12 October 2011

RELIGARE INSTITUTIONAL RESEARCH
Values that bind

Jain Irrigation Systems

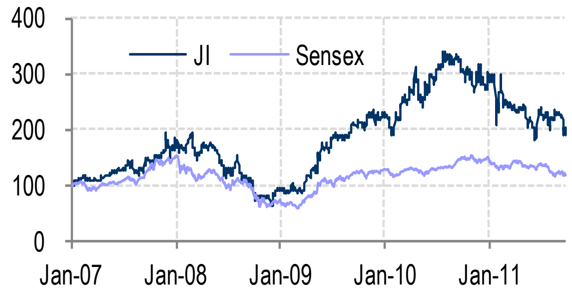
Play on India's structural agriculture growth theme

India | Agriculture | JI IN Equity

Rs 200
BUY

Year End: 31 Mar	FY10	FY11	FY12E	FY13E	FY14E
Net revenues (Rsmn)	34,200	41,528	50,096	59,933	70,922
EBITDA (Rsmn)	5,937	7,659	9,365	11,349	13,413
PAT (Rsmn)	2,476	2,807	3,469	4,541	5,800
EPS (Rs)	6.9	7.4	9.0	11.8	15.1
Growth (%)	90.3	8.5	21.6	30.9	27.7
DPS (Rs)	0.95	1.02	1.36	1.78	2.27
ROIC (%)	13.5	13.7	13.3	15.0	17.0
ROE (%)	22.1	19.5	19.8	21.8	23.1
P/E (x)	20.4	18.8	15.5	11.8	9.3
EV/EBITDA (x)	14.3	10.3	8.7	7.3	6.0
P/BV (x)	5.1	3.3	2.8	2.3	1.9

Stock performance



Investment rationale

- ❖ JI to benefit from the large micro irrigation (MI) potential in India
- ❖ Stronger policy focus on MI with a view to conserving natural resources coupled with improved yields to help accelerate MI adoption rates
- ❖ Faster subsidy disbursements through renewed policy focus on MI would help reduce working capital intensity
- ❖ Better product mix and lower leverage to drive margins and profitability ratios
- ❖ Stock is currently trading at 32% discount to its 5-year average

Risks

- ❖ Removal/ lowering of subsidies on MI business may impact MI adoption rates
- ❖ New entrants may hurt pricing power, market share and thus profitability in the longer term
- ❖ Earnings likely to be volatile due to MTM losses on foreign currency liabilities

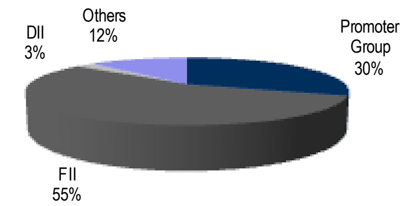
Company description

JI is India's largest MI company operating in several agriculture-related businesses, such as micro irrigation, PVC/PE pipes, agro processing, solar equipment and bio-tech tissue culture. It is the largest MI player in India and the second largest in the world.

CMP (Rs)	140
Target (Rs)	200
Rating	BUY
% Upside / (Downside) (%)	42.9
+ Dividend yield	0.9
Total return (%)	43.8

Market cap (Rsmn)	52,871
Market cap (US$mn)	1125
O/s equity shares (mn)	378
BVPS (Rs)	42.6
Free float (%)	69.64
52-week high / low (Rs)	258/128
2M avg. daily vol. (mn)	243
2M avg. daily value (US$mn)	5
ADR/GDR premium (%)	n.a.

Shareholding pattern



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India Agriculture

Jain Irrigation Systems

JI IN Equity

We initiate coverage on JI with a BUY rating and a December'12 TP of Rs 200 (43% upside). JI is the largest micro irrigation (MI) player in India with a strong distribution network and brand equity built over the years. We expect India's MI sector to post robust growth on account of a renewed policy focus on micro irrigation and improved yields/cost savings to farmers on MI adoption. Incremental growth from this higher margin segment and easing working capital requirements due to faster disbursement of subsidies would help improve JI's profitability and return ratios. We expect an FY11-FY14 net revenue/EPS CAGR of 20%/27% that should drive a significant uptick in share price over 9–12 months.

- **MI potential to drive growth:** India's immediate MI potential stands at ~22mn hectares (and rising) due to a shift in crop pattern towards fruits, vegetables and cash crops. A continued policy focus on MI and improvement in farm incomes through MI adoption (on increased yields and lower costs) will continue to drive industry growth in the next decade. JI being the leader in the segment is poised to take advantage of this opportunity.

- **Easing working capital requirements on faster subsidy disbursal:** Announcement of the National Mission on Micro Irrigation (NMMI) in late H2FY11 is expected to hasten subsidy disbursals in the MI segment. This would lead to a significant reduction in JI's working capital intensity. We expect the ratio of net working capital to revenues to fall from ~38% in FY11 to ~34% in FY13.

- **Higher return ratios on improved margins:** We expect JI's margins and profit ratios to improve led by (1) a favourable product mix with higher incremental revenues from the more profitable MI business, (2) lower leverage due to moderate capex in the medium term on the back of significant capacity additions till FY11, and (3) reducing working capital intensity. We expect the company's EBITDA/PAT margins to improve from 18.4%/6.8% in FY11 to 18.9%/8.2% in FY14. ROE/ROIC are set to increase from 19.5%/13.7% in FY11 to 23.1%/17% in FY14.

- **Competition rising but JI to remain in the lead:** While the immense potential in the MI segment has attracted many new entrants into the sector, we believe JI has a sufficient lead in terms of its distribution reach, scale and knowledge base. It will be awhile before competition matches up, especially as JI continues to expand its reach and operations.

- **Estimates and valuations:** Overall, we forecast a 27% earnings CAGR over FY11-FY14. A key aspect to monitor in FY12 remains an easing of working capital requirements. The stock has corrected recently due to concerns over foreign currency debt and NBFC plans, and still trades at an FY12/FY13E P/E of 15.5x/11.8x and EV/EBITDA of 8.7x/7.3x. Our TP is based on a 12m forward P/E of 14x. Notably, our DCF fair price for the stock is Rs 188, 34% higher than current levels.

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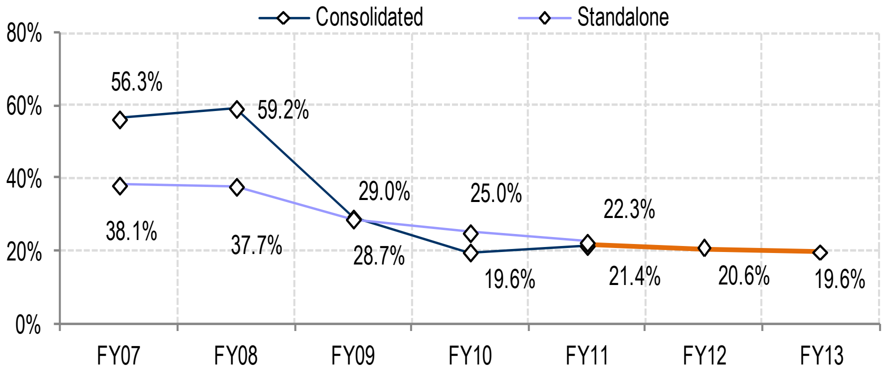
Business segments – Higher MI contribution to revenues in future

Segment	Overview	Revenue share	Margins	Competitive position
Micro Irrigation	❖ Operates in both drip and sprinkler irrigation systems ❖ Policy support, water scarcity, savings in labour/power/fertiliser costs and improvement in yields to continue to drive growth in the segment	56%	India 30% Overseas 10%	❖ Largest in India (55% share in drip and 30% in sprinkler ❖ Second largest in the world ❖ Strong distribution, brand equity and knowledge base
PE/PVC Piping	❖ Buoyant irrigation, construction activity and government focus on water supply and sanitation to keep demand strong in the coming decade ❖ India's per capita polymer consumption at 1.7kg vs. 9.2kg in China and 4.5kg in Brazil	24%	9-11%	❖ Largest player (~20% share in PVC and ~35% in PE pipes) ❖ Leader in a fragmented market
Agro Processing	❖ Operates in vegetable dehydration and fruit processing businesses ❖ Demand to be driven by favourable demographics, rising incomes and increased demand for canned/processed foods and wellness products	15%	India 15-20% Overseas 20-22%	❖ Largest mango processor in India with 40% market share ❖ Third largest onion dehydrator in the world with 20% market share
Plastic Sheets	❖ Europe and United States major markets ❖ Caters to the sign & graphics and building materials market ❖ Subdued demand on housing market slump in the US	3%	7%	❖ Industry has been going through a consolidation phase ❖ Competition comprises 5-7 local manufacturers along with Chinese imports
Tissue Culture	❖ State governments are evincing keen interest in promoting tissue culture which will keep demand healthy	~1%	Low margin business	❖ Fragmented market with only a few large players ❖ Most of the players are engaged in culture for cut flower exports
Solar Systems	❖ Operates in solar photo voltaic systems and solar water heating systems ❖ Government's Solar Mission likely to drive growth in the segment	~1%	NA	❖ Nascent sector ❖ Likely to take off as prices fall with large scale manufacturing and rising affordability

FY11-FY14 earnings CAGR at 27%

Standalone and consolidated revenue growth



Source: Company, RCML Research

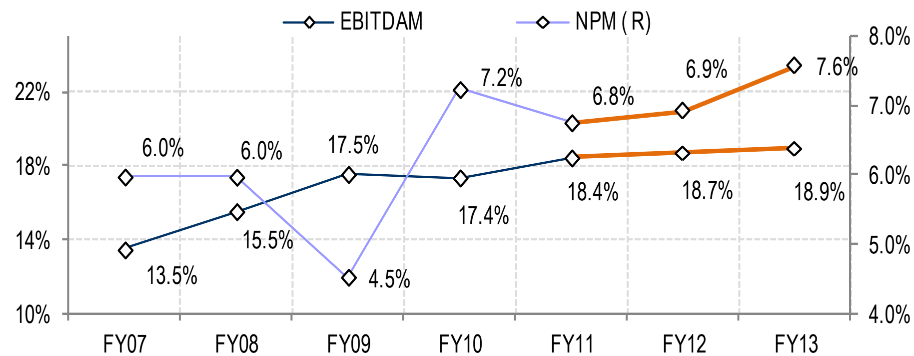
FY11-FY13 earnings CAGR at 27%

JI is expected to post a revenue CAGR of 20% over FY11-FY14 driven by the high-margin MI segment, which would translate into a stronger earnings CAGR of 27%. While contribution of the solar systems business to total revenues is small, it is expected to post robust growth in coming years on additional capacity.

Margins to improve 140bps over FY11-FY14

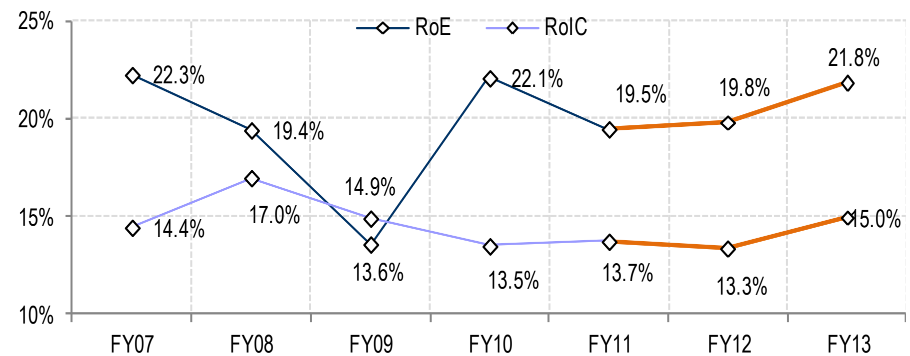
Lower interest outgo led by reducing leverage (as working capital and capex requirements moderate in the medium term) is expected to drive an improvement in net profit margin from 6.8% in FY11 to 8.2% in FY14.

Consolidated EBITDA and PAT margins



Source: Company, RCML Research

RoE and RoCE trend



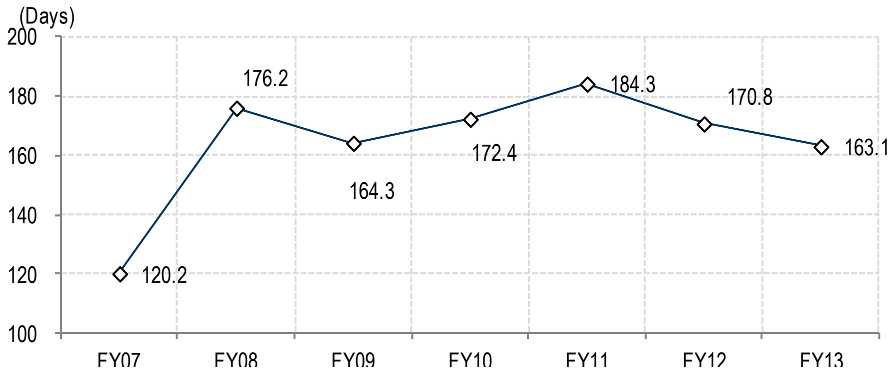
Source: Company, RCML Research

Return ratios likely to improve on stronger margins

JI's recent capacity additions and consequent comfortable utilisation levels in most segments implies lower capex in the next 4-5 years. We expect ROE to improve from 19.5% in FY11 to 23.1% in FY14 on account of lower capex and an improved product mix even as financial leverage falls from 3.9x to 3.2x over this period.

Subsidy disbursals, working capital remain key concerns

Cash conversion cycle

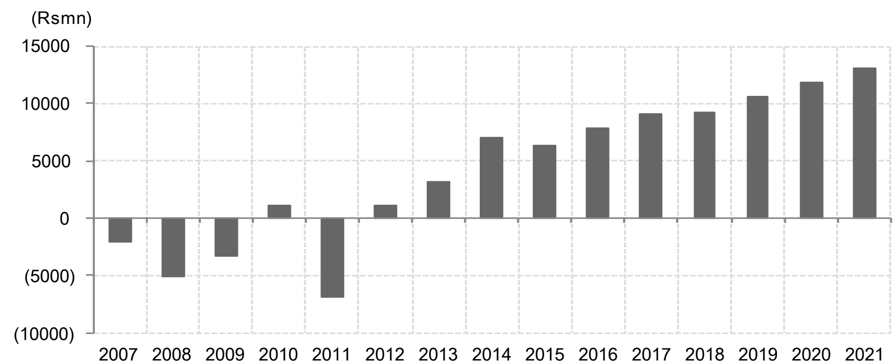


Source: Company, RCML Research

Net working capital/revenue to fall to 34% by FY13

While we factor in 60 days of improvement in MI segment receivables over two years (versus one year guided by the management), it would still result in a reduction in working capital intensity, with the net working capital/revenue ratio falling from ~38% in FY11 to ~34% in FY13E.

Free cash flow

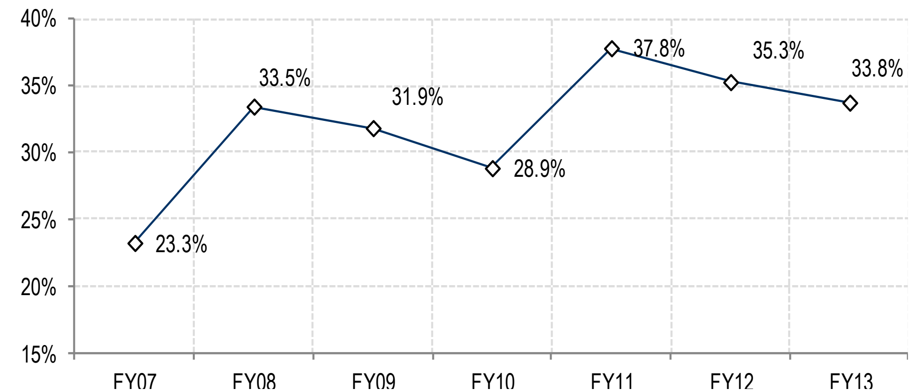


Source: Company, RCML Research

FY11 saw a jump in working capital – likely to come down

We expect JI's net cash conversion cycle to have peaked at 184 days in FY11 on account of state-specific issues in Andhra Pradesh and Tamil Nadu. The company has guided for a substantial improvement going forward (MI receivable days to come down from 370 at present to 310 in FY12). This will be led by faster disbursements through the NMMI and ongoing parleys with the various state-owned debtors.

Net working capital as a % of revenue

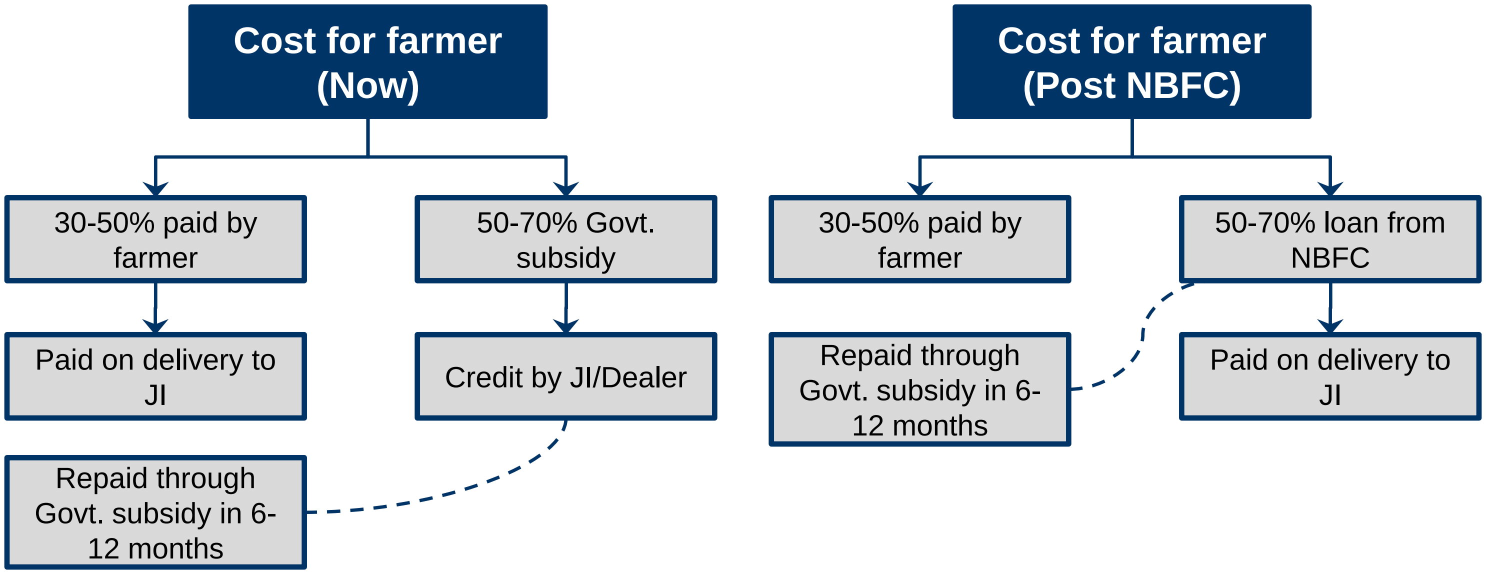


Source: Company, RCML Research

FCF positive in FY12

A reduction in the net debtor/revenue ratio from 41% in FY11 to ~37% in FY13E is expected to reduce working capital intensity in coming years. Substantial capacity build-up in the last few years and comfortable utilisation levels in most business segments are likely to keep capex lower than historical levels. This along with improvement in overseas operations should help JI turn FCF positive in FY12.

NBFC needed to fund growth; markets cautious about diversification



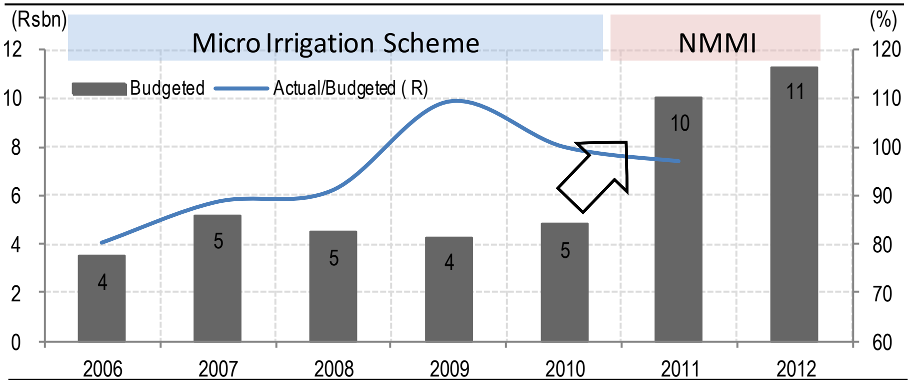
NBFC to help ease working capital requirement

JI has proposed a new NBFC venture with 49% own stake and promoter-cum-institutional holdings at 51%. The NBFC will fund JI's receivables by issuing loans to farmers. The government subsidy, when received by the farmer, would be repaid to the NBFC. The higher cost of funding for the farmer in the form of NBFC interest would be partly offset by JI through a cut in ASP of its irrigation systems. IFC has expressed interest in picking up a 10% stake in the NBFC and JI is awaiting RBI approval for the license. The market has been skeptical about the NBFC venture on account of concerns over (1) willingness of farmers to take up loans to fund irrigation systems and (2) possibility of funding avenues other than MI. While we think that actual dynamics and farmer response need to be monitored, there are some key positives in terms of NBFC operations such as:

- Higher leverage possible on NBFC balance sheet compared to JI's balance sheet
- Improvement in JI's working capital and cash flow
- Reduced risk for the company in the form of lower debt on its own balance sheet

Policy focus on micro irrigation has increased

Allocation to MI

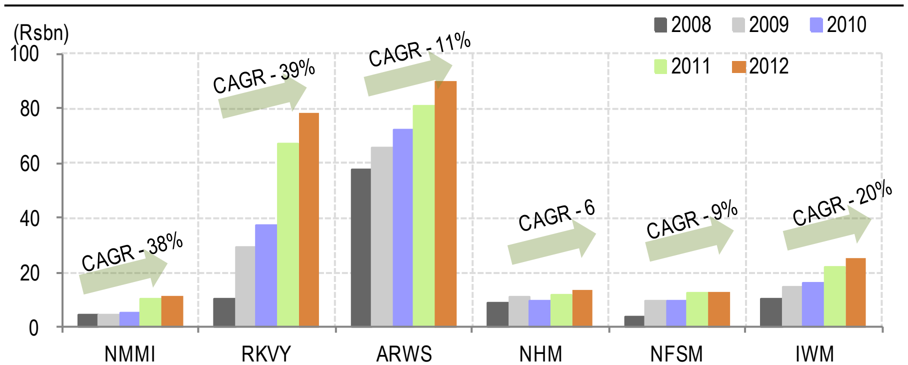


Source: agricoop.nic.in, RCML Research

MI allocation channeled through other schemes as well

Apart from direct allocation through NMMI, many other schemes run by the central and state governments also allocate funds to support the MI subsidy. Subsidies continue to be the largest driver for MI adoption by Indian farmers.

Allocation has been increasing through various schemes



Source: agricoop.nic.in, RCML Research

National Mission on Micro Irrigation to help push MI adaptation

Announcement of NMMI in November'10 has reiterated the government's commitment towards MI, given the need to conserve water and increase farm yields in order to meet burgeoning food demand in India. NMMI would ensure direct allocation and monitoring for MI projects and is expected to ensure faster disbursement of subsidies to increase MI penetration.

Key schemes that have direct or indirect partial allocation to MI

Scheme	Allocation (Rsbn)	Scheme	Allocation (Rsbn)
National Mission on Micro Irrigation	11.3	Project Scheme for Benefit of NER	8.1
Rashtriya Krishi Vikas Yojana	78.1	Horticulture and Vegetable Crops	3.5
Accelerated Rural Water Supply	90.0	Macromanagement for Agriculture	6.5
National Horticulture Mission	13.4	Technology Mission on Oilseeds & Pulses	5.5
National Food Security Mission	12.5	Support to State Extension Services	4.5
Integrated Watershed Management	25.0	Climate Resilient Agri Innovations	2.0

Source: agricoop.nic.in, RCML Research

Total MI allocation has increased at ~25% CAGR (FY08-FY12)

The aggregate subsidy allocation for MI through these schemes has increased from Rs 13.5bn in FY08 to Rs 32.15bn in FY12E, registering a CAGR of 24.2%. We believe that MI will continue to be an area of focus for the government considering the advantages of water conservation and higher farm yields.

Rising farm incomes pushing down breakeven point for MI

Improvement in farm incomes due to micro irrigation

Cultivation Cost (Rs).	Banana		Mango		Potato		Sugarcane	
	Drip	Flood	Drip	Flood	Drip	Flood	Drip	Flood
Land Preparation (Rs./Acre).	4,010	4,010	2,750	2,750	1,000	1,000	1,325	1,325
Seed and Sowing (Rs./Acre)	6,380	6,380	5,800	5,800	10,200	10,200	1,599	1,599
Irrigation Management	960	2,880	850	2,550	770	2,310	1,619	4,857
Manures and fertlizers(Rs/Acre)	12,005	10,205	9,100	7,735	5,304	4,508	4,760	4,046
Weeding and interculturing(Rs/Acre)	950	1,520	950	1,520	1,000	1,600	1,079	1,727
Plant protection(Rs/Acre)	1,795	2,280	800	1,016	898	1,140	2,186	2,776
Harvesting/Prooning(Rs/Acre)	45,000	32,400	4,150	3,170	1,270	1,270	7,000	3,000
Total	71,100	59,675	24,400	24,541	20,442	22,028	19,568	19,330
Yield (Kg)	30,000	21,600	10,000	7,000	16,252	9,000	70,000	30,000
Sales Realization	Rs3/Kg		Rs9/Kg		Rs4.75/Kg		Rs 0.85/Kg	
Gross Sales Realization @ Rs.3 Rs./kg	90,000	64,800	90,000	63,000	77,197	42,750	59,500	25,500
Net Sales Realization	18,900	5,125	65,600	38,459	56,755	20,722	39,932	25,500
Incremental Return with Drip Irrigation System	**13,775**		**27,141**		**36,033**		**14,432**	

Source: GGRC website

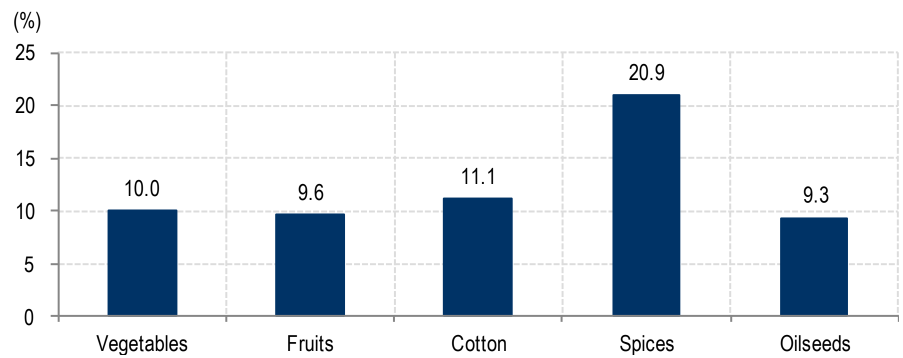
Farm incomes have risen sharply in the past few years

Due to increased MSP/APMC prices for most crops, fruits and vegetables, farm incomes have risen over the past few years. While the cost of farming has also gone up, increased yields and higher market prices for the produce have translated into significant disposable incomes.

Higher income has pushed down the breakeven point for MI

Higher farm incomes and cost savings along with subsidies have lowered the breakeven period to as low as under a year (single harvest) in some cases. Higher return on investment is likely to drive MI adoption in some crops (fruits, vegetables, etc.).

Five-year price CAGR for select crops



Source: CMIE

Competition will take some time to catch up

Recent entrants in the MI space

Entrant	Details	Entry
Mahindra & Mahindra	Indian farm equipment conglomerate entering through acquisition of 38% stake in EPC Industries. Gets leads from its tractor business.	FY11
Godrej Agrovet	2.5 US$ Billion Indian multinational with presence in 60 countries	FY11
Toro	Major MI player from USA	FY11
Escort	Strong distribution (1600 sales outlets in 40 countries). Gets leads from tractor and agriculture machinery business	FY12
Coromandel	Fertilizers manufacturer & marketer. Second largest phosphatic fertilizer player in India	FY11

Source: RCML Research

JI's dominant market share in high growth markets

State	Govt. Subsidy (%)		Mkt Share (%)
	Drip	Sprinkler	
Maharashtra	50	50	65
Gujarat	50	50	30
AndhraPradesh	70	70	35
TamilNadu	50	50	60
Karnataka	75	50	60
MadhyaPradesh	70	70	60
Chhattisgarh	70	70	50
Punjab	75	75	50
Bihar	60	60	60
Himachal Pradesh	50	50	50
Rajasthan	70	70	50
Kerala	50	50	50
UtterPradesh	75	75	50
Uttarakhand	50	50	50

Source: Company (FY10)

Several players have announced entry into MI…

Many new players have expressed their interest in the MI space over the past few years even as existing players such as Netafim, Nagarjuna Fertilizers and Finolex Industries continue to expand their operations. We think the large market opportunity in the space and interest in the agricultural economy has fuelled interest in this space.

JI's distribution network – unmatched presence

State	Plant	Offices	Depots	Dealers
Maharashtra	3	16	9	1,164
Andhra	3	24	5	262
Karnataka	-	4	2	234
Gujarat	2	5	2	207
MP	-	1	3	161
TN	1	6	3	78
Rajasthan		3	4	71
Other		21	11	365
Total (India)	**9**	**80**	**39**	**2,542**
North America	6	3	-	-
Europe	3	4	-	-
South America	2	1	-	-
Australia	1			
Middle East	2	2		

Source: Company

…but competition will take some time to catch up

Given JI's wide presence through its strong distribution network, dominant presence in high growth markets (Maharashtra, Gujarat, Tamil Nadu, Karnataka), brand equity in the space and knowledge base built over the years, it will be awhile before new entrants in the space catch up. JI has been gaining market share in the last few years despite strong competition from existing large (and several unorganised) players.

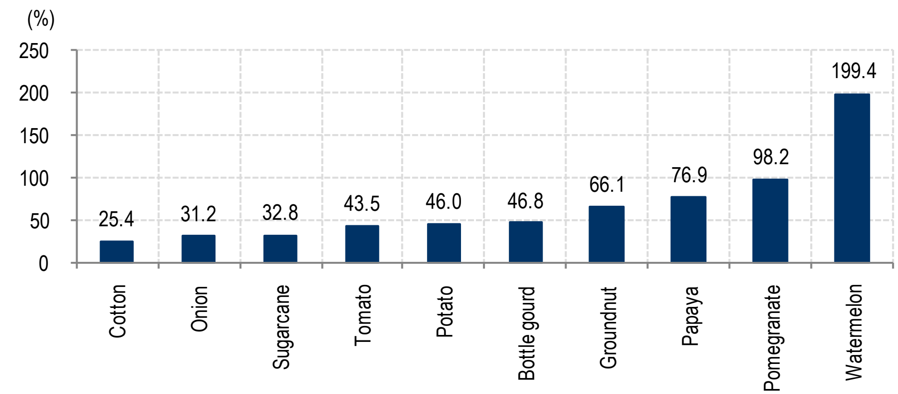
Key drivers of MI – Subsidies and yield, not just water scarcity

Benefits of micro irrigation over flood irrigation

	Micro Irrigation	Flood Irrigation
Water saving	40-100 percent	Less due to evaporation
Irrigation efficiency	80-90 percent	30-50 percent
Input cost	Less labour, fertilizers, pesticides and power cost	Comparatively higher
Weed problem	Reduced significantly	Very High
Suitable water	Saline/ normal	Only normal water can be used
Diseases/pest problems	Relatively less	High/moderate
Water logging	Nil	8.5mn ha under water logging
Water control	Easily manageable	Difficult to manage
Evaporation/transportation loss	Very low	Very High
Labour requirement	Relatively low	High
fertiliser use efficiency	High and constant supply	Low on leaching/evaporation loss
Benefit/Cost ratio	2.8-30.0	1.8-3.9
Product quality	Relatively better	Normal
Increase in yield	20-100 percent higher	Less compared to micro irrigation

Source: Efficiency of Irrigation: A case of Drip Irrigation, Occasional paper-45, NABARD

Increase in yields due to micro irrigation



Source: Efficiency of Irrigation: A case of Drip Irrigation, Occasional paper-45, NABARD

Drivers other than water scarcity

While implementation of MI systems helps conserve 40-100% of the water used in regular irrigation techniques, we highlight other compelling drivers such as savings in power and labour costs, increased yields and up to 75% subsidies in certain states. As these benefits will only become more attractive in the years to come (higher labour & energy cost, increased prices for farm produce), MI systems would thrive and be used even by the farmers in canal irrigated areas (ample water availability).

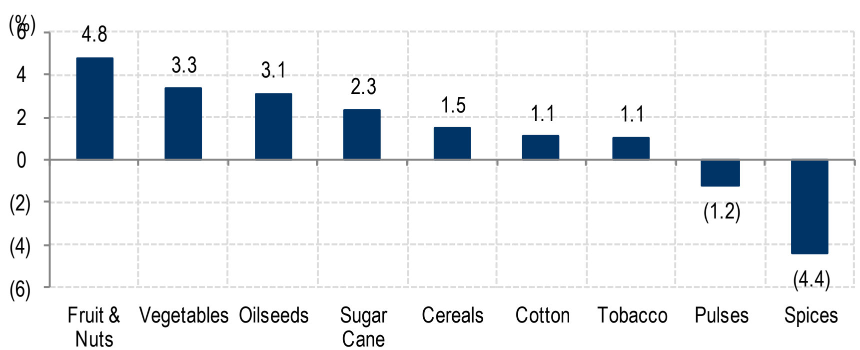
India's immediate micro irrigation potential at ~22mn ha and growing

Immediate MI potential in India

Type of Crop	Area (mn ha.)
Vegetables	8.0
Fruit & Nuts	6.3
Oilseeds	8.3
Plantation Crops	1.7
Spices	2.5
Cotton	9.3
Sugarcane	4.4
Tobacco	0.4
Total	**40.8**
Canal/Total Irrigation (%)	25.0
Less Canal Irrigated Area	10.2
Gross MI Potential	**30.6**
Cropping Intensity	1.4
Net MI Potential	**21.8**
Current MI coverage	6.0
Penetration (%)	**27.5**

Source: RCML Research, agricooop.nic.in, CMIE

Increase in area under cropping – Select crops' five-year CAGR



Source: CMIE

India's immediate MI potential at ~22mn hectares…

Given the manifold benefits of MI, the increased policy focus and increasing scarcity of water resources, we believe the entire irrigated cropping area (under suitable crops) would gradually come under MI as awareness grows. While the government has mandated MI implementation to the extent of 10% of the canal command area under CWBP, we have not included this in our conservative immediate MI potential estimate.

…with many upsides

We see several upsides to MI adoption as follows:

- Potential for MI systems in canal irrigated areas as well given the advantages of improved yields, cost savings and access to subsidies
- Potential of wheat and pulses also not considered at present
- Increasing shift towards MI-friendly crops
- Non-inclusion of cultivable areas such as undulating terrain, rolling topography, hilly areas, barren lands and areas which have shallow soils
- New technology for paddy which is currently under testing by several major irrigation players in India

Future demand is contingent on future cropping pattern

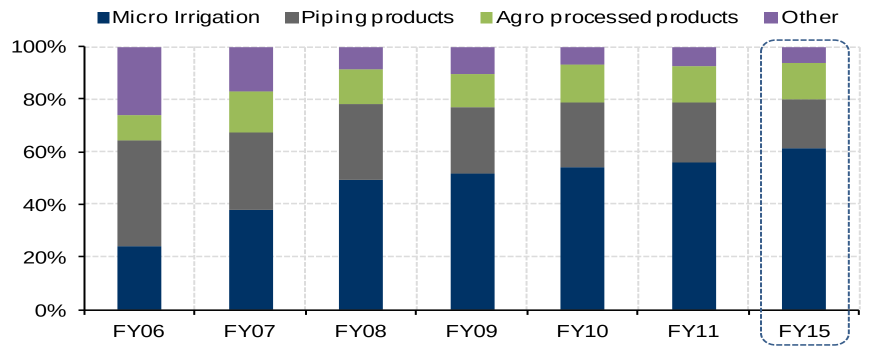
Cropping patterns have changed substantially over the years and are determined by market dynamics, Minimum Support Prices (MSPs)/ Agricultural Produce Market Committee (APMC) prices of different crops and evolving technologies, among other factors. It is fairly difficult to determine future cropping patterns based on current prices and cropping areas.

But trend favourable for MI – towards, fruits, vegetables, cash crops

The recent trend in cropping pattern has visibly shifted towards fruits, vegetables and cash crops relative to cereals and pulses on account of higher demand and consequent favourable economics.

MI to continue to drive JI's growth and profitability

Revenue mix over the years

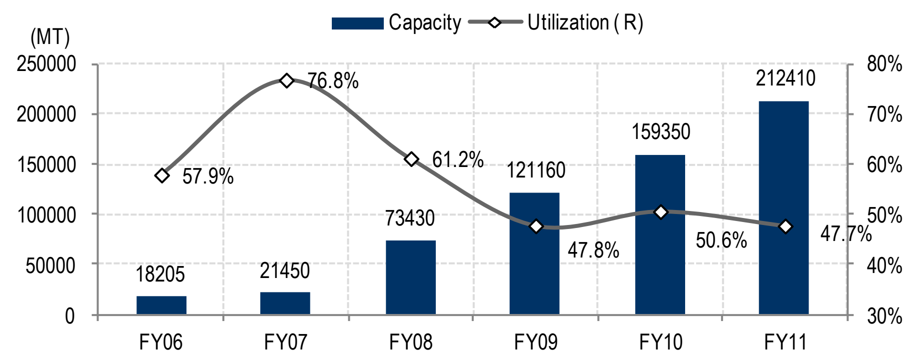


Source: Company, RCML Research

Favourable business mix likely to improve profitability

While profitability of most PE/PVC plays has been fairly volatile in the past, JI's improving product mix (towards MI) has seen its margins expand from 13.5% in FY07 to 18.4% in FY11. This trend is expected to continue with aggregate EBITDA margin expansion of 50bps through FY11-FY13E.

Capacity and utilization – Micro irrigation segment

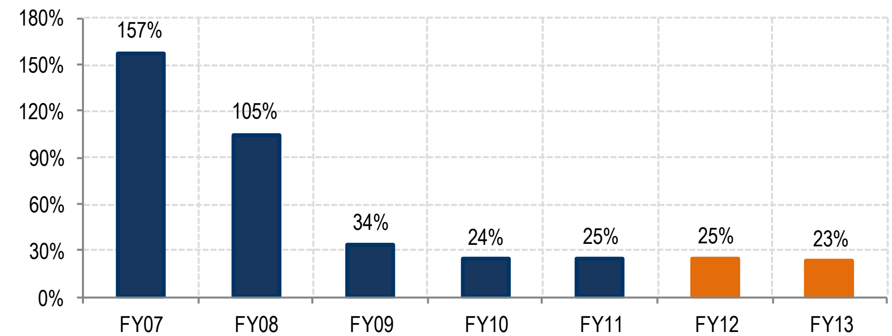


Source: Company, RCML Research

Micro irrigation to contribute ~62% to revenues by FY15

MI continues to be the most important sector for JI, contributing ~55% to the topline at present and ~62% by FY15E. We believe that given its leadership in the sector, strong distribution and presence across India, JI will be able to increase its MI revenues at a CAGR of 25% through FY11-FY13E. This would translate into an EBITDA contribution of ~75% from the segment.

Micro irrigation revenue growth for FY11-13E at 25% CAGR



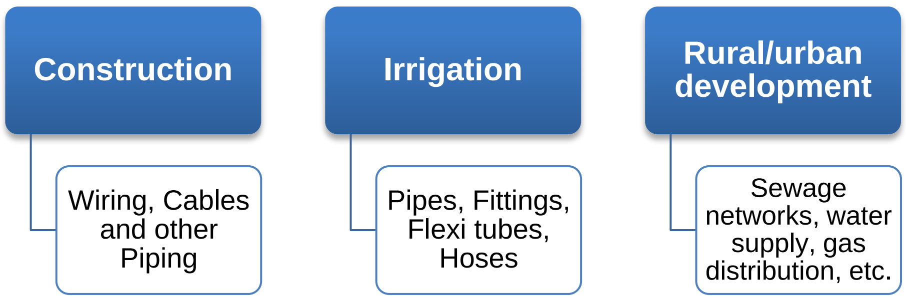
Source: Company, RCML Research

Integrated project development – key growth driver

Integrated projects involve end-to-end water management works where the company designs and implements complete water distribution systems (instead of open canal distribution) and also sells MI equipment to farmers. These projects are typically large and dealt with at an institution rather than individual farmer level. Several states such as Maharashtra, Rajasthan, Tamil Nadu, Karnataka and Himachal Pradesh are implementing them and JI has a pending order book of Rs 1.3bn in this segment.

Pipes – India's per capita PVC consumption very low

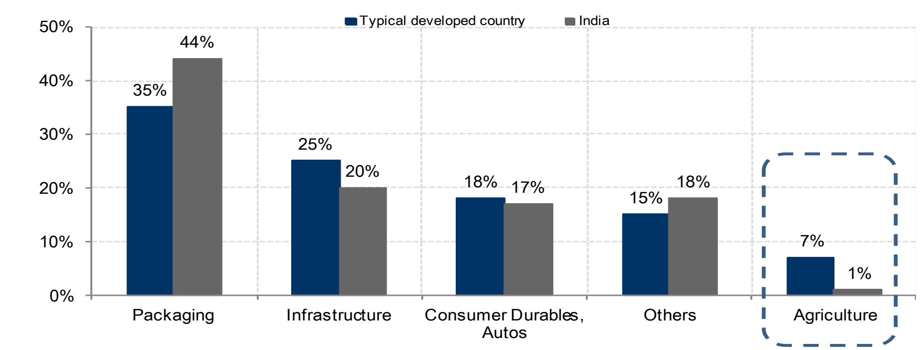
Drivers of growth in the pipes segment in India



Construction, irrigation & development projects drive demand

JI operates in both the PE/PVC pipes segments. We expect demand for pipes to be driven by substantial growth in the irrigation and construction sectors along with different rural/urban development programmes by the government in the fields of water supply and sewage systems.

Polymer demand by Application

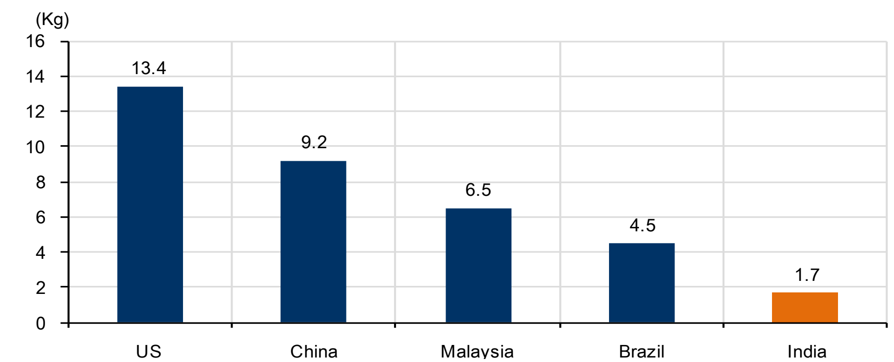


Source: RCML Research

India's per capita PVC consumption one of the lowest

Per capita PVC consumption in India is at 1.7kg, substantially lower than other emerging economies such as Brazil (4.5kg) and China (9.2kg). Moreover, the share of polymer application in the field of agriculture is limited at ~1% compared to 7% in most developed economies. This leaves much scope for further penetration of polymer products and provides a substantial growth opportunity.

Per capita PVC consumption



Source: Factset, Company reports, RCML Research

Overhang of global capacity – key risk

PVC demand tends to be highly correlated with global economic growth, as seen in 2008–09 when the global recession severely hit PVC demand and consequently prices slumped more than 50%. The overhang of low cost imports could act as a major risk for the segment and may impact profitability.

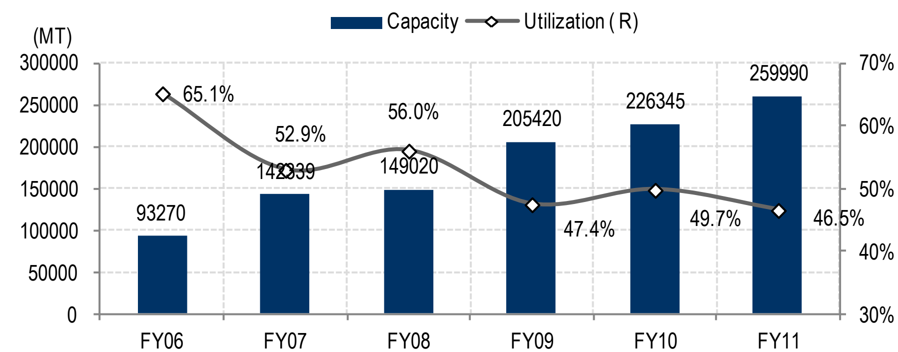
Pipes – Robust demand expected over the next decade

PVC pipes

PE/PVC business offers synergies with MI

JI operates in both the PE/PVC pipes segments, which together contribute ~24% to revenues. These segments have an installed a capacity of 259,990mt (FY11). While the pipes division offers low margins, its large scale of operations, relatively low capex requirements and synergies with the MI business make it an important component of JI's business strategy.

Installed capacity and Utilisation

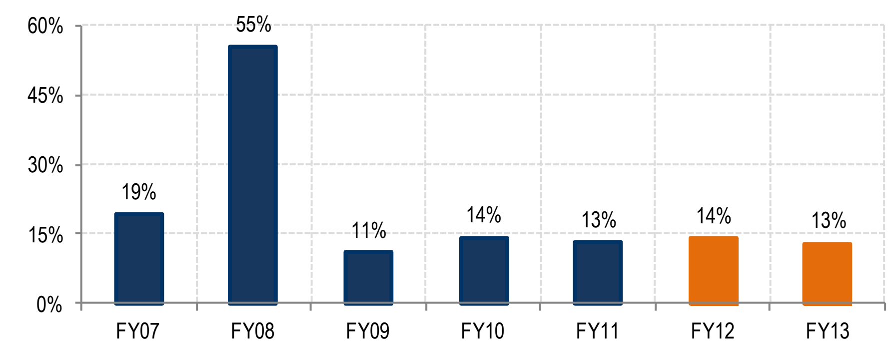


Source: Company, RCML Research

Demand likely to be robust

Lower penetration and increased demand on account of strong growth in the construction and irrigation sectors will help the segment post healthy growth in the coming decade even as large, unorganised competition will keep margins in check.

Revenue growth trend – Pipes segment



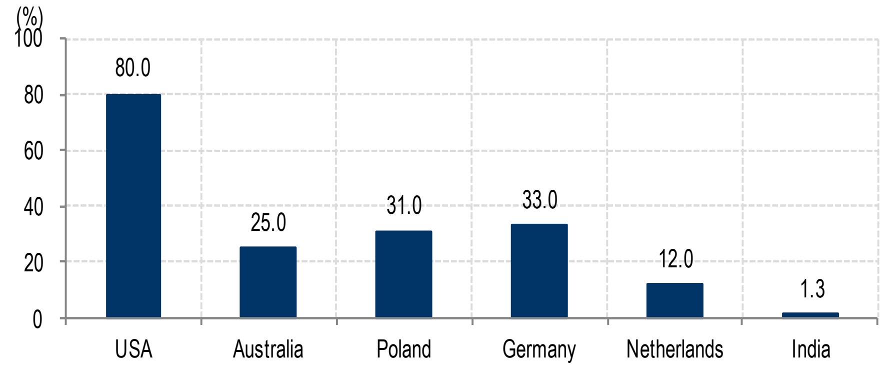
Source: Company, RCML Research

Dominant in an otherwise fragmented, commoditised market

While the pipes industry is largely fragmented with many small local suppliers and a few large national suppliers, JI's scale and leadership puts it at the forefront in terms of sourcing of raw material and lends it some pricing power in an otherwise commoditised industry.

Agro processed products – Incomes, demographics to drive growth

Secondary processing of agricultural produce



Source: mofpi.nic.in

India processes ~2% of its fruit and vegetable produce; immense scope for growth

Globally, India ranks second in fruit and vegetable output, but is at the lower rung of the value chain in terms of processing due to a lack of quality produce and inadequate post-harvest infrastructure (cold chain facilities, transportation, storage facilities). India processes only ~2% of its fruit and vegetable produce versus 80% in the US and 30% in Thailand. Value addition here is also estimated at only 20% versus 45% for peers such as the Philippines.

The Ministry of Food Processing Industries, in its Vision2015 action plan, has set the goal of improving value add to up to 35% and the level of processing perishables to 20% through rationalisation of the tax regime, modification in APMC and providing incentives to attract additional investment in the sector. Growth of the retail sector and corresponding investments in the back-end of the agro supply chain are also likely to boost availability of the right produce at the right price to food processors.

Canned, wellness foods to drive domestic demand

Demand for agro processed products is led by demand for canned, packaged and wellness foods. With a change in demographics, higher disposable incomes and an improved standard of living in India, the consumption pattern is shifting from basic foods to wellness and 'ready to cook' convenience foods. This is fuelling stronger demand for processed foods in general and processed fruits and vegetables in particular.

Level of processing in different food categories in India

(%)	Organized	Unorganized	Total
Fruits & Vegetables	1.4	0.8	2.2
Milk & Milk Products	13	22	35
Marine Products	8	15	23
Poultry	6	NA	NA

Source: mofpi.nic.in

Export demand likely to increase

India's share in the global food trade is only 1.5% even though it is a leading producer of several fruits and vegetables such as mangoes (41%), cauliflower (30%), tea (28%), bananas (23%), cashew nuts (24%), green peas (36%) and onions (10%). All of this implies that there is a great potential to broaden this industry.

India's lower cost of production and good-quality export produce have led to robust export demand. Segments such as mango pulp have seen exports surge to Rs 7.5bn, a CAGR of 20% in the past five years. We think that larger players with credible operations are likely to gain from this export boom.

Agro processed products – Earnings volatile on monsoon dependence

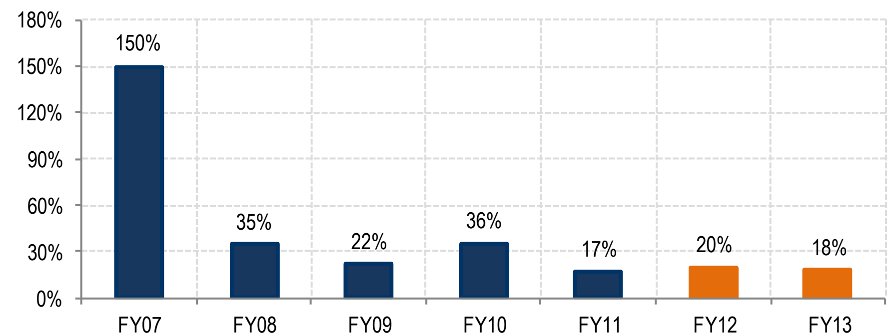
Backward linkages, presence across value chain – key positives

JI enjoys a strong position due to its backward linkages, farmer relationships, contract farming programmes, and ability to supply from multiple origins with different seasons and product quality attributes. JI sources 100% of the raw material for its US operations through contract farming, which mitigates the risk of low-quality inputs to some extent.

JV with Coke — No immediate impact but good for the long term

JI is a strategic supplier to Coca Cola System worldwide for mango pulp/puree and concentrates. The company has successfully evolved the concept of Ultra High Density Plantation (UHDP) of mango, which will revolutionise mango growing, making it one of the most profitable crops for farmers. Coca Cola and JI recently announced a 50:50 JV at an investment of US$ 2mn to promote the adoption of UHDP by mango farmers. The project will also help cross sell JI's irrigation products to mango growers.

Revenue growth (FY06-11 CAGR)

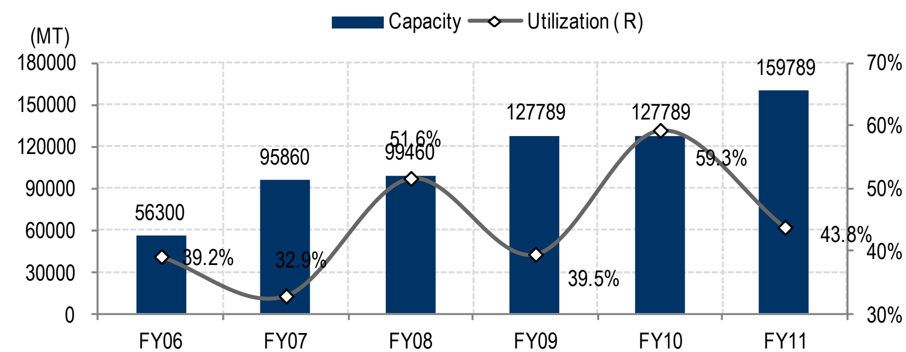


Source: Company reports, RCML Research

Volatile topline

The agro processed segment contributed 15% to JI's total revenue in FY11 and has shown topline volatility on account of erratic and untimely monsoons in the last few years. Key products in the segment include dehydrated vegetables and onions as well as processed fruit. JI has an installed capacity of 1,8214mt in vegetable processing and 141,575mt in fruit puree & concentrates at present.

Revenue growth (FY06-11)



Source: Company reports, RCML Research

Availability of crop, dependence on monsoons – key risks

While the sector is slated to grow on account of domestic and export-oriented demand, dependence on monsoons for a good harvest (a quality and timely crop) is a key concern, which makes this business fairly seasonal and volatile.

Plastic sheets – Demand subdued

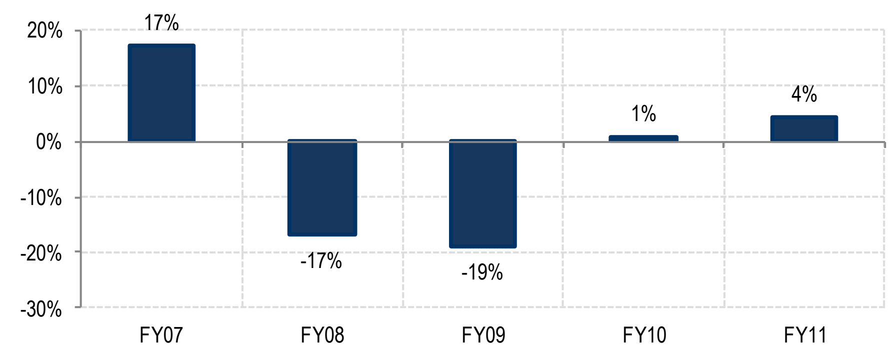
PVC sheets

Source: Company

Demand likely to remain subdued

Most of the revenues for JI's plastic sheet business comes from the US. However, high unemployment in the US and a slump in the housing market will continue to subdue demand in the coming year.

Volume growth trend – Plastic sheets



Source: Company, RCML Research

100% export-oriented

JI's plastic sheets business has a 100% export-oriented unit with an installed capacity of 36,300mt (FY11). The segment has registered flat growth in the past year and contributed 3% to revenues. The industry has been going through a consolidation phase in the past few months, leaving a group of 5-7 local manufacturers along with Chinese imports.

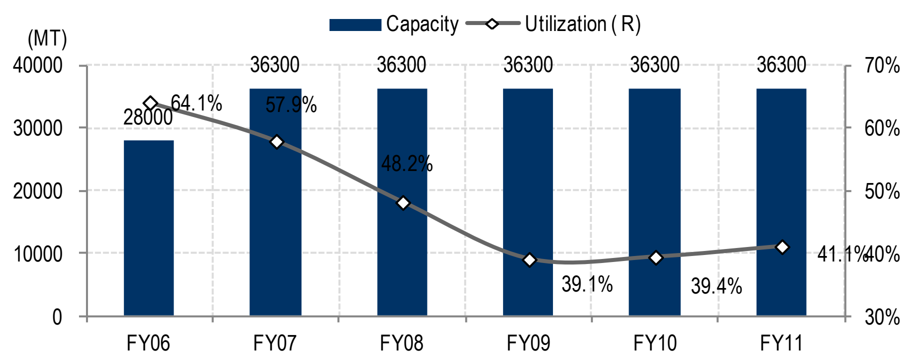
PVC sheets are primarily used for:

- Manufacturing sign and graphic boards, point-of purchase displays and large print media (66%)
- Building material and industrial purposes (34%) including surrounds for windows and garage doors, corner boards and interior applications such as Wainscoat and Beadboards

US, Europe major markets

Major markets for JI's products are Europe and the US. Even as the near flat growth last year provides a low base, weakness in the US housing markets and a worsening growth outlook (leading to high unemployment in the region) will subdue medium-term demand for the segment.

Installed capacity and utilisation – Plastic sheets



Source: Company, RCML Research

Tissue culture – Diversification to aid growth

Tissue culture

Source: Company

Medium-term growth pegged at ~25%

Cultured plants are resistant to pests and diseases, and reduce the crop harvest cycle. Many state governments are evincing keen interest in promoting tissue culture and are providing incentives to promote cultivation of such plants. The industry is growing at an estimated 25% p.a.

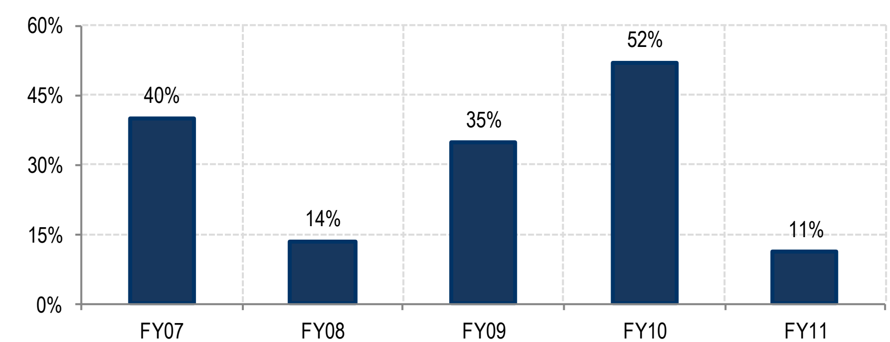
Focus on fruits & vegetables

Most players are engaged in tissue culture for cut flower exports, whereas JI is engaged in fruits and vegetables for now. It also cultivates leafy plants and flowering ornamental plants.

Diversification into new plants and exports to drive growth

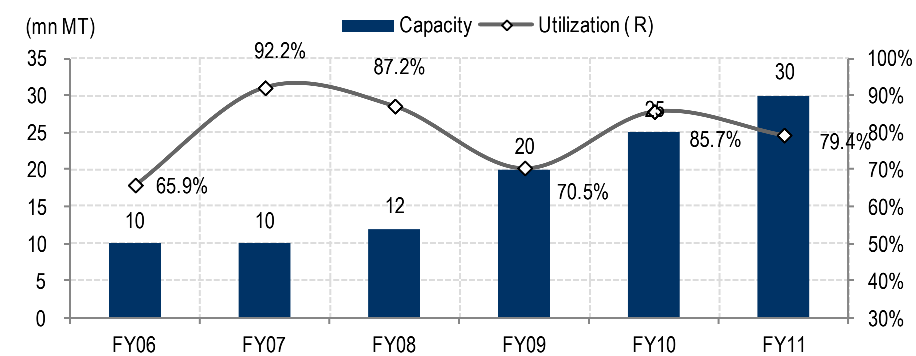
JI had installed a capacity for 3mn plantlets in FY11 for bananas, pomegranates, onions and mangoes. Efforts are underway to increase the capacity to 5mn. The company is currently engaged in research to create Citrus plants which have a high potential market. Cultured plantlets also have a potential export market in other Asian countries.

Volume growth trend – Tissue culture



Source: Company, RCML Research

Installed capacity and utilisation – Tissue culture



Source: Company, RCML Research

Renewable energy – Strong growth prospects

Applications of solar powered equipment

Source: Company

Poised for strong growth ahead

The government, though its Solar Mission, has targeted deploying 20,000MW of solar power by 2022 through 15mn sq m of solar thermal collector area by 2017 and 20mn solar lighting systems for rural areas by 2022. This is likely to drive growth in the segment.

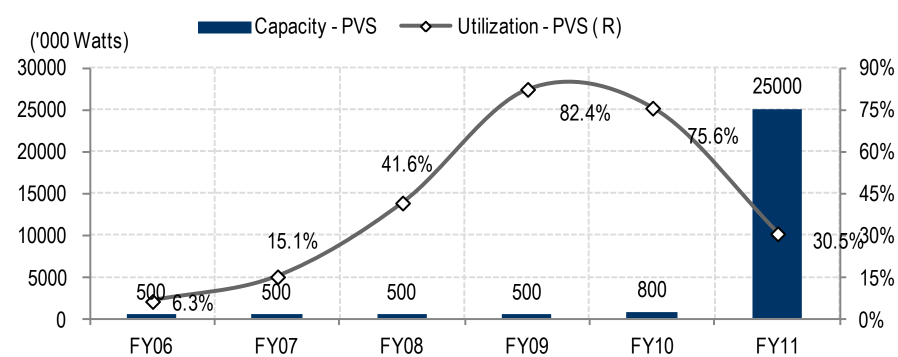
Key products

JI's key products include solar thermal water heaters, solar powered pumping systems and solar photo-voltaic lighting. The company has a current capacity of 25mn watts in solar photo voltaic systems and 2mn litres in solar water heating systems.

Small but high-growth segment

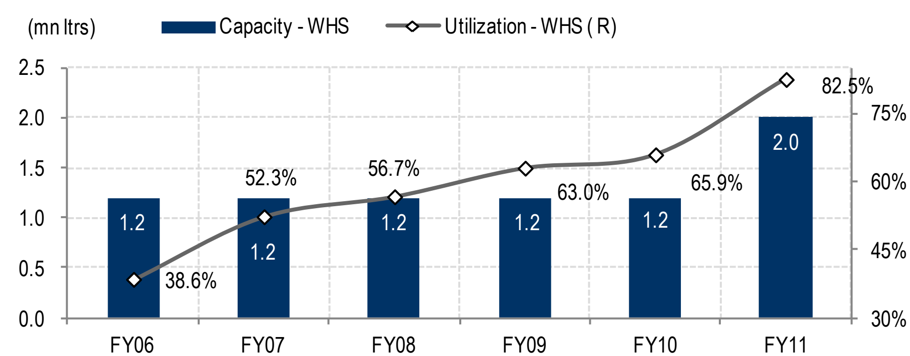
While the segment contributes <1% to revenues at present, its short-term growth CAGR is likely to be ~50%. JI has also introduced an energy efficient drip irrigation system, which operates on solar energy—this will help the company leverage its existing leadership in MI and drive growth. The government's incentives to promote renewable energy sources through subsidies and interest-free loans are also likely to drive growth.

Installed capacity and utilization – Photo voltaic systems



Source: Company, RCML Research

Installed capacity and utilization – Water heating systems



Source: Company, RCML Research

Peer comparison – JI is the only large MI player

Key P&L figures for industry peers

	Jain Irrigation	EPC Industries	Finolex Industries	Supreme Industries	John Deere, US*
Revenue (FY11, Rsmn)	**41,528**	867	19,777	24,354	25,995
5 Yr Revenue CAGR	**36.1**	38.1	22.3	19.9	3.5
EBITDA (FY11, Rsmn)	**7,659**	85	2,350	3,221	4,863
EBITDA margin (%)	**18.4**	9.8	11.9	13.2	18.7
5Yr EBITDA CAGR (%)	**34.1**	NM	19.6	27.3	6.7

Source: Factset, RCML Research. *US$mn for John Deere

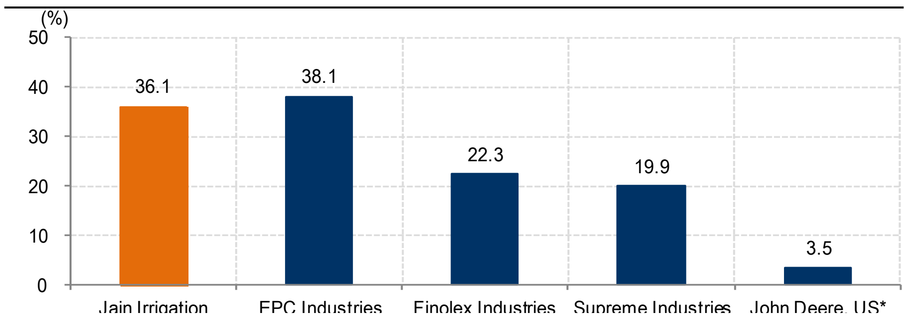
Key valuation metrics for industry peers

	CMP	Market cap	P/E (x)		P/B (x)		RoE (%)	
	(Rs)	(Rsmn)	FY10	FY11	FY10	FY11	FY10	FY11
Jain Irrigation	**154**	**59,426**	**22.5**	**20.7**	**4.37**	**3.62**	**22.1**	**19.5**
EPC Industries	125	2,149	129.0	95.1	11.28	3.94	8.6	4.3
Finolex Industries	65	8,063	6.1	10.5	1.37	1.29	24.3	12.6
Supreme Industries	186	23,665	15.2	12.1	5.71	4.32	43.4	40.7
John Deere, US*	67	27,907	32.8	15.5	5.92	4.52	15.4	33.6

Source: Factset, RCML Research, * US$ for John Deere

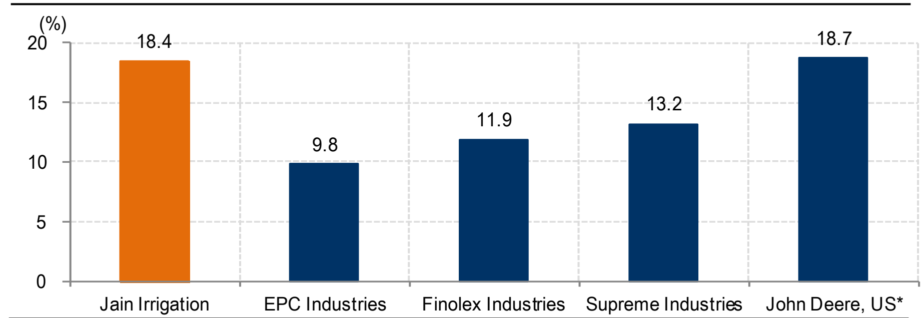
- **JI remains the only large MI player**
- **The company has a superior margin and growth profile versus PVC/PE plays**
- **Gained market share over the years despite stiff competition from other large and unorganised players**
- **An increasingly favourable product mix is driving stronger profitability**
- **MI is expected to contribute ~62% to JI's topline in FY15 versus ~55% at present**

Revenue growth (FY06-11 CAGR)



Source: Factset, Company reports, RCML Research

EBITDA margins - Strong profitability profile on high value product mix



Source: Factset, Company reports, RCML Research

Valuation – Dec'12 PT of Rs 200 based on 14x CY13E EPS

- Given the continued policy focus on MI, rising farm incomes, pick-up in the pace of MI adoption, expected easing in working capital requirements and JI's clear leadership in the space, we value the stock at 14x CY13E EPS of Rs 14.3 to arrive at a TP of Rs 200 – this implies a ~43% upside from current levels.
- JI is currently trading at ~14x twelve-month forward earnings, which is at a 32% discount to its five-year average multiple. We are closely monitoring JI's working capital position and any improvement, as guided by the company, may lead to an expansion of the multiple, offering a potential upside to our TP.

Earnings & Multiple	
FY13EPS	11.8
FY14EPS	15.1
CY13EPS	14.3
Multiple	**14**
Price Target	**200**
CMP	140
Upside	43%

Source: RCML Research

Sensitivity analysis

Multiple	CY13 EPS				
	12.9	**13.6**	**14.3**	**15.0**	**15.7**
12.6x	162	171	180	189	198
13.3x	171	181	190	200	209
14.0x	180	190	**200**	210	220
14.7x	189	200	210	221	231
15.4x	198	209	220	231	242

Source: RCML Research

Key risks

- Status quo/deterioration in government disbursements, leading to increased working capital requirements
- Lower allocation to MI-related schemes by the government
- Adverse impact of currency movements leading to earnings volatility

Jain Irrigation – P/E band

Source: RCML Research

Jain Irrigation – P/B band

Source: RCML Research

Jain Irrigation – EV/EBITDA band

Source: RCML Research

Conservative DCF valuation suggests ~30% upside

DCF Fair Value	
PV of Cash Flow (Rsmn)	34,138
PV of Terminal Value (Rsmn)	64,078
Total PV of Firm (Rsmn)	98,216
Less: Net Debt & adj. (Rsmn)	26,057
Equity Value (Rsmn)	72,159
Shares outstanding (mn)	384
Fair Value per Share (Rs)	**188**
CMP (Rs, as of 3rd Oct)	144
Upside/(downside) (%)	30.6

	FY12E	FY13E	FY14E	FY15E	FY16E	FY17E	FY18E	FY19E	FY20E	FY21E
EBIT	7,893	9,713	11,628	14,262	16,102	18,383	20,977	23,557	26,315	29,392
NOPAT	**5,525**	**6,799**	**8,139**	**9,983**	**11,271**	**12,868**	**14,684**	**16,490**	**18,421**	**20,574**
Add: Depreciation	1,471	1,636	1,785	1,923	2,074	2,241	2,424	2,625	2,846	3,090
Working capital change	(1,971)	(2,550)	(399)	(2,837)	(2,459)	(2,681)	(4,174)	(4,458)	(4,963)	(5,650)
Capital expenditure	(3,955)	(2,710)	(2,500)	(2,750)	(3,025)	(3,328)	(3,660)	(4,026)	(4,429)	(4,872)
Free cash flow	**1,071**	**3,175**	**7,026**	**6,319**	**7,862**	**9,100**	**9,274**	**10,630**	**11,875**	**13,142**
Discount factor	0.89	0.80	0.71	0.63	0.56	0.50	0.45	0.40	0.36	0.32
PV of FCF	**955**	**2,526**	**4,984**	**3,998**	**4,436**	**4,580**	**4,163**	**4,256**	**4,240**	

DCF assumptions	
Beta	1
Risk free rate (%)	8.5
Market premium (%)	5.5
Cost of equity (%)	14.0
Cost of debt (%)	12.5
Marginal tax rate (%)	30.0
Cost of debt after tax (%)	8.8
Equity value (Rsmn)	53,725
Debt value (Rsmn)	29,888
Total value	83,613
k(e)	**14.0**
Weight k(e) (%)	64.3
k(d)	**8.8**
Weight k(d) (%)	35.7
WACC (%)	**12.1**
ROIC	13.7
Terminal growth rate (%)	**4.0**

Sensitivity analysis

		Terminal growth rate				
		3.6%	**3.8%**	**4.0%**	**4.2%**	**4.4%**
WACC	**10.9%**	240	241	243	245	247
	11.5%	211	212	213	214	216
	12.1%	187	187	**188**	189	189
	12.7%	166	166	166	167	167
	13.3%	148	148	148	148	148

Source: RCML Research

Explicit growth assumptions

	FY11 Rev. Share (%)	Growth (%)	
		FY11-13 CAGR	FY13-21 CAGR
Micro Irrigation	56.0	24.0	13.6
Piping products	22.7	13.5	9.7
Agro processed products	14.1	19.0	11.1
Other	7.2	12.5	9.8

Source: RCML Research

Financials

Income Statement

(Rs mn)	FY09A	FY10A	FY11A	FY12E	FY13E	FY14E
Total revenue	**28,584**	**34,200**	**41,528**	**50,096**	**59,933**	**70,922**
EBITDA	5,016	5,937	7,659	9,365	11,349	13,413
EBIT	4,332	4,917	6,443	7,893	9,713	11,628
Interest	1,845	2,194	2,717	3,288	3,288	3,288
Other income/(Expense)	101	99	77	456	167	51
Exceptional items	(598)	868	279	0	0	0
EBT	1,990	3,691	4,082	5,061	6,593	8,391
Income taxes	659	1,203	1,201	1,518	1,978	2,517
Min int./Inc. from associates	(37)	(12)	(74)	(74)	(74)	(74)
Adjusted Net profit	1,892	1,607	2,529	3,469	4,541	5,800
EPS	5.26	4.45	6.70	9.04	11.83	15.11

Balance Sheet

(Rs mn)	FY09A	FY10A	FY11A	FY12E	FY13E	FY14E
Accounts payable	8,787	9,323	15,604	18,072	20,721	24,521
Other current liabilities	851	1,797	721	868	1,039	1,230
Debt funds	18,170	24,447	29,888	29,888	29,888	29,888
Other liabilities						
Deferred tax liabilities	707	1,024	1,239	1,239	1,239	1,239
Equity capital	5,972	6,480	7,326	7,326	7,326	7,326
Reserves & surplus	3,702	6,257	8,756	11,618	15,365	20,151
Shareholder's funds	9,674	12,737	16,081	18,944	22,691	27,476
Total liabilities	**38,189**	**49,329**	**63,533**	**69,011**	**75,578**	**84,353**
Cash and cash eq	1,174	5,053	4,144	1,522	461	2,812
Accounts receivable	8,663	10,099	16,924	19,395	21,982	23,411
Inventories	9,859	10,638	14,864	16,929	19,654	22,548
Other current assets	3,352	4,991	5,030	6,068	7,259	8,590
Investments	201	211	211	255	305	360
Deferred tax assets	367	414	577	577	577	577
Net fixed assets	14,573	17,923	21,782	24,266	25,339	26,054
Total assets	**38,189**	**49,329**	**63,533**	**69,011**	**75,578**	**84,353**

Financials

Cash Flow Statement

(Rs mn)	FY09A	FY10A	FY11A	FY12E	FY13E	FY14E
Net income	1,294	2,476	2,807	3,469	4,541	5,800
Depreciation and amort.	684	1,020	1,216	1,471	1,636	1,785
items	2,335	2,844	51	0	0	0
WC changes	(2,043)	(2,408)	(5,797)	(2,958)	(3,683)	(1,665)
Operating cash flow	**2,271**	**3,932**	**(1,723)**	**1,983**	**2,494**	**5,921**
Capital expenditure	(4,637)	(4,646)	(5,186)	(3,955)	(2,710)	(2,500)
Change in investments	(47)	(4)	(0)	(44)	(50)	(56)
Other investing cash flow	(14)	(4)	50	0	0	0
Investing cash flow	**(4,698)**	**(4,653)**	**(5,135)**	**(3,999)**	**(2,760)**	**(2,556)**
Issue of equity	(326)	435	0	0	0	0
Issue/repay debt	5,269	6,691	5,440	0	0	0
Interest expenses	(1,845)	(2,232)	987	(0)	0	0
Dividends paid	(227)	(256)	(450)	(607)	(794)	(1,015)
Financing cash flow	**2,870**	**4,637**	**5,977**	**(607)**	**(794)**	**(1,015)**
Other adjustments	**62**	**84**	**(28)**	**0**	**0**	**0**
Change in cash & cash eq	505	4,000	(909)	(2,622)	(1,060)	2,350
Opening cash & cash eq	**669**	**1,053**	**5,053**	**4,144**	**1,522**	**461**
Closing cash & cash eq	**1,174**	**5,053**	**4,144**	**1,522**	**461**	**2,812**

Key Ratios

	FY09A	FY10A	FY11A	FY12E	FY13E	FY14E
Growth ratios (%)						
Revenue	29.0	19.6	21.4	20.6	19.6	18.3
EBITDA	45.8	18.4	29.0	22.3	21.2	18.2
EBIT	50.2	13.5	31.0	22.5	23.1	19.7
Net income	(2.2)	91.3	13.4	23.6	30.9	27.7
EPS	(2.0)	90.3	8.5	21.6	30.9	27.7
Profitability & Return ratios (%)						
EBITDA margin	17.5	17.4	18.4	18.7	18.9	18.9
EBIT margin	15.2	14.4	15.5	15.8	16.2	16.4
Net profit margin	4.5	7.2	6.8	6.9	7.6	8.2
ROE	13.6	22.1	19.5	19.8	21.8	23.1
ROIC	14.9	13.5	13.7	13.3	15.0	17.0
Working Capital & Liquidity ratios						
Receivables (days)	110.6	107.8	148.7	141.3	133.9	120.5
Inventory (days)	125.9	113.5	130.6	123.3	119.7	116.0
Payables (days)	112.2	99.5	137.1	131.7	126.2	126.2
Current ratio (x)	1.3	1.3	1.2	1.2	1.2	1.3
Quick ratio (x)	0.5	0.7	0.6	0.6	0.6	0.6
Turnover & Leverage ratios (x)						
Gross asset turnover	1.8	1.6	1.6	1.7	1.8	2.0
Total asset turnover	0.8	0.8	0.7	0.8	0.8	0.9
Gross Interest Cover	2.3	2.2	2.4	2.4	3.0	3.5
Adjusted debt/equity	1.8	1.5	1.6	1.5	1.3	1.0

Appendix: Management profile

Name	Designation	Qualification	Experience	Profile
Mr. Bhavarlal H. Jain	Chairman	B.Com., LLB	48 Years	Founder of the Jain group of Companies , he began his business in 1963 by trading in agricultural inputs and equipments. He pioneered the concept of MI in India. He has received many awards and accolades for outstanding work in agriculture including the prestigious Crawford Reid Memorial Award instituted by Irrigation Association, U.S.A. for “Significant Contribution to the Irrigation Industry outside the United States”.
Mr. Ashok B. Jain	Vice Chairman	B.Com	29 Years	Mr. Ashok Jain joined the management team in 1982 and was in charge of marketing and extension services. In 1993 he became Director and was responsible for Corporate Administration, Corporate Image and Relationships, Events Management, Personnel/HRD, Communication, PR, Art and Publicity. At present he also acts as Commercial Chief of the Food Processing Division.
Mr. Anil B. Jain	Managing Director	B.Com., LLB	19 Years	Mr. Anil Jain joined management team in 1984 and was in charge of US based marketing operations. He has an extensive background and experience in Finance, Banking, Mergers & Acquisitions, Strategic Planning, Restructuring Operations, Export Marketing, International Business Relations, Collaborations and JVs.
Mr. Ajit B. Jain	Joint Managing Director	BE.(Mech.)	17 Years	Mr. Ajit Jain is responsible for the pipe division as well as marketing all plastic products, including drip irrigation, guidance for extension service and development of new applications and products. He joined in 1984 and started his training in production and maintenance in the pipe division. During the period from 1985-1990, he was in charge of establishing our new pipe production plant at Sendhwa (in the state of MPin India). In 1991 he was appointed Director with the overall responsibility of the pipe manufacturing plant at Jalgaon, including production, Maintenance and marketing.

Source: Company reports

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Recommendation Interpretation

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Hold	Between 15% and -5%
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