



INDIA

# Indian pipes sector

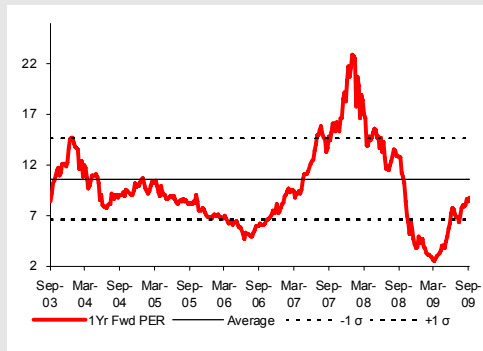
16 September 2009



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## 1-yr fwd PER (based on consensus est)



Source: Macquarie Research, September 2009

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## Pipers find their tune

### Initiate coverage on pipe sector with positive view

We believe Indian pipe producers are poised to benefit significantly from robust global demand. Pipe companies provide strong earnings visibility despite the current uncertain environment. The Indian pipe stocks have significantly underperformed the NIFTY and the mid-cap indices in the past year on a perception that they are leveraged plays on crude oil prices. The Indian pipes sector is quoting at more than a 20% discount to five-year historical average PER.

We highlight five Indian pipe makers in this report and initiate coverage on two of these – Welspun Gujarat and Jindal Saw – with Outperform ratings.

### Demand outlook strong for welded, sluggish for seamless

Since the oil & gas sector is the biggest consumer of steel pipes globally, the market perceives crude oil prices to be a key indicator of pipe demand. We believe that demand for welded pipes for oil & gas transmission is driven more by structural factors, like long-term infrastructure requirements, new oil & gas sources and the shift to cleaner fuels than medium-term oil price fluctuations. Despite the low oil price, oil & gas pipeline investments in the US look set to rise in 2009. Consultancy *Simdex* estimates 326,000km of pipelines will be built in the next five years, which we estimate would require US\$78bn worth of pipes.

On the other hand, seamless pipe demand is highly correlated to exploratory activities, which depends on crude oil prices. We do not expect meaningful E&P activity improvements until the second half of 2010.

### High visibility in the uncertain environment

The Indian pipe producers offer strong revenues and earnings visibility despite uncertainty in commodity prices. The strong order book positions of the welded pipe producers can provide comfort at the top line. Large planned capacity additions, coupled with strong global demand, may drive top-line growth.

Raw materials (plates/coils) comprise 70–75% of the total cost structure. Pipe producers tie up raw-material and book freight rates as soon as they get a new order, making the steel cost a pass-through. This has enabled companies to maintain their margins despite the steel price volatility.

### Key risks – oil prices and Chinese competition

Any significant fall in crude prices may cause oil majors to delay their capex plans, which could hurt demand. However, Macquarie Oil economist Jan Stuart expects prices will rise above US\$70/bbl in 2010. Competition from China, especially in seamless pipes, is a risk; however this is mitigated by the US and EU imposing anti-dumping duties on imports of Chinese steel pipes.

### Welspun top pick amongst pipe producers

Our target prices of Rs375 for WGS and Rs890 for JSAW imply a 14x FY11/2010E PER, at a 20% discount to the global peer average despite their stronger earnings growth over FY10–12E. Our earnings forecasts for WGS and JSAW are 15% and 7% higher than the Street's as we believe the market may not be fully factoring in earnings from future orders. We prefer WGS for its stronger order book, large capacity additions and margin gains from backward integration.

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# Pipers find their tune

## Initiate coverage on pipe sector with positive view

Indian pipe producers appear poised to benefit significantly from robust global demand. The Indian pipe stocks have significantly underperformed the NIFTY and mid-cap indices in the past year on a perception that they are leveraged plays on crude oil prices. The Indian pipe sector is quoting at more than a 20% discount to five-year historical average PER.

We highlight five Indian pipe manufacturers in this report. We initiate coverage on two of these, Welspun Gujarat (WGS IN) and Jindal Saw (JSAW IN), with Outperform ratings.

**Fig 1 Indian pipe manufacturers – valuations**

	Stock code	Rating	Price (Rs)	TP (Rs)	% upside/downside	Mkt cap (US\$m)	FY10E PER (x)	Order book/09 sales (x)
Welspun Gujarat	WGS IN	OP	256	375	47	980	11.1	1.19
Jindal Saw	JSAW IN	OP	696	890	28	740	10.5	0.68**
Maharashtra Seamless	MHS IN	NR	313	na	na	454	9.8*	0.18
Man Industries	MAN IN	NR	53	na	na	60	13.9*	1.30
PSL Limited	PSLL IN	NR	171	na	na	189	6.2*	1.26

Note: \*Consensus estimates, \*\*Based on 12-month period ended 30 September 2009. Pricing date: 15 Sep 2009 Data for companies not under coverage are based on Bloomberg consensus estimates.

Source: Bloomberg, Macquarie Research, September 2009

## Demand outlook strong for welded, sluggish for seamless

### Demand for welded pipes remains resilient

Since the oil & gas sector is the biggest consumer of steel pipes globally, the market perceives crude oil prices to be a key indicator of pipe demand. What we believe the market may be missing is that demand for welded pipes for oil & gas transmission is driven more by structural factors, like long-term infrastructure requirements, a shift to cleaner fuels (gas), new oil & gas sources and geo-politics than short- to medium-term oil price fluctuations.

Demand for welded pipes remains strong because of the continued need to connect new areas of oil and gas supply to areas of net demand. Despite the economic slowdown in the United States, *the Oil & Gas Journal* forecasts investment in oil & gas pipelines to increase by more than 40%YoY in 2009.

According to global consultancy *Simdex*, 710 pipeline projects of 326,000km are to be implemented in the next five years, with principal demand coming from Asia, followed by North America. We estimate the global demand for pipes could be up to US\$78bn.

Replacement of old pipelines, which were laid during the 1960s and 1970s, would generate significant demand for SAW (submerged arc welded) pipes. We expect 50,000km of pipelines to be replaced in the next five years, which may in fact turn out to be conservative as 1.8m km out of a total 2.7m km of pipelines in the US are over 30 years old and will need to be replaced.

### Seamless pipe demand recovery to remain sluggish

Seamless pipe demand is highly correlated with crude oil prices, which in turn depends on the global economic outlook. Although there has been some increase in global drilling activity recently, this remains very low given the significant decline over the last 12 months. For 2010, we expect a year of slow recovery; however, the pace would be dictated by crude oil prices. We assume no meaningful activity improvements until the second half of 2010. In 2011, we anticipate the recovery to strengthen, with both activity levels and pricing improving.

### Domestic demand gaining momentum

India is witnessing a spurt in construction of pipelines as the domestic gas availability is poised to increase two-fold over the next four years. The planned investments and ongoing projects will triple the gas transmission infrastructure, with the eventual development of a national gas grid. The government is also planning to build national gas highways.

**US\$78bn  
opportunity in the  
next five years**

In addition, most of the exploratory blocks that have been offered under various rounds of New Exploration Licensing Policy (NELP) will enter the drilling phase over the next few years. NELP I and NELP II blocks entered the drilling phase in FY08 and FY09. NELP III to NELP VII will enter the drilling phase over FY10–14. This implies that demand for seamless pipes for oil & gas drilling will remain robust.

Moreover, we believe water and irrigation offers a very strong business opportunity for Indian pipe manufacturers. The 11th five-year plan envisages around US\$83bn of investments in irrigation and water supply & sanitation over FY08–12E.

### Clients stay committed to their investment plans

We have verified the macro demand projections against the investment plans of large global as well as domestic oil and gas pipeline companies. We have analysed the investment plans of three of the largest pipelines companies in North America – TransCanada, El Paso and Kinder Morgan. These companies are to invest billions of dollars in several mega projects over the next few years. GAIL will be adding 5,500km of gas pipelines and building 6,000km of national gas highways over the next five years.

**GAIL will be adding 5,500km of gas pipelines**

**Fig 2 Several large pipeline projects planned over the next few years, demand for pipes to remain strong**

Project	Players	Length (km)	Inv cost (US\$m)	Timeline	Type
Alaska Pipeline	TransCanada, ExxonMobil	2737	26000	2018	Natural Gas
Bison Pipeline	TransCanada	483.2	1000	2010	Natural Gas
Groundbirch Mainline	TransCanada	77	251.4	2010	Natural Gas
Horn River Mainline	TransCanada	72	340	2012	Natural Gas
Keystone Pipeline	TransCanada	3456	12000	2010	Crude Oil
Mackenzie Valley Pipeline	Consortium	1220	7000	2010	Natural Gas
North Central Corridor Pipeline	TransCanada	300	923	2010	Natural Gas
Palomar Gas Transmission	TransCanada	350	NA	2011	Natural Gas
Fayetteville Express	Kinder Morgan	296	1300	2011	Natural Gas

Source: Company data, Macquarie Research, September 2009

### High visibility in the uncertain environment

**Indian pipe makers to increase capacity by 17%**

The top five Indian pipe manufacturers are planning to collectively increase their production capacity by 17% over the next two years. With demand expected to outpace supply, we believe Indian pipe manufacturers are well positioned. WGS has the most aggressive capacity expansion plans, adding 40% to SAW pipe capacity. JSAW plans to add 16% to capacity, primarily for HSAW and DI.

Currently, raw materials account for 70–75% of the cost of production. Indian pipe companies tie up raw material prices at the time of bidding for new orders, and the cost of steel has been a pass-through, which has enabled companies to maintain margins. In addition, Welspun's plan to set up a plate mill positions it for margin expansion, in our view.

### Key risks – oil prices and Chinese competition

Any significant fall in crude prices could lead to the oil majors delaying their capex plans, which could hurt demand. However, Macquarie Oil economist Jan Stuart expects prices will rise above US\$70/bbl in 2010. Competition from China, especially in seamless pipes, also appears to be a risk, albeit this is partly mitigated by the US and EU imposing anti-dumping duties on imports of Chinese steel pipes.

### Welspun and Jindal Saw – initiating coverage with an Outperform

We believe WGS will not only achieve higher margins, but also benefit from greater operational leverage as it integrates backwards. Our FY11 EPS estimate for WGS is 15% ahead of the consensus and our CY10 earnings estimate for JSAW is 7% ahead of the consensus. We forecast WGS' earnings to grow at a CAGR of 16% over the three-year period FY10–13E and JSAW's earnings to grow at a CAGR of 8% over 2009–12E.

**WGS is our top pick**

Our target price for WGS is Rs375, implying a 14x FY3/11E PER, which is at a ~20% discount to the global pipe companies. We believe that its strong expected earnings growth, robust order book, backward integration and larger share of high-margin orders from North America warrant a higher multiple premium to the industry.

Our target price for JSAW of Rs890 implies a 14x 2010E PER. We believe JSAW presents a low-risk model given a well-diversified product portfolio. We believe JSAW is uniquely positioned to capture the large demand from the hydrocarbon and water transportation sectors.

## Welspun top pick among pipe producers

### Current underperformance unjustified

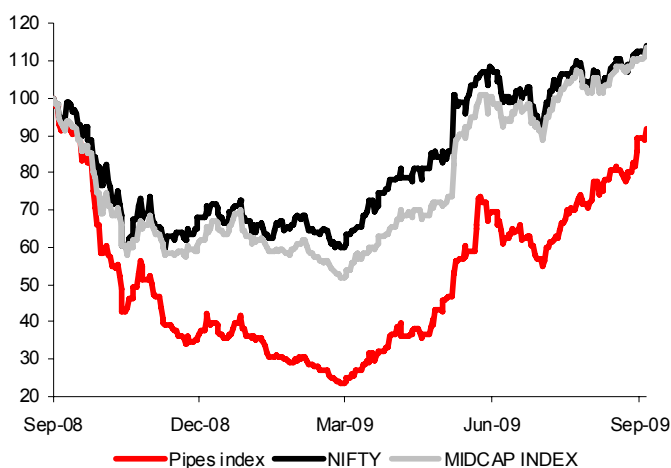
**Pipeline investments in US are expected to increase in 2009**

In the past 12 months, Indian pipe manufacturers' stock prices have clearly underperformed the NIFTY and midcap indices as people have perceived them to be leveraged plays on the crude oil price. The oil & gas sector is the biggest consumer of steel pipes globally; hence, the market views the crude oil price as a key indicator of pipe demand. We believe the demand for welded pipes for oil & gas transmission is driven more by structural factors like long-term infrastructure requirements, shifting to cleaner fuels, new oil & gas sources and geopolitics than by medium-term oil-price fluctuations. Despite the low oil price, oil and gas pipeline investments in the US are expected to increase in 2009.

We have created a market-cap weighted index of five Indian pipe manufacturers (WGS, JSAW, MHS, MAN and PSL) that clearly indicates that the underperformance began in October 2008, when the global economy experienced its worst crisis in recent times.

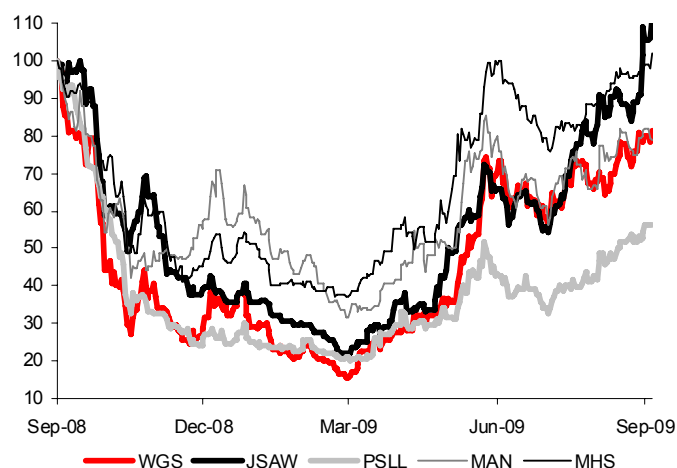
Of the five manufacturers featured here, Welspun has underperformed its peers. We believe the key reason, unlike the situation with its domestic peers, is Welspun's predominant exposure to the export markets and the oil & gas sector, to which the market attributes a higher risk premium. We believe a strong global demand outlook, a high-quality order book, margin expansion due to commissioning of the plate mill and the HSAW facility in the US will lead to outperformance by WGS over the next 12 months.

**Fig 3 Pipes index has underperformed the market**



Source: Macquarie Research, September 2009

**Fig 4 JSAW has been best performer, WGS lagged**



Source: Macquarie Research, September 2009

### Welspun trades at discount to global and Indian peers

There are no strict comparables for Indian steel-pipe companies because, globally, the largest pipe companies are backward integrated and have steel-manufacturing operations. Although the integrated business of global peers exposes them to commodity-price volatility, Indian pipe companies are less correlated to commodity prices.

Indian pipe companies are trading at a discount of ~50% to their global peers based on 2010/FY11E PER valuations. Welspun is trading at a discount to its Indian peers, and we believe that, due to its strong earnings growth, robust order book, backward integration and larger share of high-margin orders from North America, WGS warrants a higher multiple premium to its peers.

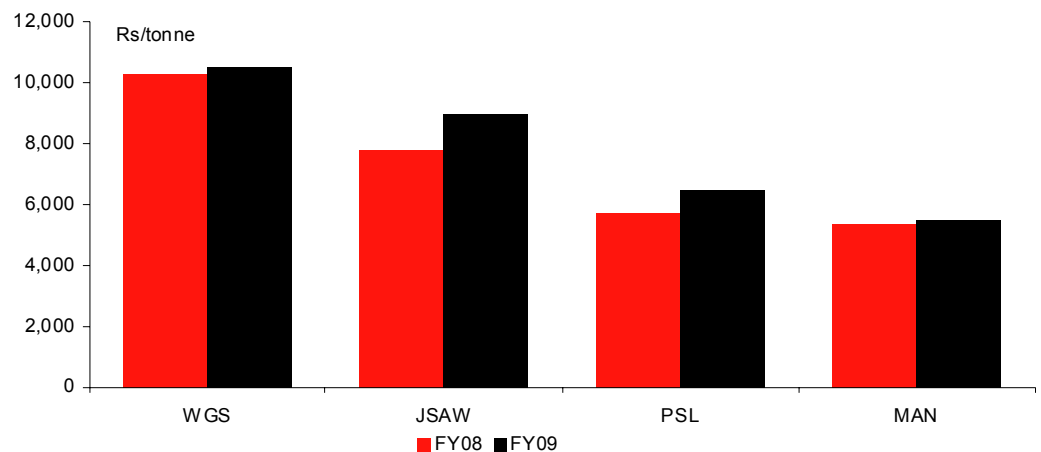
**Fig 5 Indian pipe companies are trading at significant discount to global peers**

Name	Stock code	Fiscal year end	10E PER	11E PER	Mkt cap (US\$bn)
<b>Global manufacturers</b>					
Sumitomo	5405 JP	March	-35.1	17.5	11.9
Tenaris	TS US	December	17	15	19.6
TMK	TMKS LI	December	17.5	7.7	2.9
US Steel	X US	December	-4.2	42.6	6.7
Vallourec	VK FP	December	14.3	17.1	9.1
			<b>16.3</b>	<b>19.2</b>	
<b>Indian manufacturers</b>					
Welspun	WGS IN	March	11.1	9.5	0.98
Jindal Saw	JSAW IN	December	10.5	11.3	0.74
Maharashtra Seamless	MHS IN	March	9.8	9.1	0.45
MAN Industries	MAN IN	March	13.9	10.4	0.06
PSL Limited	PSLL IN	March	6.2	6.4	0.19
			<b>10.3</b>	<b>9.8</b>	

Source: Bloomberg, Macquarie Research, September 2009

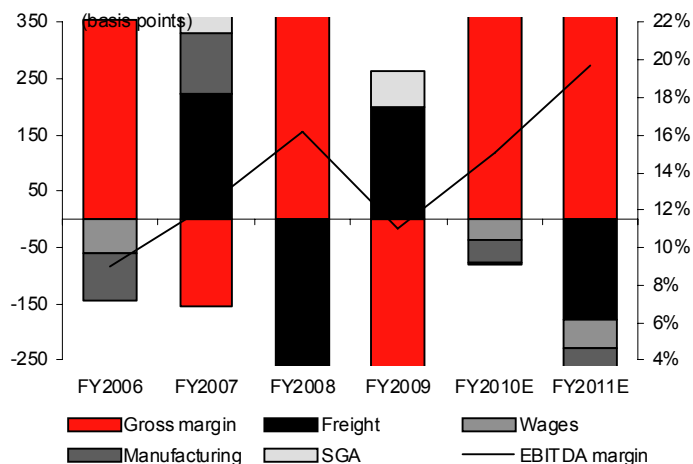
**Welspun – best-in-class margins**

The best metric for comparing the profitability of the pipe manufacturers is EBITDA/tonne, in our view. WGS has consistently achieved an EBITDA/tonne of over Rs10,000, which is the highest among the Indian peers. Going forward, we expect WGS to maintain EBITDA of ~Rs10k per tonne, despite the addition of new capacities, because it plans to balance its low-margined domestic sales with high-margined niche export sales. The margin on US sales should increase further due to material freight savings as production from the US pipe mill ramps up. In addition, the plate mill is expected to contribute Rs5,000–6,000 per tonne of plate produced.

**Fig 6 Highest margins among Indian SAW pipe manufacturers**

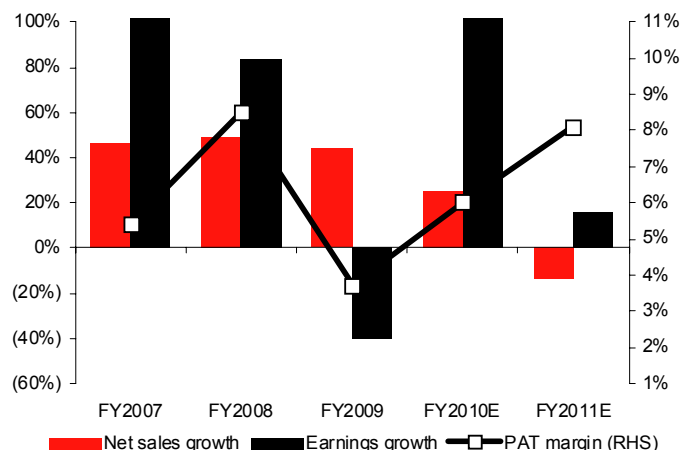
Source: Macquarie Research, September 2009

**Fig 7 EBITDA margins to expand to 20% by FY3/11E**



Source: Company data, Macquarie Research, September 2009

**Fig 8 PAT margins to inch up to 8% by FY3/11**

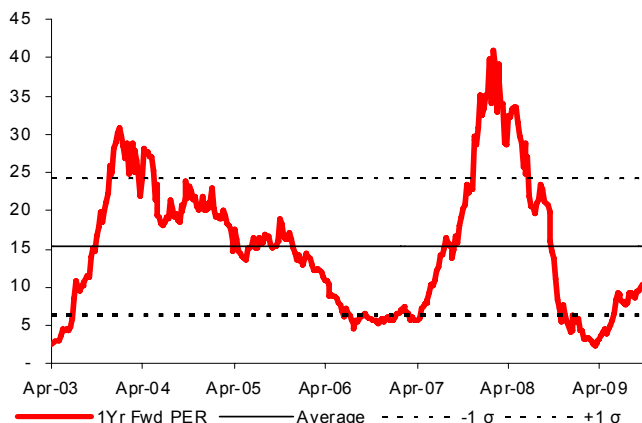


Source: Company data, Macquarie Research, September 2009

**Welspun trading at a 35% discount to historical average PER**

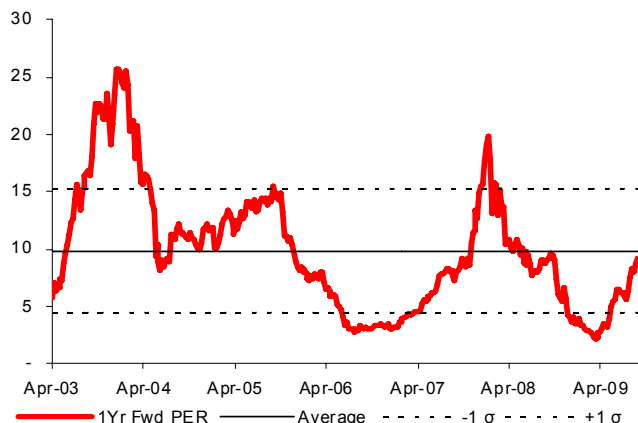
We review the price history of WGS and JSAW for the past few years. WGS historically has traded in a range of 5–35x forward PER (see chart). Our target price of Rs375 implies a 14x FY3/11E PER. JSAW historically has traded in a range of 4–25x forward PER (see chart). Our target price of Rs890 implies a 14x 2010E PER.

**Fig 9 WGS is trading 35% below average PER**



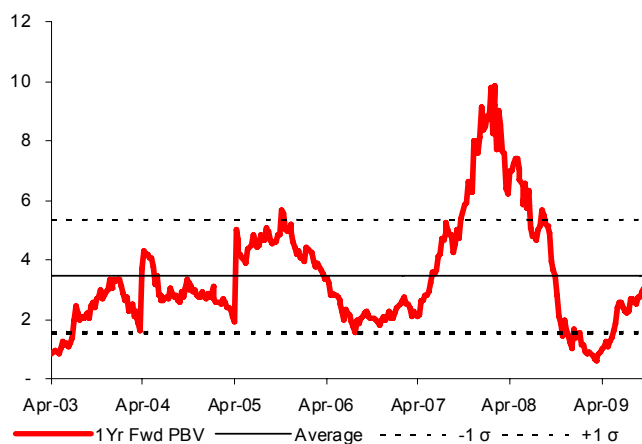
Source: Company data, Macquarie Research, September 2009

**Fig 10 JSAW is trading above its average PER**



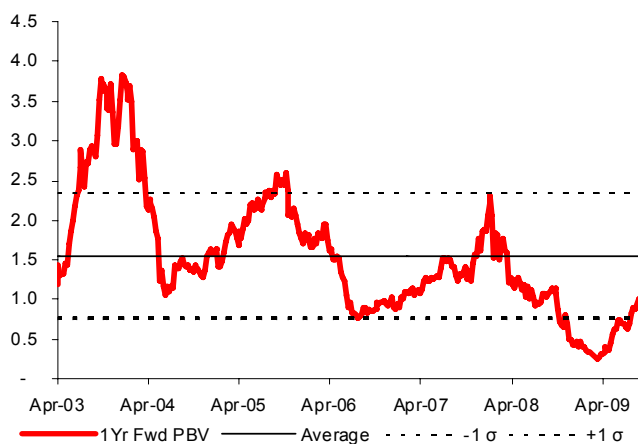
Source: Company data, Macquarie Research, September 2009

**Fig 11 WGS trading at 12% below average P/BV**



Source: Company data, Macquarie Research, September 2009

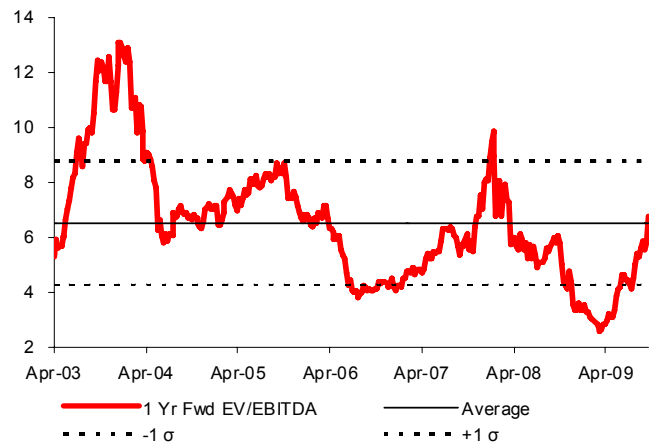
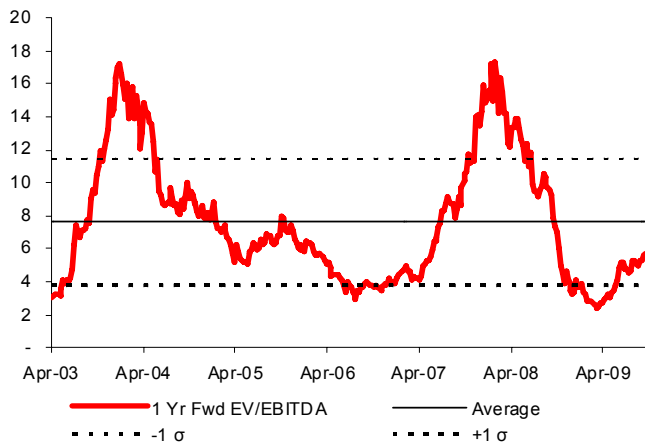
**Fig 12 JSAW trading at 23% below average P/BV**



Source: Company data, Macquarie Research, September 2009

**Fig 13 WGS is trading 25% below average EV/EBITDA**

**Fig 14 JSAW is trading at its average EV/EBITDA**



Source: Company data, Macquarie Research, September 2009

Source: Company data, Macquarie Research, September 2009



# Global demand drivers looking strong

## Real strength in 2010 and after

The oil and gas sector is the biggest consumer of steel pipes globally. Nearly 60% of the pipes produced in India last year went to the oil and gas sector. Although SAW pipes (LSAW and HSAW) are used in oil and gas transmission pipelines, seamless pipes are used in oil and gas exploration. The global liquidity crunch that led to the economic slowdown and more than a 70% fall in oil prices last year affected new orders for steel pipes.

### Macquarie oil-price forecast

Macquarie oil economist Jan Stuart believes that, in the near term, fundamentals offer only sporadic support until 2010. For 2010, he expects a US\$70/bbl price for Brent and believes prices will rise above long-term marks to spur upstream spending. In the long run, however, he thinks that prices will oscillate around levels required for major new developments to yield acceptable returns.

**Prices above long-term marks to spur upstream spending**

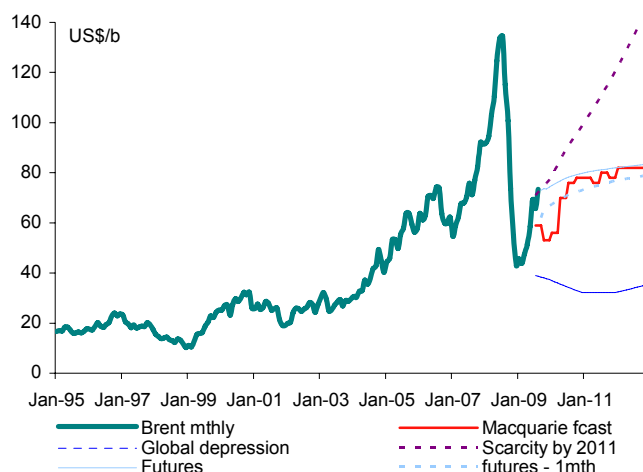
- In the near term, and despite a broad economic recovery, global oil fundamentals remain soft and oil futures markets remain in a deep contango, with support in the US\$50s not the US\$70s.
- Simple fundamentals may not support oil prices in the US\$70 area until 2Q10 and after. Only in 2011 do we expect global oil demand to return to 2007 levels and spare capacity to once again become tight. Prices need to rise above long-term marks to raise upstream spending.
- In the long run, however, we still think that prices will oscillate around levels required for major new developments to yield acceptable returns. Until mid-2008, steep inflation all along the supply chain drove this all-in-cost-of-supply steadily higher. Although relatively insulated from broad deflationary forces, costs at big ultra-deep oil sands and for gas-to-liquids (GTL) and coal-to-liquids projects should decline by about 15%, leaving our long-term price at US\$73 per barrel for Brent oil (in real 2009 dollars in contrast to near-term nominal ones).

**Fig 15 Macquarie oil price forecast**

	Q309E	Q409E	2009E	2010E	2011E	2012E	Long Run
<b>Brent</b>							
US\$	59.00	53.00	54.41	70.00	78.00	82.00	73.00
Futures*	73.65	74.25	63.89	78.18	81.96	83.47	92.02
<b>WTI</b>							
US\$	58.00	52.00	53.28	71.00	80.00	84.00	75.00
First Call	63.06	65.26	57.03	68.86	75.52		
<b>Tapis</b>							
US\$	62.00	56.00	56.84	73.00	82.00	82.00	77.00
<b>Dubai</b>							
US\$	57.00	51.00	52.92	67.50	75.50	79.00	70.00

\*10-day averages ending 24 August

**Fig 16 Oil prices, forecast and uncertainty cone**



Source: Bloomberg, Macquarie Research, September 2009

Source: Bloomberg, Macquarie Research, September 2009

### Risk to our oil-price forecast

In a few short months, risks to our forecast have changed quite fast. They were skewed to the downside in April; now, after a more-balanced distribution emerged in May, price risk appears to be skewed to the upside. This progression, we believe, is another sign that a global economic recovery is underway, or that perhaps the signs are very misleading.

# Welded demand strong, seamless sluggish

## Demand for welded pipes remains resilient

Demand for SAW pipes remains strong given the continued need to connect new areas of oil and gas supplies to areas of net demand. We believe the demand for oil and gas transmission pipelines is more often driven by structural factors like government policies, a need for infrastructure development to meet long-term demand, geopolitics and a shift to cleaner fuels (gas) than by short-to-medium-term demand fluctuations.

**Investments in gas pipelines to rise by 64% in 2009**

Despite the economic slowdown in the United States, expenditures on oil and gas pipelines are actually expected to increase in 2009. According to *the Oil & Gas Journal*, investment in crude and product pipelines is expected to increase by 17% YoY and investments in natural gas pipelines are expected to increase by 64% in 2009. This is in sharp contrast to a 29% YoY decline expected in E&P expenditures for 2009.

**Fig 17 Expenditures on pipelines remain robust, despite slowdown**

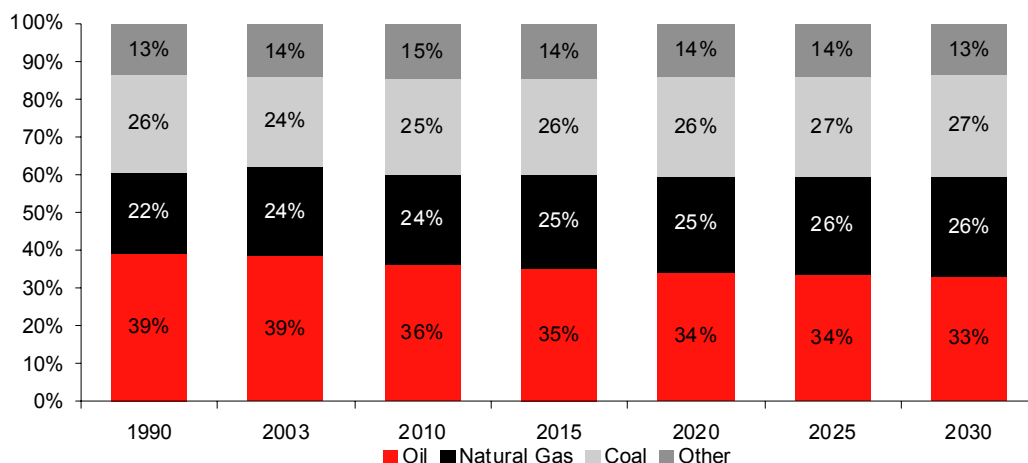
Projects in US (US\$ m )	2007	2008	2009E
<b>Exploration &amp; Production</b>			
Drilling/Exploration	216,462	239,646	174,621
Production	41,128	45,533	33,178
OCS Lease Bonus	3,142	6,883	1,080
<b>Subtotal</b>	<b>260,732</b>	<b>292,062</b>	<b>208,879</b>
Refining	8,280	13,000	10,140
Petrochemicals	840	1,000	50
Marketing	2,500	3,000	1,950
<b>Crude and Product Pipelines</b>	<b>1,796</b>	<b>4,431</b>	<b>5,164</b>
<b>Natural Gas Pipelines</b>	<b>4,367</b>	<b>6,343</b>	<b>10,374</b>
Other transportation	970	1,200	840
Mining, other energy	1,000	1,200	900
Miscellaneous	4,100	5,000	3,750
<b>Subtotal</b>	<b>23,853</b>	<b>35,174</b>	<b>33,168</b>
<b>Total</b>	<b>284,585</b>	<b>327,236</b>	<b>242,047</b>

Source: Oil & Gas Journal, Macquarie Research, September 2009

## Natural gas usage is on the rise

Natural gas is now seen as an emerging fuel – it has been the fastest-growing source of energy over the last 25 years. The Energy Information Administration (EIA) forecasts that the share of natural gas in world energy consumption will increase from 24% in 2003 to 26% by 2030, with the share of oil falling from 39% to 33% (see chart below).

**Fig 18 World energy consumption by fuel – historical and forecast**



Source: Energy Information Administration, Macquarie Research, September 2009

Increased use of natural gas would require building the infrastructure needed to transport the gas from the point of production/import to end users. This would mean constructing more pipelines, benefiting SAW pipe manufacturers. Also, the inter-regional gas trade is expected to be robust. According to EIA forecasts, the inter-regional gas trade will expand faster than output, and the main gas-consuming regions will become increasingly dependent on imports.

According to the *Pipeline and Gas Journal*, approximately 43,000km of new pipelines will be under construction in the US in 2009, and natural gas will account for 27,000km. There are a total of 75 projects, 58 of which will involve pipes that are 30" or bigger.

#### Global pipeline investment looks robust – US\$78bn potential

According to the global consultancy *Simdex*, 710 pipeline projects of ~326,000km are to be constructed in the next five years, with principal demand coming from Asia followed by North America. At an assumed rate of 200 tonnes of pipes per kilometer and an average price of US\$1,200/tonne, we estimate the global demand for pipes could be as large as US\$78bn. The increased demand in Asia may be fueled mainly by the growing economies of China and India.

**Major demand from Middle East, Russia, USA, UK and Africa**

Major users of line pipes are regions such as the Middle East, Russia, the US and UK and Africa. Of these, the Middle East, Russia and the US together absorb more than half of the entire global production of welded steel pipes and tubes. The global export market of welded pipes is estimated to be close to US\$15–16bn a year.

**Fig 19 Global demand for pipes in the next five years**

	Number of projects	% of total	Total length (km)	% of total
Asia	142	20%	95,003	29%
North America	192	27%	73,736	23%
Europe	101	14%	44,784	14%
Middle East	111	16%	43,626	13%
Latin America	56	8%	35,034	11%
Africa	49	7%	17,452	5%
Australasia	59	8%	16,339	5%
<b>Total</b>	<b>710</b>	<b>100%</b>	<b>325,974</b>	<b>100%</b>

Source: Simdex, Macquarie Research, September 2009

**Fig 20 Global market potential US\$78bn in five years, US\$16bn market opportunity for Indian players**

	Total length (km)	Required tonnage (m tonnes)	Total Value (US\$ bn)	Addressable Market for Indian Players (%)	Est Market Opportunity (US\$ bn)
Asia	95,003	19	23	40	9.1
North America	73,736	15	18	8	1.4
Europe	44,784	9.0	11	2	0.2
Middle East	43,626	8.7	10	40	4.2
Latin America	35,034	7.0	8	2	0.2
Africa	17,452	3.5	4	15	0.6
Australasia	16,339	3.3	4	5	0.2
<b>Total</b>	<b>325,974</b>	<b>65</b>	<b>78</b>	<b>20</b>	<b>16</b>

Source: Simdex, Macquarie Research, September 2009

**Douglas-Westwood forecasts US\$180bn spending on pipelines**

*Douglas-Westwood*, global oil and gas consultants, forecasts that US\$180bn will be spent on onshore pipeline projects worldwide between 2008–12. It estimates a 16% increase in pipeline mileage installed from 2008–12 compared with 2003–07. Nearly 75% of these expenditures is expected to be spent in Asia, eastern Europe, the FSU and North America. Asia stands out as the largest market by length of pipeline construction, accounting for US\$42bn of forecast capital expenditures. The status of forecast pipeline projects shows a split between planning (47%), under construction or ordered (40%) and approved (13%). Much of this expected growth is based on modest increases in energy consumption.

#### Substantial replacement demand from the US and Russia

Demand for SAW pipes comes from both new pipelines and the replacement of old pipelines. Most of the pipelines need replacement after being in operation for 25–35 years. Replacement of old pipelines that were laid during the 1960s and 1970s (mainly in the US and Russia) should generate substantial demand for welded pipes.

**1.8m km of pipelines  
in US are over 30  
years old**

We expect pipelines of ~50,000km to be replaced in the next five years, which might turn out to be conservative as ~1.8m km out of a total 2.7m km of pipelines in the US are over 30 years old and will need replacement in the near future. At an assumed rate of 200 tonnes of pipes per kilo-meter and an average price of US\$1,200/tonne, we estimate the replacement demand for pipes in the next five years could be as large as US\$12bn. Considering that the annual production of pipes has been over 16–17m tonnes, the replacement of 1.8m km of pipeline would take at least 25 years to complete.

**Fig 21 Two-thirds of existing pipelines in US are nearly 40 years old**

	1960	1970	1980	1990	1995	2000	2006
<b>Oil pipeline, total</b>	<b>305,510</b>	<b>349,874</b>	<b>349,429</b>	<b>334,003</b>	<b>291,059</b>	<b>283,194</b>	<b>270,954</b>
Crude lines <sup>a</sup>	225,736	234,040	207,730	190,088	155,246	136,768	NA
Product lines	79,774	115,834	141,699	143,915	135,813	146,426	NA
<b>Gas pipeline<sup>b,c</sup>, total</b>	<b>1,009,440</b>	<b>1,461,280</b>	<b>1,682,880</b>	<b>1,902,720</b>	<b>2,044,160</b>	<b>2,190,880</b>	<b>2,454,880</b>
Distribution mains	626,240	951,680	1,122,880	1,383,360	1,519,680	1,672,960	1,942,400
Transmission pipelines <sup>d</sup>	293,920	403,520	426,400	467,520	475,040	474,560	480,640
Gathering lines <sup>e</sup>	89,280	106,080	133,600	51,840	49,440	43,360	31,840
<b>Total</b>	<b>1,314,950</b>	<b>1,811,154</b>	<b>2,032,309</b>	<b>2,236,723</b>	<b>2,335,219</b>	<b>2,474,074</b>	<b>2,725,834</b>

a. Includes trunk and gathering lines.

b. Excludes service pipe. Data are not adjusted to common diameter equivalent. Mileage as of the end of each year.

c. Total gas pipelines in 2004 do not add to total due to rounding by the data source.

d. After 1975, includes 8,000–10,000kms of underground storage pipe.

e. Before 1990, data include field line mileage.

Sources: Oil Pipeline - 1960-2000: Eno Transportation Foundation, Inc., Transportation in America, 2002 (Washington, DC: 2002), p. 58., 2001-06: U.S. Department of Transportation, Research and Special Programs Administration, Office of Pipeline Safety, Pipeline Statistics, Internet site <http://ops.dot.gov/stats.htm> as of 4 June 2008. Gas Pipeline - 1960-2006: American Gas Association, Gas Facts (Washington, DC: Annual issues), table 5-1 and similar tables in earlier editions.

### Stimulus expenditures to boost water sector demand

Oil and gas pipes are unlikely to benefit from stimulus expenditures, with the majority of the gas distribution network run by the private sector. One area where the stimulus may have a direct effect on tubular demand is the water sector. The 2010 US federal budget for water and sewer infrastructure offers a strong rise to a proposed US\$3.9bn from US\$1.5bn in 2009.

### Seamless pipe demand recovery to remain sluggish

Seamless pipe demand is very highly correlated with crude oil prices, which, in turn, depend on the global economic outlook. Although there has been some increase in global drilling activities recently, the increase in activities remains very low given a significant decline during the past 12 months.

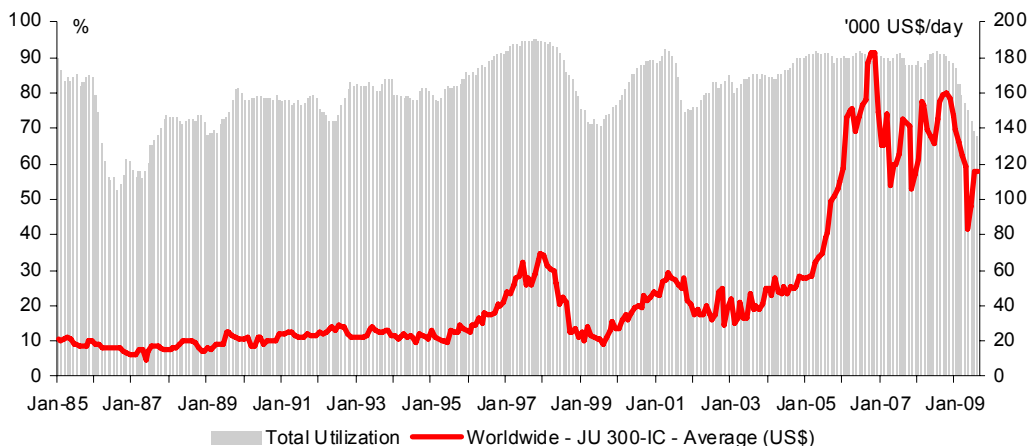
**For 2010, we expect  
a year of slow  
recovery**

For 2010, we expect a slow recovery; however, the pace may be dictated by crude oil prices. We assume no meaningful activity improvements until the second half of 2010. In 2011, we expect the recovery to strengthen, with both activity levels and pricing improving. The multi-year energy cycle should again be fully underway.

### E&P activities hit hard by the global economic slowdown

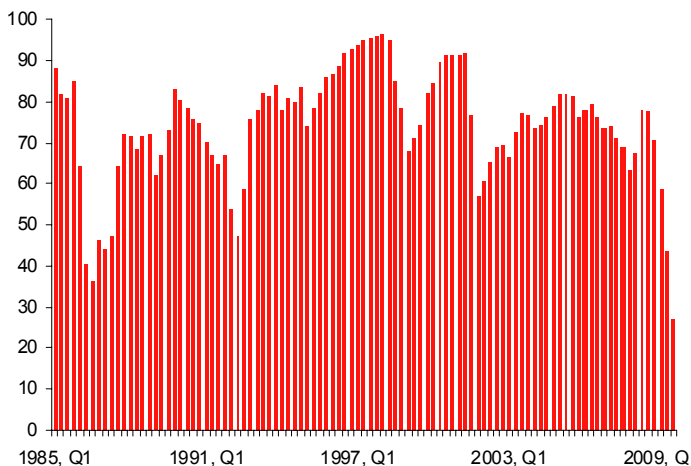
The oil and gas industry is one of the most capital intensive industries, with its history of boom and bust. When oil and gas prices are high, upstream companies invest in the development of existing properties and exploration for new reserves. These initiatives lead to an increase in drilling activity, which tends to remain high until oil and natural gas prices begin to fall, at which point drilling activity also declines. The rig count is a good indicator of changes in the cycle; it is timely and sensitive to changes in the outlook. Figure 22 shows a sharp cut in E&P investment after the sharp oil price decline in the past 12 months.

**Fig 22 Global jack-up utilisation and day rates remain under severe stress**



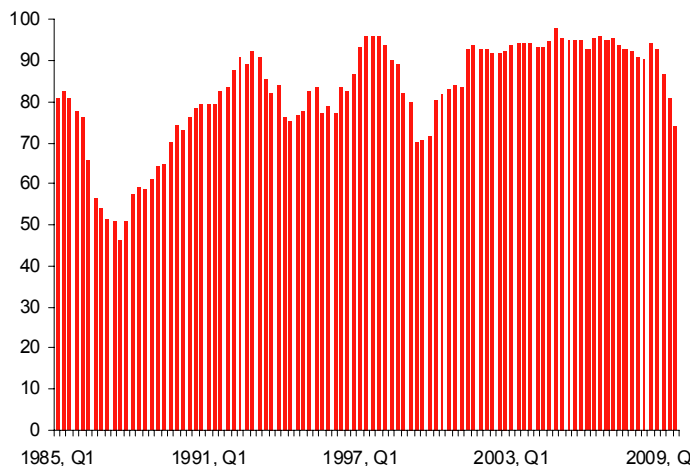
Source: ODS-Petrodata, Macquarie Research, September 2009

**Fig 23 US-GoM jack-up utilisation has fallen to 27%**



Source: ODS-Petrodata, Macquarie Research, September 2009

**Fig 24 Middle East jack-up utilisation has fallen to 75%**



Source: ODS-Petrodata, Macquarie Research, September 2009

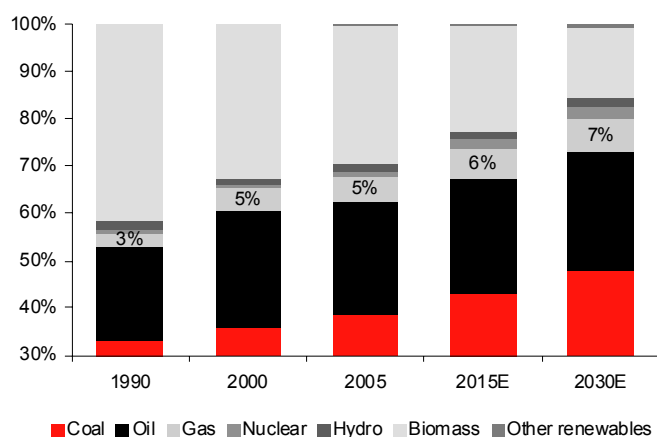
## Domestic demand gaining momentum

India is expected to have a spurt in the construction of pipeline infrastructure because the country's domestic gas availability is poised to increase two-fold over the next four years. In addition, most of the exploratory blocks that have been offered under various rounds of the New Exploration Licensing Policy (NELP) will enter the drilling phase over the next few years. We also expect investments in water-related infrastructure to increase demand for SAW/DI pipes.

### India's energy requirement to be robust for the next 25 years

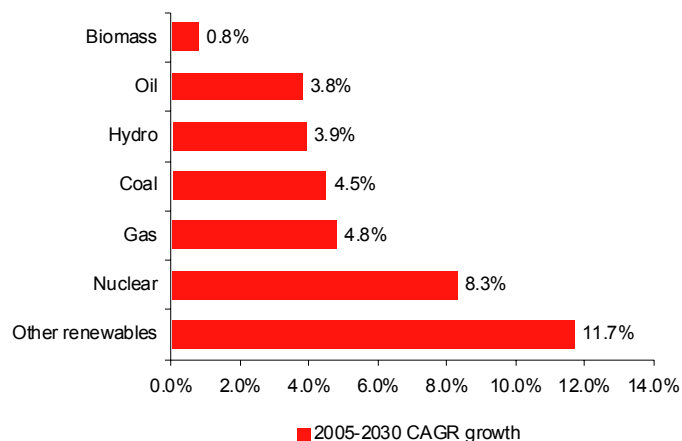
According to the EIA, energy demand grew by 3.5% pa in 1999–2005, which we expect to increase to 3.7% pa during 2005–15 and to slow slightly to a 3.5% CAGR for 2015–30. By 2030, we expect India to be the third-largest energy consumer in the world, after China and the US (it currently ranks fourth). Also, India's energy demand is expected to surpass the energy demand of the entire OECD Pacific region (which currently equals 60%).

**Fig 25 Share of gas in India's energy basket will rise**



Source: EIA, Macquarie Research, September 2009

**Fig 26 Gas demand expected to grow at 4.8% CAGR**



Source: EIA, Macquarie Research, September 2009

Natural gas is one of the fastest-growing sources of energy, with the potential to more than triple by 2030, in our view, when its share of primary demand could reach 7% (from the current 5%). To ensure energy security, the Indian government introduced a new exploration licensing policy, NELP, in 1998, and is actively promoting exploration activities.

Other than a major find by Cairn India in the Mangala field in Rajasthan, no significant oil discoveries have been made recently in India. The most recent discoveries have been largely of natural gas. The recent discoveries in the country have been skewed towards gas finds (see Figure 11, which shows the expected tripling of gas finds in India in the next five years).

**Fig 27 Gas supply outlook – KG-D6 gas to double domestic availability**

Sources (mmscmd)	2007/08	2011/12E	2016/17E
ONGC (Firm + Indicative)	47.19	51.65	42.36
OIL	10	10	10
Pvt / JVs (As per DGH)	22.21	102.57	99.09
Projected Domestic Supply Conservative	79.4	164.22	151.45
Additional RIL	0	2	3.2
GSPC	0	4.5	4.5
Additional Gas Anticipated	0.00	13	7.7
<b>Total Projected Supply Optimistic</b>	<b>79.4</b>	<b>177.72</b>	<b>159.15</b>
<b>LNG Supply Source (MMTPA)</b>			
Dahej	6.5	12	12.5
Hazira	2.5	2.5	5
Dabhol	-	5	5
Kochi	-	2.5	5
Mangalore	-	1.25	2.5
Ennore	-	-	1.25
Total LNG Supply	9	23.25	31.25
<b>Total LNG Supply (mmscmd)</b>	<b>31.5</b>	<b>81.38</b>	<b>109.38</b>
<b>Total Domestic Gas + LNG (Conservative)</b>	<b>110.9</b>	<b>245.6</b>	<b>260.83</b>
<b>Total Domestic Gas + LNG (Optimistic)</b>	<b>110.9</b>	<b>258.6</b>	<b>268.53</b>

Source: MoPNG, Macquarie Research, September 2009

### Domestic demand less dependent on global energy cycles

In India, the domestic price of natural gas is regulated by the government, which has fixed the price of KG-D6 gas at US\$4.2/mm btu (~US\$25/boe) for the first five years. Because the prices are fixed at lower levels, the cashflows of the oil and gas players do not vary significantly with changes in global energy prices.

The main reason for the slow development of gas transmission infrastructure in the past was a lack of domestic supplies. This scenario is changing very rapidly, with a series of new gas discoveries and R-LNG terminals. The gas transmission companies are moving swiftly to create the infrastructure to maximise the value from higher availability of gas.

### Gas transmission infrastructure poised to triple

Transportation infrastructure has been a major barrier to the development of a full natural gas market in India. The planned investments and ongoing projects in the next few years should promote significant expansion of the transportation infrastructure – at local, intra-state and inter-state levels, with the eventual development of a national grid. This is likely to directly affect the development of demand in markets that do not have access to gas today.

There continues to be a lack of clarity on regulatory issues with respect to pipelines, open access and distribution, and this needs to be addressed on a priority basis for gas-market development to be accomplished.

### Pipeline length to triple from 5,826km to 13,685km in the 11th five-year plan

- The current gas grid for gas transmission is not adequate to meet future natural gas supply. Hence, the government has made the development of pipeline infrastructure a top priority.
- Companies such as GAIL, Reliance Group and GSPL have planned huge capital expenditures to establish gas transmission infrastructure.
- We expect the growth of pipeline infrastructure to be synchronised with supply and demand timelines.

**Fig 28 Development plans for transmission infrastructure**

<b>GAIL</b>	
Dahej-Uran-Pune-Dabhol PL	693km
Dadri-Bawana-Nangal PL	610km
Chainsa-Gurgaon-Jhajjar-Hisar PL	310km
Jagdishpur-Haldia PL	876km
Dabhol-Bangalore PL	730km
Kochi-Kanjirkod-Mangalore/Bangalore PL	820km
Dahej-Vijaipur II PL	610km
Vijaipur-Dadri PL	505km
Vijaipur-Auraiya-Jagdishpur PL	571km
<b>GSPL</b>	
Rajkot-Jamnagar-Vadinar PL	110km
Bhadbhut-Gana-Hadala PL	190km
Darod-Pipavav PL	215km
Morbi-Mundra PL	182km
Padmla-Godhra PL	60km
Mehsana-Palanpur PL	70km
<b>Reliance</b>	
Kakinada-Hyderabad-Uran-Bharuch-Ahmedabad PL	2062km
Kakinada-Kolkata PL	1150km
Kakinada-Chennai-Tuticorin PL	580km
<b>IOCL</b>	
Dadri-Panipat PL	114km

Source: GAIL, GSPL, RIL, Macquarie Research, September 2009

## National gas highway will widen the gas markets in India

### Uneven gas consumption and infrastructure

Southern, central, eastern and northeastern parts of the country lack gas supply as well as infrastructure. The gas market has remained limited to the states where gas sources were found. This explains higher consumption of gas in the western region.

States closer to the gas sources have benefited from higher utilization of gas and local development of the gas market. Other states have not been able to utilize the benefits of gas due to less gas availability and a lack of infrastructure.

**Fig 29 Current gas usage – western and northern states consume 75% of gas**

Region	%
Western (Gujarat & Maharashtra)	42.7
Northern (Rajasthan, Uttar Pradesh, Delhi, Haryana)	30.5
Central (Madhya Pradesh)	4.6
Southern (Tamil Nadu, Andhra Pradesh)	14.5
Eastern (Assam, Tripura)	7.6

Source: Macquarie Research, September 2009

### Proposal for Natural Gas Highways

Total new pipelines required under the Natural Gas Highways project may be about 6,000km, which may need investment of Rs300bn. This is in addition to the Rs500bn already committed by GAIL and RTIL under the authorised projects.

### City gas distribution (CGD) poised to take off

CGD is being extended to 30 cities in different states – besides Mumbai and Delhi – during 2009. Currently, CGD is operational only in Mumbai, Delhi and several cities in Gujarat, while CGD projects are being implemented in more than half-a-dozen states, including Uttar Pradesh, Rajasthan, Madhya Pradesh, Maharashtra, Karnataka, Kerala, Andhra Pradesh and West Bengal. With investments of over US\$2.0bn, the network could be further expanded at a later stage to cover 200 cities in 15 states, providing gas to 160m people. As of now, CGD accounts for only about 5–6% of total gas consumption or 5–6mmscmd. In the next four years, however, consumption is likely to grow to 20mmscmd, and may be even higher.



## Seamless pipe demand to be driven by large upstream potential

### Large untapped potential in the East Coast

The total sedimentary area in India's east coast covers 299,000sq km. DGH estimates potential resources in the East Coast at 48bn boe, of which gas would be 153tcf. A gross in-place reserve of 16tcf has been established so far. DGH expects reserves to improve significantly as more wells are drilled. The drilling density (wells drilled per 1,000sq km area) in the East Coast is only 0.15 compared with more than 10 wells in Brazil.

**Fig 30 India's offshore drilling density is among the lowest in the world**

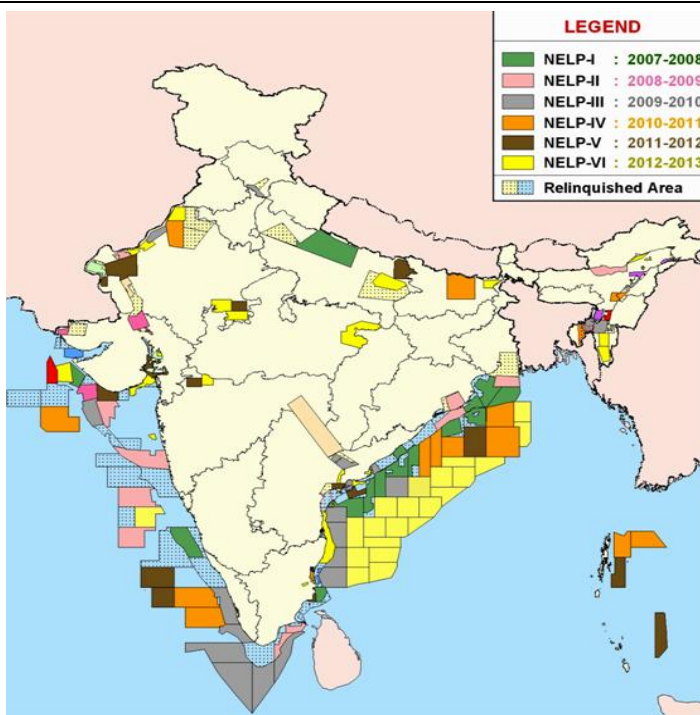
		Area under contract (sq km)	Exploratory wells	Well density (wells/1,000sq km)
Deep Water	East Coast	478209	70	0.15
	West Coast	377023	67	0.18
	<b>Total</b>	<b>855232</b>	<b>137</b>	<b>0.16</b>
Shallow Water	East Coast	98715	79	0.8
	West Coast	19078	1034	54.2
	<b>Total</b>	<b>289497</b>	<b>1113</b>	<b>3.84</b>
<b>Total Offshore</b>		<b>1144729</b>	<b>1250</b>	<b>1.09</b>

Source: DGH, Macquarie Research, September 2009

### NELP blocks are in the early stages of E&P cycle

Most of the blocks awarded under NELP are currently in Phase I of the exploratory programme. Phase I usually consists of 2D and 3D seismic surveys. NELP I and NELP II blocks entered the mandatory drilling phase in FY08 and FY09. NELP III to NELP VII will enter the drilling phase progressively over FY10-14E. This means greater potential may be unearthed as fields progress towards drilling.

**Fig 31 Expected future discoveries in NELP rounds**



Source: DGH, March 2009

### Water-related demand – thrust should continue

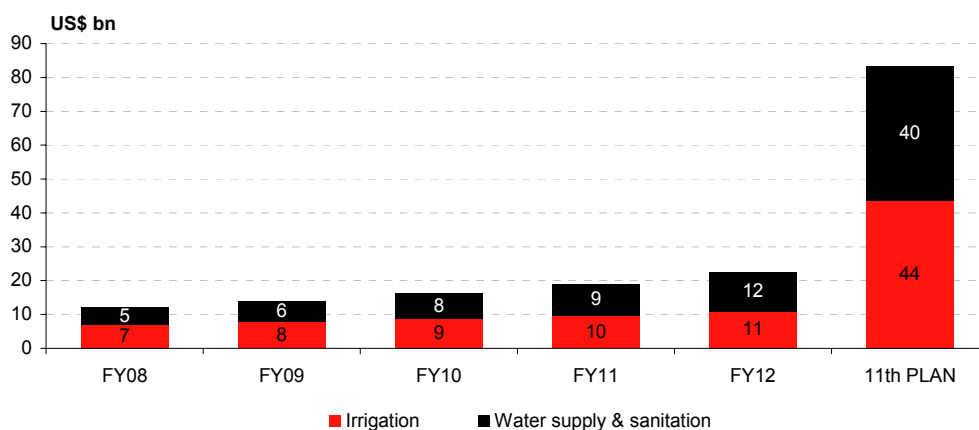
We believe water and irrigation offers a very strong business opportunity for Indian pipe manufacturers, in addition to the opportunity from the energy sector. A combination of greater government focus on irrigation, higher multilateral lending for water-related sectors and enhanced private sector participation in water supply projects increase the potential for a rise in demand from this segment.

**11<sup>th</sup> plan envisages  
US\$83bn spending  
in irrigation and  
water**

**Key focus area for the government according to 11th plan**

Irrigation remains a key focus area for the government and more so for the state governments due to the politically sensitive nature of the investments. Combined with water supply and the sanitation segment, which is essentially driven by the government plan for Jawaharlal Nehru National Urban Renewal Mission (JNNURM) projects, this segment is the second-most-important focus for the government after the power sector as per the 11th five-year plan. The 11th plan envisages ~US\$83bn of investments in irrigation and water supply and sanitation over FY08–12.

**Fig 32 US\$83bn of investments expected in the segment in 11th plan**



Source: Macquarie Research, September 2009

**Bharat Nirman programme – significant addition of 5.9m hectares of irrigation potential in four years**

Under the irrigation component of Bharat Nirman (the flagship programme of the government of India to improve infrastructure in rural areas), there was a four-year target (FY06–09) to create additional irrigation potential of 10m hectares. This was planned to be met largely through expeditious completion of identified ongoing major and medium irrigation projects in addition to minor irrigation schemes through surface flow and ground water development.

**Fig 33 Four-year plan under Bharat Nirman to create 10m ha of irrigation potential**

Components	Total (m ha)
<b>Major &amp; Medium Irrigation</b>	
Completion of on-going Projects	4.2
Extension, Renovation, Modernisation of Major & Medium Irrigation Projects	1.0
<b>Total</b>	<b>5.2</b>
<b>Minor Irrigation</b>	
Surface Water	1
Ground Water	2.8
Repair, Renovation & Restoration of Water bodies/ ERM of MI Schemes	1
<b>Total</b>	<b>4.8</b>
<b>Grand Total</b>	<b>10.00</b>

Source: Macquarie Research, September 2009

- **Irrigation potential added in five key states:** The programme succeeded in creating additional irrigation potential of 5.94m hectares over the last four years (FY06–09), with Uttar Pradesh, Andhra Pradesh, Maharashtra, Gujarat and Rajasthan leading the way, creating 66% of the additional potential among them. However, there still remains a deficit of 34.6m hectares irrigation potential in India. India's estimated irrigation potential is around 139.9m hectares; after the four-year Bharat Nirman plan, the irrigation potential could be 105.3m hectares.

**Fig 34 Five states lead the way in adding 5.9m ha of new irrigation potential**

S. No	States	4 year plan	Achieved
1	<b>Andhra Pradesh</b>	<b>1.57</b>	<b>0.80</b>
2	Arunachal Pradesh	0.02	0.01
3	Assam	0.07	0.02
4	Bihar	1.70	0.31
5	Chhattisgarh	0.19	0.16
6	Goa	0.03	0.01
7	<b>Gujarat</b>	<b>0.95</b>	<b>0.51</b>
8	Haryana	0.06	0.05
9	Himachal Pradesh	0.08	0.02
10	Jammu & Kashmir	0.11	0.06
11	Jharkhand	0.33	0.05
12	Karnataka	0.39	0.27
13	Kerala	0.04	0.03
14	Madhya Pradesh	0.77	0.31
15	<b>Maharashtra</b>	<b>0.82</b>	<b>0.52</b>
16	Manipur	0.07	0.01
17	Meghalaya	0.01	0.01
18	Mizoram	0.01	0.01
19	Nagaland	0.02	0.01
20	Orissa	0.33	0.18
21	Punjab	0.06	0.14
22	<b>Rajasthan</b>	<b>0.42</b>	<b>0.42</b>
23	Sikkim	0.01	0.00
24	Tamil nadu	0.02	0.23
25	Tripura	0.08	0.01
26	<b>Uttar Pradesh</b>	<b>0.98</b>	<b>1.66</b>
27	Uttranchal	0.04	0.10
28	West Bengal	0.70	0.03
	<b>Total</b>	<b>9.88</b>	<b>5.94</b>

Source: Ministry of water resources, Macquarie Research, September 2009

### Andhra Pradesh remains the leader in providing thrust to irrigation investments

The re-elected government in Andhra Pradesh has plans to double spending on irrigation over the next five years. This could also lead to higher irrigation spending by neighbouring states such as Maharashtra and Madhya Pradesh.

### Urban Infra – rapid approval of projects augurs well for order inflows

Investments in Urban Infra tend to be much in doubt given the fiscal scenario of state governments and urban local bodies. However, significant Jawaharlal Nehru National Urban Renewal Mission (JNNURM) projects have been approved during the past year, with project approvals having increased to Rs494bn from Rs270bn a year ago. The major positive is the increase in assistance released by the government of India (GOI) in the past year; that assistance has gone up almost three-fold from Rs29bn to Rs74bn.

**Fig 35 Project approvals in Rs m**

	Oct-06	Oct-07	Mar-08	Mar-09
<b>Value of approved projects</b>	<b>44,302</b>	<b>214,851</b>	<b>270,379</b>	<b>494,225</b>
Central share in approved projects	21,885	103,503	129,597	234,111
Central assistance released by GOI	2,375	25,550	29,922	74,284
Total number of projects approved	80	252	302	461

Source: JNNURM, Macquarie Research, September 2009

### Water supply/sewage projects contribute 76% of total projects

Water supply, sewage and drainage projects account for 76% of all project approvals. The mass rapid transport system (MRTS) and roads follow with contributions of 10% and 7%, respectively. The top six sectors account for 97% of all the approved projects.

**Fig 36 Sector project approvals – 76% has been for water-related segments**

Sectors	No. of projects	Approvals (Rs bn)	% of approvals
Water Supply	140	183.24	37%
Sewerage	99	123.38	25%
Drainage	59	70.66	14%
Mass rapid transport system	19	47.7	10%
Roads / Flyovers	75	33.82	7%
Solid waste management	40	21.86	4%
Urban renewal	9	4.46	1%
Other urban transport	13	6.86	1%
Development of heritage areas	2	0.49	0%
Preservation of water bodies	4	1.17	0%
Parking	1	0.56	0%
<b>TOTAL</b>	<b>461</b>	<b>494.2</b>	<b>100%</b>

Source: JNNURM, Macquarie Research, September 2009

### 32% of government's contribution already disbursed – expect surge in order flows

The total contribution of the central government is Rs234bn, representing 47% of the total project cost. The central government has already released Rs74bn under the first instalment for 461 projects in 21 states and Union Territories. We view the release of funds by the government of India as a proxy to progress on the ground because funds are only released for specific projects for which detailed project reports (DPRs) have been approved. Given the strong activity on the ground, we expect a surge in orders in the areas of water supply, sewage and drainage during the next 6–12 months.

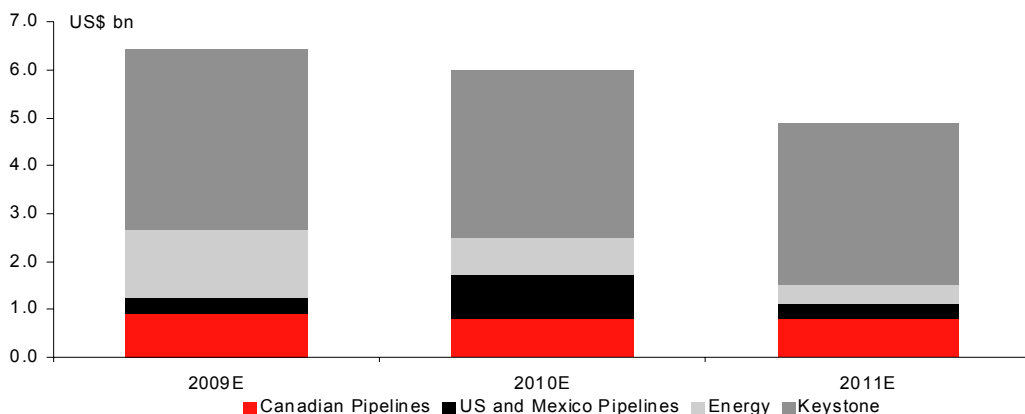
# Clients stay committed to investment plans

We have analysed demand projections from previous sections against the investment plans of large global and domestic oil and gas pipeline companies. We have analysed the investment plans of three of the largest pipeline companies in North America and GAIL (India), the largest gas transmission company in India.

## TransCanada

TransCanada has ~59,000km of pipeline system that taps into virtually all major gas supply basins in North America and delivers to markets across Canada and the United States. TransCanada has interests in natural gas pipelines in Canada, the United States and Mexico.

**Fig 37 Company guidance indicates pipeline expenditures will remain strong**



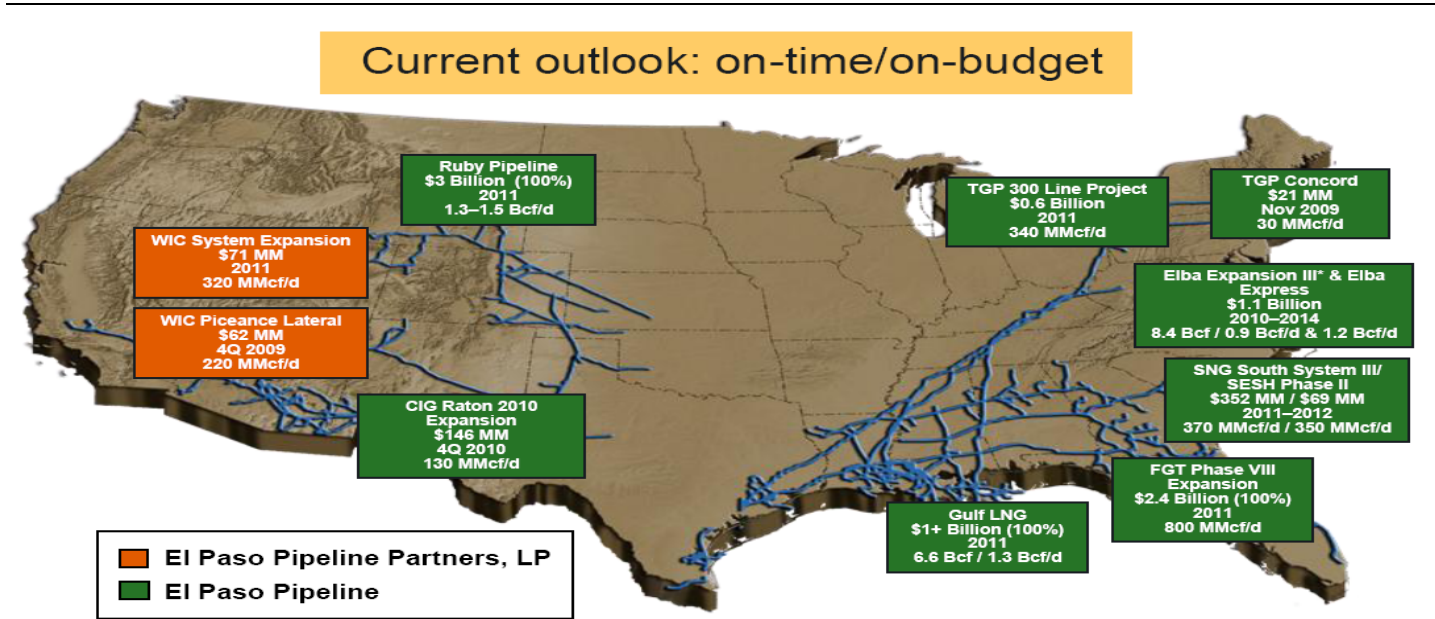
Source: Company data, Macquarie Research, September 2009

## El Paso Corporation

**El Paso has US\$8bn of committed growth projects**

El Paso Corporation is organized around two core businesses – pipelines and exploration and production. It owns North America’s largest interstate natural gas pipeline system – 67,000km – transporting more than a quarter of the natural gas consumed in the US. This year, El Paso will spend about US\$1.3bn in growth capital for an array of projects. Overall, El Paso has ~US\$8bn of committed growth projects.

**Fig 38 El Paso has plans to invest more than US\$8bn in pipeline infrastructure over the next three years**



Source: El Paso Corp, September 2009

### Kinder Morgan

**Kinder Morgan is investing US\$6bn in the next two years**

Kinder Morgan is one of the largest pipeline transportation and energy storage companies in North America, with more than 59,000km of pipelines and 170 terminals. Kinder Morgan is currently investing more than US\$6bn over the next two years to construct new infrastructure and expand existing infrastructure to help meet future energy demand in growing markets across North America.

**Fig 39 Several large pipeline projects planned over next few years; demand for pipes to remain strong**

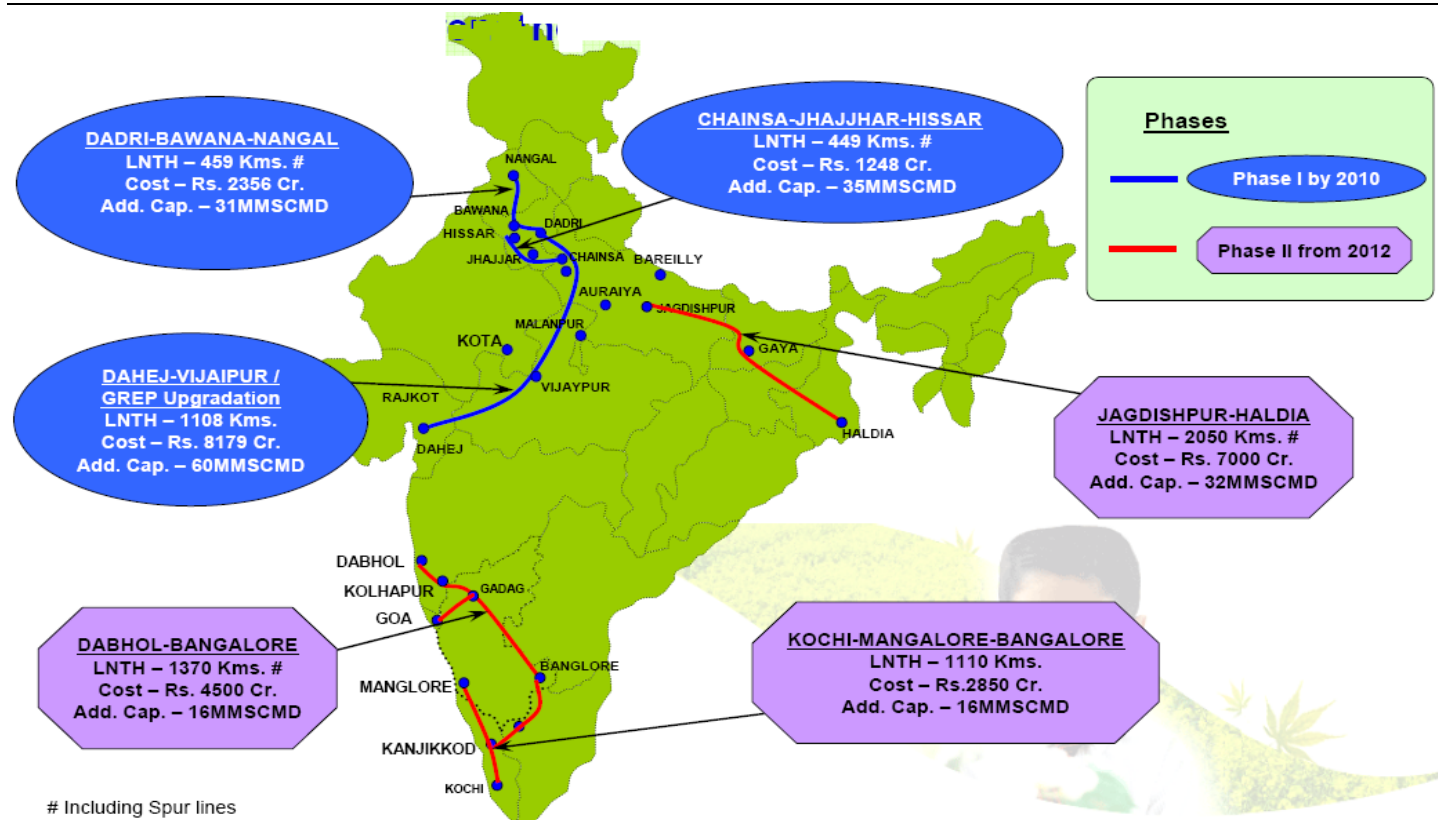
Project	Players	Length (km)	Inv Costs (US\$ m)	Timeline	Type
Alaska Pipeline	TransCanada, ExxonMobil	2737	26000	2018	Natural Gas
Bison Pipeline	TransCanada	483.2	1000	2010	Natural Gas
Groundbirch Mainline	TransCanada	77	251.4	2010	Natural Gas
Horn River Mainline	TransCanada	72	340	2012	Natural Gas
Keystone Pipeline	TransCanada	3456	12000	2010	Crude Oil
Mackenzie Valley Pipeline	Consortium	1220	7000	2010	Natural Gas
North Central Corridor Pipeline	TransCanada	300	923	2010	Natural Gas
Palomar Gas Transmission	TransCanada	350	NA	2011	Natural Gas
Fayetteville Express	Kinder Morgan	296	1300	2011	Natural Gas

Source: Company data, Macquarie Research, August 2009

### GAIL (India)

- GAIL is India’s largest gas transmission company, with over 7,000km of pipeline network.
- 5,500km of pipelines already under-construction.** GAIL has started implementing the second phase of its capacity expansion plan. The first phase of capacity expansion is progressing according to the schedule. GAIL plans to spend US\$6bn on these projects.
- 6,000km of pipelines for gas highways.** Gas highways will be connected to the National Gas Grid, which will be made up of existing and authorised pipelines and the missing links to remote and underdeveloped areas. the government has identified the 6,000km of missing links that will form the gas highways.

**Fig 40 GAIL’s planned pipeline – GAIL will add 126mmscmd of new capacity by 2010**



Source: GAIL, Macquarie Research, September 2009

## High visibility in an uncertain environment

### Order books look robust

WGS and JSAW have been able to build strong order books, primarily because of resilience in exports, but also because of dominant growth in the domestic market. We believe that earnings expansion should be driven primarily by continued growth in the order book.

**Fig 41 Welspun has a robust order book, Jindal SAW lags in contrast**

	Stock code	Rating	Market cap (US \$m)	Order book/FY3/09 sales
Welspun Gujarat	WGS IN	OP	904	1.19
Jindal Saw	JSAW IN	OP	578	0.68
Maharashtra Seamless	MHS IN	NR	374	0.18
PSL Limited	PSLL IN	NR	135	1.26
Man Industries	MAN IN	NR	62	1.30

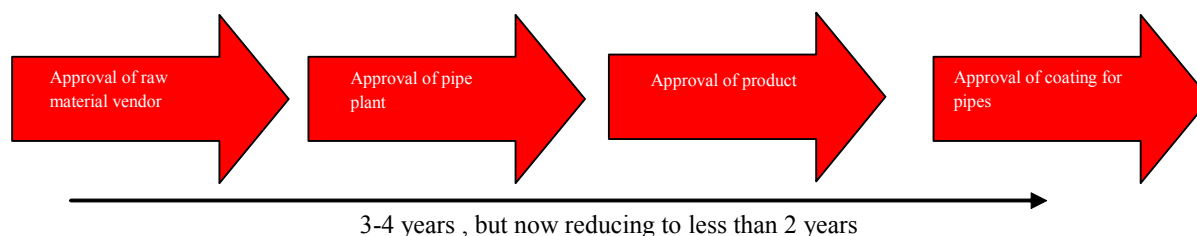
Source: Macquarie Research, September 2009 Note: Data for companies not under coverage are based on Bloomberg consensus estimates.

### Client accreditation – not a major hurdle anymore

Given that oil and gas transportation is hazardous, there are stringent quality norms set by global oil majors for pipe manufacturers. Therefore, for Indian pipe manufacturers to become suppliers to international/local oil majors, they must obtain accreditation from these companies.

For the Indian pipe manufacturers, the process of getting accreditation requires approvals not only for the quality of the final pipes, but also for the plant facilities. This generally takes three or four years, thereby creating a major entry barrier for new pipe manufacturers.

**Fig 42 Obtaining accreditation is a time-consuming process – but things are changing now**



Source: Company data, Macquarie Research, September 2009

However, given that Indian pipe manufacturers have been through the process in the past 4–5 years and have received accreditation from a majority of key suppliers, we do not see this as a significant roadblock (at least for Welspun and Jindal SAW).

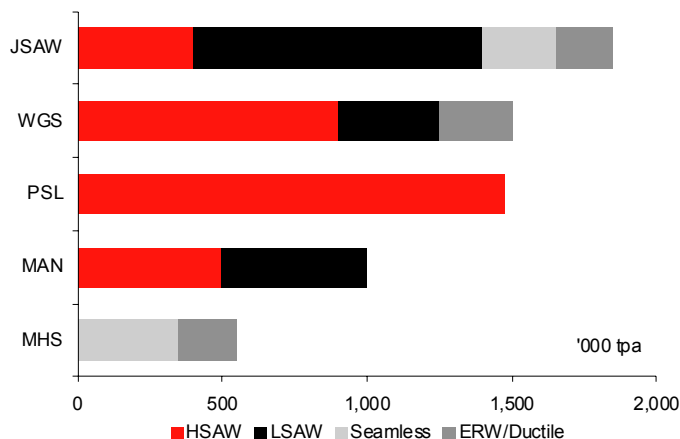
Also, because exports have been forming a large portion of the total order book (for Indian pipe manufacturers), it is evident that Indian pipe manufacturers are fulfilling the desired quality standards of international customers. This has led to repeat orders from these customers. It has also led to the accreditation process getting shorter, with some Indian pipe manufacturers receiving accreditation in as short as 8–12 months.

### Indian manufacturers ramping up capacity

Among the large Indian pipe manufacturers, JSAW has the most-diverse product range in India, with production spread across all possible categories of pipes. This is followed by WGS, which has a similar product profile as JSAW (but which lacks seamless pipes in its portfolio). PSL is a pure HSAW play, while MAN is equally divided between HSAW and LSAW. Maharashtra Seamless (as the name suggests) predominantly manufactures seamless pipes and also makes ERW pipes.

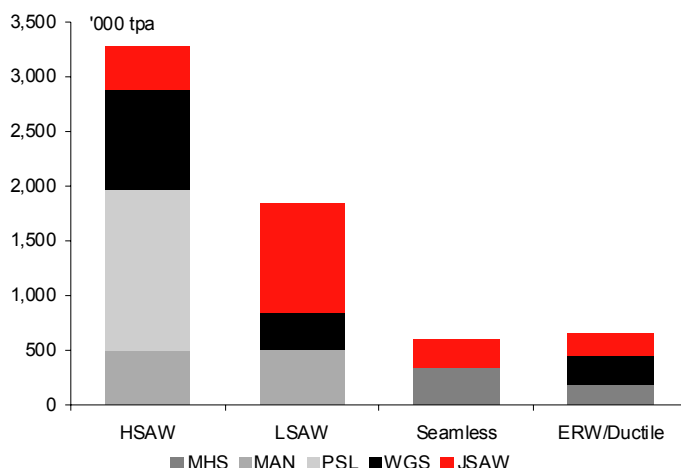


**Fig 43 JSAW – spread across all product categories**



Source: Company data, Macquarie Research, September 2009

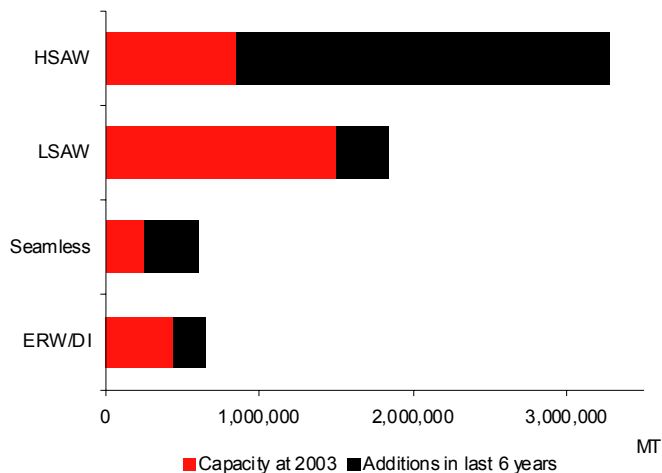
**Fig 44 Current capacity – skewed towards HSAW**



Source: Company data, Macquarie Research, September 2009

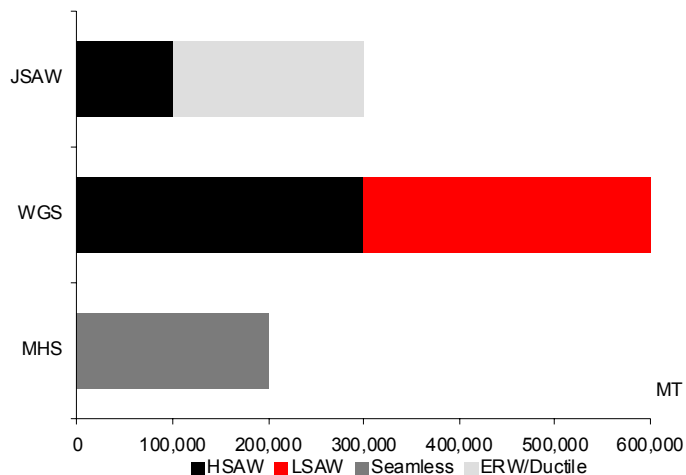
Current total pipe-production capacity is skewed towards HSAW capacity (mainly because of PSL, which only manufactures HSAW and manages 45% of total HSAW capacity in India). LSAW comes next, with JSAW leading the pack followed by WGS and MAN. Seamless is clearly dominated by MHS.

**Fig 45 Focus has been on HSAW capacity additions**



Source: Company data, Macquarie Research, September 2009

**Fig 46 WGS leads the pack in capex for next 12–18 months**



Source: Company data, Macquarie Research, September 2009

There has been a strong focus by companies on building HSAW capacities in the past five years. Also, the gap in production capacity between HSAW and LSAW could widen in the next 2–3 years, given that significant future capacity additions are skewed towards HSAW.

One of the key reasons HSAW capacities have dominated capacity additions is the availability of hot rolled (HR) coils (used for HSAW) vis-à-vis plates (used mainly for LSAW). Easy availability of HR coils has ensured that they are 25–30% cheaper than plates, resulting in HSAW pipes being cheaper than LSAW pipes by a similar percentage.

This has led to a notion among investors that, given the cheapness of HSAW compared with LSAW, consumers may completely substitute LSAW with HSAW, thereby gradually reducing demand for LSAW. However, we do not foresee any drastic shift in demand from LSAW to HSAW (primarily based on cost aspects), as both LSAW and HSAW serve different applications. However, we do expect certain customers to view HSAW as a valid substitution for certain applications (purely because of price differentials).



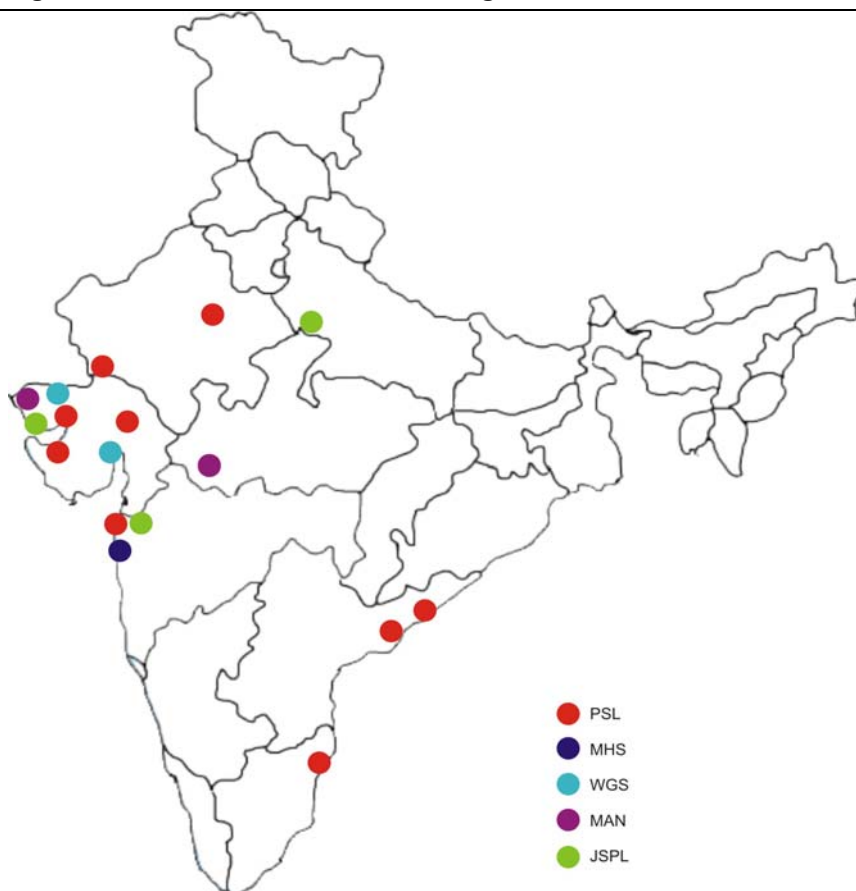
**WGS has the most aggressive growth plan**

**How are capacities looking for the future?** WGS has the most aggressive capex plan (in terms of increasing production capacities) and is focusing on both LSAW and HSAW. MHS is next and is increasing its production capacity in seamless by 36%. JSAW plans to increase its capacity by 16–25% in HSAW and by 100% in DI.

**Capacities strategically located near ports**

Practically all Indian pipe manufacturers have set up their manufacturing facilities in the state of Gujarat (west coast of India) because of its proximity to the port (see figure below). Because pipes are bulky, we think that having locations near the port can lead to significant savings in freight costs, enabling Indian manufacturers to compete in the export market. Indian manufacturers have the closest proximity to the fifth-largest market for pipes (the Middle East), where we estimate 12% of projected incremental pipe demand will be in the next five years, giving them a clear advantage over European pipe manufacturers.

**Fig 47 Higher concentration of manufacturing hubs in the west of India**

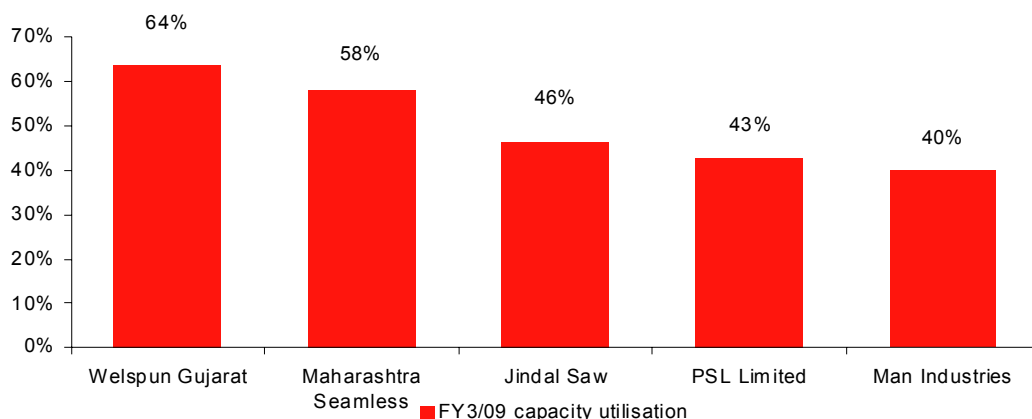


Source: Company data, Macquarie Research, September 2009

**Capacity utilisation ranges between 40–60%; Is it low?**

In a pipe mill, pipe production per hour increases gradually as production increases, and it generally takes a couple of years for a pipe mill to achieve optimum levels of production. Also, since a large portion of current capacities has been added in the past 2–3 years, Indian pipe manufacturers are slowly reaching their optimisation levels.

The optimum level of production varies according to the specifications of the products with respect to size and outer diameter of pipes. A pipe mill that has orders spanning different dimensions requires constant adjustments, leading to higher lead times and lower capacity utilisation.

**Fig 48 Capacity utilisation ranges between 40–65%**

For JSAW – capacity utilisation is calculated as of 31 December 2008.

Source: Company data, Macquarie Research, September 2009

Our discussions with industry sources suggest that 60–65% is regarded as an optimum level of capacity utilisation.

### Setting manufacturing bases in US

By their very nature, SAW pipes are bulky and freight costs play an important role in the final cost structure for a customer. The closer the manufacturer is to the customer, the better it is for the customer in terms of cheaper pipes (because of lower freight).

Given the strong demand expected from North American markets, Indian companies are setting up manufacturing facilities in these areas (mainly emanating from replacement demand for existing pipeline infrastructure). This ensures that Indian manufacturers are not only able to sell pipes at cheaper rates, but also that it enables them to understand their customers better.

As long as the demand scenario in the US is robust, we think it augurs well for Indian pipe manufacturers. However, any significant slowdown in the North American market may make it difficult for Indian companies to sell pipes (manufactured in the US) outside the US (because they will incur high freight costs to export pipes to any other regions). However, robust demand from the North American market makes the US market look rosy for Indian pipe manufacturers in the near-to-medium term.

### Globally, no strict comparables for Indian pipe manufacturers

Pipe manufacturing is globally an integrated business as steel companies have downstream facilities to make pipes (ie, they have captive plate/HR coils/billets through which they source their raw materials). However, Indian pipe manufacturers convert steel plates/coils to pipes. Essentially, there are no strict comparables for Indian steel-pipe companies because, globally, the largest pipe companies are backward integrated and have steel-manufacturing operations that expose them to commodity-price volatility. By contrast, Indian pipe companies are less correlated to commodity prices.

## Raw material hedge protects margins

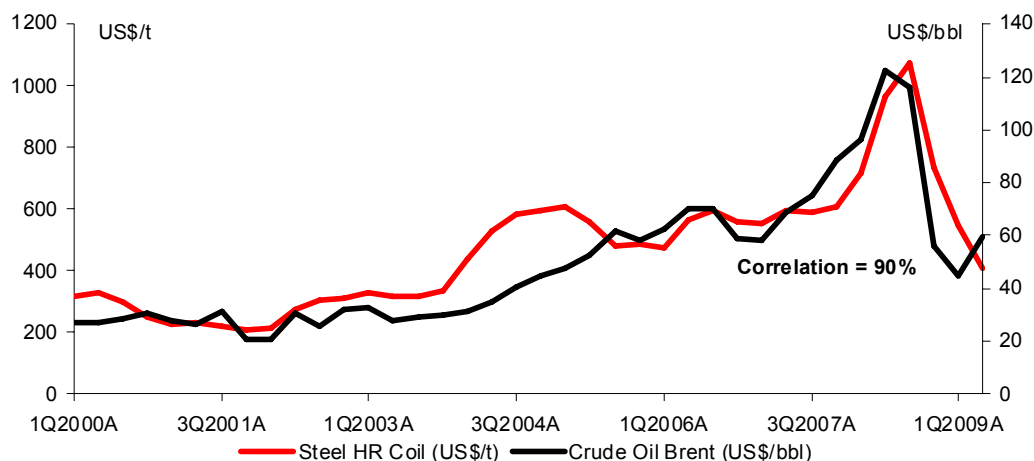
Raw material for the production of line pipes, comprising hot rolled (HR) coils and plates, has always been a matter of great concern because of the availability of the right quality at the right price and the right time. There is a substantial premium that existing welded-pipe manufacturers are paying to secure their raw materials, particularly due to the small number of high-width plate and HR coil suppliers of requisite API grades.

The timely and competitively priced availability of raw materials forms an integral part of the production process. Currently, raw material accounts for over 80% of the cost of production and ~72% of the total price of pipes. The plates have a long lead time of almost 12 months, thus restricting orders with shorter delivery schedules.

### Raw material has a natural hedge with demand drivers

The investments in oil and gas transmission pipelines have been driven primarily by long-term crude oil price forecasts. Oil prices historically have exhibited a very high correlation of ~90% with steel prices, and both these commodities are strongly linked to global macroeconomic factors and tend to move in tandem.

**Fig 49 Steel HR coil (raw material) has a 90% correlation with crude oil prices**



Source: Macquarie Research, September 2009

### Raw materials are contracted at the time of bids for new orders

Raw materials (plates/coils) comprise 70–75% of the total cost structure. Until the middle of 2005, when pipe manufacturers bought steel at spot prices, margins were at risk because of unexpected increases in steel prices. However, after 2005, companies started to tie up raw-material prices at the time of bidding for new orders, and the cost of steel was a pass-through, which enabled companies to maintain margins. However, higher steel prices in certain cases do lead to risks of non-delivery from plate/coil manufacturers, leading to disruptions in production schedules.

### Backward integration strategy further strengthens margins

Welspun Gujarat has set up a 1.5m tpa-capacity plate and coil mill in FY09. This will enable it to internally source scarce high-quality plate (4.5-metre width) and capture a higher share of the entire value-added process (from converting plates to pipes). We expect the plate mill to be a key catalyst that will drive earnings in FY3/10–11.

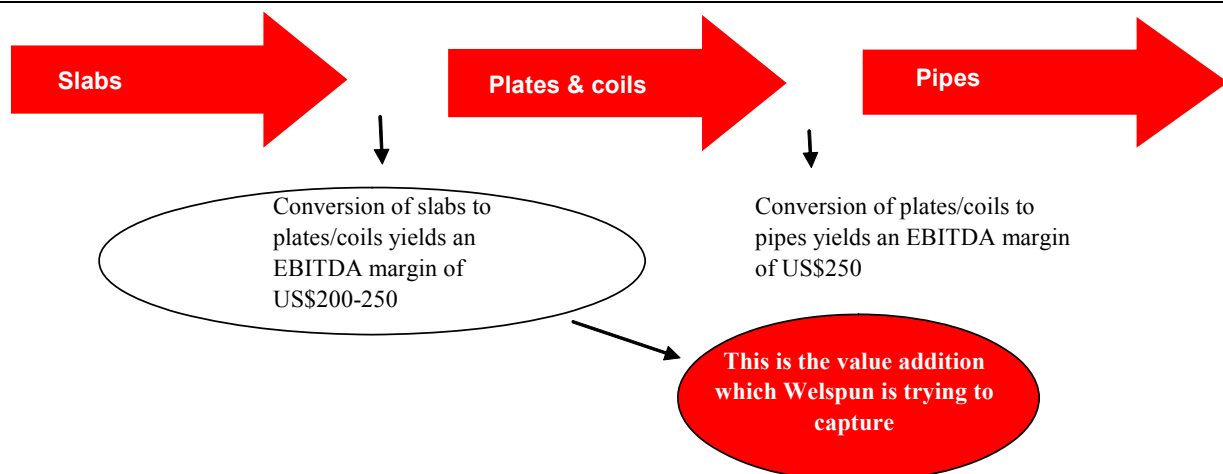
### Captive plate mill will alleviate timing risk

Manufacturing LSAW pipes requires steel plates, and because, globally, only a handful of mills produce them, many LSAW manufacturers have been finding it difficult to procure plates at reasonable prices. Given the demand-supply mismatch, plate prices have risen faster than anticipated and have doubled over the past four years (depending on different quality grades).

Also, even if pipe manufacturers are willing to pay high prices for plates, the overflowing order books of the plate manufacturers should ensure that plates can be delivered with a lag of only six months to a year. This not only affected the delivery schedules for pipe manufacturers, but also prohibited them from taking any new orders for LSAW given the lack of adequate plate supply.

Given this, Welspun decided to secure its own raw material supply by setting up a plate and coil mill. The mill should be beneficial to Welspun in many ways. First, it will give the company better control over its delivery schedules (because it will source its raw materials in-house). Second, it should enable it to source its plates at lower prices (because it will not have to pay freight charges for plates, given that previously 80% of all raw materials were imported). Third, it will enable the company to execute niche orders (Welspun is one of the few qualified global companies in this area); these often require wider plates, which are scarce in the market and, even when available, command a significant premium, thus enabling the company to enhance both margins and productivity. Fourth, and most important, it will enable the company to capture a larger portion or the entire value chain (from conversion of slabs to final pipes) as illustrated in Figure 51.

**Fig 50 Welspun is trying to capture a larger share of the total value-added process**



Source: Company data, Macquarie Research, September 2009

## Industry risks

### Fall in crude prices

The oil and gas industry is by-far the biggest consumer of steel pipes and tubes. The oil and gas companies' investment plans are directly linked to future expected crude oil prices. If crude prices decline and remain low, oil and gas companies may postpone some of their investment plans. As we have shown earlier, demand for seamless pipe gets affected much-more severely than that for welded pipes.

Also, with Asia expected to be the biggest consumer of pipes in the next five years, principally China and India, any significant slowdown in Chinese spending could lead to excess capacity for Chinese players and, in turn, increased competition from Chinese players.

### Shortage of steel plates/coils

The unavailability of steel plates/coils (the primary component in pipe manufacturing) is the biggest risk factor for the pipe-manufacturing industry, in our view, because the majority of them are imported into India. Long gestation supplies of these materials or any subsequent delay in delivery could affect the production cycle of the business. This is one of the reasons why pipe manufacturers (namely Welspun) are going for backward integration, which could enable them to have timely sourcing of plates/coils.

### Sharp unexpected increase in the cost of steel plates/coils

Raw materials (plates/coils) comprise 70–75% of the total cost structure. Until the middle of 2005, when pipe manufacturers bought steel at spot prices, margins were at risk because of unexpected increases in steel prices. However, after 2005, companies started to tie up raw-material prices at the time of bidding for new orders, and the cost of steel was a pass-through, which enabled companies to maintain margins. However, higher steel prices in certain cases do lead to risks of non-delivery from plate/coil manufacturers, leading to disruptions in production schedules.

### Sharp increase in freight costs

A sharp and unprecedented increase in the cost of freight may lead to pressure on margins. Presently, the cost of freight is calculated prior to the execution of the order. However, if this cost were to rise sharply and suddenly, the pipe-manufacturing companies could be at risk if charter rates were not tied up well in advance.

### Increased competition

Although China is a significant manufacturer of SAW, seamless and DI pipes, it does not pose a serious threat in the SAW business in the near future, we believe, because of strong domestic demand in China.

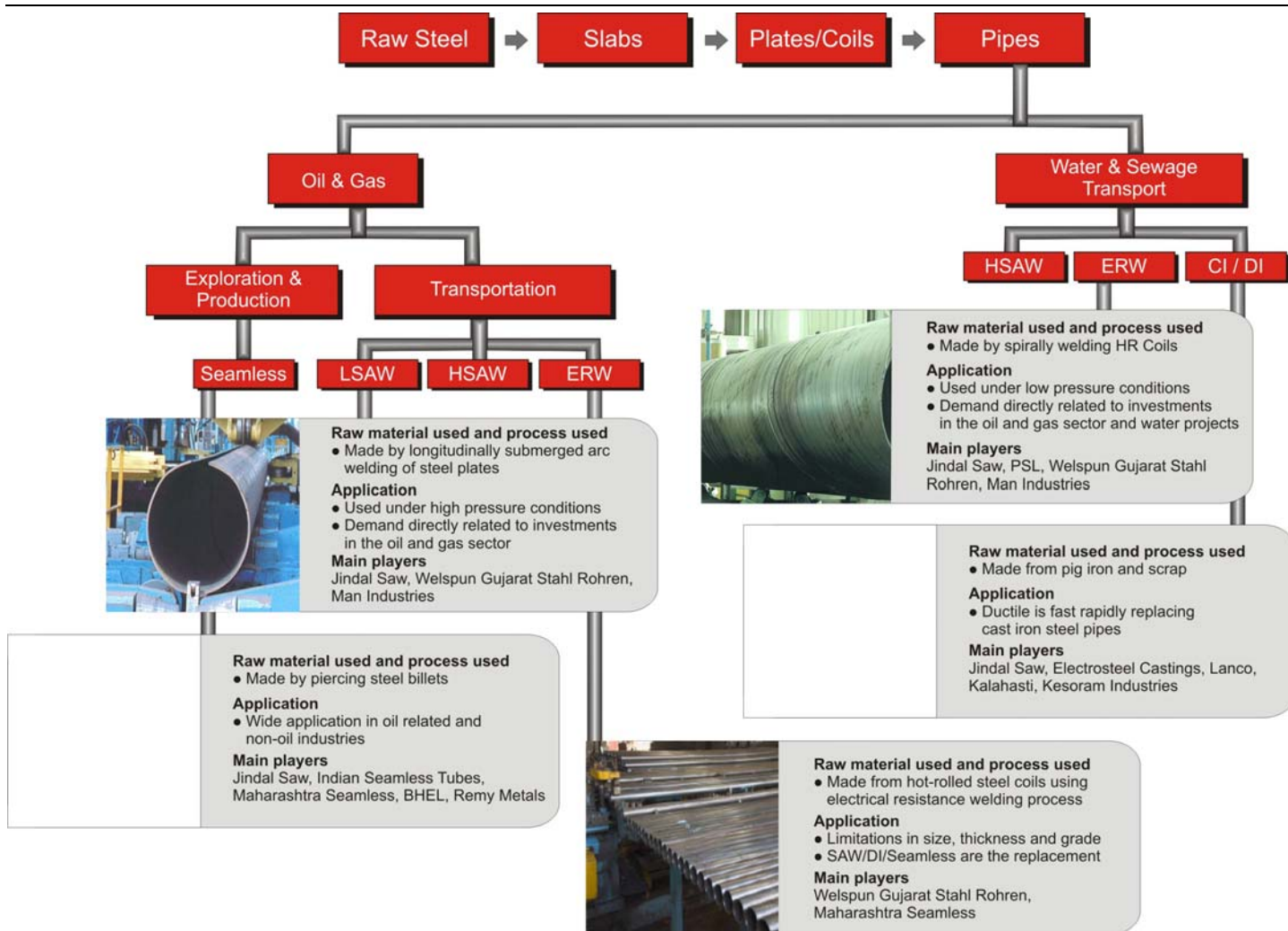
Also, even if supply from China were to exceed local demand, we do not see that as a serious near-term threat to the SAW business because of the high freight cost due to the volume weight ratio factor in play; we think the remaining segments are vulnerable to global competition.

However, in the seamless and DI pipes business (which is more in the nature of commodity products), large imports from China might lead to increased competition and thus affect realisations for Indian pipe manufacturers. However, the decision by the US government and the European Union to impose an anti-dumping duty on Chinese imports alleviates the risk for the largest market.

# Appendix 1: Pipes industry overview

Pipes are manufactured mainly from steel, concrete and plastic, with steel pipes having the largest demand potential in the near future, in our view. Although concrete pipes are used more in irrigation systems, sanitary sewers and storm drains, plastic pipes find applications in water mains, drainage, irrigation, fire sprinklers, etc. Steel pipes are preferred for long-distance high-pressure transportation of oil, gas and water.

Fig 51 Pipes overview – demand drivers, manufacturing processes and key players



Source: Company data, Macquarie Research, September 2009

Fig 52 Indian pipes industry – key players and areas of operation

Types of Pipes	Size	Raw Materials	Indian Players
Seamless	1/2" - 14"	Round steel billets	Maharashtra Seamless, Indian Seamless Tubes, Jindal SAW
HSAW	18" - 100"	HR Coils	Jindal SAW, PSL, Welspun Gujarat, Man Industries
LSAW	16"-50"	Steel Plates	Jindal SAW, Welspun Gujarat, Man Industries
ERW	1/2" - 20"	HR Coils	Maharashtra Seamless, Jindal Pipes, Welspun Gujarat
DI/CI	3"-39"	Pig Iron & Scrap	Electrosteel Castings, Jindal SAW, Kesoram Industries

Source: Company data, Macquarie Research, September 2009



INDIA

# Welspun Gujarat

16 September 2009

## WGS IN

Outperform

Stock price as of 15 Sep 09	Rs	256.05
12-month target	Rs	375.00
Upside/downside	%	+46.5
Valuation	Rs	375.00
- PER		

GICS sector		materials
Market cap	Rs m	47,834
30-day avg turnover	US\$m	25.0
Market cap	US\$m	982
Number shares on issue	m	186.8

## Investment fundamentals

Year end 31 Mar		2009A	2010E	2011E	2012E
Total revenue	m	57,395	71,657	61,858	79,853
EBITDA	m	6,348	10,783	12,181	13,096
EBITDA growth	%	-2.0	69.9	13.0	7.5
EBIT	m	4,915	8,820	9,950	10,798
EBIT Growth	%	-16.2	79.5	12.8	8.5
Reported profit	m	2,135	4,309	5,012	5,720
Adjusted profit	m	2,135	4,309	5,012	5,720
EPS rep	Rs	11.45	23.10	26.88	30.67
EPS adj	Rs	11.45	23.10	26.88	30.67
EPS adj growth	%	-39.9	101.8	16.3	14.1
PE adj	x	22.4	11.1	9.5	8.3
Total DPS	Rs	2.01	4.06	4.72	5.38
Total div yield	%	0.8	1.6	1.8	2.1
ROE	%	13.7	24.8	23.6	22.3
EV/EBITDA	x	10.8	6.4	5.6	5.2
Net debt/equity	%	109.4	108.2	63.9	16.3
Price/book	x	3.1	2.5	2.1	1.7

## WGS IN rel SENSEX performance, & rec history



Source: FactSet, Macquarie Research, September 2009  
(all figures in INR unless noted)

## Analyst

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## The premium pipe company

### Event

- We initiate coverage on Welspun Gujarat Stahl Rohren (WGS IN) with an Outperform rating and a 12-month target price of Rs375 (47% potential upside) based on a target one-year forward PER of 14x. WGS is one of the largest SAW pipe producers in the world and is adding 40% capacity over the next 12–15 months.

### Impact

- Large-scale expansions.** WGS is ramping up its capacity for SAW pipes to meet increasing domestic demand both from the oil & gas and water-related sectors. It will raise its production capacity by 40% over the next 15 months, which should take its total capacity to 2.1m tpa. This large expansion follows 0.5m tpa of SAW capacity addition in FY09. The full benefit of these large capacity expansions should become visible from 2H FY11E.
- Strong order book.** With more than 50 accreditations from major oil & gas companies, we believe WGS is in a strong position to capture market share in the SAW pipes market. Given that WGS has moved higher up the value chain with its niche products (there are no competitors in India for 70–75% of its order book), we expect it to capture a larger share of the high-margin niche pipe segment. It currently has orders of Rs70bn (1.2x FY3/09 sales).
- Best-in-class margins.** WGS has consistently achieved an EBITDA/tonne of over Rs10k, which is the highest amongst Indian peers. Going forward, we expect WGS to maintain EBITDA at ~Rs10k per tonne despite the addition of new capacities as it plans to balance low-margin domestic sales with high-margin niche export sales. Margins on American sales should also expand further on material freight savings as production from US pipe mill ramps up.
- Backward integration should enhance margins.** WGS has set up a 1.5m tpa-capacity plate cum coil mill. While plate production started in FY09, the commissioning of the coil mill is now underway. This should enable the company to internally source high-quality plate (4.5-metre width) and capture a larger share of the entire value-added process (from converting slabs to pipes). We expect the plate mill to be a key catalyst for EBITDA margin and help secure high-margin orders, as it would enable better control of delivery schedules.

### Price catalyst

- 12-month price target: Rs375.00 based on a PER methodology.
- Catalyst: 1) New orders and 2) timely commissioning of new plants.

### Action and recommendation

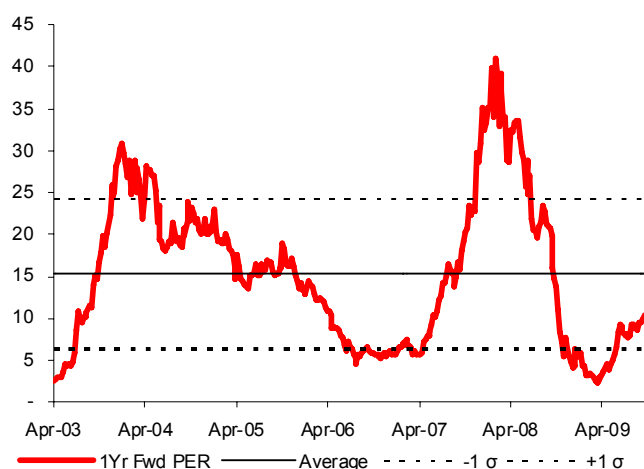
- WGS is our preferred pick in the Indian pipes sector.** WGS is trading at a ~50% discount to the global peer average FY11E PER. Our target price of Rs375 implies an FY3/11E PER of 14x, which is at a 20% discount to global peers despite a better earnings growth. We forecast Welspun's earnings to grow at a 16% CAGR in FY10–13E, driven by large capacity additions, EBITDA margin gains from sourcing plates through its captive plate mill and its larger share of high-margin incremental orders from North America.

## Believe current valuation discount to peer group unjustified

Amongst the Indian pipe producers, we believe WGS is best positioned to benefit from the global as well as domestic demand growth. The key reasons are:

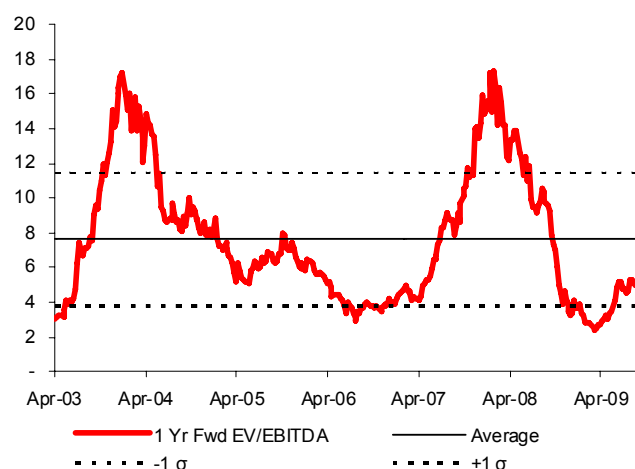
- WGS has moved higher up the value chain with its niche products with respect to its peer group, (as currently there are no competitors in India for 70–75% of its order book); we thus expect it to capture a larger share of the high-margin niche pipe segment.
- The current order book stands at Rs70bn (1.2x FY3/09 sales), which it hopes to increase substantially over the next year. The order book size is the highest amongst peers.
- WGS has the best EBITDA margin amongst peers. Margins are likely to remain robust due to the twin levers of the plate cum coil mill and the pipe mill in the US.

**Fig 1 WGS trading at a discount to average PER**



Source: Bloomberg, Macquarie Research, September 2009

**Fig 2 WGS trading below average EV/EBITDA**



Source: Bloomberg, Macquarie Research, September 2009

## Welspun trades at discount to global and Indian peers

There are no strict comparables for Indian steel-pipe companies, as globally the largest pipe companies are backward integrated and also have steel-manufacturing operations. While the integrated business of global peers exposes them to commodity price volatility, Indian pipe companies are less correlated to commodity prices.

Indian pipe companies are trading at a ~50% discount to the global peers on CY10/FY11E PER valuations. Welspun is trading at a discount even to its Indian peers, although we believe that given its strong earnings growth, robust order book, backward integration and larger share of high-margin orders from North America, WGS warrants a higher multiple premium to its peers.

**Fig 3 WGS trading at a 50% discount to global peer average**

Name	Bloomberg ticker	Current Price	Recommendation	Target Price	Upside/Downside	Fiscal Year end	Price/Earnings		Market cap (US\$ bn)
							12-09/03-10	12-10/03-10	
<b>Global manufacturers</b>									
Sumitomo	5405 JP	JPY226	Outperform	JPY370	64%	March	-35.1	17.5	11.9
Tenaris	TS US	US\$33.24	Not Rated	-	-	December	17.0	15.0	19.6
TMK	TMKS LI	US\$13.12	Not Rated	-	-	December	17.5	7.7	2.9
US Steel	X US	US\$46.72	Not Rated	-	-	December	-4.2	42.6	6.7
Vallourec	VK FP	EUR116.5	Not Rated	-	-	December	14.3	17.1	9.1
							<b>16.3</b>	<b>19.2</b>	
<b>Indian manufacturers</b>									
Welspun Gujarat	WGS IN	INR256.05	Outperform	INR375	46%	March	11.1	9.5	0.98
Jindal Saw	JSAW IN	INR695.75	Outperform	INR890	28%	December	10.5	11.3	0.74
Maharashtra Seamless	MHS IN	INR313.30	Not Rated	-	-	March	9.8	9.1	0.45
MAN Industries	MAN IN	INR52.85	Not Rated	-	-	March	13.9	10.4	0.06
PSL Limited	PSLL IN	INR171.55	Not Rated	-	-	March	6.2	6.4	0.19
							<b>10.3</b>	<b>9.8</b>	

Prices as of 15 Sep 2009; data for Not rated companies are based on Bloomberg consensus estimates.

Source: Bloomberg, Macquarie Research, September 2009



### Target price of Rs375/sh provides 47% potential upside

We use a PER-based valuation methodology for our coverage universe. The pipe-making business is a cyclical business with order inflows linked with energy capex, which is further affected by energy prices.

Given the robust outlook for energy capex and prices, we believe earnings visibility for the next 2–3 years is driven by growth in order book and capacity expansions. We refrain from using a DCF-based methodology – given the cyclical nature of the business, coupled with volatility in commodity prices; earnings drivers may potentially change beyond our forecast period (FY3/10–12E).

WGS has historically traded in the range of 5–35x forward PER (see chart above). Our target price of Rs375 implies an FY3/11E PER of 14x, which is at a 20% discount to the global peer group. We believe Welspun provides better earnings growth prospects given its large planned capacity additions, EBITDA margin gains from sourcing plates through its captive plate mill and its larger share of high-margin incremental orders from North America.

### Strong volume and margins drive earnings growth

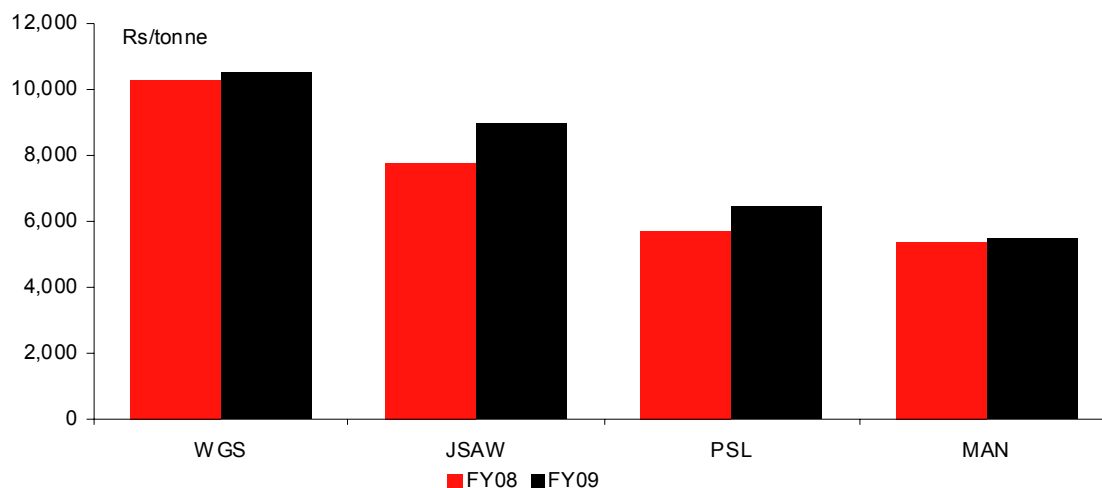
WGS has recorded robust numbers in the last four years, with revenue growing by a minimum of 40% pa and EBITDA increasing 8.0x. The key driver of growth has been the large increase in production and sales volumes. WGS is adding 40% of capacity over the next 15 months and given the strong demand outlook is targeting to achieve 55% utilisation of pipe mills in FY12E.

We expect capacity utilisation of the 1.5m tpa plate mill to rise from 13% in FY3/09 to 30% by FY3/11. Based on management guidance, we assume the internal consumption of plates will increase from 40% of total plate production to 70% by FY3/11.

### Best-in-class margins

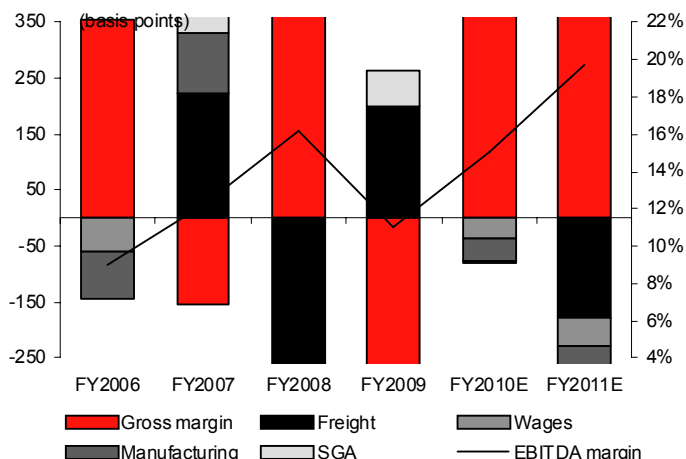
We believe the best metric to compare the profitability of the pipe manufacturers is EBITDA/tonne. WGS has consistently achieved an EBITDA/tonne of over Rs10,000, which is the highest amongst Indian peers. Going forward, we expect WGS to maintain EBITDA at ~Rs10k per tonne despite the addition of new capacities, as it plans to balance low-margin domestic sales with high-margin niche export sales. Margin on American sales should increase further on material freight savings as production from the US pipe mill ramps up. In addition, the plate mill is expected to contribute Rs5,000–6,000 per tonne of plate produced.

**Fig 4 Highest margins amongst Indian SAW pipe manufacturers**



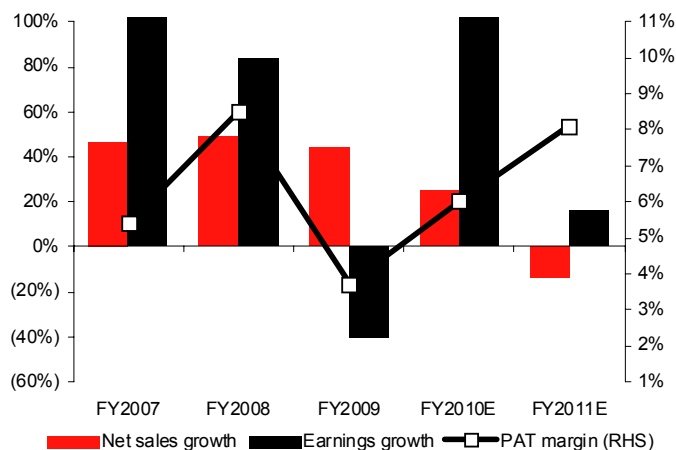
Source: Company data, Macquarie Research, September 2009

**Fig 5 EBITDA margins to expand to 20% by FY3/11E**



Source: Company data, Macquarie Research, September 2009

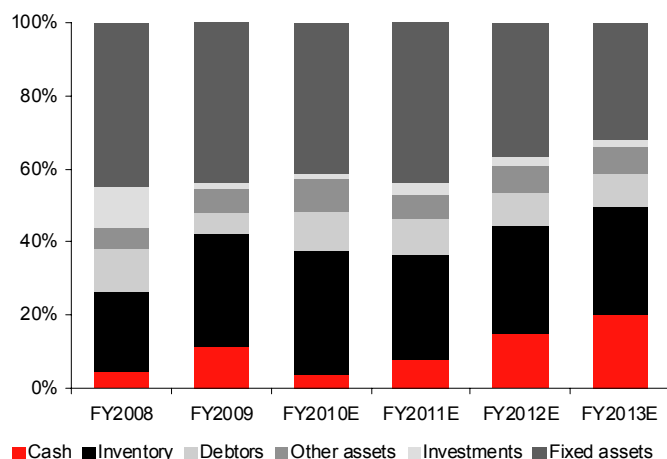
**Fig 6 PAT margins to inch up to 8% by FY3/11E**



Source: Company data, Macquarie Research, September 2009

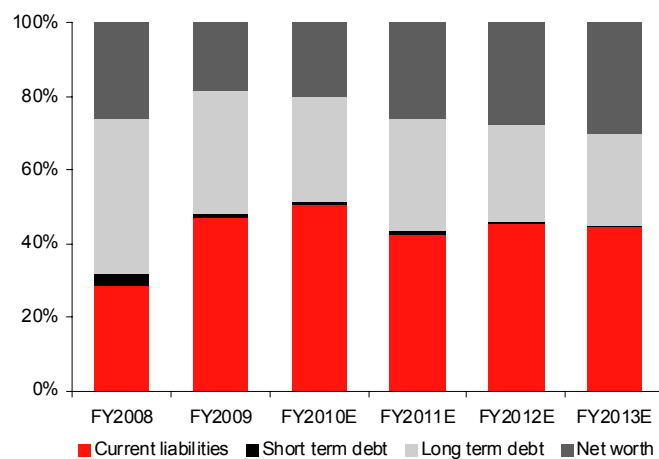
We estimate WGS's leverage to be ~1.1x until FY3/10E, as it funds its capex plan. It should then decline over the next two years to 0.3x in FY3/12E.

**Fig 7 Cash position to improve as capex cycle ends**



Source: Company data, Macquarie Research, September 2009

**Fig 8 Debt-equity to come down to 33% in FY3/12E**



Source: Company data, Macquarie Research, September 2009

**Fig 9 SWOT analysis – premium product and high-margin segments**

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Premium product offerings</li> <li>▪ Relationship with large marquee clients</li> <li>▪ Backward integrated to plates/coils</li> <li>▪ Proven track record</li> </ul>	<p><b>Weakness</b></p> <ul style="list-style-type: none"> <li>▪ Heavy reliance on export markets</li> <li>▪ Reliant on export markets for slabs</li> <li>▪ Heavy dependence on oil &amp; gas sector</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ Strong demand from Middle East and Indian markets</li> <li>▪ Huge replacement market in US and Russia</li> <li>▪ Water infrastructure demand in India</li> </ul>	<p><b>Threat</b></p> <ul style="list-style-type: none"> <li>▪ Economic slowdown leading to lower energy price</li> <li>▪ Forex fluctuations can hit margins</li> <li>▪ Overcapacity could impact margins</li> <li>▪ Threat of imports/entry of foreign players</li> </ul>

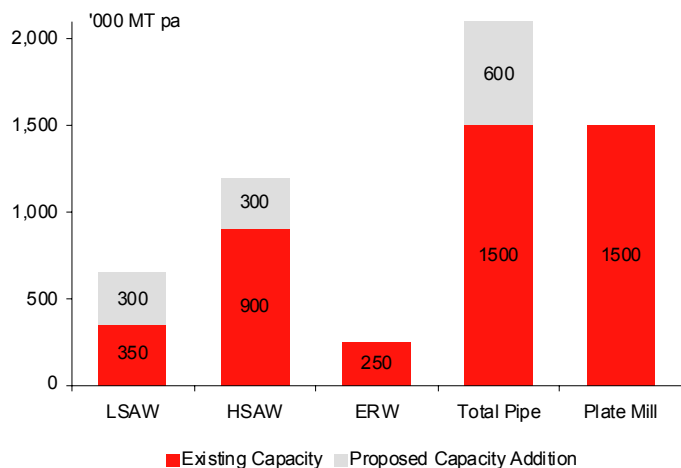
Source: Macquarie Research, September 2009

**Welspun to become the largest line pipe manufacturer in the world**

WGS is ramping up its capacity for SAW pipes to position itself to gain larger share of the growing global and domestic demand (oil & gas and water usage). It expects to increase its production capacity by 40% over the next 12 months, which should bring its total capacity to 2.1m tpa. WGS is adding 300,000 tpa of LSAW capacity and 300,000 tpa HSAW capacity. The new HSAW capacity will be set up in southeast India, closer to key demand centres for oil & gas and water applications to reduce logistics costs.

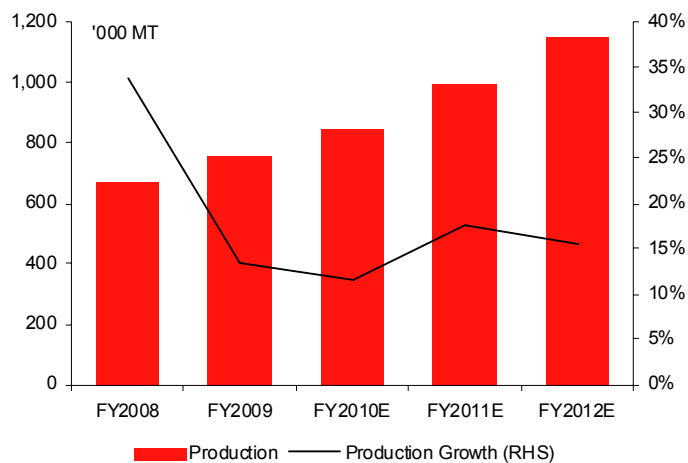
This large expansion follows 0.5m tpa of SAW capacity addition in FY09. The full benefit of these large capacity expansions should become visible from 2H FY11E. The full benefit of the expansion should be seen from 2H FY11E.

**Fig 10 WGS – adding 40% new capacity in 15 months**



Source: Company data, Macquarie Research, September 2009

**Fig 11 WGS – steady growth in production**



Source: Company data, Macquarie Research, September 2009

Welspun commissioned its HSAW mill in the US (350,000 tpa) earlier this year. This mill is now fully operational. With North and South America still the key source of demand for SAW pipes, the plant should be able to service its customers better. Though production cost in the US will likely be higher (compared with India), this should be more than offset by large savings in freight. The company expects net savings of US\$30–50/tonne on its production from the US facility.

## Backward integration strategy will boost profitability

WGS has set up a 1.5m tpa-capacity plate cum coil mill, which commenced production last year. This enables WGS to internally source scarce high-quality plate (4.5-metre width) and capture a higher share of the entire value-added process (from converting plates to pipes). We expect the plate mill to be a key catalyst for earnings in FY3/10–11E.

### Strategic and financial gains from the plate mill

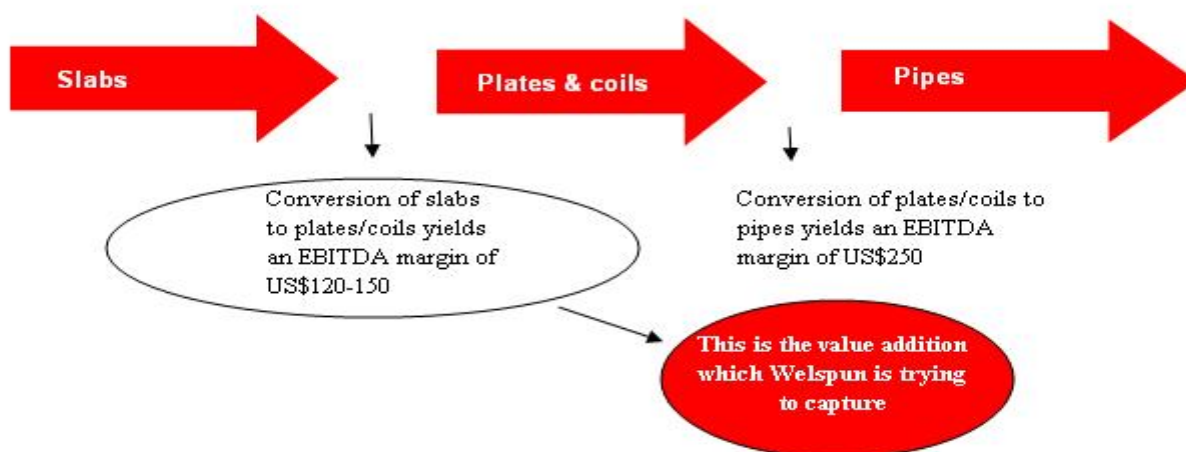
Manufacturing LSAW pipes requires steel plates, and given that globally only a handful of mills produce them, many LSAW manufacturers (including Welspun) had found it difficult to procure plates at reasonable prices last year. As the pipes demand rises, we expect the demand-supply mismatch for plates to increase, which should lead to a sharp rise in plate prices (depending on different quality grades).

Also, even if pipe manufacturers are willing to pay high prices for plates, we believe the overflowing order books of the plate manufacturers ensures that plates could be delivered only with a lag of six months to a year. This has not only affected the delivery schedules of the pipe manufacturers but has also prohibited them from taking any fresh new orders for LSAW given the lack of adequate plate supply.

The plate cum coil mill should be beneficial to Welspun in many ways. First, it should give the company better control over its delivery schedules (as it will be sourcing raw materials in-house). Second, it will likely be able to source its plates at lower prices (as it will not have to pay freight charges for plates, as opposed to previously when 80% of all raw materials were imported).

Third, it should allow the company to execute niche orders (Welspun is one of the few qualified global companies in this area). These often require wider plates (which are scarce in the market, and even when available, command a significant premium), thus enabling the company to enhance both margins and productivity. Fourth, and most important, it should enable the company to capture a larger portion or the entire value chain (from conversion of slabs to final pipes), as illustrated in Figure 3.

**Fig 12 Welspun is trying to capture a larger share of the total value-added process**



Source: Company data, Macquarie Research, September 2009

## Strong relationships with large customers across the globe

Given that oil & gas transportation is hazardous, global oil majors have set stringent quality norms for pipe manufacturers. For Indian pipe manufacturers to become suppliers to international/local oil majors, they must obtain accreditations from these companies – this process requires approvals not only for the quality of the final pipes but also for the plant facilities.

WGS has been approved by more than 50 large global oil & gas companies. WGS serves several large customers, including Exxon Mobil (Golden Pass Pipeline), Kinder Morgan, Ruby (El Paso) and GAIL, thanks to its specialized offerings. It has long-term contracts with giants such as TransCanada and framework agreements with Chevron, Saudi Aramco, etc.

**Fig 13 Well diversified across a large client base**

Customer	FY09A Revenues (Rs m)	Revenues (% of total)	Country
TransCanada	13,818	24%	Canada
Kinder Morgan	6,863	12%	USA
Sonatrach	4,428	8%	Algeria
National Gas Company	2,917	5%	Trinidad
MITCO	2,857	5%	Malaysia
Peru LNG S.R.L. (Hunt Oil)	2,233	4%	Peru
Saudi Aramco	2,085	4%	Middle East
Teppco (Pinedale)	2,106	4%	USA
Repsol	1,178	2%	Spain
Petroleum Development Oman	1,100	2%	Middle East

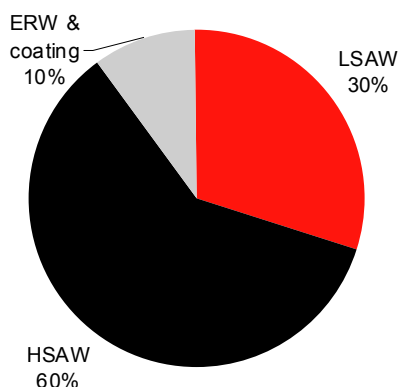
Source: Company data, Macquarie Research, September 2009

**Order book looks strong and is getting stronger**

With more than 50 accreditations from major oil & gas companies, we believe WGS is in a strong position to capture incremental market share in the SAW pipes market. The demand upturn coincides with the company's capacity expansion plans. Given that WGS has moved higher up the value chain with its niche products with respect to its peer group (as currently there are no competitors in India for 70–75% of its order book), we expect it to capture a larger share of the high-margin niche pipe segment.

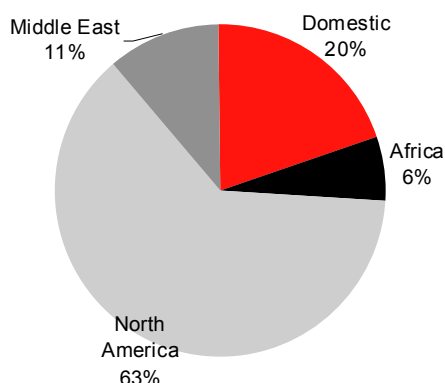
The current order book stands at Rs70bn (1.2x FY3/09 sales), which the company hopes to increase substantially over the next year. It expects major demand from the domestic as well as US/Canada/Latin America markets. The demand potential looks particularly strong in the US, where nearly 1m miles out of a total of 1.5m miles of pipelines are over 30 years old and will need replacement in the near future.

**Fig 14 Order book skewed toward HSAW ...**



Source: Company data, Macquarie Research, September 2009

**Fig 15 ... and North America and India**



Source: Company data, Macquarie Research, September 2009

**Fig 16 Top ten clients for pipes as per current order book**

Client	Country
Ruby - El Paso	USA
Enterprise - Teppco (TOPS)	USA
TransCanada	Canada
GAIL	India
Sonatrach	Algeria
PD Oman	Middle East
Punj Lloyd	India
Saudi Aramco	Middle East
Adani	India
GWSSB - Gandhinagar	India

Source: Company Data, Macquarie Research, September 2009

## Key risks

### Delays in capex rollout

Any significant delay in the commissioning of the facilities or serious budget overruns might affect our assumptions with regards to capacity utilisations/margins and would be a key risk to our target price.

### Reduction in oil prices and competition from Chinese manufacturers

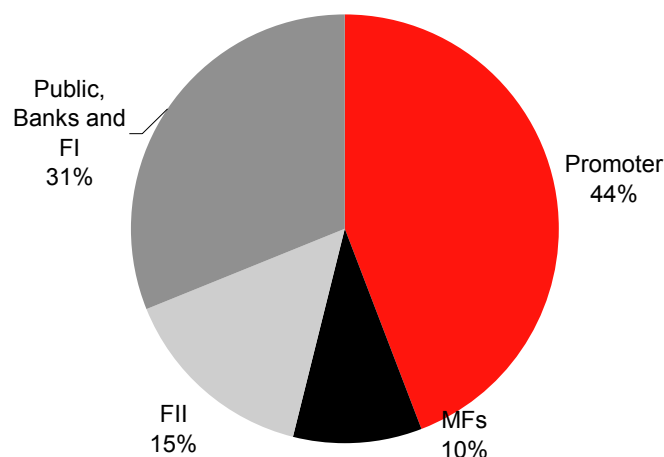
Any significant reduction in oil and gas prices could have a negative impact on energy capex, and in turn, reduce pipeline demand, thereby affecting order intake for WGS. Although China is a significant manufacturer of SAW, seamless and DI pipes, we do not see it posing a serious threat to other SAW manufacturers in the near future given the strong domestic demand in China and non-accreditation of Chinese companies by international oil & gas majors. And even if supply from China exceeds local demand, it is unlikely to be a serious near-term threat, as we believe the SAW business is a zero-defect business that requires flawless execution. Recent experience with Chinese players indicates that despite lower costs, they have not been able to deliver on execution, making Indian companies reconsider their decision to favour Chinese suppliers.

## Company background

Incorporated in 1995, Welspun Gujarat Stahl Rohren Limited is the flagship company of the Welspun group. The company manufactures longitudinal submerged arc welded pipes (LSAW), helical submerged arc welded pipes (HSAW) and electric resistant welded pipes (ERW). It also offers complete coating, as well as bending solutions.

WGS is one of the largest SAW pipe companies in the world. The company's manufacturing facilities are located in Gujarat (Western India), in proximity to the national highway and seaports. The company's clientele includes domestic majors such as GAIL, IOCL, ONGC and BPC, and global clientele such as TOTAL, Chevron, BG, Exxon Mobil, Shell, Saudi Aramco, Kinder Morgan and Gazprom.

## Shareholdings as of 30 June 2009



Source: NSE, Company Data, September 2009

**Welspun Gujarat Stahl Rohren (WGS IN, Outperform, Target price: Rs375.00)**

Balance Sheet		2009A	2010E	2011E	2012E	Profit & Loss		2009A	2010E	2011E	2012E
Cash	m	9,470	3,401	6,729	15,069	<b>Revenue</b>	m	<b>57,395</b>	<b>71,657</b>	<b>61,858</b>	<b>79,853</b>
Receivables	m	4,601	10,798	8,474	9,845	<b>Gross Profit</b>	m	<b>17,369</b>	<b>24,539</b>	<b>26,751</b>	<b>30,773</b>
Inventories	m	26,113	32,393	25,421	29,535	Cost of Goods Sold	m	40,027	47,118	35,107	49,080
Investments	m	1,140	1,710	2,565	2,565	<b>EBITDA</b>	m	<b>6,348</b>	<b>10,783</b>	<b>12,181</b>	<b>13,096</b>
Fixed Assets	m	36,835	39,372	38,640	36,843	Depreciation	m	1,433	1,963	2,231	2,297
Intangibles	m	0	0	0	0	Amortisation of Goodwill	m	0	0	0	0
Other Assets	m	6,019	7,965	6,251	7,262	Other Amortisation	m	0	0	0	0
<b>Total Assets</b>	<b>m</b>	<b>84,178</b>	<b>95,638</b>	<b>88,080</b>	<b>101,118</b>	<b>EBIT</b>	<b>m</b>	<b>4,915</b>	<b>8,820</b>	<b>9,950</b>	<b>10,798</b>
Payables	m	38,528	46,992	36,349	44,472	Net Interest Income	m	-1,766	-2,234	-2,245	-2,024
Short Term Debt	m	700	868	681	791	Associates	m	0	0	0	0
Long Term Debt	m	25,838	23,255	20,929	18,836	Exceptionals	m	0	0	0	0
Provisions	m	601	845	663	770	Forex Gains / Losses	m	0	0	0	0
Other Liabilities	m	2,914	4,530	6,176	8,252	Other Pre-Tax Income	m	187	145	125	161
<b>Total Liabilities</b>	<b>m</b>	<b>68,581</b>	<b>76,489</b>	<b>64,798</b>	<b>73,121</b>	<b>Pre-Tax Profit</b>	<b>m</b>	<b>3,336</b>	<b>6,731</b>	<b>7,830</b>	<b>8,935</b>
Shareholders' Funds	m	15,597	19,149	23,281	27,997	Tax Expense	m	-1,200	-2,422	-2,818	-3,216
Minority Interests	m	0	0	0	0	<b>Net Profit</b>	<b>m</b>	<b>2,135</b>	<b>4,309</b>	<b>5,012</b>	<b>5,720</b>
Other	m	0	0	0	0	Minority Interests	m	-0	-0	0	0
<b>Total S/H Equity</b>	<b>m</b>	<b>15,597</b>	<b>19,150</b>	<b>23,282</b>	<b>27,997</b>	<b>Reported Earnings</b>	<b>m</b>	<b>2,135</b>	<b>4,309</b>	<b>5,012</b>	<b>5,720</b>
<b>Total Liab &amp; S/H Funds</b>	<b>m</b>	<b>84,178</b>	<b>95,638</b>	<b>88,080</b>	<b>101,118</b>	<b>Adjusted Earnings</b>	<b>m</b>	<b>2,135</b>	<b>4,309</b>	<b>5,012</b>	<b>5,720</b>
						EPS (rep)		11.45	23.10	26.88	30.67
						EPS (adj)		11.45	23.10	26.88	30.67
						EPS Growth (adj)	%	-39.9	101.8	16.3	14.1
						PE (rep)	x	22.4	11.1	9.5	8.3
						PE (adj)	x	22.4	11.1	9.5	8.3
						Total DPS		2.01	4.06	4.72	5.38
						Total Div Yield	%	0.8	1.6	1.8	2.1
						Weighted Average Shares	m	186	186	186	186
						Period End Shares	m	186	186	186	186
Profit and Loss Ratios		2009A	2010E	2011E	2012E	Cashflow Analysis		2009A	2010E	2011E	2012E
Revenue Growth	%	43.7	24.8	-13.7	29.1	<b>EBITDA</b>	<b>m</b>	<b>6,348</b>	<b>10,783</b>	<b>12,181</b>	<b>13,096</b>
EBITDA Growth	%	-2.0	69.9	13.0	7.5	Tax Paid	m	-451	-909	-1,058	-1,207
EBIT Growth	%	-16.2	79.5	12.8	8.5	Chgs in Working Cap	m	9,179	-5,612	72	1,801
Gross Profit Margin	%	30.3	34.2	43.2	38.5	Net Interest Paid	m	-1,766	-2,234	-2,245	-2,024
EBITDA Margin	%	11.1	15.0	19.7	16.4	Other	m	196	145	125	161
EBIT Margin	%	8.6	12.3	16.1	13.5	<b>Operating Cashflow</b>	<b>m</b>	<b>13,506</b>	<b>2,173</b>	<b>9,075</b>	<b>11,826</b>
Net Profit Margin	%	3.7	6.0	8.1	7.2	Acquisitions	m	0	0	0	0
Payout Ratio	%	17.6	17.6	17.6	17.6	Capex	m	-11,469	-4,500	-1,500	-500
EV/EBITDA	x	10.8	6.4	5.6	5.2	Asset Sales	m	0	0	0	0
EV/EBIT	x	13.9	7.8	6.9	6.3	Other	m	0	0	0	0
<b>Balance Sheet Ratios</b>						<b>Investing Cashflow</b>	<b>m</b>	<b>-11,469</b>	<b>-4,500</b>	<b>-1,500</b>	<b>-500</b>
ROE	%	13.7	24.8	23.6	22.3	Dividend (Ordinary)	m	-375	-756	-880	-1,004
ROA	%	6.8	9.8	10.8	11.4	Equity Raised	m	-843	0	0	0
ROIC	%	8.2	17.3	16.0	18.1	Debt Movements	m	1,264	-2,416	-2,512	-1,983
Net Debt/Equity	%	109.4	108.2	63.9	16.3	Other	m	-992	0	-0	0
Interest Cover	x	2.8	3.9	4.4	5.3	<b>Financing Cashflow</b>	<b>m</b>	<b>-946</b>	<b>-3,172</b>	<b>-3,392</b>	<b>-2,987</b>
Price/Book	x	3.1	2.5	2.1	1.7	<b>Net Chg in Cash/Debt</b>	<b>m</b>	<b>1,090</b>	<b>-5,499</b>	<b>4,183</b>	<b>8,339</b>
Book Value per Share		83.6	102.7	124.8	150.1	<b>Free Cashflow</b>	<b>m</b>	<b>2,036</b>	<b>-2,327</b>	<b>7,575</b>	<b>11,326</b>

All figures in INR unless noted.

Source: Company data, Macquarie Research, September 2009

INDIA

# Jindal Saw Limited

16 September 2009

## JSAW IN Outperform

Stock price as of 15 Sep 09	Rs	695.30
12-month target	Rs	890.00
Upside/downside	%	+28.0
Valuation	Rs	890.00
- PER		

GICS sector		materials
Market cap	Rs m	36,241
30-day avg turnover	US\$m	11.0
Market cap	US\$m	744
Number shares on issue	m	52.12

### Investment fundamentals

Year end 31 Dec		2008A	2009E	2010E	2011E
Total revenue	m	53,558	53,184	47,983	52,476
EBITDA	m	7,066	7,604	7,015	7,471
EBITDA growth	%	-12.5	7.6	-7.7	6.5
EBIT	m	6,226	6,637	5,789	6,128
EBIT Growth	%	-14.8	6.6	-12.8	5.8
Reported profit	m	3,291	3,797	3,523	4,048
Adjusted profit	m	3,213	3,719	3,445	3,970
EPS rep	Rs	63.15	65.95	61.18	70.30
EPS adj	Rs	61.64	64.58	59.82	68.94
EPS adj growth	%	-53.6	4.8	-7.4	15.2
PE adj	x	11.3	10.8	11.6	10.1
Total DPS	Rs	7.61	11.07	10.37	11.71
Total div yield	%	1.1	1.6	1.5	1.7
ROE	%	12.3	12.4	10.5	11.2
EV/EBITDA	x	5.7	5.8	6.3	5.9
Net debt/equity	%	22.8	12.5	-4.9	-15.1
Price/book	x	1.3	1.3	1.2	1.1

### JSAW IN rel SENSEX performance, & rec history



Source: FactSet, Macquarie Research, September 2009  
(all figures in INR unless noted)

### Analyst

Amit Mishra, CFA

91 22 6653 3051

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## Well diversified

### Event

- We initiate coverage on Jindal SAW with an Outperform rating and a 12-month target price of Rs890 (28% potential upside). At our target price, the stock trades at 14x 2010E PER. JSAW is the largest and most diversified pipe producer in India and we believe it is uniquely positioned to capture the significant demand from the hydrocarbon and water transportation sectors.

### Impact

- Most-diversified pipe manufacturer in India.** JSAW has a multi-product approach to pipes – offering a full product portfolio of LSAW (longitudinal submerged arc welded), HSAW (helical submerged arc welded), seamless, DI pipes and anti-corrosion coatings. Its product portfolio allows it to straddle value-driven products (DI and seamless pipes, which are high-margin segments) and volume-driven ones (SAW pipe business).
- Capex to confirm JSAW's position as India's largest pipe producer.** JSAW is ramping up capacity by using the proceeds of the US divestiture and carrying out de-bottlenecking projects to increase efficiencies. For example, in the next 24 months, it is increasing its HSAW capacity by 25% and DI by 100%. This will increase JSAW's capacity by 30% in 2008-11E.
- Order book provides visibility to March 2010.** JSAW has an order book of US\$780m (0.7x 2008 sales), which the company expects to execute until March next year. JSAW has focused on the Middle Eastern, Asian and African markets, supplying pipes to large oil & gas players like Saudi Aramco, Petrochina, AGIP and Petronas. With the addition of new capacities, JSAW is looking to increase its domestic sales by catering to oil & gas companies and municipal corporations for water-related infrastructure.
- Strongly positioned to capture water infrastructure demand.** JSAW is one of the few pipe manufacturers in India capable of offering a complete pipe solution to the water sector. The DI pipe business gives JSAW an opportunity to take advantage of the strong domestic capex cycle seen in the water transportation segment. The government's 11<sup>th</sup> plan envisages US\$83bn of investment in irrigation and water infrastructure, which is likely to result in strong demand for DI pipes.

### Price catalyst

- 12-month price target: Rs890.00 based on a PER methodology.
- Catalyst: i) New orders and ii) timely commissioning of new facilities

### Action and recommendation

- JSAW is trading at a ~40% discount to the global peer group average 2010E PER. Our target price of Rs890 implies a 14x 2010E PER, which is at a 20% discount to the global peer group. We believe JSAW presents a low-risk model given its diversified product portfolio and access to the export and domestic markets. We forecast an earnings CAGR of 8% for 2009–12. We believe JSAW is uniquely positioned to capture the significant demand indicated from the hydrocarbon and water transportation sector.

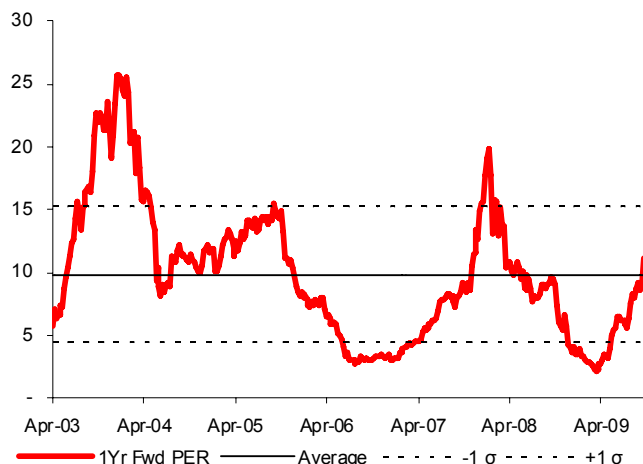


### Target price of Rs890 provides 28% potential upside

Among the Indian pipe producers, we believe JSAW is best positioned to benefit from the significant domestic demand growth, especially from water-related infrastructure.

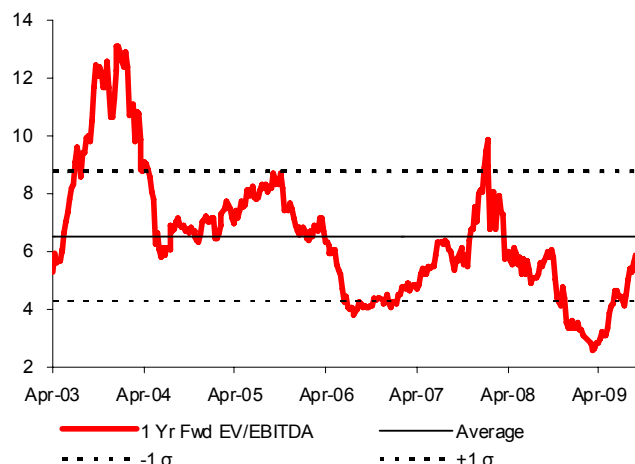
Given its diversified product portfolio, JSAW appears to be following a low-risk strategy as compared to peers like Maharashtra Seamless (MHS IN) or PSL Limited (PSLL IN). However, since JSAW's current order book gives visibility only until March 2010, we believe it should trade at a discount to Welspun Gujarat (WGS IN). The order book for JSAW stands at US\$780m (0.7x 2008 sales), compared to US\$1.7bn (1.4x FY3/09 sales) for WGS.

**Fig 1 JSAW trading close to its average PER**



Source: Bloomberg, Macquarie Research, September 2009

**Fig 2 JSAW trading at its average EV/EBITDA**



Source: Bloomberg, Macquarie Research, September 2009

### Jindal SAW trades at discount to global peers

There are no strict comparables for Indian steel-pipe companies globally as, outside India, the largest pipe companies are backward-integrated and also have steel-manufacturing operations. While the integrated businesses of the global peers expose them to commodity price volatility, Indian pipe companies' share prices are less correlated with commodity prices.

Jindal SAW is trading at a ~40% discount to its global peers on 2010/FY11E PER valuations. JSAW is trading at a modest premium to its Indian peers on 2010E PER; we believe the large capacities that JSAW has already added, and plans to add, will start contributing fully only in 2011E.

**Fig 3 JSAW trading at a 40% discount to global peer average**

Name	Bloomberg ticker	Current Price	Recommendation	Target Price	Upside/Downside	Fiscal Year end	Price/Earnings		Market cap (US\$ bn)
							12-09/03-10	12-10/03-10	
<b>Global manufacturers</b>									
Sumitomo	5405 JP	JPY226	Outperform	JPY370	64%	March	-35.1	17.5	11.9
Tenaris	TS US	US\$33.24	Not Rated	-	-	December	17.0	15.0	19.6
TMK	TMKS LI	US\$13.12	Not Rated	-	-	December	17.5	7.7	2.9
US Steel	X US	US\$46.72	Not Rated	-	-	December	-4.2	42.6	6.7
Vallourec	VK FP	EUR116.5	Not Rated	-	-	December	14.3	17.1	9.1
							<b>16.3</b>	<b>19.2</b>	
<b>Indian manufacturers</b>									
Welspun Gujarat	WGS IN	INR256.05	Outperform	INR375	46%	March	11.1	9.5	0.98
Jindal Saw	JSAW IN	INR695.75	Outperform	INR890	28%	December	10.5	11.3	0.74
Maharashtra Seamless	MHS IN	INR313.30	Not Rated	-	-	March	9.8	9.1	0.45
MAN Industries	MAN IN	INR52.85	Not Rated	-	-	March	13.9	10.4	0.06
PSL Limited	PSLL IN	INR171.55	Not Rated	-	-	March	6.2	6.4	0.19
							<b>10.3</b>	<b>9.8</b>	

Prices as of 15 Sep 2009

Source: Bloomberg, Macquarie Research, September 2009

We use a price-to-earnings-based valuation methodology for our coverage universe. Pipe-making is a cyclical business with order inflows linked to energy capex, which is further affected by energy prices.

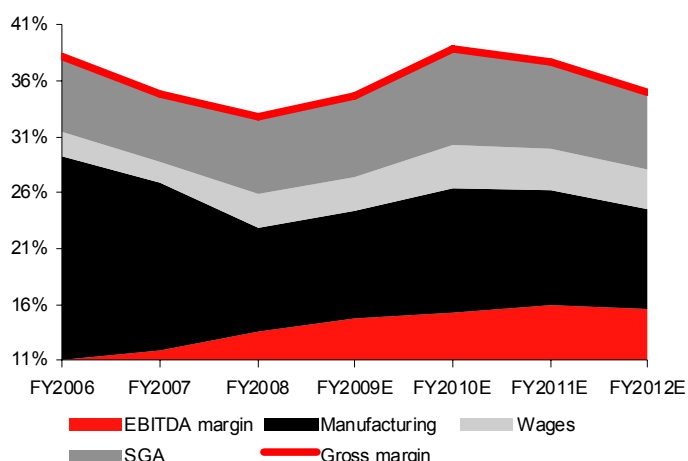
Given the robust outlook for energy capex and prices, we believe earnings visibility for the next two-three years will be driven by growth in order book and capacity expansion. We refrain from using a DCF-based methodology, as given the cyclical nature of the business, coupled with volatility in commodity prices; earnings drivers could potentially change beyond our forecast period (2010–12E).

JSAW has historically traded in the range of 4–25x forward PER (see chart above). Our target price of Rs890 implies a 2010E PER of 14x. We believe this multiple is justified as JSAW has added large capacities in the past year, which should start contributing fully over the next two years.

### Earnings growth driven by margin expansion

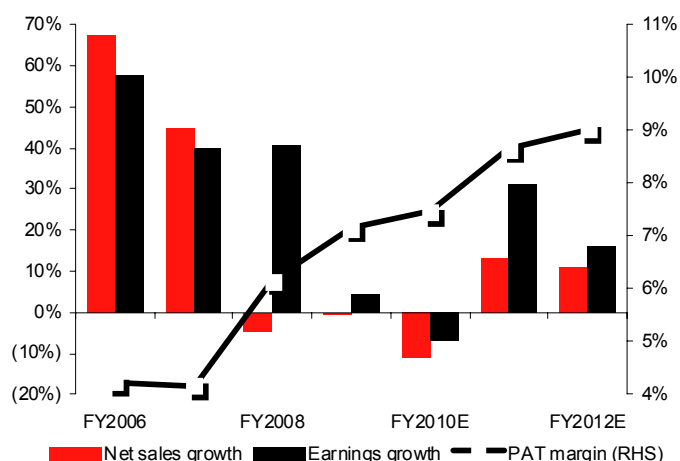
JSAW recorded robust results for FY03–07, with revenues and earnings growing by a minimum of 40% each year. However, after divesting its US operations, JSAW reported a decline in FY08 (in the absence of US revenue and earnings). EBITDA margins improved, however, partly driven by the higher margins on seamless and DI pipes (EBITDA margins had been dragged down by the US operations, which were low-margin). We expect gross margins to be around 34–38% in 2009–10E, with EBITDA margins at around 14–15%, up from around 10–12% in 2006–07.

**Fig 4 EBITDA margin improvement to continue**



Source: Company data, Macquarie Research, September 2009

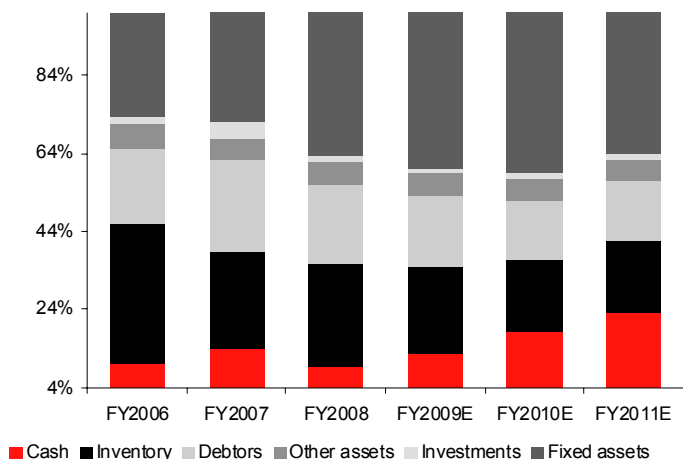
**Fig 5 Earnings growth driven by margin expansion**



Source: Company data, Macquarie Research, September 2009

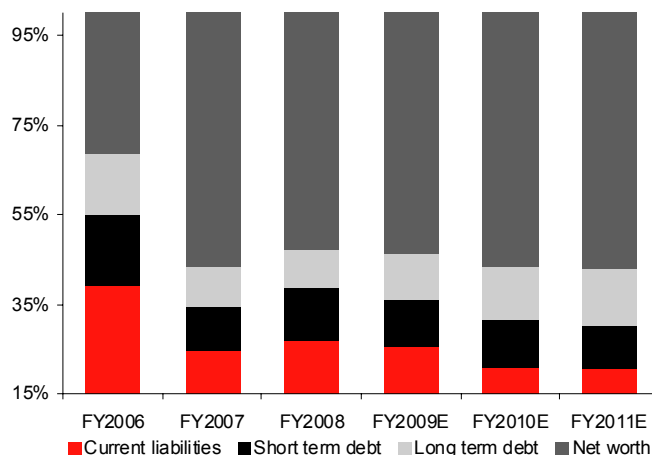
We expect the additional capacity expansion to drive revenues and profitability in 2010E (as the majority of its capex plans would be commissioned). The cash from the US divestiture increased the cash balance in FY08, which would later decline due to the capex requirements mentioned above. Overall by 2010E, we expect the debt-equity ratio to improve from 0.5x (end-FY08) to 0.2x.

**Fig 6 Cash position post-capacity expansion plans**



Source: Company data, Macquarie Research, September 2009

**Fig 7 Debt-equity ratio should improve**



Source: Company data, Macquarie Research, September 2009

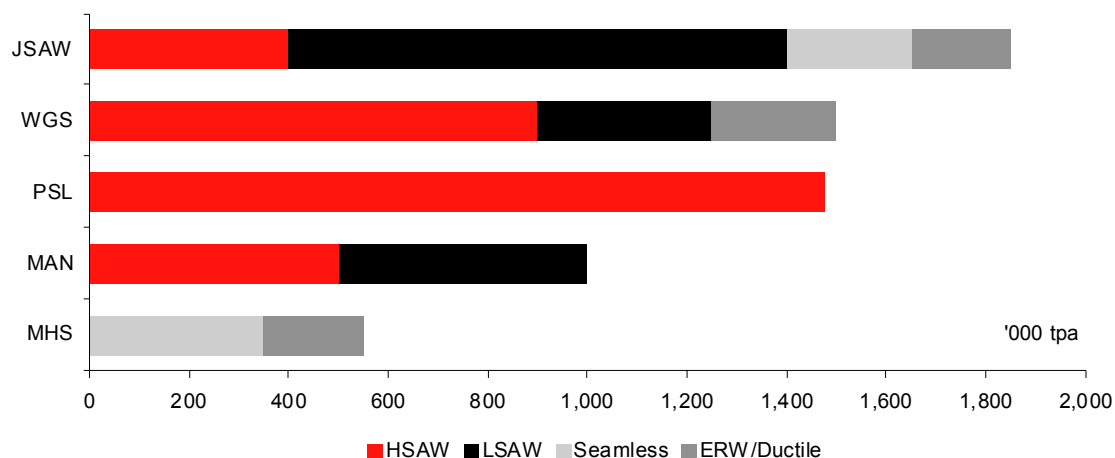
**SWOT analysis – diversified product offerings, low-risk business model**

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>Most diversified product offering</li> <li>Relationships with global &amp; domestic clients</li> <li>One of the few players capable of supplying to the water segments</li> <li>Proven track record</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>Reliant on export market for raw materials</li> <li>Less control over the supply chain to ensure timely execution</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>Strong demand from Middle East &amp; Indian markets</li> <li>Huge replacement market in US &amp; Russia</li> <li>Water infrastructure demand in India</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>Economic slowdown leading to lower energy prices</li> <li>Delay in ramp-up of capacity</li> <li>Threat of imports/entry of foreign players</li> </ul>

Source: Macquarie Research, September 2009

**Most-diversified pipe manufacturer in India**

JSAW has a multi-product approach to pipes – offering a full product portfolio of LSAW, HSAW, seamless, DI pipes, anti-corrosion coatings, bends and connector casings. Its multi-product portfolio allows it to straddle value-driven product lines (DI and seamless pipes, which are high-margin segments) and volume-driven ones (SAW pipe business).

**Fig 8 Jindal Saw: Diversified in all product categories**

Notes: These are current production capacities. MHS – Maharashtra Seamless, MAN – Man Industries, WGS – Welspun Gujarat, PSL – PSL Ltd, JSAW – Jindal Saw Ltd. MT – metric tonne.  
Source: Company data, Macquarie Research, September 2009

JSAW is increasing its focus on the water infrastructure sector in India and, in our view, is currently one of the few pipe manufacturers capable of offering a complete pipe solution to the water sector (ie, spiral pipes, ductile pipes and accessories).

The DI pipe business gives the company an opportunity to take advantage of the strong domestic capex cycle seen in the water transportation segment. We believe that the combination of increasing government focus to build water infrastructure and growing support from multilateral agencies (such as the World Bank and the Asian Development Bank) is likely to result in strong demand for DI pipes.

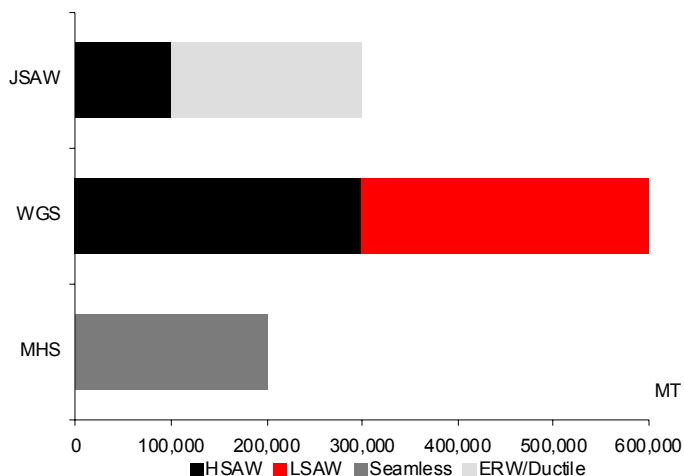
### Capex plan to position JSAW as India's largest pipe producer

JSAW is ramping up its capacity by using the proceeds of the US divestiture and carrying out de-bottlenecking projects to increase efficiencies. In the next 24 months, it is increasing its HSAW capacity by 25% and DI by 100% (in addition to carrying out other de-bottlenecking projects). The capex plan should increase its total manufacturing capacity by 16%.

JSAW has the largest production capacity (spread across various product categories) in pipe manufacturing in India. Through its expansion plan, JSAW could further strengthen its leadership position by reaching a total manufacturing capacity of 2.15m tonnes (spread across all product categories).

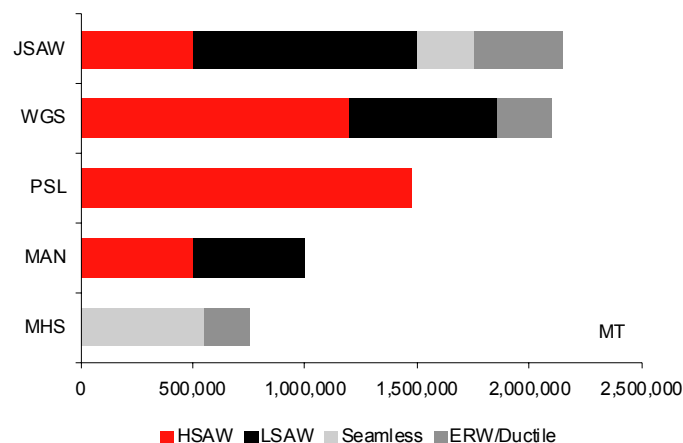
The majority of the capex would be funded through the proceeds of the US divestiture. The capex plan would not only include the ramping up of the core capacity, but also other de-bottlenecking projects to enable the company to increase efficiencies.

**Fig 9 Capacity additions (next 12–18 months)**



Source: Company data, Macquarie Research, September 2009

**Fig 10 JSAW should hold No. 1 position after 18 mths**



Source: Company data, Macquarie Research, February 2008

Among the major Indian pipe manufacturers, JSAW has the second-largest capex plans (after WGS) over the next 12–18 months.

**Fig 11 JSAW: Capital expenditure schedule**

	Locations in India	Current capacity (mt)	Expected additions (mt)	Start dates	Total expected capacity (mt)	Estimated capex (US\$m)
<b>LSAW</b>	Kosi (North)	250,000	-	-	-	-
	West coast	750,000	-	-	1,000,000	-
<b>HSAW</b>	West coast	350,000	-	-	-	-
	South	50,000	100,000	Dec-09	500,000	50
<b>Ductile iron pipe</b>	West coast	200,000	200,000	June-11	400,000	700
<b>Seamless</b>	Nashik	250,000	-	-	250,000	-
		<b>1,850,000</b>	<b>300,000</b>		<b>2,150,000</b>	<b>750</b>

Source: Company data, Macquarie Research, September 2009

**World-class clientele**

JSAW has more than 20 years of experience in providing SAW pipes to the oil and gas industry. It caters to the top-tier oil & gas and EPC companies in India and abroad. JSAW has a strong presence in the export markets, especially the Middle East, Southeast Asia and Africa. Export sales currently account for 55% of JSAW's total revenues.

Its global clientele includes oil and gas majors like Shell, British Gas, Saudi Aramco, Oman Gas, Gulf South, South Oil Company (Iraq), Chevron Angola, International Petroleum, and GASCO, etc.

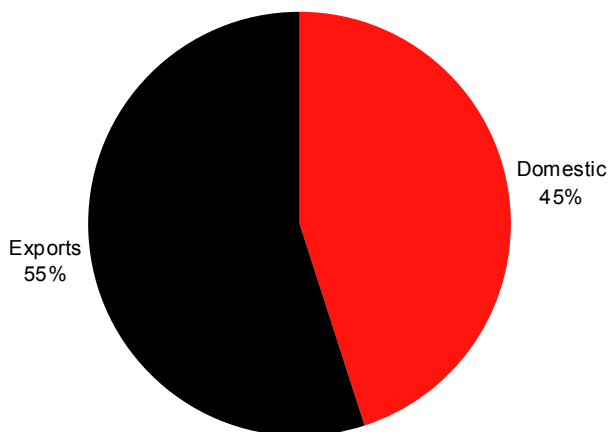
**Order book gives visibility for next three quarters**

JSAW's products have been approved by several major oil & gas companies across the world. In addition, we believe its diversified product portfolio positions it to benefit from potentially large domestic demand growth in the oil & gas and water-related sectors. We see that JSAW is in a strong position to capture market share in the DI pipes market, while maintaining its 35% market share of oil & gas sector demand.

The demand upturn coincides with the company's capacity expansion plans. Given that JSAW has sold out of its low-margin facilities in US, it is now fully focused on margin improvements at its Indian operations.

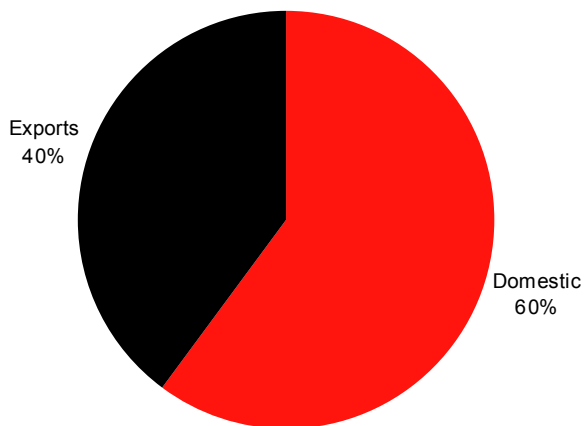
The current order book stands at US\$780m (0.7x CY08 sales), which it hopes to increase substantially over the next year. It expects major demand domestically as well as from the Middle East, US/Canada/Latin America. The demand potential looks particularly strong in the US, where nearly 1m miles out of a total of 1.5m miles of pipelines are over 30 years old and will need replacing in the near future.

**Fig 12 Exports to contribute 55% of 2009E revenues**



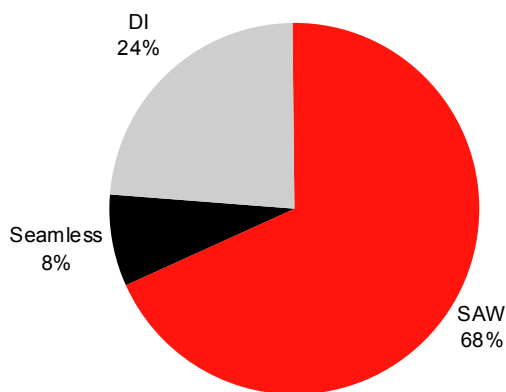
Source: Company data, Macquarie Research, September 2009

**Fig 13 Order book is skewed towards domestic sales**



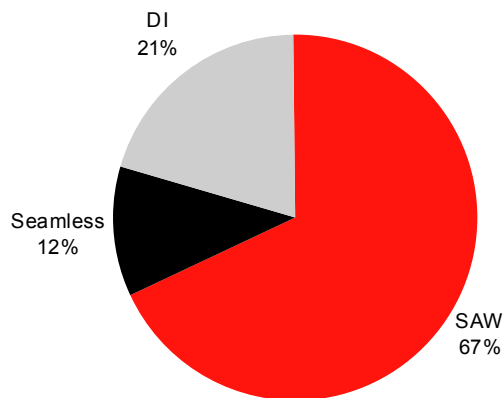
Source: Company data, Macquarie Research, September 2009

**Fig 14 SAW will contribute 2/3<sup>rd</sup> of 2009E revenues**



Source: Company data, Macquarie Research, September 2009

**Fig 15 Higher share of seamless in order book**



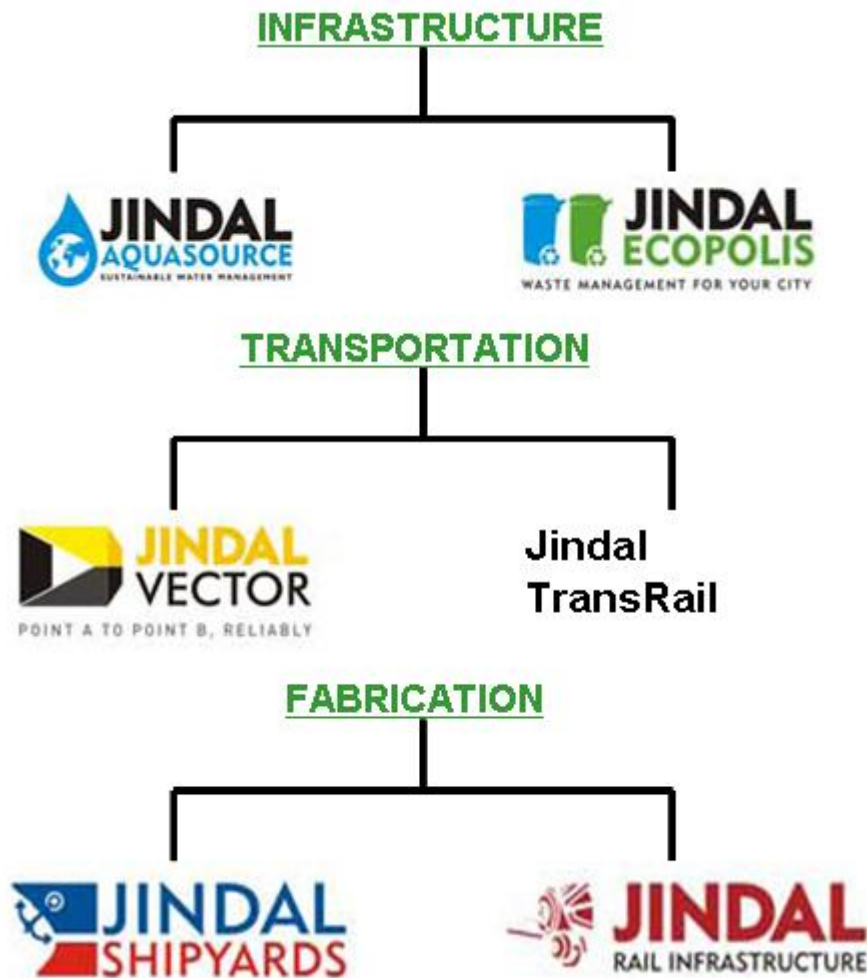
Source: Company data, Macquarie Research, September 2009

## Jindal ITF – targeting India’s mega infrastructure investment cycle

Jindal SAW has formed a 100%-owned subsidiary, Jindal ITF Ltd, the main objective of which is to carry out infrastructure-related business in India. Jindal ITF is presently engaged in water management, waste management and water-borne transportation. Jindal ITF operates in three segments of the Indian economy: infrastructure, transportation, and fabrication.

This is a nascent business for JSAW, and we have not ascribed any earnings and valuations to this subsidiary yet. Jindal ITF has orders of US\$130m that will be executed over the next 2–3 years.

Fig 16 Jindal ITF targeting high-growth segments



Source: Company data, September 2009

## Company background

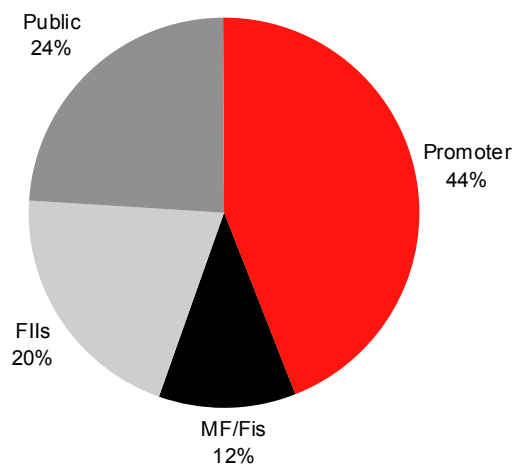
Jindal SAW is a part of the O P Jindal Group (total group revenues of around US\$12bn).

In 1999, JSAW set up its first 100%-export-oriented unit in Nanakapya, Mundra (Gujarat) for manufacturing LSAW and HSAW pipes. In 2005, with the commissioning of the integrated pipe unit at Samaghogha (Mundra), JSAW further augmented its LSAW capabilities and added DI pipes to its portfolio.

Pursuant to its overall strategy of diversifying from being a single product producer (SAW pipes) to a multi-product company, JSAW changed its name from "SAW Pipes" to "Jindal Saw" with effect from January 2005

JSAW's current product portfolio includes LSAW pipes and HSAW pipes, seamless tubes and pipes, and DI pipes. Besides, JSL also provides various value-added products and services like anticorrosion coatings for pipes and bends, and bends and connector casings.

## Shareholding structure as of 30-Jun-09



Source: NSE, Company Data, September 2009



**Jindal Saw Limited (JSAW IN, Outperform, Target price: Rs890.00)**

Balance Sheet		2008A	2009E	2010E	2011E	Profit & Loss		2008A	2009E	2010E	2011E
Cash	m	5,664	8,182	11,478	15,422	<b>Revenue</b>	m	<b>53,558</b>	<b>53,184</b>	<b>47,983</b>	<b>52,476</b>
Receivables	m	12,645	11,657	9,859	10,783	<b>Gross Profit</b>	m	<b>17,287</b>	<b>18,127</b>	<b>18,256</b>	<b>18,940</b>
Inventories	m	16,534	14,407	11,809	12,863	Cost of Goods Sold	m	36,272	35,057	29,726	33,536
Investments	m	48	48	48	48	<b>EBITDA</b>	m	<b>7,066</b>	<b>7,604</b>	<b>7,015</b>	<b>7,471</b>
Fixed Assets	m	22,733	25,766	26,040	25,197	Depreciation	m	840	967	1,226	1,343
Intangibles	m	0	0	0	0	Amortisation of Goodwill	m	0	0	0	0
Other Assets	m	4,416	4,416	4,416	4,416	Other Amortisation	m	0	0	0	0
<b>Total Assets</b>	<b>m</b>	<b>62,039</b>	<b>64,475</b>	<b>63,649</b>	<b>68,727</b>	<b>EBIT</b>	m	<b>6,226</b>	<b>6,637</b>	<b>5,789</b>	<b>6,128</b>
Payables	m	13,089	13,602	11,452	12,008	Net Interest Income	m	-1,979	-1,673	-1,181	-826
Short Term Debt	m	6,320	6,320	6,320	6,320	Associates	m	0	0	0	0
Long Term Debt	m	5,818	5,818	3,483	3,483	Exceptionals	m	0	0	0	0
Provisions	m	815	815	815	815	Forex Gains / Losses	m	0	0	0	0
Other Liabilities	m	7,612	6,321	7,567	9,015	Other Pre-Tax Income	m	130	129	117	128
<b>Total Liabilities</b>	<b>m</b>	<b>33,655</b>	<b>32,877</b>	<b>29,638</b>	<b>31,642</b>	<b>Pre-Tax Profit</b>	m	<b>4,377</b>	<b>5,093</b>	<b>4,725</b>	<b>5,429</b>
Shareholders' Funds	m	28,075	31,290	33,916	36,990	Tax Expense	m	-1,113	-1,295	-1,202	-1,381
Minority Interests	m	96	96	96	96	<b>Net Profit</b>	m	<b>3,263</b>	<b>3,797</b>	<b>3,523</b>	<b>4,048</b>
Other	m	213	213	0	0	Minority Interests	m	28	0	0	0
<b>Total S/H Equity</b>	<b>m</b>	<b>28,384</b>	<b>31,599</b>	<b>34,012</b>	<b>37,086</b>	<b>Reported Earnings</b>	m	<b>3,291</b>	<b>3,797</b>	<b>3,523</b>	<b>4,048</b>
<b>Total Liab &amp; S/H Funds</b>	<b>m</b>	<b>62,039</b>	<b>64,475</b>	<b>63,649</b>	<b>68,727</b>	<b>Adjusted Earnings</b>	m	<b>3,213</b>	<b>3,719</b>	<b>3,445</b>	<b>3,970</b>
						EPS (rep)		63.15	65.95	61.18	70.30
						EPS (adj)		61.64	64.58	59.82	68.94
						EPS Growth (adj)	%	-53.6	4.8	-7.4	15.2
						PE (rep)	x	11.0	10.5	11.4	9.9
						PE (adj)	x	11.3	10.8	11.6	10.1
						Total DPS		7.61	11.07	10.37	11.71
						Total Div Yield	%	1.1	1.6	1.5	1.7
						Weighted Average Shares	m	52	58	58	58
						Period End Shares	m	52	58	58	58
Profit and Loss Ratios		2008A	2009E	2010E	2011E	Cashflow Analysis		2008A	2009E	2010E	2011E
Revenue Growth	%	-23.7	-0.7	-9.8	9.4	<b>EBITDA</b>	m	<b>7,066</b>	<b>7,604</b>	<b>7,015</b>	<b>7,471</b>
EBITDA Growth	%	-12.5	7.6	-7.7	6.5	Tax Paid	m	-1,113	-1,295	-1,202	-1,381
EBIT Growth	%	-14.8	6.6	-12.8	5.8	Chgs in Working Cap	m	-3,211	3,527	2,318	-1,322
Gross Profit Margin	%	32.3	34.1	38.0	36.1	Net Interest Paid	m	-1,979	-1,673	-1,181	-826
EBITDA Margin	%	13.2	14.3	14.6	14.2	Other	m	179	1,394	1,290	1,476
EBIT Margin	%	11.6	12.5	12.1	11.7	<b>Operating Cashflow</b>	m	<b>942</b>	<b>9,556</b>	<b>8,241</b>	<b>5,418</b>
Net Profit Margin	%	6.1	7.1	7.3	7.7	Acquisitions	m	0	0	0	0
Payout Ratio	%	12.3	17.1	17.3	17.0	Capex	m	-10,228	-4,000	-1,500	-500
EV/EBITDA	x	5.7	5.8	6.3	5.9	Asset Sales	m	0	0	0	0
EV/EBIT	x	6.5	6.6	7.6	7.2	Other	m	0	0	0	0
<b>Balance Sheet Ratios</b>						<b>Investing Cashflow</b>	m	<b>-10,229</b>	<b>-4,000</b>	<b>-1,500</b>	<b>-500</b>
ROE	%	12.3	12.4	10.5	11.2	Dividend (Ordinary)	m	-397	-637	-597	-674
ROA	%	11.4	10.5	9.0	9.3	Equity Raised	m	10	55	-300	-300
ROIC	%	17.4	14.2	12.1	14.1	Debt Movements	m	5,785	-2,455	-2,335	0
Net Debt/Equity	%	22.8	12.5	-4.9	-15.1	Other	m	1,635	0	-213	-0
Interest Cover	x	3.1	4.0	4.9	7.4	<b>Financing Cashflow</b>	m	<b>7,034</b>	<b>-3,038</b>	<b>-3,445</b>	<b>-974</b>
Price/Book	x	1.3	1.3	1.2	1.1	<b>Net Chg in Cash/Debt</b>	m	<b>-2,253</b>	<b>2,519</b>	<b>3,295</b>	<b>3,944</b>
Book Value per Share		542.7	547.1	589.0	642.4	<b>Free Cashflow</b>	m	<b>-9,286</b>	<b>5,556</b>	<b>6,741</b>	<b>4,918</b>

All figures in INR unless noted.

Source: Company data, Macquarie Research, September 2009

## INDIA

## PSL Limited

16 September 2009

## PSLL IN

Not rated

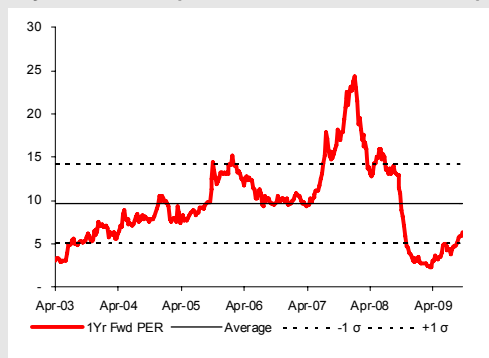
Stock price as of 15 Sep 09	Rs	171.6
Market cap	Rs m	9,171
30-day average turnover	US\$m	4.2
Market cap	US\$m	188.8
Number of shares on issue	m	53.5

## Investment fundamentals

Yr end 31 Mar		2007A	2008A	2009A
Total revenue	m	14,708	21,182	36,489
Total revenue growth	%	0.1	44.0	72.3
EBITDA	m	1,788	2,371	3,101
EBITDA growth	%	16.3	32.6	30.8
Reported profit	m	653	844	949
EPS	Rs	22.4	29.0	32.6
EPS growth	%	25.8	29.3	12.4
PE	x	7.6	5.9	5.3
EBITDA margin	%	12.4	11.4	8.7
ROE	%	13.7	15.5	15.0
Net debt/equity	%	95.6	164.0	158.5

(all figures in Rs m unless noted)  
Source: Company data, September 2009

## 1-yr fwd PER (based on consensus est)



Source: Bloomberg, SepTEMBER 2009

## Leader in HSAW

## Event

- PSL is the largest HSAW (Helical Submerged Arc Welded) pipe manufacturer in India (capturing approximately 45% of domestic production). It started operating mainly as a pipe-coating company in 1987 and later diversified into pipe manufacturing. In 2008, PSL commissioned its 300,000tpa pipe mill in the US, bringing its total capacity to 1.475m tpa.

## Impact

- Order book – looking robust.** PSL's order book for the next 12–15 months stands at Rs46bn (1.3x FY09 sales), 98% of which is domestic. It is a key beneficiary of pipe demand stemming from GAIL's mega plans to build 5,500km of new gas transmission pipelines by 2012. In addition, the government has plans to set up 6,000km of new pipelines to create national gas highways.
- Geographical footprint – the largest in India.** PSL is the only pipe maker with facilities on both the west and east coasts of India; the majority of rival plants are on the west coast. This gives it a strong geographical presence and helps it to service customers in different geographies at reduced freight costs.
- Distributed manufacturing – one of a kind.** Of PSL's 13 manufacturing units (with total capacity of 1.475m tpa), 10 units of 75,000tpa capacity each are movable, which means the plant and machinery can be dismantled and then erected at a site where the pipeline is to be laid. This provides PSL with a competitive edge, as movable capacity translates to significant cost savings for the client (reduced freight costs).
- No immediate plans for backward integration.** Unlike some of its competitors who are setting up plants for sourcing plates/coils, PSL believes 'conversion' (from plates/coils to pipes) is its core-competency, and it aims to maintain this position for the foreseeable future.
- Recently expanded to the Middle East and US.** The company has started focusing on exports (currently comprising 2% of sales), as it has ample scope to increase capacity utilisation. It has established a 75,000t mill in Sharjah, UAE, and a 300,000t HSAW capacity in the US.
- Largest capacity – opportunity or risk?** PSL has the largest installed manufacturing capacity for HSAW in India at 1.475m tpa. However, even after capturing close to 60% of the domestic market, it currently operates at 40–45% capacity, giving it ample scope to ramp up production. Industry experts believe that 60–65% can be considered an optimum capacity utilisation level. However, any slowing of order intake may lead to a rise in idle capacity, which could squeeze operating margins.

## Outlook

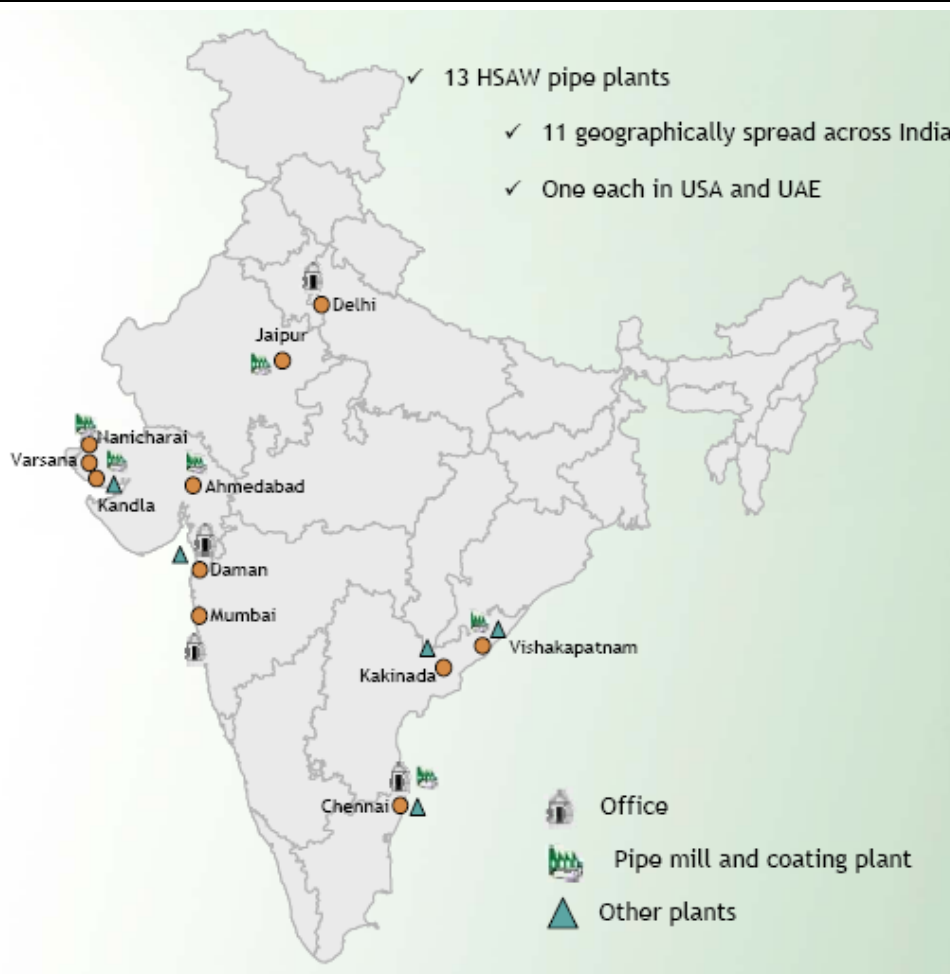
- PSL is currently trading at 6.4x FY3/11E PER consensus estimates, which is below its five-year historical average. Its dominant position in the HSAW category means it could reap the most benefit from any substantial increase in demand for HSAW pipes catering to oil & gas and water transportation sectors in India.

## Analyst

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91 22 6653 3051

amit.mishra@macquarie.com

**Fig 1 Geographical footprint – largest in India**



Source: Company data, September 2009

**Fig 2 Major orders executed by PSL**

Name of project	Client	Value (Rs m)
Chennai Metro Water Supply & Sewerage	Puncak Niaga Malaysia and IVRCL	3,745
Modhera_Motidau-Raulpur-Dharoi	L&T	3,497
Mundra-Delhi Pipeline	HPCL	2,529
Pradeep Haldia Crude Pipeline	IOCL	2,387
Dahej-Vijapur Pipeline	GAIL	849
Bina-Kota Pipeline	BPCL	1,044
Melut Basin Oil Development - Sudan	Petrodar	8,627
Dolphin Energy	Saipem Portugal Comercio Maritimo	1,956
Water supply to Bid Bid Fanja	Erco & Al Matar - Oman	596

Source: Company data, September 2009

**Fig 3 Major orders under execution**

Name of project	Value (Rs m)
<b>Oil</b>	
Mundra-Bhatinda Pipeline I	9,355
Mundra-Bhatinda Pipeline II	4,091
Dadri Panipat pipeline	1,656
<b>Gas</b>	
Vijaipur - Dadri Bawana pipeline I	17,272
Vijaipur - Dadri Bawana pipeline II	1,848
Cagmog SPA Algeria	731
<b>Water</b>	
Barmer lift water supply	3,080
Indore Municipal corporations	507
DJB Dwarka Water supply	233
<b>Others</b>	
Indira gandhi super thermal power	608
Coimbatore Municipal corporation	357
Ragunantur Thermal Power	141

Source: Company data, September 2009

**Company background**

Incorporated in 1987, PSL Limited is the largest manufacturer in India of high-grade large-diameter spiral (helical) submerged arc welded pipes (HSAW) pipes for oil & gas and water transmission as well as structural and piling applications.

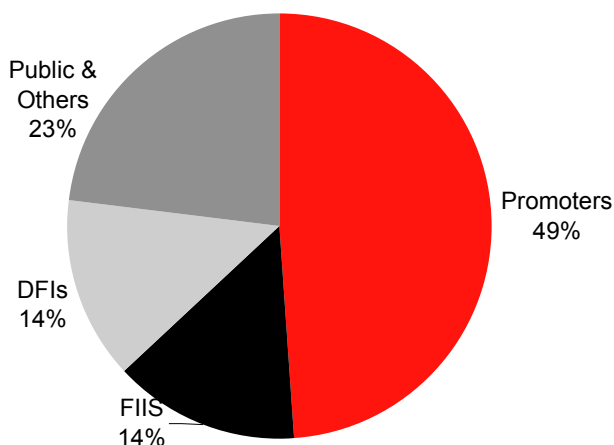
The company manufactures HSAW pipes in 13 HSAW pipe mills and pipe coating mills.

Over 2000–02, it doubled its pipe mill capacity to 0.5m tpa, which has since been ramped up to 1.475m tpa.

The company’s clientele includes domestic majors such as GAIL, HPCL, IOCL and L&T, and overseas majors such as Hyundai Heavy industries, Kalanriyan General Trading (LLC), Kala Gas Co. (PARS) and Erko Oman.

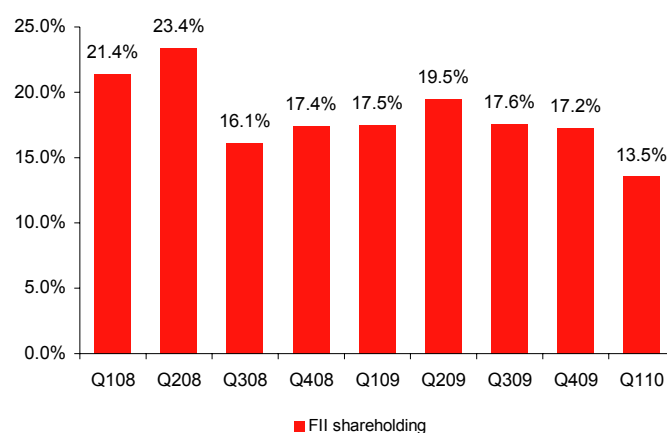
The company has technical collaborations with Commercial Resins (US), Lilly Powder Coating (US), Oronzio De Nora (Switzerland) and Abbey Resources (UK).

**Fig 4 Shareholdings as of 30 June 2009**



Source: Company data, September 2009

**Fig 5 FII holding as of 30 June 2009**



FII – foreign institutional investors

Source: Company data, September 2009

**Fig 6 PSL Limited – income statement**

(Rs m)	2005A	2006A	2007A	2008A	2009A
<b>Net sales</b>	<b>14,092</b>	<b>14,503</b>	<b>14,433</b>	<b>20,734</b>	<b>35,599</b>
Other operating income	170	193	274	448	890
Total operating income	14,262	14,695	14,708	21,182	36,489
Total operating expenses	13,242	13,157	12,920	18,811	33,389
<b>EBITDA</b>	<b>1,020</b>	<b>1,538</b>	<b>1,788</b>	<b>2,371</b>	<b>3,101</b>
Depreciation & amortisation	240	344	445	539	688
Other income	-	-	-	-	-
<b>EBIT</b>	<b>779</b>	<b>1,193</b>	<b>1,343</b>	<b>1,831</b>	<b>2,413</b>
Interest and finance charges	325	485	435	579	1,028
Pretax income	454	708	908	1,253	1,385
Extraordinary items	-	-	-	-	-
Tax	122	189	255	409	437
<b>Net income</b>	<b>333</b>	<b>519</b>	<b>653</b>	<b>844</b>	<b>949</b>

Source: Company data, September 2009

**Fig 7 PSL Limited – balance sheet**

(Rs m)	2005A	2006A	2007A	2008A	2009A
<b>ASSETS</b>					
Current assets, loans & advances					
Cash & bank balance	1,736	1,132	1,263	4,005	2,133
Inventory	4,587	5,195	6,226	7,436	34,800
Sundry debtors	3,100	4,200	2,157	3,460	5,430
Other current assets	687	1,146	1,213	2,070	5,539
<b>Total current assets</b>	<b>10,109</b>	<b>11,673</b>	<b>10,859</b>	<b>16,971</b>	<b>47,901</b>
Current liabilities & provisions	4,775	5,849	5,791	8,365	42,463
<b>Net current assets</b>	<b>5,335</b>	<b>5,825</b>	<b>5,068</b>	<b>8,606</b>	<b>5,439</b>
Investments	114	114	25	43	43
Deferred tax assets	0	0	0	0	0
Fixed assets	2,752	3,528	5,131	6,391	12,973
<b>Total assets</b>	<b>8,200</b>	<b>9,467</b>	<b>10,224</b>	<b>15,040</b>	<b>18,454</b>
<b>LIABILITIES</b>					
Equity share capital	289	320	341	426	426
Reserves & surplus	1,387	4,006	4,887	5,538	6,607
<b>Net worth</b>	<b>1,676</b>	<b>4,325</b>	<b>5,228</b>	<b>5,630</b>	<b>7,033</b>
Minority Interest	0	0	0	178	273
Total borrowings	6,490	5,110	4,989	9,217	11,296
Deferred tax liabilities	34	32	7	16	-147
<b>Total liabilities and equity</b>	<b>8,200</b>	<b>9,467</b>	<b>10,224</b>	<b>15,040</b>	<b>18,454</b>

Source: Company data, September 2009

**Fig 8 DuPont analysis (using average values from balance sheet)**

	2005A	2006A	2007A	2008A	2009A
Profit margin (%)	2.4	3.6	4.5	4.1	2.7
Asset turnover (x)	2.2	1.1	1.0	1.1	0.8
Asset to equity ratio (x)	7.7	4.4	2.9	3.5	6.6
RoE	39.7	17.3	13.7	15.5	15.0

Source: Company data, September 2009

## INDIA

## Maharashtra Seamless

16 September 2009

## MHS IN

Not rated

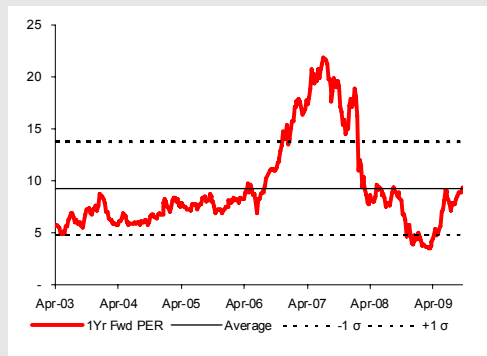
Stock price as of 15 Sep 09	Rs	313.3
Market cap	Rs m	22,098
30-day average turnover	US\$m	1.0
Market cap	US\$m	455.0
Number of shares on issue	m	70.5

## Investment fundamentals

Yr end 31 Mar		2007A	2008A	2009A
Total revenue	m	14,073	15,024	20,436
Total revenue growth	%	43.9	6.8	36.0
EBITDA	m	3,513	3,023	3,471
EBITDA growth	%	65.7	-13.9	14.8
Reported profit	m	2,339	2,135	2,599
EPS	Rs	33.4	30.1	36.1
EPS growth	%	55.7	-10.0	20.0
PE	x	9.4	10.4	8.7
EBITDA margin	%	25.1	20.2	17.0
ROE	%	35.0	21.2	21.6
Net debt/equity	%	14.5	13.2	9.5

(all figures in Rs m unless noted)  
Source: Company data, September 2009

## 1-yr fwd PER (based on consensus est)



Source: Bloomberg, September 2009

## Analyst

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## Seamless play

## Event

- Maharashtra Seamless (MSL), India's leading seamless pipe producer, appears set to benefit from the rise in domestic exploration and production (E&P) activity.

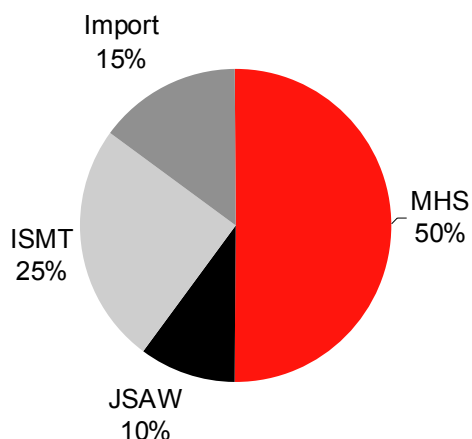
## Impact

- **MSL – the largest seamless pipe manufacturer in India.** Given the increase in E&P spending by oil & gas majors, the demand/supply dynamics in the seamless pipe segment have tilted in favour of the manufacturers. With a 50% share of India's domestic capacity for seamless pipes and a monopoly in the high-margin, high-diameter seamless and ERW pipe segments, MSL looks positioned to increasingly benefit from the robust growth in demand.
- **Order book and margins poised to revive.** The company has a current order book of Rs4bn, which represents 0.2x FY3/09 sales. EBITDA margins in FY09 fell 3% owing to high billet prices and lower margins in the ERW business. However, management believes ERW margins should be sustained at around Rs2,200/t, and seamless margins should stabilise at around Rs15,000/t.
- **Backward integration plan delayed.** The company had issued a US\$75m foreign currency convertible bond primarily to set up a plant in Orissa, India, to manufacture its key raw material (billets). Unfortunately, it could not acquire the land required for the plant, and the project has been significantly delayed. Alternatively, management said that it is in the process of identifying other states in India where it can acquire the land and set up a billet plant.
- **Future plans – exports, niche domestic products.** The company is primarily a domestic operator and has yet to exploit the export potential of seamless/ERW pipes, but it plans to explore this in the next couple of years. It is also planning to focus on niche products within the pipe business (higher-diameter ERW, Seamless 13 Chrome Pipe), which have higher margins.
- **Key risks.** Any significant increase in raw material prices (billets) will affect margins. Other risks include a slowdown in oil & gas exploration, affecting demand for seamless pipes, cheaper imports and increasing domestic capacities.

## Outlook

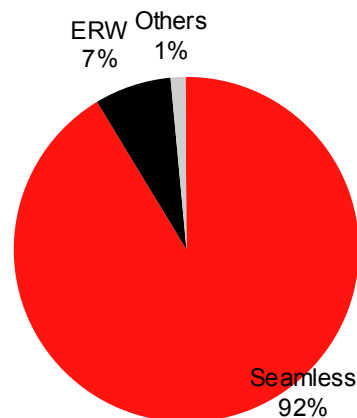
- **Seamless pipe demand to remain sluggish.** Seamless pipe demand is highly correlated with crude oil prices, which in turn is dependent on the global economic outlook. Although there has been some increase in global drilling activities recently, this remains very low given the significant decline over the last 12 months. We expect 2010 to be a year of slow recovery; however, the pace will be dictated by crude oil prices. We assume no meaningful activity improvements until the second half of 2010. In 2011, we anticipate the recovery to strengthen with both activity levels and pricing improving.
- **Consensus estimates and valuations:** MSL is currently trading near its six-year average one-year forward PER. Bloomberg consensus estimates suggest that it is trading at 9.1x FY3/11E PER.

**Fig 1 MHS dominates domestic seamless market**



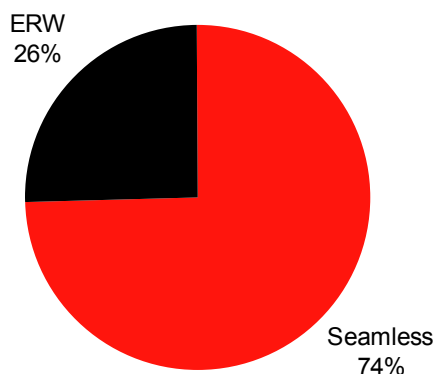
Source: Company data, September 2009

**Fig 2 Seamless contributed 92% to FY09 EBITDA**



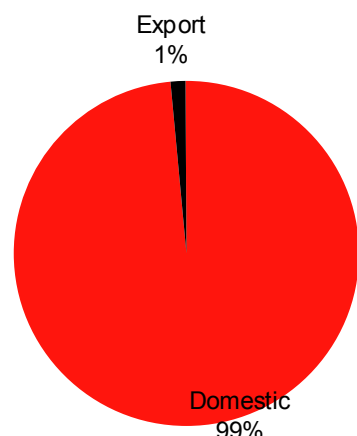
Source: Company data, September 2009

**Fig 3 High margin seamless is 3/4<sup>th</sup> of order book**



Source: Company data, September 2009

**Fig 4 Order book break-up – all domestic**



Source: Company data, September 2009

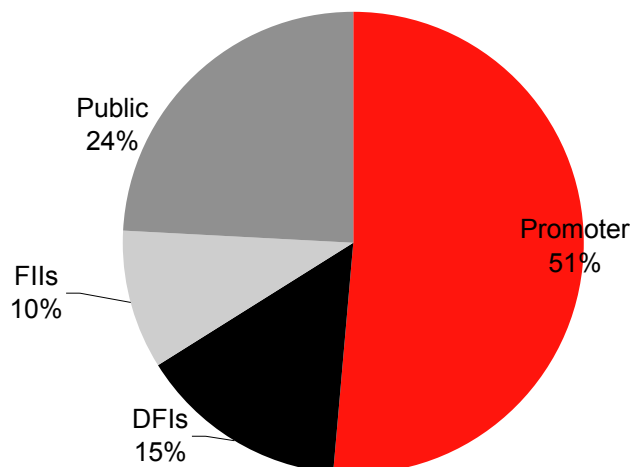
**Company background**

Incorporated in 1989, Maharashtra Seamless Limited (MSL), the flagship company of the DP Jindal Group, is the largest manufacturer of seamless steel pipes and tubes in India.

MSL has a technical collaboration with Mannesmann Demag Huttentechnik of Germany. The business operations are structured with three strategic business units – seamless division, ERW division and power division. Its clientele includes domestic majors such as Punj Lloyd, L&T, GAIL, ONGC, BPCL, Thermax and SAIL.

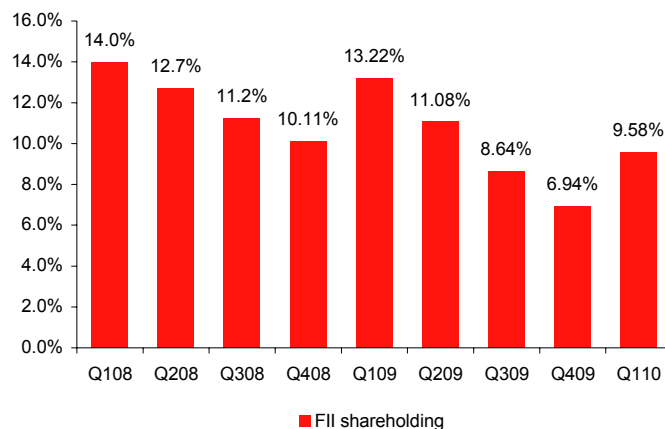
The company has entered the wind power generation business for captive consumption, which should lead to lower power generation costs. It has 20 wind mills with a combined capacity of 7MW. MSL commands a 50% share of India's seamless pipe markets.

Fig 5 Shareholdings as of 30 June 2009



Source: Company data, September 2009

Fig 6 FII holding as of 30 June 2009



FII – foreign institutional investors

Source: Company data, September 2009

Fig 7 MHS Limited – income statement

(Rs m)	2005A	2006A	2007A	2008A	2009A
<b>Net sales</b>	7,694	9,743	13,971	14,977	20,389
Other operating income	26	40	103	47	47
<b>Total operating income</b>	<b>7,721</b>	<b>9,783</b>	<b>14,073</b>	<b>15,024</b>	<b>20,436</b>
Total operating expenses	6,409	7,663	10,560	12,000	16,964
<b>EBITDA</b>	<b>1,312</b>	<b>2,120</b>	<b>3,513</b>	<b>3,023</b>	<b>3,471</b>
Depreciation & amortisation	105	146	163	174	179
Other income	69	34	36	215	468
<b>EBIT</b>	<b>1,276</b>	<b>2,008</b>	<b>3,386</b>	<b>3,064</b>	<b>3,760</b>
Interest and finance charges	13	- 60	- 141	- 137	- 90
Pretax income	<b>1,262</b>	<b>2,068</b>	<b>3,527</b>	<b>3,202</b>	<b>3,850</b>
Extraordinary items	3	5	1	183	-
Tax	414	673	1,188	1,067	1,251
<b>Net income</b>	<b>851</b>	<b>1,391</b>	<b>2,339</b>	<b>1,952</b>	<b>2,599</b>

Source: Company data, September 2009

Fig 8 PSL Limited – Balance sheet

(Rs m)	2005A	2006A	2007A	2008A	2009A
<b>ASSETS</b>					
Current assets, loans & advances					
Cash & bank balance	21	3,192	3,232	2,549	1,106
Inventory	1,331	2,755	2,513	3,803	3,521
Sundry debtors	964	1,400	1,996	2,695	2,788
Other current assets	159	309	394	985	617
<b>Total current assets</b>	<b>2,476</b>	<b>7,655</b>	<b>8,135</b>	<b>10,031</b>	<b>8,032</b>
Current liabilities & provisions	814	1,211	797	1,924	1,786
<b>Net current assets</b>	<b>1,662</b>	<b>6,444</b>	<b>7,338</b>	<b>8,107</b>	<b>6,246</b>
Investments	193	205	538	894	4,199
Deferred tax assets	0	0	0	0	0
Fixed assets	2,699	2,807	2,858	3,375	3,906
<b>Total assets</b>	<b>4,554</b>	<b>9,457</b>	<b>10,734</b>	<b>12,375</b>	<b>14,351</b>
<b>LIABILITIES</b>					
Equity share capital	288	288	350	353	353
Reserves & surplus	2,840	3,851	8,891	10,581	12,747
<b>Net worth</b>	<b>3,128</b>	<b>4,139</b>	<b>9,241</b>	<b>10,934</b>	<b>13,100</b>
Total borrowings	1,084	4,930	1,082	1,022	824
Deferred tax liabilities	342	388	411	420	427
<b>Total liabilities and equity</b>	<b>4,554</b>	<b>9,457</b>	<b>10,734</b>	<b>12,375</b>	<b>14,351</b>

Source: Company data, September 2009



**Fig 9 DuPont analysis (using average values from balance sheet)**

	2005A	2006A	2007A	2008A	2009A
Profit margin (%)	11.03	14.33	16.74	14.26	12.75
Asset turnover (x)	2.87	1.22	1.26	1.16	1.34
Asset to equity ratio (x)	1.72	2.21	1.66	1.28	1.27
RoE	54.27	38.42	34.96	21.17	21.63

Source: Company data, September 2009

## INDIA

## Man Industries

16 September 2009

## MAN IN

Not rated

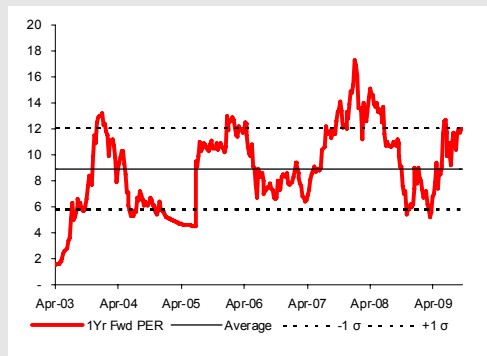
Stock price as of 15 Sep 09	Rs	52.9
Market cap	Rs m	2,816
30-day average turnover	US\$m	0.7
Market cap	US\$m	58.0
Number of shares on issue	m	53.3

## Investment fundamentals

Yr end 31 Mar		2007A	2008A	2009A
Total revenue	m	11,296	15,126	18,834
Total revenue growth	%	30.0	33.9	24.5
EBITDA	m	1,283	1,718	1,479
EBITDA growth	%	38.6	34.0	-14.0
Reported profit	m	553	722	216
EPS	Rs	8.1	10.6	3.2
EPS growth	%	57.8	30.6	-70.1
PE	x	6.5	5.0	16.7
EBITDA margin	%	12.0	11.4	7.9
ROE	%	19.0	21.6	5.8
Net debt/equity	%	0.9	1.0	1.5

(all figures in Rs m unless noted)  
Source: Company data, September 2009

## 1-yr fwd PER (based on consensus est)



Source: Bloomberg, September 2009

## The line pipe company

## Event

- MAN Industries (MAN), part of the UK-based MAN group, is an established submerged arc welded (SAW) pipe manufacturer in India. Its total production capacity of 1m tpa is equally divided between helical submerged arc welded (HSAW) pipes and longitudinal submerged arc welded (LSAW) pipes.

## Impact

- SAW capacity of 1m tpa.** Currently, MAN has a production capacity of 500,000tpa of LSAW and 500,000tpa of HSAW. The company should start seeing meaningful contribution from the 400,000tpa HSAW capacity added over the past two years from FY10. The company had planned to set up a 300,000m tpa HSAW mill in the US, but this has been put on hold for now.
- Predominantly export-oriented.** Currently, approximately 55% of total sales come from exports. The company is also focusing its efforts on the burgeoning domestic market given the huge demand potential on the back of a trebling of gas supplies. The Anjar facility is located close to the Mundra and Kandla ports, which enhances the company's export competitiveness.
- Order book – sales coverage highest amongst peers.** MAN currently has orders worth Rs25bn (1.3x FY09 sales) to be executed in the next 12–15 months, mostly for the export market. It is in various stages of discussions for orders worth US\$1bn (for which it expects a 20–25% success rate).
- Growing confidence in India as a manufacturing hub.** In March 2007, MAN received an order worth US\$280m from the Middle East – one of the largest orders received by an Indian pipe manufacturing company. We believe this reflects a strong shift in confidence among international players on the execution capabilities of Indian pipe manufacturers.
- SAW demand remains strong.** Demand for SAW pipes remains robust given the continued need to connect new areas of oil & gas supplies to areas of net demand. Despite the economic slowdown in the US, *the Oil & Gas Journal*, forecasts that investment in oil & gas pipelines will increase by more than 40% YoY in 2009.
- Risks.** MAN has no plans for backward integration. Unlike some of its competitors who are setting up plants to source plates/coils, MAN believes 'conversion' (from plates/coils to pipes) is its core competency and wants to maintain this position for the foreseeable future. Also, it wants to keep a standard technology platform (SAW) rather than diversify into other segments (such as seamless pipes and electric resistant welded pipes [ERW]).

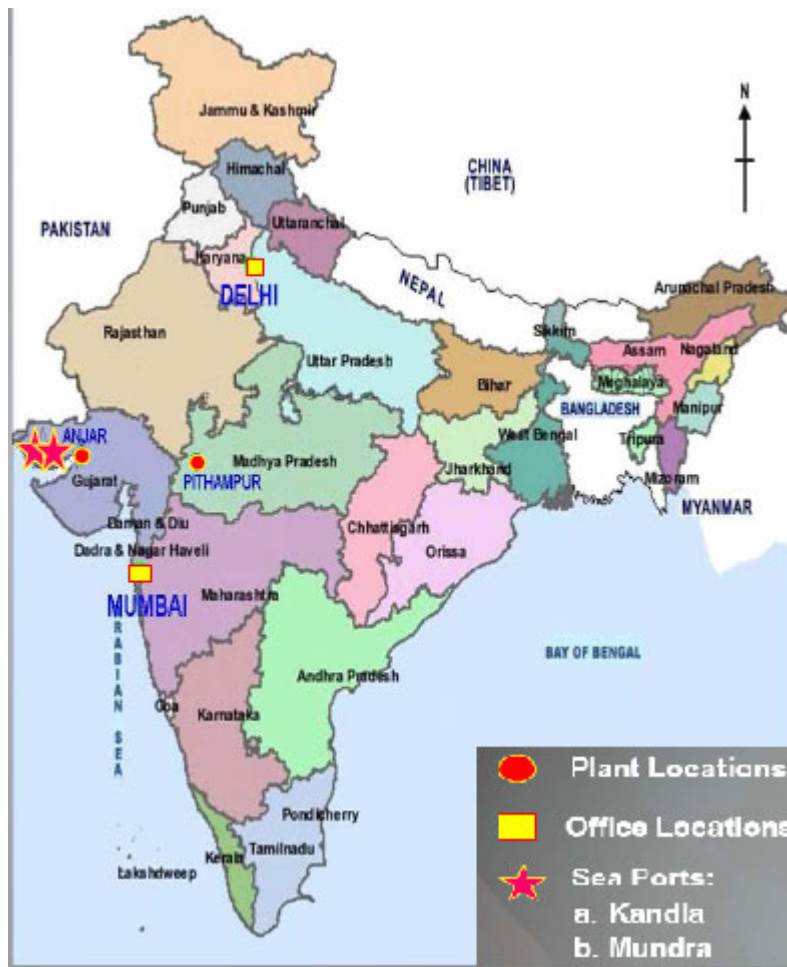
## Outlook

- MAN is currently trading at 10.4x FY3/11E PER consensus estimates, which is above its five-year historical average. The global demand outlook for SAW pipes is very strong, and MAN is likely to benefit from large global and growing domestic demand.

## Analyst

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**Fig 1 Plants are located close to the sea ports on the west coast of India**



Source: Company data, September 2009

## Company background

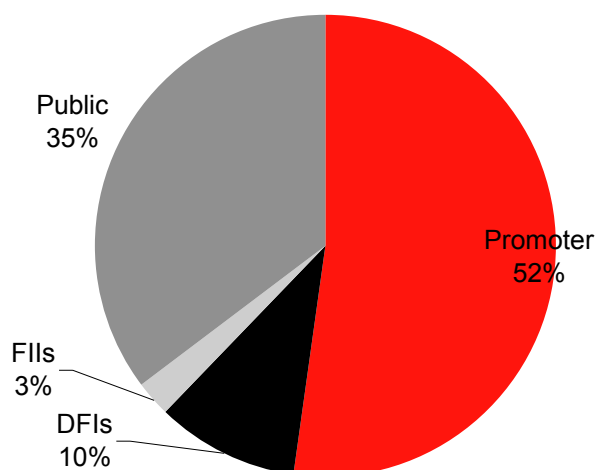
Incorporated in 1988, Man Industries (India) Ltd, the flagship company of the Man Group (UK), is a leading manufacturer and exporter of large diameter carbon steel line pipes for various high pressure transmission applications for gas, crude oil, petrochemical products and potable water.

The company started operations in 1989 as an aluminium extrusion company with an installed capacity of 4,000tpa. In 1994, it diversified into SAW pipes by setting up a plant in Pithampur, Madhya Pradesh. Later in 1998, it forward integrated to become an integrated SAW pipe manufacturer with its own polyethylene-coating facility.

It manufactures LSAW and HSAW line pipes, as well as various types of anti-corrosion coating systems. The company's manufacturing facilities are located in Anjar (Gujarat) and Pithampur (Madhya Pradesh).

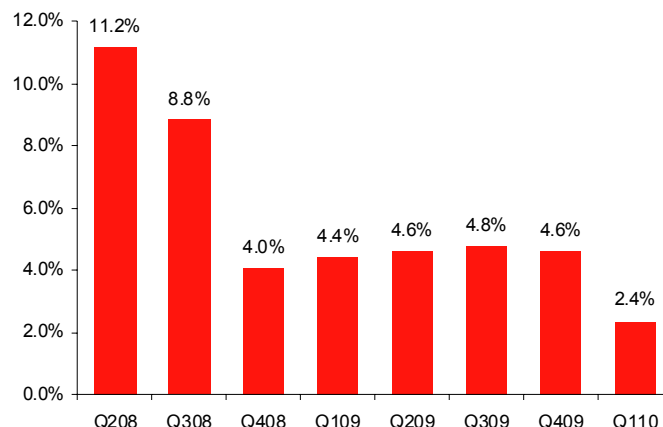
Its clientele includes domestic majors such as GAIL, IOC, RIL, BPCL, HPCL, L&T and BHEL. and overseas clientele such as Petronet (Egypt), NIGC (Iran), NOC & SOC (Iraq), Qatar Petroleum, (Qatar), Shell Global International BV and Hyundai Engineering (Korea).

Fig 2 Shareholdings as of 30 June 2009



Source: Company data, September 2009

Fig 3 FII holding as of 30 June 2009



FII – foreign institutional investors

Source: Company data, September 2009

Fig 4 Man Industries – income statement

(Rs m)	2005A	2006A	2007A	2008A	2009A
<b>Net sales</b>	<b>4,886</b>	<b>8,356</b>	<b>10,706</b>	<b>15,126</b>	<b>18,834</b>
Other operating income	58	331	590	-	-
Total operating income	4,944	8,687	11,296	15,126	18,834
Total operating expenses	4,523	7,762	10,013	13,407	17,356
<b>EBITDA</b>	<b>421</b>	<b>925</b>	<b>1,283</b>	<b>1,718</b>	<b>1,479</b>
Depreciation & amortisation	68	156	169	282	350
Other income	-	-	-	-	-
<b>EBIT</b>	<b>353</b>	<b>770</b>	<b>1,114</b>	<b>1,437</b>	<b>1,129</b>
Interest and finance charges	63	256	274	329	670
Pretax income	289	513	840	1,107	459
Extraordinary items	-	-	-	-	-
Tax	106	163	287	385	243
<b>Net income</b>	<b>183</b>	<b>350</b>	<b>553</b>	<b>722</b>	<b>216</b>

Source: Company data, September 2009

Fig 5 Man Industries – Balance sheet

(Rs m)	2005A	2006A	2007A	2008A	2009A
<b>ASSETS</b>					
Current assets, loans & advances					
Cash & bank balance	291	1,567	146	1,170	1,919
Inventory	631	1,154	1,797	3,516	3,986
Sundry debtors	1,155	1,006	3,326	2,165	5,191
Other current assets	217	1,230	1,814	1,475	2,397
<b>Total current assets</b>	<b>2,295</b>	<b>4,957</b>	<b>7,083</b>	<b>8,327</b>	<b>13,494</b>
Current liabilities & provisions	1,713	1,901	4,072	5,886	9,035
<b>Net current assets</b>	<b>582</b>	<b>3,056</b>	<b>3,011</b>	<b>2,440</b>	<b>4,458</b>
Investments	3	3	11	318	64
Deferred tax assets	0	0	0	1	0
Fixed assets	2,187	2,465	2,887	4,379	5,077
<b>Total assets</b>	<b>2,772</b>	<b>5,524</b>	<b>5,910</b>	<b>7,138</b>	<b>9,600</b>
<b>LIABILITIES</b>					
Equity share capital	199	266	266	266	266
Reserves & surplus	741	2,486	2,802	3,455	3,624
<b>Net worth</b>	<b>940</b>	<b>2,752</b>	<b>3,069</b>	<b>3,621</b>	<b>3,813</b>
Minority Interest	0	0	0	1	195
Total borrowings	1,628	2,510	2,472	3,095	5,064
Deferred tax liabilities	204	262	368	421	527
<b>Total liabilities and equity</b>	<b>2,772</b>	<b>5,524</b>	<b>5,910</b>	<b>7,138</b>	<b>9,600</b>

Source: Company data, September 2009

**Fig 6 DuPont analysis (using average values from balance sheet)**

	2005A	2006A	2007A	2008A	2009A
Profit margin (%)	3.75	4.19	5.16	4.77	1.15
Asset turnover (x)	2.18	1.40	1.23	1.31	1.19
Asset to equity ratio (x)	4.82	3.24	2.99	3.44	4.26
RoE	39.35	19.07	19.03	21.59	5.81

Source: Company data, September 2009

**Important disclosures:**

Recommendation definitions	Volatility index definition*	Financial definitions
<p><b>Macquarie - Australia/New Zealand</b>            Outperform – return &gt;5% in excess of benchmark return            Neutral – return within 5% of benchmark return            Underperform – return &gt;5% below benchmark return</p> <p><b>Macquarie – Asia/Europe</b>            Outperform – expected return &gt;+10%            Neutral – expected return from -10% to +10%            Underperform – expected return &lt;-10%</p> <p><b>Macquarie First South - South Africa</b>            Outperform – expected return &gt;+10%            Neutral – expected return from -10% to +10%            Underperform – expected return &lt;-10%</p> <p><b>Macquarie - Canada</b>            Outperform – return &gt;5% in excess of benchmark return            Neutral – return within 5% of benchmark return            Underperform – return &gt;5% below benchmark return</p> <p><b>Macquarie - USA</b>            Outperform (Buy) – return &gt;5% in excess of benchmark return (Russell 3000)            Neutral (Hold) – return within 5% of benchmark return (Russell 3000)            Underperform (Sell)– return &gt;5% below benchmark return (Russell 3000)</p> <p><b>Recommendations – 12 months</b></p> <p><b>Note:</b> Quant recommendations may differ from Fundamental Analyst recommendations</p>	<p><b>Volatility index definition*</b>            This is calculated from the volatility of historical price movements.</p> <p><b>Very high–highest risk</b> – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.</p> <p><b>High</b> – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.</p> <p><b>Medium</b> – stock should be expected to move up or down at least 30–40% in a year.</p> <p><b>Low–medium</b> – stock should be expected to move up or down at least 25–30% in a year.</p> <p><b>Low</b> – stock should be expected to move up or down at least 15–25% in a year.</p> <p>* Applicable to Australian/NZ/Canada stocks only</p>	<p><b>Financial definitions</b></p> <p>All "Adjusted" data items have had the following adjustments made:            Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives &amp; hedging, IFRS impairments &amp; IFRS interest expense            Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends &amp; minority interests</p> <p><b>EPS</b> = adjusted net profit / epowa*  <b>ROA</b> = adjusted ebit / average total assets  <b>ROA Banks/Insurance</b> = adjusted net profit /average total assets  <b>ROE</b> = adjusted net profit / average shareholders funds  <b>Gross cashflow</b> = adjusted net profit + depreciation            *equivalent fully paid ordinary weighted average number of shares</p> <p>All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).</p>

**Recommendation proportions – For quarter ending 30 June 2009**

	AU/NZ	Asia	RSA	USA	CA	EUR	
Outperform	40.38%	48.53%	40.00%	44.02%	57.42%	40.20%	(for US coverage by MCUSA, 1.54% of stocks covered are corporate advisory clients)
Neutral	39.25%	17.08%	45.00%	37.45%	32.90%	39.21%	(for US coverage by MCUSA, 1.16% of stocks covered are corporate advisory clients)
Underperform	20.38%	34.40%	15.00%	18.53%	9.68%	20.59%	(for US coverage by MCUSA, 0.77% of stocks covered are corporate advisory clients)

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