



# Jindal Steel & Power

**BSE SENSEX** 28,893  
**S&P CNX** 8,940

**CMP: INR117**      **TP: INR180(+54%)**      **Buy**



## Stock Info

Bloomberg	JSP IN
Equity Shares (m)	915
52-Week Range (INR)	118/52
1, 6, 12 Rel. Per (%)	41/33/84
M.Cap. (INR b)	106.8
M.Cap. (USD b)	1.6
Avg Val, INRm	902.9
Free float (%)	38.1

## Financials Snapshot (INR b)

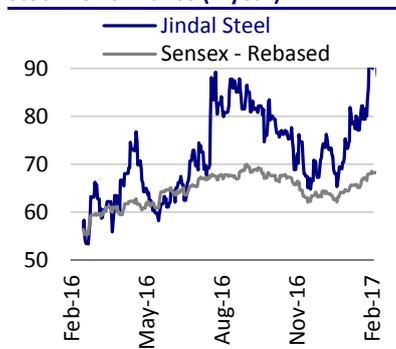
Y/E Mar	2017E	2018E	2019E
Net Sales	209.1	254.2	313.4
EBITDA	44.8	60.9	78.3
PAT	-21.8	-16.0	-2.0
EPS (INR)	-23.9	-17.5	-2.2
Gr. (%)	31.1	-26.7	-87.4
BV/Sh (INR)	395.8	377.9	375.2
RoE (%)	-8.0	-4.5	-0.6
RoCE (%)	0.6	1.8	3.7
P/E (x)	-4.9	-6.7	-52.9
P/BV (x)	0.3	0.3	0.3

## Shareholding pattern (%)

As On	Dec-16	Sep-16	Dec-15
Promoter	61.9	61.9	61.9
DII	1.8	1.8	3.6
FII	17.6	18.2	18.7
Others	18.7	18.1	15.8

FII Includes depository receipts

## Stock Performance (1-year)



## New furnace to drive sharp turnaround

**Global Ventures' debt servicing improving; upgrade to Buy**

### Steel business to drive turnaround

- Jindal Steel & Power (JSP) is in advanced stages of commissioning a new 3mtpa furnace, which would increase its total steelmaking capacity in India to 8mtpa.
- The new blast furnace would correct hot metal mix, reduce operating costs, and leverage existing infrastructure to drive turnaround of its Angul plant.

### Global Ventures – USD2b debt now serviceable

- Global Ventures (GV) comprises coking coal mines in Australia and Mozambique, thermal coal mine in South Africa, and a profitable 2mtpa DRI-EAF route steel plant in Oman.
- Rising coking coal prices have led to a turnaround of the mines. With EBITDA run-rate of ~USD130m, USD2b debt in GV is now serviceable.

### Attractive 750MW PPAs and EUP1 sale to boost cash flows

- 3,400MW power capacity is now fully commissioned and capex is behind. We expect EUP1 (1,000MW) to generate INR40b cash flow on asset sale in FY19.
- EUP2 is highly valuable, as it secured 750MW long-term PPAs from Tamil Nadu and Kerala at attractive gross margin when the market was tight.
- The future of EUP3 (1,200MW) and merchant market remains uncertain due to oversupply. Hence, we are not factoring material cash flows from these.

### Sharp turnaround in cash profit, though asset revaluation impacting PAT

- We expect standalone sales volume to grow at a CAGR of 31% to 5.8mt and EBITDA to grow at a CAGR of 35% to INR52b over FY17-19. Our estimate of 4.5mt for FY18 is conservative relative to JSP's guidance of 6mt; we have factored in teething problems during startup of the new furnace. Consolidated EBITDA would grow at a CAGR of 35% to INR52b over FY17-19.
- There is a sharp turnaround in cash profits. Yet, adjusted PAT would be negative due to bloated depreciation on massive asset revaluation in 1HFY17.

### Upgrading to Buy, with a target price of INR180

- The Angul site can accommodate much larger 12mtpa capacity, which implies that new capacity addition would require low specific capex, shorter execution cycle, and deliver superior IRR. The site is strategically located in an over-supplied iron ore region and is close to ports.
- While there are some risks (steel and coking coal prices, slower production ramp-up) to our estimates, there could be upside if any of several anticipated events (access to iron ore inventories at Sarda mines, captive iron ore mines in auction, PPA for idle 1,500MW capacity, etc) play out.

We are raising our target price to INR180 (based on SOTP; earlier INR88 based on replacement cost) and are upgrading our recommendation to **Buy**.

**Sanjay Jain** (SanjayJain@MotilalOswal.com); +91 22 6129 1523

**Dhruv Muchhal** (Dhruv.Muchhal@MotilalOswal.com); +91 22 6129 1549

**Investors are advised to refer through important disclosures made at the last page of the Research Report.**

Motilal Oswal research is available on [www.motilaloswal.com/Institutional-Equities](http://www.motilaloswal.com/Institutional-Equities), Bloomberg, Thomson Reuters, Factset and S&P Capital.

## Steel business to drive turnaround

### New 3mtpa furnace to drive cost reduction and strong volume growth

- JSP is in advanced stages of commissioning its new 3mtpa furnace, which would increase its total steelmaking capacity in India to 8mtpa.
- Sales volume would grow at a CAGR of 31% over FY17-19.
- Cost of production would decline on more favorable share of hot metal in mix.
- We expect standalone EBITDA to grow at a CAGR of 35% over FY17-19.

### New 3mtpa capacity in advanced stages of commissioning

Jindal Steel and Power (JSP) is in advanced stages of commissioning its new 3mtpa BoF route steel plant expansion (1-A) at Angul at low additional capex of INR50b-70b. It plans to commission various facilities in FY18 as per the following schedule:

- **1.9mtpa coke oven:** Light-up has already started. Full commissioning is planned by the end of March 2017.
- **5mtpa sinter plant:** April 2017.
- **3.85mtpa (4,554m<sup>3</sup>) blast furnace:** April 2017.
- **Steel melt shop:** BoF is likely to be commissioned in August 2017. The existing EAF would also be converted into BoF.
- **Caster:** 2.3mtpa billet caster has already been commissioned on December 10, 2014. Another billet caster is planned to match capacities.
- **Rebar mill:** 1.4mtpa capacity was commissioned during 1QFY17.

Exhibit 1: Expansion of capacity at Angul 1-A (revised configuration v/s original plan 1B)

MAJOR FACILITIES OF PHASE 1B			
<b>COKE OVEN</b> March 2017 CAPACITY- 1.9 MTPA SIZE- 4X72 OVEN TECHNOLOGY SUPPLIER- SINO STEEL, CHINA	<b>SINTER PLANT</b> April 2017 CAPACITY- 5 MTPA AREA- 490 M <sup>2</sup> TECHNOLOGY SUPPLIER- SIEMENS VAI, AUSTRALIA	<b>BLAST FURNACE</b> March 2017 CAPACITY- 3.85 MTPA VOLUME 4554 M <sup>2</sup> TECHNOLOGY SUPPLIER- SIEMENS VAI, UK	<b>DRI - 2</b> Cancelled CAPACITY- 2.5 MTPA TECHNOLOGY SUPPLIER- HYL MEXICO
<b>BOF SHOP</b> CAPACITY- 4.5 MTPA BASIC OXYGEN FURNACE-2X250T LADLE RH- TECH- 2.25mt by Aug 2017 SMS SIEMAS, GERMANY	<b>BILLET CASTER</b> CAPACITY- 2 MTPA STRAND-8 Dec 2014 TECHNOLOGY SUPPLIER- SMS CONCAST, ZURICH	<b>BAR MILL</b> CAPACITY- 1.4 MTPA TECHNOLOGY SUPPLIER- SMS MEER, GERMANY April 2016	<b>NSM</b> CAPACITY 3.5 MTPA TECHNOLOGY SUPPLIER- SMS SIEMANG, GERMANY

Source: MOSL

1-A capex is lower because some of the downstream facilities (for example, 2.3mtpa billet caster, 1.4mtpa rebar mill, etc) have already been commissioned and capitalized in the books. Investment in BoF too has been reduced because only one of the two BoF is being implemented initially. Modification of existing EAF into NEOF (New Electric Oxygen Furnace - BoF equivalent) would partly compensate for the postponed BoF. Though nameplate capacity would expand to 5mtpa, practical saleable steel production might be capped at 3-3.5mtpa until further investment in balancing facilities is done.

**By-product gases to partially improve DRI’s viability**

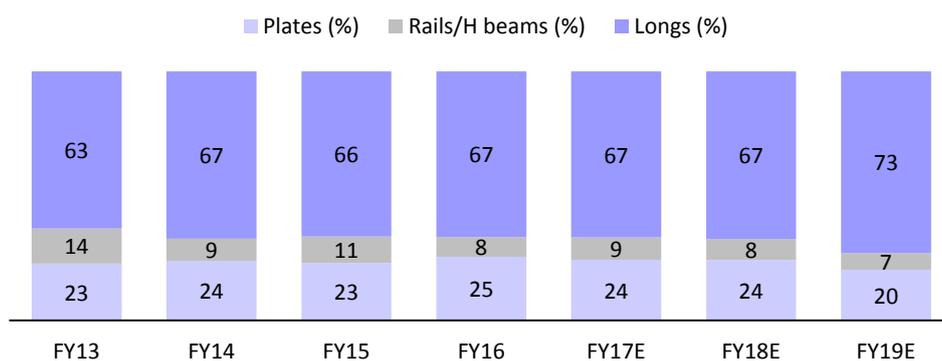
Steel making through DRI-Syn gas (coal gasification) route is unviable in the absence of captive coal mines. Therefore, we expect that DRI production at Angul to remain subdued, though coke oven gases would substitute synthetic gas to the extent of 25% and help reduce cost of production. The actual DRI production would hinge on market conditions and cost of production.

**Product mix challenges in achieving capacity utilization**

Product mix is another challenge in ramping up volumes. Though the cost of production of plates would be lower than Indian competition, JSP’s production facilities are away from the demand center in western India. Strong export market conditions are necessary for it to achieve targeted production. In the long product segment, the competition is high from secondary steel producers. Yet, JSP would have an edge because of economies of scale. We expect domestic demand to start accelerating with time. In terms of pricing, long products have underperformed due to economic slowdown in investment cycle. The presence of primary producers (such as Tata, JSW, Essar, Bhushan) in long products is low. We believe JSP would have a clear competitive advantage, as its new BoF gets commissioned.

High exposure to long products and plates

**Exhibit 2: Product Mix**



Source: MOSL, Company

**33% CAGR in steel production over two years**

At 2.5mt, JSP’s production during 9MFY17 was below our estimate. Yet, it could finish the year with total production of 3.5mt against capacity of 5mtpa in India (Angul and Raigarh). There are primarily two reasons for the underperformance. First, the DRI-syn gas plant is still not getting stabilized – suffered a major breakdown during 1QFY17 – which would be rectified only after the new BoF is commissioned in 2HFY18. Second, tight liquidity forced the management to move away from low margin products to reduce working capital.

Tight liquidity and break-downs impacted FY17 volumes

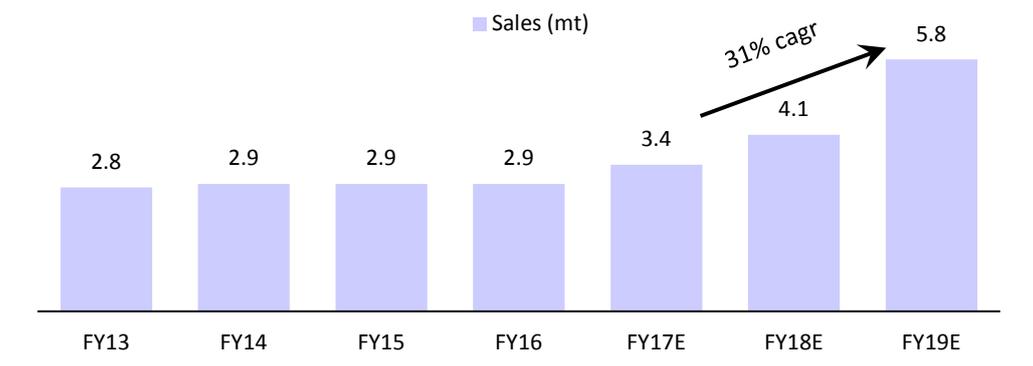
FY18 is likely to be similar to FY17, as liquidity remains tight and there would be many operational challenges during the commissioning phase. We estimate 4.5mt steel production against management guidance of 6mt for FY18. There might be additional sale of pig iron, if the new blast furnace is commissioned on time.

Factor in volume of 4.5mt against guidance of 6mt for FY18

We expect steel production to ramp up to 6mt in FY19, though nameplate capacity would have increased to 8mtpa. Margins in the DRI process would remain volatile. We are basing our estimates on hot metal and BoF availability. Steel sales volumes are likely to grow at a CAGR of 31% to 5.8mt over FY17-FY19.

Expect ~6mt production in FY19

**Exhibit 3: Standalone steel volumes**

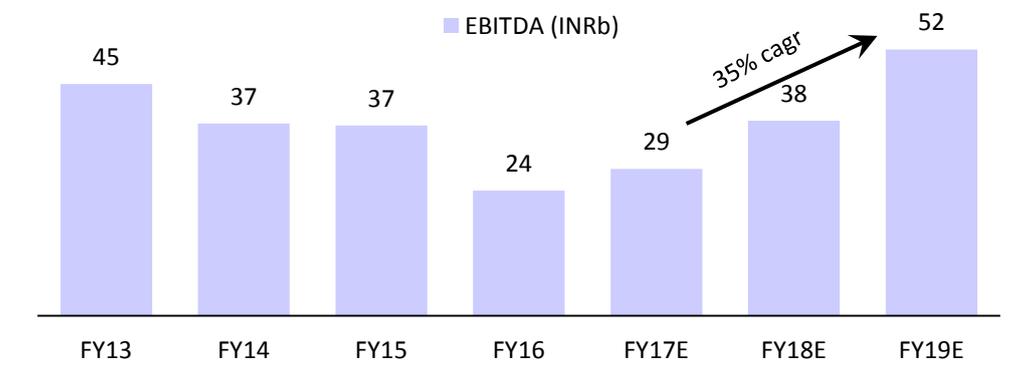


Source: MOSL

Standalone EBITDA likely to grow at a CAGR of 35% to INR52b over FY17-19

Steel segment margins are likely to expand, driven by operating leverage and new 3mtpa BoF capacity at Angul. We expect EBITDA/t of INR8,000 and additional benefits from continued sales of 2.8mt pellets. JSP reported EBITDA/t of ~INR7,800 (excluding EBITDA on pellet sales) in 3QFY17. We believe EBITDA/t of INR8,000 is achievable and expect standalone EBITDA to grow at a CAGR of 35% to INR52b over FY17-19. The key drivers of margins are: (1) higher steel prices, (2) dilution of product mix, (3) higher coking coal prices, (4) lower benefit of iron ore integration, and (5) major benefits on operating costs from new BoF.

**Exhibit 4: Standalone EBITDA**



Source: MOSL

## Analyzing cost of production

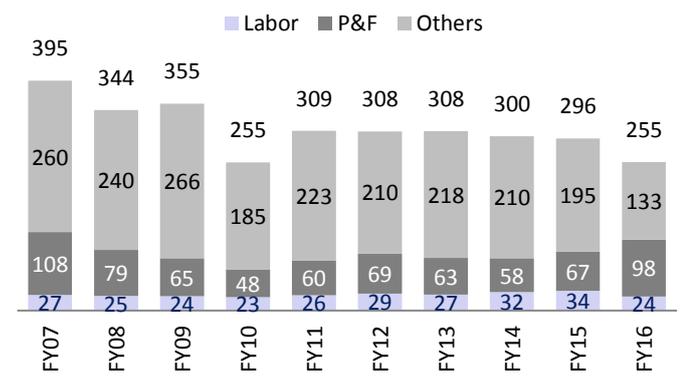
### New furnace to correct hot metal mix and reduce operating costs

- High share of DRI in metallic is the key reason for high operating costs.
- New blast furnace would partially correct hot metal mix and reduce CoP.

### Benchmarking highlights flaws in technology selection

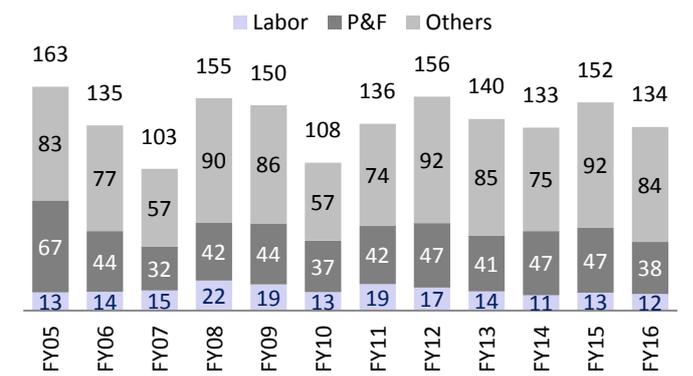
A comparison of JSP's conversion cost and net sales realization (NSR) with JSW Steel reveals that both companies have similar NSR despite complementary product mix. JSP is mainly in longs and plates, while JSW Steel is in largely in flat products. JSP's conversion cost is much higher than JSW Steel's. JSP has historically benefited from lower raw material (RM) cost due to captive iron ore, coal mines, and attractive iron ore supply arrangement with Sarda Mines. Once the supplies from Sarda iron ore mines and captive coal mines got snapped, JSP's RM cost advantage versus JSW Steel disappeared and its margins came under pressure due to high conversion cost. Therefore, it is important to understand the conversion process for JSP.

Exhibit 5: JSP's conversion cost (UD/t)



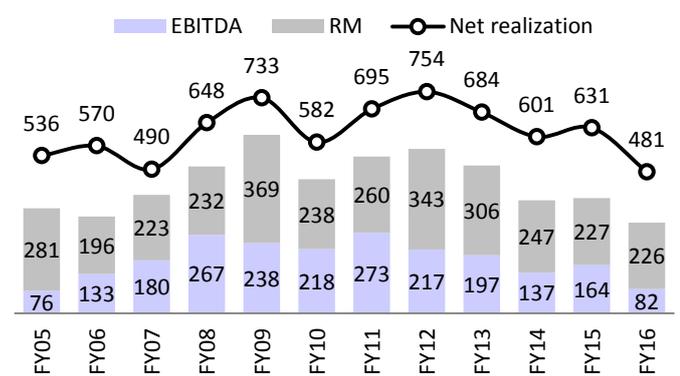
Source: MOSL

Exhibit 6: JSW Steel's conversion cost (UD/t)



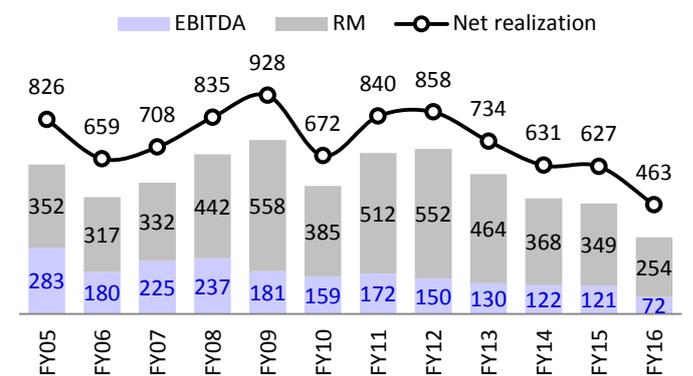
Source: MOSL

Exhibit 7: JSP (USD/t)



Source: MOSL

Exhibit 8: JSW Steel (USD/t)



Source: MOSL

**Analyzing reason behind high conversion cost**

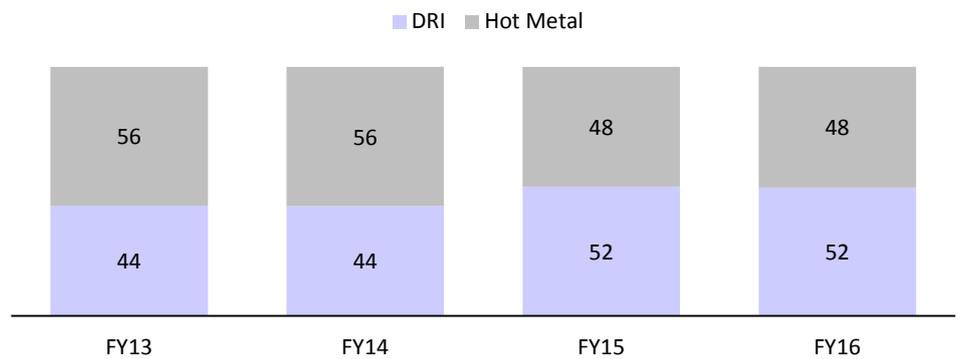
JSP had adopted the sponge iron process to capitalize on captive coal mines. Its sponge iron (or DRI) capacity is 3.4mt, while its hot metal capacity is only 2.1mt. This implies ~62% share of capacity of solid metallic. The operating cost through sponge iron route is always much higher. The process is not competitive unless subsidized by cheaper iron ore and thermal coal. The DRI-syngas route is even more expensive because of addition of one more process (coal gasification). Coal gasification requires heavy consumption of oxygen. Oxygen production is energy-intensive. After commissioning of coal gasification plant at Angul, the power and fuel cost per ton of steel production shot up in FY15 and FY16. Post losing captive coal and iron ore supply from Sarda mines, JSP has tried to maximize production of hot metal and reduce sponge iron production in the mix. This has led to loss of capacity utilization and increase in conversion cost.

**New blast furnace to partially correct hot metal mix and reduce CoP**

With the commissioning of new blast furnace, JSP would partly correct its hot metal mix and possibly reduce conversion cost. At steel production of 6mt, the hot metal mix can increase to 75-80% (from 48% in FY16). Therefore, we expect significant reduction in operating costs, which would drive margins.

Share of hot metal in metallic would increase sharply from 48% in FY16 to 75-80% in FY19 on commissioning of new blast furnace

**Exhibit 9: Actual share of DRI/Hot metal in production of metallic**



Source: MOSL, Company

## Global Ventures – USD2b debt is now serviceable

### Coking coal prices are key driver of turn around

- Global Ventures (GV) comprises coking coal mines in Australia and Mozambique, thermal coal mine in South Africa, and a profitable steel plant in Oman.
- Rising coking coal prices have led to a turnaround of mines. With EBITDA run-rate of ~USD130m, USD2b debt in GV is now serviceable.

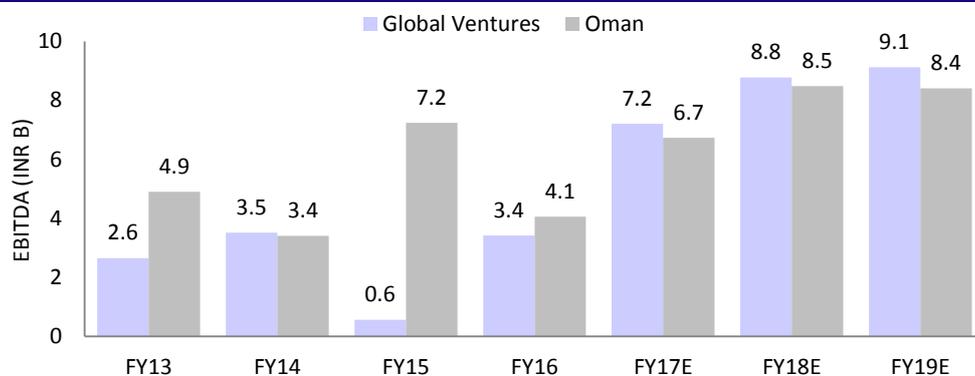
Coking coal mines in Australia are producing 100ktpm. Cost of production has reduced to USD60/t on FOB-Australia basis after cost-cutting measures. Permanent staff count has been reduced from 460 to 60, and a lot of work has been outsourced. It plans to restart Russel Vale mines using bord-and-pillar method of mining (abandoning long wall) due to geographical challenges. Coal production is expected to increase to 200-250kt. The coking coal has high ash content and is priced at 40% discount to the benchmark index. Therefore, it is important that the index remains above USD110/t for economic sustainability of the mines. Coal from these mines is exported to the Angul steel plant for washing and use in blast furnace. Coal washing machines would be relocated from Raigarh to Angul, as the latter is closer to ports. We do not factor material profit from these mines.

Production is expected to ramp up at mines in Mozambique, as well. The quality of coal is better than Australian mines; yet, it is priced at 20% discount to the benchmark. The cost of production (including transportation and loading on ships) is high at USD90/t. Therefore, the benchmark coking coal index needs to trade above USD120/t for economic sustainability.

Oman steel plant is highly profitable because it has very attractive long-term gas supply contracts. This steel plant too benefits from high coking coal prices, because coking prices drive steel prices higher, while cost of gas remains unchanged for this steel plant. It has recently forward integrated into rebar mill.

Oman steel plant is key driver of GV's EBITDA

**Exhibit 10: Global Ventures**



Source: MOSL

## Jindal Power: Source of steady cash flows

### Attractive 750MW PPA and EUP1 sale key drivers of cash flows

- 3,400MW capacity is now fully commissioned and capex is behind. We expect EUP1 (1,000MW) to generate INR40b cash flow on asset sale in FY19.
- EUP2 is highly valuable, as it secured 750MW long-term PPAs from Tamil Nadu and Kerala at attractive gross margin when the market was tight.
- The future of EUP3 (1,200MW) and merchant market remains uncertain due to oversupply. Hence, we are not factoring material cash flows from these.
- PV of cash flows is INR203b (EUP1=INR40b, EUP2=INR113b, EUP3=INR50b).

### EUP1 (1,000MW) sale to drive home INR40b

JSP has signed an MoU with JSW Energy for the sale of its 1,000MW (4x250MW) power plant, EUP1 at a valuation of INR40b-65b. The long stop date for this transaction is June 2018. We believe JSP would be able to fetch only INR40b (by FY19E) in view of oversupply in the sector.

### EUP2 (1,200MW): Highly valuable 750MW PPAs

EUP2 has been able to fetch three PPAs totaling 750MW from the states of Kerala and Tamil Nadu, as it has coal linkages from Coal India. Profitability is high due to low cost of generation and attractive rates secured during 2012-14, when the southern region had supply shortage. The total supply commitment is 870MW, which includes 120MW of concessional power to the home state of Chhattisgarh. The average tariff is INR3.97/kwh and gross margin is INR2.68/kwh. The gross margin in these PPAs is nearly double the gross margin for NTPC.

EUP2 is likely to generate EBITDA of INR17b annually

#### Exhibit 11: Long term PPAs

Project	Buyer	Period		PPA (MW)	Total	Tariff (INR/kwh)					
		From	To			fuel		fixed	Transmission		Gross Margin
						coal	logistic		charges	loss	
EUP2	Tamil Nadu*	Feb-14	Sep-28	400	4.91	0.69	0.17	4.05	0.35	0.17	3.53*
EUP2	KSEB	Jun-16	May-41	200	3.60	0.69	0.17	2.74	0.35	0.13	2.26
EUP2	KSEB	Oct-17	Sep-42	150	4.29	0.69	0.17	3.43	0.35	0.15	2.93
EUP2	Chhattisgarh	Asset life		60	1.06	0.69	0.17	0.20			0.20
EUP3	Chhattisgarh	Asset life		60	1.06	0.69	0.17	0.20			0.20
				870	3.97						2.68

Note: fuel and transmission costs are scalable with CERC determined inflation index \*structured

Source: MOSL/KSEB/TNGEDCO

According to our calculations, EUP2 should generate EBITDA of INR17b, annually. The DCF value of these cash flows is about INR113b. If it is able to secure 325MW PPA from UP where it is L2, the cash flows and DCF value would increase further. However, we are not very optimistic about additional PPAs, because UP Electricity Board is under fire from the regulator for buying expensive power in the past.

### EUP3 (1,200MW): No PPA; so, no cash flows factored

EUP3 was not able to secure coal linkages until the last committee meeting. Therefore, it has not been able to participate in long-term PPA bids. The future of this capacity remains uncertain. We do not factor any cash flows from this unit in our valuations. EUP3's 600MW units, being more efficient, may be used for captive supply to JSP's steel plants. Smaller, less efficient captive power units might be shut.

We are valuing it at INR50b based on replacement cost

## Sharp turnaround in cash profit

### Raising TP to INR180/share and upgrading to BUY

- EBITDA to increase at cagr of 32% to INR78b over FY17-19E.
- There is sharp turnaround in cash profits. Adj. PAT will still be negative due to bloating of depreciation on massive revaluation of assets.
- Target price raised to INR180/share (earlier INR88) based on SOTP. Although there are some risks to our estimates, yet there may be upside if some the highlighted events play out. Upgrading to BUY.

### EBITDA to increase at cagr of 35%

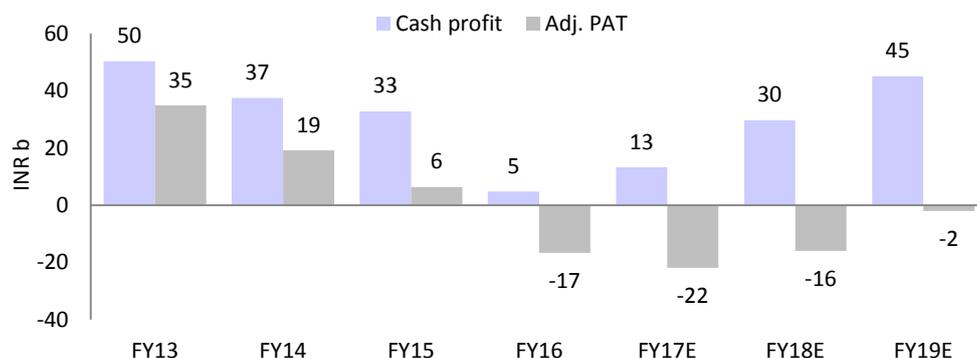
We have reworked our model to incorporate commissioning of new blast furnace and to introduce FY19E estimates. We expect consolidated EBITDA to increase at cagr of 32% to INR78b over FY17-19E.

- We expect steel sales volumes to increase at cagr of 31% to 5.8mt over FY17-19E and standalone EBITDA to increase at cagr of 35% to INR52b.
- GV is expected to contribute INR9b EBITDA in FY19E largely driven by Oman steel plant.
- Jindal Power will lose some revenue on sale of EUP1, but the EBITDA will increase at cagr of 39% to INR17.3b over FY17-19E driven by full ramp up of attractive 750MW PPAs.

### Sharp turnaround in cash profit though asset revaluation impacting PAT

JSP has recently revalued its asset by INR209b to avoid fast depletion of net worth on mounting losses. Although it has boosted net worth and reduced debt to equity ratio, yet it has badly impacted the return ratios permanently. Despite sharp jump in cash profit, the PAT and RoE will still be negative.

### Exhibit 12: Sharp turnaround in cash profit



Source: MOSL

### Raising target price to INR180/share; upgrading to Buy

The addition of new blast furnace is value accretive. It boosts volumes and reduces cost of production. The capex on this piece of addition is low because investment on infrastructure (land, captive power plants, RM handling plants, railway sidings, oxygen plant, residential complex, R&R and other auxiliary services) and downstream facilities (caster and rolling mills) is already incurred. The Angul site has been prepared for 12mtpa capacity. This would drive growth at much lower incremental capex. As a result, there is a turnaround in cash profit. We value the steel business at 6.5x FY19E EBITDA and power business on DCF (PV of JPL's FCFF). The SOTP value is now revised to INR180/share. Earlier, we were valuing the company at INR88/share based on replacement cost due to losses. We are upgrading the stock to **Buy**.

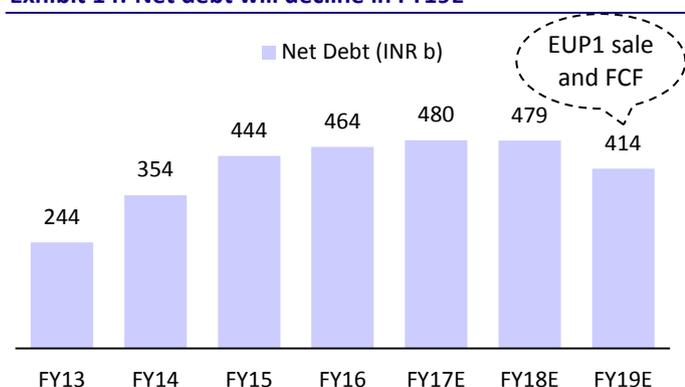
**Exhibit 13: Sum-of-the-parts valuation**

INR million

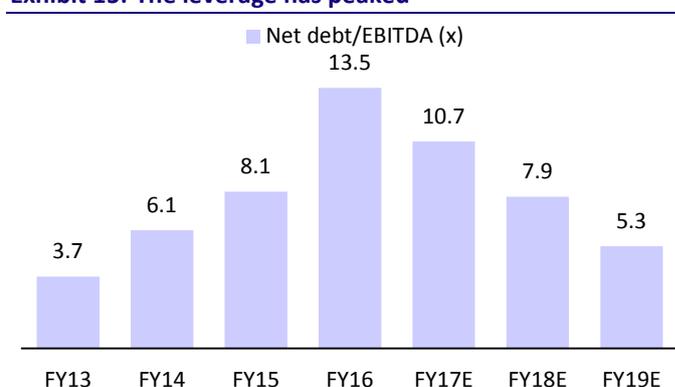
YEAR	FY13	FY14	FY15	FY16	FY17E	FY18E	FY19E
<b>Steel Business</b>							
A. EBITDA	47,773	40,941	37,618	27,810	35,826	46,793	60,985
B. Target EV/EBITDA(x)					6.5	6.5	6.5
C. EV (AxB)					232,871	304,153	396,405
<b>Jindal Power (JPL)</b>							
D. PV of JPL's FCFF					168,848	167,418	163,330
<b>Consolidated</b>							
EBITDA	65,685	57,764	54,598	34,410	44,810	60,948	78,281
E. Enterprise Value (C+D)					401,719	471,571	559,735
F. Net Debt	244,180	353,529	443,617	463,928	479,962	479,169	414,378
G. CWIP	192,303	178,112	90,728	118,266	89,266	59,266	19,266
Equity Value (E-F+G)						51,668	164,623
<b>Target price (INR/share)</b>						<b>56</b>	<b>180</b>

INR50b for EUP3 included

Source: MOSL

**Exhibit 14: Net debt will decline in FY19E**

Source: MOSL

**Exhibit 15: The leverage has peaked**

Source: MOSL

**Estimates could see upside, if one or more of following events play out**

- If the Supreme Court permits, JSP may be able to access its iron ore inventories from Sarda mines in Odisha. These are worth INR20b at market prices or INR22/share.
- Odisha and Jharkhand are likely to auction a number of iron ore mines over the next three years because the leases of a large number of mines working on deemed extension would expire at the end of FY20. JSP is likely to get some of the mines at discount, which would help reduce its RM cost.
- Of the 2,400MW power capacity, nearly 1,500MW capacity is sitting idle. Its plants are located close to coal mines, have low transportation cost and are very competitive. With the commissioning of high capacity HVDC transmission lines to NR (Northern Region) and SR (Southern Region), the transmission bottlenecks would disappear and allow it to sell power anywhere in the country. With its competitive position, it has high chances of securing PPAs. Though the market is oversupplied and it could take a long time for new PPAs to materialize, there could be a positive surprise.
- Coking coal mines may deliver better operating profit than our expectation.

**Risks to our estimates**

- **Possible collapse of steel and coking coal prices:** We believe continued liquidity infusion by the Chinese government and various trade actions against Chinese exports would keep margins in the steel business healthy. Coking coal prices too are unlikely to collapse below USD120/t, as China is trying to curb pollution and control coal prices by calibrating production.
- **Interest cost may rise on refinancing of USD2b debt in GV**
- New capacity may take longer than our expectation in view of adoption of new technology to convert EAF into NEOF (equivalent of BoF).

**Exhibit 16: Summary of financials****INR million**

Y/E March	FY13	FY14	FY15	FY16	FY17E	FY18E	FY19E	Remarks
<b>Net sales</b>	<b>198,068</b>	<b>200,040</b>	<b>201,592</b>	<b>194,673</b>	<b>209,085</b>	<b>254,227</b>	<b>313,370</b>	
<b>Steel business (incl. CPP)</b>	<b>172,971</b>	<b>175,473</b>	<b>169,312</b>	<b>164,523</b>	<b>178,861</b>	<b>215,106</b>	<b>284,926</b>	
Standalone	149,547	145,440	140,994	137,865	142,897	176,984	246,323	
Steel sales (kt)	2,843	2,935	2,930	3,380	3,370	4,063	5,794	new 3mtpa capacity at Angul
Pellet sales (kt)	2,112	2,035	411	962	2,840	2,840	2,840	Assuming continues sales
Oman	29,012	32,621	31,243	26,439	30,369	39,375	39,375	
HBI (kt) production	1,520	1,468	1,420	1,509	1,500	1,500	1,500	
Steel (kt) sales			534	1,050	1,290	1,250	1,250	
Wollongong (GNM)			466	1,065	2,039	1,672	2,153	
Coking coal (kt)			171	304	240	400	400	Russelvale to use Bord and Pillar mining
Others	-5,588	-2,588	-3,391	-846	3,556	-2,925	-2,925	
<b>Jindal power</b>	<b>25,097</b>	<b>24,568</b>	<b>32,280</b>	<b>30,150</b>	<b>30,223</b>	<b>39,120</b>	<b>28,444</b>	EUP1 sold to JSW in FY19
Sales (Mkwh)	7,411	7,568	8,969	8,730	8,753	11,609	7,595	
<b>EBITDA</b>	<b>65,685</b>	<b>57,764</b>	<b>54,598</b>	<b>34,410</b>	<b>44,810</b>	<b>60,948</b>	<b>78,281</b>	
<b>Steel business (incl. CPP)</b>	<b>47,773</b>	<b>40,941</b>	<b>37,618</b>	<b>27,810</b>	<b>35,826</b>	<b>46,793</b>	<b>60,985</b>	
(a) Standalone	45,126	37,420	37,057	24,392	28,620	38,014	51,859	
EBITDA/t of steel	15,872	12,747	12,646	7,216	8,493	9,356	8,951	includes pellets' margin
(b) Global Venture	2,647	3,522	561	3,419	7,206	8,779	9,126	
1. Oman	4,903	3,404	7,235	4,057	6,735	8,480	8,410	attractive gas supply contacts
EBITDA/t of HBI	3,226	2,318	5,096	2,688	4,490	5,654	5,607	
2. Wollongong (GNM)			-2,794	-196	1,141	835	1,145	
EBITDA/t of coal				-644				
3. Others	-2,256	117	-3,879	-442	-670	-536	-429	
<b>Jindal power</b>	<b>17,912</b>	<b>16,823</b>	<b>16,980</b>	<b>6,600</b>	<b>8,983</b>	<b>14,156</b>	<b>17,295</b>	750MW PPAs are attractive
EBITDA (INR/kwh)	2.4	2.2	1.9	0.8	1.0	1.2	2.3	
Deprn. & Amortization	15,392	18,292	27,328	28,194	40,477	45,673	47,044	Asset revaluation inflating numbers
<b>EBIT</b>	<b>50,293</b>	<b>39,472</b>	<b>27,270</b>	<b>6,216</b>	<b>4,333</b>	<b>15,275</b>	<b>31,237</b>	
Net Interest	7,582	15,008	25,837	32,808	34,090	31,724	33,702	
Other income	1,364	656	2,256	2,200	324	0	0	
<b>PBT before EO</b>	<b>44,076</b>	<b>25,120</b>	<b>3,689</b>	<b>-24,391</b>	<b>-29,433</b>	<b>-16,449</b>	<b>-2,465</b>	
<b>Adjusted PAT</b>	<b>34,842</b>	<b>19,104</b>	<b>6,335</b>	<b>-16,662</b>	<b>-21,849</b>	<b>-16,006</b>	<b>-2,022</b>	
<b>Cash Profit</b>	<b>50,235</b>	<b>37,396</b>	<b>32,782</b>	<b>4,769</b>	<b>13,186</b>	<b>29,667</b>	<b>45,022</b>	but, cash profit will rise sharply
No. of shares (m)	935	915	915	915	915	915	915	
<b>EPS (INR)</b>	<b>37.3</b>	<b>20.9</b>	<b>6.9</b>	<b>-18.2</b>	<b>-23.9</b>	<b>-17.5</b>	<b>-2.2</b>	Asset revaluation impacting RoE and...
RoE	17.7	8.8	2.9	-8.5	-8.0	-4.5	-0.6	
RoCE (pre-tax)	12.3	7.3	4.5	1.2	0.6	1.8	3.7	...capital return ratios
RoIC (pre-tax)	20.2	11.4	5.5	1.1	0.8	2.7	5.5	

Source: MOSL, Company

## Financials and Valuations

Income Statement						(INR Million)		
Y/E Mar	2012	2013	2014	2015	2016	2017E	2018E	2019E
<b>Net Sales</b>	<b>182,086</b>	<b>198,068</b>	<b>200,040</b>	<b>201,592</b>	<b>194,673</b>	<b>209,085</b>	<b>254,227</b>	<b>313,370</b>
Change (%)	38.9	8.8	1.0	0.8	-3.4	7.4	21.6	23.3
<b>EBITDA</b>	<b>68,868</b>	<b>65,685</b>	<b>57,764</b>	<b>54,598</b>	<b>34,410</b>	<b>44,810</b>	<b>60,948</b>	<b>78,281</b>
EBITDA Margin (%)	37.8	33.2	28.9	27.1	17.7	21.4	24.0	25.0
Depreciation	13,865	15,392	18,292	27,328	28,194	40,477	45,673	47,044
<b>EBIT</b>	<b>55,003</b>	<b>50,293</b>	<b>39,472</b>	<b>27,270</b>	<b>6,216</b>	<b>4,333</b>	<b>15,275</b>	<b>31,237</b>
Interest	3,600	7,582	15,008	25,837	32,808	34,090	31,724	33,702
Other Income	1,419	1,364	656	2,256	2,200	324	0	0
Extraordinary items	-936	-5,741	0	-19,116	-2,358	-6,257	0	0
<b>PBT</b>	<b>51,886</b>	<b>38,335</b>	<b>25,120</b>	<b>-15,428</b>	<b>-26,750</b>	<b>-35,690</b>	<b>-16,449</b>	<b>-2,465</b>
Tax	11,863	9,218	6,182	-882	-6,763	-5,441	110	110
Tax Rate (%)	22.9	24.0	24.6	5.7	25.3	15.2	-0.7	-4.5
Min. Int. & Assoc. Share	574	417	-140	-1,738	-980	-2,079	-151	-151
<b>Reported PAT</b>	<b>39,649</b>	<b>29,101</b>	<b>19,104</b>	<b>-12,781</b>	<b>-19,020</b>	<b>-28,106</b>	<b>-16,006</b>	<b>-2,022</b>
<b>Adjusted PAT</b>	<b>40,585</b>	<b>34,842</b>	<b>19,104</b>	<b>6,335</b>	<b>-16,662</b>	<b>-21,849</b>	<b>-16,006</b>	<b>-2,022</b>
Change (%)	8.1	-14.2	-45.2	-66.8	-363.0	31.1	-26.7	-87.4

Balance Sheet						(INR Million)		
Y/E Mar	2012	2013	2014	2015	2016	2017E	2018E	2019E
Share Capital	935	935	915	915	915	915	915	915
Reserves	180,176	211,588	225,191	209,506	180,556	361,214	344,806	342,382
<b>Net Worth</b>	<b>181,111</b>	<b>212,523</b>	<b>226,105</b>	<b>210,421</b>	<b>181,471</b>	<b>362,129</b>	<b>345,720</b>	<b>343,296</b>
Minority Interest	3,071	5,573	10,802	8,573	8,003	5,923	5,772	5,621
Debt	170,908	246,182	363,682	455,007	470,132	495,132	495,132	495,132
Deferred Tax	11,920	13,365	14,727	20,185	13,477	13,477	13,482	13,487
<b>Total Capital Employed</b>	<b>367,010</b>	<b>477,642</b>	<b>615,316</b>	<b>694,185</b>	<b>673,082</b>	<b>876,660</b>	<b>860,106</b>	<b>857,536</b>
Gross Fixed Assets	223,301	267,032	466,646	612,235	627,116	681,116	736,116	751,116
Less: Acc Depreciation	58,360	74,285	122,687	151,286	178,233	218,710	252,383	287,427
<b>Net Fixed Assets</b>	<b>164,940</b>	<b>192,747</b>	<b>343,959</b>	<b>460,949</b>	<b>448,883</b>	<b>462,406</b>	<b>483,732</b>	<b>463,689</b>
Capital WIP	136,520	192,303	178,112	90,728	118,266	89,266	59,266	19,266
Goodwill on consolidation	918	1,543	5,930	5,485	5,485	214,312	202,312	190,312
Investments	3,776	8,089	3,418	17,852	3,577	3,577	3,577	3,577
<b>Current Assets</b>	<b>143,922</b>	<b>176,046</b>	<b>209,301</b>	<b>180,353</b>	<b>159,182</b>	<b>171,905</b>	<b>183,581</b>	<b>262,632</b>
Inventory	35,795	45,242	48,812	48,487	32,360	34,943	42,487	52,371
Debtors	13,068	19,541	17,724	16,907	14,292	15,467	18,806	23,181
Cash & Bank	1,492	2,001	10,153	11,391	6,204	15,169	15,962	80,754
Loans & Adv, Others	93,567	109,262	132,612	103,568	106,326	106,326	106,326	106,326
<b>Curr Liabs &amp; Provns</b>	<b>83,066</b>	<b>93,084</b>	<b>125,405</b>	<b>61,181</b>	<b>62,310</b>	<b>64,805</b>	<b>72,362</b>	<b>81,940</b>
<b>Net Current Assets</b>	<b>60,856</b>	<b>82,962</b>	<b>83,896</b>	<b>119,172</b>	<b>96,872</b>	<b>107,099</b>	<b>111,219</b>	<b>180,693</b>
<b>Total Assets</b>	<b>367,010</b>	<b>477,642</b>	<b>615,316</b>	<b>694,185</b>	<b>673,082</b>	<b>876,660</b>	<b>860,106</b>	<b>857,536</b>

## Financials and Valuations

### Ratios

Y/E Mar	2012	2013	2014	2015	2016	2017E	2018E	2019E
<b>Basic (INR)</b>								
<b>EPS</b>	<b>43.4</b>	<b>37.2</b>	<b>20.9</b>	<b>6.9</b>	<b>-18.2</b>	<b>-23.9</b>	<b>-17.5</b>	<b>-2.2</b>
Cash EPS	57.6	47.6	40.7	14.0	9.0	11.2	31.8	48.6
Book Value	193.7	227.3	247.1	230.0	198.4	395.8	377.9	375.2
DPS	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0
Payout (incl. Div. Tax.)	3.8	4.4	7.9	27.0	0.0	0.0	0.0	0.0
<b>Valuation(x)</b>								
P/E	2.7	3.1	5.6	16.9	-6.4	-4.9	-6.7	-52.9
Price / Book Value	0.6	0.5	0.5	0.5	0.6	0.3	0.3	0.3
EV/Sales	1.5	1.8	2.3	2.7	2.9	2.8	2.3	1.7
EV/EBITDA	4.0	5.4	8.0	10.1	16.6	13.1	9.6	6.7
Dividend Yield (%)	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0
<b>Profitability Ratios (%)</b>								
RoE	25.2	17.7	8.8	2.9	-8.5	-8.0	-4.5	-0.6
RoCE	17.2	12.3	7.3	4.5	1.2	0.6	1.8	3.7
RoIC (pre-tax)	26.5	20.2	11.4	5.5	1.1	0.8	2.7	5.5
<b>Turnover Ratios (%)</b>								
Asset Turnover (x)	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.4
Debtors (No. of Days)	26	36	32	31	27	27	27	27
Inventory (No. of Days)	72	83	89	88	61	61	61	61
Creditors (No. of Days)	58	58	90	70	79	78	75	72
<b>Leverage Ratios (%)</b>								
Net Debt/Equity (x)	0.9	1.1	1.6	2.1	2.6	1.3	1.4	1.2

### Cash Flow Statement

(INR Million)

Y/E Mar	2012	2013	2014	2015	2016	2017E	2018E	2019E
Adjusted EBITDA	68,868	65,685	57,764	54,598	34,410	44,810	60,948	78,281
Non cash opr. exp (inc)	1,160	628	-2,456	-21,600	-4,581	-6,257	0	0
(Inc)/Dec in Wkg. Cap.	-20,385	-23,207	12,816	-18,154	11,762	-1,263	-3,326	-4,682
Tax Paid	-10,421	-7,884	-8,337	-3,393	-170	5,441	-105	-105
Other operating activities	0	0	0	0	0	0	0	0
<b>CF from Op. Activity</b>	<b>39,221</b>	<b>35,223</b>	<b>59,786</b>	<b>11,451</b>	<b>41,422</b>	<b>42,731</b>	<b>57,517</b>	<b>73,494</b>
(Inc)/Dec in FA & CWIP	-60,604	-84,012	-141,525	-50,964	-39,500	-25,000	-25,000	-15,000
<b>Free cash flows</b>	<b>-21,383</b>	<b>-48,789</b>	<b>-81,739</b>	<b>-39,513</b>	<b>1,922</b>	<b>17,731</b>	<b>32,517</b>	<b>58,494</b>
(Pur)/Sale of Invt	19	-3,405	4,898	-13,430	15,904	0	0	0
Others	-4,138	-8,408	-3,809	-970	3,706	324	0	40,000
<b>CF from Inv. Activity</b>	<b>-64,723</b>	<b>-95,825</b>	<b>-140,437</b>	<b>-65,365</b>	<b>-19,889</b>	<b>-24,676</b>	<b>-25,000</b>	<b>25,000</b>
Inc/(Dec) in Net Worth	38	0	-3,986	5	0	0	0	0
Inc / (Dec) in Debt	33,044	75,274	115,838	90,704	9,230	25,000	0	0
Interest Paid	-1,925	-1,569	-1,488	-1,448	-8	0	0	0
Divd Paid (incl Tax) & Others	-8,804	-12,593	-21,563	-34,110	-35,941	-34,090	-31,724	-33,702
<b>CF from Fin. Activity</b>	<b>22,354</b>	<b>61,111</b>	<b>88,802</b>	<b>55,151</b>	<b>-26,719</b>	<b>-9,090</b>	<b>-31,724</b>	<b>-33,702</b>
<b>Inc/(Dec) in Cash</b>	<b>-3,148</b>	<b>509</b>	<b>8,152</b>	<b>1,238</b>	<b>-5,187</b>	<b>8,965</b>	<b>793</b>	<b>64,792</b>
Add: Opening Balance	4,640	1,492	2,001	10,153	11,391	6,204	15,169	15,962
<b>Closing Balance</b>	<b>1,492</b>	<b>2,001</b>	<b>10,153</b>	<b>11,391</b>	<b>6,204</b>	<b>15,169</b>	<b>15,962</b>	<b>80,754</b>

## Disclosures

This document has been prepared by Motilal Oswal Securities Limited (hereinafter referred to as Most) to provide information about the company (ies) and/or sector(s), if any, covered in the report and may be distributed by it and/or its affiliated company(ies). This report is for personal information of the selected recipient/s and does not constitute to be any investment, legal or taxation advice to you. This research report does not constitute an offer, invitation or inducement to invest in securities or other investments and Motilal Oswal Securities Limited (hereinafter referred as MOST) is not soliciting any action based upon it. This report is not for public distribution and has been furnished to you solely for your general information and should not be reproduced or redistributed to any other person in any form. This report does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Before acting on any advice or recommendation in this material, investors should consider whether it is suitable for their particular circumstances and, if necessary, seek professional advice. The price and value of the investments referred to in this material and the income from them may go down as well as up, and investors may realize losses on any investments. Past performance is not a guide for future performance, future returns are not guaranteed and a loss of original capital may occur.

MOST and its affiliates are a full-service, integrated investment banking, investment management, brokerage and financing group. We and our affiliates have investment banking and other business relationships with a some companies covered by our Research Department. Our research professionals may provide input into our investment banking and other business selection processes. Investors should assume that MOST and/or its affiliates are seeking or will seek investment banking or other business from the company or companies that are the subject of this material and that the research professionals who were involved in preparing this material may educate investors on investments in such business. The research professionals responsible for the preparation of this document may interact with trading desk personnel, sales personnel and other parties for the purpose of gathering, applying and interpreting information. Our research professionals are paid on twin parameters of performance & profitability of MOST.

MOST generally prohibits its analysts, persons reporting to analysts, and members of their households from maintaining a financial interest in the securities or derivatives of any companies that the analysts cover. Additionally, MOST generally prohibits its analysts and persons reporting to analysts from serving as an officer, director, or advisory board member of any companies that the analysts cover. Our salespeople, traders, and other professionals or affiliates may provide oral or written market commentary or trading strategies to our clients that reflect opinions that are contrary to the opinions expressed herein, and our proprietary trading and investing businesses may make investment decisions that are inconsistent with the recommendations expressed herein. In reviewing these materials, you should be aware that any or all of the foregoing among other things, may give rise to real or potential conflicts of interest. MOST and its affiliated company(ies), their directors and employees and their relatives may; (a) from time to time, have a long or short position in, act as principal in, and buy or sell the securities or derivatives thereof of companies mentioned herein. (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies) or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the affiliates of MOST even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report

Reports based on technical and derivative analysis center on studying charts company's price movement, outstanding positions and trading volume, as opposed to focusing on a company's fundamentals and, as such, may not match with a report on a company's fundamental analysis. In addition MOST has different business segments / Divisions with independent research separated by Chinese walls catering to different set of customers having various objectives, risk profiles, investment horizon, etc, and therefore may at times have different contrary views on stocks sectors and markets.

Unauthorized disclosure, use, dissemination or copying (either whole or partial) of this information, is prohibited. The person accessing this information specifically agrees to exempt MOST or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOST or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOST or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays. The information contained herein is based on publicly available data or other sources believed to be reliable. Any statements contained in this report attributed to a third party represent MOST's interpretation of the data, information and/or opinions provided by that third party either publicly or through a subscription service, and such use and interpretation have not been reviewed by the third party. This Report is not intended to be a complete statement or summary of the securities, markets or developments referred to in the document. While we would endeavor to update the information herein on reasonable basis, MOST and/or its affiliates are under no obligation to update the information. Also there may be regulatory, compliance, or other reasons that may prevent MOST and/or its affiliates from doing so. MOST or any of its affiliates or employees shall not be in any way responsible and liable for any loss or damage that may arise to any person from any inadvertent error in the information contained in this report. MOST or any of its affiliates or employees do not provide, at any time, any express or implied warranty of any kind, regarding any matter pertaining to this report, including without limitation the implied warranties of merchantability, fitness for a particular purpose, and non-infringement. The recipients of this report should rely on their own investigations.

This report is intended for distribution to institutional investors. Recipients who are not institutional investors should seek advice of their independent financial advisor prior to taking any investment decision based on this report or for any necessary explanation of its contents.

Most and its associates may have managed or co-managed public offering of securities, may have received compensation for investment banking or merchant banking or brokerage services, may have received any compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company in the past 12 months.

Most and its associates have not received any compensation or other benefits from the subject company or third party in connection with the research report.

Subject Company may have been a client of Most or its associates during twelve months preceding the date of distribution of the research report. MOST and/or its affiliates and/or employees may have interests/positions, financial or otherwise of over 1% at the end of the month immediately preceding the date of publication of the research in the securities mentioned in this report. To enhance transparency, MOST has incorporated a Disclosure of Interest Statement in this document. This should, however, not be treated as endorsement of the views expressed in the report.

Motilal Oswal Securities Limited is registered as a Research Analyst under SEBI (Research Analyst) Regulations, 2014. SEBI Reg. No. INH00000412

Pending Regulatory inspections against Motilal Oswal Securities Limited:

SEBI pursuant to a complaint from client Shri C.R. Mohanraj alleging unauthorized trading, issued a letter dated 29th April 2014 to MOSL notifying appointment of an Adjudicating Officer as per SEBI regulations to hold inquiry and adjudge violation of SEBI Regulations; MOSL replied to the Show Cause Notice whereby SEBI granted us an opportunity of Inspection of Documents. Since all the documents requested by us were not covered we have requested to SEBI vide our letter dated June 23, 2015 to provide pending list of documents for inspection.

List of associate companies of Motilal Oswal Securities Limited - [Click here to access detailed report](#)

### Analyst Certification

The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issues, and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations and views expressed by research analyst(s) in this report. The research analysts, strategists, or research associates principally responsible for preparation of MOST research receive compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors and firm revenues

### Disclosure of Interest Statement

### JINDAL STEEL & POWER

- |  |    |
|--|----|
| Analyst ownership of the stock               | No |
| Served as an officer, director or employee - | No |

A graph of daily closing prices of securities is available at [www.nseindia.com](http://www.nseindia.com) and <http://economictimes.indiatimes.com/markets/stocks/stock-quotes>

### Regional Disclosures (outside India)

This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOST & its group companies to registration or licensing requirements within such jurisdictions.

**For Hong Kong:** This report is distributed in Hong Kong by Motilal Oswal capital Markets (Hong Kong) Private Limited, a licensed corporation (CE AYY-301) licensed and regulated by the Hong Kong Securities and Futures Commission (SFC) pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) "SFO". As per SEBI (Research Analyst Regulations) 2014 Motilal Oswal Securities (SEBI Reg No. INH00000412) has an agreement with Motilal Oswal capital Markets (Hong Kong) Private Limited for distribution of research report in Kong Kong. This report is intended for distribution only to "Professional Investors" as defined in Part 1 of Schedule 1 to SFO. Any investment or investment activity to which this document relates is only available to professional investor and will be engaged only with professional investors." Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from registration. The Indian Analyst(s) who compile this report is/are not located in Hong Kong & are not conducting Research Analysis in Hong Kong.

### For U.S.

Motilal Oswal Securities Limited (MOSL) is not a registered broker - dealer under the U.S. Securities Exchange Act of 1934, as amended (the "1934 act") and under applicable state laws in the United States. In addition MOSL is not a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended (the "Advisers Act" and together with the 1934 Act, the "Acts"), and under applicable state laws in the United States. Accordingly, in the absence of specific exemption under the Acts, any brokerage and investment services provided by MOSL, including the products and services described herein are not available to or intended for U.S. persons.

This report is intended for distribution only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the Exchange Act and interpretations thereof by SEC (henceforth referred to as "major institutional investors"). This document must not be acted on or relied on by persons who are not major institutional investors. Any investment or investment activity to which this document relates is only available to major institutional investors and will be engaged in only with major institutional investors. In reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act") and interpretations thereof by the U.S. Securities and Exchange Commission ("SEC") in order to conduct business with Institutional Investors based in the U.S., MOSL has entered into a chaperoning agreement with a U.S. registered broker-dealer, Motilal Oswal Securities International Private Limited. ("MOSIPL"). Any business interaction pursuant to this report will have to be executed within the provisions of this chaperoning agreement.

The Research Analysts contributing to the report may not be registered /qualified as research analyst with FINRA. Such research analyst may not be associated persons of the U.S. registered broker-dealer, MOSIPL, and therefore, may not be subject to NASD rule 2711 and NYSE Rule 472 restrictions on communication with a subject company, public appearances and trading securities held by a research analyst account.

### For Singapore

Motilal Oswal Capital Markets Singapore Pte Limited is acting as an exempt financial advisor under section 23(1)(f) of the Financial Advisers Act (FAA) read with regulation 17(1)(d) of the Financial Advisers Regulations and is a subsidiary of Motilal Oswal Securities Limited in India. This research is distributed in Singapore by Motilal Oswal Capital Markets Singapore Pte Limited and it is only directed in Singapore to accredited investors, as defined in the Financial Advisers Regulations and the Securities and Futures Act (Chapter 289), as amended from time to time.

In respect of any matter arising from or in connection with the research you could contact the following representatives of Motilal Oswal Capital Markets Singapore Pte Limited:

Varun Kumar  
[Varun.kumar@motilaloswal.com](mailto:Varun.kumar@motilaloswal.com)  
Contact : (+65) 68189232  
Office Address: 21 (Suite 31), 16 Collyer Quay, Singapore 04931



## Motilal Oswal Securities Ltd

Motilal Oswal Tower, Level 9, Sayani Road, Prabhadevi, Mumbai 400 025  
Phone: +91 22 3982 5500 E-mail: [reports@motilaloswal.com](mailto:reports@motilaloswal.com)