Hold

Source: Deutsche Bank

Top picks

Tata Steel (TISC.BO),INR472.50	Buy
JSW Steel (JSTL.BO),INR1,248.75	Buy

Source: Deutsche Bank

Companies Featured

Tata Steel (TISC.BO),INR472.50 — Buy

	2014A	2015E	2016E
P/E (x)	9.2	8.7	7.4
EV/EBITDA (x)	6.3	5.9	5.3
Price/book (x)	0.9	1.0	0.9

JSW Steel (JSTL.BO),INR1,248.75 — Buy

	2014A	2015E	2016E
P/E (x)	10.3	11.9	10.4
EV/EBITDA (x)	5.8	6.3	5.6
Price/book (x)	1.2	1.3	1.2

Steel Authority of India (SAIL.BO),INR83.10 — Buy

	2014A	2015E	2016E
P/E (x)	14.5	11.8	9.7
EV/EBITDA (x)	11.3	9.3	7.4
Price/book (x)	0.7	0.8	0.7

NMDC (NMDC.BO),INR164.75 — Hold

	2014A	2015E	2016E
P/E (x)	7.8	9.0	8.6
EV/EBITDA (x)	4.0	4.7	4.7
Price/book (x)	1.8	2.0	1.8

Source: Deutsche Bank

Table Of Contents

This report changes ratings, price targets, and/or estimates for several companies under coverage. For a detailed listing of these changes, see page 8 and individual company pages.

Executive summary

Steel – Resumption of materials intensive growth to drive demand

This report is an extension of our "India 2020" series which so far includes a top down report exploring the new growth strategy from the new Prime Minister's speeches and policy actions ("**India 2020: The Road to East Asia**") and a report on the long-term potential in India's oil & gas sector ("Kickstarting reforms").

As we have highlighted in our earlier report, the new government's initiatives clearly point to India embarking on an economic model used by the East Asian economies to rapidly modernize themselves. The Indian steel and iron ore sector lies at the forefront of the Modi administration's move to the East Asian model of growth. We expect the sector to be a direct beneficiary of the two most important elements of the East Asian model - (1) the move to materials intensive growth from an aggressive focus on heavy infrastructure build out and revitalizing manufacturing, and equally importantly (2) a conscious attempt to keep the currency weak. As we have extensively argued in our India 2020 report, under the East Asian model, the currency may emerge as an important tool rather than just a passive exchange rate that drifts towards 'fair value'. We have assumed an average annual depreciation of 3% for our forecasts. We believe that a depreciating currency could emerge as competitive advantage vs imports and cushion Indian steelmakers from global steel price volatility as domestic steel prices are benchmarked to landed cost of imports.

There is strong empirical evidence that economies see a visible inflection point in materials intensive growth within a few years of GDP per capita, on a PPP basis reaching threshold levels of around USD 2,500-3,000 (Figure 10, Figure 11). This trend has been observed across various countries starting with the post-war industrialization of Japan in the fifties and most recently in China, a decade ago. India reached this inflection point in 2006 and was on a the path of strong materials demand until 2011-12, when the economy started slowing due to a combination of policy paralysis, coalition politics, stalled parliament and a slow moving bureaucracy (Figure 13, Figure 14).

With expectations of the new government's thrust on jump starting stalled projects initially followed by pushing large flagship projects including the freight and industrial corridors, we expect India to begin moving back on the path of materials intensive growth by the end of this year. We expect steel demand to rise by 4-5% this year (vs average of 2% over FY13-14), 8% in FY16E and a 15% CAGR after FY17E when policy initiatives of the new government begin to impact materials demand, meaningfully. Based on our growth forecasts, India has the potential to emerge as the second largest steel consuming market, behind China during FY15-20.

Based on our expectations of a rise in India's materials intensity, a realistic assessment of its supply side constraints and analysis of balance sheets of incumbent companies, we see India emerging as a large importer of steel particularly in FY19-20. We see India importing as much as ~24mn tonnes of steel – equivalent to 17% of its consumption - despite our assumption of production rising by 48% by 2020. We also estimate India's iron ore requirements to rise by 53% and coking coal requirements by 39% by 2020.

Iron ore – 3 key conclusions from our proprietary demand supply model

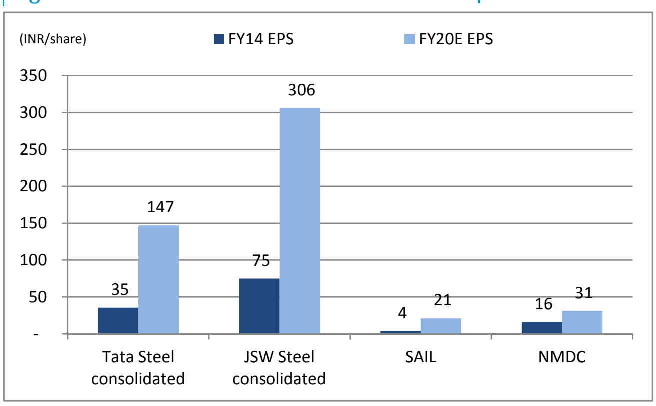
Our proprietary demand supply model for Indian iron ore highlights three interesting conclusions:

- India is likely to import ~15.5 mn tonnes of iron ore – its highest ever imports - in FY15.
- We do not see a risk to India's iron ore self sufficiency on a longer term basis. However, this remains contingent on easing of regulatory restrictions. A timely resolution can support domestic supply ramp up to meet demand from new steel capacities between now and 2020.
- We forecast India to become a net exporter of iron ore again from FY16. However, the magnitude of exports is likely to be only a fraction of its historical levels. During our forecast period till 2020, we expect India's iron ore exports to stay range bound between 15 and 35mn tonnes, relative to a range of 80 and 120mn tonnes during FY05-10.

Stock specific implications

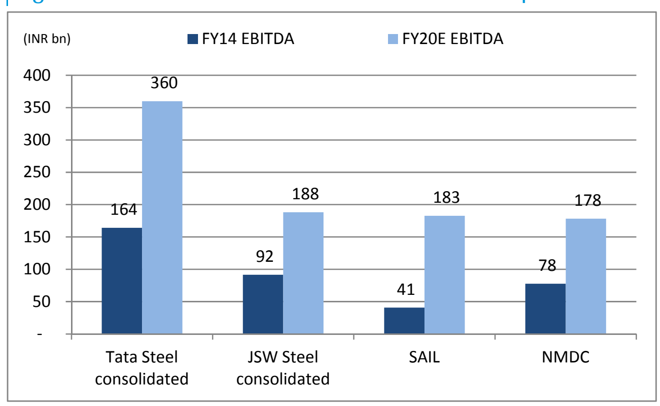
We see large potential upside for the companies under coverage which is discussed in more details below:

Figure 1: 2020 EPS trend for covered companies



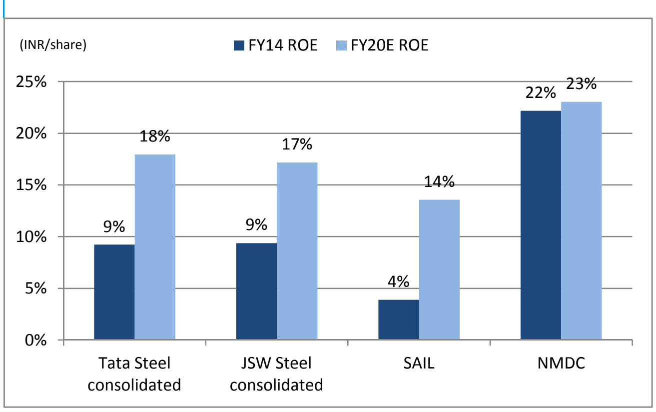
Source: Company data, Deutsche Bank

Figure 2: 2020 EBITDA trend for covered companies



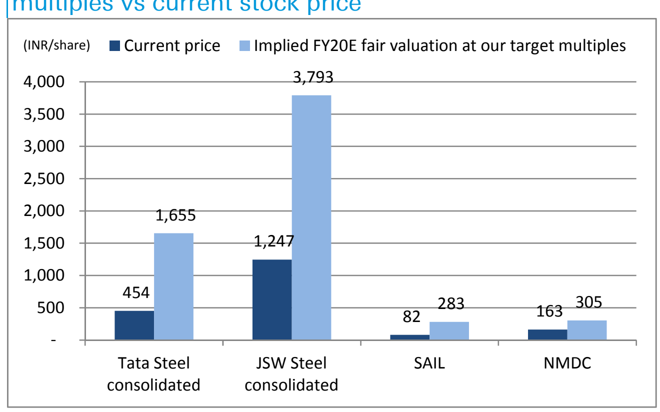
Source: Company data, Deutsche Bank

Figure 3: 2020 ROE trend for covered companies



Source: Company data, Deutsche Bank

Figure 4: 2020 implied fair value at our current target multiples vs current stock price



Source: Company data, Deutsche Bank

SAIL – Upgrading to Buy from Hold

We are upgrading SAIL to a Buy from Hold with a 9% increase in our target price to INR100/share, implying a 22% upside from current levels. SAIL's extensive expansion and modernization plan has faced inordinate delays over past three to four years, leading to a declining earnings trajectory. We believe the worst of the delays are now behind and we should see an improving volume and profitability trajectory for SAIL as newly commissioned, more efficient facilities ramp up and benefits of operating leverage begin to flow through, following the commercial commissioning of IISCO in 4Q'FY15. We forecast SAIL to report EBITDA and PAT CAGR of 37%/36% respectively over FY14-17 – amongst the strongest in the sector, driven by a combination of higher volumes (+29% over FY14-17) and improved profitability (+100% over FY14-17), which underpins our positive view on the stock.

Our detailed 2020 analysis of SAIL also throws up three key conclusions: (1) modernization and scale benefits should result in EBITDA margins doubling from current levels and EBITDA/tonne rising by 170%. However it will still lag Tata Steel and JSW Steel, which will continue to have a superior product mix, (2) we believe that, following the completion of ongoing modernization, SAIL should look at altering its growth strategy from volume growth towards value addition to see a significant jump in profitability towards levels seen at Tata and JSW Steel – the other two blast furnace steel producers, (3) under our forecast assumptions and target multiple (EV/EBITDA of 6.5x), stock has the potential to rise to INR283/share by 2020 (implying upside of +245% from current levels).

Figure 5: SAIL – Summary of 2020 analysis

		FY14	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E	*CAGR (%, FY14-20E)*
Saleable steel sales volumes	**mn tonnes**	**11**	**12**	**13**	**14**	**15**	**17**	**18**	***9%***
Consolidated EBITDA	**INR mn**	**40,684**	**65,390**	**84,572**	**104,057**	**138,172**	**165,858**	**182,596**	***28%***
EBITDA margin	*%*	*9%*	*14%*	*15%*	*16%*	*19%*	*20%*	*20%*	
EBITDA/MT	**INR/MT**	**3,662**	**5,417**	**6,708**	**7,267**	**8,955**	**9,814**	**9,885**	***18%***
Consolidated EPS	**INR/share**	**4**	**7**	**9**	**10**	**13**	**18**	**21**	***32%***
ROE	(%)	3.9%	6.7%	7.6%	8.5%	10.1%	12.6%	13.6%	
ROCE	(%)	1.0%	4.4%	5.2%	6.1%	7.1%	8.9%	9.9%	
Net debt/equity	(x)	0.5	0.6	0.6	0.6	0.5	0.4	0.3	
Interest coverage	(x)	2.4	3.3	3.2	3.0	3.8	5.4	8.2	

Source: Company data, Deutsche Bank estimates

NMDC – Downgrading to Hold from Buy

We are cutting our target price for NMDC by 19% to INR173/share and downgrading our rating to Hold from Buy. While the long-term earnings outlook for the company remains positive underpinned by 10% CAGR in iron ore volumes over FY14-20 as new mines are commissioned and logistic constraints gradually ease, we see pricing headwinds for domestic iron ore producers in FY16. These will be driven by: (i) weak international iron ore pricing outlook and high iron ore procurement costs domestically, which is likely to encourage substitution of domestic supplies by imports especially for the port based plants on the west coast of India, (ii) improving iron ore supply situation in India as the regulatory headwinds on mining imposed over the last 3 years begin to abate. Historically we have seen a relative de-rating of the NMDC stock in a weak iron ore pricing environment.

Our detailed 2020 analysis also shows NMDC reporting the slowest EPS growth trajectory within our steel and iron ore coverage universe. NMDC's forward integration in steelmaking should result in company's blended EBITDA margins compressing by 1400bps over FY17-20 as profitability of steel business will be sharply lower than its legacy iron ore mining business. Under our forecast assumptions and target multiple (5x EV/EBITDA), stock has the potential to rise to INR305/share by 2020 (implying upside of +86% from current levels).

Figure 6: NMDC – Summary of 2020 analysis

		FY14	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E	*CAGR (%, FY14-20E)*
Iron ore sales volumes	**mn tonnes**	**31**	**35**	**39**	**42**	**47**	**51**	**54**	***10%***
Consolidated EBITDA	**INR mn**	**77,732**	**91,488**	**95,784**	**110,894**	**128,191**	**150,382**	**178,324**	***15%***
EBITDA margin	*%*	*64%*	*65%*	*62%*	*63%*	*56%*	*52%*	*49%*	
EBITDA/MT (iron ore)	**INR/MT**	**2,549**	**2,627**	**2,467**	**2,617**	**2,710**	**2,814**	**3,009**	***3%***
Consolidated EPS	**INR/share**	**16**	**18**	**19**	**21**	**23**	**26**	**31**	***12%***
ROE	(%)	22.2%	23.0%	21.6%	21.5%	21.2%	21.7%	23.0%	
ROCE	(%)	16.5%	17.6%	16.6%	17.3%	17.1%	17.5%	18.5%	
Net debt/equity	(x)	(0.6)	(0.7)	(0.6)	(0.5)	(0.5)	(0.5)	(0.6)	

Source: Company data, Deutsche Bank estimates

Tata Steel – Raising target price to INR675/share, remains a top pick

The proposed commissioning of phase I of the Odisha Greenfield plant within a twelve month period of achieving optimal ramp up of legacy Jamshedpur operations will be transformational for Tata Steel. Robust cash flow generation in India (Indian assets to constitute 44% of total production, 73% of consolidated EBITDA in FY20) will allow company to fund Odisha Phase II from internal cash flow generation helping alleviate investor angst over perennially stretched balance sheet. Commissioning of Odisha should also emerge as the beginning of the end of the financial stress encountered by Tata Steel, following the acquisition of European assets 2007. While suspension of mining operations at Noamundi iron ore mine in Jharkhand and fears over a recession in Europe have driven stock price weakness, we believe these fears are overdone. We see material upside potential and rate the stock Buy.

Figure 7: Tata Steel – Summary of 2020 analysis

		FY14	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E	*CAGR (%, FY14-20E)*
Consolidated Saleable steel sales volumes	**mn tonnes**	**26**	**28**	**29**	**31**	**31**	**32**	**34**	***4%***
TS India	*mn tonnes*	*9*	*9*	*10*	*12*	*12*	*13*	*15*	*10%*
TS Europe	*mn tonnes*	*14*	*14*	*14*	*15*	*15*	*15*	*15*	*1%*
Consolidated EBITDA	**INR mn**	**164,110**	**198,653**	**214,767**	**251,396**	**273,675**	**312,712**	**360,071**	***14%***
EBITDA margin	*%*	*11%*	*13%*	*13%*	*14%*	*14%*	*15%*	*16%*	
Blended EBITDA/MT	**INR/MT**	**6,227**	**7,211**	**7,492**	**8,183**	**8,773**	**9,705**	**10,594**	***9%***
TS India	*INR/MT*	*15,050*	*16,271*	*15,436*	*15,805*	*16,043*	*17,001*	*17,899*	*3%*
TS Europe	*INR/MT*	*2,170*	*2,815*	*3,402*	*3,815*	*4,417*	*5,030*	*5,292*	*16%*
Consolidated EPS	**INR/share**	**35**	**54**	**64**	**79**	**96**	**120**	**147**	***27%***
ROE	(%)	9.2%	12.4%	13.0%	14.4%	15.4%	17.0%	18.0%	
ROCE	(%)	4.5%	5.6%	6.2%	7.2%	7.6%	8.7%	9.5%	
Net debt/equity	(x)	1.7	1.6	1.3	1.2	1.1	0.9	0.6	
Interest coverage	(x)	2.4	2.7	2.8	3.0	3.4	4.2	5.1	

Source: Company data, Deutsche Bank estimates

Our detailed 2020 analysis of Tata Steel illustrates the transformational impact of Indian operations on company's P&L and balance sheet. We see: (1) consolidated EBITDA and RoE almost doubling to INR360bn and 18% respectively by 2020 driven by 6mn tonnes of additional capacity in Odisha,

(2) net debt to equity to sharply decline post FY16 as operating cash flows from Odisha begin to flow while capex moderates. We expect consolidated net debt to equity to decline to 0.6x by FY20, down from 1.7x in FY14, (3) as phase-1 of Odisha is likely to produce only HRC, blended EBITDA margins for Indian operations may show some moderation until FY18, when company commissions Phase-II which should see full value addition. Under our forecast assumptions and target multiples (India business at 6x EV/EBITDA, European business at 4.5x EV/EBITDA, 4x for Asia and raw material assets), stock has the potential to rise to INR1,655/share by 2020 (implying upside of +267% from current levels).

JSW Steel – Raising target price to INR1,578/share; reiterate as a top pick

We believe the conscious policy initiatives being undertaken by JSW Steel provide it with multiple levers of shareholder value creation over the medium to long term. Our positive investment thesis for JSW is built around: (i) value harnessing initiatives at Dolvi (erstwhile Ispat) driving impressive consolidated EBITDA growth. We see the EBITDA/t gap widening further between company's legacy Vijaynagar plant and newly acquired Ispat plant at Dolvi, (ii) gains from value addition as company moves towards a product differentiation strategy through foraying into high margin auto body steels and high grade electrical steel. We expect EPS growth to rise at CAGR of 16% over next two years and 24% over next five years. We rate the stock as Buy.

Figure 8: JSW Steel – Summary of 2020 analysis

		FY14	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E	*CAGR (%, FY14-20E)*
Saleable steel sales volumes	**mn tonnes**	**12**	**12**	**14**	**15**	**17**	**17**	**18**	***8%***
Consolidated EBITDA	**INR mn**	**91,655**	**105,344**	**119,096**	**131,922**	**151,175**	**171,643**	**188,310**	***13%***
EBITDA margin	*%*	*18%*	*20%*	*19%*	*19%*	*20%*	*20%*	*20%*	
Blended EBITDA/MT	**INR/MT**	**7,767**	**8,461**	**8,739**	**8,805**	**9,142**	**10,041**	**10,222**	***5%***
JSW Steel India	*INR/MT*	*7,442*	*8,113*	*8,390*	*8,473*	*9,049*	*9,894*	*10,022*	*5%*
Consolidated EPS	**INR/share**	**75**	**105**	**120**	**142**	**192**	**254**	**306**	***26%***
ROE	(%)	9.4%	11.3%	11.8%	12.6%	15.0%	17.0%	17.2%	
ROCE	(%)	10.4%	6.6%	6.8%	7.3%	8.2%	9.5%	10.0%	
Net debt/equity	(x)	1.6	1.7	1.5	1.4	1.2	0.8	0.5	
Interest coverage	(x)	2.0	2.2	2.4	2.6	3.2	4.2	5.7	

Source: Company data, Deutsche Bank estimates

Our detailed 2020 analysis throws up 3 key conclusions: (i) Consolidated EBITDA to more than double to INR188bn while consolidated EPS to rise 308% to INR306/share driven by interest cost savings as free cash generation picks up FY17 onwards, (ii) consolidated RoE to rise by 780bps driven by a combination of improving profitability as well commissioning of new capacity expansions implemented at industry leading capital costs (US$350/t for 1.7mn tonne expansion at Dolvi).

The company should also be a key beneficiary of improving iron ore integration as category C iron ore mines in Karnataka are auctioned. With aggressive growth being the core DNA of JSW Steel's strategy, unanticipated inorganic expansions which have a potential to stretch company's balance sheet further, remain a key risk area for JSW Steel investors.

Under our forecast assumptions and target multiples (India business at 6x EV/EBITDA, US business at 5x EV/EBITDA, 4x for raw material assets), stock has the potential to rise to INR3,793/share by 2020 (implying upside of +206% from current levels).

Summary of changes in forecasts

Figure 9: Summary of changes in forecasts

	FY15E			FY16E			FY17E		
	Old	New	% Change	Old	New	% Change	Old	New	% Change
Tata Steel consolidated									
Sales	1,488,417	1,552,967	4%	1,563,007	1,630,168	4%	1,702,551	1,822,196	7%
EBITDA	189,758	198,653	5%	206,782	214,767	4%	233,249	251,396	8%
PAT	53,118	52,855	0%	61,072	62,128	2%	69,825	77,123	10%
EPS	54.7	54.4	0%	62.9	64.0	2%	72	79	10%
JSW Steel									
Sales	534,353	536,429	0%	604,142	615,620	2%	604,142	705,179	17%
EBITDA	105,205	105,344	0%	114,038	119,096	4%	114,038	131,922	16%
PAT	25,043	25,327	1%	27,516	29,053	6%	27,516	34,337	25%
EPS	103.6	104.8	1%	113.8	120.2	6%	113.8	142.1	25%
SAIL									
Sales	495,735	476,017	-4%	570,675	566,619	-1%	665,262	646,394	-3%
EBITDA	73,790	65,390	-11%	84,375	84,572	0%	104,703	104,057	-1%
PAT	34,822	29,195	-16%	35,523	35,236	-1%	42,888	41,965	-2%
EPS	8.4	7.1	-16%	8.6	8.5	-1%	10.4	10.2	-2%
NMDC									
Sales	135,565	141,413	4%	144,463	153,289	6%	158,155	175,228	11%
EBITDA	91,490	91,488	0%	97,747	95,784	-2%	107,532	110,894	3%
PAT	74,117	72,646	-2%	78,398	75,855	-3%	84,507	83,682	-1%
EPS	19	18	-2%	20	19	-3%	21	21	-1%

Source: Deutsche Bank estimates

India -set for return to materials intensive growth

Following the new government's policy announcements it is now becoming increasingly obvious that the Modi administration is re-directing India's economic model from consumption to investment by focusing on (1) Investments in heavy infrastructure ranging from power to railways (2) building new cities and expanding existing cities - urbanization being the spatial manifestation of industrialization, and (3) export oriented manufacturing. The 'Make in India' and the 'Shramave Jayate' (labour reforms) campaigns on manufacturing revival and kick starting historic labor reforms are expected to lay the foundations of a manufacturing revival through reforming the factor markets – principally land and labour.

In the ongoing series of policies/reforms to revitalize and revive an ailing manufacturing sector, we expect the government to move towards the contentious issue of land reform next, where amendments to facilitate easier and faster acquisition are expected. As we have highlighted in our earlier report "**India 2020:The Road to East Asia**", the government's initiatives clearly point to India embarking on the economic model used by the East Asian economies to rapidly modernize themselves. In this report, we look at how the domestic steel industry may emerge as a direct beneficiary of India's transition towards an East Asian economic model. We have also extended the sector analysis to a top-down company analysis through building detailed five year forecasts for key stocks under our coverage.

Steel sector is a direct beneficiary of India's move to East Asian model of economic growth

The Indian steel and iron ore sector lies at the forefront of the Modi administration's move to the East Asian model of growth. We expect the sector to be a direct beneficiary of the two most important elements of the East Asian model - (1) the move to materials intensive growth from an aggressive focus on heavy infrastructure build out and revitalizing manufacturing and equally importantly (2) a conscious attempt to keep the currency weak. As we have extensively argued in our India 2020 report, under the East Asian model, the currency may emerge as an important policy tool rather than just a passive exchange rate that drifts towards 'fair value'. Recall how Japan and China accumulated very large reserves and held down their currencies over long periods of time.

Material intensity to rise disproportionately from historic averages

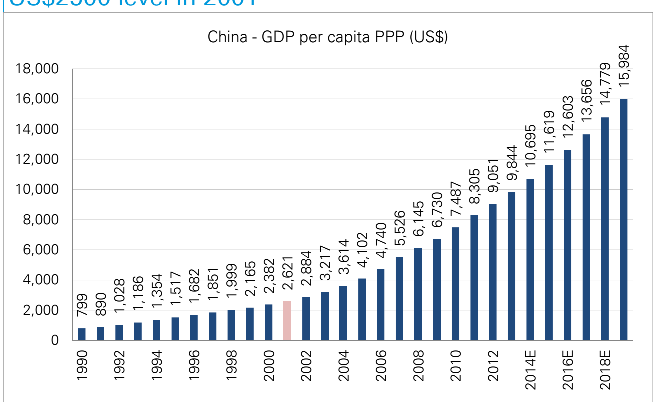
A strong thrust on infrastructure, urbanization and manufacturing revival is expected to be highly materials intensive and will see India's steel demand intensity rise disproportionately from historic averages as these initiatives take off in a meaningful manner (we expect this to be strongly visible from FY18 onwards) which will see India's steel demand rise to its highest ever growth rates, compelling the country to rely on imports to meet demand in 2019 and 2020.

Based on our expectations of a rise in India's materials intensity, a realistic assessment of its supply side constraints and analysis of balance sheets of incumbent companies, we see India emerging as a large importer of steel particularly in FY19-20. We see India importing as much as 24mn tonnes of steel – equivalent to 17% of its consumption - despite our assumption of production rising by 48% by 2020. We also estimate India's iron ore requirements to rise by 53% and coking coal requirements by 39% by 2020. We expect an even bigger proportion of India's incremental steel production to be fed through imported coking coal. An increasing reliance on imports would further stretch an already stressed logistics sector, particularly in terms of moving raw materials inland, where most of India's steel capacity is domiciled. In case, corresponding investments are not made in the logistics sector the cost of production for Indian steel will rise sharply, diluting India's iron ore advantage (Please refer Figure 21 for more details).

India will follow materials intensive growth trajectory seen in East Asia

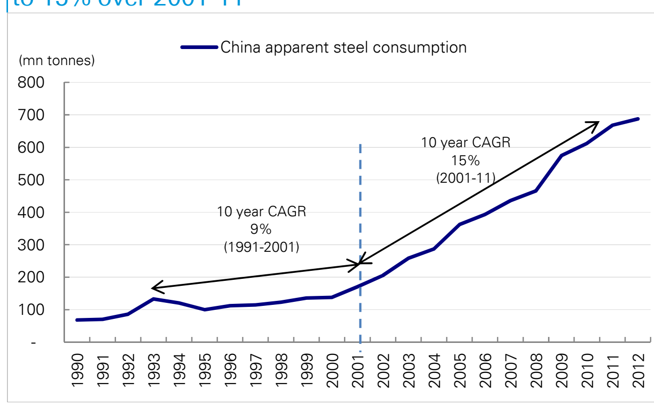
There is strong empirical evidence that economies see a visible inflection point in materials intensive growth within a few years of GDP per capita, on a PPP basis reaching threshold levels of around USD 2,500-3,000. This trend has been observed across various countries starting with the post war industrialization of Japan in the fifties and most recently in China, a decade ago. China's GDP/capita PPP crossed a threshold of US$2500 in 2001-2002 following which we saw a multi decade high, materials intensive growth there.

Figure 10: China – GDP per capita PPP (US$) crossed the US$2500 level in 2001



Source: International Monetary Fund, Deutsche Bank

Figure 11: China steel consumption growth accelerated to 15% over 2001-11

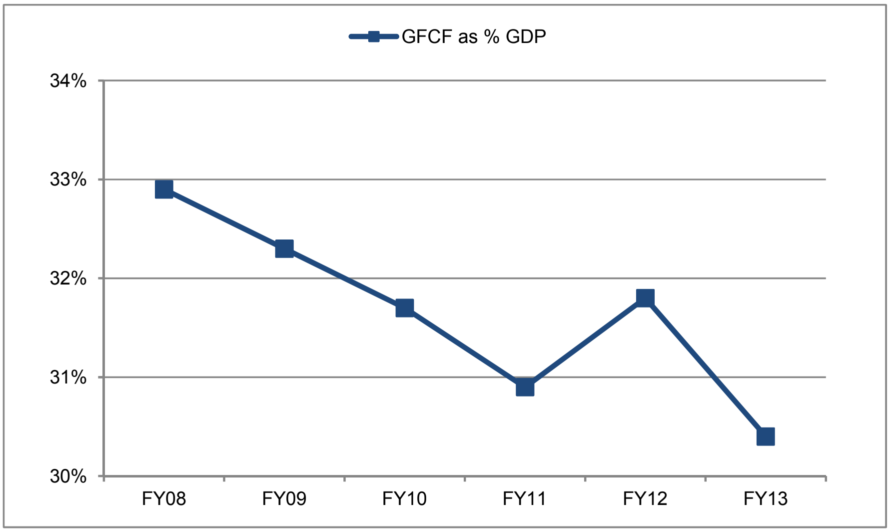


Source: WSA, Deutsche Bank

India to resume its move towards materials intensive growth

India reached its materials intensive growth phase sometime around 2006, when its GDP/capita PPP reached US$2500 and was on the path of strong materials demand until 2011-12, when the economy started slowing due to a combination of policy paralysis, coalition politics, stalled parliament and a slow moving bureaucracy.

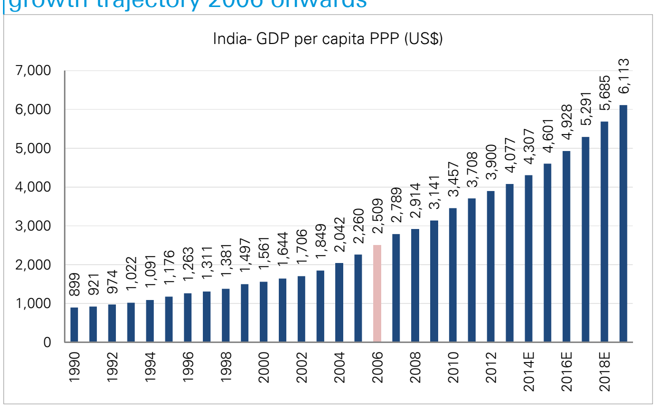
Figure 12: India - Gross fixed capital formation (GFCF) as % of GDP has declined by 250bps over FY08-13



Source: RBI, Deutsche Bank

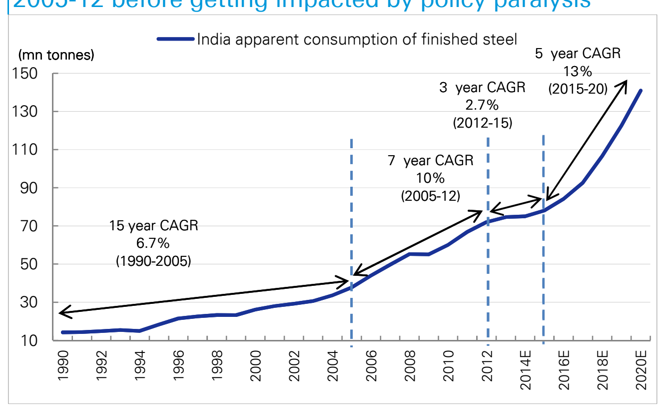
Following a sharp slowdown in the capex cycle, India's GDP growth nearly halved from 9% to 4.5% driven by a virtual collapse in capital formation and investment demand.

Figure 13: India embarked on its materials intensive growth trajectory 2006 onwards



Source: International Monetary Fund, Deutsche Bank

Figure 14: Domestic steel consumption rose sharply over 2005-12 before getting impacted by policy paralysis



Source: Steel scenario, Deutsche Bank

With expectations of the new government's thrust on jump starting stalled projects initially followed by pushing large flagship projects including the freight and industrial corridors, we expect India to begin moving back on the path of materials intensive growth by the end of this year. We expect steel demand to rise by 4-5% this year (vs an average of 2% over FY12-14), 8% in FY16 and a 15% CAGR after FY17 when the policy initiatives of the new government begin to impact materials demand.

Translation of capex to steel demand from flagship Infrastructure projects to reach inflection point in 2017

Our view of materials intensive growth in India is premised on the government's ambitious plans to spur economic growth through its strategic focus on heavy infrastructure and urbanization. We construe three flagship infrastructure projects of the government of India – (i) development of five industrial corridors, (ii) dedicated freight corridors (DFC) across eastern and western regions, and (iii) proposed scheme for developing 100 smart cities are decisive to begin the capex cycle in domestic economy. However, reforms pertaining to land acquisition and faster environmental clearances – at the center and state levels - are imperative before meaningful capex can begin on these projects. In fact, the Government of India has planned these projects in such a manner that industrial corridors will be developed along the alignment of DFC so that logistical bottlenecks will not create any hurdle in developing the associated infrastructure projects.

We understand it will take at least another two years to commence full-scale work on these projects. The Modi government has shown a strong intent to accomplish promises made in the manifesto after rolling out two major reforms in fuel and coal sectors within five months since coming to power.

Consequently, we believe steel consumption in India should reach an inflection point in 2017, when the actual benefit of reforms will push infrastructure development in India in a big way.

Dedicated freight corridors – Based on current government commentary, we believe that translation of capex to steel demand from the DFC will begin by 2017 and accelerate after i) the completion of c.90% of proposed land required for the project, and ii) the tie-up for funding with the World Bank and Japanese government for EDFC and WDFC respectively. Presently, power, iron & steel and other projects have not been able to transport required feedstock to their plants due to logistic bottlenecks. We believe improvement in logistic infrastructure will be a big positive for infrastructure projects over the medium term.

Figure 15: Dedicated Freight Corridors overview

	Particulars	Comments
Western Development Freight Corridors (WDFC)	** Covers a distance of 1483 km of double line electric track from JNPT to Dadri ** Traffic will mainly comprise of containers from JNPT and Mumbai Port in Maharashtra and ports of Pipavav, Mundra and Kandla in Gujarat destined for container depots located in northern India, especially at Tughlakabad, Dadri and Dandharikalan ** Will traverse 4 states and is projected to transport containers and other commodities like fertilizers, food grains, salt, coal, iron & steel and cement ** Is proposed for funding by the Government of Japan	** DFC requires 10667 hectares of land spread over 3338 Kms for both Corridors ** Progress of land acquisitions up to Mar'14 - 90% on overall basis ** Total capex required - INR800 bn (US$13 bn) by 2017-18.
Eastern Development Freight Corridors (EDFC)	** Route length of 1839 km consists of -an electrified double-track segment of 1392 km between Dankuni in West Bengal & Khurja in U.P. & an electrified single-track segment of 447 km between Ludhiana and Dadri ** Will traverse 6 states and is projected to transport - coal in the northern region of U.P., Delhi, Harayana, Punjab and parts of Rajasthan from the Eastern coal fields, finished steel, cement, fertilizers, lime stone from Rajasthan to steel plants in the east and general goods ** Is proposed for funding by the World Bank, internal generation and PPP.	

Source: Dedicated Freight Corridor Corporation of India, Deutsche Bank

Industrial corridors - We believe work on development of five industrial corridors is still in the preliminary phase as master plan of four projects is still in process except for DMIC, where work on the project has already begun. Capex on building the industrial corridors will pick up after completion of meaningful capex on the DFC.

Figure 16: Industrial Corridors overview

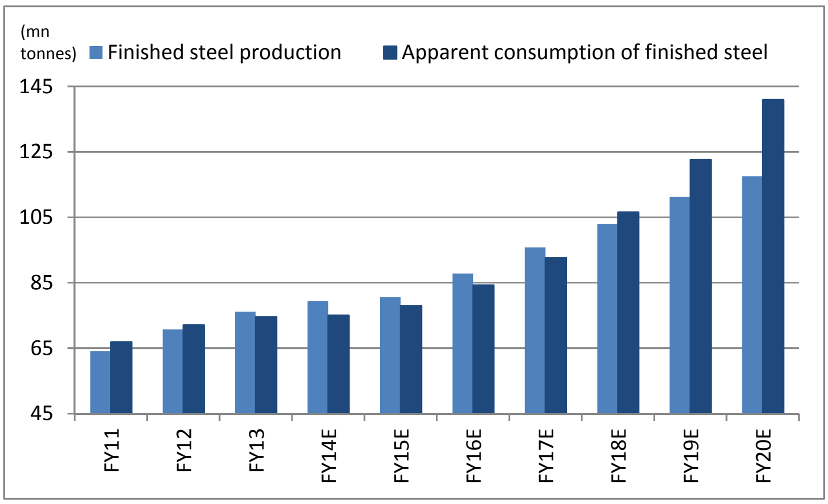
	Particulars
Delhi-Mumbai industrial corridor (DMIC)	** To be developed on either side, along the 1483 km long WDFC between Dadri (UP) and Jawaharlal Nehru Port Trust (JNPT), Navi Mumbai
	** To cover six states Uttar Pradesh, Haryana, Madhya Pradesh, Rajasthan, Gujarat and Maharashtra
	**GoI - 49%, Japan Bank for International Cooperation - 26%, Housing and Urban Development Corporation - 19.9% and India Infrastructure Finance company ltd - 4.1%
	**Japanese government committed to fund c.US$ 4.5 bn in the first phase
Bengaluru-Mumbai Economic Corridor (BMEC)	** UK has shown interest in cooperating with India for development of BMEC
	** Project is presently in preliminary phase; Feasibility study is undertaking to prepare TORs
Chennai-Bengaluru Industrial Corridor (CBIC)	**** Japan has shown interest in cooperating and extend financial support for development of CBIC
	**The corridor between Chennai – Bengaluru – Chitradurga (around 560 km) would cover Karnataka, Andhra Pradesh and Tamil Nadu
	** Both GoI and Japan International Cooperation Agency (JICA) are presently working on preparation of concept master plan for the project
Amritsar-Kolkatta Industrial Corridor (AKIC)	** To develop an industrial zone across seven states -Punjab, Haryana, U.P., Bihar, Jharkhand, West Bengal & Uttarakhand
	** Would be developed in a band of 150-200 kms on either side of the Eastern Dedicated Freight Corridor (EDFC)
Vizag-Chennai Industrial Corridor (VCIC)	** To be set up on the lines of DMIC
	** Expected to give impetus to the economic growth of Seemandhra region

Source: Department Of Industrial Policy & Promotion, Deutsche Bank

Smart Cities – Modi government is likely to announce a clear roadmap to develop 100 smart cities, by Dec'14. Smart cities, which are advanced in terms of the overall infrastructure and technology, will entail a huge investment to develop. We believe it is yet too early to comment on the timelines of the project; however, according to comments made by government officials in the press, the initial phase of the new cities will be completed by 2019 and a few of the cities could come across the alignment of industrial corridors. The biggest challenge for these projects may lie in coordinating successfully with various state governments to identify location of smart cities and securing foreign assistance for funding. We have not factored in any major capex from these projects in our 2020 forecasts as we expect this development to become meaningful only towards 2020.

India steel – Demand supply dynamics

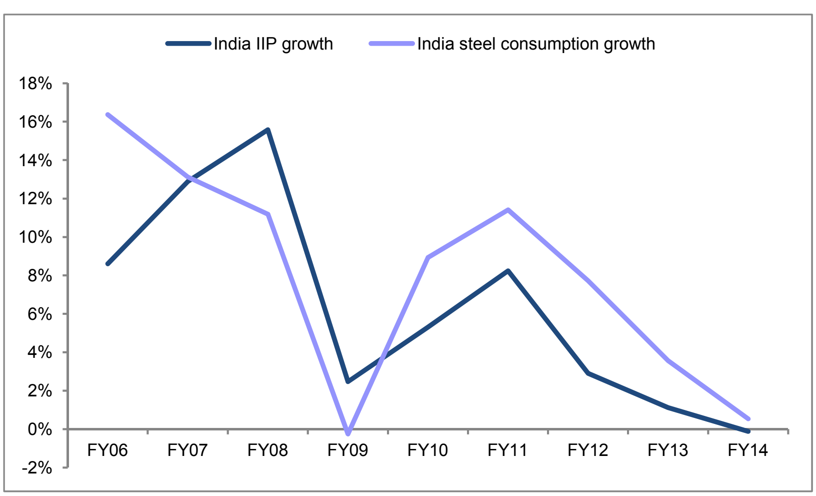
Figure 17: India steel – steel consumption set to growth at a faster rate compared to production increasing India's reliance on steel imports



Source: Ministry of Steel, Deutsche Bank

We expect India's steel consumption to rise to 141mn tonnes by FY20 implying a 6 year CAGR of 11%. Rising domestic demand may likely make India the fastest growing steel market globally by FY18. Based on our growth forecasts, India has the potential to emerge as the second largest steel consuming market, behind China during FY15-20.

Figure 18: Indian steel consumption growth has a strong correlation with the domestic IIP growth



Source: Central Statistical Organization, Steel scenario, Deutsche Bank

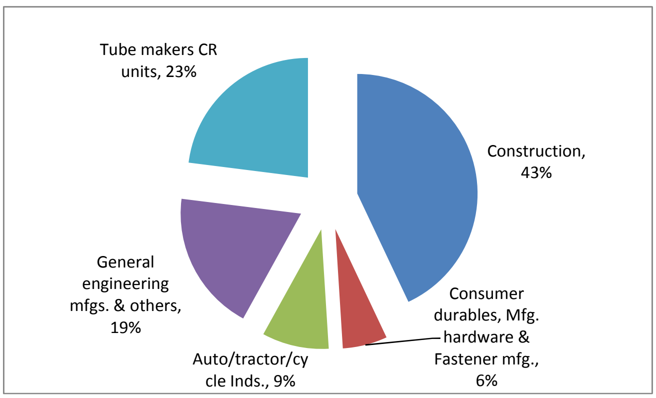
India's apparent domestic steel consumption has shown a strong correlation with the growth in the Index of Industrial Production (IIP) over the last decade

(Figure 18). While India's IIP has grown at a CAGR of 6.2% over FY05-14, domestic steel consumption has risen at a CAGR of 8% over the same time period, implying a multiplier of ~1.3 to IIP growth. We believe that the multiplier should expand to 1.4-1.6x as the government's thrust on infrastructure build out and manufacturing revival drive an increase in materials intensity.

In addition, over the last two year period from FY12-14, Indian IIP growth has slowed down to just +0.5%. We expect IIP to recover to a trend level of +10-11% by FY17/FY18 as economic activity, led by construction, manufacturing and infrastructure build, accelerates.

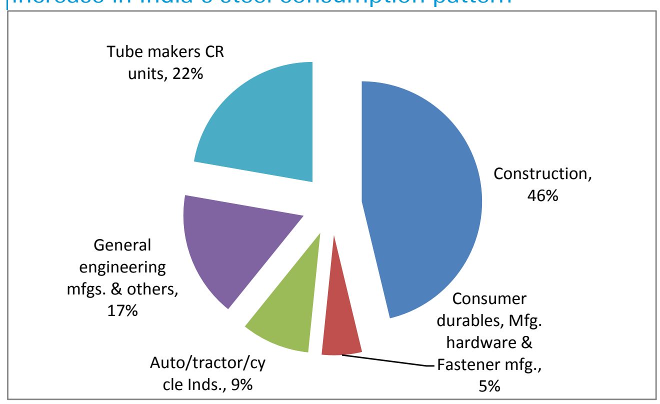
India's steel consumption relies heavily on the construction segment and government's efforts to boost infrastructure and capital formation provide a positive outlook for consumption growth from this segment.

Figure 19: FY14 – India's steel consumption pattern



Source: Steel scenario, Deutsche Bank

Figure 20: FY20 – Contribution from construction to increase in India's steel consumption pattern



Source: Steel scenario, Deutsche Bank

DB's India steel demand supply model concludes that India is likely to emerge as a large importer of steel FY18 onwards (Figure 21)

Our India steel supply forecasts capture production growth for all large announced steel capacity expansion projects, which in our opinion have a high probability of being executed over FY14-20. We have excluded projects which we believe could face extended procedural (land acquisition) and regulatory (forest clearance, environmental) delays. For Tata Steel, we have factored in the completion of 6mn tonnes of steel capacity at Odisha. For JSW Steel, we have factored in completion of 1.7mn tonne expansion at Dolvi followed by a 3 mn tonne Greenfield plant at the newly-acquired Welspun facility. For SAIL, we have factored full commissioning of the present phase of 7.8mn tonne capacity expansion plan.

Figure 21: DB India's proprietary steel demand supply model

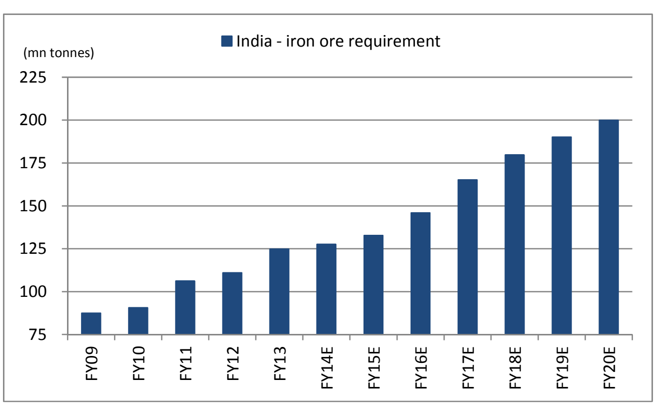
(mn tonnes)	FY11	FY12	FY13	FY14E	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E
Steel production										
Tata Steel	6.9	7.1	8.1	9.2	10.1	11.0	12.7	13.2	14.3	16.2
SAIL	13.8	13.5	13.4	13.6	14.3	16.2	17.3	18.7	20.5	21.2
JSW Steel (including SISCOL)	6.4	7.4	11.2	12.2	12.8	14.3	15.7	17.2	17.8	19.1
Essar Steel	3.4	4.3	4.2	3.2	4.0	5.0	6.0	7.0	8.5	8.5
JSW Ispat	2.4	2.5	-	-	-	-	-	-	-	-
Bhushan Steel	1.8	2.0	2.3	1.6	3.1	3.8	4.1	4.8	4.8	4.8
JSPL	2.3	2.8	3.0	2.8	3.5	4.0	4.3	4.3	4.4	4.4
POSCO	-	-	-	-	-	-	-	-	1.5	2.4
ArcelorMittal	-	-	-	-	-	-	-	-	-	-
NMDC	-	-	-	-	-	-	-	0.9	1.8	2.7
Other	3.2	3.1	3.1	3.2	4.1	5.0	6.2	7.1	7.4	7.4
Total production - Major producers	40.1	42.7	45.3	45.9	52.0	59.3	66.3	73.1	81.0	86.7
Other producers	7.6	7.6	7.4	8.2	8.4	8.7	8.9	9.2	9.4	9.7
Secondary Sector (Induction Furnaces)	22.9	23.9	25.7	27.5	23.5	23.5	24.5	25.0	25.5	26.0
Total crude steel production	70.7	74.3	78.4	81.5	83.9	91.5	99.8	107.3	115.9	122.4
YoY growth (%)	7%	5%	6%	4%	3%	9%	9%	8%	8%	6%
Finished steel production	64.1	70.7	76.2	79.4	80.6	87.8	95.8	103.0	111.3	117.5
Apparent consumption of finished steel	66.9	72.0	74.6	75.0	78.0	84.2	92.7	106.6	122.5	140.9
YoY growth (%)	11%	8%	3%	1%	4%	8%	10%	15%	15%	15%
Net imports (exports)	2.8	1.3	(1.6)	(0.8)	(2.6)	(3.6)	(3.1)	3.6	11.3	23.4

Source: JPC, Ministry of Steel, Deutsche Bank estimates

Reliance on coking coal imports to increase as well

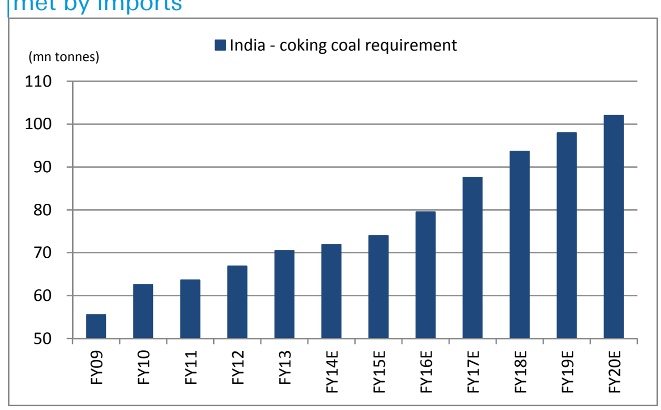
While India is blessed with high grade iron ore reserves (discussed in more detail in the following section), it lacks high quality coking coal reserves, also necessary for steel making. India's coking coal reserves are high in ash content, which forces Indian steel producers to blend domestic coking coal with imported coking coal. Consequently, the dependence on coking coal imports will rise as Indian steel production increases.

Figure 22: Domestic annual iron ore requirement to rise by 69mn tonnes over FY14-20



Source: Steel scenario, Deutsche Bank estimates

Figure 23: Annual coking requirement to rise by 30mn tonnes annually over FY14-20 which will primarily be met by imports



Source: Steel scenario, Deutsche Bank estimates

Assuming even a very efficient usage of coking coal (given new technologies), we estimate that India will need to import an incremental 30mn tonnes per annum by FY20 to meet the requirements from domestic steelmakers. We estimate that India's total coking coal requirement on an annual basis will rise from 72 mn tonnes currently to 102 mn tonnes in FY20.

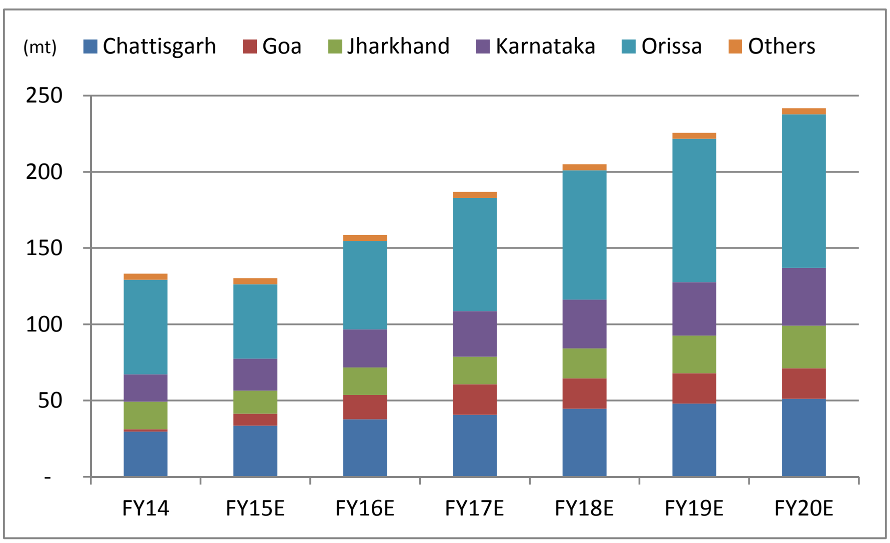
India iron ore

Will India have sufficient iron ore to meet domestic requirements?

Iron ore production in India has declined to a decade low

Regulatory constraints have led to tightening supply from top iron ore-producing states, constituting Goa, Karnataka, Odisha and Jharkhand (cumulating 85% of Indian iron ore production before regulatory restrictions). This combined with record capacity expansion being undertaken by Indian steelmakers, is challenging India's iron ore self-sufficiency and low cost positioning in steel making. The simultaneous implementation of regulatory restrictions in the above-mentioned iron ore producing states, in response to allegations of rampant illegal mining and non regularized approval processes, has resulted in India's iron ore production declining by 39% since FY10 to a decade low of 133mn tonnes in FY14. We believe that FY13-15 has been a period of transition in which the landmark Supreme Court judgments have led to taking the past excesses out of the system. We now expect the sector to resume its growth trajectory as regulatory constraints ease.

Figure 24: Indian iron ore - forecasts for production ramp in key iron ore producing states



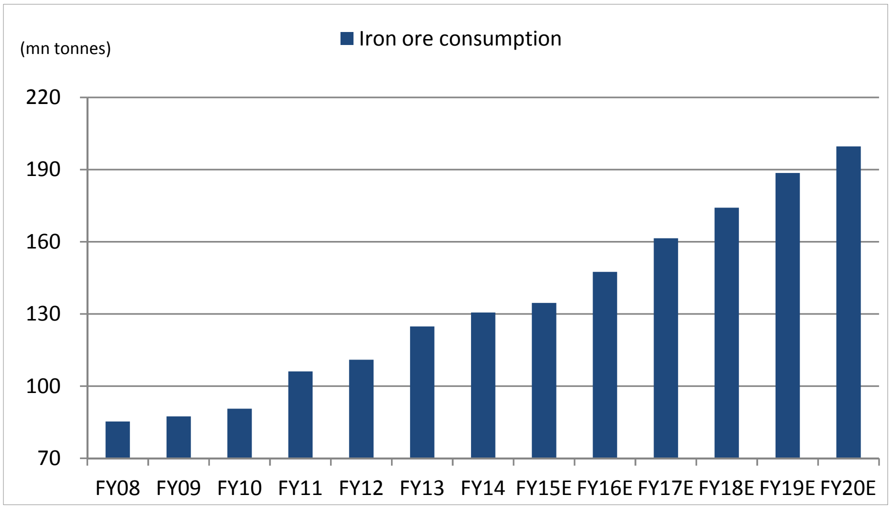
Source: Ministry of mines, Deutsche Bank

A traditional blast furnace steel producer needs about 1.6mn tonnes of iron ore to produce the equivalent of 1mn tonnes of crude steel. Indian steel makers are in the midst of their most aggressive capacity expansion and investment cycle which needs to be matched by a significant ramp in domestic iron ore supply if India intends to preserve its iron ore self-sufficiency.

Domestic iron ore production needs to ramp up by 50% to preserve self-sufficiency

Our analysis of the Indian steel production forecasts over FY14-20 leads us to the conclusion that domestic iron ore production will need to rise by ~66mn tonnes by FY20 (+50% over FY14 production levels) for India to remain self sufficient in iron ore allowing the country to retain its global cost competitiveness in steel. However, given the outlook of a sedate iron ore pricing environment, Indian steel producers – particularly those with captive raw materials – will need to rely on other efficiency parameters to retain the low cost advantage.

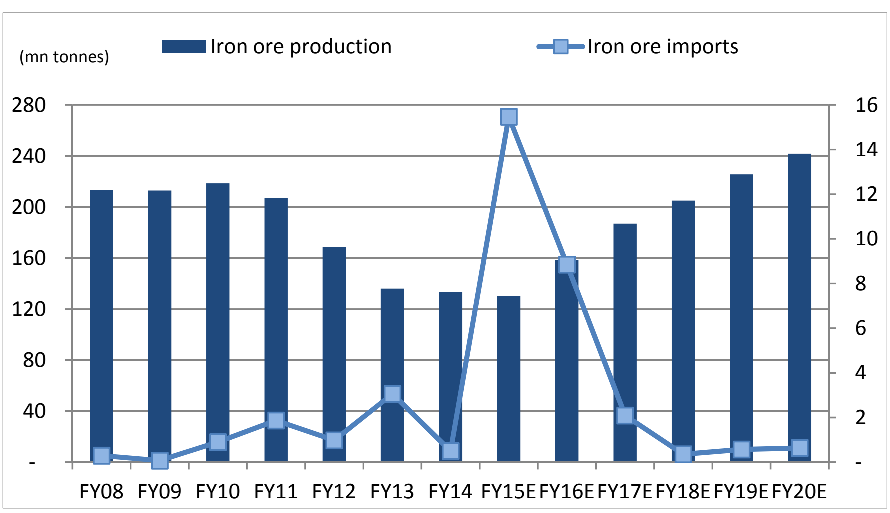
Figure 25: Indian iron ore requirements to rise by more than 50% over FY14-20



Source: Ministry of mines, Deutsche Bank

Given the large adverse economic impact associated with the shutdown of domestic iron ore mines and with state government's accelerating the approvals/regularization of mining leases, we are hopeful of a gradual resolution of these issues over the next 12-18 months, which should allow Indian miners to comfortably meet domestic demand and ramp up on exports.

Figure 26: India – Timely resolution of regulatory constraints remains critical to meet demand from domestic steelmakers



Source: Ministry of mines, Deutsche Bank

The risk to our forecasts emerges from regulatory delays and logistical bottlenecks. We have factored in a gradual resolution of the regulatory constraints and relaxation of the logistical bottlenecks. In case of extended delays in regulatory respite or continuation of logistical bottleneck, the iron growth in iron ore production could trail that in the demand for steelmaking raw material, thus, leading to a sustained increase in imports.

India iron ore – 3 conclusions from proprietary demand supply model

Our proprietary demand supply model for iron ore highlights three interesting conclusions:

- India is likely to import ~15.5 mn tonnes of iron ore – its highest ever imports - in FY15
- We do not see a risk to India's iron ore self sufficiency on a longer term basis. However, this remains contingent on easing of regulatory restrictions. A timely resolution can support domestic supply ramp up to meet demand from new steel capacities between now and 2020.
- We forecast India to become a net exporter of iron ore again from FY16. However, the magnitude of exports is likely to be only a fraction of its historical levels. During our forecast period till 2020, we expect India's iron ore exports to stay range bound between 15 and 35mn tonnes, relative to a range of 80 and 120mn tonnes during FY05-10.

India to import 15.5 mn tonnes of iron ore in FY15 despite rich resource endowment

India has been among some of the most attractive geographies globally, for steel production. The attractiveness is manifested by not only the country's compelling demand growth potential but also by its mineral endowment. India is blessed with large reserves of high grade iron ore – with eastern India having some of the finest reserves, globally (ferric content higher than 63%).

Figure 27: India is richly endowed with iron ore resources

	Reserves	Resources	Total R&R
Haematite	8.09	9.79	17.88
Magnetite	0.02	10.62	10.64
Total	**8.12**	**20.41**	**28.53**

Source: Indian Bureau of Mines, Deutsche Bank

A simultaneous imposition of production constraints across key iron ore producing geographies has resulted in severe iron ore supply constraints with in the country, with many Indian steel makers (JSW Steel being the largest importer of ore) being forced to rely on high-cost iron ore imports in order to sustain their utilization rates. India's iron ore production has come off by 39% from peak production levels (FY10) with 85 mn tonnes having gone off the market on account of regulatory restriction on mining operations in Karnataka, Goa, Odisha and now Jharkhand.

We expect India to import a record 15.5 mn tonnes of iron ore during FY15 which should decline to ~8.8mn tonnes in FY16 as production constrains in Odisha, Karnataka and Jharkhand are gradually relaxed. We expect iron ore exports from India to pick up from FY16 as iron ore mines in Goa resume production and begin to export – export is the natural market for Goan iron ore on account of low grades, port based location and high cost of inland transportation.

Figure 28: DB India's proprietary Indian iron ore demand supply model

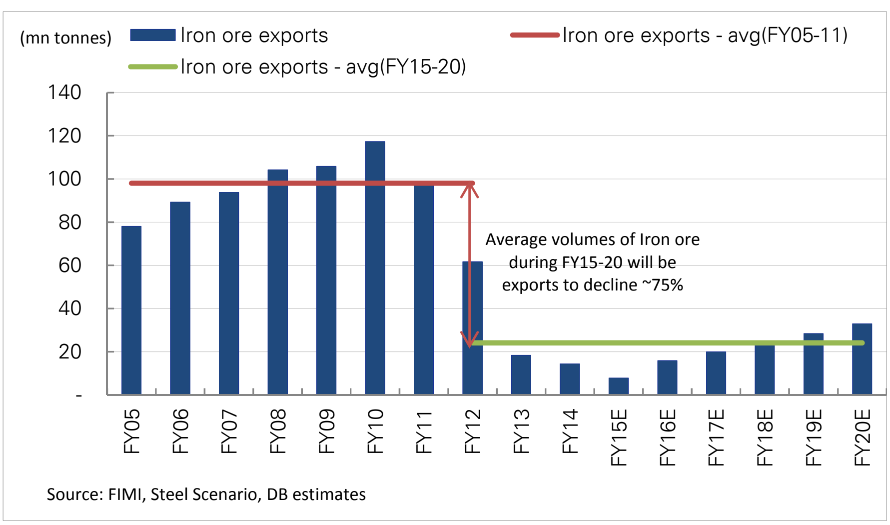
(mn tonnes)	FY14	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E
Tata Steel	17	17	20	23	24	26	29
SAIL	25	24	28	29	31	34	35
JSPL	2	2	2	2	2	2	2
NMDC	30	34	39	43	48	51	54
Sesa Goa	2	3	10	10	10	10	10
OMDC	2	3	4	5	8	11	11
Goa miners (ex-Sesa)		6	8	13	13	13	13
Karnataka miners (ex-NMDC, ex-Sesa)	7	11	12	17	18	21	24
Odisha (merchant miners, ex- OMC)	47	32	33	43	49	51	53
Other producers	1	-	2	3	4	5	6
Total iron ore production (wmt)	133	130	159	187	205	226	242
YoY growth (%)	*-2%*	*-2%*	*22%*	*18%*	*10%*	*10%*	*7%*
Domestic iron ore consumption (dmt)	131	135	148	161	174	189	200
YoY growth (%)	*5%*	*3%*	*10%*	*9%*	*8%*	*8%*	*6%*
Iron ore exports (dmt)	14.4	7.9	15.9	20.0	23.0	28.5	33.0
Iron ore imports (dmt)	0.5	15.5	8.8	2.1	0.4	0.6	0.6
Iron ore net exports (dmt)	13.9	(7.6)	7.1	17.9	22.6	27.9	32.4

Source: Ministry of mines, FIMI, Deutsche Bank

India to resume iron ore exports from FY16 but at much subdued levels

While we believe that India will to import a meaningful amount of iron ore between FY15-16, we expect production and exports to ramp up from Goa which is likely to take India back to net exporter status by FY16, however, the magnitude of exports is likely to be significantly lower than historical levels.

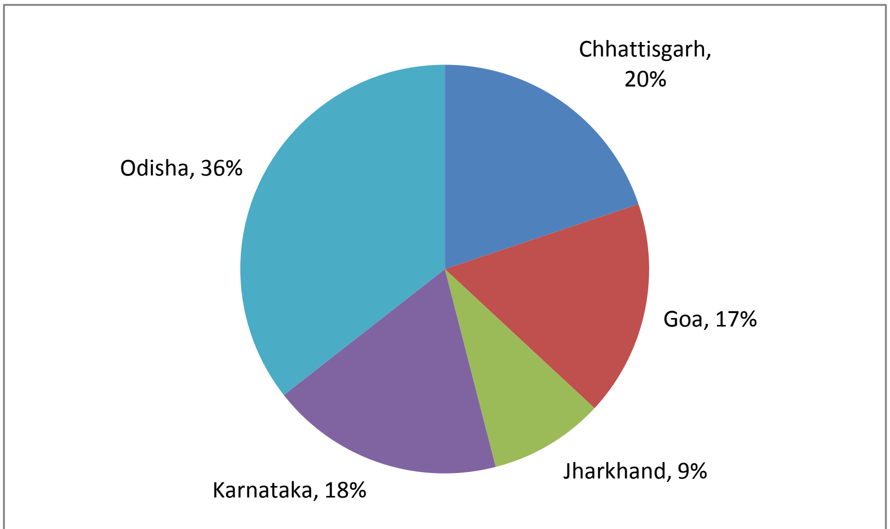
Figure 29: Exports will India will be significantly below historical levels



Source: FIMI, Steel Scenario, Deutsche Bank

We do not expect a sustained reliance on iron ore imports as supply ramp up from key iron ore producing regions (details in the following section) should be able to meet domestic requirements.

Figure 30: State-wise contribution to incremental iron ore production over FY14-20



Source: Ministry of Mines, Deutsche Bank

Odisha (37% of domestic iron ore production before regulatory restrictions) – Long term linkage policy likely to expedite regulatory approvals

We remain optimistic on the iron ore supply ramp up in Odisha, which is the largest iron ore producing state in India. We forecast iron ore supply from Odisha to rise by 62% over FY14-20 and contribute 36% of incremental iron ore production in India over similar period. The state government is considering providing linkage towards ensuring long term supplies of key raw material (iron ore, chrome ore) to user industries. This is likely to expedite the state approval process with production from state owned mining entity Odisha Mining Corporation Ltd (OMC) rising sharply - 8.6 mn tonnes over FY14-20.

Karnataka (20% of domestic iron ore production before regulatory restrictions) – production to ramp up to 30 mn tonnes by FY17 (18mt in FY14)

The mining ban in Karnataka was lifted in Apr'13, however, iron ore production ramp up in the state has lagged our as well as industry expectations on account of delays in securing regulatory approvals. Karnataka miners produced ~18 mn tonnes in FY14, significantly lower than the Indian Supreme Court mandated cap of 30 mn tonnes, as many mines await statutory approvals. We expect iron ore production in Karnataka to more than double to 38 mn tonnes by FY20 as we expect (i) completion of statutory approval process for Category A and Category B mines, and (ii) some relaxation of production caps. The ramp up could be higher in case mining operations resume at 49 Category C mines - which had been cancelled by the Indian Supreme Court – post their auctioning.

Figure 31: Karnataka iron ore – Many iron ore mines on the verge of restart

*Source: FIMI, Deutsche Bank, * Status as of Mar'14, ** Include NMDC mines, operations at 2 mines suspended as they await mining lease renewal, *** R&R: Reclamation and Rehabilitation plan*

Jharkhand (10% of domestic production before regulatory restrictions) – Expect easing of regulatory curbs

While the state government had ordered suspension of mining operations at 12 ore mines (11 Iron ore & 1 manganese ore) in Sept'14, we expect the regulatory curbs to be lifted shortly akin to the situation in Odisha. We forecast iron ore production in Jharkhand to rise by 55% over FY14-20 and contribute 9% of the incremental iron ore production over the same period.

Goa (37% of domestic production before regulatory restrictions) – Exports from Goa to ramp up in FY16

With the Supreme Court lifting the mining restrictions in the state and Goa government passing the Grant of Mining Leases Policy, the mining resumption awaits mining lease clearance and statutory approvals. We expect iron ore production from Goa to rise steadily from here and contribute 17% of India's iron ore production over FY14-20. However, Goa iron ore will primarily be targeted to export market on account of its low grade and port based location.

Chhattisgarh (12% of domestic production before regulatory restrictions) – steady increase in production

It remains the only large iron ore producing state that has not been impacted significantly by regulatory constraints on iron ore production. We forecast a steady ramp up in iron ore production in this state driven primarily by ramp up of NMDC's mines.

SAIL (Buy, TP: INR100)

Investment thesis

We are upgrading SAIL to a Buy from Hold with a 9% increase in our target price to INR100/share. SAIL's extensive expansion and modernization plan has faced inordinate delays over past three to four years, leading to a declining earnings trajectory. Over the last 5 year period (FY10-14), SAIL's volumes have remained stagnant while profitability (EBITDA/t) has declined by 58% leading to a 58% decline in SAIL's EBITDA and 75% decline in SAIL's net profit over FY10-14. Investors have been particularly concerned that the company's EBITDA/tonne declined to levels below other steel producers without captive iron ore.

However, we believe the worst of the delays are now behind and we should see an improving volume and profitability trajectory for SAIL as newly commissioned, more efficient facilities ramp up and benefits of operating leverage begin to flow through. We forecast SAIL to report EBITDA and PAT CAGR of 37%/36% respectively over FY14-17 – amongst the strongest in the sector, driven by a combination of higher volumes (+29%) and improved profitability (+100%), which underpins our positive view on the stock. However, investors will need to look beyond the earnings volatility in the short term as the benefits of SAIL's expansion and modernization plan will begin to reflect only towards the end of FY15.

The commencement of operations at SAIL's IISCO steel plant (4Q'FY15) with long product capacity at a time when we are anticipating a pick-up in domestic steel demand backed by the government's focus on infrastructure and capital formation, remains a key near term trigger.

Valuation

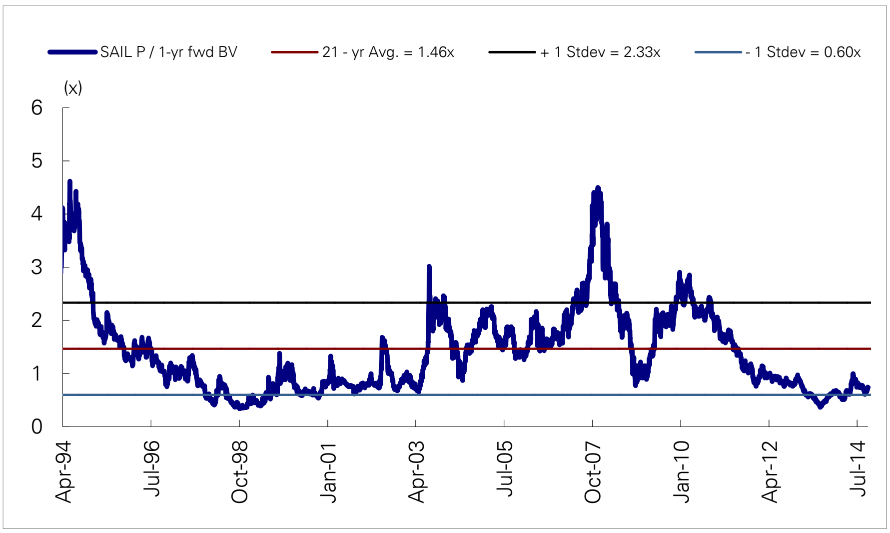
Figure 32: SAIL's long term EV/EBITDA valuation chart

*Source: Bloomberg Finance LP, Deutsche Bank, ** This chart plots the headline EV/EBITDA and not adjustments have been made for CWIP*

We value SAIL at FY16EV/EBITDA of 6.5x (ex-capital work in progress- CWIP), in line with its historical average, and we continue to value SAIL's FY16 CWIP at 75% of the book value. Please note that the headline FY16 EV/EBITDA multiple looks high at 7.4x and at a premium to our target multiple as it does not give any credit for the Capital work in progress (CWIP), which we believe is highly conservative as SAIL's CWIP is likely get commissioned over the next two years and drive significant cash flows and hence should be valued. The valuations look much more reasonable at 5.5x FY16 EV/EBITDA after we adjust the valuation multiple for CWIP (valued at 75% of the book value).

Our target multiple would imply a premium to its Indian steel peers which we believe is justifiable on account of SAIL's superior EBITDA and PAT growth outlook. On P/BV, SAIL is trading at the lower end of its long term valuation range which we believe should provide strong support to the stock price.

Figure 33: SAIL is trading at the low end of its long-term P/BV valuation range



Source: Bloomberg Finance LP, Deutsche Bank

Risks

Risks: downside - capacity expansions delays, higher coking coal prices, iron ore curbs continuing for SAIL's mines

Model updated:27 October 2014

Running the numbers

Asia

India

Metals & Mining

Steel Authority of India

Reuters: SAIL.BO | Bloomberg: SAIL IN

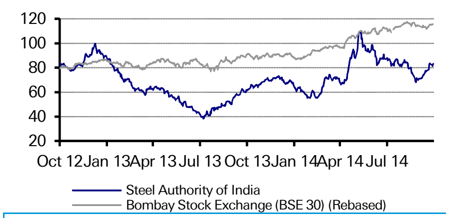
Buy

Price (29 Oct 14)	INR 83.10
Target Price	INR 100.00
52 Week range	INR 55.10 - 109.55
Market Cap (m)	INRm 343,236
	USDm 5,597

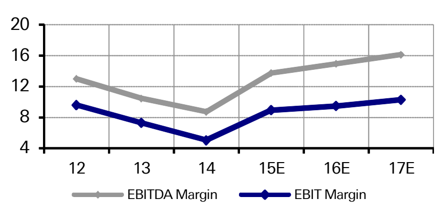
Company Profile

SAIL is one of the largest steel-making companies in India with a crude steel production capacity of 12.5m tonnes. SAIL has access to captive iron ore mines that supply 100% of its iron ore requirements. The company is undertaking a modernisation and expansion plan to enhance its saleable steel production capacity and lower its conversion costs.

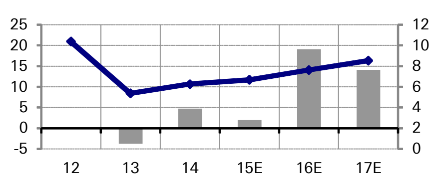
Price Performance



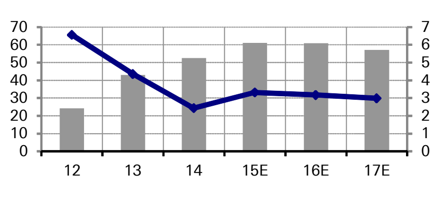
Margin Trends



Growth & Profitability



Solvency



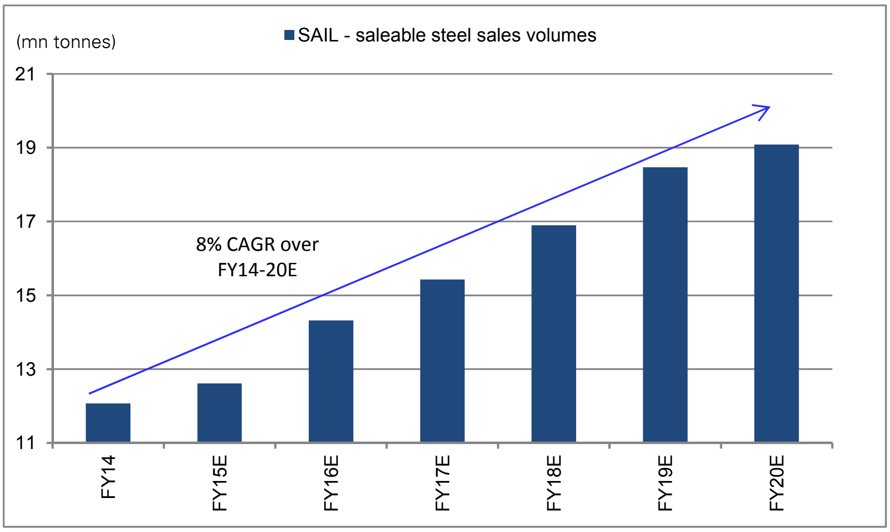
Anuj Singla
+91 22 7180 4172 anuj.singla@db.com

Fiscal year end 31-Mar	2012	2013	2014	2015E	2016E	2017E
Financial Summary						
DB EPS (INR)	10.08	4.70	4.01	7.07	8.53	10.16
Reported EPS (INR)	9.65	5.25	6.33	7.07	8.53	10.16
DPS (INR)	2.00	2.00	2.02	1.41	1.71	2.03
BVPS (INR)	96.4	99.3	103.3	108.7	115.3	123.1
Weighted average shares (m)	4,130	4,130	4,130	4,130	4,130	4,130
Average market cap (INRm)	476,826	354,222	240,674	343,236	343,236	343,236
Enterprise value (INRm)	566,791	523,540	457,726	610,080	626,039	626,977
Valuation Metrics						
P/E (DB) (x)	11.4	18.2	14.5	11.8	9.7	8.2
P/E (Reported) (x)	12.0	16.3	9.2	11.8	9.7	8.2
P/BV (x)	0.98	0.63	0.69	0.76	0.72	0.68
FCF Yield (%)	nm	nm	nm	nm	nm	0.6
Dividend Yield (%)	1.7	2.3	3.5	1.7	2.1	2.4
EV/Sales (x)	1.2	1.2	1.0	1.3	1.1	1.0
EV/EBITDA (x)	9.4	11.2	11.3	9.3	7.4	6.0
EV/EBIT (x)	12.8	16.1	19.5	14.3	11.7	9.4
Income Statement (INRm)						
Sales revenue	463,152	445,983	466,984	476,017	566,619	646,394
Gross profit	97,223	90,289	88,897	119,212	143,592	165,298
EBITDA	60,080	46,562	40,684	65,390	84,572	104,057
Depreciation	15,670	14,030	17,167	22,836	30,855	37,616
Amortisation	0	0	0	0	0	0
EBIT	44,410	32,532	23,517	42,554	53,718	66,441
Net interest income(expense)	-6,777	-7,477	-9,676	-12,821	-16,934	-22,245
Associates/affiliates	0	0	0	0	0	0
Exceptionals/extraordinaries	1,802	-2,293	9,591	0	0	0
Other pre-tax income/(expense)	16,496	9,644	8,814	6,761	7,261	8,261
Profit before tax	54,129	34,700	22,654	36,494	44,045	52,456
Income tax expense	16,082	10,703	6,081	7,299	8,809	10,491
Minorities	0	0	0	0	0	0
Other post-tax income/(expense)	0	0	0	0	0	0
Net profit	39,850	21,704	26,165	29,195	35,236	41,965
DB adjustments (including dilution)	1,802	-2,293	-9,591	0	0	0
DB Net profit	41,652	19,410	16,574	29,195	35,236	41,965
Cash Flow (INRm)						
Cash flow from operations	28,642	19,182	68,854	39,579	65,929	82,095
Net Capex	-93,978	-91,204	-88,715	-90,000	-80,000	-80,000
Free cash flow	-65,336	-72,023	-19,861	-50,421	-14,071	2,095
Equity raised/(bought back)	1	0	0	0	0	0
Dividends paid	-9,601	-9,613	-9,760	-6,773	-8,175	-9,736
Net inc/(dec) in borrowings	-29,586	54,034	37,808	45,000	40,000	0
Other investing/financing cash flows	-6,122	1,949	-18,131	7,403	6,287	6,703
Net cash flow	-110,644	-25,654	-9,944	-4,792	24,041	-937
Change in working capital	*-29,266*	*-17,719*	*10,259*	*-5,050*	*6,125*	*9,218*
Balance Sheet (INRm)						
Cash and other liquid assets	64,157	38,504	28,560	23,768	47,809	46,872
Tangible fixed assets	452,074	526,683	604,212	671,375	720,521	762,905
Goodwill/intangible assets	0	0	0	0	0	0
Associates/investments	6,850	7,184	7,202	7,202	7,202	7,202
Other assets	240,289	269,815	279,646	271,931	291,317	313,118
Total assets	763,370	842,185	919,619	974,276	1,066,849	1,130,097
Interest bearing debt	160,972	215,006	252,814	297,814	337,814	337,814
Other liabilities	204,285	216,933	240,141	227,377	252,889	283,907
Total liabilities	365,257	431,938	492,955	525,191	590,703	621,721
Shareholders' equity	398,113	410,246	426,664	449,085	476,146	508,376
Minorities	0	0	0	0	0	0
Total shareholders' equity	398,113	410,246	426,664	449,085	476,146	508,376
Net debt	*96,815*	*176,502*	*224,255*	*274,046*	*290,005*	*290,942*
Key Company Metrics						
Sales growth (%)	nm	-3.7	4.7	1.9	19.0	14.1
DB EPS growth (%)	na	-53.4	-14.6	76.2	20.7	19.1
EBITDA Margin (%)	13.0	10.4	8.7	13.7	14.9	16.1
EBIT Margin (%)	9.6	7.3	5.0	8.9	9.5	10.3
Payout ratio (%)	20.7	38.1	31.9	20.0	20.0	20.0
ROE (%)	10.4	5.4	6.3	6.7	7.6	8.5
Capex/sales (%)	20.3	20.5	19.0	18.9	14.1	12.4
Capex/depreciation (x)	6.0	6.5	5.2	3.9	2.6	2.1
Net debt/equity (%)	24.3	43.0	52.6	61.0	60.9	57.2
Net interest cover (x)	6.6	4.4	2.4	3.3	3.2	3.0

Source: Company data, Deutsche Bank estimates

SAIL – 2020 outlook

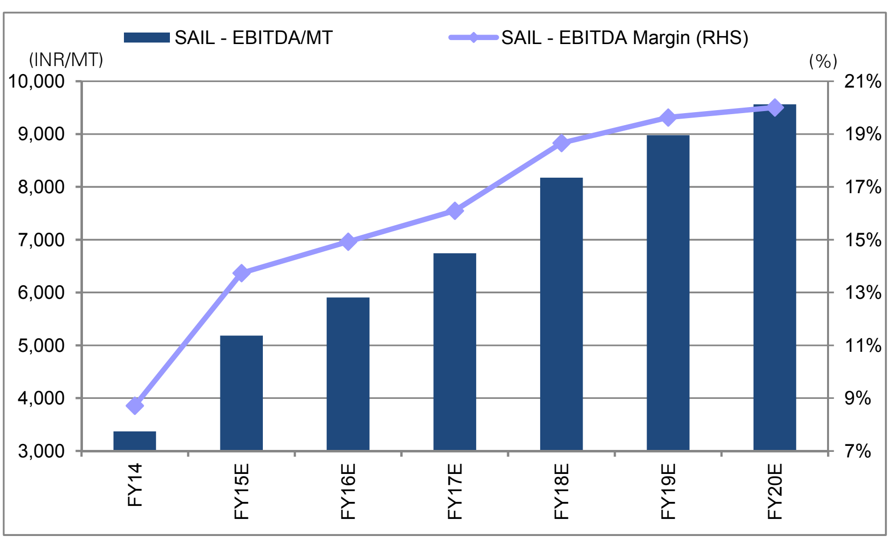
Figure 34: We forecast SAIL to report 8% volume CAGR over FY14-20 after a period of stagnant volumes over FY10-14



Source: Company data, Deutsche Bank estimates

SAIL's saleable steel volumes will rise as the new steelmaking capacity at IISCO (2.2mt) and Bhilai (2mt) is commissioned and capacity at Rourkela (1.8mt) ramps up

Figure 35: SAIL's profitability metrics should improve as newly commissioned more efficient facilities ramp up, product mix improves and benefits of operating leverage begin to flow



Source: Company data, Deutsche Bank estimates

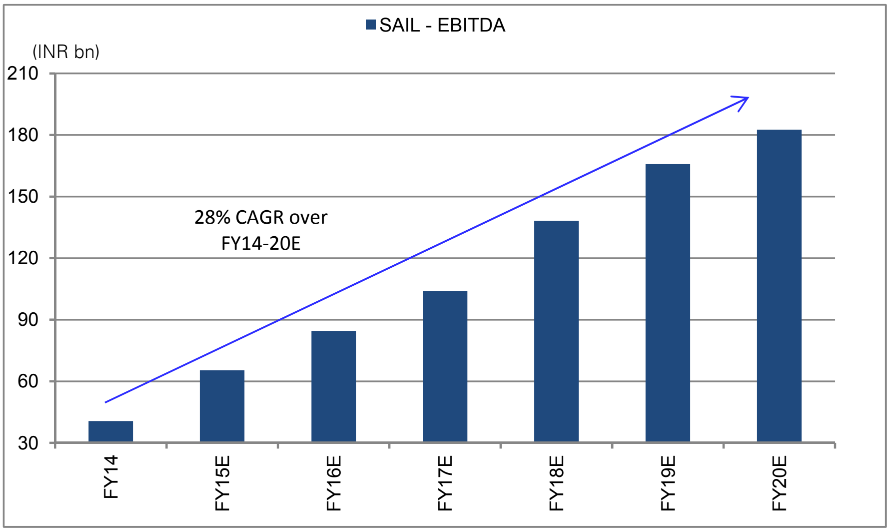
Apart from setting up 3 new blast furnaces with better operating parameters, SAIL is upgrading its existing steel making facilities including:

- setting up of new more efficient coke oven batteries

- replacing the highly inefficient twin-hearth furnace route (14% of capacity presently) with more efficient technology

- improving product mix with semis declining to 12% of sales, down from 22% presently

Figure 36: We forecast SAIL's EBITDA to grow at a 28% CAGR over FY14-20 after a 60% decline over FY10-14



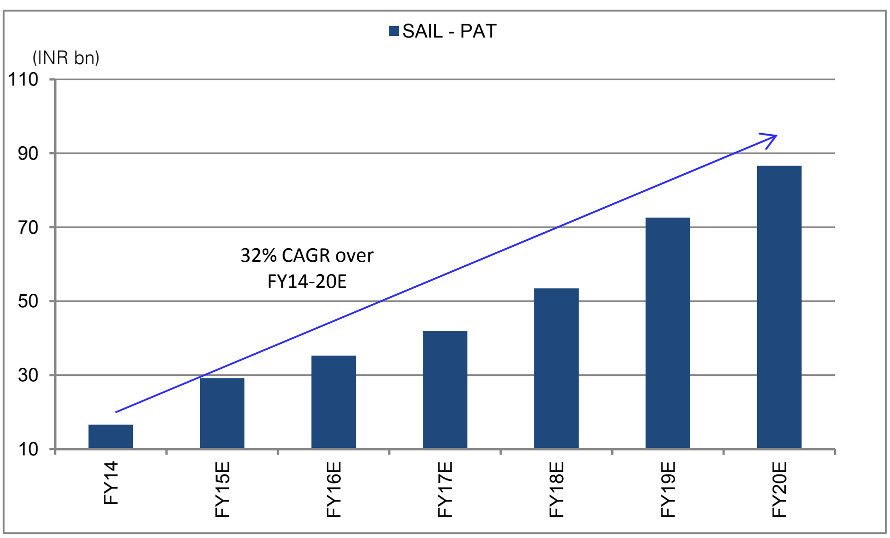
Source: Company data, Deutsche Bank estimates

SAIL's EBITDA growth over FY14-20 will be driven by a combination of:

- 58% increase in saleable steel volumes

- EBITDA/t rising from by1.8x from INR3,370 in FY14 to INR9,566 in FY20 supported by operational efficiencies and currency depreciation- we have factored in a 3% per annum depreciation in currency over FY15-20.

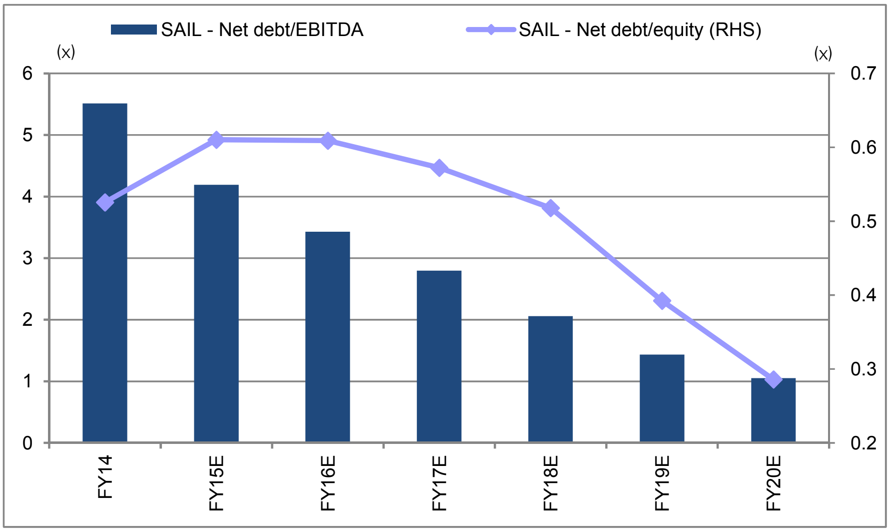
Figure 37: We forecast SAIL's PAT to grow at a 32% CAGR over FY14-20 after a 75% decline over FY10-14



Source: Company data, Deutsche Bank estimates

SAIL's PAT growth is likely to mirror the trend in EBITDA growth

Figure 38: SAIL's leverage ratio likely to begin improving from FY17 as operating cash flows rise while capital expenditure in its extensive modernization and expansion plan tapers off



Source: Company data, Deutsche Bank

SAIL has among the best balance sheets within India steel sector with FY15 net debt to equity at 0.61x which we expect to decline to 0.29x by FY20. The only risk relates to company embarking on another capital expenditure programme towards further capacity expansion.

Figure 39: SAIL – Summary of 2020 analysis

		FY14	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E	*CAGR (%, FY14-20E)*
Saleable steel sales volumes	**mn tonnes**	**11**	**12**	**13**	**14**	**15**	**17**	**18**	***9%***
Consolidated EBITDA	**INR mn**	**40,684**	**65,390**	**84,572**	**104,057**	**138,172**	**165,858**	**182,596**	***28%***
EBITDA margin	*%*	*9%*	*14%*	*15%*	*16%*	*19%*	*20%*	*20%*	
EBITDA/MT	**INR/MT**	**3,662**	**5,417**	**6,708**	**7,267**	**8,955**	**9,814**	**9,885**	***18%***
Consolidated EPS	**INR/share**	**4**	**7**	**9**	**10**	**13**	**18**	**21**	***32%***
ROE	(%)	3.9%	6.7%	7.6%	8.5%	10.1%	12.6%	13.6%	
ROCE	(%)	1.0%	4.4%	5.2%	6.1%	7.1%	8.9%	9.9%	
Net debt/equity	(x)	0.5	0.6	0.6	0.6	0.5	0.4	0.3	
Interest coverage	(x)	2.4	3.3	3.2	3.0	3.8	5.4	8.2	

Source: Company data, Deutsche Bank estimates

Figure 40: SAIL - Implied 2020 fair valuation at our current target multiples

Implied 2020 fair valuation at our current target multiples	FY20
EBITDA (INR mn)	182,596
Target Multiple	6.5
EV (INR mn)	**1,178,659**
Net debt (INR mn)	192,101
Market cap before CWIP adjustment (INR mn)	**986,557**
CWIP valued at 75% (INR mn)	180,667
Market cap after CWIP adjustment (INR mn)	**1,167,224**
Shares outstanding (mn)	4,130
Implied FY20 Fair value (INR/share)	**283**

Source: Deutsche Bank estimates; Investors should note the long time horizon and the inherent uncertainty and risks associated with our FY 2020 valuation; we make an ongoing concern assumption

For the purpose of arriving at a probable fair valuation for 2020, we use our current target multiple for SAIL - EV/EBITDA of 6.5x (ex-capital work in progress- CWIP) and CWIP at 75% of the book value. We firmly believe that there is a strong case for upward re-rating of the Indian steel companies on (i) a positive demand environment and operating leverage benefits as new facilities are nearing completion (Figure 21),(ii) our forecast improvement in the balance sheets of steel companies and hence improving financial leverage. However, we are being conservative and not factoring in any valuation expansion over our forecast period.

Tata Steel (Buy, TP: INR675)

Investment thesis

The proposed commissioning of phase I of the Odisha Greenfield plant within a twelve month period of achieving optimal ramp up of legacy Jamshedpur operation will be transformational for Tata Steel. Our positive investment case is underpinned by (i) commissioning of Odisha plant by FY15 end, leading to low cost, high margin Indian operations constituting 44% of consolidated production and 73% of consolidated EBITDA (ii) Robust cash flow generation allowing company to fund Odisha Phase II from internal generation and helping alleviate investor angst over perennially stretched balance sheet, (iii) improving outlook for steel profitability in Europe driven by a combination of improving steel spreads (steel price - raw material costs) and operating leverage from higher volumes and (iv) expectations of sharp and significant working capital savings in Europe following large decline in raw material prices. Visible progress on the long-delayed Odisha project will be seen as a positive catalyst for the stock. While the closure of the Noamundi iron ore mine in Jharkhand and fears over a recession in Europe have driven stock price weakness, we believe these fears appear overdone. We see material upside potential and rate the stock Buy.

Valuation

Figure 41: Tata Steel – SOTP valuation table

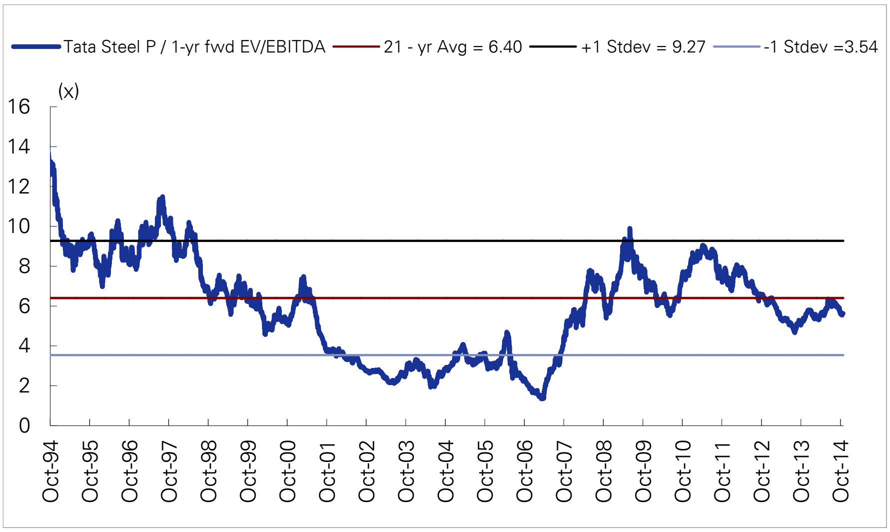
SOTP on FY16	Methodology	Multiple used	FY16E EBITDA	EV (INR bn)
Tata Steel India	EV/EBITDA	6.0	157,071	942
Tata Steel Europe	EV/EBITDA	4.5	48,830	220
Asia+other subsidiaries	EV/EBITDA	4.0	8,211	33
Raw material assets (attributable EBITDA)	EV/EBITDA	4.0	1,319	5
Total EV (INR bn)				1,200
Net Debt (INR bn)				691
CWIP (INR bn) (valued at 50% discount)				71
Value of investment in shares of various companies (INR bn)				78
Derived Equity Value (INR bn)				658
Number of shares (mn)				971
12 month Target price (INR/share)				675

Source: Deutsche Bank estimates

Our 12 month target price is based on Sum of the parts (SOTP) methodology. We value the Indian operations at 6x FY16E EBITDA. We value European operations at 4.5x FY16E EV/EBITDA (vs 5.4x earlier). Following fears over a sharper than anticipated economic slowdown in Europe, we have seen a compression in valuations of European steel producers. Consequently, we now value Tata Steel Europe at 4.5x FY16E EV/EBITDA, in line with its European peers. This implies a discount of 25% to Tata Steel’s India operations which we believe is justified given Tata Steel Europe's lower profitability relative to the Indian operations and lack of captive access to raw materials. Asian operations are converters and we value them at a FY16E EV/EBITDA multiple of 4x, a marked discount to the Indian and European operations. Raw material assets are also valued at 4x FY16E EV/EBITDA. We continue to value the FY16 capital work in progress at 50% of its book value.

The much anticipated announcement of a QE in Europe may emerge as a positive catalyst for the stock.

Figure 42: Tata Steel is trading at a discount to its long-term trading average



Source: Bloomberg Finance LP, Deutsche Bank

Risks

Key risks include: 1) higher-than-anticipated increase in steel-making raw material prices without a commensurate increase in the international steel prices, 2) delay in capacity expansions in India, and 3) steel demand environment remaining challenging in Europe and delay in steel demand recovery in both India and Europe and (4) company embarking on potentially compelling inorganic growth opportunities in India, which risks an already elevated balance sheet.

Model updated:28 October 2014

Running the numbers

Asia

India

Metals & Mining

Tata Steel

Reuters: TISC.BO — Bloomberg: TATA IN

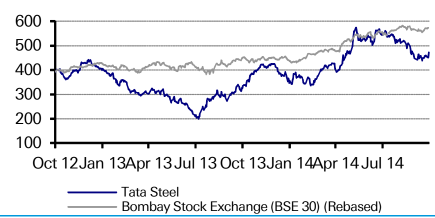
Buy

Price (29 Oct 14)	INR 472.50
Target Price	INR 675.00
52 Week range	INR 326.40 - 574.20
Market Cap (m)	INRm 458,899
	USDm 7,483

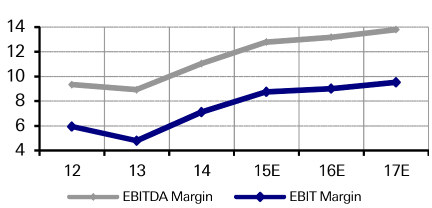
Company Profile

Tata Steel is among the top ten global steel companies with an annual crude steel capacity of over 28 million tonnes per annum (mtpa). Tata Steel is a geographically-diversified steel company with production facilities spread across India, the UK, the Netherlands, Thailand, Singapore, China and Australia. In India, Tata Steel is among India's top steel producers with a production capacity of 10mn tonnes and is in the process of ramping up 16 mn tonees.

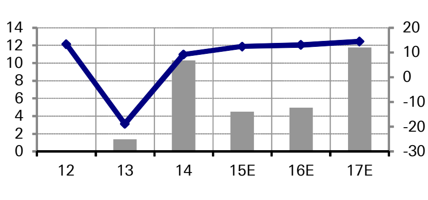
Price Performance



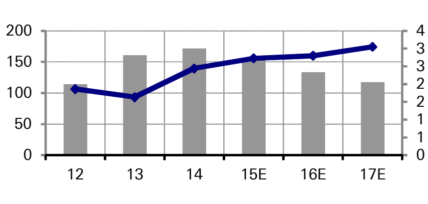
Margin Trends



Growth & Profitability



Solvency



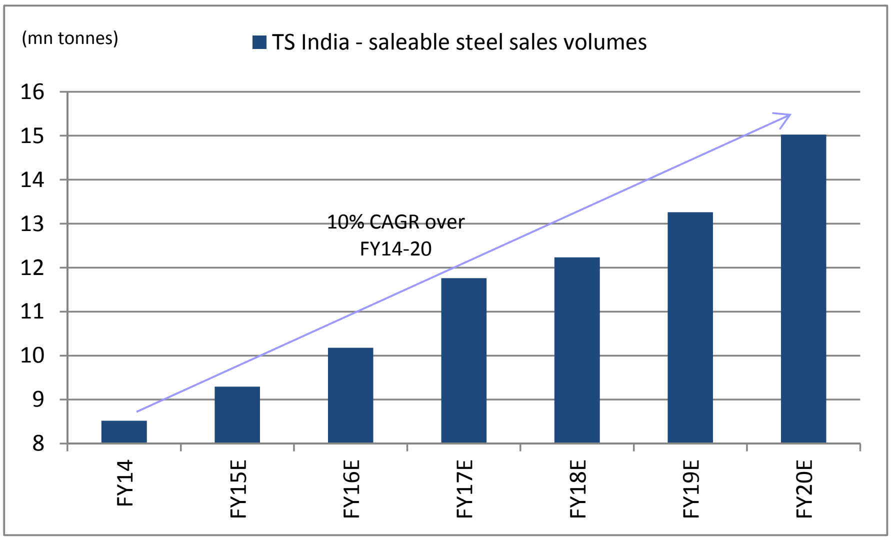
Abhay Laijawala
+91 22 7180 4031 abhay.laijawala@db.com

Fiscal year end 31-Mar	2012	2013	2014	2015E	2016E	2017E
Financial Summary						
DB EPS (INR)	30.53	-1.36	35.21	54.42	63.97	79.41
Reported EPS (INR)	53.73	-74.52	35.21	54.42	63.97	79.41
DPS (INR)	11.62	8.00	10.00	8.00	8.00	14.40
BVPS (INR)	438.8	351.9	417.3	462.6	517.9	582.0
Weighted average shares (m)	971	971	971	971	971	971
Average market cap (INRm)	474,098	391,603	315,004	458,899	458,899	458,899
Enterprise value (INRm)	957,926	959,816	1,033,207	1,174,422	1,139,592	1,131,480
Valuation Metrics						
P/E (DB) (x)	16.0	nm	9.2	8.7	7.4	6.0
P/E (Reported) (x)	9.1	nm	9.2	8.7	7.4	6.0
P/BV (x)	1.07	0.89	0.94	1.02	0.91	0.81
FCF Yield (%)	nm	nm	nm	nm	8.2	4.8
Dividend Yield (%)	2.4	2.0	3.1	1.7	1.7	3.0
EV/Sales (x)	0.7	0.7	0.7	0.8	0.7	0.6
EV/EBITDA (x)	7.7	8.0	6.3	5.9	5.3	4.5
EV/EBIT (x)	12.1	14.9	9.8	8.6	7.7	6.5
Income Statement (INRm)						
Sales revenue	1,328,997	1,347,115	1,486,136	1,552,967	1,630,168	1,822,196
Gross profit	124,168	120,365	164,110	198,653	214,767	251,396
EBITDA	124,168	120,365	164,110	198,653	214,767	251,396
Depreciation	45,167	55,753	58,412	62,661	67,706	77,708
Amortisation	0	0	0	0	0	0
EBIT	79,001	64,612	105,698	135,992	147,062	173,688
Net interest income(expense)	-42,501	-39,681	-43,368	-49,914	-52,581	-57,005
Associates/affiliates	2,681	903	8	254	322	360
Exceptionals/extraordinaries	22,525	-71,052	-276	0	0	0
Other pre-tax income/(expense)	15,730	4,792	5,168	6,729	8,229	8,229
Profit before tax	52,231	29,722	67,498	92,808	102,710	124,913
Income tax expense	25,270	32,294	30,582	40,239	40,439	47,059
Minorities	-1,731	-2,145	699	-1,789	-1,291	-666
Other post-tax income/(expense)	-1,735	-1,801	-1,756	-1,756	-1,756	-1,756
Net profit	52,163	-72,377	34,193	52,855	62,128	77,123
DB adjustments (including dilution)	-22,525	71,052	0	0	0	0
DB Net profit	29,638	-1,325	34,193	52,855	62,128	77,123
Cash Flow (INRm)						
Cash flow from operations	102,822	88,371	67,910	137,156	133,413	149,335
Net Capex	-120,777	-154,715	-164,201	-151,885	-96,002	-127,215
Free cash flow	-17,955	-66,344	-96,291	-14,730	37,411	22,120
Equity raised/(bought back)	5,346	0	0	0	0	0
Dividends paid	-11,284	-7,770	-9,712	-7,770	-7,770	-13,983
Net inc/(dec) in borrowings	172	61,575	155,112	55,229	-7,651	15,996
Other investing/financing cash flows	5,510	-3,234	-42,580	23,137	3,576	282
Net cash flow	-18,212	-15,772	6,529	55,866	25,566	24,414
Change in working capital	*33,231*	*21,248*	*-13,440*	*53,119*	*9,391*	*5,433*
Balance Sheet (INRm)						
Cash and other liquid assets	121,972	106,200	112,729	168,595	194,160	218,575
Tangible fixed assets	621,283	692,132	859,806	949,030	977,327	1,026,834
Goodwill/intangible assets	173,546	130,650	157,488	162,668	162,668	172,754
Associates/investments	26,229	24,974	24,251	24,504	24,826	25,186
Other assets	524,877	514,744	561,763	545,727	536,873	573,586
Total assets	1,467,907	1,468,699	1,716,037	1,850,524	1,895,855	2,016,935
Interest bearing debt	621,118	682,693	837,805	893,034	885,383	901,379
Other liabilities	409,715	427,591	455,535	492,617	493,154	535,300
Total liabilities	1,030,833	1,110,283	1,293,340	1,385,651	1,378,537	1,436,679
Shareholders' equity	426,162	341,722	405,320	449,285	503,021	565,294
Minorities	10,912	16,694	17,377	15,588	14,297	14,963
Total shareholders' equity	437,074	358,416	422,697	464,873	517,318	580,256
Net debt	*499,146*	*576,493*	*725,076*	*724,439*	*691,222*	*682,804*
Key Company Metrics						
Sales growth (%)	nm	1.4	10.3	4.5	5.0	11.8
DB EPS growth (%)	na	na	na	54.6	17.5	24.1
EBITDA Margin (%)	9.3	8.9	11.0	12.8	13.2	13.8
EBIT Margin (%)	5.9	4.8	7.1	8.8	9.0	9.5
Payout ratio (%)	21.6	nm	28.4	14.7	12.5	18.1
ROE (%)	13.3	-18.9	9.2	12.4	13.0	14.4
Capex/sales (%)	9.1	11.5	11.0	9.8	5.9	7.0
Capex/depreciation (x)	2.7	2.8	2.8	2.4	1.4	1.6
Net debt/equity (%)	114.2	160.8	171.5	155.8	133.6	117.7
Net interest cover (x)	1.9	1.6	2.4	2.7	2.8	3.0

Source: Company data, Deutsche Bank estimates

Tata Steel – 2020 outlook

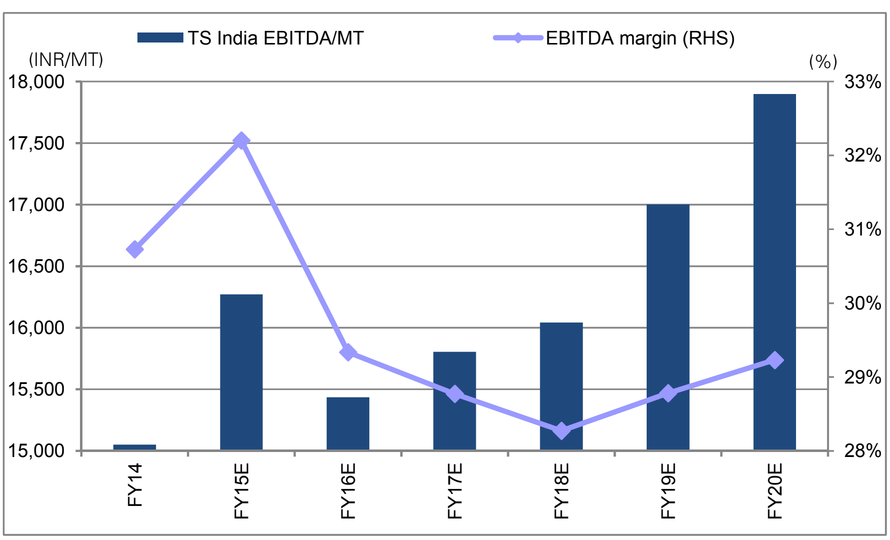
Figure 43: We expect Tata Steel India to report 10% CAGR in saleable steel volumes over FY14-20



Source: Company data, Deutsche Bank

Tata Steel's low cost, high margin domestic production is expected to rise to 15mn tonnes by 2020, implying a 10% CAGR. We see very low risk in making this assessment as all land for the Odisha project has not only been acquired but phase 1 of the 6mn tonne plant is in advanced stages of commissioning.

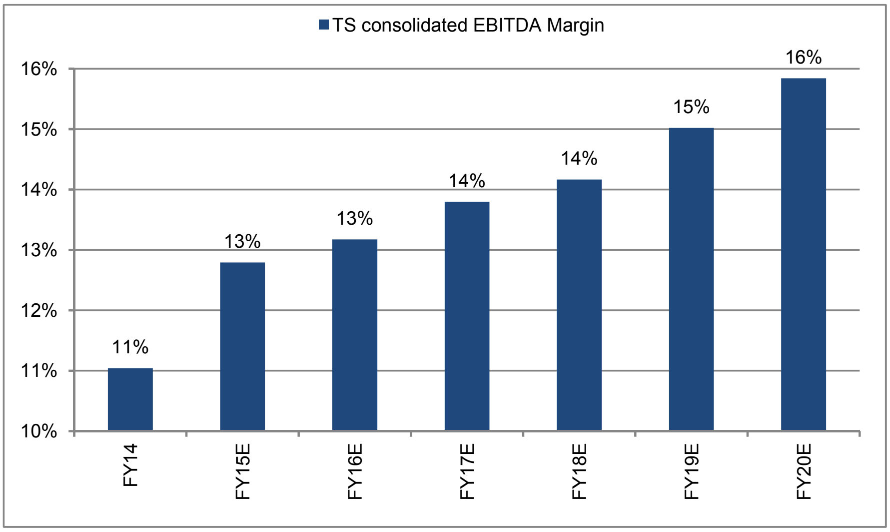
Figure 44: Tata Steel's India profitability is likely to register a temporary decline in FY16 as HRC capacity at Odisha ramps up. We expect normalization of profitability as new finishing mills are commissioned over FY16-20.



Source: Company data, Deutsche Bank, * The above chart plots profitability for Tata Steel India only

Tata Steel India is expected to retain its domestic competitive advantage in steel making. We expect EBITDA/tonne to rise to an all time high of INR17,900/tonne by 2020 when Odisha plant moves to its optimum value addition. This will only happen when phase II is commissioned. Its phase I expansion will stop at HR coils. Beyond 2020, profitability of Odisha can move higher towards Jamshedpur levels as full benefits of value addition start flowing through.

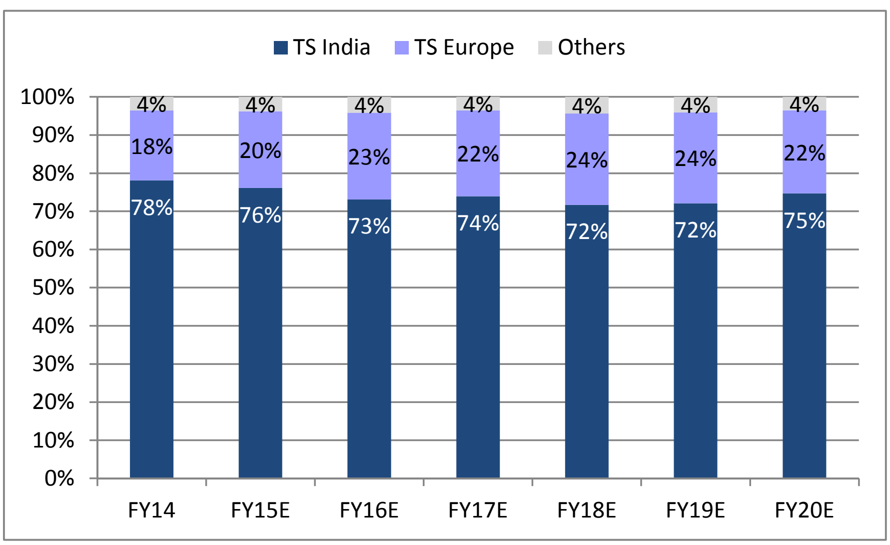
Figure 45: The outlook for Tata Steel's consolidated EBTIDA margins remains positive as we expect profitability improvement in both India and European operations



Source: Company data, Deutsche Bank estimates

Consolidated EBITDA margin is set to improve by 500bps on (1) increasing proportion of production growth in India, where margins are far higher and (2) improvement in profitability of European operations. We expect EBITDA/tonne of European operations to improve to US$76 by FY20E

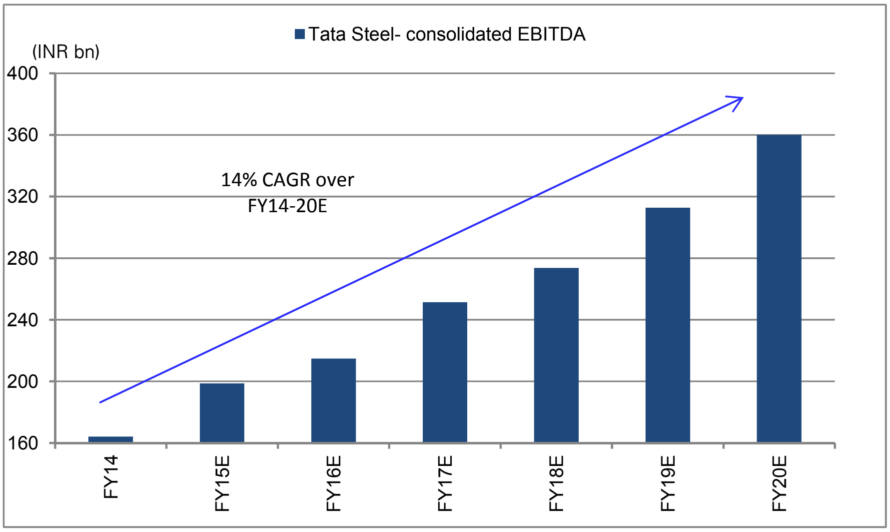
Figure 46: Tata Steel India should continue to be a dominant contributor to consolidated EBITDA



Source: Company data, Deutsche Bank estimates

Improving profitability in Europe should drive the contribution of EBITDA from Europe to 22%from 18% currently. High margin Indian operations will constitute three fourths of consolidated EBITDA.

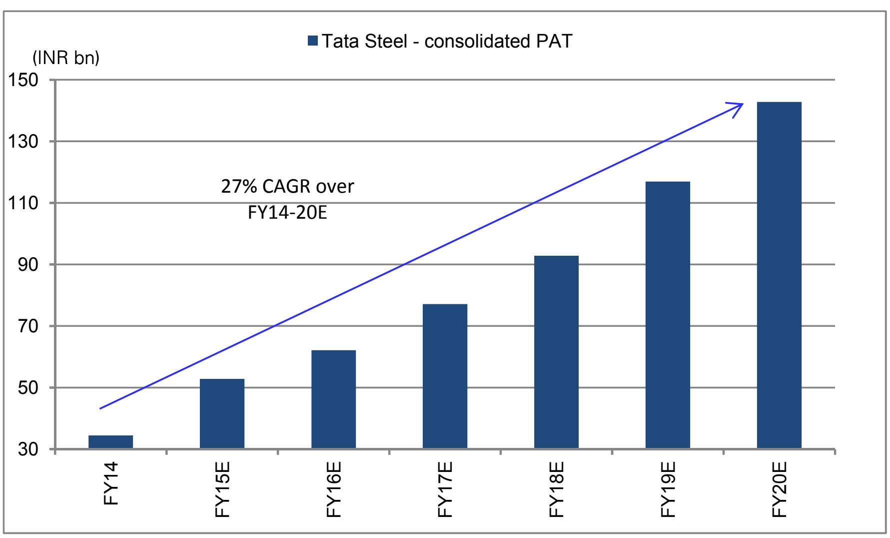
Figure 47: We forecast Tata Steel's consolidated EBITDA to record 14% CAGR over FY14-20



Source: Company data, Deutsche Bank estimates

Consolidated EBITDA is expected to rise at a CAGR of 14% by 2020E driven by (1) volume growth (2) value added product mix, where company is a market leader and (3) benefits of currency depreciation

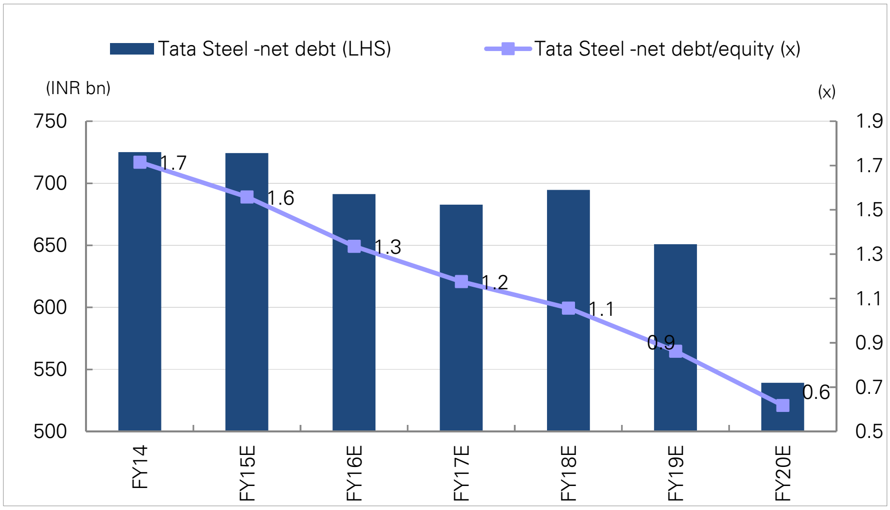
Figure 48: We forecast Tata Steel's consolidated PAT to record 27% CAGR over FY14-20



Source: Company data, Deutsche Bank estimates

Consolidated PAT growth is expected to rise at a CAGR of 27% driven by a 10% CAGR in volumes, aided by declining interest costs between FY17 andFY20, and rupee depreciation.

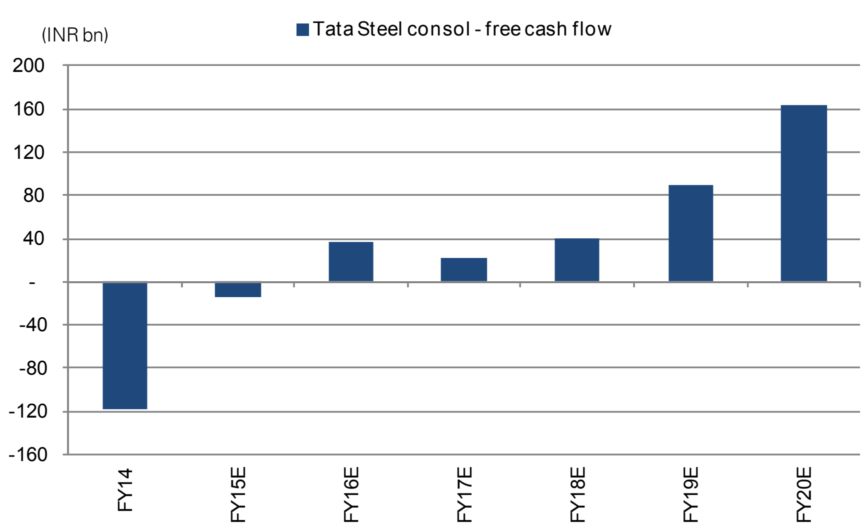
Figure 49: We expect a gradual deleveraging of consolidated balance sheet FY16 onwards as Odisha is commissioned



Source: Company data, Deutsche Bank estimates

High leverage – taken to fund Corus acquisition – has been a source of angst for Tata Steel shareholders. Increasing cash flows following Jamshedpur expansion (where company generates an EBITDA/tonne of US$250/tonne), followed by commissioning of the Odisha greenfield plant should drive impressive cash flow generation over forecast period. Unless company embarks on new expansion beyond Odisha, we see balance sheet concerns ebbing over next two years

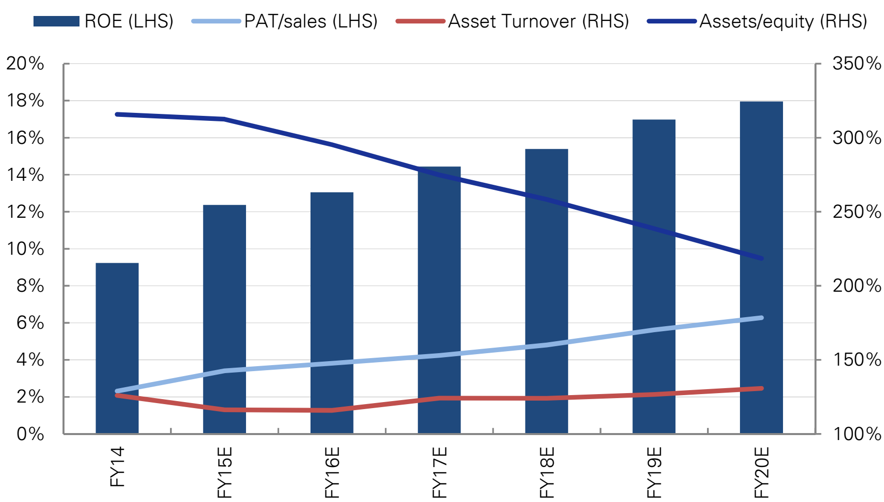
Figure 50: We expect Tata Steel to turn free cash flow positive from FY16 onwards driven by a combination of rising operating cash flows (Odisha plant) and declining capex



Source: Company data, Deutsche Bank estimates

The commissioning of two key expansions coming over a short gap of three years will result in free cash flow turning positive from FY16 – after a gap of almost three years. With low cost, high margin operations in India constituting 44% of total production, company's financials will see a strong transformation

Figure 51: Tata Steel's RoE to improve supported by improving asset turnover and profitability



Source: Company data, Deutsche Bank

Ongoing capex until FY18 will keep ROE subdued. However declining leverage following completion of Odisha phase II should result in ROE rising sharply. In case company is able to successfully move forward in its ongoing portfolio optimization strategy and restructures/reconfigures its European operations, ROE expansion will be far faster, as ROE of Indian operations is materially and meaningfully higher.

Figure 52: Tata Steel – Summary of 2020 analysis

		FY14	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E	*CAGR (%, FY14-20E)*
Consolidated Saleable steel sales volumes	**mn tonnes**	**26**	**28**	**29**	**31**	**31**	**32**	**34**	***4%***
TS India	*mn tonnes*	*9*	*9*	*10*	*12*	*12*	*13*	*15*	*10%*
TS Europe	*mn tonnes*	*14*	*14*	*14*	*15*	*15*	*15*	*15*	*1%*
Consolidated EBITDA	**INR mn**	**164,110**	**198,653**	**214,767**	**251,396**	**273,675**	**312,712**	**360,071**	***14%***
EBITDA margin	*%*	*11%*	*13%*	*13%*	*14%*	*14%*	*15%*	*16%*	
Blended EBITDA/MT	**INR/MT**	**6,227**	**7,211**	**7,492**	**8,183**	**8,773**	**9,705**	**10,594**	***9%***
TS India	*INR/MT*	*15,050*	*16,271*	*15,436*	*15,805*	*16,043*	*17,001*	*17,899*	*3%*
TS Europe	*INR/MT*	*2,170*	*2,815*	*3,402*	*3,815*	*4,417*	*5,030*	*5,292*	*16%*
Consolidated EPS	**INR/share**	**35**	**54**	**64**	**79**	**96**	**120**	**147**	***27%***
ROE	(%)	9.2%	12.4%	13.0%	14.4%	15.4%	17.0%	18.0%	
ROCE	(%)	4.5%	5.6%	6.2%	7.2%	7.6%	8.7%	9.5%	
Net debt/equity	(x)	1.7	1.6	1.3	1.2	1.1	0.9	0.6	
Interest coverage	(x)	2.4	2.7	2.8	3.0	3.4	4.2	5.1	

Source: Company data, Deutsche Bank estimates

Figure 53: Tata Steel – Implied 2020 fair valuation at our current target multiples

SOTP on FY20E	Methodology	Multiple used	FY20E EBITDA	EV (INR bn)
Tata Steel India	EV/EBITDA	6.0	268,969	1,614
Tata Steel Europe	EV/EBITDA	4.5	78,418	353
Asia+other subsidiaries	EV/EBITDA	4.0	9,276	37
Raw material assets (attributable EBITDA)	EV/EBITDA	4.0	3,664	15
Total EV (INR bn)				2,018
Net Debt (INR bn)				539
CWIP (INR bn) (valued at 50% discount)				53
Value of investment in shares of various companies (INR bn)				78
Derived Equity Value (INR bn)				1,610
Number of shares (mn)				971
Implied FY2020 (INR/share)				1,655

Source: Deutsche Bank estimates; Investors should note the long time horizon and the inherent uncertainty and risks associated with our FY 2020 valuation; we make an ongoing concern assumption

For the purpose of arriving at a probable fair valuation estimate for 2020, we use our current target multiple for Tata Steel - EV/EBITDA of 6x for India, 4.5x for European operations and 4x for the rest (ex-capital work in progress- CWIP) and CWIP at 50% of the book value. We firmly believe that there is a strong case for upward re-rating of the Indian steel companies on (i) a positive demand environment and operating leverage benefits as new facilities are nearing completion (Figure 21), (ii) our forecast improvement in the balance sheets of steel companies and hence improving financial leverage. However, we are being conservative and not factoring in any valuation expansion over our forecast period.

JSW Steel (Buy, TP: INR1,578)

Investment thesis

We believe the initiatives being undertaken by JSW Steel provide it with multiple levers of shareholder value creation over the medium to long term, which should emerge as key stock price catalysts. Our positive investment thesis for JSW is built around (i) value harnessing initiatives at Dolvi (erstwhile Ispat) driving impressive consolidated EBITDA growth. We see the EBITDA/t gap widening further between company's legacy Vijaynagar plant and newly acquired Ispat plant at Dolvi, (ii) gains from value addition as company moves towards a product differentiation strategy through foraying into high margin auto body steels and high grade electrical steel. We expect EPS growth to rise at CAGR of 16% over next two years and 24% over next five years. We rate the stock a Buy.

Valuation

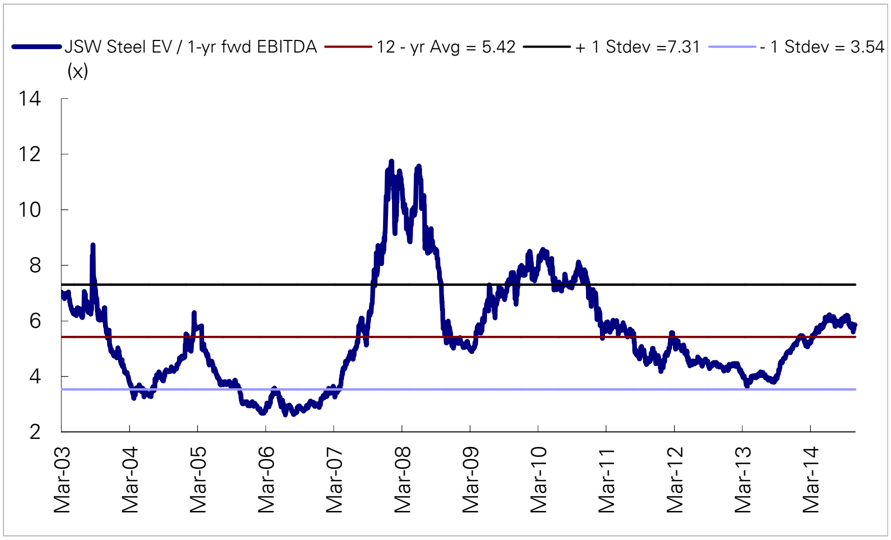
Figure 54: JSW Steel – SOTP valuation table

	Methodology	Multiple assigned	FY16E EBITDA (INR mn)	JSW Steel's share (%)	EV (INR bn)
JSW Steel India + Coated	EV/EBITDA	6.0	118,570	100%	716
JSW Steel US assets	EV/EBITDA	5.0	1,074	100%	5
Total EV (INR bn)					720
Net Debt (INR bn)					395
CWIP (INR bn) (valued at 50% discount)					56
Derived Equity Value (INR bn)				381	
Number of shares (mn)					242
12 M Target price (INR/share)					1,578

Source: Deutsche Bank estimates

We use sum of the parts (SOTP) methodology to value JSW Steel. We continue to value JSW Steel's India operations at 6x FY16E EV/EBITDA, at a slight discount to its global peer group. We value the US operating at 5x FY16E EV/EBITDA, at a discount to the India operations and global peer group on account of its depressed profitability. We have also ascribed value to the FY16E CWIP at 50% discount of the book value.

Figure 55: JSW Steel stock is trading in line with its long term valuation average



Source: Bloomberg Finance LP, Deutsche Bank

Risks

Key risks include: 1) Iron ore cost escalation, 2) Delay in the resolution of iron ore sourcing issues, 3) increase in leverage in case company revives its investment plans for a new steel plant. With aggressive growth being the core DNA of JSW's strategy, unanticipated inorganic expansions which have a potential to stretch company's balance sheet further, remain a key risk area for JSW investors. While company's organic growth strategy has been impressive (JSW Steel has reported lowest capital cost/tonne) and ROE accretive, we remain concerned over company looking at simultaneous inorganic opportunities in Europe and India, which could stretch balance sheet unduly.

Model updated:28 October 2014

Running the numbers

Asia

India

Metals & Mining

JSW Steel

Reuters: JSTL.BO Bloomberg: JSTL IN

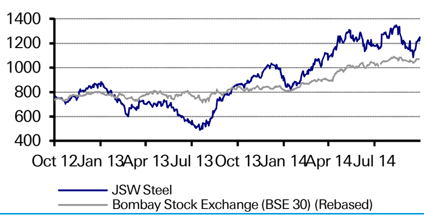
Buy

Price (29 Oct 14)	INR 1,248.75
Target Price	INR 1,578.00
52 Week range	INR 816.70 - 1,348.00
Market Cap (m)	INRm 278,618
	USDm 4,543

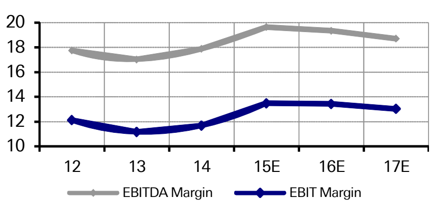
Company Profile

JSW Steel, the flagship company of the JSW Group, is an integrated steel manufacturer and among the top three steel producers in India with a total capacity of 11mn tonnes which is being expanded to 13mn tonnes. JSW Steel has tied up with JFE Steel Corp, Japan for manufacturing high grade automotive steel in India. The company has acquired a majority stake in Ispat Industries Ltd which provides it 3.3mn tonnes of crude steel capacity on the west coast of India. The company has also acquired mining assets in Chile, USA and Mozambique.

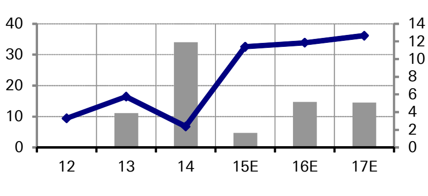
Price Performance



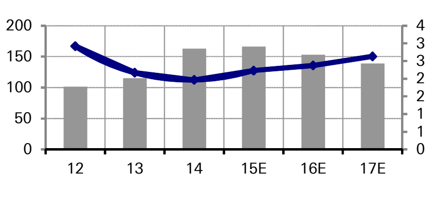
Margin Trends



Growth & Profitability



Solvency



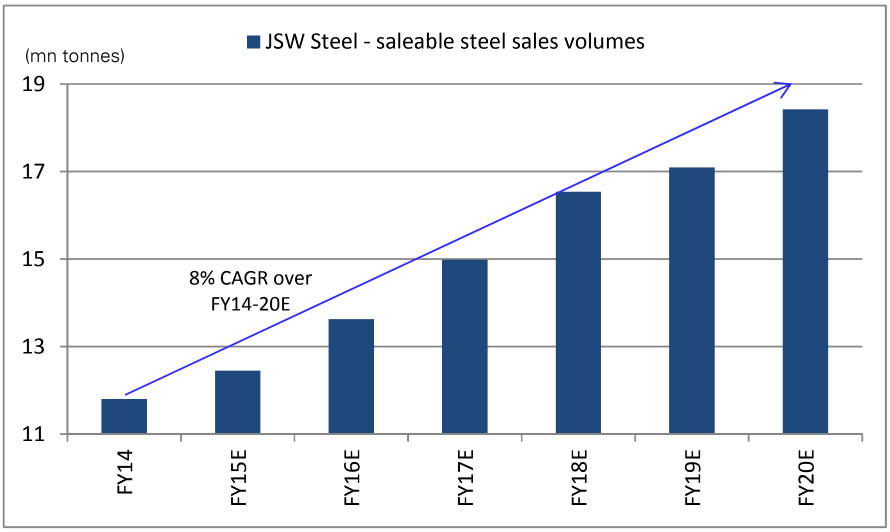
Abhay Laijawala
+91 22 7180 4031 abhay.laijawala@db.com

Fiscal year end 31-Mar	2012	2013	2014	2015E	2016E	2017E
Financial Summary						
DB EPS (INR)	83.63	55.45	74.88	104.78	120.19	142.05
Reported EPS (INR)	24.10	43.17	18.70	104.78	120.19	142.05
DPS (INR)	7.50	10.00	9.58	13.36	16.12	18.27
BVPS (INR)	738.2	764.8	876.0	963.7	1,063.5	1,182.7
Weighted average shares (m)	223	223	242	242	242	242
Average market cap (INRm)	165,411	161,950	187,319	278,618	278,618	278,618
Enterprise value (INRm)	318,103	346,138	530,998	662,908	668,345	670,226
Valuation Metrics						
P/E (DB) (x)	8.9	13.1	10.3	11.9	10.4	8.8
P/E (Reported) (x)	30.8	16.8	41.4	11.9	10.4	8.8
P/BV (x)	0.98	0.88	1.18	1.30	1.17	1.06
FCF Yield (%)	2.0	nm	nm	nm	0.0	3.2
Dividend Yield (%)	1.0	1.4	1.2	1.1	1.3	1.5
EV/Sales (x)	0.9	0.9	1.0	1.2	1.1	1.0
EV/EBITDA (x)	5.2	5.3	5.8	6.3	5.6	5.1
EV/EBIT (x)	7.6	8.1	8.9	9.2	8.1	7.3
Income Statement (INRm)						
Sales revenue	343,681	382,097	512,196	536,429	615,620	705,179
Gross profit	84,129	93,324	134,479	152,843	172,689	191,084
EBITDA	61,019	65,039	91,655	105,344	119,096	131,922
Depreciation	19,332	22,375	31,826	33,009	36,394	39,997
Amortisation	0	0	0	0	0	0
EBIT	41,687	42,664	59,829	72,334	82,702	91,925
Net interest income(expense)	-14,273	-19,675	-30,479	-32,488	-34,848	-34,977
Associates/affiliates	-2,262	-1,645	135	135	135	135
Exceptionals/extraordinaries	-13,283	-2,740	-13,581	0	0	0
Other pre-tax income/(expense)	769	697	858	1,717	1,641	563
Profit before tax	28,183	23,687	30,208	41,563	49,495	57,511
Income tax expense	7,071	10,014	12,748	16,801	21,028	23,700
Minorities	189	-343	-504	-429	-451	-390
Other post-tax income/(expense)	0	0	0	0	0	0
Net profit	5,377	9,631	4,520	25,327	29,053	34,337
DB adjustments (including dilution)	13,283	2,740	13,581	0	0	0
DB Net profit	18,660	12,371	18,100	25,327	29,053	34,337
Cash Flow (INRm)						
Cash flow from operations	44,157	38,005	40,103	37,796	66,734	79,671
Net Capex	-40,795	-56,301	-57,629	-77,000	-66,681	-69,981
Free cash flow	3,362	-18,296	-17,525	-39,204	53	9,691
Equity raised/(bought back)	-5,294	0	186	0	0	0
Dividends paid	-1,990	-2,658	-3,376	-3,817	-6,718	-7,747
Net inc/(dec) in borrowings	34,348	14,369	139,015	40,000	13,224	-633
Other investing/financing cash flows	-21,098	-7,956	-128,959	1,981	777	-4,214
Net cash flow	9,328	-14,541	-10,659	-1,041	7,336	-2,903
Change in working capital	*-9,054*	*-3,199*	*-3,000*	*-24,566*	*-8,522*	*-10,964*
Balance Sheet (INRm)						
Cash and other liquid assets	32,510	17,969	7,310	6,269	13,605	10,702
Tangible fixed assets	353,998	393,004	548,838	592,829	623,116	653,100
Goodwill/intangible assets	12,440	13,143	15,619	15,619	15,619	15,619
Associates/investments	18,856	16,064	5,947	5,947	5,947	5,947
Other assets	121,419	134,948	198,685	208,050	231,497	263,884
Total assets	539,222	575,128	776,399	828,713	889,784	949,251
Interest bearing debt	201,881	216,250	355,265	395,265	408,490	407,856
Other liabilities	170,459	186,259	207,724	199,263	223,423	255,112
Total liabilities	372,340	402,509	562,990	594,529	631,913	662,969
Shareholders' equity	164,705	170,647	211,739	232,944	257,080	285,882
Minorities	2,177	1,972	1,670	1,241	791	401
Total shareholders' equity	166,882	172,619	213,409	234,185	257,871	286,282
Net debt	*169,372*	*198,281*	*347,956*	*388,996*	*394,885*	*397,155*
Key Company Metrics						
Sales growth (%)	nm	11.2	34.0	4.7	14.8	14.5
DB EPS growth (%)	na	-33.7	35.0	39.9	14.7	18.2
EBITDA Margin (%)	17.8	17.0	17.9	19.6	19.3	18.7
EBIT Margin (%)	12.1	11.2	11.7	13.5	13.4	13.0
Payout ratio (%)	31.1	23.2	51.2	12.8	13.4	12.9
ROE (%)	3.3	5.7	2.4	11.4	11.9	12.6
Capex/sales (%)	11.9	14.7	11.3	14.4	10.8	9.9
Capex/depreciation (x)	2.1	2.5	1.8	2.3	1.8	1.7
Net debt/equity (%)	101.5	114.9	163.0	166.1	153.1	138.7
Net interest cover (x)	2.9	2.2	2.0	2.2	2.4	2.6

Source: Company data, Deutsche Bank estimates

JSW Steel – 2020 outlook

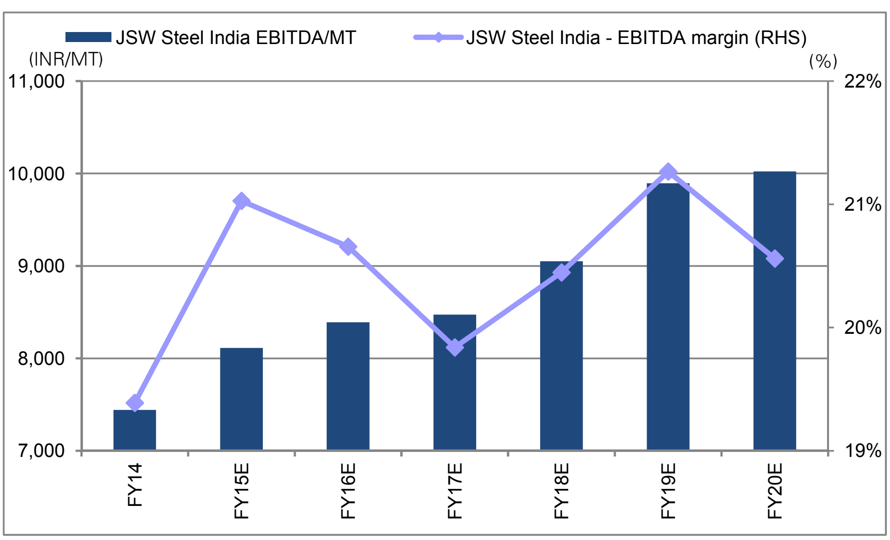
Figure 56: We forecast JSW Steel's saleable steel sales to record 8% CAGR over FY14-20



Source: Company data, Deutsche Bank

JSW's strategy of volume growth will continue over the forecast period. We see future expansions at Ispat and new site acquired recently from Welspun. The company will maintain its status as India's second largest steel producer behind SAIL.

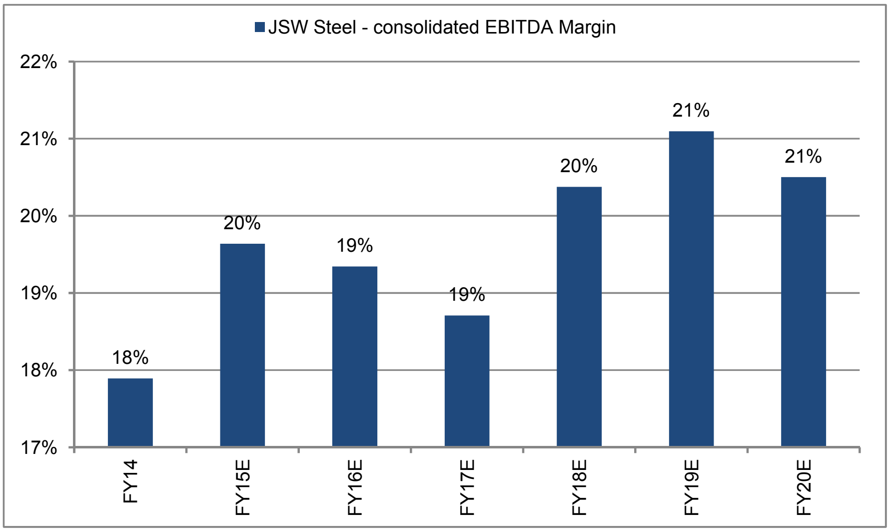
Figure 57: We see JSW Steel's EBITDA/t to INR2500 over FY14-20 without factoring in any benefit of captive iron ore



Source: Company data, Deutsche Bank, ** Please note that the above chart shows profitability trend for only the India operations and not the consolidated entity

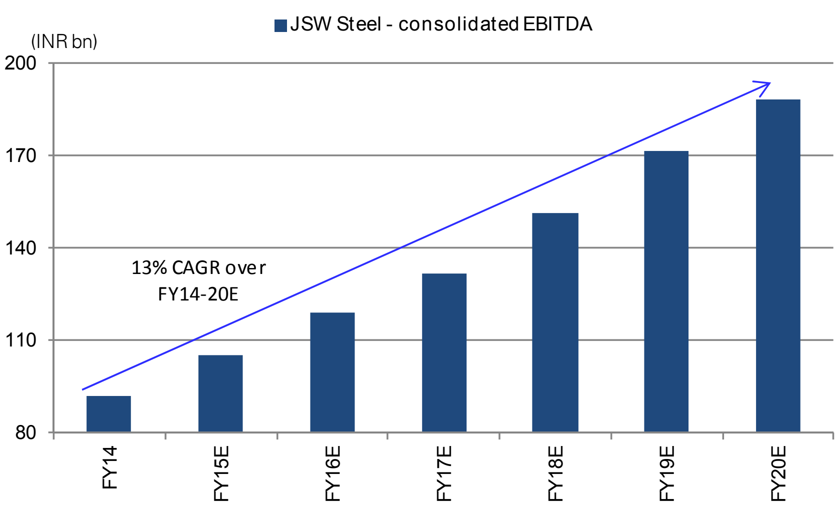
Benefits of scale economies, value addition and a continuing thrust on cost efficiencies – which is a source of strong and competitive advantage for JSW – should drive profitability higher. We forecast company's EBITDA/tonne to rise to INR10,000/tonne by 2020.

Figure 58: We expect JSW Steel's consolidated steel margins to remain stable ~20-21%



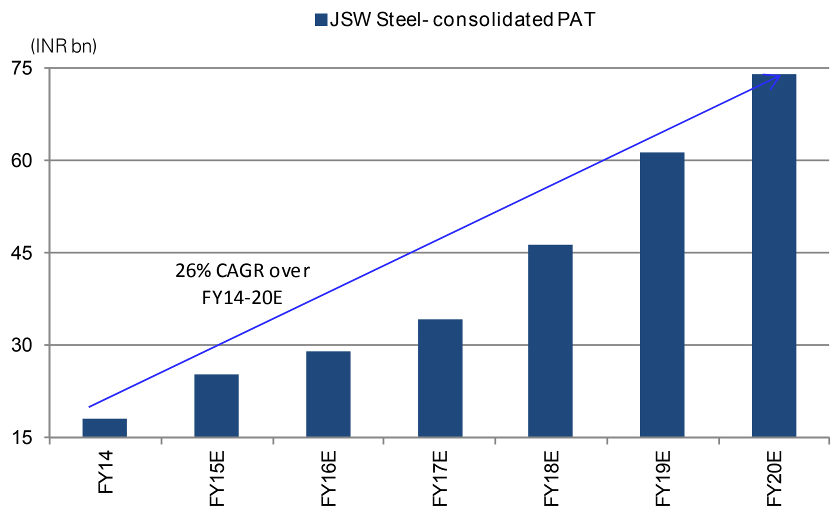
Source: Company data, Deutsche Bank estimates

Figure 59: We forecast JSW Steel's consolidated EBITDA to record 13% CAGR over FY14-20



Source: Company data, Deutsche Bank estimates

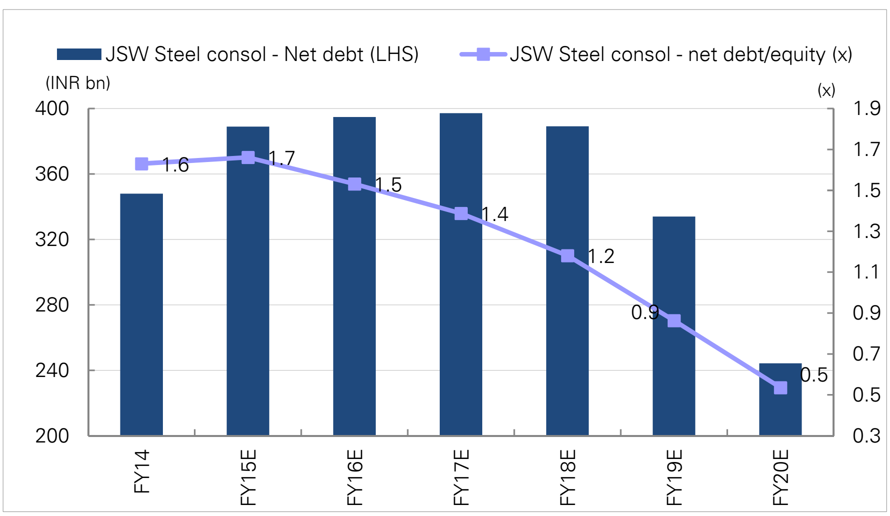
Figure 60: We forecast JSW Steel's consolidated PAT to record 26% CAGR over FY14-20



Source: Company data, Deutsche Bank estimates

Volume growth, value addition (following commissioning of CR facilities and ultimate foray into auto body steel market) and competitive cost of commissioning will drive PAT at CAGR of 26% by 2020. We see rupee depreciation also aiding profit growth, in line with other steel producers.

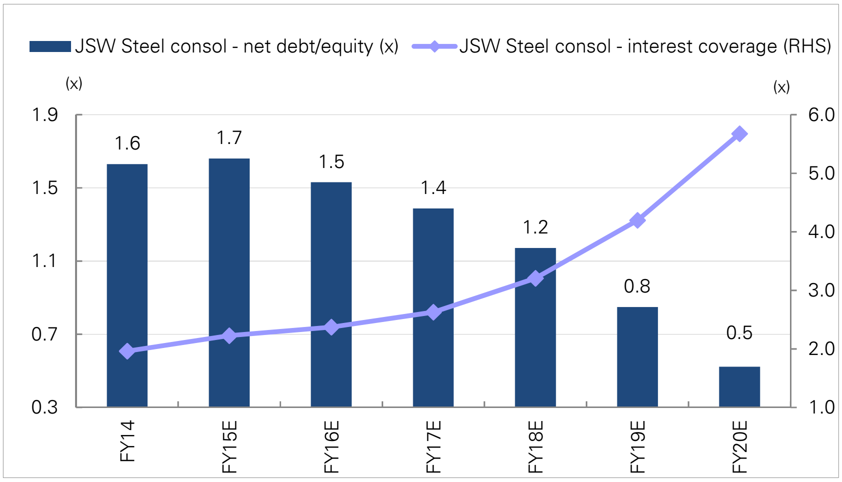
Figure 61: We forecast a sharp decline in JSW Steel's leverage over FY14-20 unless company embarks on a significant Greenfield capex or inorganic growth



Source: Company data, Deutsche Bank estimates

JSW's stretched balance sheet has been a source of investor concern following fast paced organic and inorganic growth. With better than anticipated ramp up of Ispat, we expect consolidated net debt equity to peak in current year and decline progressively over forecast period, unless company embarks on new organic/inorganic growth strategy.

Figure 62: We forecast JSW Steel's interest coverage to progressively improve as operating profit rises while leverage comes off



Source: Company data, Deutsche Bank estimates

Figure 63: JSW Steel – Summary of 2020 analysis

		FY14	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E	*CAGR (%, FY14-20E)*
Saleable steel sales volumes	**mn tonnes**	**12**	**12**	**14**	**15**	**17**	**17**	**18**	***8%***
Consolidated EBITDA	**INR mn**	**91,655**	**105,344**	**119,096**	**131,922**	**151,175**	**171,643**	**188,310**	***13%***
EBITDA margin	*%*	*18%*	*20%*	*19%*	*19%*	*20%*	*20%*	*20%*	
Blended EBITDA/MT	**INR/MT**	**7,767**	**8,461**	**8,739**	**8,805**	**9,142**	**10,041**	**10,222**	***5%***
JSW Steel India	*INR/MT*	*7,442*	*8,113*	*8,390*	*8,473*	*9,049*	*9,894*	*10,022*	*5%*
Consolidated EPS	**INR/share**	**75**	**105**	**120**	**142**	**192**	**254**	**306**	***26%***
ROE	(%)	9.4%	11.3%	11.8%	12.6%	15.0%	17.0%	17.2%	
ROCE	(%)	10.4%	6.6%	6.8%	7.3%	8.2%	9.5%	10.0%	
Net debt/equity	(x)	1.6	1.7	1.5	1.4	1.2	0.8	0.5	
Interest coverage	(x)	2.0	2.2	2.4	2.6	3.2	4.2	5.7	

Source: Company data, Deutsche Bank estimates

Figure 64: JSW Steel – Implied 2020 fair valuation at our current target multiples

	Methodology	Multiple assigned	FY20E EBITDA (INR mn)	JSW Steel's share (%)	EV (INR bn)
JSW Steel India + Coated	EV/EBITDA	6.0	184,619	100%	1,115
JSW Steel US assets	EV/EBITDA	5.0	2,957	100%	15
Total EV (INR bn)					1,132
Net Debt (INR bn)					244
CWIP (INR bn) (valued at 50% discount)					29
Derived Equity Value (INR bn)					917
Number of shares (mn)					242
Implied FY2020 fair value (INR/share)					3,793

Source: Deutsche Bank estimates; Investors should note the long time horizon and the inherent uncertainty and risks associated with our FY 2020 valuation; we make an ongoing concern assumption

For the purpose of arriving at a probable fair valuation for 2020, we use our current target multiple for JSW Steel - EV/EBITDA of 6x for India, 5x for US operations and 4x for the rest (ex-capital work in progress- CWIP) and CWIP at 50% of the book value. We firmly believe that there is a strong case for upward re-rating of the Indian steel companies on (i) a positive demand environment and operating leverage benefits as new facilities are nearing completion (Figure 21), (ii) our forecast improvement in the balance sheets of steel companies and hence improving financial leverage. However, we are being conservative and not factoring in any valuation expansion over our forecast period.

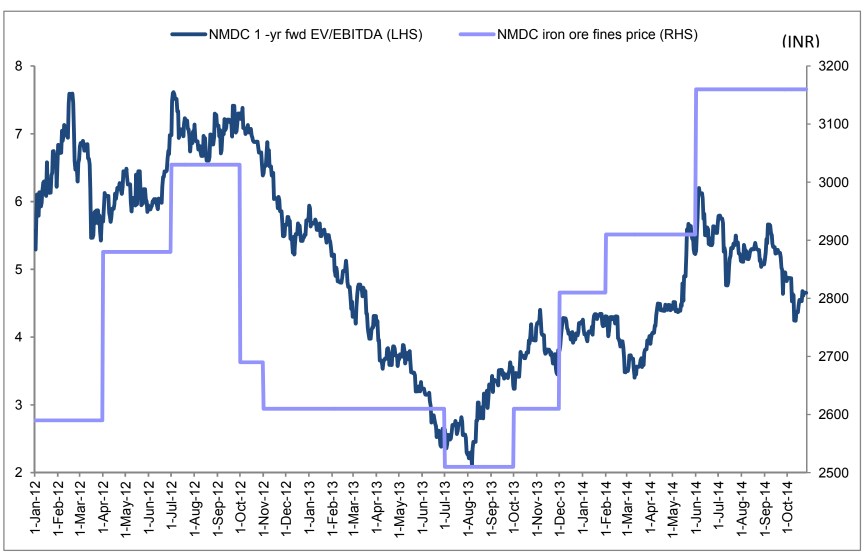
NMDC (Hold, TP: INR173)

Investment thesis

We are cutting our target price for NMDC by 19% to INR173/share and downgrading NMDC to a Hold from a Buy. While the long term earnings outlook for the company remains positive underpinned by 10% CAGR in iron ore volumes over FY14-20 as new mines are commissioned and logistic constraints are relaxed gradually, we see pricing headwinds emerging for the domestic iron ore in FY16 driven by (i) weak international iron ore pricing outlook and high iron ore procurement costs domestically, which is likely to encourage substitution of domestic supplies by imports especially for the port based plants on the west coast of India, (ii) improving iron ore supply situation in India as the various regulatory constraints on mining imposed over the last 3 years are gradually relaxed.

Historically, we have seen a relative de-rating of the NMDC stock in a weak iron ore pricing environment as shown in the chart below. While we expect the magnitude of iron ore price cuts to be much more moderate (-8% from present levels) that what we witnessed over Sept'12-Aug'13 (-17%), weak pricing outlook is likely to limit the upside from present stock price levels, hence, our hold recommendation on the stock.

Figure 65: We have seen NMDC's stock de-rated in a weak domestic iron ore pricing environment



Source: Bloomberg Finance LP, Deutsche Bank

Valuation

We use EV/EBITDA as our primary valuation methodology for NMDC, in line with the methodology being used by us to value other iron ore businesses. We have valued NMDC at a FY16E EV/EBITDA of 5x (vs 6x earlier) broadly in line with its global peers. This multiple cut reflects our expectation of a weakening domestic iron ore pricing environment. This is further supported by past trends (as highlighted in Figure 65), NMDC's stock tends to get de-rated in a weak iron ore pricing environment domestically.

Risks

Downside: Implementation of profit share proposal under the new MMDR act, evacuation constraints taking longer than expected to get resolved, disruption of operations by rebel group attacks, investment in Indian Public Sector Undertakings or investment in businesses beyond India's boundaries where political and geographical risks are higher,

Upside: Delay in the resolution of regulatory constraints related to domestic iron ore production, sharp rebound in international iron ore prices

Model updated:27 October 2014

Running the numbers

Asia

India

Metals & Mining

NMDC

Reuters: NMDC.BO Bloomberg: NMDC IN

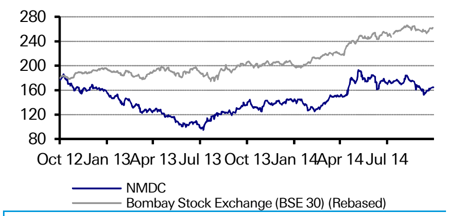
Hold

Price (29 Oct 14)	INR 164.75
Target Price	INR 173.00
52 Week range	INR 124.65 - 192.90
Market Cap (m)	INRm 653,188
	USDm 10,651

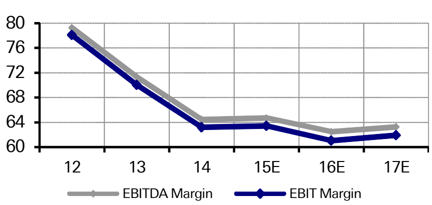
Company Profile

NMDC Limited, a Navaratna PSU, is the largest producer of iron ore in India. It has access to high quality iron ore reserves from its mines in Chhattisgarh and Karnataka. It also exports iron ore to countries such as Japan and South Korea. Company is also engaged in the exploration of other minerals such as rock phosphate, lime stone, dolomite, gypsum, diamond etc.

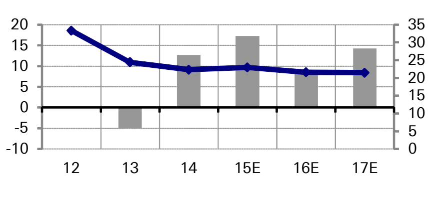
Price Performance



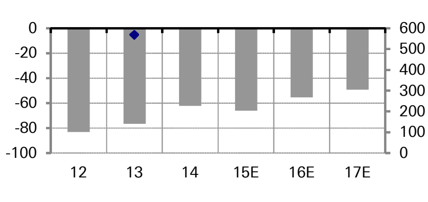
Margin Trends



Growth & Profitability



Solvency



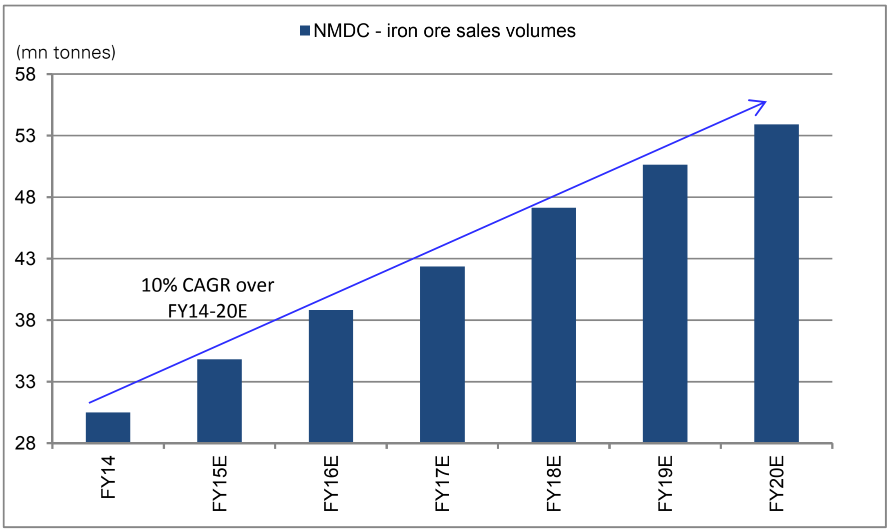
Anuj Singla
+91 22 7180 4172 anuj.singla@db.com

Fiscal year end 31-Mar	2012	2013	2014	2015E	2016E	2017E
Financial Summary						
DB EPS (INR)	18.33	16.00	16.19	18.32	19.13	21.11
Reported EPS (INR)	18.33	16.00	16.19	18.32	19.13	21.11
DPS (INR)	5.23	8.17	9.94	9.95	9.95	10.97
BVPS (INR)	61.6	69.4	75.6	84.0	93.2	103.3
Weighted average shares (m)	3,965	3,965	3,965	3,965	3,965	3,965
Average market cap (INRm)	877,483	676,621	499,241	653,188	653,188	653,188
Enterprise value (INRm)	672,360	463,867	310,165	430,323	445,786	449,279
Valuation Metrics						
P/E (DB) (x)	12.1	10.7	7.8	9.0	8.6	7.8
P/E (Reported) (x)	12.1	10.7	7.8	9.0	8.6	7.8
P/BV (x)	2.62	1.98	1.85	1.96	1.77	1.59
FCF Yield (%)	6.1	6.2	3.2	11.2	3.7	6.1
Dividend Yield (%)	2.4	4.8	7.9	6.0	6.0	6.7
EV/Sales (x)	6.0	4.3	2.6	3.0	2.9	2.6
EV/EBITDA (x)	7.5	6.1	4.0	4.7	4.7	4.1
EV/EBIT (x)	7.6	6.2	4.1	4.8	4.8	4.1
Income Statement (INRm)						
Sales revenue	112,619	107,043	120,582	141,413	153,289	175,228
Gross profit	93,175	84,823	91,843	105,264	111,123	128,067
EBITDA	89,262	76,365	77,732	91,488	95,784	110,894
Depreciation	1,302	1,385	1,504	1,771	2,176	2,361
Amortisation	0	0	0	0	0	0
EBIT	87,960	74,980	76,228	89,718	93,608	108,534
Net interest income(expense)	0	-132	-19	-19	-19	-19
Associates/affiliates	0	0	0	0	0	0
Exceptionals/extraordinaries	-515	-1,732	443	0	0	0
Other pre-tax income/(expense)	20,150	22,389	20,945	21,000	22,000	19,000
Profit before tax	108,110	97,237	97,155	110,699	115,589	127,515
Income tax expense	34,942	32,081	33,397	38,053	39,734	43,834
Minorities	0	0	0	0	0	0
Other post-tax income/(expense)	0	0	0	0	0	0
Net profit	72,654	63,424	64,201	72,646	75,855	83,682
DB adjustments (including dilution)	0	0	0	0	0	0
DB Net profit	72,654	63,424	64,201	72,646	75,855	83,682
Cash Flow (INRm)						
Cash flow from operations	64,298	61,260	38,167	105,838	76,703	80,348
Net Capex	-10,418	-19,357	-22,288	-32,620	-52,736	-40,344
Free cash flow	53,880	41,902	15,879	73,218	23,967	40,004
Equity raised/(bought back)	0	0	0	0	0	0
Dividends paid	-20,736	-32,378	-39,427	-39,429	-39,429	-43,497
Net inc/(dec) in borrowings	0	0	0	0	0	0
Other investing/financing cash flows	-2,779	-1,913	-137	0	0	0
Net cash flow	30,365	7,612	-23,685	33,788	-15,462	-3,494
Change in working capital	*-10,244*	*-5,281*	*-27,095*	*31,421*	*-1,328*	*-5,694*
Balance Sheet (INRm)						
Cash and other liquid assets	202,646	210,258	186,572	220,361	204,898	201,405
Tangible fixed assets	26,830	45,008	66,392	97,241	147,801	185,785
Goodwill/intangible assets	0	0	0	0	0	0
Associates/investments	2,478	2,497	2,504	2,504	2,504	2,504
Other assets	34,531	51,181	59,302	51,316	55,073	62,955
Total assets	266,484	308,943	314,769	371,421	410,276	452,649
Interest bearing debt	0	0	0	0	0	0
Other liabilities	22,421	33,833	14,886	38,321	40,750	42,938
Total liabilities	22,421	33,833	14,886	38,321	40,750	42,938
Shareholders' equity	244,064	275,110	299,883	333,100	369,526	409,710
Minorities	0	0	0	0	0	0
Total shareholders' equity	244,064	275,110	299,883	333,100	369,526	409,710
Net debt	*-202,646*	*-210,258*	*-186,572*	*-220,361*	*-204,898*	*-201,405*
Key Company Metrics						
Sales growth (%)	nm	-5.0	12.6	17.3	8.4	14.3
DB EPS growth (%)	na	-12.7	1.2	13.2	4.4	10.3
EBITDA Margin (%)	79.3	71.3	64.5	64.7	62.5	63.3
EBIT Margin (%)	78.1	70.0	63.2	63.4	61.1	61.9
Payout ratio (%)	28.5	51.0	61.4	54.3	52.0	52.0
ROE (%)	33.3	24.4	22.3	23.0	21.6	21.5
Capex/sales (%)	9.3	18.1	18.5	23.1	34.4	23.0
Capex/depreciation (x)	8.0	14.0	14.8	18.4	24.2	17.1
Net debt/equity (%)	-83.0	-76.4	-62.2	-66.2	-55.4	-49.2
Net interest cover (x)	nm	568.0	nm	nm	nm	nm

Source: Company data, Deutsche Bank estimates

NMDC – 2020 outlook

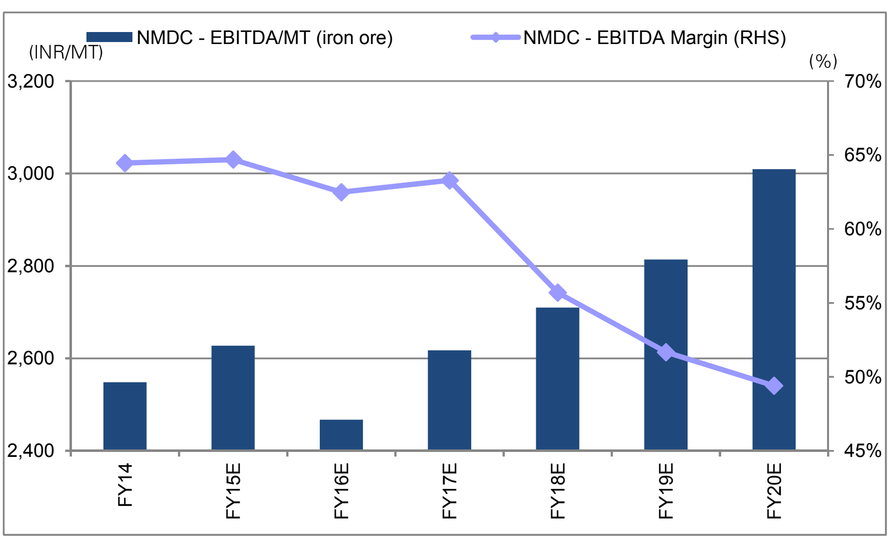
Figure 66: We forecast NMDC to report 10% CAGR in volumes over FY14-20 following 16% volume growth in FY14



Source: Company data, Deutsche Bank estimates

The opening up of new mines in Bailadila combined with easing of the logistical bottlenecks to drive 10% CAGR in NMDC's iron ore volumes over FY14-20.

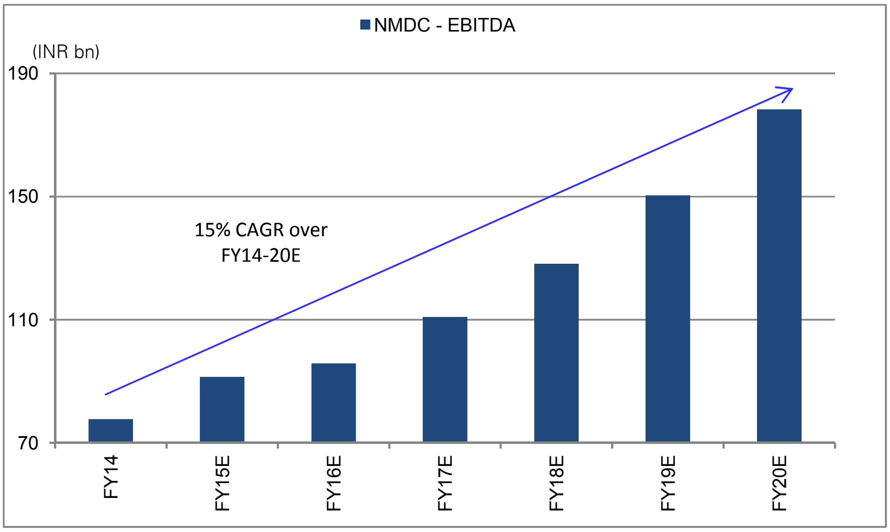
Figure 67: NMDC's profitability in the iron ore business (EBITDA/t) to drop in FY16 on account of price declines, before recovering in FY17



Source: Company data, Deutsche Bank estimates

NMDC's EBITDA margins are likely to decline in FY18 as we expect NMDC's 3mn tonne steel project in Jagdalpur to be commissioned in FY18, which will have significantly lower EBITDA margins compared to NMDC's mining business.

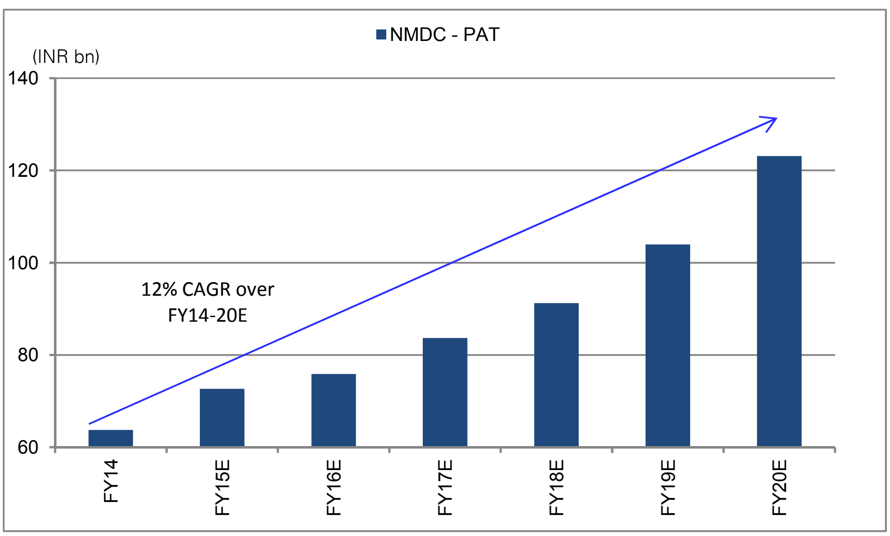
Figure 68: We forecast NMDC to report 15% CAGR in EBITDA over FY14-20



Source: Company data, Deutsche Bank estimates

NMDC's EBITDA growth over FY14-20 should be driven primarily by 10% CAGR in iron ore volumes over similar period

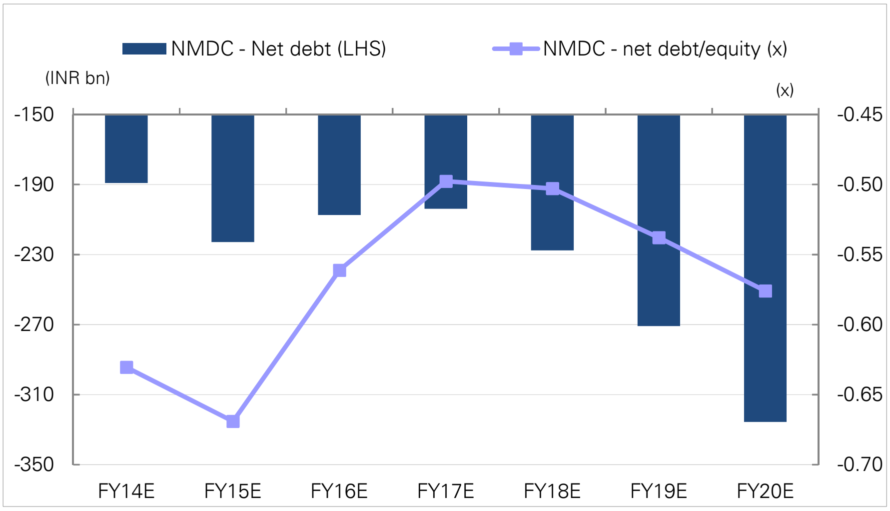
Figure 69: We forecast NMDC to report 12% CAGR in PAT over FY14-20



Source: Company data, Deutsche Bank estimates

NMDC's PAT growth over FY14-20 will mirror the EBITDA growth over similar period

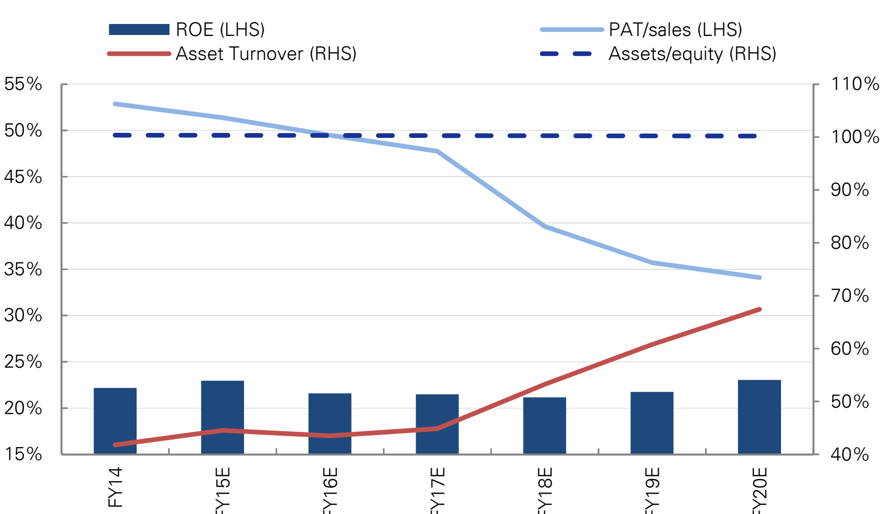
Figure 70: NMDC has the strongest balance sheet in the Indian ferrous sector with net cash of INR189bn in FY14



Source: Company data, Deutsche Bank estimates

We expect NMDC to be able to finance its 3mt steel capacity expansion without any undue stress on the balance sheet. We expect NMDC's to resume adding to its net cash post FY18, when its steel plant is commissioned.

Figure 71: NMDC RoEs are likely to sustain at FY14 levels over FY14-20, but will be lower than historical range of 27-46%



Source: Company data, Deutsche Bank estimates

While the commissioning of the steel plant is likely to adversely impact the margins, the impact is likely to be offset by improving asset turnover as the steel volumes ramp up

Figure 72: NMDC – Summary of 2020 analysis

		FY14	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E	*CAGR (%, FY14-20E)*
Iron ore sales volumes	**mn tonnes**	**31**	**35**	**39**	**42**	**47**	**51**	**54**	***10%***
Consolidated EBITDA	**INR mn**	**77,732**	**91,488**	**95,784**	**110,894**	**128,191**	**150,382**	**178,324**	***15%***
EBITDA margin	*%*	*64%*	*65%*	*62%*	*63%*	*56%*	*52%*	*49%*	
EBITDA/MT (iron ore)	**INR/MT**	**2,549**	**2,627**	**2,467**	**2,617**	**2,710**	**2,814**	**3,009**	***3%***
Consolidated EPS	**INR/share**	**16**	**18**	**19**	**21**	**23**	**26**	**31**	***12%***
ROE	(%)	22.2%	23.0%	21.6%	21.5%	21.2%	21.7%	23.0%	
ROCE	(%)	16.5%	17.6%	16.6%	17.3%	17.1%	17.5%	18.5%	
Net debt/equity	(x)	(0.6)	(0.7)	(0.6)	(0.5)	(0.5)	(0.5)	(0.6)	

Source: Company data, Deutsche Bank estimates

Figure 73: NMDC - Implied 2020 fair valuation at our current target multiples

Implied 2020 fair valuation at our current target multiples	**FY20**
EBITDA (INR mn)	178,324
Target Multiple	5
EV (INR mn)	**882,702**
Net debt (INR mn)	(325,656)
Implied market cap (INR mn)	**1,208,358**
Shares outstanding (mn)	3,965
Implied FY20 Fair value (INR/share)	**305**

Source: Deutsche Bank estimates; Investors should note the long time horizon and the inherent uncertainty and risks associated with our FY 2020 valuation; we make an ongoing concern assumption

For the purpose of arriving at a probable fair valuation for 2020, we use our current target multiple for NMDC - EV/EBITDA of 5x for India. With the relaxation of the domestic iron ore production curbs (Figure 28), we believe that NMDC's pricing power is unlikely to improve significantly from here, thus, keeping the valuation multiple at current levels.

Appendix A

Figure 74: Deutsche Bank Global Coking Coal* Supply/Demand Model

		2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e
Australian exports	Mt	134	158	134	144	169	179	186	193	206
growth	%	*-2%*	*18%*	*-16%*	*8%*	*17%*	*6%*	*4%*	*4%*	*7%*
Canadian exports	Mt	22	27	28	31	32	33	32	33	33
growth	%	*-18%*	*23%*	*2%*	*11%*	*4%*	*3%*	*-3%*	*3%*	*0%*
US exports	Mt	33	48	59	59	60	45	40	40	40
growth	%	*-7%*	*45%*	*24%*	*0%*	*1%*	*-24%*	*-11%*	*0%*	*0%*
China exports	Mt	4	5	8	7	6	6	6	6	6
growth	%	*-59%*	*39%*	*45%*	*-17%*	*-8%*	*0%*	*0%*	*0%*	*0%*
Other supply	Mt	43	63	59	74	72	83	88	89	92
Disruption allowance			-20	-20	-15	-20	-20	-20	-15	-15
Global traded coking coal supply	**Mt**	**236**	**281**	**268**	**300**	**318**	**326**	**332**	**346**	**362**
growth	%	*1%*	*19%*	*-5%*	*12%*	*6%*	*2%*	*2%*	*4%*	*5%*
Japanese imports	Mt	66	77	69	72	71	75	75	76	76
growth	%	*9%*	*17%*	*-11%*	*4%*	*0%*	*5%*	*1%*	*0%*	*0%*
Korea & Taiwan imports	Mt	25	34	38	40	40	41	43	45	46
growth	%	*-23%*	*36%*	*13%*	*4%*	*0%*	*4%*	*4%*	*3%*	*3%*
European imports	Mt	46	52	53	53	54	54	54	53	53
growth	%	*-30%*	*14%*	*2%*	*0%*	*0%*	*0%*	*0%*	*-1%*	*-1%*
China imports	Mt	34	47	45	71	75	63	48	69	69
growth	%	*912%*	*37%*	*-5%*	*58%*	*7%*	*-16%*	*-23%*	*43%*	*0%*
India imports	Mt	31	34	34	37	43	46	49	53	58
growth	%	*17%*	*11%*	*-1%*	*8%*	*16%*	*7%*	*8%*	*8%*	*10%*
Brazil imports	Mt	11	14	13	11	13	13	14	15	16
growth	%	*-32%*	*20%*	*-4%*	*-16%*	*19%*	*3%*	*5%*	*6%*	*5%*
Other imports / inventory adjustment	Mt	12	20	24	21	21	19	22	23	24
Global traded coking coal demand	**Mt**	**221**	**274**	**271**	**295**	**310**	**304**	**300**	**327**	**334**
growth	%	*-4%*	*24%*	*-1%*	*9%*	*5%*	*-2%*	*-1%*	*9%*	*2%*
Notional market balance	**Mt**	**15**	**7**	**-3**	**5**	**9**	**22**	**32**	**19**	**28**
Contract Hard Coking Coal	**USD/t**	**129**	**195**	**289**	**210**	**159**	**126**	**131**	**157**	**165**

*Source: McCloskey's, AME, BP, CEIC, Deutsche Bank Research, * Includes Hard Coking Coal, Semi-soft Coking Coal and PCI*

Figure 75: Deutsche Bank Global Iron Ore Supply/Demand Model

Supply		2009	2010	2011	2012	2013	2014e	2015e	2016e	2017e
Brazil	Mt	285	349	373	372	366	390	438	474	508
growth	%	*-12%*	*22%*	*7%*	*0%*	*-2%*	*6%*	*12%*	*8%*	*7%*
Australia	Mt	370	404	449	496	584	681	740	784	806
growth	%	*16%*	*9%*	*11%*	*10%*	*18%*	*17%*	*9%*	*6%*	*3%*
South Africa	Mt	55	61	57	59	63	65	67	67	68
growth	%	*12%*	*12%*	*-7%*	*4%*	*6%*	*3%*	*3%*	*1%*	*1%*
India	Mt	202	192	164	133	126	157	165	175	185
growth	%	*3%*	*-5%*	*-15%*	*-19%*	*-5%*	*25%*	*5%*	*6%*	*6%*
China	Mt	237	310	340	355	376	300	200	180	180
growth	%	*-21%*	*31%*	*10%*	*4%*	*6%*	*-20%*	*-33%*	*-10%*	*0%*
CIS incl. Russia	Mt	161	181	189	192	197	207	216	223	239
growth	%	*-6%*	*12%*	*5%*	*2%*	*3%*	*5%*	*4%*	*4%*	*7%*
North America	Mt	66	91	98	99	105	110	114	118	120
growth	%	*-32%*	*37%*	*8%*	*1%*	*6%*	*4%*	*4%*	*3%*	*1%*
West Africa	Mt	11	11	14	23	35	43	52	56	62
growth	%	*2%*	*-1%*	*23%*	*67%*	*53%*	*25%*	*20%*	*7%*	*11%*
Other regions	Mt	96	113	137	136	156	160	175	184	187
Total iron ore supply	**Mt**	**1,484**	**1,713**	**1,820**	**1,864**	**2,008**	**2,113**	**2,167**	**2,262**	**2,356**
growth	%	*-5.7%*	*15.5%*	*6.2%*	*2.4%*	*7.8%*	*5.2%*	*2.5%*	*4.4%*	*4.2%*
Demand		**2009**	**2010**	**2011**	**2012**	**2013**	**2014e**	**2015e**	**2016e**	**2017e**
Global steel production (crude steel)	Mt	1,235	1,430	1,534	1,543	1,606	1,661	1,706	1,763	1,799
Global BOF production	Mt	850	968	1,037	1,043	1,101	1,139	1,164	1,201	1,215
growth	%	-1.4%	13.9%	7.1%	0.6%	5.5%	3.5%	2.2%	3.1%	1.2%
% BOF	%	69%	68%	68%	68%	69%	69%	68%	68%	68%
European steel production (crude steel)	Mt	168	206	217	209	205	208	211	214	215
European BOF production	Mt	88	112	112	109	109	110	110	109	108
growth	%	-30%	28%	0%	-3%	0%	1%	1%	-1%	-1%
% BOF	%	52%	54%	52%	52%	53%	53%	52%	51%	50%
Japan steel production (crude steel)	Mt	88	110	108	107	111	112	113	113	113
Japan BOF production	Mt	68	86	83	82	85	86	87	87	86
growth	%	-23%	26%	-4%	0%	3%	2%	1%	0%	0%
% BOF	%	78%	78%	77%	77%	77%	77%	77%	76%	76%
India steel production (crude steel)	Mt	64	69	74	78	81	87	94	102	111
India BOF production	Mt	24	25	25	26	27	29	33	37	43
growth	%	3%	2%	1%	3%	5%	9%	12%	13%	16%
% BOF	%	38%	36%	34%	33%	33%	34%	35%	36%	38%
China steel prodution (crude steel)	Mt	577	639	702	717	779	809	826	854	863
China steel production (BOF)	**Mt**	**521**	**572**	**631**	**644**	**700**	**727**	**739**	**763**	**766**
growth	%	*16%*	*10%*	*10%*	*2%*	*9%*	*3.8%*	*1.7%*	*3.3%*	*0.5%*
% BOF	%	*90%*	*90%*	*90%*	*90%*	*90%*	*90%*	*89%*	*89%*	*89%*
Iron Ore										
China	Mt	824	910	996	1050	1137	1176	1192	1227	1229
growth	%	*13%*	*10%*	*10%*	*5%*	*8%*	*3%*	*1%*	*3%*	*0%*
Japan	Mt	109	134	132	132	136	138	139	139	138
growth	%	*-22%*	*23%*	*-2%*	*0%*	*3%*	*2%*	*1%*	*0%*	*0%*
S. Korea & Taiw an & other	Mt	63	79	95	93	95	91	97	102	106
growth	%	*-12%*	*24%*	*21%*	*-2%*	*2%*	*-5%*	*7%*	*6%*	*4%*
Europe	Mt	123	158	158	153	155	159	158	156	155
growth	%	*-30%*	*28%*	*0%*	*-3%*	*1%*	*2%*	*-1%*	*-1%*	*-1%*
India	Mt	93	97	102	106	111	119	128	139	152
growth	%	*3%*	*4%*	*5%*	*4%*	*5%*	*7%*	*8%*	*8%*	*10%*
Brazil	Mt	38	47	50	41	40	41	43	45	47
growth	%	*-29%*	*23%*	*8%*	*-19%*	*-3%*	*3%*	*5%*	*6%*	*5%*
CIS	Mt	118	127	131	134	134	138	144	150	153
growth	%	*-12%*	*8%*	*3%*	*2%*	*0%*	*3%*	*5%*	*4%*	*2%*
Total iron ore demand	**Mt**	**1,482**	**1,691**	**1,812**	**1,860**	**1,964**	**2,022**	**2,066**	**2,129**	**2,158**
growth	%	*-4.36%*	*14.07%*	*7.20%*	*2.64%*	*5.56%*	*2.95%*	*2.20%*	*3.06%*	*1.34%*
Implied scrap ratio	*%*	*25%*	*26%*	*26%*	*25%*	*24%*	*24%*	*24%*	*25%*	*25%*
Disruption allowance	*Mt*						*20*	*20*	*50*	*100*
Notional market balance	**Mt**	**2**	**22**	**8**	**3**	**44**	**71**	**80**	**82**	**98**
China imported fines (62% CFR)	**USD/t**	**79.8**	**146.6**	**167.0**	**123.8**	**130.0**	**101.0**	**91.3**	**90.0**	**88.0**

Source: AME, CRU, CEIC, Deutsche Bank

Acknowledgement

The authors of this report wishes to acknowledge the contribution made by Kumar Rahul Chauhan, employee of Irevna, a division of CRISIL Limited, a third-party provider to Deutsche Bank of offshore research support services.

Appendix 1

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Additional information available upon request

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Company	Ticker	Recent price*	Disclosure
Tata Steel	TISC.BO	450.55 (INR) 28 Oct 14	1,14
JSW Steel	JSTL.BO	1,220.00 (INR) 28 Oct 14	8,14
Steel Authority of India	SAIL.BO	81.40 (INR) 28 Oct 14	14,17
NMDC	NMDC.BO	164.75 (INR) 28 Oct 14	NA

*Prices are current as of the end of the previous trading session unless otherwise indicated and are sourced from local exchanges via Reuters, Bloomberg and other vendors . Data is sourced from Deutsche Bank and subject companies.

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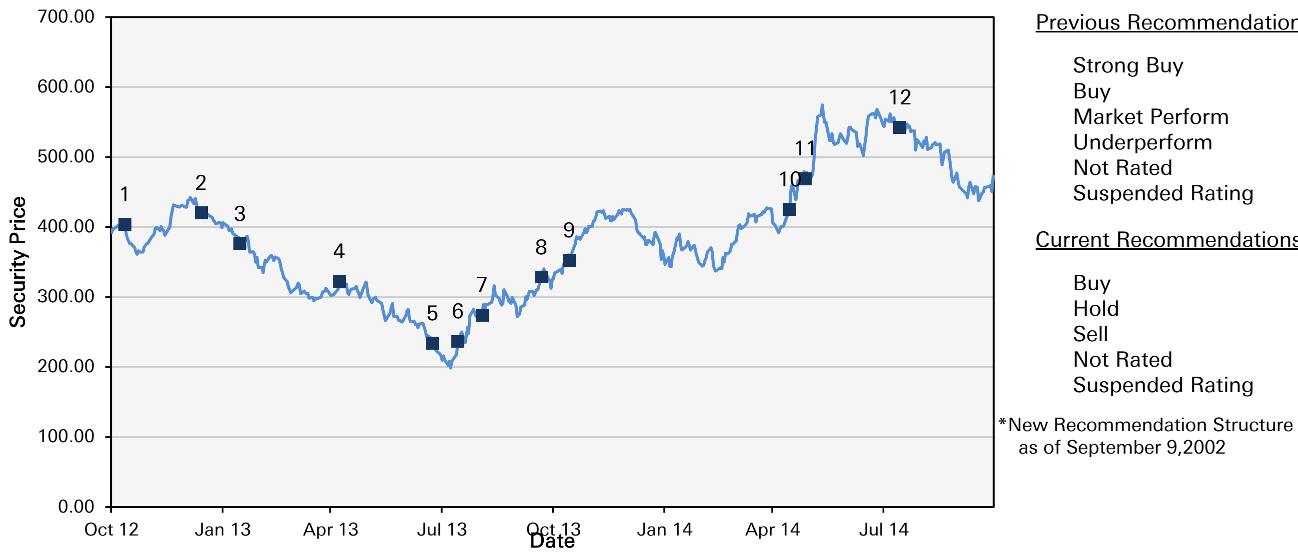
Historical recommendations and target price: Tata Steel (TISC.BO)

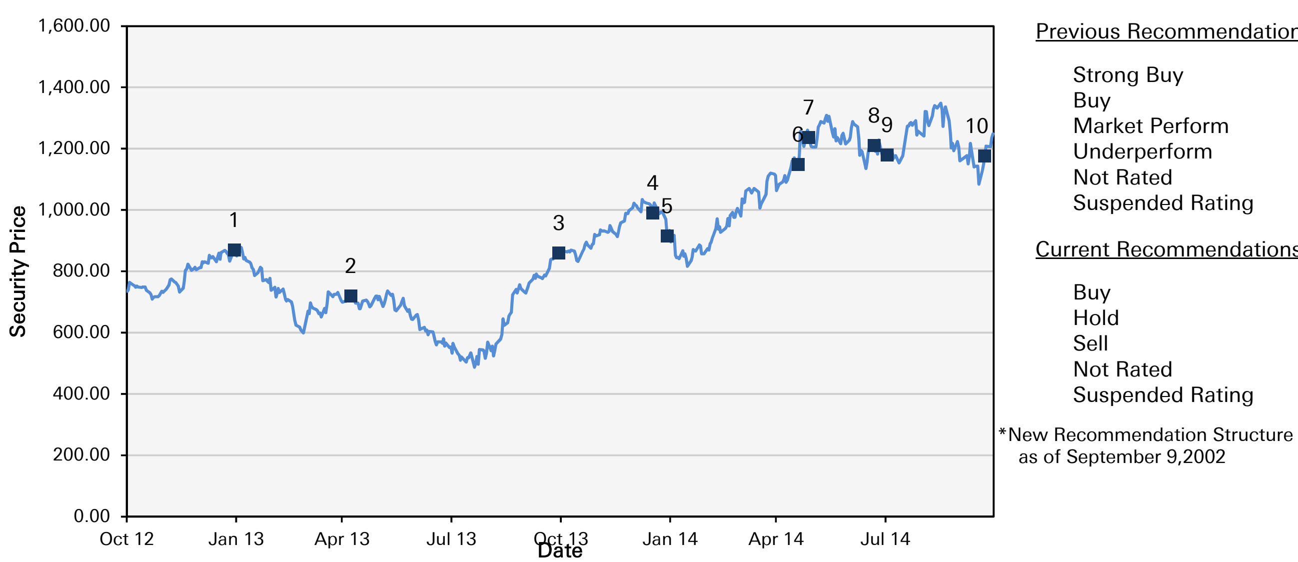
(as of 10/29/2014)



1.	11/11/2012:	Buy, Target Price Change INR445.00	7.	02/09/2013:	Buy, Target Price Change INR340.00
2.	13/01/2013:	Buy, Target Price Change INR480.00	8.	21/10/2013:	Buy, Target Price Change INR372.00
3.	14/02/2013:	Buy, Target Price Change INR445.00	9.	13/11/2013:	Buy, Target Price Change INR525.00
4.	07/05/2013:	Buy, Target Price Change INR380.00	10.	14/05/2014:	Buy, Target Price Change INR570.00
5.	23/07/2013:	Buy, Target Price Change INR286.00	11.	27/05/2014:	Buy, Target Price Change INR600.00
6.	13/08/2013:	Buy, Target Price Change INR301.00	12.	13/08/2014:	Buy, Target Price Change INR665.00

Historical recommendations and target price: JSW Steel (JSTL.BO)

(as of 10/29/2014)



1.	29/01/2013:	Buy, Target Price Change INR930.00	6.	18/05/2014:	Buy, Target Price Change INR1,220.00
2.	07/05/2013:	Buy, Target Price Change INR845.00	7.	27/05/2014:	Buy, Target Price Change INR1,420.00
3.	29/10/2013:	Buy, Target Price Change INR900.00	8.	21/07/2014:	Buy, Target Price Change INR1,390.00
4.	16/01/2014:	Buy, Target Price Change INR1,125.00	9.	01/08/2014:	Buy, Target Price Change INR1,400.00
5.	28/01/2014:	Buy, Target Price Change INR1,130.00	10.	22/10/2014:	Buy, Target Price Change INR1,542.00

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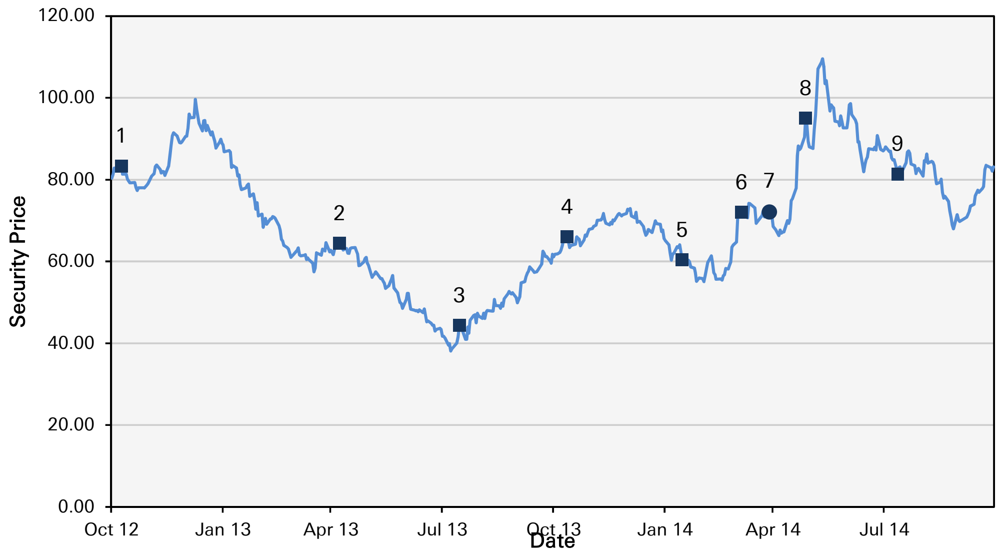
(as of 10/29/2014)



Previous Recommendations

Strong Buy
Buy
Market Perform
Underperform
Not Rated
Suspended Rating

Current Recommendations

Buy
Hold
Sell
Not Rated
Suspended Rating

*New Recommendation Structure as of September 9,2002

1. 08/11/2012: Buy, Target Price Change INR106.00
2. 07/05/2013: Buy, Target Price Change INR82.00
3. 14/08/2013: Buy, Target Price Change INR75.00
4. 11/11/2013: Buy, Target Price Change INR74.00
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6. 04/04/2014: Buy, Target Price Change INR74.00
7. 27/04/2014: Downgrade to Hold, INR74.00
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9. 11/08/2014: Hold, Target Price Change INR92.00

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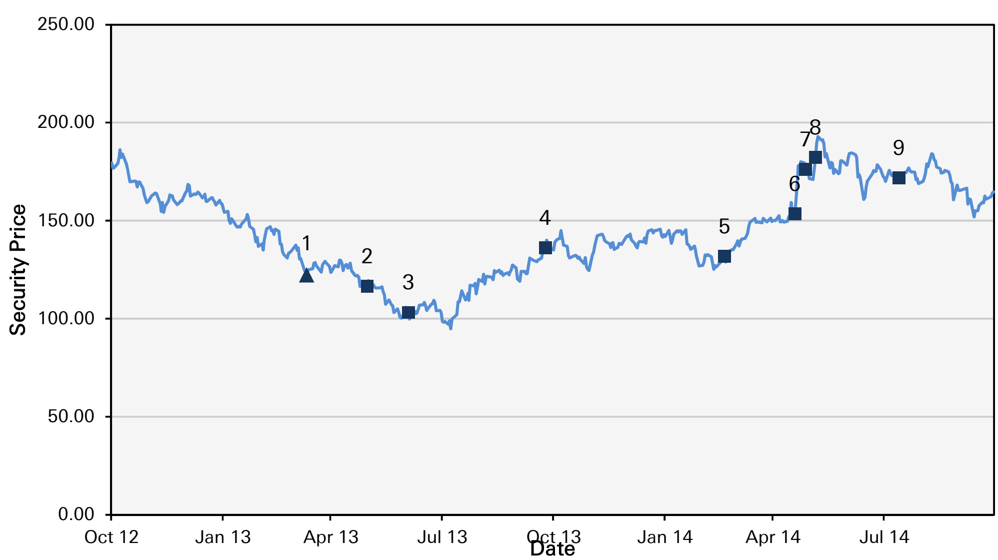
(as of 10/29/2014)



Previous Recommendations

Strong Buy
Buy
Market Perform
Underperform
Not Rated
Suspended Rating

Current Recommendations

Buy
Hold
Sell
Not Rated
Suspended Rating

*New Recommendation Structure as of September 9,2002

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5. 21/03/2014: Buy, Target Price Change INR160.00
6. 18/05/2014: Buy, Target Price Change INR170.00
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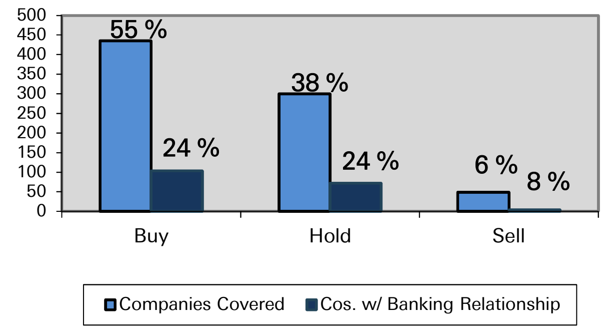
Equity rating dispersion and banking relationships



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Regional Head Asia Pacific Research	Regional Head Deutsche Bank Research, Germany	Regional Head Equity Research, Germany	Regional Head Americas Research

International locations

Deutsche Bank AG
Deutsche Bank Place
Level 16
Corner of Hunter & Phillip Streets
Sydney, NSW 2000
Australia
Tel: (61) 2 8258 1234

Deutsche Bank AG
Große Gallusstraße 10-14
60272 Frankfurt am Main
Germany
Tel: (49) 69 910 00

Deutsche Bank AG
Filiale Hongkong
International Commerce Centre,
1 Austin Road West,Kowloon,
Hong Kong
Tel: (852) 2203 8888

Deutsche Securities Inc.
2-11-1 Nagatacho
Sanno Park Tower
Chiyoda-ku, Tokyo 100-6171
Japan
Tel: (81) 3 5156 6770

Deutsche Bank AG London
1 Great Winchester Street
London EC2N 2EQ
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Tel: (44) 20 7545 8000

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