JM FINANCIAL

Rural Safari IV
Rural India gets a one year monsoon boost

Our fourth trip to hinterlands covering 10 states that together contribute ~69% of agri-GDP validates our primary hypothesis of farm income staging a strong 20%+ comeback in FY17 on favourable monsoon, improving yields and lower costs. It also takes us one step closer in understanding the rural households' current spending priorities - deleveraging (30% of additional income), farm investment (25%), house repairs (18%) and festivals and marriage related discretionary spending (28%), thereby enabling us to assess the primary beneficiaries of rural recovery. We present the latest updates from rural economy in this report.

JM Financial Institutional Securities Limited

Table of Contents

India Strategy

Rural India gets a one-year monsoon boost

Our 4th Rural Safari validates our primary hypothesis of double-digit growth in overall rural income over the next three quarters driven by: a) 20%+ YoY growth in farm income on higher crop yields and lower input costs due to reduced irrigation spend, lower fertilizer cost (price cap), reduced insecticide cost (lower pest incidence), and b) a steady, but single-digit, improvement in non-farm income. All indicators (soil humidity and water levels in reservoir) point towards a strong Rabi crop (winter crop), barring any unseasonal rains (as was in 2015). Our second-level hypothesis, hence, based on our survey, is that the YoY jump in income would be utilised towards de-leveraging, investments towards farm-related equipment, house repairs, children's education, and on marriages in that order. We unequivocally heard about farmers' inclination towards repaying existing debt that bodes well for rural financiers. However, the suppressed wealth effect (primarily land), in most parts of India, have kept farmers' overall consumption sentiment under check even as expectations of bumper crop ride high. We highlight Bajaj Corp (Buy), JK Lakshmi Cement (Buy), Mahindra & Mahindra Financial Services (Buy), Maruti Suzuki (Hold) and V-Mart (Unrated), as key beneficiaries from the improvement in rural prospects.

- **Farm income (36% of rural income) on track for 20%+ YoY growth:** A normal monsoon has led to a 3.5% increase in Kharif sown area (pulses +29%) and our field visits indicated yield improvement across the country, barring few pockets (such as Karnataka; please refer to Exhibit 7). An improved agriculture outlook has driven higher income from tractor rentals and allied activities, while dairy/poultry remained flat. Infrastructure work remains modest with high activity in election-bound states; overall we forecast growth in non-farm income (64% of total) in single digits.
- **De-leveraging and investment in farms/house to take priority:** Over the past three years, we estimate debt/assets for rural households to have risen 220bps and EMI/income by 350bps (Exhibit 2). We estimate 30% of additional savings in FY17 to be first used for de-leveraging, and a small farmer would invest 20% each in farm/house, leaving 20% for discretionary consumption. A large farmer, on the other hand, is likely to invest 20%/15% of additional savings on farm/house and 35% on discretionary spending (Exhibit 3).
- **Marriage and festival spending to scale up:** Our interactions indicated clearly that farm dependent families had scaled down spending on marriages in the past two years, which is likely to revert. This could prove beneficial for apparels, consumer durables and overall rural economy. Even as the traditional marriage services market is quite a fragmented one, there are players such as V-Mart with presence in mid-tier towns that could benefit.
- **Agro-chemical growth impacted in FY17:** We expect c.15% YoY growth for the agro-chemical industry, lower than the industry growth guidance of 20% YoY. The reduction in agro-chemical usage is due to: **(a)** the shift towards pulses (+29% YoY) from cotton (highest consumer), **(b)** reduction in pest incidence for crops on a healthy monsoon across regions, thereby causing lower usage, and **(c)** down-trading to cheaper brands.
- **Other interesting observations:** **(a)** We noted the steady popularity of Patanjali in urban areas, while it still has to make inroads in rural India. **(b)** Increased awareness about micro-finance in North India. **(c)** Mixed response of farmers on crop insurance schemes. **(d)** While Hero Motocorp maintains good brand recall in rural areas, we would monitor its market-share over the next three months given the increased competitive intensity in the 2 Wheeler (2W) segment and its 17% YTD outperformance over Nifty.

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Exhibit 1: Our trip across country

Source: Rural Safari

Link for our previous reports

Rural Safari I

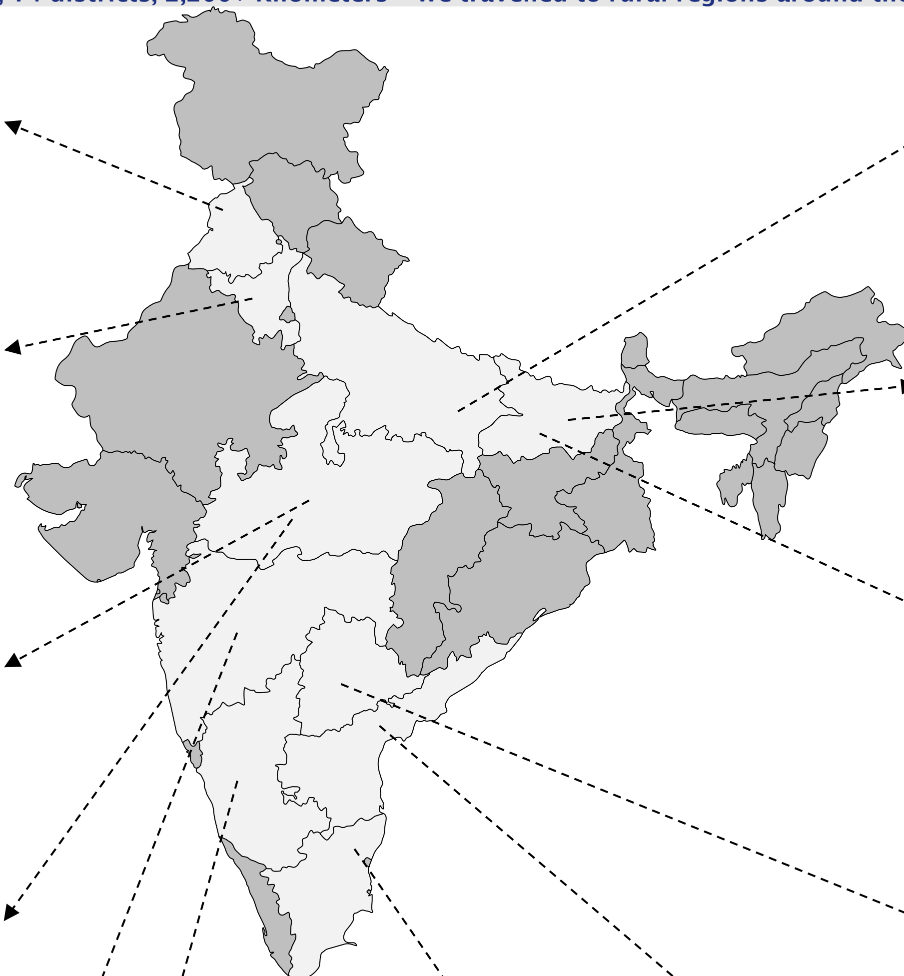
Rural Safari II

Rural Safari III

JM Financial Research is also available on: Bloomberg - JMFR <GO>, Thomson Publisher & Reuters, S&P Capital IQ and FactSet.

Please see Appendix I at the end of this report for Important Disclosures and Disclaimers and Research Analyst Certification.

10 states, 14 districts, 2,200+ Kilometers – We travelled to rural regions around these towns



Amritsar
Amritsar, located at India-Pakistan border is a major religious, commercial centre. Sikhs' holiest shrine - Golden Temple is located in the city, making tourism one of the largest industry here. Wheat, Rice, Maize and Potato are the key crops

Hissar
Hissar, the 2nd most populous district of Haryana is the divisional headquarter of the Indian army. While agriculture is prominent in the region, Jindal steel factory is also located here. Key crops grown in the region are wheat, paddy, cotton, maize and oilseeds

Sehore
Sehore stands at the foothills of Vindhyachal Range in the middle of Malwa region. Sehore has many temples, mathas, shrines, mosques and churches of great historical and religious antiquity. Key crops grown in the region are Wheat, Soyabean, Gram, Lentil, Peas and Linseed

Indore
Indore is the most populous city of Madhya Pradesh. Indore has been selected as one of the 100 Indian cities to be developed as a smart city under Smart Cities Mission. Key crops are Soyabean, Wheat, Potato, Maize and Gram

Aurangabad/ Ahmednagar
Located near Godavari basin, Agriculture in Aurangabad is well diversified with wide range of crops like Jowar, Pearl Millet, Wheat, Gram, Soyabean and Cotton. Ahmadnagar is a rural district of Maharashtra (80% rural population) . Key crops in the region are Jowar, Sugarcane, Wheat, Gram and Cotton

Davanagere
The region is a cotton hub and popularly known as *the* Manchester of Karnataka. Primary commercial ventures of Davanagere are now dominated by education and agro-processing industries. It has been selected as one of the 100 Indian cities to be developed as a smart city under Smart Cities Mission. Maize and cotton are the key crops

Varanasi
Varanasi is the largest trading hub for agri-commodities in eastern UP and a famous religious tourist destination. Wheat, Paddy, Bajra, Arhar, Sugarcane and Potato are key crops in the region

Patna
Patna, the capital of Bihar, is a city with many religious attractions. 57% of population in the district is rural and Paddy, Wheat, Arhar, Gram, Bajra, Barley, and Chillies are key crops

Bhojpur
Bhojpur, a famous district of Bihar, is well known for its regional language - Bhojpuri which is spoken globally by over 40mn people. The region holds special significance from the perspective of India's freedom struggle. The key crops in the region are Wheat, Paddy and Gram

Nalgonda
The city's name is derived from two Telugu words: nalla ("black") and konda ("hill"). Key crops in the region are Paddy, Cotton, Green-gram, Castor, Redgram and Orange

Guntur & Vijayawada
Guntur is the largest producer of chilies in the country. Vijayawada is a city on the banks of the Krishna river. it is also known as "*The Business Capital of Andhra Pradesh*". Key crops are Paddy, Cotton, Chillies and Maize

Tiruvallur
Tiruvallur is located on the banks of Cooum river about 42 km (26 mi) northwest of Chennai, the capital city of Tamil Nadu. It is well known because of the Veera Raghavar temple which is one of the 108 sacred shrines of Vaishnavites Key crops are Paddy, Jowar, Maize, Gram, Sugracane, Chillies, Coconut

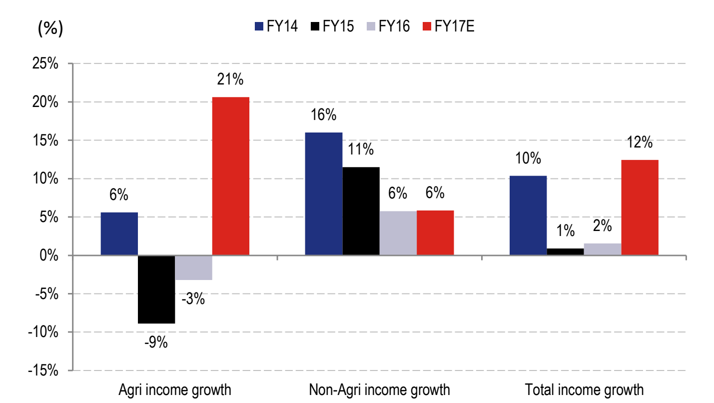
Source: Rural Safari

Focus charts…

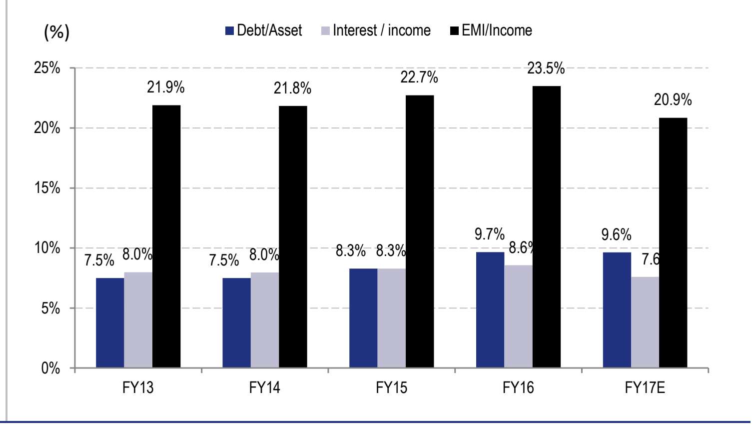
Exhibit 2. Strong farm income in FY17 to lower the degree of leverage in rural India

Avg. farmer's income to grow 12% in FY17 post remaining flattish in past two years, thereby enabling easing of debt burden

Agri. income to be up 21% aided by yield improvement and lower input cost in FY17



Increase in farm income to aid small farmer mend his balance sheet

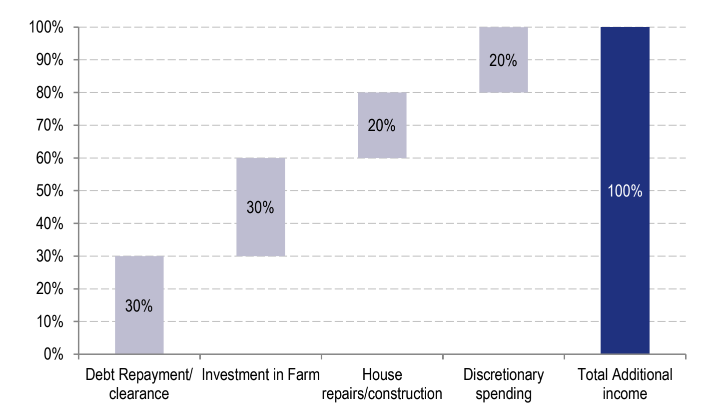


Source: NSSO, JM Financial

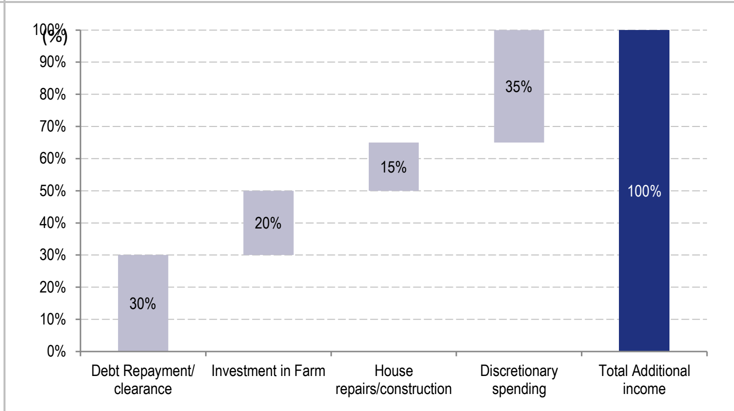
Exhibit 3. Sample allocation of additional FY17 income for a small and large farmer (assuming an excellent crop)

Investment in farm, house repair/construction, expenses on education, festival season and marriages to take priority

Allocation of additional income by a small farmer (Rs50,000)



Allocation of additional income by a large farmer (Rs 0.2mn)



Source: Rural Safari

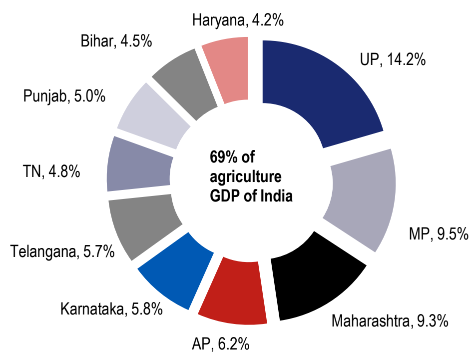
Exhibit 4. State-wise rural consumption spending index

State	Farm Income	Non-Farm Income	Wealth Effect	Rural Consumption Sentiment
Madhya Pradesh	Strong	Modest	⇔	Modest
Uttar Pradesh	Strong	Modest	Strong	Strong
Punjab	Strong	Strong	Decline	Strong
Bihar	Modest	Modest	Strong	Strong
Andhra Pradesh	Strong	Strong	Modest	Strong
Telangana	Strong	Strong	Modest	Strong
Haryana	Strong	⇔	Decline	Modest
Karnataka	Decline	⇔	⇔	Decline
Tamil Nadu	Modest	⇔	⇔	Modest
Maharashtra	Modest	⇔	⇔	Modest

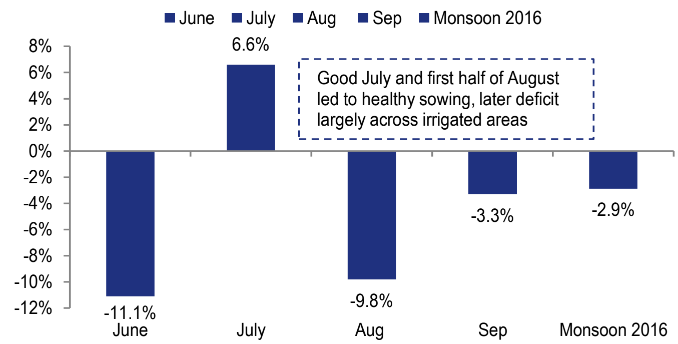
Source: Rural Safari : **Strong** : **Modest** ⇔ : Flat : **Decline**

Exhibit 5. We travelled to 10 states that contribute c.69% to India's agriculture GDP

States covered and their share in agriculture GDP



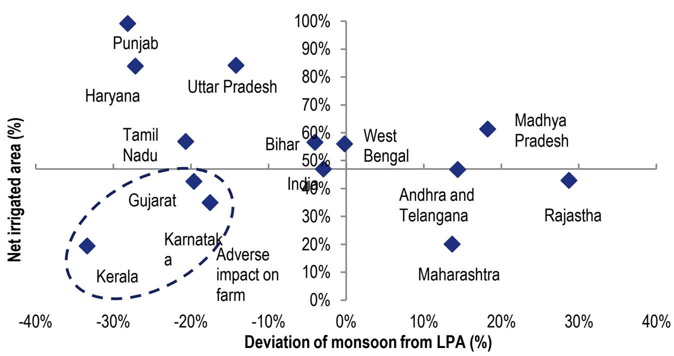
Monthly rainfall deviation from Long Period Average (LPA) in 2016 - Overall rains 3% below LPA



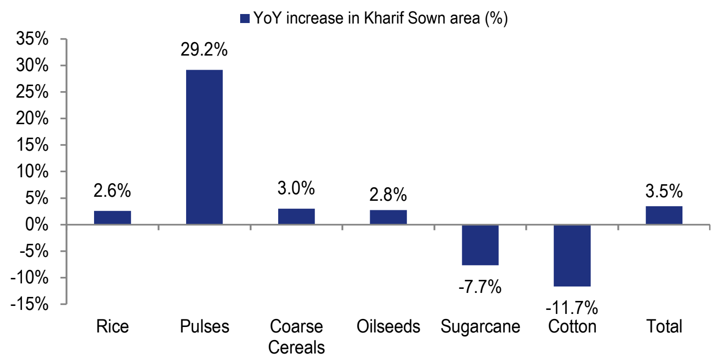
Source: CMiE, IMD, Rural Safari

Exhibit 6. Well-spread rains during 2016 have led to healthy increase in sown area; pulses have seen sharp jump

Based on irrigation cover and rain-fall, majority of states to see healthy farm output



Higher MSP growth (c.8-9%) for pulses against c.4% for cereals drives strong growth in pulses' sown area (+29%)



Source: IMD, Min of Agriculture

Exhibit 7. Farm income to increase YoY – key takeaways from our Rural Safari

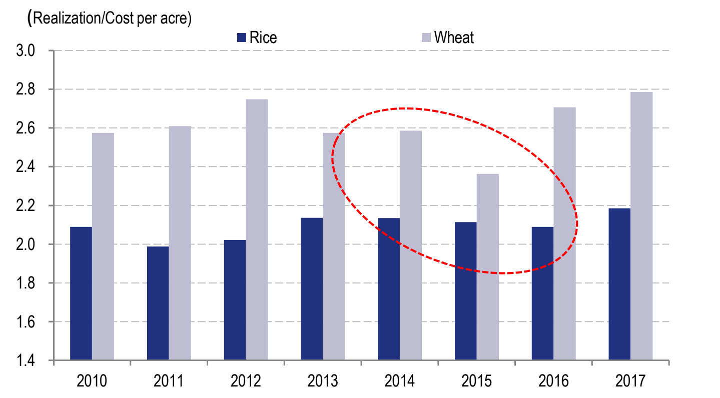
Except Karnataka, we expect farm income to improve across states on improvement in yields and declined cost (lower irrigation cost due to good rains, low usage of pesticides and lower fertilizer cost)

States	Details
Madhya Pradesh	Significant jump in yield of soya bean (c.50% of country's production in MP) due to good rains. Healthy improvement in paddy yields. Lower expense on irrigation and agro-chemicals
Uttar Pradesh	Healthy increase in yield of paddy, mixed performance of vegetables and coarse-cereals; lower farm input cost (lower irrigation cost) due to well-spread rains
Punjab	Improved yield of paddy and jump in cotton yield due to well-spread rains. Despite rain deficit, state is well-irrigated so overall low impact and this deficit is lower than previous two years. Savings on irrigation and pesticide costs
Bihar	Overall increase in yield with lower input costs. Three distinct regions in Bihar: (a) majority of districts have seen yield improvement with lower irrigation cost, (b) floods in few districts have caused damage to existing crop, but have left very fertile soil, and (c) few districts have seen modest crop this year.
Andhra Pradesh	Paddy crop yield has definitely improved over the last year. Some adverse impact of unseasonal rains on chillies and cotton near Guntur; but overall there was a healthy increase in farm income
Telangana	Situation largely similar to Andhra. Heavy rains came late and some adverse impact on cotton and chillies, but overall improvement in yield
Haryana	Yield improvement in paddy and significant jump (+50%) in cotton yield as the last two years' crop got infested with pests; drop in irrigation cost and reduced pesticide usage to improve farm income. Shift from "basmati" rice to the standard rice, given a sharp price decline of non-MSP supported Basmati rice
Karnataka	Northern Karnataka is expected to see yield improvement, but central and southern Karnataka have seen a sharp decline in yields (such as maize, cotton, paddy and sugarcane) due to rain deficit and inadequate irrigation. Overall, we estimate farm income to decline in low single digits for the state
Tamil Nadu	Increase in yield across crops. Late rains have led to healthy sowing for the paddy (Rabi) in the state. TN receives c.45% of rains from the south-eastern Monsoon (Oct-Dec), which has been predicted to be normal
Maharashtra	Despite delayed rains (Marathwada), a better rainfall than last year has led to improvement in yields across crops. Lower input costs due to lower expense on fertilizer, pesticides and irrigation

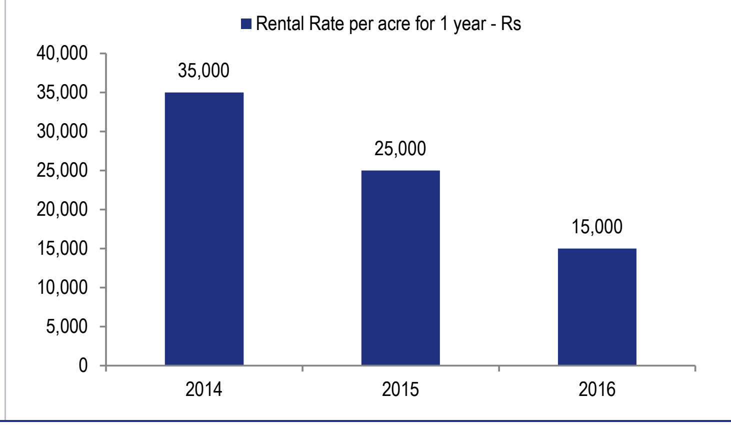
Source: Rural Safari

Exhibit 8. Weak monsoons, unseasonal rains & pest attacks had pulled down farm profitability in the past two years

Crop profitability had been weak during last two years



Weak farm profitability also reflected in declining farm rental rates*

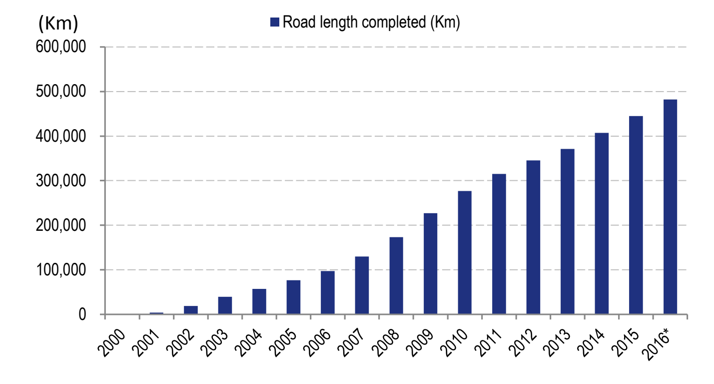


Source: CACP, Rural Safari, *Rental rates for a farm land in Hissar district of Haryana

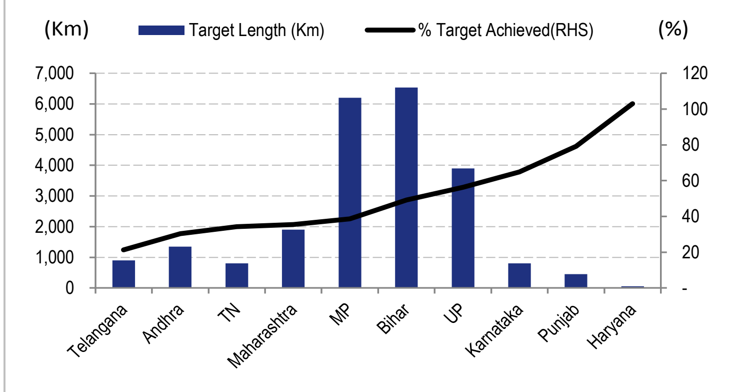
Exhibit 9. Higher infrastructure spending to sustain non-farm income

Road length of 0.05mn km to be added in FY17 under Pradhan Mantri Gram Sadak Yojana (PMGSY)

Road length trend under PMGSY



UP, Karnataka and Punjab have seen 55%+ target achievement



Source: PMGSY, Rural Safari, Note: 2016 data up to Aug'16

Exhibit 10. Highlights on pace of infrastructure built-up from our Rural Safari

States with high visible infrastructure activity during our trip	
Uttar Pradesh	High infrastructure work evident near Varanasi—national highway development till Gorakhpur and Lucknow, underground electrification of entire city, replacement of sewage system
Punjab	Brisk infrastructure related activity with some projects such as the bus corridor project, Golden Temple project, bridge construction have been expedited by the government, to be completed before the state assembly elections
Andhra Pradesh	Infrastructure work around the capital city Amaravati, roads are already well developed in rural areas
Telangana	Steady infrastructure work under Project Kakatia (building of water tanks) and Mission Bhagiratha (drinking water)
States with modest visible infrastructure activity during our trip	
Madhya Pradesh	Roads and highways already developed in the Malwa region. Not much visible infrastructure activity during our trip and also from channel checks
Bihar	Low infrastructure activity, expansion of roads in Patna, road work on two Ganga bridges in the state
Haryana	Road infrastructure already developed. Not much infrastructure activity visible during our trip. There is news around a new airport at Hissar, but work has not yet started on that
Karnataka	Not much infrastructure activity visible, some work seen on the expansion of lakes, farm pond creation etc.
Tamil Nadu	Steady state work, but not much large infrastructure activity visible
Maharashtra	Not much infrastructure work visible in Marathwada regions, some pond creation activity

Source: Rural Safari

Rural Income Drivers

Exhibit 11. Key drivers of rural income – Assessing their status based on our visit

	Punjab	Haryana	UP	Bihar		Madhya Pradesh		Maharashtra		Karnataka	Andhra/Telangana & Tamil Nadu		
District	**Amritsar**	**Hissar**	**Varanasi**	**Patna**	**Bhojpur**	**Sehore**	**Indore**	**Aurangabad**	**Ahmednagar**	**Davangere**	**Guntur**	**Nalgonda**	**Tiruvallur**
Agri. income													
Main crops	Wheat, Paddy, Maize, Potato	Wheat, Paddy, Cotton, Maize, Oil-seeds	Wheat, Paddy, Sugarcane, Fruits, Vegetables	Wheat, gram, soya bean, cotton	Wheat, Paddy, gram,	Wheat, gram, soya bean, cotton	Soya bean, Wheat, Potato, Maize, Gram	Jowar, Paddy, Soya bean, Gram	Maize, Cotton, Paddy, Sugarcane	Maize, areca nut, paddy	Paddy, Cotton, Maize, Banana, Chilly	Paddy, Cotton, Green-gram, Castor, Red gram,	Paddy, Jowar, Maize, Gram, Sugarcane, Chillies, Coconut
Yield over last year	↑	↑	↑	↑	↑	↑	↑	↑	↑	↓	↑	↑	↑
Price over last year	⇔	⇔	⇔	⇔	⇔	↓	↓	⇔	⇔	⇔	⇔	⇔	⇔
Agriculture financing awareness and usage	↑	↑	⇔	⇔	⇔	↑	↑	↑	↑	↑	↑	↑	↑
Non-agri. income													
Dairy	↑	⇔	⇔	⇔	⇔	⇔	⇔	⇔	⇔	↓	⇔	⇔	⇔
Tractor/Pick-ups	↑	↑	↑	↑	⇔	↑	↑	⇔	⇔	↓	↑	↑	↑
Remittances	⇔	⇔	↑	⇔	⇔	⇔	⇔	⇔	⇔	⇔	↑	⇔	⇔
Wealth effect of land													
Urbanisation	↑	⇔	↑	↑	↑	↑	↑	↑	⇔	⇔	↑	↑	↑
Road connectivity	↑	↑	↑	⇔	⇔	↑	↑	↑	↑	⇔	↑	↑	↑
Price trend	↓	↓	↑	↑	↑	⇔	⇔	⇔	⇔	↓	⇔	⇔	⇔
Political satisfaction													
Satisfaction with state government	↓	↓	⇔	⇔	⇔	⇔	⇔	⇔	⇔	↓	↑	⇔	⇔
Satisfaction with central government	⇔	↓	↑	⇔	⇔	↑	↑	⇔	⇔	↑	⇔	⇔	⇔

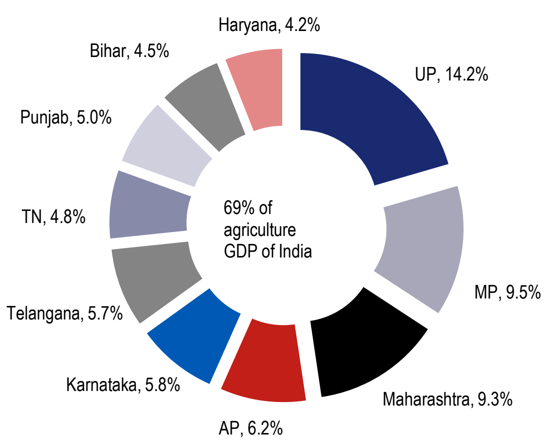
Source: Rural Safari, Note: ↑: Improving, ⇔: Flat, ↓: Declining

About Rural Safari

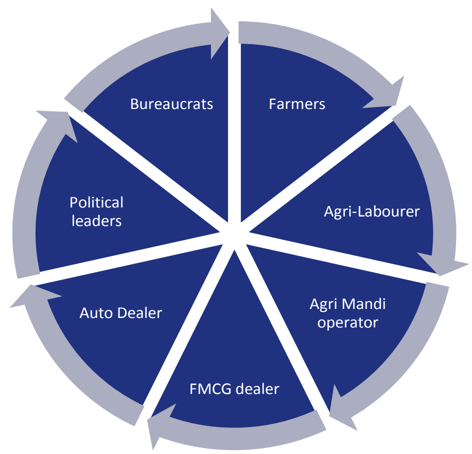
In continuation with our efforts to understand the rural economy, our analysts again travelled to hinterlands for an insight on the ground realities. We covered 10 states this time, including Haryana and travelled more than 2,200 km during Sep-Oct 2016. We met 50+ farmers and 50+ small business owners, auto dealers, FMCG dealers, cement dealers and agri. input dealers during our trip. We also interacted with financiers, politicians (in UP), journalists, government officials to get varied perspectives. We looked at how the rural economy has recovered after two years of deficit rains, to what extent the current season has provided farmers with disposable income and what are the key priorities of spending for rural population.

Exhibit 12. About Rural Safari – states travelled to and stakeholders interacted with

States covered and their share in agriculture GDP



Interacted with a variety of stakeholders in rural India



Source: CMIE, Rural Safari

Exhibit 13. Visited to villages – developed and under-developed

We waded through flood waters to reach some of the interior villages in Bhojpur (Bihar)

We met people in agri. as well as non-agri. professions
A handloom weaver near Varanasi (UP)

Source: Rural Safari

Exhibit 14. We met farmers and rural population in various settings

We met farmers at a Panchayat in Sehore (MP)
A model village panchayat with an MBA educated Sarpanch

We met farmers in large street meetings
Meeting with farmers near Vijayawada (AP)

Source: Rural Safari

Exhibit 15. We met farmer families

We met rich farmers in Davangere, Karnataka

Interaction with a farmer family in Uttar Pradesh

Source: Rural Safari

Exhibit 16. We visited *Mandis* (local farm markets) met various dealers

We visited a *mandi* to witness live price discovery and trading
Soya bean trading at Indore *Mandi (MP)*

We interacted with FMCG stores
FMCG store at Rahauri village, Ahmednagar (Maharashtra)

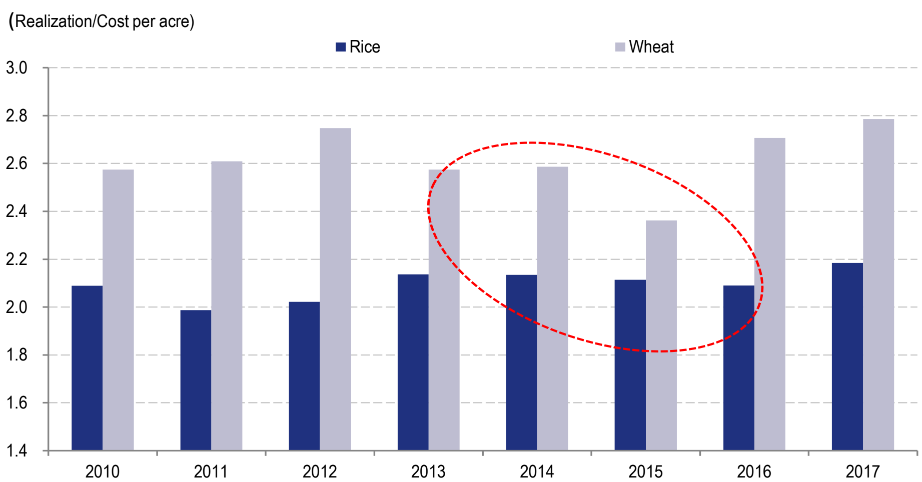
Source: Rural Safari

Farm income – On a strong growth track in FY17

Despite declining share of farm income in rural India (approx. 1/3rd), agriculture continues to be one of the major drivers of rural economy as farming still employs c.50% of labor force in India. Therefore, farm income is of critical importance for any recovery in rural spending.

Farm income has been adversely impacted during past two years (2014 and 2015) on account of consecutive weak monsoon, unseasonal rains (Feb-Mar) and also from pest attacks on crops such as cotton. The profitability of crops have been under pressure during last two years.

Exhibit 17. Crop profitability that declined in last two years to improve in 2017 on higher yields

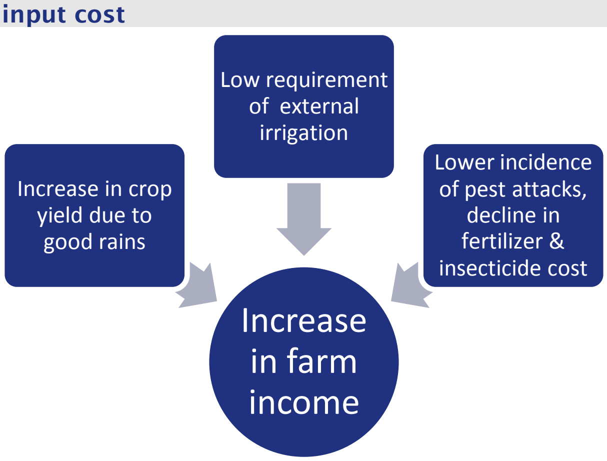


Source: CACP, Rural Safari

Increase in crop yield along with lower input cost to benefit farm income

A normal monsoon in 2016 (3% below Long Period Average) with a good spatial distribution has led to improved farm output. In addition a confluence of factors would also benefit farm input cost – lower irrigation cost due to timely rains, lower incidence of pest attacks reducing pesticide cost, price cap on fertilizers leading to lower cost. We believe farm income is on track for c.20%+ YoY growth in FY17. (Exhibit 52)

Exhibit 18. Farm income to benefit in FY17 from yield improvement as well as lower farm input cost



Source: Rural Safari

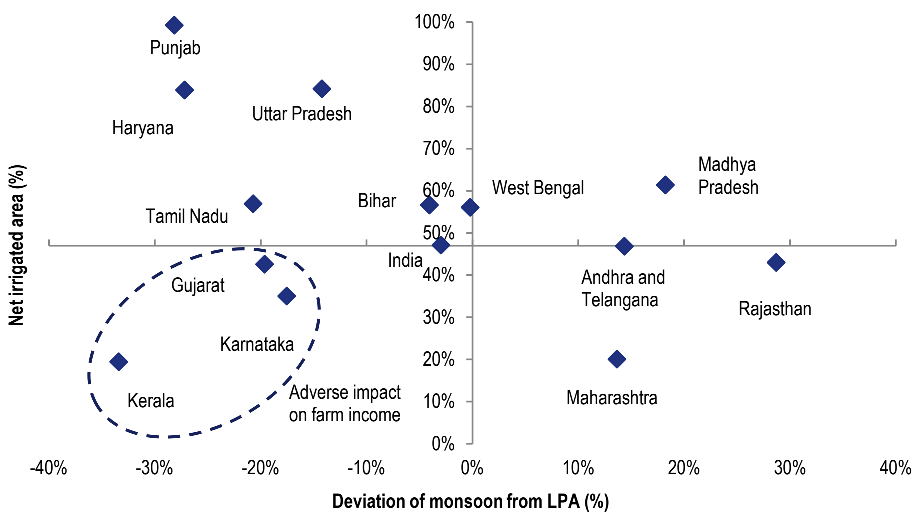
Well spread monsoon during 2016 after two years of deficit

Indian agriculture remains highly dependent on nature, as only 47% of sown area is under irrigation cover. The wide variation of irrigation cover across states (20% in Maharashtra/Kerala to 99% in Punjab) results in varied outcome across states. The south-western monsoon, or simply termed as monsoon (Jun-Sep), provides 80% of water requirement of Indian irrigation. After two years of deficit (-12% in 2014 and -14% in 2015), 2016 finally saw normal rains at -3% of LPA (normal rains defined within -6% to +6% of LPA).

Distribution of rains across regions: Even as the 2016 monsoon came as normal, a spatial view shows that the already well-irrigated north-western region of India received good rains (-5% deviation LPA), while the southern region, excluding Telangana and AP, was below normal (-8% LPA), thereby hampering the sowing activity particularly in Karnataka as was also evident from our interaction with locals. Central India, on the other hand, received surplus rains, and is likely to be followed by a good harvesting season. Based on irrigation coverage and monsoon spread, majority of Indian states, except Gujarat, Karnataka and Kerala, are likely to see healthy growth in farm output.

Exhibit 19. On account of spread of monsoon and irrigation cover, majority of Indian states to see healthy agriculture growth

On the basis of irrigation cover and monsoon spread, there are reasons to believe that majority of Indian states, except Gujarat, Karnataka and Kerala, are likely to see healthy farm output growth



Source: IMD

Healthy increase of 3.5% YoY in Kharif net sown area to result in higher crop output

Kharif acreages up 3.5% bodes well for Indian agriculture

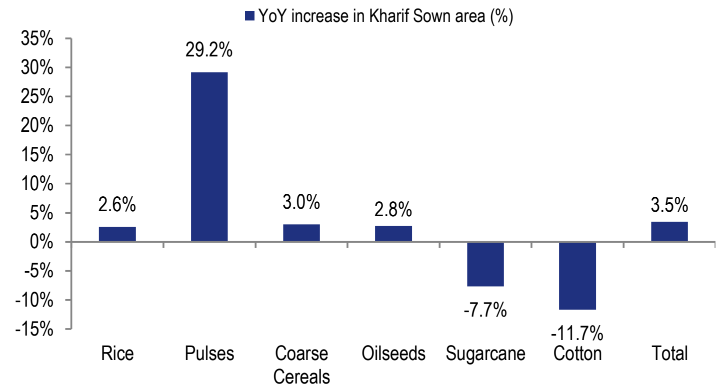
- A good rain-fall drove 3.5% YoY growth in Kharif sown area. Pulses acreages, which were up by 29% during the year remained the key highlight of Kharif'16 backed by crop shifts, primarily in Rajasthan (+28%, and accounts for 23% of India's share), Maharashtra (+42% YoY, 20%) and Karnataka (+40% YoY, 13%).

Strong crop shifts witnessed towards pulses (up 29%) from cotton and oilseeds on higher MSPs (up 9%)

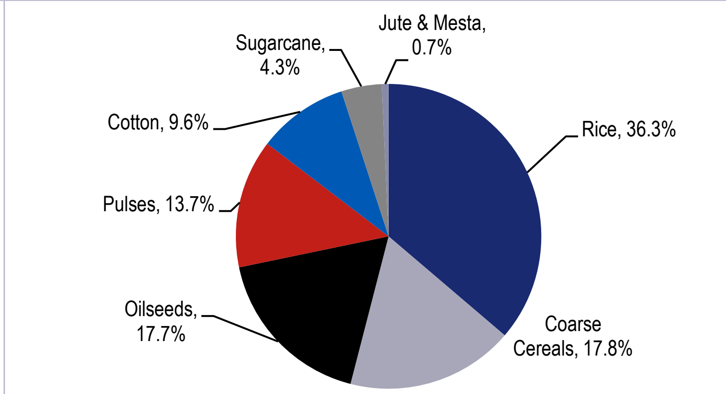
- Cotton acreages fell 12% during the year with most impacted states being Telangana (-26% YoY) owing to crop shifts towards pulses and oilseeds, and Punjab and Haryana (-43% and -12%, respectively) on the cautious approach followed by farmers after the whitefly pest attack last year. (Full sowing details in Appendix 1)

Exhibit 20. Kharif sowing up 3.5% YoY led by strong 29% increase in pulses

Share of pulses saw strong growth aided by crop shift from cotton



Kharif sown area by crops – Rice accounts for 36% of Kharif sown area and total cereals account for 54% of Kharif sowing



Source: Ministry of Agriculture

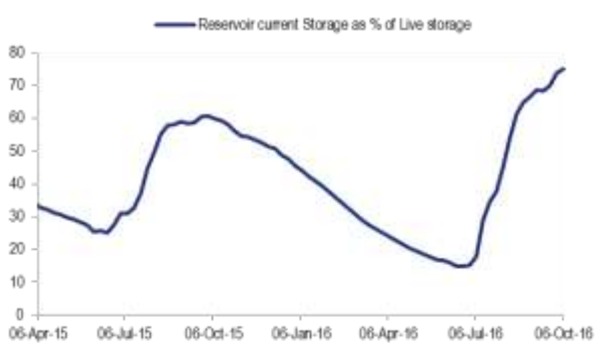
Normal monsoons and increase in water levels bode well for the upcoming Rabi crop

While the late onset of monsoon had caused reservoir levels to hit as low as 20% of live storage in June 2016, after July, we saw a strong upward trend in water levels, particularly in the northern and central regions comprising the Ganga, Narmada and Sabarmati rivers. This means that at an all-India level, water levels deviated 2% below the last 10-year average.

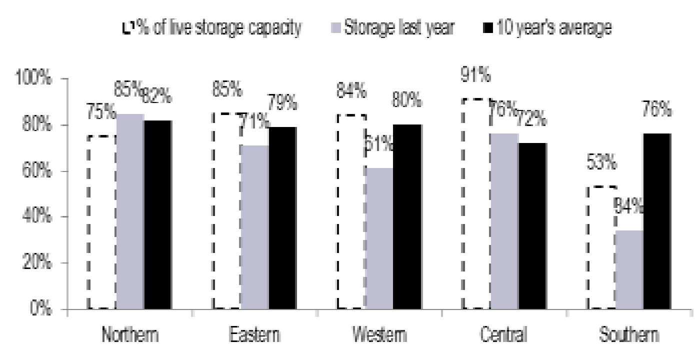
We see high positive correlation (c.68%) between reservoir levels at the end of Kharif and sowing of crops during Rabi season. Given 15%YoY increase in reservoir levels at the end of Kharif 2016, there lies in optimism for high Rabi productions, going forward.

Exhibit 21. Reservoir storage showing consistent increase in water levels since Jul'16

Reservoir levels on the rise (all-India)

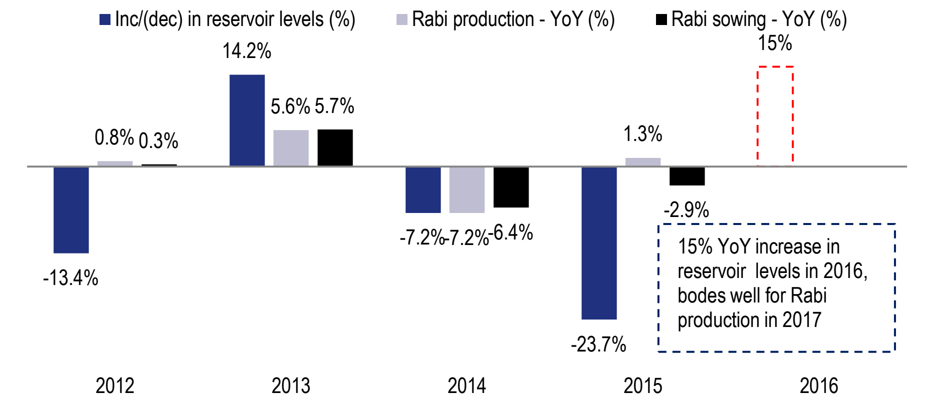


Region-wise storage levels



Source: Central water commission

Exhibit 22. Reservoir levels and Rabi sowing positively correlated



Source: CMIE, JM Financial

We see high positive correlation (c.68%) between reservoir levels at the end of Kharif and sowing of crops during Rabi season. Given 15%YoY increase in reservoir levels at the end of Kharif 2016, there lies optimism for high Rabi productions, going forward

A farmers' income is highly dependent on irrigation facilities – clearly demonstrated time and again during our visits by the differential in crop outputs (box below). In fact, it's such a critical aspect that many farmers without irrigation facilities have clearly said that rather than providing subsidies on farm inputs and other related areas, farmers will be better off if only the irrigation problem is solved. **We believe therefore that the increase in water levels across the country bodes well for Rabi crop output, even for the relatively un-irrigated farms.**

Box 1: Differential irrigation explains variance in crop quality – Example of maize crop in Karnataka

Our visit to the Davangere district of Central Karnataka amply illustrates the stark difference irrigation makes to a farmers' life. During the 2016 monsoon season, rainfall has been 20% below normal and c.30% of agricultural land in this district receives irrigation through canals from River Tungabhadra. The remaining 70% of land is almost entirely dependent on rainfall and water available in the bore-well. Given that the region faced a monsoon deficit even last year; bore-well levels have gone down and remained dry for most parts of the season.

Exhibit 23. Fate of crop vulnerable to irrigation system

Healthy corn crop irrigated through sprinkler system	**Destroyed corn crop in the non-irrigated area just 2 km away**
	

Source: Rural Safari

While we noticed that farmers in the non-irrigated areas faced c.70-80% crop loss and a big loss in income during the season, farmers in the irrigated areas faced minimal crop losses and would potentially earn profits of c.Rs25,000/acre on the maize crop.

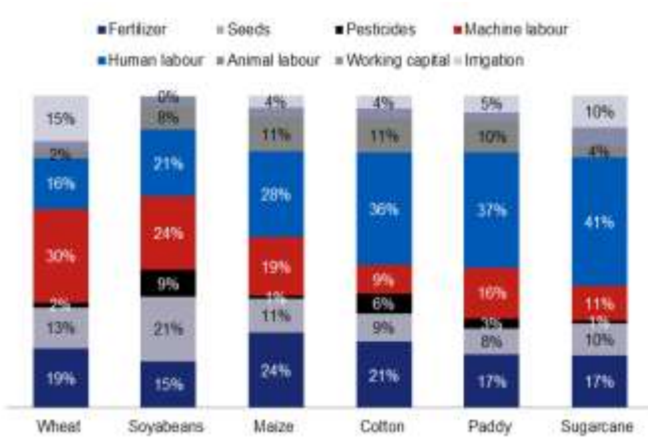
Benign farm inputs to further aid farm income growth

An analysis of the cost structure of major crops provides sufficient reasons to believe that farmers in FY17 would benefit from a confluence of factors such as: **(a)** moderation in wage growth, **(b)** reduced irrigation costs on account of sufficient rainfall, **(c)** price caps on fertilizers and **(d)** lower pesticide cost due to lower incidence of pest attacks. The input cost reduction in itself should add up to high single-digit growth in farm income during FY17, in our view.

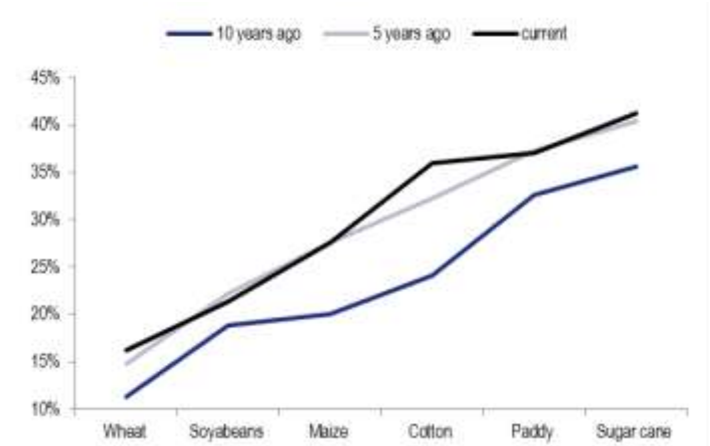
Manual labour continues to dominate input costs: Manual labour forms a significant percentage of total cost of cultivation across crops, followed by machine labour, seeds and agro-chemicals. The percentage share of each of these costs in the total cost of cultivation has remained largely unchanged over the past 10 years, thereby implying high scope for mechanisation.

Exhibit 24. Low level of mechanization in crops such as cotton, paddy and sugarcane

Cost break-up for major crops



Manual labour continues to form a significant % of total cost



Source: CACP, JM Financial, Note: Data as released by CACP (FY14)

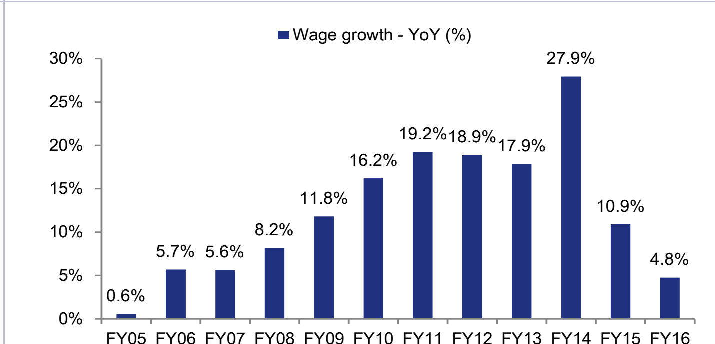
(A) Labour – Rural wage growth rate has stabilised over the past few quarters implying modest increase in cost

The pace of increase in rural wage has nearly stabilised over the past two years at early single digits to an average of 4.8% YoY. To that extent we do not expect the farm wage bill to increase significantly in FY17, and rather remain benign, much to the comfort of the farmers.

Exhibit 25. Rural wage growth has almost stabilised since 2HFY'15

Wage rate growth around c.5% for the past two years

Even on a longer period, wage growth rates remain subdued



Source: CACP, CMIE, JM Financial

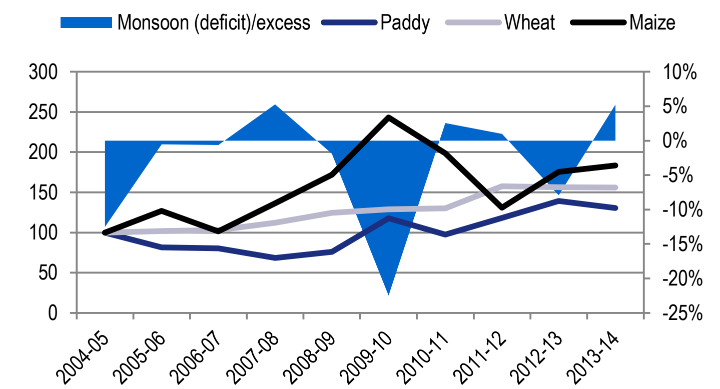
(B) Irrigation cost decline - Healthy rainfall in 2016 reduced irrigation requirement during current Kharif season

Our interactions with farmers indicated that their spending on irrigation (diesel and electricity) has reduced during the current Kharif season on account of timely rainfall. For paddy crop, the fields have to be filled with water at least 3 time, a good monsoon this year reduced this requirement to 1-2 using external means, thereby saving cost for farmers.

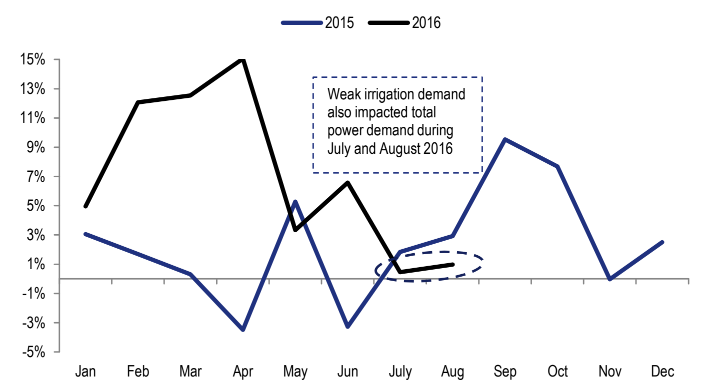
Historically, we have seen that when the monsoon is bad, irrigation cost increases; this cost reduces when rainfall is sufficient, as was seen in 2010-11. We also saw power demand (for which irrigation demand is an important driver) moderating in July and August 2016, a clear reflection of lower irrigation related demand in 2016.

Exhibit 26. Improvement in monsoon to lower irrigation cost

A near normal monsoon (as in 2016) to lower irrigation cost – Similar trend was seen after the normal monsoons in 2010 (post 2009 drought)



Power demand moderated in Jul-Aug'16, a reflection of weak irrigation related demand



Source: CEA, JM Financial, Irrigation cost indexed to 2004-05 year at 100

(C) Agrochemicals and seeds: Fertilizer price cap and seed cost reduction to benefit farm income

'De-controlled fertilizers' price cap: To pass on the fall in international prices of phosphoric acid, subsidy for nitrogen and phosphatic nutrients were reduced 25%/30%. In July 2016, and the Fertilizer Ministry had asked firms to slash prices of all non-urea fertilizers. Di-ammonium phosphate (DAP) prices were cut by Rs2,800 to Rs22,000 (10% cut) and Muriate of Potash (MOP) prices were cut by Rs5,000/mT to Rs11,000/mT (30% cut).

Fertilizer price cap helping lower fertilizer costs for farmers by 10% for DAP and 30% for MOP

It, however, seems unlikely that the cap in prices of fertilizers will address the issue of overuse of urea (as a vast price gap still exists and NPK ratios are also driven by farmer literacy levels and government schemes). With industry participants expecting the downfall in phosphoric acid prices to continue, it is unlikely that the price cap will be increased in the medium term.

Cotton seed price control order, 2015 helping farmers save cotton seed costs by up to 27%

Cotton seed price regulation leading to savings in seed costs: In India, cotton seed prices are regulated by the government since December 2015, with the adoption of Cotton Seed Price control Order 2015, which led to reduction in cotton seed prices that earlier ranged between Rs830 and Rs1,100 to Rs800, thereby leading to savings in cotton seed costs for farmers by up to 27%.

(D) Lower pest infestations due to timely rains reduced pesticide usage and cost

During 2015, cotton was significantly impacted by pests particularly in Punjab and Haryana. This had resulted in extra usage of pesticides which had reduced profitability significantly. Our interactions during Rural Safari clearly highlighted a relieved cotton farmer with lower pesticide usage brining down his cost. In addition, good rains also led to lower agro-chemical usage even in case of paddy, thereby improving farm profitability.

Box 2: Healthy cotton crop in Punjab and Haryana reduced pesticide requirement

Timely monsoon has turned out to be a boon for cotton farmers in Punjab and Haryana aiding in a healthy crop thereby reducing expenditure on pesticides. Based on our interactions with agri-input dealers and cotton farmers in the regions, we noted that spray usage has reduced by ~30% YoY for cotton. Reduction in sprays coupled with cut in cotton seed prices from Rs1,100 to Rs800, boosted farmer incomes by ~20% and brought optimism amongst farmers towards cotton farming, which had significantly gone down post the whitefly attack last year.

Exhibit 27. Cheers of a good cropping season in Haryana and Punjab

A good cotton crop spreads cheers for farmers in Haryana

Healthy paddy in the fields of Punjab

Source: Rural Safari

Positive cues on farm income from Rural Safari

Exhibit 28. Healthy farm produce caught our attention in most of the areas we visited

A healthy paddy produce in Vijayawada	Paddy crop in Varanasi (UP)
	

Source: Rural Safari

Our visits during Rural Safari clearly indicated healthy farm output along with cost structure benefits, thereby setting up base for increase in farm income during FY17.

Exhibit 29. Farm income to increase YoY – key observations from our Rural Safari

States	Share of agri. in state GSDP (%)	Rainfall deficit (%)	Farm income trend -YoY (%)	Details
Madhya Pradesh	27.2%	18.0%	Up	Significant jump in yield of soya bean (c.50% of country's production in MP) due to good rains. Healthy improvement in paddy yields. Lower expense on irrigation and agro-chemicals
Uttar Pradesh	20.2%	-14.2%	Up	Healthy increase in yield of paddy, mixed performance of vegetables and coarse-cereals; lower farm input cost (lower irrigation cost) due to well-spread rains
Punjab	19.7%	-28.0%	Up	Improved yield of paddy and jump in cotton yield due to well-spread rains. Despite the deficit, the state is well-irrigated so overall low impact and this deficit is lower than the previous two years. Savings done on irrigation cost (diesel, power) and on insecticide cost
Bihar	16.5%	-4.0%	Up	Overall increase in yield with lower input costs. Three distinct regions in Bihar: (a) majority of districts have seen yield improvement with lower irrigation cost, (b) floods in few districts have caused damage to existing crop, but have left very fertile soil, and (c) some districts have seen modest crop this year.
Andhra Pradesh	14.8%	9.0%	Up	Paddy crop yield has definitely improved over the last year. Some adverse impact of unseasonal rains on chillies and cotton near Guntur, but on overall basis, healthy increase in farm income due to yield improvement and reduction in farming input costs
Telangana	14.8%	20.0%	Up	Situation largely similar to Andhra. Heavy rains came late and some adverse impact on cotton and chillies, but overall improvement in yield
Haryana	14.4%	-27.0%	Up	Yield improvement in paddy and significant jump (+50%) in cotton yield; cotton had been infested with pests during the past two years. Drop in irrigation cost and reduced pesticide usage to improve farm income in these regions. Shift from "basmati" rice to the standard rice, given sharp price decline of non-MSP supported Basmati rice.
Karnataka	11.3%	-18.0%	Flat to decline	Northern Karnataka has shown improvement in yield, but the state's central and southern areas have seen sharp decline in yields (maize, cotton, paddy, sugarcane, etc.) due to rain deficit and inadequate irrigation. Overall we estimate farm income to decline in low single digits for the state
Tamil Nadu	6.3%	-21.0%	Up	Increase in yield across crops. Late rains have led to healthy sowing for the paddy (Rabi) in the state. TN receives c.45% of rains from the south-eastern monsoon (Oct–Dec), which has been predicted to be normal
Maharashtra	6.0%	14.0%	Up	Despite delayed rains (Marathwada), a better rainfall than last year has led to improvement in yields across crops. Lower input costs due to lower expense on fertilizer, pesticides and irrigation

Source: Rural Safari

Changing facets of Indian farming

As we interacted with more and more farmers across the country, we also witnessed diversification in farming such as shrimp farming, layer farming (eggs) and pisciculture (fish). However, these require large upfront investments and thereby only large farmers (10acre+) would be able to participate. We believe as awareness and availability about alternative farming improves, more farmers would adopt which would lead to improvement in their income. We also investigated the area of contract farming which has the potential to improve average farm income and reduce the price and volume off-take concern for an average farmer.

Box 3: Contract farming to enable price and volume assurance for farmers, also enables adoption of improved farming technique

Under contract farming, bipartite agreements are made between the farmer and the company and the latter contributes directly to the management of the farm through input supply as well as technical guidance and also markets the produce. Our interactions indicated guidelines and regulations need to be strengthened for increased adoption of contract farming in India.

LT foods has entered into contract farming arrangements with c.1,400 farmers over a land size of 25k acres for procurement of rice

PepsiCo was one of the earliest promoters of the contract-farming model in India. In 1997, it set up a tomato processing plant in Punjab, and started tying up with local farmers to grow tomato varieties needed for ketchup. Although PepsiCo has since exited tomato processing, it still works with 12,000 farmers, primarily to procure potatoes for potato chips. Other companies which practice contract farming in India are Rallis India and HUL for wheat, Appachi cotton Company for cotton, Ugar sugars for sugar, LT foods for Basmati rice, etc.

- **LT Foods, a player in the branded “Basmati” rice segment:** LT Foods, Incorporated in 1990, is a global branded foods company with more than 85% of its revenues (FY16: Rs18.4bn) from the basmati rice segment. Two of its basmati rice brands; ‘Daawat’ and ‘Royal’ are market leaders in India and the US, respectively, and are valued at over USD 100 mn each, as per the management. The other brands are Devaaya, Heritage, Rozana and Chef’s Secretz.

- **Procurement of Rice from farmers in Haryana and MP at higher rates than mandi prices:** LT Foods procure rice under the contract farming mechanism. It has entered into contracts with c.1,000 farmers in Haryana (Kurukshetra and Karnal districts) and 400 farmers in MP (Raisen and Hoshangabad districts) with a cumulative land size of c.25,000 acres for rice procurement. Under the contract, the farmer is required to follow the direction of the company with regard to sowing seeds, applying inputs and other aspects of farming. The company personnel go on periodic visits to the farm and supervise the farming activities undertaken. Expenses relating to the farming as well as procurement of farm inputs are the responsibility of the farmer. In return, the company procures the produce of the farmer at Rs50/quintal above the prevailing *mandi* price.

- **Encouragement of sustainable production technique:** LT Foods is also encouraging farmers to go for environment friendly techniques, under its initiative of **Sustainable Rice Production**. Under this, apart from basic advisory on farming techniques and farm inputs, farmers are advised on proper water usage (water meters are installed) and usage of only approved agri-inputs. The company also advices farmers to conduct soil testing through what it calls ‘**Know Your field (KYF)’** initiative.

Box 4: Shrimp farming in Haryana

The shrimp farmer we met in Hissar, Haryana made a profit of Rs 05-1mn/cultivation. On an average, 2 cultivations are made in a year.

In shrimp farming, a shrimp pond has to be first designed through drilling and necessary arrangements have to be made to have the soil and water conditioned. The most common types of species that are grown in Indian shrimp farms are the Indian white prawn and the tiger prawn.

Typical activities involved in shrimp farms involve planting seeds, feeding and shrimp cultivation, water quality management through oxygen pumping, harvesting and handling of shrimp produce.

We met a farmer in the Hissar district of Haryana, who specialized in shrimp and layer farming. He owned a shrimp pond of the size of 2.5 acres, which involves an investment of Rs1-1.2mn every four months (one cultivation), seed costs of Rs1.2mn/cultivation, labour costs of Rs1.5mn, generator and other costs, thereby totalling to a cost of Rs7-8mn/cultivation. In one cultivation, c.2.5 ton of shrimp is obtained, which is typically sold at Rs300-400/kg (Rs300/kg if the shrimp weighs Rs20g and Rs400/kg if the shrimp weighs less than 30g), thereby indicating a revenue of Rs7.5mn-Rs9mn/cultivation and a profit of Rs0.5-1mn/cultivation. On an average, 2 cultivations are done in a year.

Exhibit 30. Shrimp farming in Haryana

Shrimp farm in Hissar district, Haryana

Sample produce from the farm

Source: Rural Safari

Non-farm income remains supportive

We expect non-farm income to grow on a similar trajectory of mid-single digits

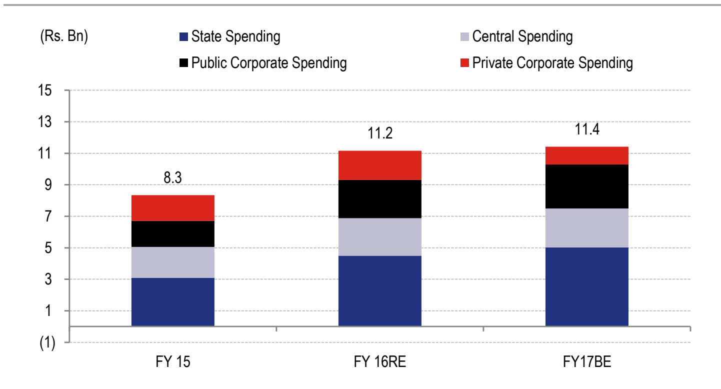
Rural income is increasingly diversifying away from agriculture and non-farm income now accounts for c.40% of agri. households' income. Major sources of non-farm income are: (a) dairy farming, (b) wage based occupation, (c) sand mining, (d) tractor rental income, and (e) small businesses. Increase in infrastructure activity creates jobs and aids in rural income. As the agro-economy improves, it is likely to create additional demand in the non-farm sector, including processing, transportation and packaging through backward and forward production linkages. However, this may only have a marginal to moderate impact on non-farm income and as such broader growth, to a large extent, is dependent on the degree of institutional investment as well as other local conditions, which in turn is governed by government policy.

Non-farm income has been supportive over the past few years and compensated decline in farm income during the past two years. We expect non-farm income to grow on a similar trajectory of mid-single digits.

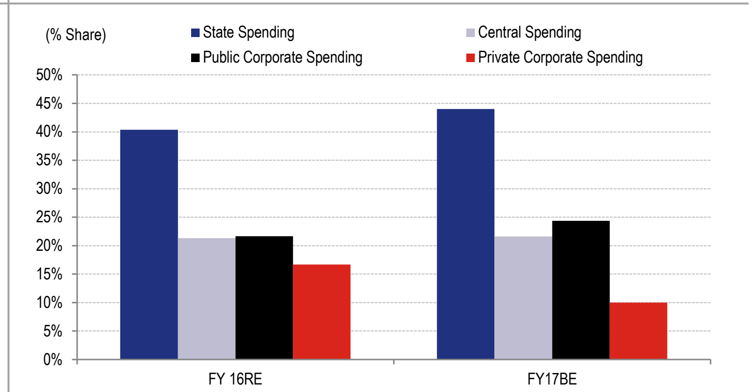
Government spending to drive investment and consequently benefit non-farm income: As the private sector grapples with excess capacity and RBI OBICUS below 75% in FY16, the capital investment cycle is going to be largely driven by public sector spending in FY17. Interestingly, the share of state spending is expected to increase in FY17 (c.44% vs. 40% in FY16RE). States have directed for higher expenditure on rural development, irrigation and agriculture sector; this may be seen as major step taken to combat rural economy stress. For 12 states (Exhibit 32) alone, rural related capex is budgeted to increase 16% YoY in FY17 akin to the urban-related capex.

Exhibit 31. Public sector to play key role in triggering the capex cycle in India

Amid excess capacity, private sector refrains from capital expenditure



Share of state spending budgeted to increase in FY17

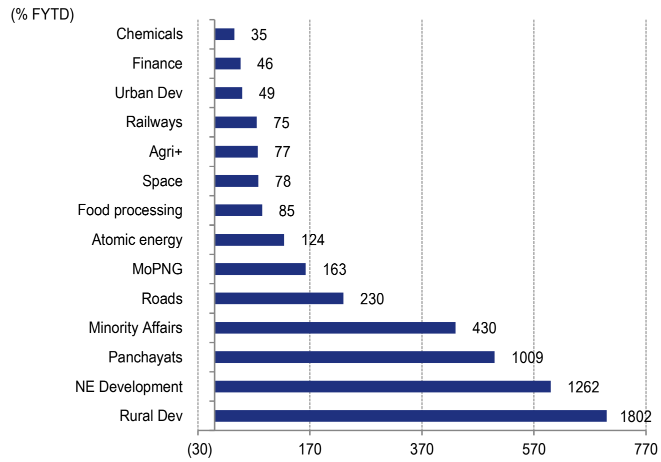


Source: Govt. Budgets, JM Financial

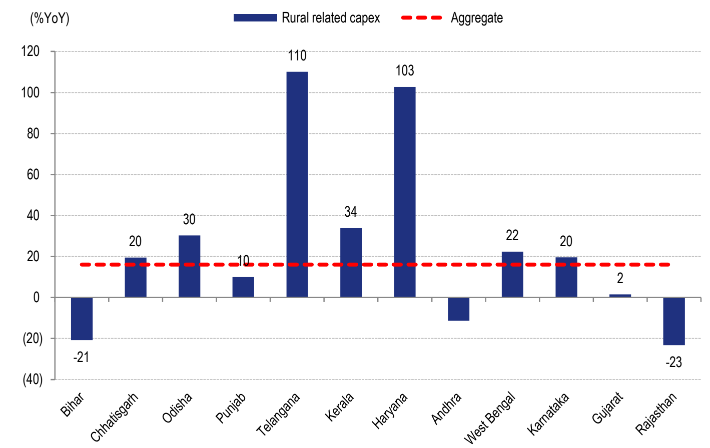
State's thrust on rural infrastructure and irrigation: While states with either low irrigation facilities or high dependence on agriculture (Chhattisgarh, Karnataka, Telangana, Haryana, Odisha and Punjab) increased spending on irrigation by as much as 35%, other states choose to spend on rural development and the agriculture sector. States have also declared adding to power generation security to achieve vision of 'Power for all' and strengthening distribution networks. Increase in infrastructure projects is expected to enhance remittances across rural India and supplement their income.

Exhibit 32. States and central govts. have budgeted for higher spending on rural sectors

FYTD central spending on rural development has increased maximum on low base



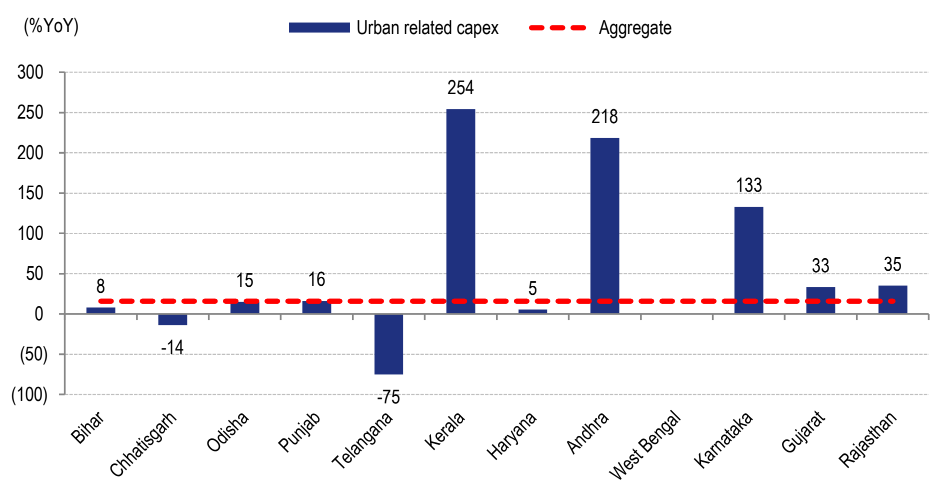
State rural capex spending to increase by 16% YoY



Source: CMIE, State Budgets, JM Financial, Note: Rural capex includes outlay for rural development, agri. & allied, irrigation & flood control

Exhibit 33. State capex on urban development and housing stepped up in FY17

Remittances from urban centres have become a significant part of rural income



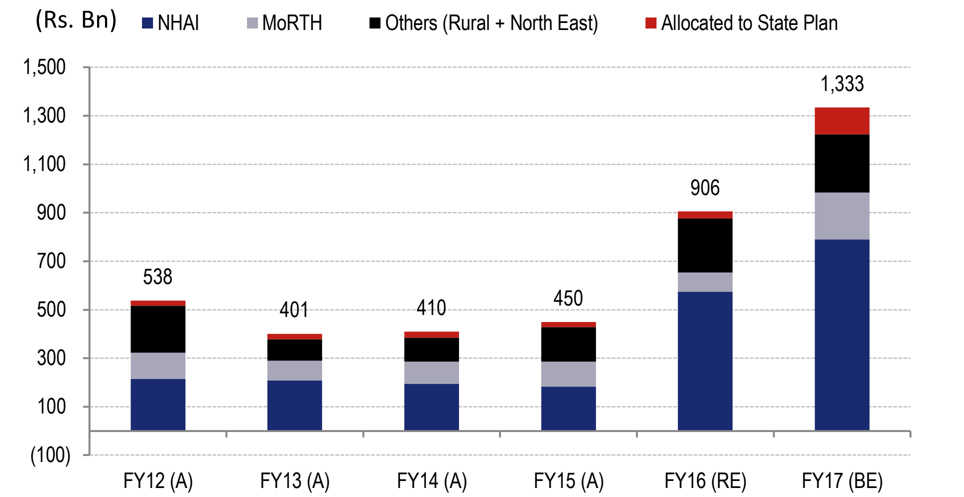
Source: State Budgets, JM Financial, Note: Urban capex includes outlay for urban development, housing, water supply and sanitation

Capital outlay for social services such as urban development and housing witness robust growth of 16% YoY at an aggregate level in FY17, in line with rural related capex with Andhra Pradesh, Kerala and Karnataka being the primary growth drivers

Expanding Indian road network

In a major boost to Indian infrastructure, the union budget provided for Rs1.3tn (47% YoY) spending on development of roads in FY17. The NHAI, too, has proposed to award Rs865bn worth of projects in FY17, adding over 6,600 km length to the existing road network. This would mark a YoY growth of 52% (26%) vs. last year's 4,400 km road length (Rs684bn project cost). As per media reports, almost 53% (64%) of the road length (project cost) target has already been bid-out with Letter of Awards (LoAs) being issued for 27%. NHAI seeks to raise USD 750bn worth of green masala bonds and another Rs450bn from public sector agencies (LIC: Rs250bn; EPFO: Rs200bn) in FY17.

Exhibit 34. Higher spending on roadways to create additional construction demand in FY17



Source: Union Budget

Exhibit 35. NHAI seeks to grant 50-60% higher road length projects in FY17

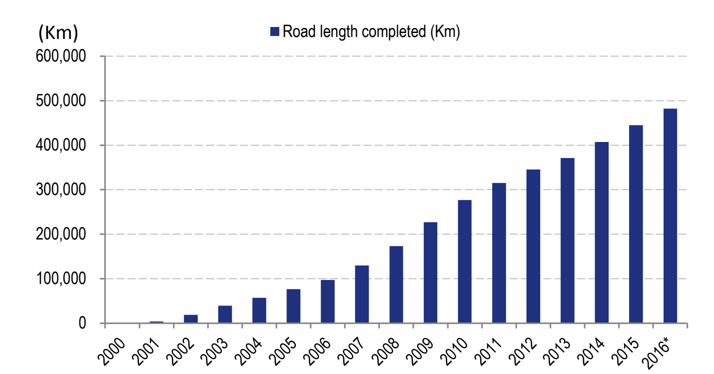
State	Road Length (Km)	Project Cost (Rs bn)	State	Road Length (Km)	Project Cost (Rs bn)
Andhra Pradesh	130	29	MP	225	34
Bihar	336	48	Maharashtra	1,090	1,73
Chhattisgarh	79	89	Odisha	734	67
Gujarat	485	44	Punjab	187	38
Haryana	87	7	Rajasthan	997	85
HP	126	58	TN	165	11
J&K	118	-	UP	649	17
Jharkhand	367	46	Bengal	215	25
Kerala	16	14	Expressway (UP)	65	40
Karnataka	561	42	**Total**	**6,631**	**865**

Source: NHAI

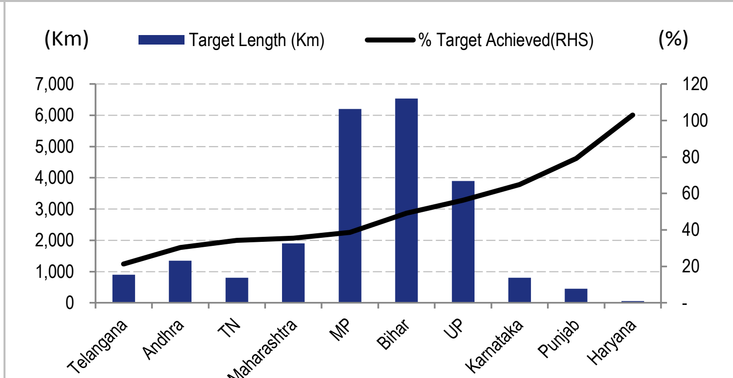
NHAI intends to increase project awards by 50-60% in 2016-17 from about 4,400 km road length in FY16 to over 6,600 km in FY17. The cumulative project cost is estimated at c.Rs865bn

Exhibit 36. Road length of 0.05mn km to be added in FY17 under Pradhan Mantri Gram Sadak Yojana (PMGSY)

Road length trend under PMGSY



UP, Karnataka and Punjab have seen 55%+ target achievement



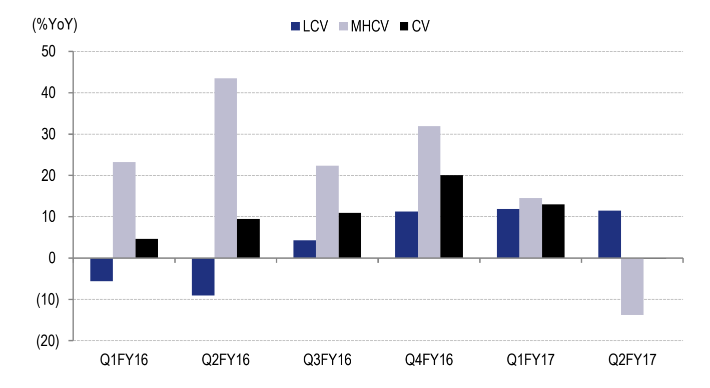
Source: PMGSY, Note: 2016 data up to Aug'16

Moderation in economic activity in 2QFY17, also reflected in our observations during the trip

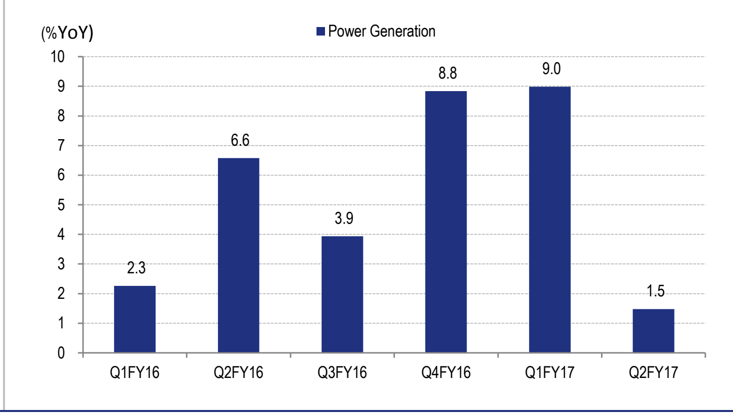
During 2QFY17, Commercial Vehicles (CV) volumes have moderated due to a sharp fall in the Medium and Heavy Commercial vehicles (MHCV) segment (14% YoY), led by subdued replacement demand and fleet expansion, even as Light Commercial Vehicles (LCV) continued to grow at steady pace (11% YoY). In the meantime, power generation has also weakened as the effect of one-off demand drivers such as warmer climate and irrigation demand faded. Our trips across states also corroborate a moderate infrastructure activity at present; the recent floods in some of the states such as Bihar, UP and MP also have adversely impacted infrastructure work in these states.

Exhibit 37. Softening of economic indicators during Q2FY17

CV volumes have moderated as MHCV declined sharply in Q2



Power generation slowed down sharply in Q2



Source: SIAM, CEA

What we saw during Rural Trips on infrastructure build-outs

While there are enough evidences for recovery in infrastructure related projects such as road expansion (MP, Patna), highway/flyover construction (Karnataka, Punjab, UP) and pond creation (Maharashtra), it is primarily in the upcoming election states of UP (metro project, underground electrification), and Punjab that developmental works appeared to be in full swing.

Exhibit 38. Highlights on pace of infrastructure built-up from our Rural Safari

States with high visible infrastructure activity during our trip	
Uttar Pradesh	High infrastructure work evident near Varanasi such as national highway development till Gorakhpur and Lucknow, underground electrification of entire city and replacement of sewage system
Punjab	Brisk infrastructure related activity with some projects such as the bus corridor project, Golden Temple project and bridge construction have been expedited by the government as it intends to finish before state assembly elections
Andhra Pradesh	Infrastructure work around the capital city Amaravati, roads are already well-developed in rural areas
Telangana	Steady infrastructure work under Project Kakatia (building of water tanks) and Mission Bhagiratha
States with modest visible infrastructure activity during our trip	
Madhya Pradesh	Roads and highways already developed in the Malwa region. Not much visible infrastructure activity during our trip and also from channel checks
Bihar	Low infrastructure activity, expansion of roads in Patna, road work on two Ganga bridges in the state
Haryana	Road infrastructure already developed. Not much infrastructure activity visible during our trip. There is news around a new airport at Hissar, but work has not started on that
Karnataka	Not much infrastructure activity visible, some work on expansion of lakes and others
Tamil Nadu	Steady state work, but not much large infrastructure activity visible
Maharashtra	Not much infrastructure work visible in Marathwada regions, some pond creation activity

Source: Rural Safari

Box 5: Construction activities more visible in states with upcoming assembly elections

Metro construction in full swing at Amritsar

Bridges and road construction in Varanasi

Construction of bridge in Vijayawada

Road expansion work at Sehore (MP)

Brick kiln near Varanasi

Road expansion in Patna

Source: Rural Safari

Exhibit 39. A healthy farm output to further drive growth in non-farm income through opportunities such as higher rental for tractors

Source: Rural Safari

As the agro-economy improves, it is likely to create additional demand in the non-farm sector, including processing, transportation and packaging through backward and forward production linkages

Increased diversification by farming families

Most of the farming families have diversified from farming and that provides support in times of weak farm output. The case study below illustrates various non-farm activities undertaken by farming families.

Box 6A: How rural households have diversified their income – An illustration from Punjab

We came across rural households in Punjab who have dual sources of income arising from sources such as tractor rental income, leasing, dairy and crop transportation

- **Most farmers have dual sources of income.** In our survey of Punjab, we found that while farming was the prime source of income, most farmers took on other occupations such as owning *kirana* shops, government jobs or dairy farming. The tendency to save in the form of bank deposits is very less and farmers re-invest their savings into their farm business (in the form of purchasing tube-wells, pumps and tractors). However, if rainfall is good and there are any surplus savings, farmers spend it on housing, cars and two-wheelers. We have illustrated few examples to demonstrate the earnings from non-farming related activities.
- **Rental income from tractors:** There has been a rising trend of renting tractors for both farm and infra related purposes. On an average, a farmer earns Rs1,000-1,200/acre which translates to an annual income of Rs25,000-30,000/year.
- **Leasing agri. equipment is a profitable source of income:** Farmers use various agri-equipment such as sowing & planting machines, grain drilling, harvesting machines, and crop processing machines; however, they use them only 3-4 times a year for their own farms. To optimise usage, they lease it to others (and bear fuel and maintenance costs); this proves to be a very profitable source of income for farmers. We met a farmer who owned a rotavator (a machine used for sowing and costs Rs1.8mn) and earned Rs800/acre, which translates to Rs0.8mn/year (he was able to do 1,000 acres/year). Income from other equipment such as ploughers and rollers (which cost less than 0.1mn) is around Rs50,000/year and Rs30,000/year, respectively.
- **Dairy continues to be a major income source for farmers:** On an average, a farmer in Punjab earns Rs24-28/litre by selling cow/buffalo milk (translating to a saving of Rs5,000/7,000 per cow/buffalo per month) and is a major source of income for farmers. Additionally, they use cow dung as an input for their own gas plants, thereby saving on cooking gas.
- **Crop transportation—a small but steady source of income:** During the harvest season, a large farmer uses his vehicle to transport other small farmers' crops to nearby villages/cities, which is a small, but steady source of income for the larger farmer. On an average, farmers in Punjab earn

Rs2,000/house for transporting paddy. We met a farmer who was working for 43 houses and was earning Rs0.2mn/year for transporting paddy and Rs42,000/year for transporting wheat.

- **Restriction imposed on sand mining has impacted farmers' income near the river belt:** With restrictions imposed on sand mining from riverbeds, it is no longer a lucrative source of income for farmers in Punjab. However, prior to restrictions, farmers were earning Rs5,000-6,000/trolley from the sand mining activities. Following the restriction imposed by the government, the cost for procuring sand has increased to Rs3,000/trolley (vs. Rs800-1,000 earlier) and getting approval has become difficult.

Box 6B: Farm pond creation in Maharashtra to supplement income of farmers

Farm ponds in Marathwada receive c.50% subsidy from the government and are used for fish farming and irrigation.

We also encountered new initiatives across various parts of country towards improving farmers' income. In the Marathwada areas of Maharashtra (drought affected), farmers have started setting up farm ponds in some portion of their farm land parcel to arrest water and also to use the same during the cropping season. Farm ponds are costing the farmers c.Rs0.3mn per acre and has the capacity to store 5mn litres (four-month reserve). Farmers receive c.50% subsidy from the government for constructing these ponds. Farmers have started using these farm ponds to do fish farming and earn additional income.

Exhibit 40. Creation of Farm ponds in Marathwada, Maharashtra

Source: Rural Safari

We believe this initiative will provide some stickiness to the farmer's income. However, this initiative is pretty recent and has been catching up only from the past two years.

MGNREGA – uptick witnessed in average wages per day, aids income for the marginal farmers

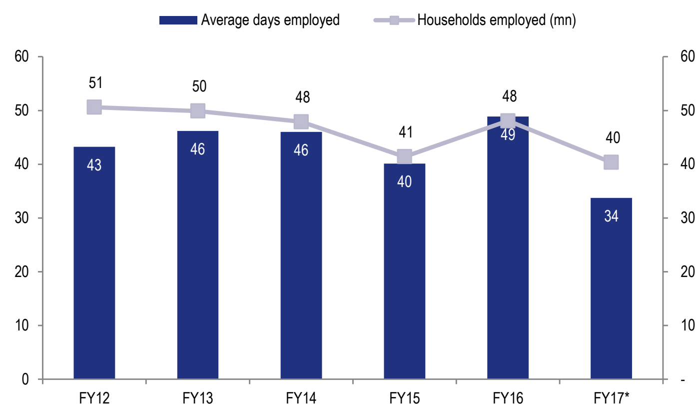
Mahatma Gandhi National Rural Employment Guarantee (MGNREGA) spending for FY16 witnessed robust 22% growth in spending after a weak FY15 (when the expenditure fell 5%). Person-days employed under NREGA witnessed a sharp uptick of 41% in FY16 bringing it at par with FY14 levels aided by increase in average days employed by 22% to 49 and increase in number of households employed by 16% to 48 mn. FY16 also witnessed increase of 4% in average wages to Rs153/day.

1H17 witnessed uptick of 7% in average wages at Rs164/day with key states being Telangana, Rajasthan and Gujarat witnessing large chunk of the rise

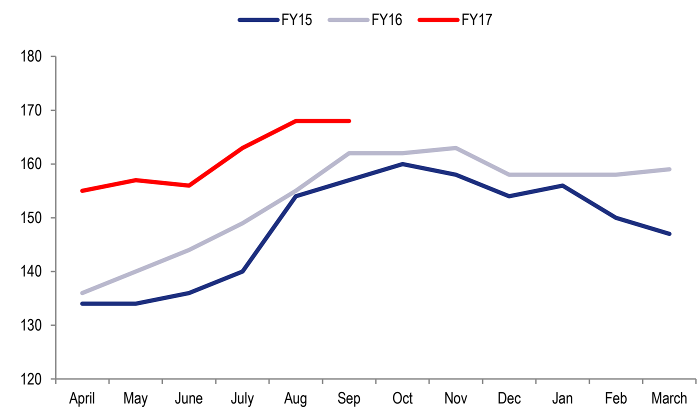
1HFY17 witnessed a further uptick in the wage rate with the average rate up 7% to Rs164/day, with key states being Telangana, Rajasthan and Gujarat witnessing the large chunk of the rise. The rise in NREGA expenditure and consequently the average wages per day is expected to help non-farm income for marginal farmer.

Exhibit 41. Pickup in person-days and average wages per day in FY16

Sharp uptick in persons employed and average days



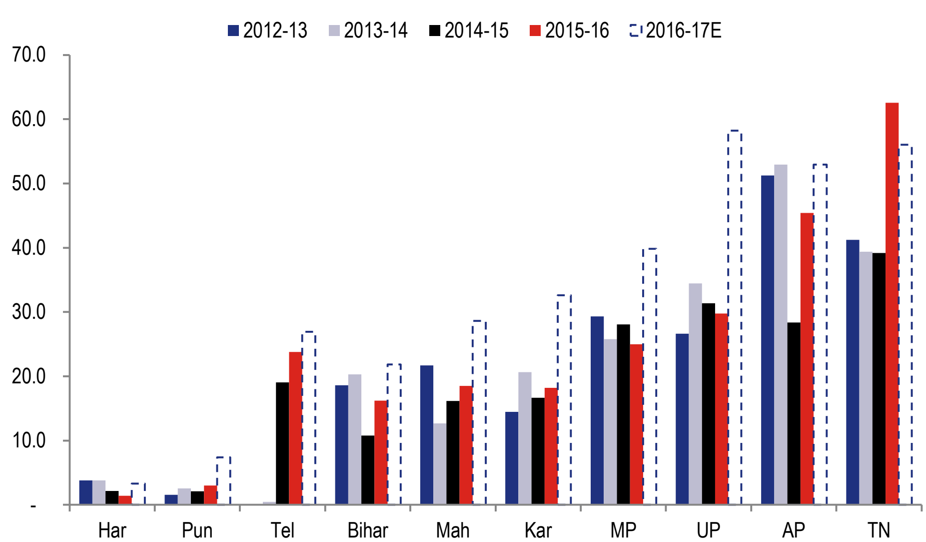
Average wages per day saw an uptick in FY17



Source: NREGA, JM Financial, *till October

On a state-wise analysis, we found that while the scheme is yet to gain significance in states such as Punjab and Haryana, the scheme has witnessed a robust uptick in terms of expenditure in FY16 for states such as Andhra Pradesh and Tamil Nadu.

Exhibit 42. State-wise expenditure indicates robust growth in TN (Rs bn)



Source: NREGA, JM Financial; Note: For FY17, expenditure till 11-Oct-16 has been annualised.

After strong growth in past decade, wealth effect tapers

As highlighted in our last report, rural land prices that had sky-rocketed by at least 5-10x over the past decade on improved road connectivity, urbanisation and remittances have remained subjected to downward pressures as re-affirmed from our recent interaction. It may be noted that barring regions adjacent to urban areas or where large infrastructure projects are coming up, we do not see much evidence of land transactions. Overall, land prices have remained and expected to be now largely stable with exceptions such as UP and Bihar, where prices have increased due to fast paced urbanisation as well as relatively smaller land holdings.

Exhibit 43. What we observed around land prices in our rural safari

States	Avg. farm-holding size (acres)	Land price trend	Detailed comments
Punjab	9.3	Stable (-ve bias)	Land prices declined during the past three years due to: (a) an increase in cost and legal process of conversion of agri. land to residential land, (b) a rise in registration cost and stamp duty cost, and (c) reduction in speculative sales. Prices have largely stabilised after declining over the past 2-3 years
Haryana	5.6	Stable (-ve bias)	Price correction started approximately two years ago, driven by increased transparency in the system along with a decrease in speculative investments
Madhya Pradesh	4.4	Stable (-ve bias)	Prices have corrected in the past two years on requirement for a higher share of declared income, weak agricultural output and reduced speculation
Karnataka	3.8	Stable (-ve bias)	Land prices have now stabilised, but the number of transactions has reduced. Weak rainfall and crops have led to downward pressure on land prices
Maharashtra	3.6	Stable (-ve bias)	Drought conditions had led to pressure on prices over the past few quarters, overall stable outlook with downward bias
Andhra Pradesh	2.7	Stable (+ve bias)	Land prices have risen up during the past 2-3 years aided by the built-up of new capital Amaravati. Prices are largely holding, but as it has risen substantially, number of transactions has reduced
Telangana	2.7	Stable (+ve bias)	Prices are largely going up driven by large infrastructure projects such as Project Kakatia (creation of water tanks), Mission Bhagirathi (to provide drinking water). Nominal, regular price increase and not a sharp one.
Tamil Nadu	2.0	Stable (+ve bias)	Prices are going up on steady basis, nominal growth over the years
Uttar Pradesh	1.9	Increase	Steady increase in land prices on account of urbanisation, low availability of land (small land parcels) and lack of speculative investments earlier. Varanasi in particular benefits disproportionately from being Prime Minister's Lok Sabha constituency
Bihar	1.0	Increase	Steady increase in land prices on account of urbanisation, less availability of land (small land parcels) and lack of speculative investments earlier. Situation very similar to Eastern Uttar Pradesh

Source: NSSO, Rural Safari

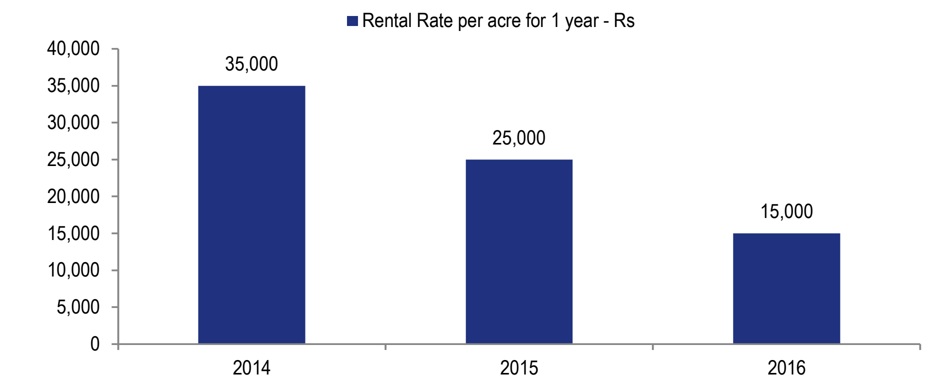
In many places we visited, a common theme that surfaced was around expansion of smaller cities. People are anticipating an appreciation in land prices led by growth of the cities/towns in peripheral areas as well as by on increased migration of: a) urban population to larger cities, thereby remitting money back into the city to propel investment demand, and b) labour from other states/hinterland pushing land demand further.

We also found that land prices remain under pressure in some states such as Haryana, which have seen decrease in speculative investments and improved transparency in land transactions. As an example in Barwali village in Hissar district of Haryana, land prices have declined over the past 2-3 years. They had zoomed 30x over the past decade as has been the trend across a majority of Haryana and Punjab, as well as in many other regions of the country. Prices softened from 2013-14 and have declined at some places, such as the one we visited in Haryana. (Exhibit 44& 45)

Farm income under pressure during past two years- Reflects in decline in rental income from farms: We could clearly observe the decline in farm profitability manifesting itself with a decline in rental rates. Rental rates in a village in Haryana are down c.55% over the past two years as successive crop failures and pest attacks (on cotton) has reduced farmer profitability in this area. We expect rental rates to inch higher next year, as farm yields improve during the current year.

Farm rental rates in Hissar, which fell 55% over two years, is expected to inch higher next year on the improvement in farm yields

Exhibit 44. Rental rate decline highlights high volatility in farmers' realisations, particularly the cash crops (cotton)



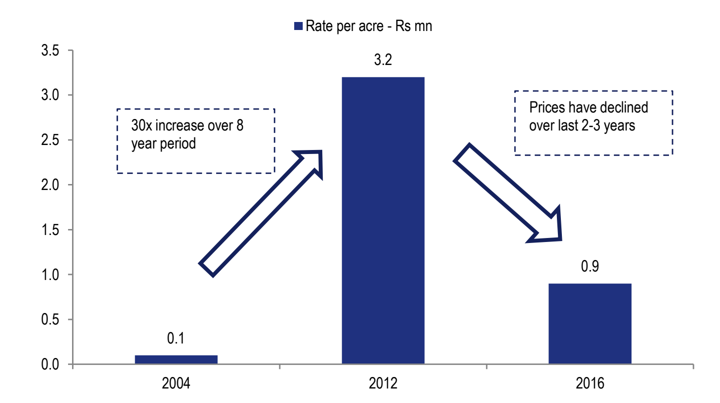
Source: Rural Safari

Weak land prices could constrain propensity to consume: During the past decade, elasticity of consumption rose fast in rural India, as land prices were increasing and provided support. However, with land prices coming under pressure, we expect the elasticity to fall less than 1x in the short term. With lower elasticity, an increase in income may not completely transfer into consumption.

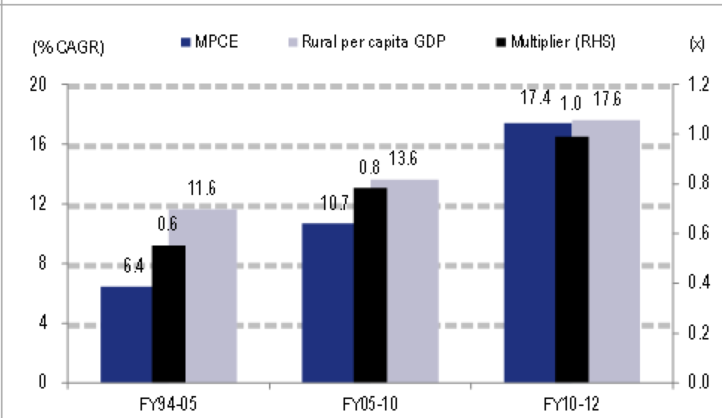
Land prices have come under pressure in recent years, gradually coming off from the peaks witnessed in last decade. This could affect the ability to spend from the fading wealth effect.

Exhibit 45. Absence of strong growth in land prices to impact consumption growth

Land prices, which had zoomed 30x till 2012, have witnessed sharp decline over the past 2-3 years – An example in Hissar district (Haryana)



Elasticity of consumption could be under pressure due to softened land prices



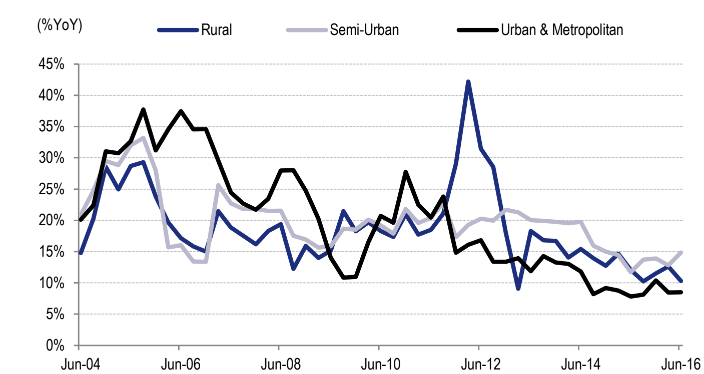
Source: NSSO, Rural Safari, Note: MPCE: Monthly Per Capita Expenditure

Rural credit: significant scope for developing institutional lending

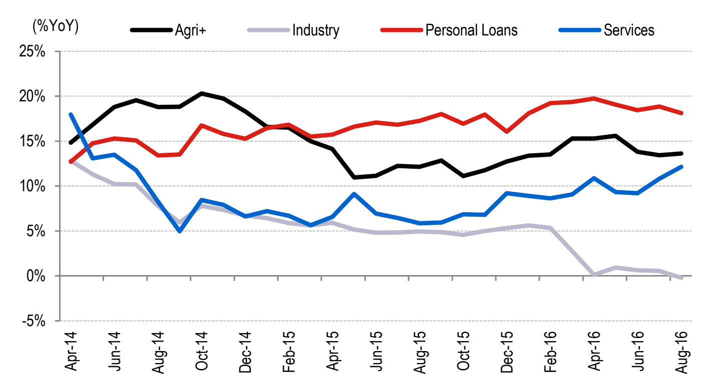
Typically, years of bad monsoon and/or bad cropping season have also been the years of high credit growth, explaining the constant growth in rural outstanding credit in the past five years. The indebtedness increases as income decile (asset holdings) rises. The average outstanding loan of an agri. household stands at Rs47,000 (NSSO survey, 2013) with the loan of higher income decile increasing to Rs290,000. An analysis of non-food gross bank credit shows that agri-credit is growing at faster pace than overall loans except for personal loans.

Exhibit 46. Non-food gross bank credit growing at faster pace than overall credit

O/S SCB rural credit grew at 10% vs. the last 8-qtr avg. of 13% in 1Q FY17 even as semi-urban credit continued to grow



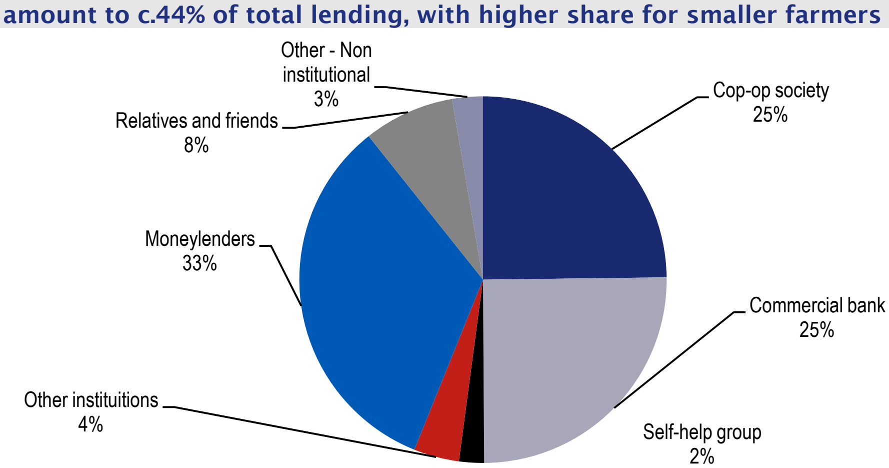
Within the non-food gross bank credit, agri+ credit is growing faster second only to personal loans



Source: CMIE, JM Financial

Agri. credit growing at faster pace: Since Apr'14, credit flow to agri. and allied sectors has been growing at faster pace (avg.15% YoY vs. 14% YTD) than other sectors barring personal loans. YTD credit worth Rs71tn has been extended to the agri. sector, which currently accounts for c.14% of the total non-food bank credit. However, outstanding SCB loans to rural sector have moderated from 14% in FY15 to 10% in Q1FY17 even as rural & semi-urban loans grew at 13% YoY.

Exhibit 47. Sources of funding in rural India – Non institutional sources amount to c.44% of total lending, with higher share for smaller farmers



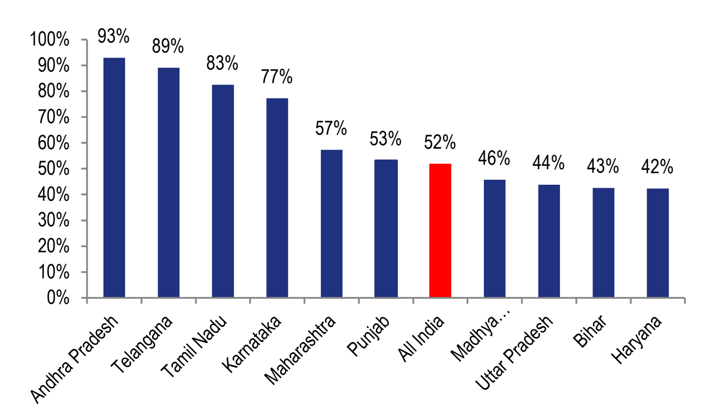
Source: NSSO, JM Financial

Non-institutional sources amount to 44% of credit in rural India: Among sources of credit, non-institutional sources still amount to 44% of the total credit, with higher share for the smaller decile (85% share). This indicates big market opportunity for institutional players in rural India.

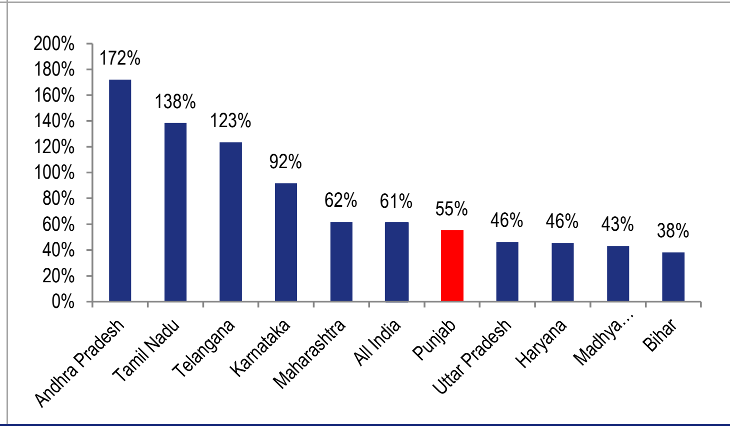
Wide variation among Indian states on credit penetration and users attitude towards credit: The credit uptake and penetration varies significantly across states in India. South Indian states, particularly Andhra, Telangana and Tamil Nadu, have 80%+ households who have availed debt, while North Indian states such as MP, UP, Bihar and Haryana have less than 50% of households with outstanding debt.

Exhibit 48. Wide variation in rural indebtedness – Southern states tend to have higher leverage

Households (%) with outstanding debt



Debt/income (%) across states



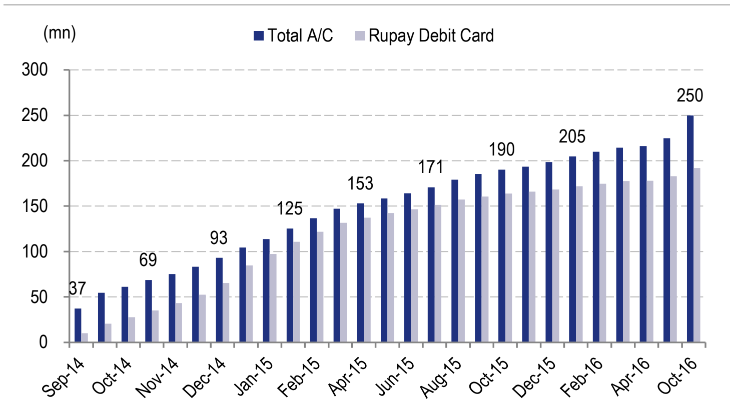
Source: NSSO, JM Financial

Even in terms of average indebtedness, the debt/income is above 100% for Andhra, Telangana and Tamil Nadu, while it is less than 50% for North Indian states. Our visits and interaction with farmers across these states reflected the weak banking infrastructure, particularly in the eastern states and general dis-inclination towards debt. While, on the other hand, in South India, the proclivity and availability of debt is quite high and reflected clearly in our interactions.

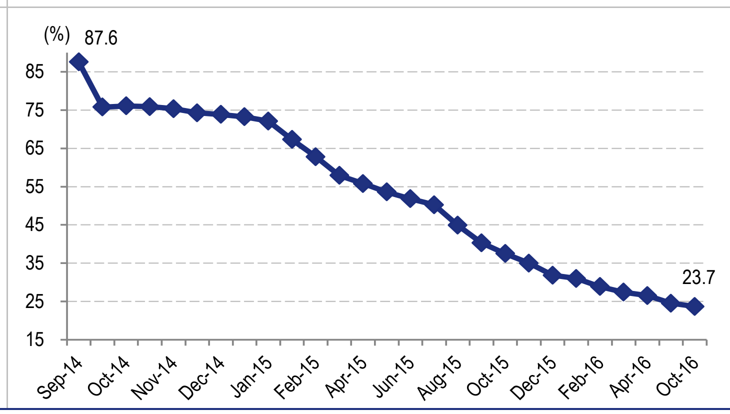
Increase in financial inclusion through PMJDY and also from micro-finance lending: The steady increase in Pradhan Mantri Jan-Dhan Yojana (PMJDY) accounts enables to bring earlier un-banked population to the banking channels and benefits were visible during our interactions. We also encountered increase in MFI lending, which would reduce non-institutional borrowing for rural India.

Exhibit 49. PMJDY continues to enhance rural financial inclusion (61% of 250mn accounts in rural India)

PMJDY account enrolment – 130mn or 52% seeded with Aadhaar



Zero balance account reduced to 24% by Oct'16 from 88% in Sep'14



Source: PMJDY, JM Financial

Box 07: Increase in penetration of MFIs in low income group – Meeting with MFI borrowers in UP

Microfinance (MFI) has an outreach of c.4bn clients across the country with gross loan portfolio (GLP) of c.Rs640bn (Mar'16). Rural forms 40% of GLP and we believe expansion of MFI in rural India can enable shift from non-institutional sources of credit. We met a group of women who work as daily wage earners and also support cloth weaving at their home in a village near Varanasi. The women in the village were aware of self-help groups (SHG) of MFIs and said they are approached by few companies on a regular basis.

One of them, Madhuri had taken Rs30,000 loan from SV creditline (acts in partnership with Kotak in this region, also has partnership with Edelweiss Housing Finance and IndusInd Bank). The payment terms are of Rs900 fortnightly for first 30 payments and then Rs450, with total interest of around Rs7,251. These loans have been taken in 10 women group and defaults are very low. Madhuri recalls only two women/families that have disappeared over the past couple of years. SHG is paying their own EMIs and does not pressurise the absconding ones.

Exhibit 50. Interaction with MFI borrowers near Varanasi

Pass-book of a borrower	Steady fortnightly payments
	

Source: Rural Safari

Borrowers clearly understand the importance of paying in time else they would not get further loans. In addition, documents such as Aadhaar copy and address proofs remain with the MFIs till the loan is not repaid and acts as a constraint for any borrower to default willingly.

Farm income increase of 21% in FY17 to help repair balance sheet of farmers: Due to decline in yields, lower net sown area and increasing incidence of crop failure, farm income of an average farmer has declined in the past two years. Based on our survey and NSSO data, we have estimated farm income for the past four years and expected income for FY17 (please refer to Exhibit 52 and Exhibit 54).

We estimate farm income for an average farmer (land holding: 2.7 acres) to have fallen 9%/3% YoY in FY15/16, even as non-farm income compensated by pushing the overall income growth to 1%/2% in FY15/FY16. Our ground checks on yield improvement in Kharif 2016 and lower input cost (less irrigation and pest attacks) and prospects of good Rabi harvest in 2017 lead us to believe that farm income will increase by about 21% in FY17. In the meantime, non-farm income is expected to remain steady thereby resulting in 12% income growth for a small farmer.

Exhibit 51. Income calculations for an average farmer (Yearly)

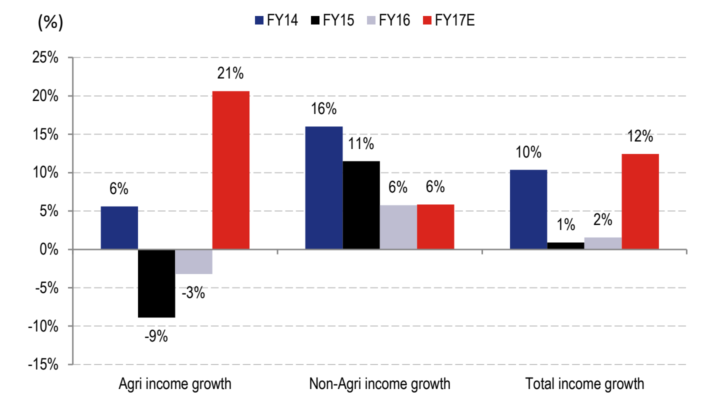
		FY13	FY14	FY15	FY16	FY17E	Assumptions
Average Land Holding	Acres	2.7	2.7	2.7	2.7	2.7	NSSO 68th round, avg. land holding: 1.1 ha
Cost of Land	Rs	270,758	297,834	282,942	254,648	254,648	Value of land from NSSO Survey & assumptions
Land Value	Rs	731,047	804,152	763,944	687,550	687,550	
Kharif Crop - Rice							
Adjustment of net crop sown area	(x)	0.70	0.70	0.68	0.58	0.63	Initial assumption to adjust income to NSSO survey. Varied based on yearly net sown area
Productivity	(qtl/acre)	14.9	14.6	14.4	14.4	14.8	Calculated as ratio of sown area & production
Price	MSP - Rs	1,280	1,345	1,400	1,450	1,510	MSP price
Revenue from crop	Rs	13,320	13,762	13,730	12,063	14,012	
By-product	Rs	1,127	1,235	1,222	1,012	1,103	Value of by-product for planting the crop
Cost	Rs	6,763	7,026	7,074	6,257	6,918	Cost assumptions based on NSSO survey & WPI
Rabi Crop - Wheat							
Adjustment of net crop sown area	(x)	0.70	0.70	0.68	0.58	0.65	Initial assumption to adjust income to NSSO survey. Varied based on yearly net sown area
Productivity	(qtl/acre)	12.6	12.7	11.1	13.1	13.4	Calculated as ratio of sown area & production
Price	MSP - Rs	1,350	1,400	1,450	1,525	1,586	MSP price till FY16, JMFe for FY17
Revenue	Rs	11,918	12,474	10,957	11,487	13,773	
By-product	Rs	2,578	3,025	2,994	2,137	2,432	Value of by-product for planting the crop
Cost	Rs	5,630	5,994	5,905	5,033	5,817	Cost assumptions based on NSSO survey & WPI
Annual agri. income	**Rs**	**44,687**	**47,186**	**42,992**	**41,605**	**50,179**	
% of Non-agri. income	(%)	46%	48%	53%	55%	52%	
Wages	Rs	20,736	24,883	28,616	30,762	32,300	Rural wage growth from CMIE
Farming of animals	Rs	9,816	10,994	11,654	11,887	12,481	NDDB release on value of livestock
Others	Rs	7,116	7,828	8,454	8,876	9,764	JMF Estimate
Non-agri. income	Rs	**37,668**	**43,705**	**48,723**	**51,525**	**54,545**	
Total Income	Rs	**82,355**	90,891	91,715	93,130	104,724	
Consumption	Rs	77,084	84,793	89,032	90,813	98,078	NSSO survey and JMF estimate
Surplus/Deficit	Rs	**5,271**	**6,098**	**2,683**	**2,317**	**6,646**	
Average Debt	Rs	54,800	60,280	63,294	66,459	68,320	NSSO Survey and JMF estimate
Additional debt	Rs		0	0	0	-1,994	De-leveraging in FY17
Total Debt	Rs	**54,800**	**60,280**	**63,294**	**66,459**	**66,326**	
Debt/Asset	x	7.5%	7.5%	8.3%	9.7%	9.6%	
Debt/Income	x	66.5%	66.3%	69.0%	71.4%	63.3%	
Interest	Rs	6,576	7,234	7,595	7,975	7,959	
Interest / income	x	8.0%	8.0%	8.3%	8.6%	7.6%	
EMI	Rs	18,042	19,846	20,839	21,880	21,837	
EMI/Income	x	21.9%	21.8%	22.7%	23.5%	20.9%	

Source: NSSO, JM Financial

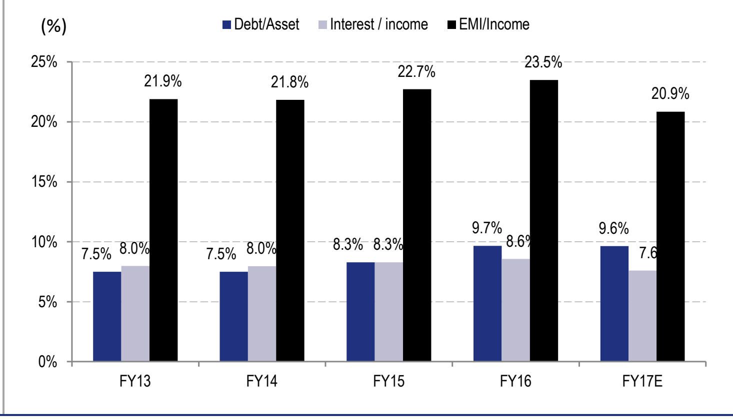
We have estimated flat incomes coupled with increase in expenses to raise the leverage for the average farmer with debt/asset increasing to 9.7% by FY16, up from 7.5% in FY13. A weak real estate had also contributed towards increase in leverage. Assuming a 12% interest rate, we estimate the EMI/income ratio deteriorated from 21.9% in FY13 to 23.5% in FY16. However, a strong increase in farm income in FY17 coupled with supportive non-farm income would drive total income to increase 12% for average farmer with c.30% of the savings being utilized for de-leveraging. This would reduce the EMI/income ratio by c.250bps YoY.

Exhibit 52. A near normal monsoon (-3% below LPA) has led to increase in yield and quality of crop outputs, higher income growth to aid in repairing the balance sheet

Agri. income to be up 21% aided by yield improvement and lower input cost in FY17



Increase in farm income to aid small farmer in mending his balance sheet



Source: NSSO, JM Financial

For a large farmer with a higher share of cultivation income (c.80%), the total income growth is estimated to be 17% YoY for FY17. An improved savings would be utilised for debt repayment and is likely to aid discretionary spending.

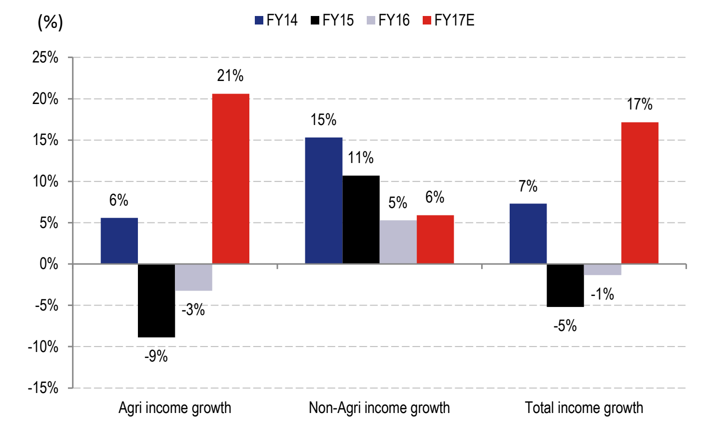
Exhibit 53. Income calculations for a large farmer

		FY13	FY14	FY15	FY16	FY17E	Assumptions
Average Land Holding	Acres	15.0	15.0	15.0	15.0	15.0	
Cost of Land	Rs	270,758	297,834	282,942	254,648	254,648	Value of land from NSSO Survey & assumptions
Land Value	Rs	4,061,372	4,467,509	4,244,134	3,819,721	3,819,721	
Kharif Crop - Rice							
Adjustment of net crop sown area	(x)	0.70	0.70	0.68	0.58	0.63	Initial assumption to adjust income to NSSO survey. Varied based on yearly net sown area
Productivity	(qtl/acre)	14.9	14.6	14.4	14.4	14.8	Calculated as ratio of sown area & production
Price	MSP - Rs	1,280	1,345	1,400	1,450	1,510	MSP price
Revenue from crop	Rs	13,320	13,762	13,730	12,063	14,012	
By-product	Rs	1,127	1,235	1,222	1,012	1,103	Value of by-product for planting the crop
Cost	Rs	6,763	7,026	7,074	6,257	6,918	Cost assumptions based on NSSO survey & WPI
Rabi Crop - Wheat							
Adjustment of net crop sown area	(x)	0.70	0.70	0.68	0.58	0.65	Initial assumption to adjust income to NSSO survey. Varied based on yearly net sown area
Productivity	(qtl/acre)	12.6	12.7	11.1	13.1	13.4	Calculated as ratio of sown area & production
Price	MSP - Rs	1,350	1,400	1,450	1,525	1,586	MSP price till FY16, JMFe for FY17
Revenue	Rs	11,918	12,474	10,957	11,487	13,773	
By-product	Rs	2,578	3,025	2,994	2,137	2,432	Value of by-product for planting the crop
Cost	Rs	5,630	5,994	5,905	5,033	5,817	Cost assumptions based on NSSO survey & WPI
Annual agri. income	**Rs**	**248,261**	**262,146**	**238,844**	**231,138**	**278,771**	
% of Non-agri. income	(%)	18%	19%	22%	23%	21%	
Wages	Rs	24,372	29,246	33,633	36,156	37,964	Rural wage growth from CMIE
Farming of animals	Rs	18,012	20,173	21,384	21,812	22,902	NDDB release on value of livestock
Others	Rs	10,332	11,365	12,274	12,888	14,177	JMF Estimate
Non-agri. income	Rs	**52,716**	**60,785**	**67,292**	**70,856**	**75,043**	
Total Income	Rs	**300,977**	322,931	306,136	301,993	353,813	
Consumption	Rs	225,733	252,820	271,782	285,371	299,640	NSSO survey and JMF estimate
Surplus/Deficit	Rs	**75,244**	**70,111**	**34,354**	**16,622**	**54,174**	
Average Debt	Rs	184,000	202,400	212,520	223,146	234,303	NSSO Survey and JMF estimate
Additional debt	Rs		0	0	0	-16,252	De-leveraging in FY17
Total Debt	Rs	**184,000**	**202,400**	**212,520**	**223,146**	**218,051**	
Debt/Asset	x	4.5%	4.5%	5.0%	5.8%	5.7%	
Debt/Income	x	61.1%	62.7%	69.4%	73.9%	61.6%	
Interest	Rs	22,080	24,288	25,502	26,778	26,166	
Interest / income	x	7.3%	7.5%	8.3%	8.9%	7.4%	
EMI	Rs	51,043	56,148	58,955	61,903	64,998	
EMI/Income	x	17.0%	17.4%	19.3%	20.5%	18.4%	

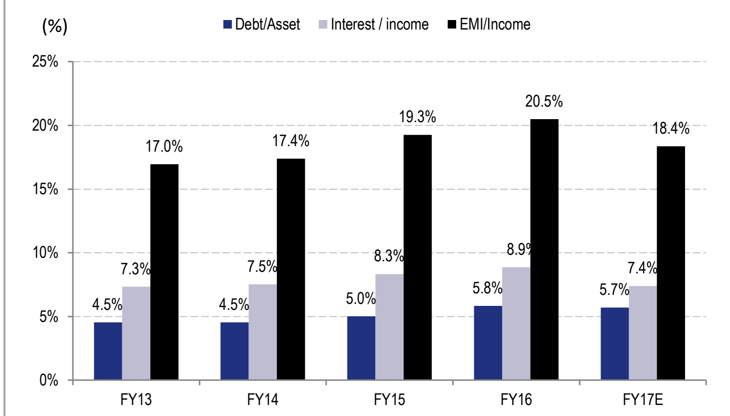
Source: NSSO, JM Financial

Exhibit 54. Higher agri. income to help replenish depleted savings of a large farmer

Due to higher share of agri. income, total income for a large farmer will increase higher than average farmer



Weak income levels have affected the balance sheet of farmers



Source: NSSO, JM Financial

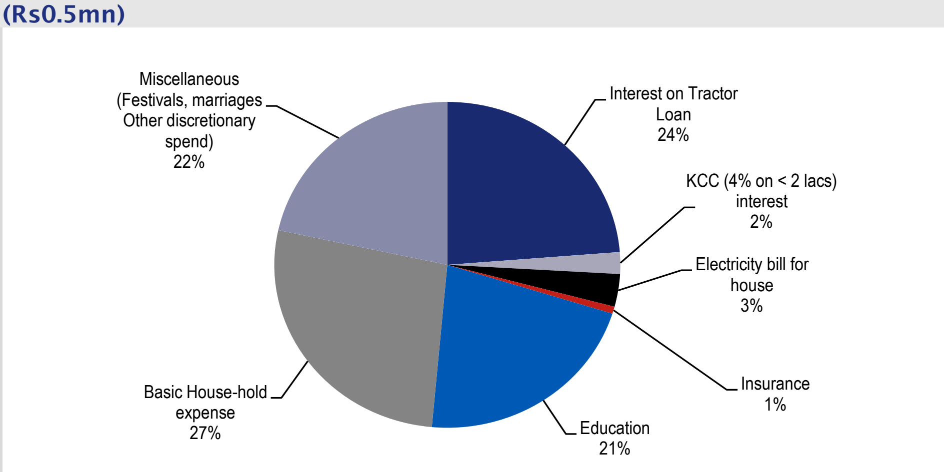
Box 08: Sample expenses from a large farmer – c.25% of annual expenses on debt repayment

We met a farmer near 30 km from Amritsar who owns 10 acre of well-irrigated land. He grows paddy, wheat and vegetables on these and in a good year earns up to Rs0.6mn from farming (Rs0.3mn from vegetables itself). He has another source of income from a trading job and earns Rs0.3mn per year.

We probed his household expenses and c.25% of the total expense is on loan re-payments (majority on the tractor loan) and forms the largest individual expense. Among other expenses, education takes up a large portion (21%) as his two children go to a private school and the family is quite inclined to provide the best available education to their children, a common theme we encountered in our trip across country.

After basic household expenses, discretionary expenses form 22% of total expenses and our discussions indicated this component is highly co-related with farm realisations.

Exhibit 55. Annual expenditure composition for large farmer in Punjab (Rs0.5mn)



Source: Rural Safari

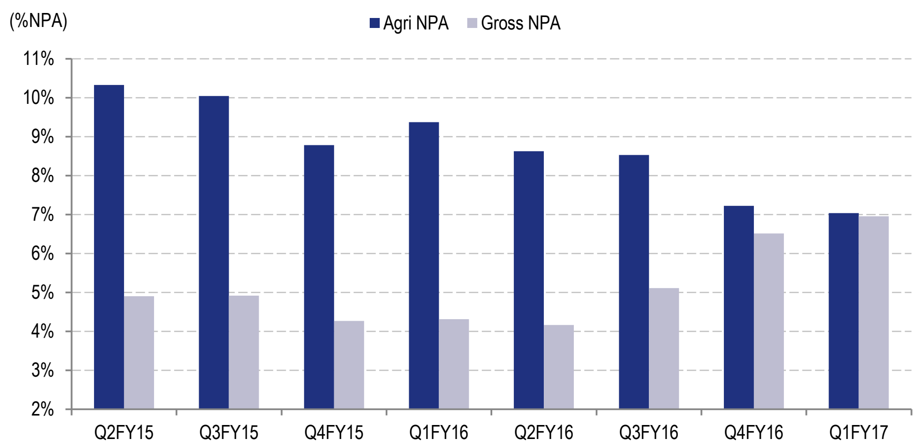
Deleveraging and investments in farm/house to take precedence

Based on our estimate of the farm and non-farm income growth across states, wealth effect, we expect rural consumption sentiment to be ahead in all states we travelled to, barring Karnataka.

Two years of weak farm income has not only increased the degree of leverage in rural India but also curbed discretionary consumption, which is well reflected in the subdued volume growth in PV and Consumables segment (exhibit 58). However year 2016 has brought some respite to farmers who are now eyeing the additional income from the current harvesting season and expectations of a good Rabi crop. Unequivocally, it is repayment of existing loans/debt that tops his priority list followed by other expenses; this bodes well for collections and is likely to lower NPAs for rural focused financiers such as MMFS. The other priority areas for spending, as per our survey findings are: (a) children's education, (b) investments in farm output improvement, (c) investments in house-building and repair, and (d) increased allocation towards spending on festivals and marriages.

Our interaction with rural folks suggest they would use additional farm income firstly to get rid of some of the existing loans, which as per our estimates is expected to lower EMI/Income ratio by at least c.200bps in FY17. (Exhibit 53, 55). It is interesting to note that even in a challenging farm environment, Agri-NPA were contained and improved farm income in FY17 is likely to further reduce it.

Exhibit 56. Agri. NPA on declining trend; to further reduce with improved cash flow from 3QFY17 (SBI)



Source: SBI, JM Financial

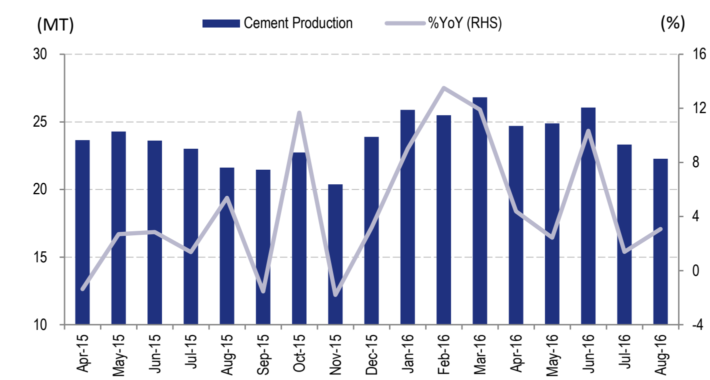
It is encouraging to hear rural families do not wish to compromise on their children's education unless it is absolutely necessary to make ends meet, and therefore would put educational spending second on the priority list. Besides this, the other areas to attract spending are:

a) **Farm investments:** Given that the past few years have been extreme in terms of monsoon shortfall and the resulting vulnerability to good irrigation system, farmers are keen to adopt and build efficient water retention practices across farms. So, we reckon investments in new tube-wells, new drills and improvement in farm topography would be a key priority area for the next six months.

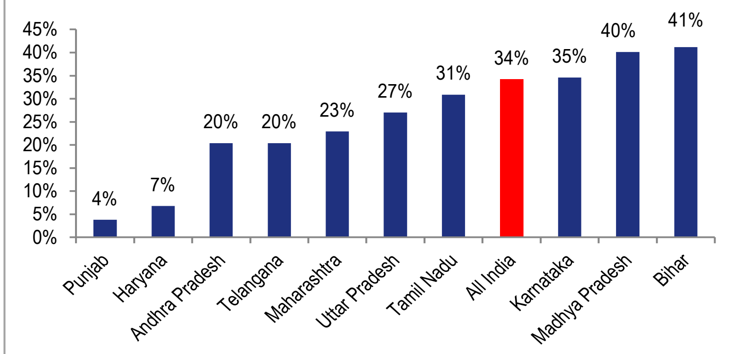
b) **House repair and construction:** This round of rural survey re-affirmed households' intentions to undertake house repairs and maintenance works as well as new constructions, if required. Given the good Kharif harvest and equally likely good Rabi season, households may not shy away from investing in residential land and houses. Our discussion with cement dealers suggest that initial signs for house construction and building are already present and as such they expect 2HFY17 demand to be driven by rural housing recovery.

Exhibit 57. Increased investment in rural housing to drive cement demand

Cement volume off-take remains modest, to pickup with growth in rural income



Share of rural houses which are kutcha or semi-pucca (%)



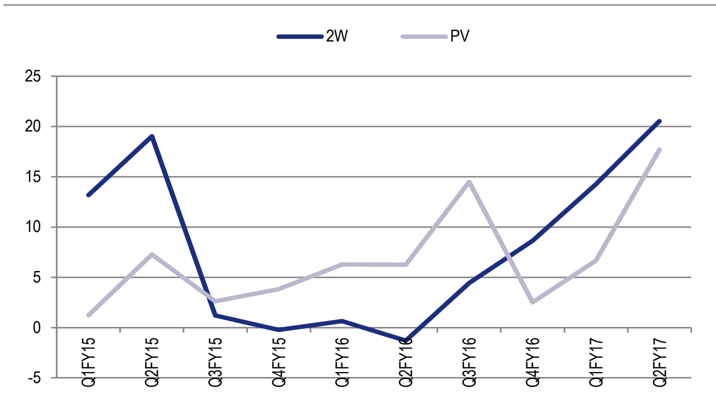
Source: CMIE, JM Financial

It is, however, interesting to note that in Punjab and Haryana, more than 90% of all houses are Pucca (concrete) houses vis-à-vis other states such as MP and Bihar where over 40% of households are Kuchha (non-concrete). Thus, there is ample scope for increased spending on housing in the latter states. At an all-India level, the number of non-Pucca houses reduced from 50% in 2005 to 34% in 2013.

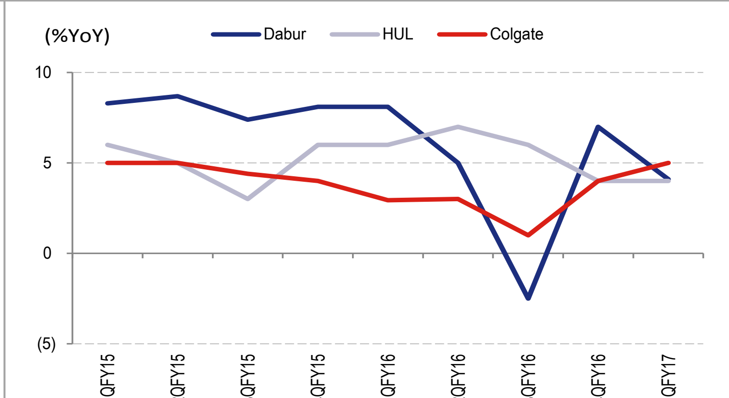
c) **Consumption demand to also get a boost:** Families have also expressed their keenness to spend on discretionary goods during special occasions like festivals and marriages. While farm dependent families had scaled down spending on marriages in the past two years, there have also been instances when a big event such as a marriage was delayed due to limited spending capacity. In light of the same, we expect average spending on marriages and other festivals to increase, going forward which would prove beneficial for apparels, consumer durables and the overall rural economy. Even as the traditional marriage services market is quite a fragmented one, there are players such as V-mart with presence in mid-tier towns that could benefit from uptake in spending.

Exhibit 58. Rural income growth to boost discretionary consumption

After weak 6 quarters, 2W and PV volumes have seen growth revive – rural spend to further boost growth rates



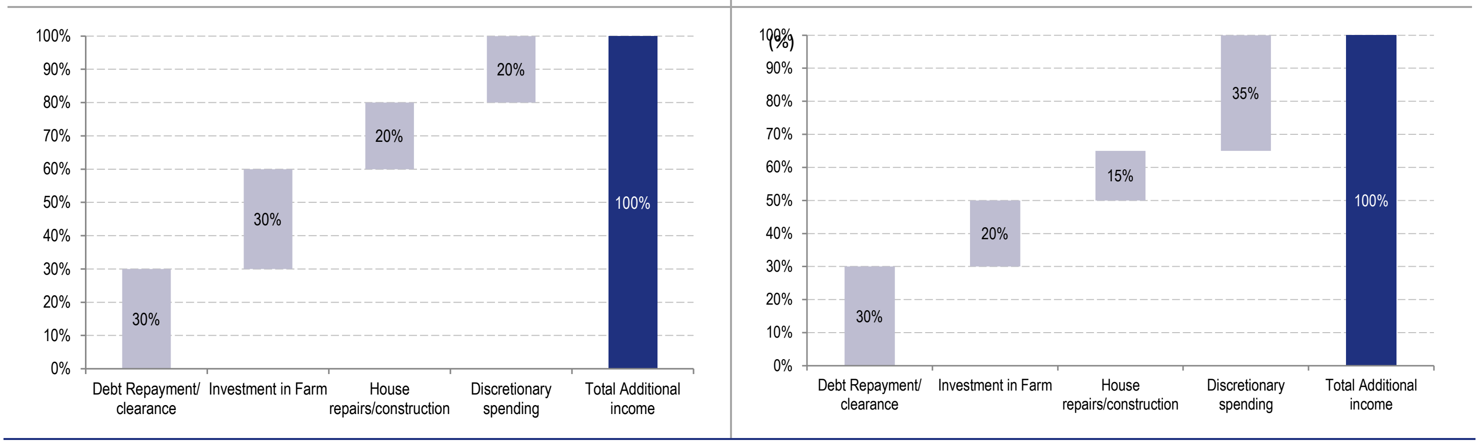
We expect improvement in volume growth for key consumption related companies



Source: CMIE, JM Financial

A sample allocation of surplus income during FY17: Based on our interaction with large and small farmers, we believe a sample allocation of the surplus during FY17 could be utilised as below. Apart from debt repayment (includes any school related debt), investments in farm and house repair would be a major investment. Given the income size, the discretionary spend amount could be limited (20%) in the case of a small farmer, while larger farmers would have much higher or 35% of share for discretionary spending.

Exhibit 59. A sample allocation of additional income during FY17 for a large and small farmer



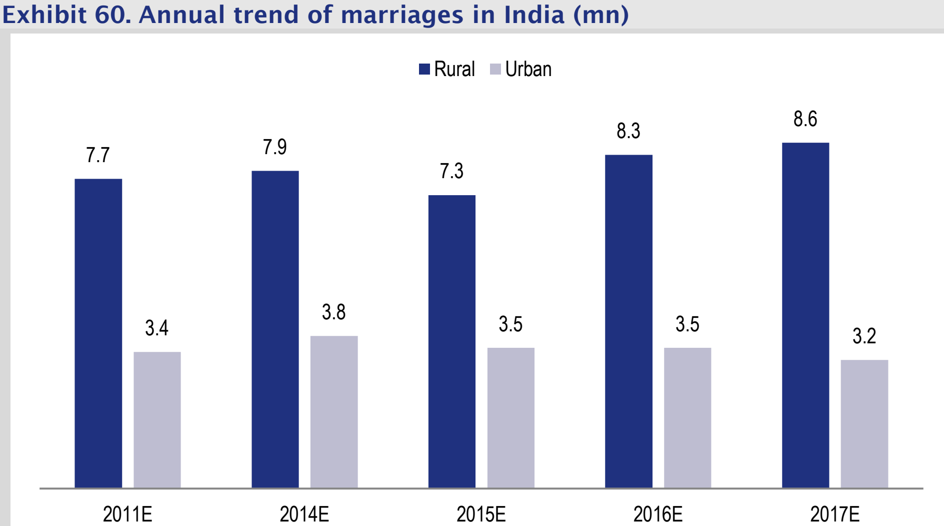
Source: Rural Safari

Box 09: Rural households now looking to increase wedding related spending

Weddings are one of the biggest events in Indian families and as such form a crucial part of Indian tradition and culture. Families typically spend a large part of their income and savings on their children's wedding; as per industry report, an average of c.10mn weddings take place in India annually out of which c.70% take place in rural India.

So much so that the Indian marriage services industry is (rural and urban combined) is estimated worth Rs3.3tn ($50bn) with almost 50% of expenditure attributable to catering services, decoration and venue bookings. This means an average of Rs0.3mn / 0.1mn are spent per wedding/rural wedding in India. Other significant heads of expenditure include jewellery, apparels, consumer durables and automobiles.

Exhibit 60. Annual trend of marriages in India (mn)

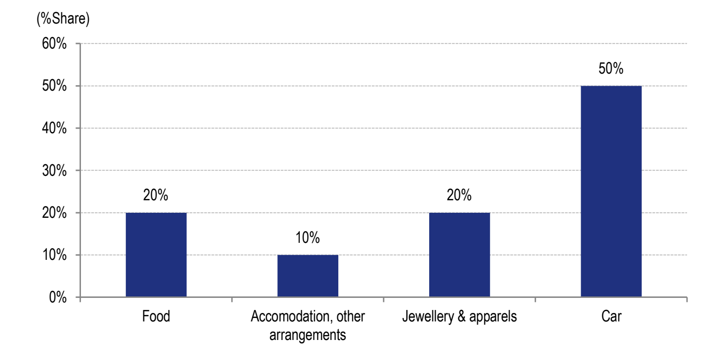


Source: Bharat Matrimony DRHP, Rural Safari

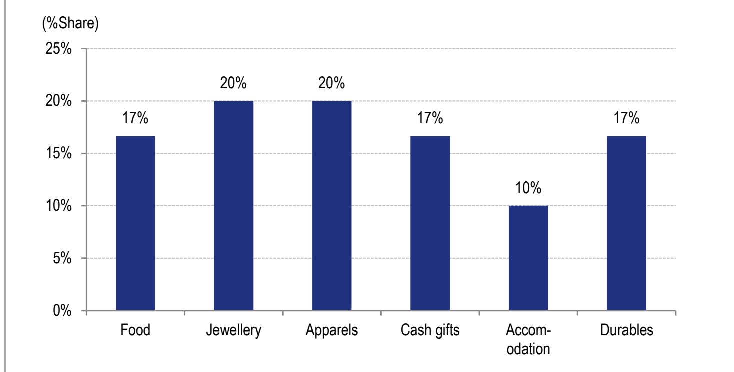
Based on our discussions with farmers across the country, we believe the revival of rural incomes will lead to increased spending on marriages

Exhibit 61. Examples from our interaction - Spending on daughter's wedding varied from Rs1mn for a large farmer to Rs0.3mn for marginal farmer

Composition of wedding spending by rich farmer (Rs1mn)



Composition of wedding spending by marginal farmer(Rs0.3mn)



Source: Rural Safari

Key takeaway: Based on our estimate of the farm and non-farm income growth across states, wealth effect, we expect rural consumption sentiment to be ahead in all states we travelled to, barring Karnataka.

Exhibit 62. State-wise rural consumption spending index

State	Farm Income	Non-Farm Income	Wealth Effect	Rural Consumption Sentiment
Madhya Pradesh	Strong	Modest	Flat	Modest
Uttar Pradesh	Strong	Modest	Strong	Strong
Punjab	Strong	Strong	Decline	Strong
Bihar	Modest	Modest	Strong	Strong
Andhra Pradesh	Strong	Strong	Modest	Strong
Telangana	Strong	Strong	Modest	Strong
Haryana	Strong	Flat	Decline	Modest
Karnataka	Decline	Flat	Flat	Decline
Tamil Nadu	Modest	Flat	Flat	Modest
Maharashtra	Modest	Flat	Flat	Modest

Source: Rural Safari **: Strong** **: Modest** : Flat **: Decline**

Sector Comments

Rural NBFC: Rural income showing signs of improvement; pick up in government spending could lead to strong recovery

We visited Mahindra Finance, Magma Finance and other financiers' branches during our recent rural trip. Our interactions at branches and with dealers and customers indicate positive sentiments across most regions. There was a sense of cyclical upturn in agri. and non-farm income attributed mainly to: i) well-distributed rain and improved outlook for Kharif crop; ii) increase in pre-election spending in regions such as UP and Punjab; and iii) decline in input costs due to good monsoon, lower usage of fertilizers and fuel costs. Furthermore, farmers are desisting attempts to repossess assets, indicating that they believe in their ability to pay when the crop has been harvested. While states such as UP and Maharashtra are showing signs of improvement, sentiments remained weak in some part of Karnataka due to poor monsoon and erratic weather patterns. Though the improvement in farm income and pick up in the Tractor and CV segments growth trend is encouraging, investors are still waiting for the pace of infrastructure activity to pick up. The current scenario is reminiscent of FY11, when rural India bounced back from a drought year driven by 2% above-normal monsoons and the government's rural stimuli—in that year, agri. GDP saw 8% growth, tractors grew 20% and 2-wheelers went up 19%; rural financiers such as MMFS witnessed robust AUM growth of 47% and its GNPL declined to 4.2% in FY11 (vs. 7% in FY10). Going forward, we believe government spending in rural India, coupled with the pick up in infra activities, should improve non-agri. income for farmers. Thus, FY17 will be a year of consolidation and the base will be set for rural growth revival in FY18.

Our Mahindra Finance and Magma Fincorp branch visits indicated increased sense of optimism in rural economy

- **Rural income take-off a reality:** We believe that rural incomes are going to be higher YoY across the board as: a) rainfall has been sufficient and timely, and sowing is better YoY—this could increase yield and total output, and b) input costs were lower. The reduction in input cost can be ascribed to: i) the reduction in cost of fertilizer, ii) lower spending on irrigation due to good rains, iii) lesser incidences of pest and fungal attacks leading to reduced demand for pesticides and fungicides for paddy and sugarcane, and iv) lower fuel usage. Furthermore, as per MMFS' management, farmers are desisting attempts to repossess assets, indicating that they believe in their ability to pay when the crop has been harvested.

- **Takeaways from MMFS' management about its performance in different states**: The past two years have been difficult for MMFS, with its gross NPLs increasing from 3% in FY12 to c.8% in FY16. It has a major presence in 10 large states, namely Uttar Pradesh, Andhra Pradesh, Bihar, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Rajasthan, Telangana and Tamil Nadu. According to the management, economic growth in Andhra Pradesh, Telangana, UP and Gujarat remain healthy, mainly due to the infrastructure drive that has been initiated by their respective state governments. However, states such as Karnataka that did not receive sufficient rainfall continue to be under stress. Additionally, it has had to deal with other problems, including the mining ban and the lack of a pick-up in economic activity. Situation in states such as Bihar and Kerala remain stable, but no improvement has been reported.

  As per the management, Maharashtra and MP are witnessing some improvement recently. With 25% of the NPLs coming from Maharashtra and MP, it expects higher recoveries from these two states.

- **Expect govt. spending to pick up:** Several measures were announced by the government in this budget to respond to the weakness in rural economy including: 1) increase in budget outlay for NREGA schemes (11% YoY), rural development (26.5% YoY), and agriculture and allied services (79.9% YoY); and 2) doubling farmers' earnings in five years via a series of measures such as transparent procurement system, increasing area under irrigation, comprehensive crop insurance scheme, improved market access and better road connectivity. Additionally, there would be positive impact of the 7th pay commission, which is likely to improve customer cash flows. The current scenario is reminiscent of FY11, when rural India bounced back from a drought year, thanks to 2% above-normal monsoons and the government's rural stimuli. In that year, agri. GDP rose 8%, while, tractors grew 20% YoY and 2-wheelers 19% YoY. Further, rural financiers such as MMFS witnessed 47% AUM growth, while its GNPL declined to 4.2% in FY11 (vs. 7% in FY10).

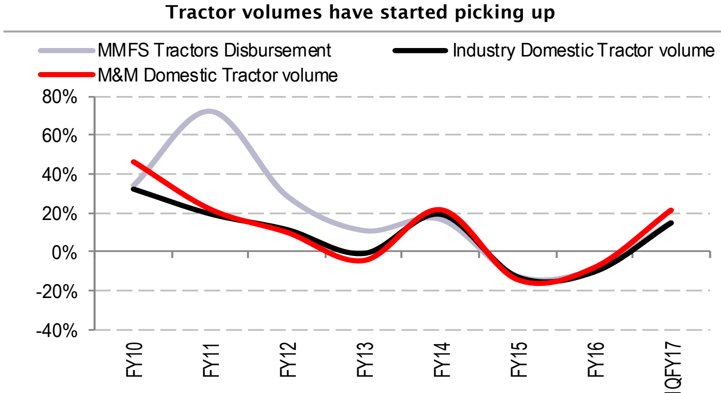
- **Farmers still prefer informal channels of credit; huge penetration opportunity for MFIs and NBFCs:** Usage of Kisan credit card (Rs40,000–50,000 per acre of land at an interest rate of 4% up to 2 lakhs) and self-help groups (microfinance lending) are the two formal channels of lending prevalent among farmers, weavers and dairy farmers. In the areas, where bank penetration and road connectivity is not strong, they mostly depend on the informal channel of lending. On several occasions, commission agents give loans to farmers, shopkeepers give seeds on credit, and businesses who procure from weavers give credit to them for the purchase of machines. We believe this is mainly the unsecured loans given to customers, who do not have access to Kisan credit cards or any other collateral against which they can borrow. With MFI penetration increasing in rural regions, there could be a shift borrowing from informal channels to formal channels such as MFIs and later to rural NBFCs as customers start moving upwards in the value chain.

Significant scope of institutional credit growth as rural population shifts from informal sources of credit

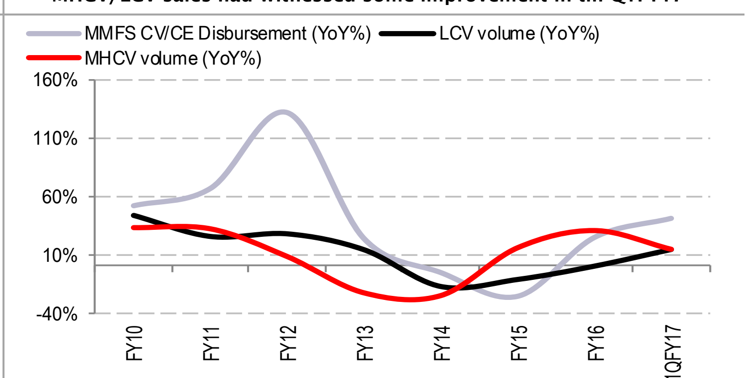
- **Pick up in tractor and CV growth trend is encouraging, but car sales remain sluggish:** While tractor (15% in 1QFY17) and CV (14% in 1QFY17) demand is witnessing some recovery, car volumes remain flat YoY. Improvement in tractor volumes was driven by better rainfall and improvement in construction and allied activities in some areas. Consequently MMFS' tractor disbursements have improved to 15% YoY in 1QFY17, while auto/UV (1% YoY in 1QFY17) and car disbursements (-1% YoY in 1QFY17) have been sluggish. CV/CE disbursement growth was, however, encouraging with 41% YoY in 1QFY17. Our channel checks suggest that the sales of all farm-related equipment have been strong in the current quarter, which could lead to higher disbursements in the quarter.

Exhibit 63. Trend in vehicle sales vs. disbursements – YoY%

Tractor volumes have started picking up



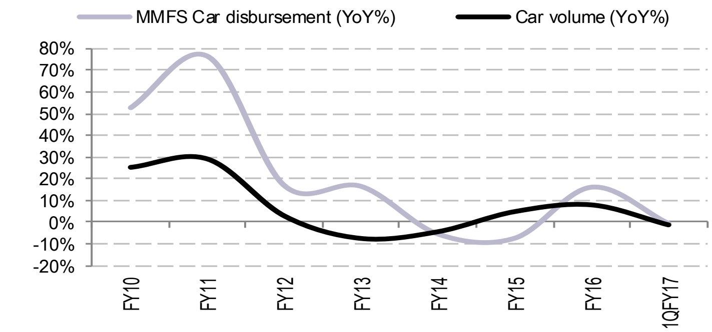
MHCV/LCV sales had witnessed some improvement in till Q1FY17

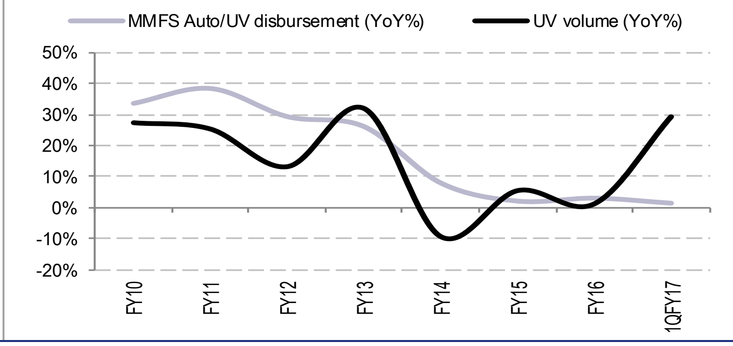


Source: Company, CMIE, SIAM

Exhibit 64. Trend in vehicle sales vs. disbursements – YoY%

Car volumes growth have remained a drag	UV volumes have also started picking up





Source: Company

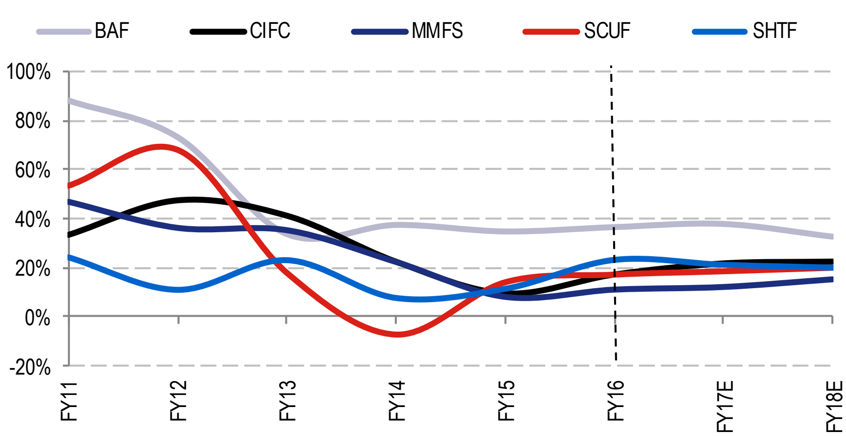
- **Pick up in infra activities will be key growth driver for rural India**: While the improvement in farm income is to be welcomed, investors are still waiting for the pace of infrastructure activity to pick up. The government has stepped up spending on infrastructure-related projects sharply by increasing allocation to roads and rural infrastructure. It has proposed a total outlay of Rs970bn in roads, including Rs190bn under Pradhan Mantri Gram Sadak Yojana (PMGSY) for rural roads. The increased pace of rural road construction would be the key growth driver for rural India. Going forward, we believe, government spending in rural India coupled with pick up in infra activities should improve the non-agri. income for farmers.

- **Long-term structural drivers intact for rural economy:** Given weak sentiment in farming and lower income levels, consumption demand in the near term looks subdued. However, we believe long-term structural trends for rural India remain firm on: (a) increasing profitability through cash crops and allied activities, (b) increased diversification through non-farming income, (c) targeted direct benefit transfer, and (d) usage of higher mechanisation and awareness of technical advancements.

Expect FY17 to be a year of consolidation and AUM growth pick-up from FY18

- **Estimates remain conservative; expect some pick up in AUM growth only in FY18**: We expect FY17 to be a year of consolidation and our estimates remain conservative. For instance, in the case of MMFS, we are factoring 12% growth in AUM for FY17E. However, in FY18E, we are factoring a pick-up in AUM growth at 15%. For NBFCs under coverage we expect 15-33% growth in AUM in FY18E, as shown below:

Exhibit 65. AUM growth trends for NBFCs under coverage



Source: JM Financial

- **Prefer MMFS as top pick among rural NBFCs:** We believe MMFS is well placed to benefit from rural recovery, given normal monsoon and pick up in government spending; we prefer Mahindra Finance as a top pick in the rural space.

Exhibit 66. Peer valuations

	RoA (%)			RoE (%)			P/B			P/E		
	FY16	FY17E	FY18E	FY16	FY17E	FY18E	FY16	FY17E	FY18E	FY16	FY17E	FY18E
SHTF	1.85%	2.14%	2.19%	12.2%	14.9%	16.1%	2.59	2.28	2.00	22.3	16.3	13.2
MMFS	1.80%	2.05%	2.47%	11.5%	13.5%	16.6%	3.45	3.15	2.81	31.1	24.4	17.9
SCUF	2.72%	2.76%	2.73%	12.3%	13.2%	14.0%	3.34	3.02	2.72	28.4	24.0	20.4
BAF	3.23%	3.32%	3.38%	20.9%	21.5%	23.3%	7.65	6.18	5.00	44.5	32.0	23.7
CIFC	2.20%	2.37%	2.37%	18.0%	18.4%	19.0%	5.15	4.40	3.74	33.1	25.8	21.3

Source: Company, JM Financial, Valuations as on 14 October 2016

Box 10: MMFS branch visit summary (Amritsar)

We visited MMFS' branch in Amritsar during our recent rural trip to understand the current rural economic scenario. Customer sentiments have improved due to well-distributed rainfall and the timely arrival of the monsoon. There has been some improvement in customer cash flow as pre-election spending has picked up and project deadline has been expedited. Additionally, farm productivity has improved and there has been a decline in farm-related costs (overall savings of Rs2,000-3,000/acre) due to good rains, reduction in fertiliser costs, lower usage of diesel and lesser incidences of pest attacks. Asset quality is indicating improvement, as collection efficiency in the 3-5 month bucket has improved to 110-115% (vs. 98% in Q1), while the recovery rate has improved to 15% (vs. 5% YoY)

- **Better crop outlook and decline in input costs has improved farm income:** It was the best monsoon in the past five years and happened at the appropriate time. Paddy crop expected to be good this year and overall sentiments are positive. Additionally, there was a decline in farm-related costs (overall savings of Rs2,000-3,000/acre) attributed mainly to: i) reduction in the cost of fertilizer, ii) lower spending on irrigation due to good rains, and iii) lesser incidences of pest and fungal attacks, leading to reduced demand for pesticides and fungicides for paddy and sugarcane.
- **Capex activity across Punjab in full swing:** MMFS' customer cash flow has witnessed some improvement in the past 6 months due to pre-election spending. Project deadline has been expedited for some large projects such as road/highway construction, sewage repairs and bus corridor project, as the election approaches. The world's largest single rooftop solar plant was recently opened near Beas River during May'16. Payments to CV/CE brokers have also been released, which has improved cash flows.
- **Healthy growth trends:** Disbursement growth has improved to 30% YoY, driven by: i) realignment of verticals—M&M's vehicle financing through MMFS has increased to 70% (vs. 50% earlier), as dealer focus has increased after the restructuring; ii) improving demand for tractors; and iii) focus on large ticket size products such as Mahindra Jeeto. CV growth is still muted in single digits, but sentiments have improved as even 2-3 fleet operators and FTUs have started purchasing.
- **New structure to shift focus from branch profitability to product profitability:** The Company has made changes in its organisational structure in May'16, wherein a separate vertical for the sales and collection teams has been formed. With the management having increased its product portfolio in the past few years, focus has shifted to product profitability. In the new

structure, the sales team (4,500+ employees) will focus on product-wise sales and after 12 months, collection process will move to the in-house collection team (6,000+ employees), which will be supported by a legal team. With increasing the area of operations (from 1 branch to 5 branches per collection officer), it has also improved employee focus; its relationships with dealers have improved.

- **Asset quality is witnessing some improvement:** Collection efficiency for Amritsar has improved in the 3–5 months bucket to 110–115% (vs. 98% in Q1) and is expected to improve further during 2HFY17. Slippages have declined YoY, while reversals have increased (35% in >150 DPD NPLs). Customer sentiments have improved and even 5–10 month overdue customers have started paying partially. Recovery rate has improved to 15% (vs. 5% YoY). However, some products such as three-wheelers are reporting higher delinquencies. There has been increased focus on repossession, as the repossession rate has doubled in this quarter.

Box 11: Magma Fincorp (NR) visit summary

We also visited branches of Magma Fincorp primarily in North India. Magma Fincorp is an Indian NBFC with a loan book size of Rs178bn that is primarily focused towards the tractor and utility vehicle segments (52% of loan book in 1Q17). Agri finance and Mortgage finance account for c.18-19% of the loan book.

The company has 257 branches and c.9,000 employees and 32% of branches are in rural regions, 47% in semi-urban and rest 20% in urban areas. Our interactions indicated optimism on farm income revival and the increased likelihood of reduction in NPA's.

Key takeaways from our interactions

- **Restructuring aiding collection efficiency:** In Dec'15, the company completed restructuring of its operations from a product-based to a branch-based structure, thereby enabling each branch to cater to all segments of the company's portfolio. In the previous system, each customer was serviced by multiple teams leading to weak customer feedback. Our visits indicated that collection efficiency and customer feedback have improved helped by the new organisation structure.

- **Focus on improving quality of book with back-ended growth:** Driven by rural weakness, Gross NPA and net NPA had reached 8.7%/6.9% in 1Q17, up by 200bps+ on 120 dpd. Company is focused on reducing NPA's in the near term and would focus on strong growth during FY18.

- **Improved sentiment in rural India:** Our discussions indicated optimism around farm income and initial signs from automobile dealers have been quite positive on the sales growth. Sales of tractors have clearly seen an uptick, with growth rates varying from a strong 20%+ YoY in MP to c.7-8% YoY in Bihar (as sales had not declined sharply in FY15-16, thereby revival is also slow).

- **Other highlights:** Magma is benefiting from the increase in demand for Sonalika tractors, particularly in Bihar & Jharkhand where it is financing 500 tractors/month against run-rate of 400 earlier. Branches are focused on improvement in employee productivity and profitability through increase in technology usage.

Consumer Goods

The recent good monsoon season after 2 successive years of failure has rekindled hopes of recovery in rural demand driven by strong growth in farm incomes. Our recent rural trip has indeed confirmed that rural income could see a healthy growth relative to previous year aided largely by higher yields and a low base. Rural demand improvement would, though, be more gradual as crop failures have resulted in increased leverage and expenditure would be largely on priority segments like children education, home improvement and marriages. In our view, low-priced apparels segment would be a clear beneficiary of a good rural marriage season and V-Mart appears to be well-positioned to leverage this opportunity. Jewellery could also benefit from a good marriage season but demand could be impacted by higher gold prices.

- **Good monsoon to help drive healthy growth in rural incomes:** Rural incomes are expected to witness a healthy growth this year as monsoon has been close to long term average levels relative to high deficit witnessed over past 2 years. Good monsoon is expected to drive sharp growth in yields (certain crops are expected to see yields doubling in the current year) which would be partially negated by slightly lower prices for certain crops. Overall, though, income growth is expected to be quite healthy but would be of a lower base. In absolute terms, income is still expected to be less than 10% higher relative to levels witnessed in FY14.

Exhibit 67. Recent good monsoon has aided in driving higher crop yields

Source: Rural Safari

- **Disposable income would still remain limited:** Last 2 years of deficit monsoon adversely impacted crop yields and resulted in sharp increase in leverage for farmers. Lower incomes also compelled famers to delay purchases of discretionary items and reduce frequency of consumption of non-discretionary items. While we are expecting a good growth in rural incomes, in absolute terms, it is largely on account of a lower base. A significant part of the increased income is expected to be utilized in reducing the high cost leverage. Surplus income available for consumption could be quite limited, in our view.

- **Marriage, education and home improvement would remain a priority:** Given limited surplus income, farmers are expected to prioritize certain expenditures over others. As per our conversation, expenditures on children education, marriages and home improvements ranked higher on their priority lists. Some of the utility items like bikes/scooters, tractors, warehouses etc could also witness increased demand.

- **Apparels to be a prime-beneficiary of a good marriage season; V-mart to benefit from this trend:** Over the past two years, there have been steep cuts on marriage expenditures on account of poor incomes in rural areas. As per our recent survey, higher rural income is expected drive a healthy growth in marriage related expenditures. Apparels segment is a beneficiary of a good marriage season and higher budget for marriages is expected to drive strong demand for fast-fashion apparels. V-Mart has a higher presence in agrarian states like UP and Bihar and could be a beneficiary of this trend. V-Mart also sells products at lower price-points which makes it affordable for rural consumers.

- **Recovery in staples to be more gradual:** Pressure on incomes over past two years has also impacted throughputs from general/kirana stores on account of lower frequency of consumption of daily-use items. Most Kirana stores that we spoke to have witnessed lower/flattish sales this year. In the initial part of the year, sales on credit were also experiencing delayed payments though recent increase in rural incomes has led to timely payments. However, there have been no signs of pick-up in demand as yet. Rural consumers are expected to initially apply surplus income towards utility items like scooters and tractors as well as on home improvement while consumption of staples may remain at current levels. Recovery in staples needs to be driven by increased frequency of usage and premiumization and constraints on surplus income, in our view, could result in recovery being more gradual.

We expect gradual recovery in staples through increased frequency of usage and premiumization

Box 12: A kirana shop in Sehore district of Madhya Pradesh.

- Witnessing flattish income this year, so far, despite a good yield of soyabean crop (primary kharif crop) in this region
- Lux and Lifebuoy are the largest selling soap brands while Wheel and Ghari brands dominate detergents segment
- In shampoos, Clinic plus and Dove sachets are the best-selling brands while Parachute and Shanti Amla witness higher demand in hair oil space
- Goodricke is the most popular tea brand while Nescafe is the only brand present in coffee segment
- Does not keep SKU's of Horlicks or Bournvita.

Exhibit 68. A retailer in Sehore, MP

Source: Rural Safari

- **Higher gold prices could impact demand for jewellery though:** Higher budget for marriages is generally expected to result in higher demand for jewellery given it is one of the key components of marriage expenditures. However, higher gold prices could impact demand for jewellery and gold coins. Given rural segment is largely catered by the unorganized jewellers, the listed players may also not be a direct beneficiary of this trend, in our view.

- **Patanjali products availability in rural areas remains limited:** As per our survey, availability of Patanjali products in rural areas remains limited. While stores in some areas prominently displayed Patanjali advertisements, other stores were not even stocking Patanjali products on account of low demand. Ayurvedic/natural products attractiveness remains lower amongst farmers on account of lower price competitiveness (synthetic products like lifebuoy soaps available at lower price points) and lower fascination with natural products. Patanjali is also witnessing competition from other Ayurvedic brands like Kesh King and Himalaya.

Exhibit 69. Patanjali products have witnessed mixed demand from the rural segment

Does not stock Patanjali products

Patanjali products witnessing good traction

Source: Rural Safari

Automobiles

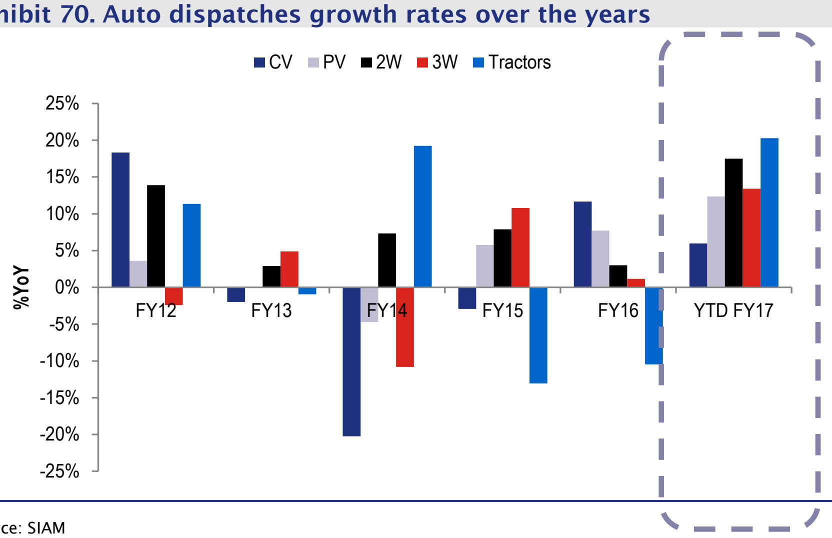
Our latest trip across rural hinterlands over the past few weeks (4th 'Rural Safari' series, 2016) brought to light higher farm yields along with lower input costs (lower pests, lower diesel prices, lower diesel consumption due to better spread of rainfall and timing of rainfall). This, we believe, is likely to convert into better net farm income. As the last two years were subdued due to weak monsoon leading to suppression of demand, with recovery of the farm incomes this year, there is likely to be a healthy uptick in automobile sales. We feel rural household expenditure will start with purchase of essential items such as tractors/implements and then spread to discretionary purchases in favor of 2-wheelers and 4-wheelers, especially during the festive and wedding season. However, we have to tide over the period of month of October as some parts of the country witnessed unseasonal rains which may possibly lead to damage to crops, making farmers cautious on their spending.

Likely uptick in automobile sales driven by recovery in rural income

During our survey, we found out that PV OEMs have increased sales activities and started targeting different customer segments based on the benefits of 7th pay commission. Teachers with monthly income of ~30k were one of the target segments. It has been seen that while their monthly incomes are not very high, their expenses too are extremely low. Hence, their affordability levels are much better than person with a similar income in the urban areas. Hence, they have better ability to afford an entry level sedan like 'Dzire'. Recovery in rural sales, along with already positive urban demand, will lead to a healthy automobiles sales growth during the year.

Our trip also reassures our belief in the long-term demand potential and growth drivers of automobiles in the rural/semi-urban India. As farm mechanization increasingly picks pace, we expect tractor volumes to grow at a healthy clip over medium-long term. Similarly, given the structural drivers (like greater aspirations, growing income, better infrastructure, and lower penetration) in place, we see strong growth opportunities for both PV and 2-wheeler players. Further, our interaction with auto companies indicate that they continue to focus on distribution/marketing set-up in the rural India, highlighting their commitment to the opportunity called 'Rural India'.

Exhibit 70. Auto dispatches growth rates over the years



Source: SIAM

Two Wheelers

2-wheelers witness healthy pick-up in demand: 2-wheelers continues to be the mainstay for transport in rural/semi urban India. During our travel across the rural hinterlands, we observed anticipation of a healthy recovery, a departure from the pessimism seen earlier. During our visits, dealers had started stocking for the upcoming festive season. We think realization of higher farm income this year, combined with catalysts like festive and wedding season, can materially drive automobile sales. While scooters were already strong, pickup in motorcycle demand will aid overall two wheeler sales growth.

Exhibit 71. 2 wheeler penetration – Hero sub-dealer in rural Bihar

Source: Rural Safari

Hero maintains healthy recall among rural population

Ahead of the festive season, Hero Motocorp recently launched the new 150cc 'Achiever 150' motorcycle and has lined up refreshes of a few other models. Achiever 150 now comes with the new BS-IV compliant engine and also features the i3S technology to improve mileage. The earlier Splendor iSmart 110 was also well received in the market.

From our dealer interactions, Hero's Glamour 125 has gained healthy traction amongst customers as witnessed in the +33%YoY growth (until Sep'16) compared to overall motorcycle industry growth of 13%YoY.

Exhibit 72. Hero remains ubiquitous amongst rural customers

Source: Rural Safari

Strong marriage season to drive demand in 2HFY17: In the last two years, due to below average monsoon, spending on marriages was quite low key. Some people we interacted with had even postponed marriages in the family. However, this time we were greeted with positive sentiment across most of the towns that we visited. Spending on marriage is a key component of the overall rural expenditure basket. Hence, we believe marriage season this year would lead to increase in gifting and would give a leg-up to the 2 wheeler demand. Our interactions with farmers indicate that small and medium sized farmers would most likely opt for 2 wheeler gifts in marriages.

Scooter volume growth continues to be ahead of motorcycle

Improving rural/semi-urban infrastructure drives demand for scooters: Scooters continue its robust growth within 2 wheelers. At the industry level, scooters registered c.27% YTD in FY17 double that of 13% growth in motorcycle dispatches. Scooters currently occupy c.25-30% of the total 2 wheeler demand in many tier-3 towns while the same is still c.10-15% in villages. At the industry level, scooters comprise c.32% YTD of the total two wheeler sales in FY17 that has grown from c.15.5% of domestic 2 wheelers in FY10. Although we believe scooters will continue to outperform 2 wheelers and occupy a bigger share of the 2 wheeler market in-line with global trends, villages will take more time to catch up to this 'scooterisation' trend in the medium-term. Further as roads and infrastructure improve in rural and semi-urban areas, the demand for scooters will increase.

Exhibit 73. Honda continues to lead the scooters market

Hero Maestro Edge/Duet

Honda Activa

Source: Rural Safari

Exhibit 74. Festive sales - 2 wheeler stalls in rural AP

TVS stall for festive season in AP

Yamaha stall in AP

Source: Rural Safari

Rising Financing penetration in 2 wheelers: Increasingly more customers are opting for financing over cash purchases in semi-urban areas. The current penetration is at c.40% and in some areas even more than that. In the case of Hero Motocorp, captive financing from Hero Fincorp is gaining increasing traction, in all the places we visited. Hero Fincorp is also setting increasingly aggressive credit growth targets for its employees and rolling out attractive financing schemes on select models in select markets. Given the upcycle in 2 wheelers, Hero Fincorp would benefit from a) increasing volumes b) increasing financing penetration on the back of declining interest rates c) increasing customer awareness and risk taking ability and d) gaining market share from other financiers.

Royal Enfield – Most wanted in the premium segment: In every rural safari, Royal Enfield comes across as a strong aspirational purchase even in smaller towns. There is a strong desire to upgrade to higher capacity bikes and RE remains the bike of choice in that segment in semi-urban/tier 3 cities due to a) cult brand status b) all metal bike whereas bigger bikes from many competitors make use of plastic panels.

Exhibit 75. RE bike in Sehore Panchayat in Madhya Pradesh

Source: Rural Safari

Honda motorcycles lag Hero in top-of-mind recall: While Honda retains market leadership in scooters with 59% market share; they have not been able to meaningfully grow their market share in motorcycles. Despite Honda's product quality being on par or slightly better than competition in terms of technology, design and style elements, Honda motorcycles is largely in-line industry growth (14% in 1HFY17 compared to industry growth of 13%). Honda has also been offering discounts in its entry level 'Shine' and Dream series to push sales. During our interactions, we observed that while 'Hero' brand was well entrenched in the minds of buyers but it seems that that solely is no longer sufficient to guarantee success in a marketplace witnessing heightened level of competition.

Passenger Vehicles

Overall positive demand on upswing in rural economy and better infrastructure: Passenger vehicles grew at a healthy pace of 12%YoY YTD FY17 on continued traction in urban demand backed by new model launches and expectation of recovery in rural sales. We remain optimistic on the PV growth prospects and expect a steady (instead of robust) rural PV recovery.

Industry leader MSIL reported domestic growth of c.12%YTD FY17, in-line with industry growth, but more importantly it has posted recovery in its rural sales portfolio which accounts for one-third of total domestic sales. During August-September period, the company reported 4% rural sales growth after one full year of declining growth trend, reeling under the impact of consecutive crop failures.

Improving rural infrastructure aids compact cars rather than UVs: Rural infrastructure has drastically improved over a period of 3- years. This has led to consumers consider and opt for compact vehicles than just bigger, expensive rural specific UVs. Our interaction with dealers confirmed such a shift in consumer behavior. Now, customers consider purchasing 'Celerio' and 'Dzire' in place of only opting for 'Bolero' earlier. The trend is likely to sustain as the consumer benefits by getting lower entry price as compared to a steep price of ~Rs 6.5 lakhs and over earlier. We expect steady recovery in Maruti's rural portfolio which forms 33% of its domestic sales.

Exhibit 76. Maruti Suzuki and Hyundai remain the most popular choices in semi-urban/tier 3 towns

Source: Rural Safari

Maruti dealers were quite optimistic on the sales growth during festive season

Healthy growth expectations amongst Maruti dealers: Maruti dealers were the most excited lot and reported healthy increase in footfalls and customer enquiries. They were expecting huge festive season sales and were positive on the uptick during the marriage season. The shift might favor Maruti as entry and compact segment demand will soar. Due to capacity constraints, the company might resort to reducing discounts. In such a scenario the challenge lies with Mahindra and their rural strong hold product 'Bolero'. Without a reversal in 'Bolero' volumes, it will be difficult for M&M to maintain market share or revive its UV portfolio.

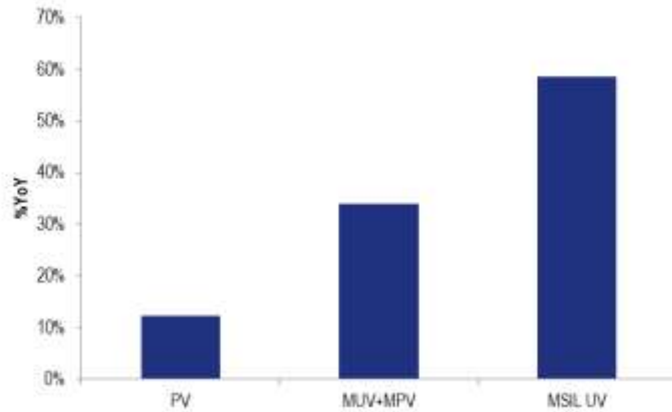
7th pay commission to aid volume growth: During our survey we found out that PV OEMs have started targeting different customer segments based on the benefits of 7th pay commission. Teachers with monthly income of 30k were one of the target segments that we came to know of during our field visits. In the past it has been seen that while monthly income is not very high their expenses too are extremely low. Hence their affordability levels are much better than person with a similar income in the urban areas and hence they have better ability to buy an entry level sedan like 'Dzire'.

Maruti's compact UV 'Vitara Brezza' and 'Baleno' continue to enjoy significant waiting periods that augurs well for sustainable demand for these vehicles in semi-urban markets.

Exhibit 77. Maruti Suzuki continues to improve its reach in rural markets

Maruti Suzuki and Hyundai remain the most popular choices in semi-urban/tier 3 towns

Vitara Brezza dispatches have been strong that has lifted MSIL's UV portfolio growth in YTD FY17



Source: Rural Safari

During our interaction with auto dealers in tier 3 towns and beyond, we learnt that recently launched Renault 'Kwid 800' seems to be creating excitement amongst the entry level car buyers in the semi-urban markets. While there was an initial erosion of retail market share for Maruti's 'Alto', the trend seems to be reversing. Further, as per a recent media article, Renault has recalled 50,000 'Kwid' to fix faulty fuel system. We continue to feel that Kwid has to prove itself on the reliability aspect over a longer period of time.

PV gifting in marriages – Anecdotes from our visit to rural Punjab: We met a section of relative medium-large farmers owning/cultivating more than 20 acres of land in rural areas of Punjab. Most of them are engaged in mechanized farming over large tracts of land. Since most of Punjab is covered under irrigation (canals/tube wells), agriculture in Punjab is largely independent of monsoon. Hence yield per acre is amongst the highest in India. Consequently, income levels for medium-large farmers are fairly steady and not very volatile unlike the rest of the country. During our discussions, we learnt that spending on marriages is a key rural household expenditure on which most households do not compromise or cut expenditure. In fact, many rural households take on debt to keep up the expenditure on marriages as they wish to remain high on the social ladder. From our interactions with farmers, we gather that large farmers typically spend up to Rs3-4.5mn on marriages while relatively medium farmers spend Rs1mn. Most well-off rural families gift Maruti Suzuki 'Swift' during marriages while relatively less privileged farmer's gift Maruti 'Alto'. Hence, sale of passenger vehicles typically rises during marriage seasons.

Tractors

Tractor demand has staged a come-back after two years of secular decline:

Tractors have seen 20%YoY volume growth by Sep'16

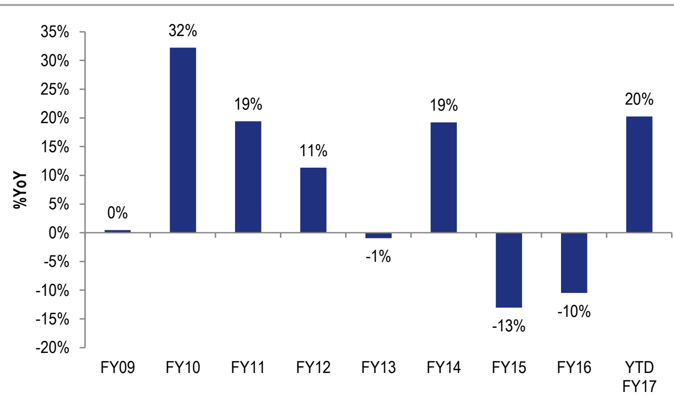
Domestic tractor sales have continued to witness a sharp turnaround led by upbeat rural economy on the back of good monsoons. Domestic tractor industry volumes declined 13%/10.5% YoY in FY15/FY16 on account of 3 consecutive crop failures. In the last 2 years, demand slump was exacerbated by sharp decline in income levels of farmers due to crop failures even as non-farm income growth remained sluggish. Earlier we observed changing crop patterns in certain locations, with farmers shifting towards cash crops like vegetables since traditional crops like paddy demands standing water. This, in turn, impacted tractor usage as vegetable farming requires lower tractor usage.

However, the worst for the tractor industry seems to be behind. Normal monsoon has led to 3.5% increase in kharif sown area (pulses 29%) and our field visits clearly indicated yield improvement across the country barring few pockets (such as Karnataka). After two years of decline in kharif food-grain production, Govt's current estimate is of 6.6% YoY growth in cereals and a massive 57% growth in pulses (+29% YoY sown area) driven by jump in yield and net sown. Given this background, we are encouraged by c.20% YTD FY17 domestic tractor industry growth with Sep'16 witnessing a robust +49%YoY.

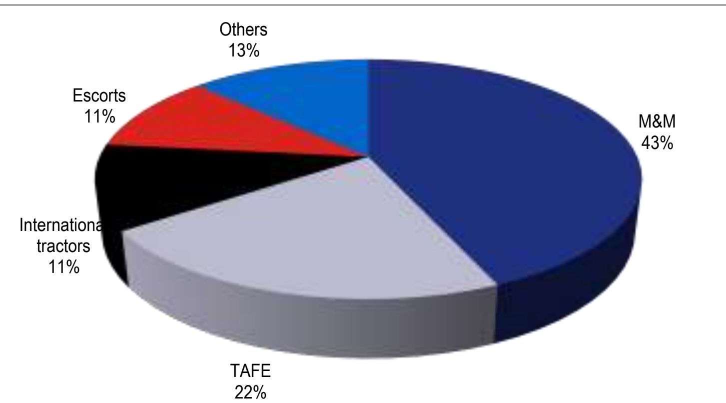
With agri demand for tractors staging a sharp comeback, the partial restart of mining in a few states like MP/Punjab has given some respite coupled with slight pickup in construction activities and relatively benign diesel prices (although slightly increasing) has improved profitability for tractor owners(especially who rent it out).

Exhibit 78. Tractor volumes have rebounded from the depths and continue to register healthy volumes

Domestic Tractor volume trend



Domestic Market share (FY17)



Source: Industry, CMIE, JM Financial

Long term tractor demand intact: Long term tractor demand remains intact at 6-7%. In the near term, multiple factors drive demand such as a) monsoons given that 53% of the cropped area is dependent on monsoons, b) pick-up in commercial activities (construction, mining) and c) availability of financing at attractive interest rates.

M&M continues to lead the tractor market: Industry leader M&M leads the domestic tractor sales with a formidable c.43% market share currently that has increased from c.40% at the beginning for FY17. The company has registered c.28% growth in domestic tractor sales in FY17 ('Industry:20%) with Sep'16 recording a high of +69%YoY. Given the healthy outlook, M&M has also raised the tractor industry growth rate to mid-teen (13-16%) levels from c.10% guidance earlier. We expect M&M to outpace industry growth and maintain their leadership position.

Agri. inputs – Pesticides

During the rural safari, we also visited a number of agri. input dealers across the country to get a sense of: (i) how the demand for pesticides, fertilizers and seeds has changed over the past year, (ii) inventory levels at the end of season that could affect sales of agrochemical companies for the coming year, and (iii) the brand pull among farmers, etc. We found a high level of similarity in farmer behaviour across the country, especially when it comes to brand awareness and spending patterns. Our key highlights from the survey are as follows:

Exhibit 79. Visits across agri-input dealers and retailers

Interaction at agri-input shop in Haryana	Interaction with a team promoting appropriate use of agro-chemicals in AP
	

Source: Rural Safari

- **Narrowing of inventory levels:** Our talks with dealers suggested that there existed high level of inventories in the system at the beginning to the season on low sales last year. **With the current season gone well, the inventory levels seemed to be narrowing down, thereby indicating recovery in sales of agrochemical companies for the coming year.**

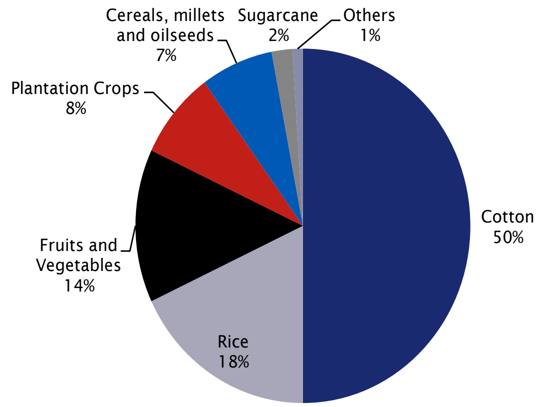
- **Volumes driven by acreage and timely monsoon:** We observed that though pesticides volumes are primarily driven by crop acreages, in some cases, timely monsoons have led to lower pest incidence, thereby necessitating lesser sprays. This phenomenon was seen more in Punjab and Haryana (wherein cotton farmers had been the victim of the whitefly attack last year) and MP. In these regions, timely monsoons had led to a healthier cotton crop this year, thereby leading to lower demand.

- **High brand pull for key brands**: Our interactions with dealers and farmers suggested that there are a few players who clearly stand out (for e.g., Bayer, Syngenta, Rallis, UPL, PI and Coromandel). Almost all dealers stated that c.40-50% of farmers ask for the brand they desire rather than the dealer having to suggest it to them. Brand awareness is high among the fairly educated section of farmers. Among the uneducated farmers, brand awareness comes either through repetitive use or word of mouth. In other cases, it is the dealer who suggests the product.

- **Price not the driving criteria**: In the normal monsoon season, farmers are looking to maximise their yields. In our survey, the interaction we had with most dealers indicated a preference for established brands, despite a higher cost to farmers.

- **Dealer margins high for local brands:** Dealers sell products of companies such as Bayer, Syngenta and Rallis only because they are demanded by farmers. Among farmers who lack brand awareness, a dealer would prefer recommending a local brand.

Exhibit 80. Crop-wise pesticide consumption (out of total est. volume of 70mn kg)



Source: Company, JM FInancial

Key drivers for pesticide volumes and outlook based on the survey

Expect c.15% YoY growth for the industry, lower than earlier estimate of 20%

- **Acreage of key crops:** Pesticides are applied based on kg/acre. Higher the acreages, higher the usage. This year, though the overall acreage was up 4%, cotton (highest consuming crop) acreages were down c.12%, primarily on account of a shift towards pulses.

- **Crop loss and yields:** Crop loss (or signs of crop loss for that matter) reduces pesticide usage from the stage at which the farmer loses faith in the crop (as he will not spend further). Previous two years witnessed fall in yields (-7% for cotton in FY16).

- **Monsoon:** Historically, it has been seen that whenever monsoon has been good, sales of agrochemical players have increased (please refer to Exhibit 82 for sales growth of companies that cater primarily to India). This is because better monsoon increases optimism among farmers and gives them confidence that their crop will not be damaged. It is because of this optimism that they do not mind spending whatever it takes to keep the crop healthy

Exhibit 81. Monsoon departure and agrochemical company sales growth

% YoY	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
% Monsoon Departure	2%	2%	-7%	6%	-12%	-14%
Rallis	20%	10%	12%	15%	-2%	-19%
Insecticides India	19%	16%	18%	40%	12%	2%
Dhanuka Agritech	21%	7%	10%	27%	6%	6%

Source: Company, JM Financial,

- **Outlook:** Improvement in monsoons, coupled with reduced crop loss, is expected to provide c.15% growth for the industry. Though we do expect some positive revenues to flow in from new product introductions with higher prices, our expectation is lower than the industry guidance of c.20% growth, as we believe volumes will be impacted on: 1) the shift towards pulses (+29% YoY) from cotton (highest consumer), 2) healthy monsoon reduced pest incidence for crops across regions (especially in Punjab, Haryana, AP and MP), thereby causing lower usage, and 3) down-trading to cheaper brands owing to low farm incomes at the beginning of the season.

Cement – Rural housing to drive demand

Accounting for c.35% of the overall demand, rural housing is a major demand driver for the cement sector. We believe the cement sector in the medium to long term will be driven by the increased demand from the rural sector; given the significant amount of housing shortfall of c.43.7mn units (a potential demand of 440mn tonnes), focus on 'pucca' houses (c.66% of the rural, translates to total demand potential of 310mn tonnes), rural wage growth supported by favourable monsoon and implementation of the 7th CPC and increased focus of the government towards rural infrastructure and irrigation.

Recent trends in the sector:

- Cement demand grew c.4.4% YoY in the first half of FY17, as against c.2.1% during the same period in FY16. We expect the demand to pick up in the second half of the financial year on favourable monsoons.

- Cement prices on an average have been stable this year owing to the pricing discipline adopted by players. There has been an uptick in the prices in the northern (15% YoY) and central markets (9% YoY), however prices have experienced pressure in other markets

Factors indicating potential revival:

- **Favourable monsoons:** We expect an uptick in farm incomes owing to good monsoons in several parts of India. Monsoons have delayed impact on cement demand. We expect the effect of better monsoons (c.3% shortfall vs. 14% shortfall in 2015) this year, to kick into the demand for cement in FY17-18.

- **Rural wage growth:** Expected growth in farm incomes supported by good monsoons and positive effects of the 7th CPC will boost demand for discretionary spend such as housing.

- **Focus on rural economy:** Increased government spending on irrigation and housing projects in the rural segment is likely to have a positive impact on cement demand.

- **Pent up demand:** Cement demand from the rural segment was impacted due to the slowdown in the rural economy for the past two years. We expect pent up demand to drive the growth in the near term.

- **Reduction in interest rates:** RBI in its recent policy review reduced the interest rates by 25bps, which we expect will have a positive impact on cement demand.

Structural drivers remain intact:

- **Rural housing:** Shortfall of c.43.7mn houses in the rural sector translates to a total potential demand of c.440mn tonnes of cement. Housing schemes such as "Housing for all by 2022" will help drive the demand in this segment.

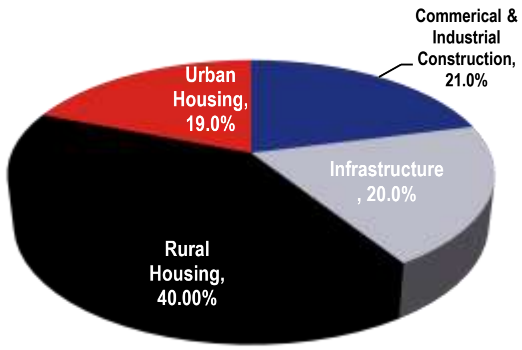
- **Focus on 'Pucca' houses:** Major proportion (c.34%) of houses in the rural areas is either Kutcha or Semi-Pucca. Conversion of these to Pucca houses translates to a potential cement demand of c.290mn tonnes. Wage growth would help in realisation of this demand.

- **Expected uptick in rural wages:** We expect the better monsoon to have a positive impact on the rural wage growth. Implementation of the 7th CPC and government schemes devised for the agro economy are also expected to positively impact wage growth.

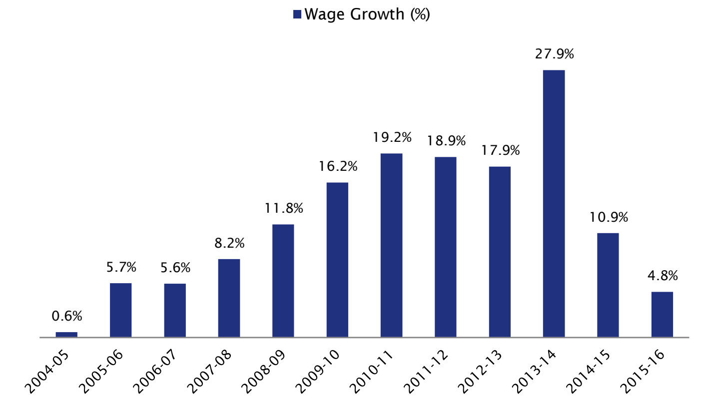
Exhibit 82. Cement demand – Rural demand is an important demand driver

Rural housing contributes c.40% to the cement demand; rural infrastructure is an additional driver

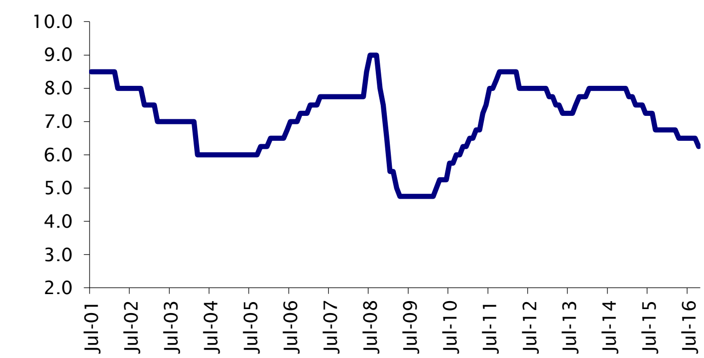
Rural housing continues to form a c.40% of the demand



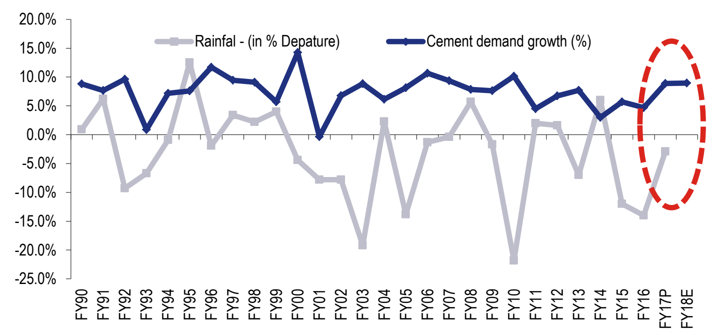
Rural wage growth; key for the cement demand



25bps interest rate cut to help the demand



Monsoons to impact in FY17-18



Source: CRISIL, JM Financial

Exhibit 83. Pucca houses forms c.66% of the total rural houses

Growth in pucca houses is higher than the growth in total number of houses

	2001 Census			2011 Census		
	Total	**Rural**	**Urban**	**Total**	**Rural**	**Urban**
Total number of census houses (mn)	249	178	72	305	207	98
Pucca roof houses (%)	48	37	75	62	52	83
Pucca wall houses (%)	59	49	84	67	58	88
Pucca floor houses (%)	44	29	83	54	37	88
Growth (%)						
Total number of census houses				***2.0***	***1.5***	***3.2***
Pucca roof houses				***4.7***	***5.1***	***4.2***
Pucca wall houses				***3.4***	***3.2***	***3.8***
Pucca floor houses				***4.0***	***4.2***	***3.9***

Source: Census, NSSO, JM Financial, Rural Safari

Exhibit 84. Potential demand from housing of c.730mn tonnes

Potential demand from housing	**Housing shortages**	**Conversion to pucca houses**
Housing (mn units)	43.7	58.3
Average size of house (sq ft)	500	500
Estimated number of bags required per sq ft	0.4	0.2
Cement per bag (kg)	50	50
Potential cement demand (mn tonnes)	**437**	**292**

Source: JM Financial

Valuation Summary

Exhibit 85. Valuation table

Company	Reco.	M Cap (₹ bn)	CMP (₹)	Chg. (%) TTM	12M TP	Upside (%)	EPS FY16	EPS FY17E	EPS FY18E	EPS CAGR (%)	P/E (x) FY16	P/E (x) FY17E	P/E (x) FY18E	PEG	EV/EBITDA FY17E	EV/EBITDA FY18E	P/BV FY17E	P/BV FY18E	RoE FY17E	RoE FY18E
Highlighted stocks																				
Bajaj Corp.	BUY	59	402	-3	505	25.6	15.8	17.0	19.0	9.7	25.4	23.6	21.2	2.5	18.8	16.1	11.3	10.2	49.8	50.4
JK Lakshmi Cement	BUY	58	490	31	400	-18.4	1.4	17.8	34.0	392.8	NA	27.5	14.4	0.1	13.3	9.1	3.9	3.2	13.9	24.3
M&M Financial	BUY	204	361	57	360	-0.4	11.9	15.2	20.7	31.9	30.1	23.6	17.3	0.7			3.1	2.7	13.4	16.1
Maruti Suzuki	HOLD	1,699	5,627	26	6,000	6.6	144.2	208.0	239.9	29.0	39.0	27.1	23.5	0.9	14.8	12.6	5.4	4.6	21.4	21.1
V-Mart	NR	9.4	512	5	NR	NR	15.3	22.1	32.7	46.3	33.5	23.2	15.6	0.5	11.5	9.0	3.4	2.9	17.0	19.1
Stocks mentioned in report/Agri-related stocks																				
Balrampur Chini*	HOLD	28	114	78	120	5.4	4.1	23.2	12.6	76.2	28.0	4.9	9.0	0.1	4.5	7.0	1.7	1.5	39.2	17.3
Bayer CropSciences	NR	159	4,508	20	NR	NR	83	119	146	32.4	54.0	37.8	30.8	1.2	26.2	21.5	7.5	6.2	22.0	22.4
Colgate-Palmolive India	SELL	250	919	2	960	4.5	20.8	24.0	27.8	15.7	44.1	38.3	33.0	2.4	23.2	20.1	22.0	19.6	60.6	62.9
Coromandal International	NR	77	266	40	NR	NR	12.4	15.4	19.1	24.3	21.4	17.2	13.9	0.7	11.0	9.5	2.9	2.5	17.4	19.2
Dabur	HOLD	484	275	1	290	5.5	7.1	8.1	9.3	14.3	38.6	34.0	29.6	2.4	27.1	23.3	11.6	10.1	37.8	36.5
Dhanuka Agritec	NR	33	650	37	NR	NR	21.5	25.4	31.1	20.4	30.3	25.6	20.9	1.3	18.0	14.8	5.7	4.8	24.0	24.9
Eicher Motors*	BUY	681	25,069	37	23,500	-6.3	452.8	550.1	681.8	22.7	55.4	45.6	36.8	2.0	31.2	24.3	19.5	13.3	53.0	42.9
EID Parry*	BUY	46	259	61	200	-22.8	-3.8	8.6	9.7	NA	NA	30.1	26.6	NA	23.3	21.4	3.2	2.9	11.0	11.4
Hero MotoCorp*	BUY	681	3,409	32	3,600	5.6	156.9	175.5	200.2	13.0	21.7	19.4	17.0	1.5	13.4	11.5	7.2	6.1	40.3	38.8
Hindustan Unilever	HOLD	1,851	856	9	900	5.2	18.8	21.3	24.7	14.5	45.4	40.1	34.6	2.8	26.9	23.2	46.6	45.0	NA	NA
LT Foods	NR	7	272	42	NR	NR	11.5	-	-	-	23.7	-	-	-	-	-	-	-	-	-
Magma Fincorp	NR	27	116	29	NR	NR	7.8	-	-	-	14.7	-	-	-	-	-	-	-	-	-
Mahindra & Mahindra*	BUY	790	1,333	3	1,470	10.2	53.6	66.4	78.5	21.1	24.9	20.1	17.0	1.0	12.2	10.0	3.2	2.9	17.1	17.9
PI Industries*	HOLD	108	791	18	700	-11.5	22.8	27.8	32.8	19.9	34.7	28.5	24.1	1.4	20.2	16.9	7.4	5.9	29.0	27.0
Rallis India	NR	46	236	10	NR	NR	7.4	9.5	11.1	22.8	32.1	24.8	21.3	1.1	16.3	13.8	4.3	3.8	18.6	19.0
UPL	NR	352	695	42	NR	NR	30.3	37.5	44.8	21.6	22.9	18.6	15.5	0.9	11.8	10.3	3.8	3.1	22.8	22.3

Source: JM Financial, Note: * indicates stand-alone financials, Valuations as on 18th October 2016, Consensus numbers for Non-rated stocks

Bajaj Corp | BJCOR IN

JM FINANCIAL

Attractive growth opportunity at a reasonable price

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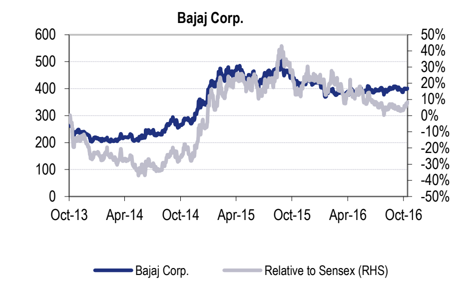
Bajaj Corp operates in the light hair-oils (LHO) category and its flagship product 'Bajaj Almond Drops' (BAD) is the category leader in the LHO space with 60% market share (FY16) (BAD accounts for c.91% of the company's turnover). Despite maintaining strong pricing power, the company has been able to scale-up its market share from 47% in FY09 to 60% in FY16. Poor rural demand has, however, adversely impacted volume growth in recent times which fell to a mere 3% in FY16 (rural constituted 42% of its sales) and consequently stock performance has been largely flattish over past 1 year. Given its high exposure to rural areas, recovery in rural demand is expected to aid in driving volume growth back to double-digit levels as witnessed in the past. Risk/reward on the stock appears quite favorable, in our view, given the company's inherent double-digit volume growth potential and sharp 40%+ discount to consumer universe.

- **Double-digit volume growth potential and high rural exposure drives our positive bias:** BAD accounts for a mere 7% of the overall hair oil market (up from 4% in FY09) and has a huge potential to gain share by conversion of users of branded coconut oils as well as users of non-branded hair oils. However, given higher price point and premium positioning of the product, it tends to be negatively impacted during recessionary periods. Pressure on rural incomes in recent times has adversely impacted volume growth trajectory for BAD (growth decelerated to 3% in FY16 and c.2% in 1HFY17 vs 11% in FY15 and 18-22% over FY11-13). However, the company has invested behind expanding its distribution reach (up from 2.8mn at the end of Mar'15 to 3.6mn at the end of Sep'16) and is well-positioned to benefit from the expected rural recovery.

- **Strong pricing power to aid in maintaining margin:** Over the years, BAD has displayed a strong pricing power and despite an average price hike of c.7% per annum, the brand has steadily increased its market share from 47% in FY09 to 60% in FY16. This has also helped increase gross margin from c.50% in FY09 to c.66% in FY16 though EBITDA margin increase was much lower (770bps) as the company invested behind brand-building efforts. Given strong pricing power, the company is expected to pass through raw material price increases to consumer which would enable margin to be maintained near current levels, in our view.

Key Data	
Market cap (bn)	₹ 59.3 / US$ 0.9
Shares in issue (mn)	147.5
Diluted share (mn)	147.5
3-mon avg daily val (mn)	₹ 53.4/US$ 0.8
52-week range	₹ 473.1/356.0
Sensex/Nifty	28,051/8,678
₹/US$	66.7

Daily Performance



%	1M	3M	12M
Absolute	-0.9	1.9	-2.7
Relative	1.1	0.8	-5.8

** To the BSE Sensex*

Shareholding Pattern (%)	Jun-16	Mar-16
Promoters	66.9	66.9
FII	25.0	24.1
DII	2.3	2.8
Public / others	5.9	6.3

Exhibit 1: Financial Summary (₹ mn)

Y/E March	FY15A	FY16A	FY17E	FY18E	FY19E
Net Sales	8,238	8,742	9,239	10,686	12,460
Sales growth (%)	22.8	6.1	5.7	15.7	16.6
EBITDA	2,392	2,737	2,976	3,454	4,046
EBITDA (%)	29.0	31.3	32.2	32.3	32.5
Adjusted net profit	2,097	2,332	2,513	2,804	3,170
EPS (₹)	14.2	15.8	17.0	19.0	21.5
EPS growth (%)	22.2	11.2	7.8	11.6	13.1
ROIC (%)	91.0	126.1	134.8	132.4	126.0
ROE (%)	41.6	48.1	49.8	50.4	51.5
PE (x)	28.3	25.5	23.7	21.2	18.7
Price/Book Value (x)	12.2	12.4	11.3	10.2	9.2
EV/EBITDA (x)	23.5	20.6	18.8	16.1	13.7

Source: Company data, JM Financial. Note: Valuations as at October 17, 2016. Above financials not based on Ind-AS

Please see Appendix I at the end of this report for Important Disclosures and Disclaimers and Research Analyst Certification.

Financial Tables (Consolidated)

Profit & Loss Statement					(₹ mn)
Y/E March	**FY15A**	**FY16A**	**FY17E**	**FY18E**	**FY19E**
Net sales (Net of excise)	**8,238**	**8,742**	**9,239**	**10,686**	**12,460**
Growth (%)	22.8	6.1	5.7	15.7	16.6
Net sales under Ind-AS (Net of excise)			8,455	9,791	11,423
Other operational income	18	22	23	27	31
Raw material (COGS)	3,162	2,980	3,059	3,564	4,156
Personnel cost	390	475	490	556	642
Other expenses (SG&A)	2,312	2,572	2,737	3,139	3,648
EBITDA	**2,392**	**2,737**	**2,976**	**3,454**	**4,046**
EBITDA (%)	29.0	31.2	32.1	32.2	32.4
Growth (%)	28.6	14.4	8.7	16.0	17.1
EBITDA margin under Ind-AS (%)			35.2	35.3	35.4
Other non-op. income	0	0	0	0	0
Depreciation and amort.	49	49	53	60	68
EBIT	2,344	2,688	2,923	3,394	3,978
Add: Net interest income	314	284	320	346	367
Pre tax profit	2,658	2,972	3,244	3,740	4,345
Taxes	462	538	689	936	1,174
Exceptional Inc / (exp)	-470	-470	-184	0	0
Less: Minority interest	0	0	0	0	0
Net profit	1,727	1,964	2,371	2,804	3,170
Adjusted net profit	**2,097**	**2,332**	**2,513**	**2,804**	**3,170**
Margin (%)	25.4	26.6	27.1	26.2	25.4
Diluted share capital (mn)	148	148	148	148	148
EPS (₹)	**14.2**	**15.8**	**17.0**	**19.0**	**21.5**
Growth (%)	22.2	11.2	7.8	11.6	13.1
Total Dividend + tax	2,035	2,041	1,897	2,243	2,536

Source: Company, JM Financial

Balance Sheet					(₹ mn)
Y/E March	**FY15A**	**FY16A**	**FY17E**	**FY18E**	**FY19E**
Share capital	148	148	148	148	148
Other capital	0	0	0	0	0
Reserves & surplus	4,738	4,660	5,135	5,696	6,330
Networth	4,886	4,808	5,282	5,843	6,477
Total loans	0	100	100	100	100
Minority Interest	0	0	0	0	0
Sources of Funds	**4,886**	**4,908**	**5,382**	**5,943**	**6,577**
Intangible assets	430	430	430	430	430
Fixed assets	2,359	2,421	2,721	3,121	3,521
Less: Dep / Amort.	942	1,457	1,694	1,754	1,822
Net block	1,847	1,393	1,457	1,797	2,129
CWIP	7	9	9	9	9
Investments	1,837	2,707	2,707	2,707	2,707
Def tax assets / (-) liability	-5	-7	-7	-7	-7
Current assets	1,988	1,550	1,993	2,334	2,782
Inventories	393	502	530	613	715
Sundry debtors	133	254	268	310	361
Cash & bank balance	1,342	578	945	1,123	1,376
Other current assets	68	65	0	0	0
Loans & advances	53	152	250	287	330
Current Liabilities & Prov	788	744	776	896	1,043
Current liabilities	788	744	776	896	1,043
Provisions and others	0	0	0	0	0
Net current assets	1,200	806	1,217	1,438	1,740
Others (net)	0	0	0	0	0
Application of Funds	**4,886**	**4,908**	**5,382**	**5,943**	**6,577**

Source: Company, JM Financial

Cash Flow Statement					(₹ mn)
Y/E March	**FY15A**	**FY16A**	**FY17E**	**FY18E**	**FY19E**
Reported Net Profit	1,727	1,964	2,371	2,804	3,170
Deprn and Amortn	518	515	236	60	68
Inc/dec in working cap.	144	-274	-11	-5	-7
Others	0	0	0	0	0
Net cash from operations (a)	**2,389**	**2,205**	**2,596**	**2,859**	**3,232**
(Inc)/dec in investments	-268	-870	0	0	0
Capex	-7	-63	-300	-400	-400
Other current assets	-32	-96	-33	-37	-43
Cash flow used in invst (b)	**-308**	**-1,029**	**-333**	**-437**	**-443**
Inc/(dec) in capital	2	0	0	0	0
Dividend+Tax Thereon	-2,035	-2,041	-1,897	-2,243	-2,536
Inc/dec in loans	0	100	0	0	0
Other assets	2	1	0	0	0
Financial cash flow (c)	**-2,032**	**-1,940**	**-1,897**	**-2,243**	**-2,536**
Net inc/dec in cash (a+b+c)	50	-764	367	178	252
Opening cash balance	1,292	1,342	578	945	1,123
Closing cash balance	1,342	578	945	1,123	1,376

Source: Company, JM Financial

Key Ratios					
Y/E March	**FY15A**	**FY16A**	**FY17E**	**FY18E**	**FY19E**
BV/Share (₹)	33.1	32.6	35.8	39.6	43.9
ROIC (%)	91.0	126.1	134.8	132.4	126.0
ROE (%)	41.6	48.1	49.8	50.4	51.5
Net Debt-equity ratio (x)	-0.7	-0.7	-0.7	-0.6	-0.6
Valuation ratios (x)					
PER	28.3	25.5	23.7	21.2	18.7
PBV	12.2	12.4	11.3	10.2	9.2
EV/EBITDA	23.5	20.6	18.8	16.1	13.7
EV/Net Sales	6.8	6.4	6.0	5.2	4.5
Turnover ratios (no.)					
Debtor days	6	11	11	11	11
Inventory days	17	21	21	21	21
Creditor days	91	91	93	92	92

Source: Company, JM Financial

20 October 2016

India | Cement

JK Lakshmi | JKLC IN

Price: ₹484

Capacity expansion and cost efficiency led growth

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JK Lakshmi Cement (JKLC) will complete its massive expansion Programme by FY18, doubling its capacity from current 5.3MT to 12.1MT, providing strong volume visibility for next 4-5 years. JKLC is also one of the most cost efficient producers with its cost matrix comparable with the best in the industry. With significant capex getting over by FY17, the company will see a surge in FCF generation FY17 onwards. Given significant expansion and presence in right markets, we expect JKLC to be a key beneficiary of an upcycle in cement demand.

- **Doubling capacity provides visibility beyond FY17:** JKLC is set to more than double capacity from 5.3MT in FY13 to 12.1MT by FY18E. We estimate strong 12% volume CAGR over FY16-18E, with strong growth visibility beyond FY18 (FY18E capacity utilization at meager 66%). The company has potential to add further over 5 MT brownfield capacity giving medium term visibility. Company has recently forayed in the attractive markets of East, which has diversified its geographical reach.

- **Cost efficiency comparable with the best:** JKLC's cost/tonne is one of the lowest in the industry driven by low power and fuel cost (high pet-coke usage and efficient plants) and extremely low overheads. With the benefits of operating leverage from strong volume growth, we expect company to gain significant jump in EBITDA/t from c.₹550 in FY15 to c.₹790 by FY18E.

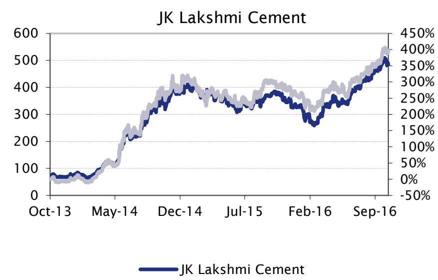
- **Major expansion near completion, FCF to jump sharply:** As expansion programme draws near completion by FY17, company will generate significant FCF from FY17 onwards and reduce debt from current peak levels.

- **Earnings momentum:** JKLC's earnings is set for a sharp jump driven by strong operating and financial leverage. We estimate EBITDA CAGR of more than 60% over FY16-18E.

- **Key Risks:** (1) Delay in expansion plans would risk volume growth; (2) Company recently forayed into East market. It remains to be seen whether company can replicate the cost structure at new operations and compete effectively; (3) Delay in industry demand/price recovery.

Key Data	
Market cap (bn)	₹ 57.7 / US$ 0.9
Shares in issue (mn)	117.7
Diluted share (mn)	117.7
3-mon avg daily val (mn)	₹ 55.7/US$ 0.8
52-week range	₹ 513.8/253.0
Sensex/Nifty	28,051/8,678
₹/US$	66.7

Daily Performance



%	1M	3M	12M
Absolute	4.3	22.0	31.3
Relative*	6.2	20.9	28.2

** To the BSE Sensex*

Shareholding Pattern (%)	Jun-16	Mar-16
Promoters	45.9	45.9
FII	12.6	13.1
DII	19.8	19.7
Public / others	21.7	21.2

Exhibit 1: Financial Summary (₹ mn)

Y/E March	FY14A	FY15A	FY16A	FY17E	FY18E
Net sales	20,559	23,071	26,199	31,859	37,078
Sales growth (%)	0.2	12.2	13.6	21.6	16.4
EBITDA	3,020	3,495	2,702	5,282	7,422
EBITDA (%)	14.7	15.1	10.3	16.6	20.0
Adjusted net profit	1,115	1,676	171	2,098	4,001
EPS (₹)	9.5	14.2	1.4	17.8	34.0
EPS growth (%)	-41.9	50.3	-89.8	1,130.0	90.7
ROCE (%)	6.4	8.2	NA	10.9	15.7
ROE (%)	8.7	12.7	1.3	14.8	24.3
PE (x)	51.1	34.0	NA	27.1	14.2
Price/Book value (x)	4.4	4.3	4.3	3.8	3.2
EV/EBITDA (x)	22.7	20.7	26.7	13.1	9.0

Source: Company data, JM Financial, Valuations as at October 17, 2016

Financial Tables (Consolidated)

Profit & Loss (₹ mn)

Y/E March	FY14A	FY15A	FY16A	FY17E	FY18E
Net sales (Net of excise)	**20,559**	**23,071**	**26,199**	**31,859**	**37,078**
Growth (%)	0.2	12.2	13.6	21.6	16.4
Other operational income	7	0	0	0	0
Raw material (or COGS)	10,802	11,932	13,738	15,190	16,806
Personnel cost	1,230	1,461	1,970	2,215	2,448
Other expenses (or SG&A)	5,515	6,183	7,789	9,172	10,402
EBITDA	**3,020**	**3,495**	**2,702**	**5,282**	**7,422**
EBITDA (%)	14.7	15.1	10.3	16.6	20.0
Growth (%)	-29.6	15.7	-22.7	95.5	40.5
Other non-op. income	443	282	603	519	621
Depreciation and amort.	1,352	1,119	1,629	1,699	1,843
EBIT	2,111	2,658	1,676	4,102	6,200
Add: Net interest income	-772	-907	-1,923	-1,633	-1,199
Pre tax profit	1,339	1,750	-247	2,469	5,001
Taxes	224	75	-418	370	1,000
Add: Extraordinary items	-185	-720	-107	0	0
Less: Minority interest	0	0	0	0	0
Reported net profit	930	956	63	2,098	4,001
Adjusted net profit	**1,115**	**1,676**	**171**	**2,098**	**4,001**
Margin (%)	5.4	7.3	0.7	6.6	10.8
Diluted share cap. (mn)	118	118	118	118	118
Diluted EPS (₹.)	**9.5**	**14.2**	**1.4**	**17.8**	**34.0**
Growth (%)	-41.9	50.3	-89.8	1,130.0	90.7
Total Dividend + Tax	275	224	0	491	936

Source: Company, JM Financial

Balance Sheet (₹ mn)

Y/E March	FY14A	FY15A	FY16A	FY17E	FY18E
Share capital	589	589	589	589	589
Other capital	0	0	0	0	0
Reserves and surplus	12,444	12,719	12,746	14,353	17,418
Networth	13,032	13,307	13,334	14,942	18,006
Total loans	16,313	19,702	19,440	19,440	15,440
Minority interest	0	0	0	0	0
Sources of funds	**29,345**	**33,009**	**32,775**	**34,382**	**33,447**
Intangible assets	0	0	0	0	0
Fixed assets	29,305	41,149	44,206	50,206	52,206
Less: Depn. and amort.	13,590	14,709	16,338	18,037	19,880
Net block	15,715	26,440	27,868	32,168	32,325
Capital WIP	9,084	3,000	2,800	-1,200	-2,200
Investments	4,477	4,228	4,005	4,005	4,005
Def tax assets/- liability	-1,226	-1,284	-867	-867	-867
Current assets	6,388	7,205	7,746	11,430	12,053
Inventories	1,024	2,235	2,406	3,055	5,079
Sundry debtors	555	705	965	960	1,219
Cash & bank balances	352	153	118	3,157	1,497
Other current assets	3,764	3,390	2,831	2,831	2,831
Loans & advances	693	722	1,427	1,427	1,427
Current liabilities & prov.	5,094	6,579	8,778	11,155	11,870
Current liabilities	4,818	6,303	8,778	11,155	11,870
Provisions and others	275	275	0	0	0
Net current assets	1,295	626	-1,032	275	183
Others (net)	0	0	0	0	0
Application of funds	**29,345**	**33,009**	**32,775**	**34,382**	**33,447**

Source: Company, JM Financial

Cash flow statement (₹ mn)

Y/E March	FY14A	FY15A	FY16A	FY17E	FY18E
Reported net profit	930	956	63	2,098	4,001
Depreciation and amort.	1,154	1,119	1,629	1,699	1,843
-Inc/dec in working cap.	77	-471	-627	1,733	-1,568
Others	0	0	0	0	0
Cash from operations (a)	**2,161**	**1,604**	**1,065**	**5,530**	**4,276**
-Inc/dec in investments	-413	249	223	0	0
Capex	-4,726	-5,760	-2,857	-2,000	-1,000
Others	664	941	2,249	0	0
Cash flow from inv. (b)	**-4,475**	**-4,570**	**-385**	**-2,000**	**-1,000**
Inc/-dec in capital	-220	-457	-36	0	0
Dividend+Tax thereon	-275	-224	0	-491	-936
Inc/-dec in loans	2,943	3,389	-262	0	-4,000
Others	92	59	-418	0	0
Financial cash flow (c)	**2,540**	**2,767**	**-715**	**-491**	**-4,936**
Inc/-dec in cash (a+b+c)	226	-199	-35	3,039	-1,660
Opening cash balance	127	352	153	118	3,157
Closing cash balance	352	153	118	3,157	1,497

Source: Company, JM Financial

Key Ratios

Y/E March	FY14A	FY15A	FY16A	FY17E	FY18E
BV/Share (₹)	110.8	113.1	113.3	127.0	153.0
ROCE (%)	6.4	8.2	NA	10.9	15.7
ROE (%)	8.7	12.7	1.3	14.8	24.3
Net Debt/equity ratio (x)	0.9	1.2	1.1	0.8	0.6
Valuation ratios (x)					
PER	51.1	34.0	NA	27.1	14.2
PBV	4.4	4.3	4.3	3.8	3.2
EV/EBITDA	22.7	20.7	26.7	13.1	9.0
EV/Sales	3.3	3.1	2.8	2.2	1.8
Turnover ratios (no.)					
Debtor days	10	11	13	11	12
Inventory days	18	35	34	35	50
Creditor days	44	67	53	105	110

Source: Company, JM Financial

20 October 2016

India | NBFC

M&M Financial | MMFS IN

Price: ₹358

BUY

June' 18 Target: ₹360

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Time to focus ahead; good monsoon = strong recovery

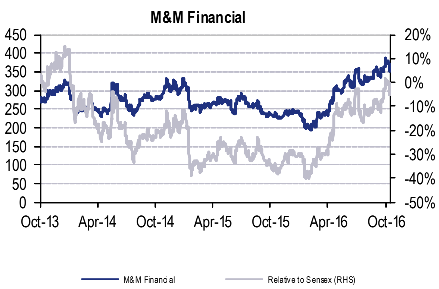
Well-distributed monsoon and increased budget allocation to the rural sector will boost farm income, which has remained under pressure for the past two years. With 80-90% of MMFS' branches in rural regions, it will be a direct beneficiary of any pick up in the rural economy. The management expects: i) disbursement growth to accelerate to 12% YoY (vs. 8% in 1QFY17) with a further upside to 15% if the festive season trends remain strong; and ii) incremental NPLs are coming down marginally YoY and MMFS expects GNPL ratio of 8% by FY17E (on 120DPD) from 10.7% in 1QFY17. Furthermore, it maintained a healthy coverage ratio of 53%, despite migrating to 120DPD. Subsidiary performance has been healthy with housing subsidiary expanding at a CAGR of 56% in the past three years; the management expects similar growth trends to continue, as it expects c.25% of business from the semi-urban market. We believe MMFS is well placed to benefit from the rural recovery if government spending picks up. Maintain BUY with TP of ₹360.

- **Budget proposals encouraging, execution of these measures holds the key:** Measures announced by the government in the budget include: a) increase in budget outlay for NREGA schemes, rural development and agriculture services, b) doubling farmers' earnings in five years via a series of measures such as transparent procurement system and increasing area under irrigation. We believe MMFS will be a significant beneficiary of rural recovery from FY17, driven by the government capex. The management expects disbursement growth to improve to 12% YoY with a further upside of 15% YoY if the festive season turns out to be good. We expect a CAGR of 14% in NII over FY16-18E with slight margin improvement.
- **Provision coverage remains healthy at 53% despite migration to 120DPD:** As per the management, incremental slippages are declining YoY; they expect upgrades to improve during 2H17. Consequently, the company expects gross NPLs of 8% by 4Q17E from 10.7% in 1Q17 (on 120DPD). The coverage ratio remained high at 53%, despite migration. We have factored credit costs (provisions/AUM) of 240bps/195bps in FY17/18E, respectively, vs. 270bps in FY16.
- **Expect earnings CAGR of c.32% over FY16-18E:** We expect earnings CAGR of c.32% over FY16-18E and return ratios with RoA of 2.5% and RoE of 17% by FY18E. We value MMFS' standalone at 2.4x June'18 BV, implying a value of ₹327. MRHF is valued at ₹19 per share and MIBL at ₹14 per share, implying a June'17 TP of ₹360, as per our estimates.

Key Data

Market cap (bn)	₹ 205.5 / US$ 3.1
Shares in issue (mn)	564.1
Diluted share (mn)	564.1
3-mon avg daily val (mn)	₹ 777.8/US$ 11.7
52-week range	₹ 405.0/173.1
Sensex/Nifty	28,051/8,678
₹/US$	66.7

Daily Performance



%	1M	3M	12M
Absolute	4.6	9.9	56.8
Relative	6.6	8.8	53.7

** To the BSE Sensex*

Shareholding Pattern (%)

	Jun-16	Mar-16
Promoters	51.9	51.9
FII	33.6	33.7
DII	9.4	9.2
Public / Others	4.8	4.9

Exhibit 1. Financial Summary (₹ mn)

Y/E March	FY14	FY15	FY16E	FY17E	FY18E
Net Profit	8,873	8,317	6,726	8,569	11,699
Net Profit (YoY) (%)	0.5%	-6.3%	-19.1%	27.4%	36.5%
Assets (YoY) (%)	24.2%	10.8%	12.8%	11.5%	14.9%
ROA (%)	3.10%	2.49%	1.80%	2.05%	2.47%
ROE (%)	18.6%	15.5%	11.5%	13.5%	16.6%
EPS (₹)	15.7	14.7	11.9	15.2	20.7
EPS (YoY) (%)	0.4%	-6.4%	-19.2%	27.4%	36.5%
PE (x)	**22.7**	**24.3**	**30.1**	**23.6**	**17.3**
BV (₹.)	90	100	107	118	132
BV (YoY) (%)	14.3%	11.0%	7.2%	9.6%	12.0%
P/BV (x)	**3.97**	**3.57**	**3.33**	**3.04**	**2.72**

Source: Company data, JM Financial. Note: Valuations as of 17/10/16

- **Despite slowdown, investment in distribution network continues:** MMFS has added 510 branches in the past three years (which is 44% of its existing branch network). Despite a slowdown in business, continuous investment in the distribution network augurs well for the company. Investment in the distribution network should continue, aiding collection initially and supporting growth later. We believe that MMFS is building a long-term strategy to improve its franchise, which will benefit the company by: 1) improving collection efficiency initially through branches that are closer to customers, 2) later these branches will be used for sourcing loans once the cycle picks up, and 3) deeper penetration would give MMFS the first mover advantage.

- **Subsidiaries to add significant value:** a) The housing finance portfolio has reported a CAGR of 56% in the past three years and its AUM proportion to the consolidated AUM has increased to 7.4% (vs. 4% in FY14). MMFS has now also started focusing on higher ticket size loans and the management believes growth momentum will continue with an expectation of 50% growth over the next two years. b) The AMC business will focus on rural and semi-urban markets with capital protection products and group employees leveraging further on the parent M&M's relationship to sell these products.

Exhibit 2. MMFS: SOTP Valuation

MMFS SOTP	Holding (%)	Valuation Methodology	Value Per Share(₹)	Contribution to TP (%)
MMFS - Standalone	100.0%	2.4x Mar'18E BV	327	91%
Mahindra Rural Housing	87.5%	2.4x Mar' 18E BV	19	5%
Mahindra Brokers Limited	85.0%	14.0x Mar' 18E EPS	14	4%
Total			**360**	**100%**

Source: Company, JM Financial

Financial Tables (Standalone)

Profit & Loss (₹ Mn)	FY14	FY15	FY16	FY17E	FY18E
Net Interest Income (NII)	**27,382**	**30,477**	**32,246**	**36,617**	**42,457**
Non-Interest Income	**268**	**403**	**412**	**492**	**558**
Total Income	**27,650**	**30,879**	**32,658**	**37,109**	**43,015**
Operating Expenses	9,134	10,068	11,781	13,703	15,666
Pre-provisioning Profits	**18,516**	**20,811**	**20,877**	**23,407**	**27,350**
Loan Loss Provisions	4,847	8,169	10,360	10,193	9,376
Other Provisions	211	106	135	230	248
Total Provisions	**5,058**	**8,275**	**10,495**	**10,423**	**9,624**
PBT	**13,458**	**12,536**	**10,382**	**12,984**	**17,725**
Tax	4,585	4,219	3,656	4,415	6,027
PAT (Pre-Extra ordinaries)	**8,873**	**8,317**	**6,726**	**8,569**	**11,699**
Extra ordinaries (Net of Tax)	0	0	0	0	0
Reported Profits	**8,873**	**8,317**	**6,726**	**8,569**	**11,699**
Dividend	2,515	2,717	2,713	2,742	3,744
Retained Profits	**6,358**	**5,600**	**4,013**	**5,827**	**7,955**

Source: Company, JM Financial

Balance Sheet (₹ Mn)	FY14	FY15	FY16	FY17E	FY18E
Equity Capital	1,127	1,128	1,129	1,129	1,129
Reserves & Surplus	49,728	55,402	59,508	65,335	73,290
Stock Option Outstanding	87	164	244	256	269
Shareholders' Equity	**50,942**	**56,694**	**60,881**	**66,720**	**74,688**
Preference Share Capital	0	0	0	0	0
Borrowed Funds	239,306	262,633	294,523	329,424	380,649
Deferred tax liabilities	0	0	0	0	0
Current Liabilities	26,409	31,414	40,391	45,021	51,748
Total Liabilities	**316,657**	**350,741**	**395,795**	**441,165**	**507,086**
Loans & Advances	296,170	329,298	366,578	408,256	470,231
Investments	8,692	8,537	14,833	16,738	18,809
Intangible Assets	0	0	0	0	0
Cash & Bank Balances	6,892	7,038	6,221	6,940	7,759
Other Current Assets - CA	558	616	1,174	1,442	1,588
Fixed Assets	1,195	1,101	1,135	1,265	1,454
Miscellaneous expenditure	0	0	0	0	0
Deferred Tax Asset	3,151	4,153	5,853	6,524	7,245
Total Assets	**316,657**	**350,741**	**395,795**	**441,165**	**507,086**

Source: Company, JM Financial

Key Ratios (%)	FY14	FY15	FY16	FY17E	FY18E
Growth (YoY) (%)					
Borrowed Funds	26.8%	9.7%	12.1%	11.9%	15.6%
Advances	23.2%	11.2%	11.3%	11.4%	15.2%
Total Assets	24.2%	10.8%	12.8%	11.5%	14.9%
NII	21.4%	11.3%	5.8%	13.6%	15.9%
Non-Interest Income	25.7%	50.2%	2.5%	19.3%	13.5%
Operating Expenses	23.1%	10.2%	17.0%	16.3%	14.3%
Operating Profits	20.7%	12.4%	0.3%	12.1%	16.8%
Core Operating Profits	20.9%	12.1%	0.5%	11.9%	16.9%
Provisions	78.5%	63.6%	26.8%	-0.7%	-7.7%
Reported PAT	0.5%	-6.3%	-19.1%	27.4%	36.5%
Yields / Margins (%)					
Interest Spread (%)	7.28%	6.94%	6.54%	6.73%	7.00%
NIM (Incl. securitization) (%)	9.73%	9.28%	8.80%	8.94%	9.14%
Profitability (%)					
ROA (%)	3.10%	2.49%	1.80%	2.05%	2.47%
ROE (%)	18.6%	15.5%	11.5%	13.5%	16.6%
Cost to Income (%)	33.0%	32.6%	36.1%	36.9%	36.4%
Assets Quality (%)					
Gross NPAs (%)	4.62%	6.14%	8.34%	9.95%	9.78%
LLP (%)	2.19%	3.02%	3.54%	2.69%	2.19%
Capital Adequacy (%)					
Tier I (%)	16.29%	15.50%	14.59%	14.60%	14.27%
CAR (%)	18.63%	18.30%	17.29%	17.43%	17.10%

Source: Company, JM Financial

Du-pont Analysis (%)	FY14	FY15	FY16	FY17E	FY18E
NII / Assets (%)	9.58%	9.13%	8.64%	8.75%	8.95%
Other income / Assets (%)	0.09%	0.12%	0.11%	0.12%	0.12%
Total Income / Assets (%)	9.68%	9.25%	8.75%	8.87%	9.07%
Cost to Assets (%)	3.20%	3.02%	3.16%	3.27%	3.30%
PPP / Assets (%)	6.48%	6.24%	5.59%	5.59%	5.77%
Provisions / Assets (%)	1.77%	2.48%	2.81%	2.49%	2.03%
PBT / Assets (%)	4.71%	3.76%	2.78%	3.10%	3.74%
Tax Rate (%)	34.07%	33.65%	35.21%	34.00%	34.00%
ROA (%)	3.10%	2.49%	1.80%	2.05%	2.47%
Leverage (%)	6.0	6.2	6.4	6.6	6.7
ROE (%)	18.62%	15.49%	11.48%	13.48%	16.61%

Source: Company, JM Financial

Valuations	FY14	FY15	FY16	FY17E	FY18E
Shares in issue (mn)	563.5	564.1	564.6	564.6	564.6
EPS (Rs.)	15.7	14.7	11.9	15.2	20.7
EPS (YoY) (%)	0.4%	-6.4%	-19.2%	27.4%	36.5%
PE (x)	22.7	24.3	30.1	23.6	17.3
BV (Rs.)	90	100	107	118	132
BV (YoY) (%)	14%	11%	7%	10%	12%
P/BV (x)	3.97	3.57	3.33	3.04	2.72
DPS (Rs.)	4.5	4.8	4.8	4.9	6.6
Div. yield (%)	1.2%	1.3%	1.3%	1.4%	1.9%

Source: Company, JM Financial

Maruti Suzuki |MSIL IN

Price: Rs5,626
HOLD
12M Target: ₹6,000

Play on improving rural economy

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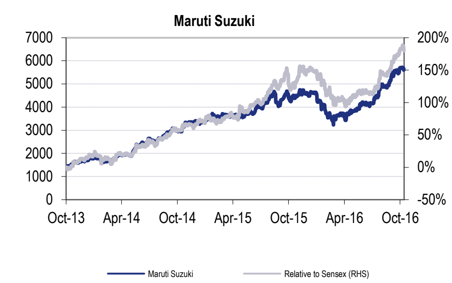
After two years of single digit industry growth, FY17 has seen relatively healthy PV growth of 12%YoY. This growth is led by urban markets on the back of successful new model launches and improving rural sales. In FY17, MSIL has largely grown in-line with industry. Although in UV segment, MSIL's growth of 150%YoY far exceeds industry growth of 40%YoY. With two successful products, Vitara Brezza and Ertiga, MSIL has catapulted to a leading position in this fast expanding segment. With PV industry increasingly shifting to gasoline, we believe MSIL will continue to benefit due to its strong gasoline portfolio, comprising 70% of its total domestic sales. Further, new model launches will continue to create excitement in the market and drive sales. We expect MSIL to hold on to its market leadership and post steady volume growth on its: a) strong distribution strength; b) wide product range; and c) new product launches and entry into new product categories. We revise our TP to ₹ 6,000 valuing the business at 25xFY18E EPS on strengthening business momentum.

- **MSIL maintains PV market leadership:** Consistent outperformance with respect to the domestic PV industry has led to increase in MSIL market share from 45% in FY15 to 47% currently. This robust performance is on the back of a) successful new model introductions b) deep network penetration c) strong brand positioning and after sales support and e) extensive product portfolio. With new launches in pipeline and increasing shift towards gasoline, we expect MSIL to maintain its market leadership in passenger vehicles.
- **Multiple growth drivers:** MSIL derives c.33% sales from rural India. We expect MSIL to benefit from a) increase in rural incomes given prospects of healthy growth in farm incomes, b) increasing preference for compact cars as rural infrastructure gets better and c) unmatched rural penetration. In the urban market, latest launches of 'Vitara Brezza' and 'Baleno' still command 4-6 months waiting period indicating healthy sustainable demand. With 7th pay commission, demand from govt. employees would further aid volume growth.
- **Healthy profitability:** MSIL's EBITDA margin has remained in a band around 14.5%-15.5% aided by higher ASP models such as 'Vitara Brezza', 'Çiaz' and 'Baleno'. Although rising commodity costs and unfavourable Yen (¥) movement pose a risk to operating margins, we believe MSIL has sufficient levers to maintain profitability. We expect ROE to remain steady at c.20%.
- **Valuation not very expensive:** MSIL is currently trading at 23.5x FY18E EPS. We estimate earnings to grow at 29% CAGR driven by 13%CAGR volume growth. Considering healthy earnings growth profile, current valuation does not appear very expensive.

Key Data

Market cap (bn)	₹ 1699.7 / US$ 25.5
Shares in issue (mn)	302.0
Diluted share (mn)	302.0
3-mon avg daily val (mn)	₹ 3827.4/US$ 57.4
52-week range	₹ 5770.0/3193.3
Sensex/Nifty	28,051/8,678
Rs/US$	66.7

Daily Performance



%	1M	3M	12M
Absolute	1.0	26.3	26.4
Relative*	2.9	25.2	23.4

** To the BSE Sensex*

Shareholding Pattern (%)

	Jun-16	Mar-16
Promoters	56.2	56.2
FII	23.6	24.0
DII	13.6	13.1
Public / others	6.6	6.7

Source: BSE

Exhibit 1: Financial Summary (Rs mn)

Y/E March	FY15A	FY16A	FY17E	FY18E	FY19E
Net sales	490,168	567,012	671,630	794,391	930,799
Sales growth (%)	14.1	15.7	18.5	18.3	17.2
EBITDA	62,460	83,906	100,192	113,953	126,240
EBITDA (%)	12.6	14.7	14.8	14.3	13.5
Adjusted net profit	35,659	43,539	62,809	72,441	80,916
EPS (Rs)	118.1	144.2	208.0	239.9	267.9
EPS growth (%)	32.5	22.1	44.3	15.3	11.7
ROCE (%)	15.6	16.7	21.3	21.8	22.0
ROE (%)	16.0	17.2	21.4	21.1	20.3
PE (x)	47.7	39.0	27.1	23.5	21.0
Price/Book value (x)	7.2	6.3	5.4	4.6	4.0
EV/EBITDA (x)	25.3	18.2	14.8	12.6	10.8

Source: Company data, JM Financial. Note: Valuations as of 18/10/2016

Financial Tables

Profit & Loss (Rs mn)

Y/E March	FY15A	FY16A	FY17E	FY18E	FY19E
Net sales (Net of excise)	**490,168**	**567,012**	**671,630**	**794,391**	**930,799**
Growth (%)	14.1	15.7	18.5	18.3	17.2
Other operational income	4,191	3,564	4,455	4,901	5,489
Raw material (or COGS)	352,572	390,542	468,184	557,944	664,449
Personnel cost	16,066	19,887	22,500	26,215	29,786
Other expenses (or SG&A)	63,261	76,241	85,209	101,179	115,813
EBITDA	**62,460**	**83,906**	**100,192**	**113,953**	**126,240**
EBITDA (%)	12.6	14.7	14.8	14.3	13.5
Growth (%)	25.2	34.3	19.4	13.7	10.8
Other non-op. income	11,125	7,821	11,265	13,511	15,079
Depreciation	24,703	28,239	27,267	31,290	34,235
EBIT	48,882	63,488	84,189	96,175	107,084
Add: Net interest income	-974	695	1,265	1,718	2,262
Pre tax profit	47,907	64,183	85,454	97,893	109,345
Taxes	11,570	19,636	22,645	25,452	28,430
Add: Extraordinary items	774	1,167	0	0	0
Less: Minority interest	0	0	0	0	0
Reported net profit	37,111	45,714	62,809	72,441	80,916
Adjusted net profit	**35,659**	**43,539**	**62,809**	**72,441**	**80,916**
Margin (%)	7.2	7.6	9.3	9.1	8.6
Diluted share cap. (mn)	302	302	302	302	302
Diluted EPS (Rs.)	**118.1**	**144.2**	**208.0**	**239.9**	**267.9**
Growth (%)	32.5	22.1	44.3	15.3	11.7
Total Dividend + Tax	8,796	12,314	15,832	19,351	22,869

Source: Company, JM Financial

Balance Sheet (Rs mn)

Y/E March	FY15A	FY16A	FY17E	FY18E	FY19E
Share capital	1,510	1,510	1,510	1,510	1,510
Other capital	0	0	0	0	0
Reserves and surplus	235,532	268,561	315,537	368,627	426,674
Networth	237,042	270,071	317,047	370,137	428,184
Total loans	6,446	3,343	3,343	3,343	3,343
Minority interest	0	0	0	0	0
Sources of funds	**243,488**	**273,414**	**320,390**	**373,480**	**431,527**
Intangible assets	0	0	0	0	0
Fixed assets	264,694	294,092	329,161	362,327	398,444
Less: Depn. and amort.	142,101	166,414	193,681	224,971	259,206
Net block	122,593	127,678	135,480	137,356	139,238
Capital WIP	18,828	10,069	13,166	18,116	11,953
Investments	128,140	177,857	212,857	255,357	302,857
Def tax assets/- liability	-4,810	-4,741	-4,741	-4,741	-4,741
Current assets	65,932	76,352	98,659	130,819	175,878
Inventories	26,859	31,321	38,642	47,881	56,103
Sundry debtors	10,698	12,986	16,561	21,764	28,051
Cash & bank balances	183	391	6,765	16,133	35,120
Other current assets	2,971	2,592	3,110	3,732	4,479
Loans & advances	25,221	29,062	33,582	41,308	52,125
Current liabilities & prov.	87,195	113,801	135,031	163,428	193,658
Current liabilities	70,665	92,436	109,865	133,980	159,683
Provisions and others	16,530	21,365	25,166	29,448	33,976
Net current assets	-21,263	-37,449	-36,372	-32,608	-17,780
Others (net)	0	0	0	0	0
Application of funds	**243,488**	**273,414**	**320,390**	**373,480**	**431,527**

Source: Company, JM Financial

Cash flow statement (Rs mn)

Y/E March	FY15A	FY16A	FY17E	FY18E	FY19E
Reported net profit	37,111	45,714	62,809	72,441	80,916
Depreciation and amort.	22,987	24,313	27,267	31,290	34,235
-Inc/dec in working cap.	-1,155	9,202	3,629	6,374	7,445
Others	0	0	0	0	0
Cash from operations (a)	**58,943**	**79,229**	**93,706**	**110,104**	**122,595**
-Inc/dec in investments	-26,961	-49,717	-35,000	-42,500	-47,500
Capex	-30,290	-20,639	-38,166	-38,116	-29,953
Others	17,278	7,192	1,667	-769	-3,286
Cash flow from inv. (b)	**-39,973**	**-63,164**	**-71,499**	**-81,385**	**-80,740**
Inc/-dec in capital	-1,054	-371	0	0	0
Dividend+Tax thereon	-8,796	-12,314	-15,832	-19,351	-22,869
Inc/-dec in loans	-14,179	-3,103	0	0	0
Others	-1,056	-69	0	0	0
Financial cash flow (c)	**-25,084**	**-15,857**	**-15,832**	**-19,351**	**-22,869**
Inc/-dec in cash (a+b+c)	-6,114	208	6,374	9,368	18,987
Opening cash balance	6,297	183	391	6,765	16,133
Closing cash balance	183	391	6,765	16,133	35,120

Source: Company, JM Financial

Key Ratios

Y/E March	FY15A	FY16A	FY17E	FY18E	FY19E
BV/Share (Rs)	784.9	894.3	1,049.8	1,225.6	1,417.8
ROIC (%)	15.6	16.7	21.1	21.2	21.0
ROE (%)	16.0	17.2	21.4	21.1	20.3
Net Debt/equity ratio (x)	-0.5	-0.6	-0.7	-0.7	-0.8
Valuation ratios (x)					
PER	47.7	39.0	27.1	23.5	21.0
PBV	7.2	6.3	5.4	4.6	4.0
EV/EBITDA	25.3	18.2	14.8	12.6	10.8
EV/Sales	3.2	2.7	2.2	1.8	1.5
Turnover ratios (no.)					
Debtor days	8	8	9	10	11
Inventory days	20	20	21	22	22
Creditor days	56	66	66	69	70

Source: Company, JM Financial

Price: ₹ 512

V-mart | VMART IN

NOT RATED

Well-placed to leverage rural recovery

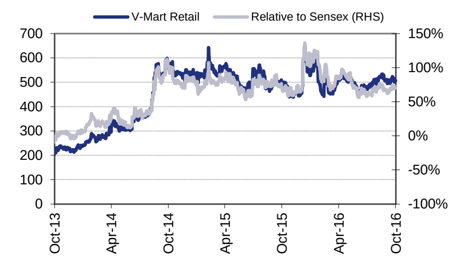
V-Mart is a chain of 127 fashion retail stores primarily located in mid-tier cities and focused on apparel/non-apparel fashion products – c.65% of stores are in UP and Bihar wherein consumers are largely dependent on agriculture and government for their incomes. Its portfolio consists of low price-point products and targeted towards lower income rural/mid-tier city consumers. Recent results have been impacted by subdued rural demand on 2 consecutive years of monsoon deficit - like-to-like growth slipped to -1.1% in FY16 vs 11-14% over FY12-14 and 6.5% in FY15 resulting in a sharp margin contraction and 26% decline in earnings in FY16. This has also impacted stock performance which declined c.21% YTD. Expectation of improving rural incomes in FY17 driven by a good monsoon season would lead to higher spends on marriages and apparels being one of the prime expenditure, is expected to witness a good demand recovery. V-mart with a high exposure to this segment is well-placed to leverage this trend.

- **Highly geared to rural play:** V-mart's stores are located in Tier II and Tier II cities wherein the customers are price conscious and buying behaviour is primarily determined by rural incomes. The company has high exposure to lower price point apparels segment (with average selling price of ₹200 for FY16), and its sales were under pressure on 2 consecutive years of below-average monsoon. Monsoon has been quite in-line with historical average in FY17 which is expected to improve rural incomes thereby resulting in higher expenditures on weddings and apparels. V-Mart is well-positioned to leverage this opportunity which could help drive a recovery in both SSSG's and margin.
- **Good cash flow generation potential and ability to drive high return ratios increases attractiveness of the business model:** V-Mart's business model has a capability to deliver a healthy mid to high teens ROCE (post-tax) and ROE (FY15 ROE: 19.9%, ROCE: 18%) though, return ratios have been slightly depressed in FY16 (ROE and ROCE declined to 12-13%) on poor consumer demand coupled with high retail space expansion. Improved apparels demand should help scale-up return ratios back to high-teens as witnessed earlier. The Company has also managed working capital quite efficiently which declined from 25% in FY11 to 12.9% in FY16 and has helped it achieve positive free cash flows in FY16 despite margin compression. Opportunity to leverage rural demand and efficient and lean operations makes it an attractive play on rural recovery.

Key Data

Market cap (bn)	Rs 9.1 / US$ 0.1
Shares in issue (mn)	18.1
Diluted share (mn)	18.0
3-mon avg daily val (mn)	Rs 3.6 / US$ 0.1
52-week range	684.9 / 425.0
Sensex/Nifty	28,051/8,678
₹/US$	66.7

Daily Performance



%	1M	3M	12M
Absolute	-1.0	7.5	-1.5
Relative*	2.6	8.4	-9.2

** To the BSE Sensex*

Shareholding Pattern (%)

	Sep-16	Jun-16
Promoters	55.5	55.5
FII	24.8	24.1
DII	4.9	4.9
Others	14.8	15.6

Exhibit 1: Financial Summary (₹ mn)

Y/E March	FY12	FY13	FY14	FY15	FY16
Net sales	2,819	3,835	5,750	7,202	8,094
Sales growth (%)	31.3	36.0	49.9	25.3	12.4
EBITDA	282	392	523	636	622
EBITDA (%)	10.0	10.2	9.1	8.8	7.7
Adjusted net profit	105	180	252	385	268
EPS (Rs)	7.5	10.0	14.0	21.4	14.8
EPS growth (%)	66.9	33.8	39.7	52.6	-30.5
ROCE (%)	17.2	16.8	14.8	18.6	11.9
ROE (%)	21.3	17.8	15.8	20.5	12.3
PE (x)	66.3	49.6	35.5	23.3	33.5
Price/Book value (x)	12.8	6.0	5.2	4.4	3.9
EV/EBITDA (x)	25.9	22.3	17.2	14.2	14.3

Source: Company data, JM Financial. Note: Valuations as of 17-10-2016

Financial Tables (Consolidated)

Profit & Loss (₹ mn)

Y/E March	FY12	FY13	FY14	FY15	FY16
Net sales (Net of excise)	**2,819**	**3,835**	**5,750**	**7,202**	**8,094**
Growth (%)	31.3	36.0	49.9	25.3	12.4
Other operational income					
Raw material (or COGS)	1,979	2,613	3,969	5,141	5,712
Personnel cost	171	250	383	489	623
Other expenses (or SG&A)	387	581	875	936	1,138
EBITDA	**282**	**392**	**523**	**636**	**622**
EBITDA (%)	10.0	10.2	9.1	8.8	7.7
Growth (%)	45.9	38.7	33.5	21.7	-2.3
Other non-op. income	1	8	7	22	10
Depreciation and amort.	58	76	109	46	190
EBIT	225	324	421	612	442
Add: Net interest income	-67	-58	-42	-42	-31
Pre tax profit	157	266	378	571	411
Taxes	53	86	127	186	142
Add: Extraordinary items	0	0	0	-11	7
Less: Minority interest	0	0	0	0	0
Reported net profit	105	180	252	374	276
Adjusted net profit	**105**	**180**	**252**	**385**	**268**
Margin (%)	3.7	4.7	4.4	5.3	3.3
Diluted share cap. (mn)	14	18	18	18	18
Diluted EPS (Rs.)	**7.5**	**10.0**	**14.0**	**21.4**	**14.8**
Growth (%)	66.9	33.8	39.7	52.6	-30.5
Total Dividend + Tax	3	15	27	33	27

Source: Company, JM Financial

Balance Sheet (₹ mn)

Y/E March	FY12	FY13	FY14	FY15	FY16
Share capital	73	180	180	180	181
Other capital	0	0	0	0	0
Reserves and surplus	469	1,297	1,522	1,869	2,127
Networth	542	1,477	1,702	2,049	2,307
Total loans	412	354	438	306	270
Minority interest	0	0	0	0	0
Sources of funds	**954**	**1,831**	**2,139**	**2,355**	**2,577**
Intangible assets	0	0	0	0	0
Fixed assets	551	765	1,096	1,421	1,750
Less: Depn. and amort.	215	291	397	441	631
Net block	336	474	700	981	1,119
Capital WIP	8	13	10	7	7
Investments	0	406	342	218	324
Def tax assets/- liability	6	7	22	6	42
Current assets	983	1,396	1,862	2,077	2,340
Inventories	869	1,108	1,677	1,832	2,044
Sundry debtors	1	0	0	0	0
Cash & bank balances	19	158	23	34	43
Other current assets	0	0	0	0	0
Loans & advances	94	131	162	212	253
Current liabilities & prov.	372	457	766	870	1,255
Current liabilities	352	440	720	817	1,173
Provisions and others	20	17	46	53	82
Net current assets	611	940	1,096	1,207	1,085
Others (net)	-7	-10	-31	-64	0
Application of funds	**954**	**1,831**	**2,139**	**2,355**	**2,577**

Source: Company, JM Financial

Cash flow statement (₹ mn)

Y/E March	FY12	FY13	FY14	FY15	FY16
Reported net profit	105	180	252	374	276
Depreciation and amort.	215	76	106	44	190
-Inc/dec in working cap.	-65	-150	-289	-58	144
Others	0	0	0	0	0
Cash from operations (a)	**254**	**106**	**68**	**360**	**610**
-Inc/dec in investments	0	-406	64	124	-106
Capex	-292	-220	-328	-322	-329
Others	10	-41	-2	-43	-12
Cash flow from inv. (b)	**-282**	**-667**	**-266**	**-240**	**-446**
Inc/-dec in capital	2	770	0	7	9
Dividend+Tax thereon	-3	-15	-27	-33	-27
Inc/-dec in loans	34	-57	83	-132	-36
Others	0	2	6	49	-100
Financial cash flow (c)	**32**	**699**	**63**	**-109**	**-155**
Inc/-dec in cash (a+b+c)	5	138	-135	10	9
Opening cash balance	15	19	158	23	34
Closing cash balance	20	158	23	34	43

Source: Company, JM Financial

Key Ratios

Y/E March	FY12	FY13	FY14	FY15	FY16
BV/Share (Rs)	38.9	82.2	94.7	113.7	127.7
ROCE (%)	17.2	16.8	14.8	18.6	11.9
ROE (%)	21.3	17.8	15.8	20.5	12.3
Net Debt/equity ratio (x)	0.7	-0.1	0.0	0.0	0.0
Valuation ratios (x)					
PER	66.3	49.6	35.5	23.3	33.5
PBV	12.8	6.0	5.2	4.4	3.9
EV/EBITDA	25.9	22.3	17.2	14.2	14.3
EV/Sales	2.6	2.3	1.6	1.3	1.1
Turnover ratios (no.)					
Debtor days	0	0	0	0	0
Inventory days	113	105	106	93	92
Creditor days	288	266	205	181	178

Source: Company, JM Financial

Appendix 01: Detailed Kharif sowing (2016)

Exhibit 86. Crop-wise state-wise sowing

Area in Lakh Hectares	Kharif sown area share (%)	Kharif sown area -YoY (%)	Rice - Share (%)	Rice - YoY (%)	Coarse Cereals - Share (%)	Coarse Cereals - YoY (%)	Pulses- share (%)	Pulses - YoY (%)
State								
Andhra Pradesh	3.9%	9.7%	4.2%	4.8%	1.1%	1.1%	2.4%	59.5%
Assam	2.1%	-1.0%	5.4%	-0.6%	0.1%	-29.0%	0.1%	-21.1%
Bihar	3.6%	-0.3%	7.8%	-1.0%	1.4%	-1.4%	0.5%	15.4%
Gujarat	7.3%	2.1%	1.9%	2.0%	6.0%	7.3%	4.7%	72.1%
Haryana	2.4%	6.4%	3.2%	5.6%	2.8%	15.4%	0.3%	263.6%
Karnataka	6.4%	10.2%	2.7%	-4.0%	11.8%	9.9%	12.5%	39.9%
Madhya Pradesh	11.2%	2.9%	4.7%	11.7%	8.2%	10.6%	11.8%	23.2%
Maharashtra	14.0%	7.8%	3.9%	3.9%	12.9%	20.6%	19.5%	42.1%
Odisha	4.5%	-0.7%	9.8%	0.4%	0.9%	-1.3%	4.4%	-1.7%
Punjab	3.4%	-4.6%	7.3%	1.2%	0.7%	-12.1%	0.1%	92.9%
Rajasthan	10.6%	2.4%	0.4%	11.5%	31.3%	-9.2%	22.5%	27.9%
Tamil Nadu	2.9%	2.4%	4.1%	11.7%	2.6%	-1.4%	2.0%	13.3%
Telangana	3.8%	3.6%	2.7%	10.9%	2.8%	39.0%	4.2%	76.7%
Uttar Pradesh	10.5%	-0.1%	14.9%	0.6%	9.1%	-1.8%	8.2%	-7.4%
Uttarakhand	0.6%	1.8%	0.6%	0.0%	1.1%	-2.3%	0.4%	9.8%
West Bengal	4.7%	3.7%	10.3%	5.0%	0.3%	6.7%	0.6%	1.8%
All-India	**100.0%**	**3.5%**	**100.0%**	**2.6%**	**100.0%**	**3.0%**	**100.0%**	**29.2%**

Source: Ministry of Agriculture

Exhibit 87. Crop-wise state-wise sowing

Area in Lakh Hectares	Oilseeds- share (%)	Oilseeds- YoY (%)	Sugarcane- share (%)	Sugarcane - YoY (%)	Cotton- share (%)	Cotton- YoY (%)
State						
Andhra Pradesh	7.0%	33.3%	3.1%	19.7%	4.9%	-28.8%
Assam	0.1%		0.6%	-	-	-
Bihar	0.0%	0.0%	4.9%	0.8%	0.0%	
Gujarat	13.3%	6.8%	3.8%	-7.9%	22.2%	-12.9%
Haryana	0.0%	122.2%	1.9%	1.8%	4.9%	-11.2%
Karnataka	5.3%	23.6%	8.7%	-20.7%	5.2%	-24.4%
Madhya Pradesh	34.7%	-7.2%	1.5%	-30.9%	5.0%	9.5%
Maharashtra	19.4%	5.7%	19.6%	-35.9%	34.2%	-0.3%
Odisha	0.8%	-13.5%	0.3%	-	-	10.4%
Punjab	0.0%	600.0%	1.7%	-1.0%	4.0%	-43.1%
Rajasthan	11.0%	5.2%	0.1%	-	-	-5.2%
Tamil Nadu	1.6%	-4.0%	6.4%	-8.8%	1.2%	-4.3%
Telangana	1.5%	16.8%	0.8%		13.6%	-26.8%
Uttar Pradesh	2.4%	-7.9%	43.6%	6.2%	0.0%	-19.0%
Uttarakhand	0.1%	100.0%	2.1%	-4.4%	-	-
West Bengal	1.1%	0.0%	0.0%	5.0%	-	-
All-India	**100.0%**	**2.8%**	**100.0%**	**-7.7%**	**100.0%**	**-11.7%**

Source: Ministry of Agriculture

Appendix 02: Crop Economics

Exhibit 88. Per acre farm economics for Rice – Realization/Cost expected to improve in 2017

		2012	2013	2014	2015	2016	2017
Yield	Quintal/Acre	14.5	14.9	14.6	14.4	14.4	14.8
Realization/Quintal	Rs/Quintal	1,110	1,280	1,345	1,400	1,450	1,510
By-product	Rs/Acre	1,463	1,610	1,764	1,800	1,754	1,764
Total Realization	**Rs/Acre**	**17,508**	**20,639**	**21,424**	**22,021**	**22,656**	**24,183**
% YoY	% YoY	15.5	17.9	3.8	2.8	2.9	6.7
Human Labour	Rs/Acre	3,296	3,629	3,718	3,936	4,156	4,272
Machine Labour	Rs/Acre	1,364	1,509	1,623	1,730	1,840	1,898
Animal Labour	Rs/Acre	840	833	972	1,035	1,098	1,132
Seeds	Rs/Acre	697	744	823	839	818	838
Fertilizers & manure	Rs/Acre	1,419	1,757	1,727	1,757	1,793	1,808
Pesticides & Insecticides	Rs/Acre	296	324	335	361	366	366
Water & Electricity	Rs/Acre	480	567	531	446	464	441
Working Capital	Rs/Acre	262	293	304	310	302	310
Miscellaneous	Rs/Acre	6	5	5	5	5	5
Total Cost	**Rs/Acre**	**8,660**	**9,661**	**10,037**	**10,419**	**10,842**	**11,069**
% YoY	% YoY	13.5	11.6	3.9	3.8	4.1	2.1
Total Profit	**Rs/Acre**	**8,848**	**10,978**	**11,387**	**11,602**	**11,814**	**13,114**
Realization/Cost	**x**	**2.02**	**2.14**	**2.13**	**2.11**	**2.09**	**2.18**

Source: CMIE, Cost of Cultivation study, JM Financial, Farmer Interactions, Yield adjusted for Paddy instead of Rice with ratio of Rice/Paddy at 0.67, Relevant WPI indices used

Exhibit 89. Per acre farm economics for Wheat – Realization/Cost expected to improve in 2017

		2012	2013	2014	2015	2016	2017
Yield	Quintal/Acre	12.9	12.6	12.7	11.1	13.1	13.4
Realization/Quintal	Rs/Quintal	1,285	1,350	1,400	1,450	1,525	1,586
By-product	Rs/Acre	3,341	3,683	4,321	4,409	3,702	3,765
Total Realization	**Rs/Acre**	**19,863**	**20,709**	**22,142**	**20,545**	**23,605**	**25,085**
% YoY	% YoY	20.4	4.3	6.9	(7.2)	14.9	6.3
Human Labour	Rs/Acre	1,155	1,242	1,384	1,486	1,591	1,702
Machine Labour	Rs/Acre	2,081	2,346	2,571	2,742	2,915	3,099
Animal Labour	Rs/Acre	167	195	204	199	195	191
Seeds	Rs/Acre	871	992	1,117	1,140	957	973
Fertilizers & manure	Rs/Acre	1,360	1,634	1,634	1,662	1,668	1,694
Pesticides & Insecticides	Rs/Acre	110	135	141	152	105	105
Water & Electricity	Rs/Acre	1,261	1,252	1,248	1,048	1,066	1,013
Working Capital	Rs/Acre	219	244	259	265	222	226
Miscellaneous	Rs/Acre	5	3	2	2	2	2
Total Cost	**Rs/Acre**	**7,229**	**8,043**	**8,563**	**8,697**	**8,720**	**9,004**
% YoY	% YoY	14.3	11.3	6.5	1.6	0.3	3.3
Total Profit	**Rs/Acre**	**12,634**	**12,666**	**13,579**	**11,848**	**14,885**	**16,081**
Realization/Cost	**x**	**2.75**	**2.57**	**2.59**	**2.36**	**2.71**	**2.79**

Source: CMIE, Cost of Cultivation study, JM Financial, Relevant WPI indices used

Exhibit 90. Per acre farm economics for Onion – Profitable but volatile earnings

		2012	2013	2014	2015	2016	2017
Yield	Quintal/Acre	65.2	64.7	65.2	65.3	65.3	65.3
Realization	Rs/Quintal	1,068	1,314	2,727	1,914	2,561	1,457
By-product	Rs/Acre	490	470	688	671	687	679
Total Realization	**Rs/Acre**	**70,096**	**85,511**	**178,601**	**125,594**	**167,839**	**95,804**
% YoY	% YoY	(25.3)	22.0	108.9	(29.7)	33.6	(42.9)
Human Labour	Rs/Acre	7,461	7,809	10,421	11,429	12,483	13,634
Machine Labour	Rs/Acre	1,721	1,496	1,856	1,982	2,110	2,246
Animal Labour	Rs/Acre	457	334	654	667	679	691
Seeds	Rs/Acre	3,530	2,554	6,204	6,330	6,169	6,416
Fertilizers & manure	Rs/Acre	2,698	3,390	4,108	4,178	4,264	4,344
Pesticides & Insecticides	Rs/Acre	618	641	1,100	1,186	1,203	1,609
Water & Electricity	Rs/Acre	1,323	1,325	1,676	1,407	1,463	1,494
Working Capital	Rs/Acre	557	550	813	830	809	841
Miscellaneous	Rs/Acre	12	36	2	2	2	2
Total Cost	**Rs/Acre**	**18,378**	**18,134**	**26,834**	**28,010**	**29,182**	**31,277**
% YoY	% YoY	11.5	(1.3)	48.0	4.4	4.2	7.2
Total Profit	**Rs/Acre**	**51,718**	**67,378**	**151,767**	**97,584**	**138,657**	**64,527**
Realization/Cost	**x**	**3.81**	**4.72**	**6.66**	**4.48**	**5.75**	**3.06**

Source: CMIE, Cost of Cultivation study, JM Financial, Relevant WPI indices used

Exhibit 91. Per acre farm economics for Potato – Profitable but volatile earnings

		2012	2013	2014	2015	2016	2017
Yield	Quintal/Acre	88.0	92.1	85.2	93.6	93.6	93.6
Realization/Quintal	Rs/Quintal	788	1,298	1,392	1,876	1,035	1,494
By-product	Rs/Acre	-	-	-	-	-	-
Total Realization	**Rs/Acre**	**69,360**	**119,572**	**118,658**	**175,583**	**96,831**	**139,840**
% YoY	% YoY	(10.7)	72.4	(0.8)	48.0	(44.9)	44.4
Human Labour	Rs/Acre	3,240	3,709	4,766	5,195	5,639	6,122
Machine Labour	Rs/Acre	1,753	1,715	2,161	2,413	2,681	2,979
Animal Labour	Rs/Acre	418	470	466	493	520	549
Seeds	Rs/Acre	6,540	9,107	11,653	11,889	11,587	12,051
Fertilizers & manure	Rs/Acre	3,880	5,313	5,470	5,564	5,678	5,785
Pesticides & Insecticides	Rs/Acre	353	313	620	668	678	907
Water & Electricity	Rs/Acre	1,667	1,490	1,631	1,370	1,424	1,454
Working Capital	Rs/Acre	558	694	838	855	833	867
Miscellaneous	Rs/Acre	1	96	51	52	51	53
Total Cost	**Rs/Acre**	**18,411**	**22,907**	**27,656**	**28,498**	**29,093**	**30,766**
% YoY	% YoY	3.0	24.4	20.7	3.0	2.1	5.8
Total Profit	**Rs/Acre**	**50,949**	**96,665**	**91,002**	**147,085**	**67,738**	**109,074**
Realization/Cost	**x**	**3.77**	**5.22**	**4.29**	**6.16**	**3.33**	**4.55**

Source: CMIE, Cost of Cultivation study, JM Financial, Relevant WPI indices used

Exhibit 92. Per acre farm economics for Arhar (Kharif) – Government focus to increase pulse acreage through higher MSP increases

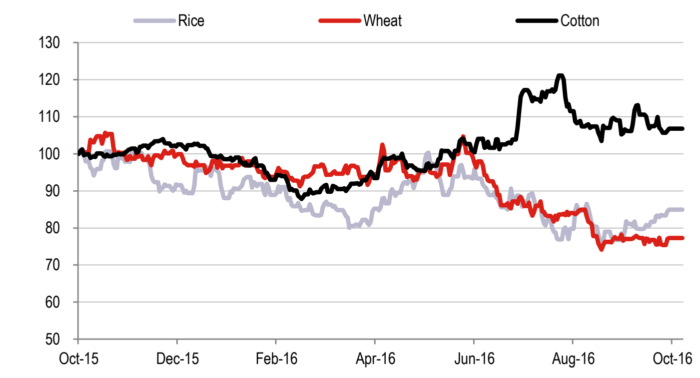
		2012	2013	2014	2015	2016	2017
Yield	Quintal/Acre	2.7	3.1	3.3	2.9	2.7	3.0
Realization/Quintal	Rs/Quintal	3,200	3,850	4,300	4,350	4,625	5,050
By-product	Rs/Acre	922	937	1,226	1,251	1,219	1,268
Total Realization	**Rs/Acre**	**9,499**	**13,035**	**15,372**	**14,075**	**13,797**	**16,375**
% YoY	% YoY	10.7	37.2	17.9	(8.4)	(2.0)	18.7
Human Labour	Rs/Acre	2,224	2,665	2,669	2,951	3,248	3,575
Machine Labour	Rs/Acre	881	1,212	1,629	1,904	2,210	2,565
Animal Labour	Rs/Acre	1,184	1,303	1,323	1,344	1,365	1,386
Seeds	Rs/Acre	422	494	524	534	521	542
Fertilizers & manure	Rs/Acre	688	1,131	1,136	1,156	1,180	1,202
Pesticides & Insecticides	Rs/Acre	563	810	907	978	992	1,327
Water & Electricity	Rs/Acre	130	134	62	52	54	55
Working Capital	Rs/Acre	191	242	258	263	256	267
Miscellaneous	Rs/Acre	7	5	3	3	3	3
Total Cost	**Rs/Acre**	**6,290**	**7,996**	**8,510**	**9,184**	**9,828**	**10,921**
% YoY	% YoY	(1.6)	27.1	6.4	7.9	7.0	11.1
Total Profit	**Rs/Acre**	**3,209**	**5,039**	**6,861**	**4,891**	**3,969**	**5,454**
Realization/Cost	**x**	1.51	1.63	1.81	1.53	1.40	1.50

Source: CMIE, Cost of Cultivation study, JM Financial, Relevant WPI indices used

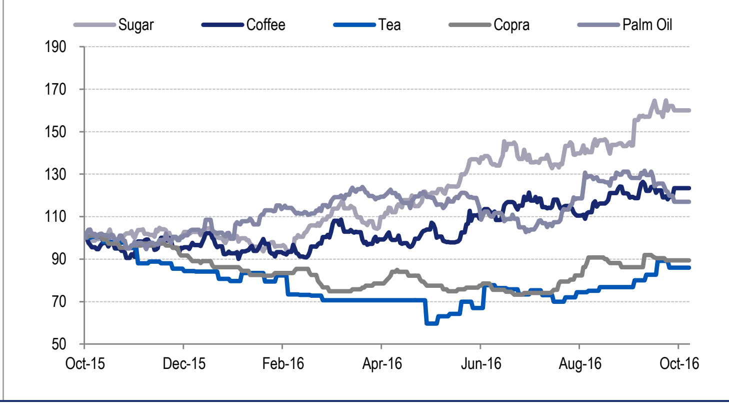
Appendix 03: Global agri-commodity prices

Exhibit 93. Global prices remain soft for cereals

Cereal prices soft on healthy global production outlook



Mixed trend among cash crops with sugar on an increasing trend



Source: Bloomberg

Global commodity prices remain mixed: A healthy production of cereals (particularly wheat) is expected to lead to soft prices in the near term. However, lower prices don't impact Indian farmers immediately, as we had discussed in detail in our note Wheato'nomics.

Appendix 04: Government Schemes and impact

Pradhan Mantri Fasal Bima Yojna (crop insurance) needs more information dissemination on ground

We received mixed responses from farmers on the new crop insurance scheme. Under this scheme, a premium of Rs300–Rs1,200/acre is collected from the farmer, depending on the region and crop cultivated. Insurance claim is given to farmers with at least 70% crop loss. Moreover, the premium for PMFBY was deducted directly from the Kisan Credit Card (KCC) loan taken by farmers in Haryana. The farmers are still sceptical of the returns from the scheme and do not approve of automatic deduction of premium.

Premium of Rs300–1,200/acre paid for 70% crop loss viewed negatively among farmers; we received feedback that crop losses do not extend to 70%, thereby making them ineligible for the claim

Exhibit 94. We heard mixed responses on the Crop insurance scheme

Source: Rural Safari

It is only that section of farmers who were depended on private insurance providers earlier who have remained neutral/marginally benefitted from the scheme. We met a farmer in Aurangabad who earlier paid Rs1,800/crop cycle but is now paying only Rs1,200/acre for the same percentage of cover under PMFBY.

Soil Health Card: Low awareness and reluctance of farmers to go for soil testing

The *Soil Health Card (SHC) scheme* seeks to encourage healthy farming practices by allowing farmers to better understand the nutrient content of soil, thereby enabling judicious use of fertilizers and micro-nutrients (mix as well as quantity). Under the scheme, farmers are required to send soil samples, at regular intervals to authorised centres/labs for testing. Nature of assistance offered varies from distribution of micronutrients to protection chemicals to adoption of organic farming practices

The union budget has allocated Rs368 crore for the National Project on Soil Health and Fertility and targets to cover all 14 crore farm holdings by March'17. Moreover, 101 new testing labs and 77 mobile soil testing labs were sanctioned in Apr-Dec'15. It is claimed that c.80% of collection target of 25 mn samples has been achieved with over 30mn SHCs being dispatched as of 10 Oct’16.

Farmers’ response: Our field checks and interaction with farmers pointed to a mixed picture for soil testing. One basic concern highlighted by farmers across Haryana, Bihar and MP was that the farmers are not convinced about the seriousness of the soil test and the recommendations that are sent are quite generic. Additionally, farmers at some places (Varanasi) said, they will have to go to office multiple times to get their soil health-cards.

We did witness some positive response for the scheme especially in Davangere (Karnataka), wherein the scheme is used by a fairly educated section of farmers who constitute c.20–30% of the total farmer base. Farmers who made use of the scheme seemed satisfied with the service and stated that it helped them to appropriately apply fertilizers and achieve better farm output.

Appendix 05: India's fertilizer scenario

- According to FAO, India has the second-largest arable land in the world after the US, accounting for around 11% of the world's arable land. However, it accounts for only 4.0% of the world's agricultural area owing to low cropping intensity. The various methods of increasing cropping intensity are: better irrigation facilities, appropriate use of fertilizers, crop rotations, mixed cropping and usage of appropriate plant protection.

Exhibit 95. Low crop intensity results in lower sown area

Particulars	FY09	FY10	FY11	FY12	FY13	FY14
Net area sown (a)	142	139	142	142	142	142
Gross cropped area (b)	195	189	199	198	197	196
as % of world	4.0%	3.9%	4.1%	4.0%	4.0%	4.0%
Cropping intensity = (b)/(a)	137.6%	135.8%	140.5%	139.8%	139.1%	138.4%

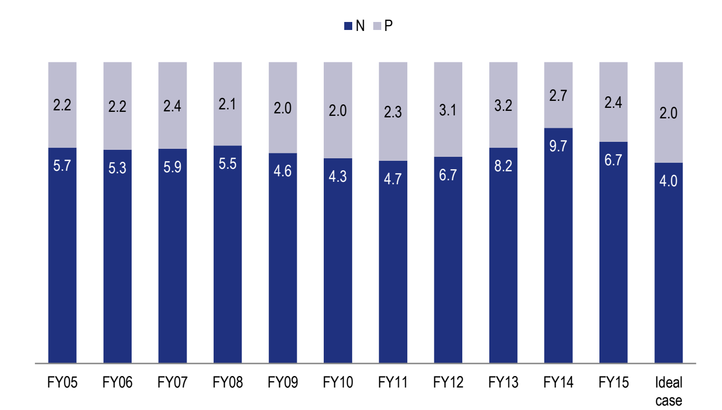
Source: Industry, JM Financial

- **Fertilizer industry entirely regulated:** Prior to July 2016, urea was a controlled fertilizer; DAP, MOP and other complex fertilizers were decontrolled. After the price cap on complex fertilizer in July, these so called decontrolled fertilizers also came under a regulatory cap, thereby bringing almost the entire fertilizer industry under the regulatory environment; the government controls both selling prices and subsidy rates.

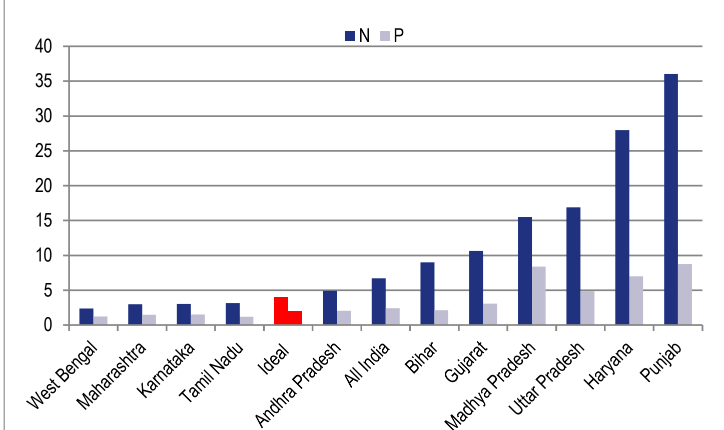
- **Dependence on fertilizer imports to go down**: Fertilizer application is driven by acreages, cropping patterns and NPK ratios (which further depend on prices of non-urea fertilizers, literacy level of farmers and government initiatives like soil health card). India is dependent on imports for N, P and K fertilizers to the extent of 30%, 30% and 100%, respectively. While dependence on imported phosphatic fertilizers has reduced over the years on account of availability of indigenous raw materials, government initiatives like neem coating of urea is expected to reduce dependence on imports for urea, going forward.

Exhibit 96. Indian fertilizer scenario: NPK ratio trend over time and across states

NPK ratios remain unfavourable (ideal ratio 4:2:1)



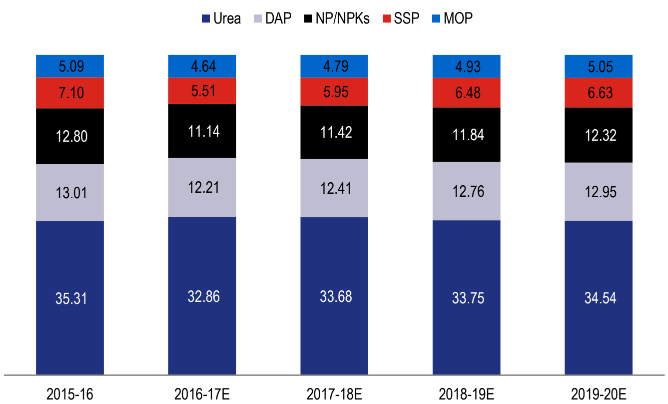
States like Punjab, Haryana, UP, Bihar and Gujarat having adverse NPK ratios



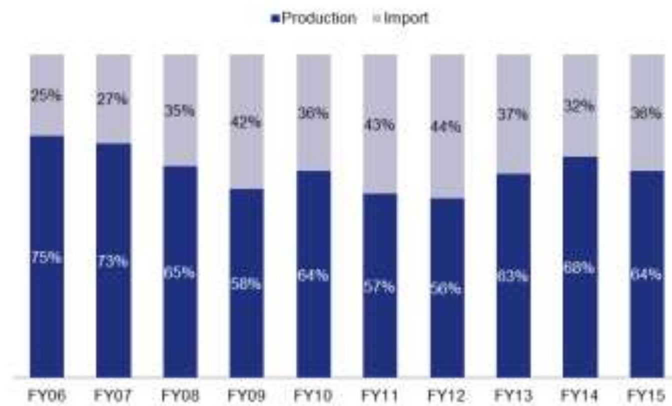
Source: Department of fertilizers, JM Financial

Exhibit 97. Prospects for fertilizer volumes; imports have been gradually falling

Fertilizer volumes to remain similar going forward



Dependence on imports gradually coming down



Source: Department of fertilizers, JM FInancial

APPENDIX I

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