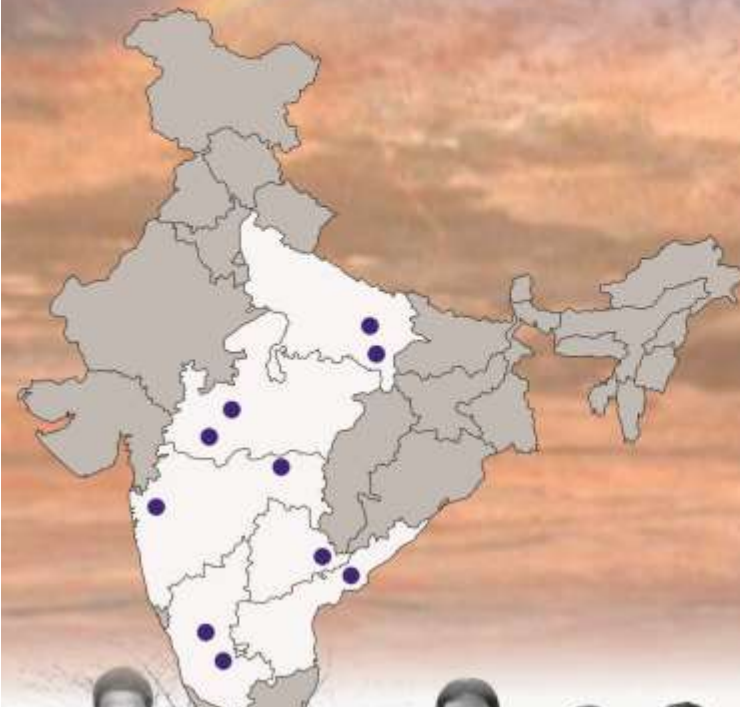


Rural Safari

A journey into India's rainbow economy cutting across "mini-Maharashtra" Nashik to "temple town" Varanasi to "Asia's second largest grain market" Warangal to understand drivers for consumption and to engage in crystal ball gazing to identify likely growth trajectory. Our analysts covered 13 districts in six states that account for 45% of India's agri GDP. We present key findings and stock implications.



Stocks mentioned:

Eicher Motors | Maruti Suzuki

Asian Paints | Berger Paints

Mahindra & Mahindra | Mahindra Finance

Cement Sector

Six states, thirteen districts, 1000+ Kilometers

Indore
The largest city in Madhya Pradesh, Indore is known as the financial capital of the State of Madhya Pradesh. Key crops in the region include Soyabean, Gram, Wheat, Potato and Maize

Dewas, Dhar
Dewas district recently came in the limelight for its irrigation facilities and Dhar district is known for its tourist places and cultural footprint. Key crops in the region include Soyabean, Gram, Wheat, Cotton, Maize

Nasik
Also known as mini Maharashtra, Nashik district boasts of c. 7 sugar factories and one cotton mill. Bajra, Maize, Wheat, Paddy and Sugarcane are key crops in the region. The district has been significantly impacted by unseasonal rains/hailstorms in last few months

Nagpur
Nagpur is a major commercial and political center of the Vidarbha region in Maharashtra. The main crop of the district are Paddy, Jowar, Cotton, Tur and Soyabean. In last decade, improving infrastructure and urbanization has supported rural prosperity in the region

Bengaluru - Rajankunte
Bangalore, the capital of Karnataka has benefited significantly from the IT boom, city has expanded geographically leading to reduction in farming land and increase in prices. The key crops have shifted according to urban consumption - vegetables, fruits, maize, poultry etc.

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

Chandauli, Mirzapur
Chandauli houses the busiest railway junction, Mughalsarai in the region and Mirzapur is known for its carpet and brassware industries. Key crops in the region are Pulses - Arhar, Gram, Bajra, Barley, Chillies, Paddy and Wheat.

Warangal
Second largest city in Telengana. Agriculture and trading are the main economic activities. The city hosts Asia's second-biggest grain market Major crops are paddy, cotton, mango and wheat.

Krishna, Guntur
Guntur and Vijayawada are one of the largest towns in newly formed Andhra Pradesh. Being highly irrigated region (as river Krishna flows through this region) most the villages around this region produce 3 crops in a year including Paddy, Jowar, Maize, Chillies, groundnut and tobacco

Tumkur, Chikkaballapura
Tumkur district is c. 65km from Bangalore, and is known for the production of Coconut. Coconut, Ragi, Paddy and groundnut are key crops in the region. Improvement in irrigation, better road connectivity and improving non-agri income has supported rural property in last decade.

Source: JM Financial

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Unseasonal rains have damaged Rabi crop and rural sentiment



Farmers are shifting to higher yielding Fruits, Vegetables and cash crops for a few years now



Better storage facilities and agri market reforms to continue to translate into better realizations, lower price volatility



Better irrigation facilities increase yield by 20-30% raising farm incomes



Dependence on agri income is falling – Jobs, Dairy, Poultry, Construction and self-employment have key income sources



Access to finance has opened up newer avenues like renting tractors, harvesters for agri & non-agri purposes



Wealth effect of land and gold - key driver in the last few years – Prices have moderated but unlikely to crash



Aspiration levels remain high – Farmers account for 30% of Royal Enfield showroom customers in Indore

India Strategy

Rural India – More than a rainbow economy

In the backdrop of weakness in the rural economy, we visited states that account for 45% of India's agrarian GDP to assess triggers and timelines for a likely revival. The recent erratic rainfall was on our minds when we set out but we note that rains, while the single biggest factor, is only one of the factors driving the rural economy today. Non-farm related income and wealth effect are also significant drivers of consumption in rural areas. In the near-term (FY16), though, all these drivers look weak to us and we see little chances of positive earnings surprise in FY16 to stocks levered to the rural economy. From a portfolio perspective, we recommend that in the near term one should be underweight the plain vanilla rural plays. We recommend adding to stocks which have "rural/semi-urban optionality" even as near-term stock performance is driven by other factors. There are many secular trends that make the rural economy a very attractive market in the long run and we are tracking those trends closely for signs of revival.

- **Wealth has been a significant driver for rural consumption:** The elasticity of rural consumption to rural GDP growth had increased from <math><0.7x</math> pre-2009 to close to 1x in years post 2009 highlighting that factors other than incomes have driven the growth. In most places we visited, land prices have risen 5-7x in past 5 years. The importance of the wealth effect can also be seen from the fact that the asset (primarily land)/income ratio in rural India has increased from the 7x levels we saw in '10 to estimated double digits now.
- **Near-term drivers for consumption are weak:** However, given that a) erratic rainfall has damaged two crops in succession b) low levels of activity (construction, mining) and rationalization of subsidies has impacted non-farm incomes (64% of rural income) and c) land price increases have moderated and fallen in a few places, we estimate the elasticity of consumption growth to income growth would drop to pre-2009 levels in FY16. Hence, we see no need to alter our FY16 estimates for companies with rural exposure.
- **Structural drivers intact, though rebound in economic activity critical:** Notwithstanding near term weakness, we noted secular growth drivers that make the rural market attractive for the long term. These are a) shift towards higher income crops b) disintermediation c) targeted direct benefit transfer, d) more than doubling of spend on roads in FY16E, e) higher devolution to states (recent state budgets have seen higher allocation to roads). A deeper rural revival, though, is likely in FY17 and we watch for activity on following areas: mining, construction in rural roads and rural infra, and manufacturing, seventh pay commission hikes. We discuss all these factors in detail.
- **How to be positioned?:**
 - a) Everyone we met wants to own a "Bullt" which reinforced our thesis on Eicher (Capacity/distribution expansion, product line-up). Maruti is another pick for similar reasons (competitive positioning, product launches, and preference for petrol cars)
 - b) On valuations, M&M and Mahindra Finance are attractive. However, we recommend only a gradual addition in the run up to the new product launches for M&M in Sep'15 given that 1HFY16 is likely to be challenging
 - c) Consumer stocks where one can still be hedged are from the paints sector (Asian Paints, Berger Paints)

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Exhibit 1: States we covered



Source: JM Financial

Our analysts covered 6 states, 13 districts and 1000+ kilometers meeting farmers, mandis (Agricultural market places), agri-input dealers, auto dealers and financiers over the last month

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

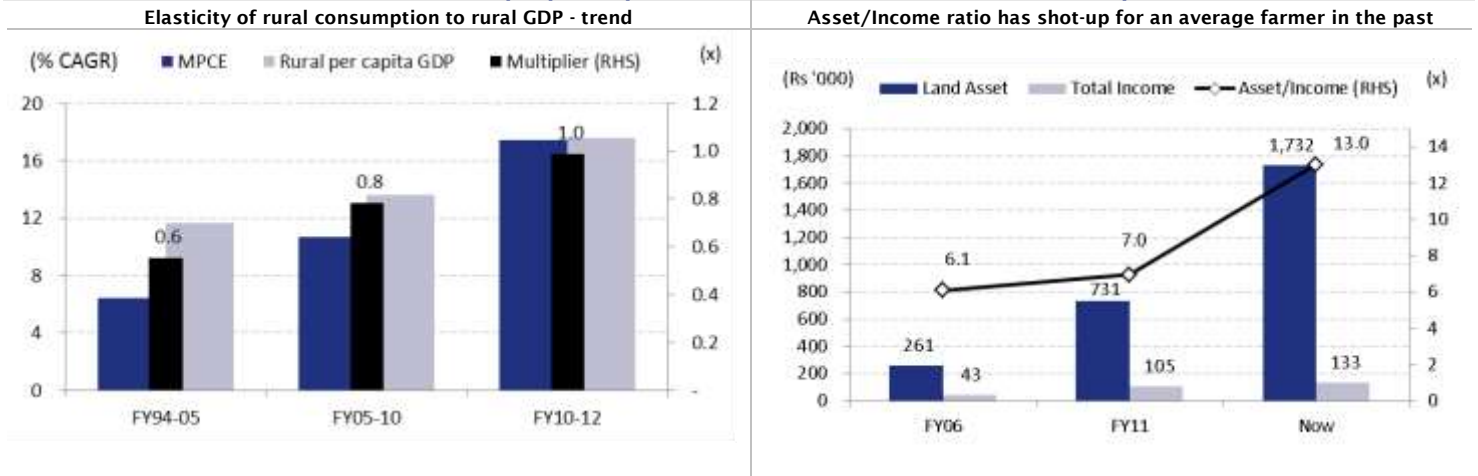
Please see Appendix I at the end of this report for Important Disclosures and Disclaimers and Research Analyst Certification.

Rural Safari – Executive Summary

6 States, 13 districts and 1000+ Kilometers

While all the indicators such as tractor sales, automobile sales, consumer durables sales, rural inflation and rural wage growth have been pointing to a weakness in the rural economy, we got onto the wayfaring path to understand reasons and extent of weakness and likely timelines and triggers for revival. Wealth effect has played an important role in the rural ecosystem over the last few years with (land) asset/income ratio shooting up from 6x to 13x over the last decade. Our main hypothesis was that the elasticity of rural consumption to rural income had increased from <math><0.7x</math> pre-2009 to close to 1x and that the risks are more to the downside in the near-term.

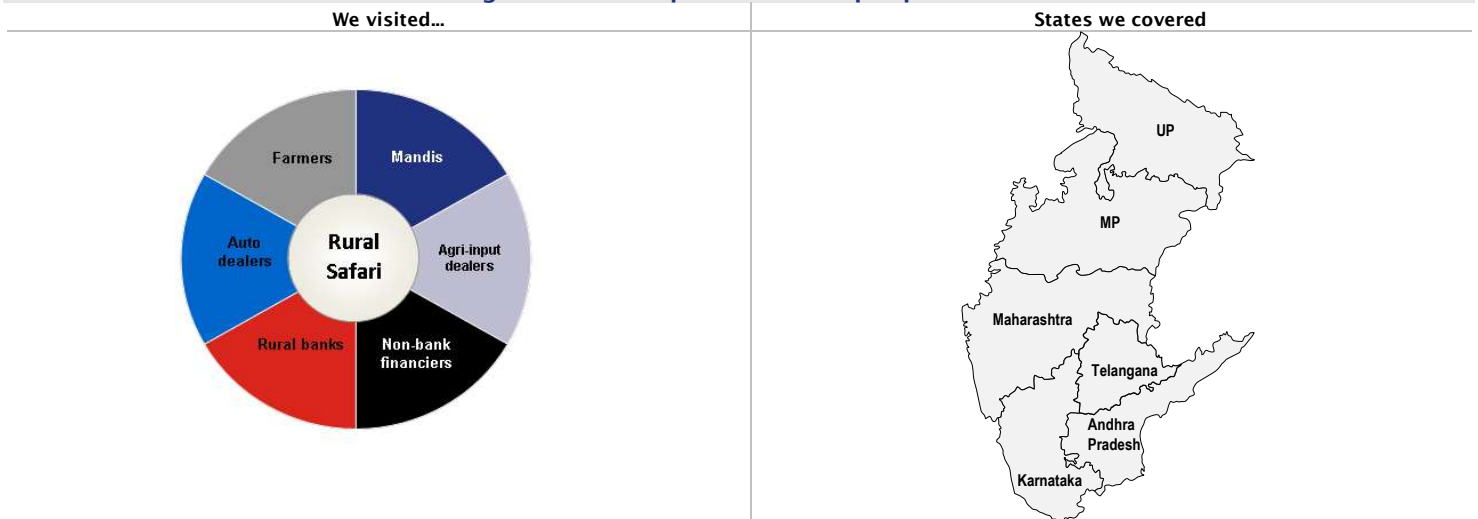
Exhibit 2. Wealth effect which increased propensity to consume has moderated in the last year



Source: NSSO, Interactions during Rural safari, JM Financial

We visited 6 states having 45% of India’s agricultural GDP, 13 districts and covered 1000+ kilometers to meet farmers, traders at mandis (Agricultural market places), agri-input dealers, auto dealers and financiers over the last month.

Exhibit 3. We covered 6 states including four of the top five farm output producers in India

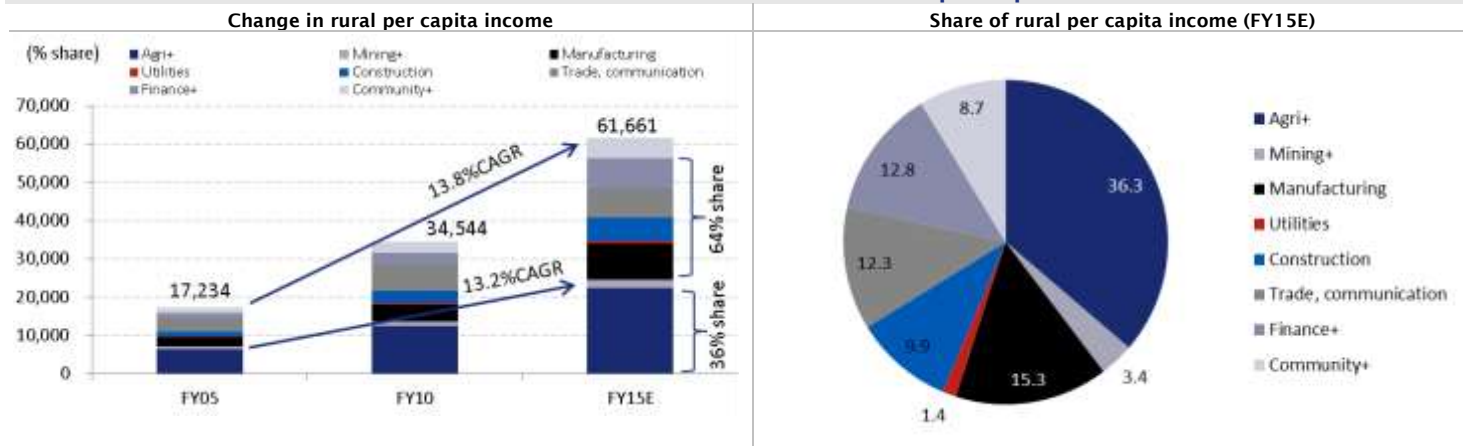


Source: JM Financial

Framework to peep into the future - Rural India is not a monolith

The rural income has grown at a CAGR of 13.6% from a per capita of ₹17,234, to ₹61,661 over the past ten years. Within this, we estimate the agri and allied income has grown at a CAGR of 13.2% and non-agri income at a CAGR of 13.8% and now accounts for 64% of overall rural income.

Exhibit 4. Non-farm income sources now contribute to an estimated 64% of per capita rural income



Source: NSSO, Interactions during Rural safari, JM Financial estimates

Our interactions during state-visits suggest that local dynamics of agri (crops, climatic conditions, irrigation, policies) and non-agri (urbanization, connectivity, construction) ecosystems are different in different places. That said, as overarching drivers, we base our analysis on near and medium term outlook for:

- Agri income
- Non-agri incomes and
- Wealth effect of land and gold prices

Our key findings:

A. Agri-income – Accounts for c.36% of total income now

What we saw?

- Share of agriculture and allied sector in the rural GDP has gone down to 36% in FY15 from 49% in FY00 but agriculture still remains the single largest contributor sector to rural GDP and continues to drive consumer sentiments in rural households (Exhibit 36)
- Unseasonal rains have damaged nearly 10.7mn hectares of area or 16% of cropped area during Rabi season – a second crop damage (Box 1)
- In many places we visited, local demand-supply dynamics matter more than the MSPs which have seen moderate hike (3.8/3.6% for paddy/wheat) in the last season (Exhibit 23)
- Fall in the global agri-commodity prices (GSCI agri commodity index down by 35% in the last 12M) has been hurting farm incomes too (Exhibit 25)
- Agricultural exports have remained flat in FY15TD (0.1% YoY) vs. 33% CAGR between FY10-14 (Exhibit 24) as a result of the export curbs on Potato, Onion, etc. to ensure domestic price stability and fall in global prices

Near-term outlook:

- Our analysis (Exhibit 64) suggests that 25% crop damage (after 2 successive failed crops) can wipe out nearly half of an average farmer's annual savings
- Thus, monsoon this year remains crucial after a series of weak cropping seasons. That said, since 1900, only 3 instances have seen back to back deficit monsoon years (Exhibit 67)

Medium-term outlook:

The monsoon is a known unknown every year and in the medium-term, the agriculture sector earnings will be supported by:

- Structural shift towards higher income farming – Area under Cotton, Sugar cane and Potatoes has gone up by 3.1, 1.1 and 0.8mn hectares between FY98-13 vs. a drop of 3.7mn hectares for Wheat and Paddy (Exhibit 27)
- Better irrigation facilities (Exhibit 29 and Box 5) eliminating dependence on monsoon – Our interactions with the farmers suggested that the yields can go up by 20-30% on account of irrigation facilities
- Agriculture sector market reforms including restructuring of the FCI, creation of competing agricultural markets and disintermediation will likely mean higher money in the hands of the farmer (Box 3/6)

B. Non-agri income – Significant now and will see a gradual pick-up**What we saw?**

- Only 58% of rural households have agriculture as their primary source of income. For these households, the share of direct farm income is only 47.9% (Exhibit 33 and 35)
- Manufacturing (15%), Finance (13%), Trade/communication (12%) and Construction (10%) are major contributors to rural per capita GDP (Exhibit 36)
- Our interaction with farmers suggests that significant diversification of agricultural incomes is driven by a) Allied activities such as dairy, poultry (Exhibit 37), b) construction (Box 9), c) employment opportunities in the nearby towns (Box 7 and 10), and d) remittances – ₹410bn/annum (1.2% of rural GDP) in rural India (Box 8 and Exhibit 39)
- Availability of capital and financing avenues has opened up new opportunities such as tractor renting – In best case scenario, a farmer with low land holding can buy and free up a tractor in 1.9 years by renting it for farming and construction activities (Box 9). We also estimate a likely potential tractor market of 7.8mn tractors assuming a tractor in every 45 acres (Box 14)
- Lower construction activity also delays the replacement cycle of tractors given low utilization. Also, tractor purchases are less sensitive to changes in the interest rates

Near-term outlook:

- Rural construction which formed an estimated c.60% of the national construction GDP in FY15E has seen real growth fall down to 4.1% in FY15E from 12.3% in FY12 (Exhibit 41 and Exhibit 42)
- Infrastructure push by the government (plan capital outlay up 26% - Roads up 194%, Railways up 53%) will likely play out from 2HFY16

- Economic survey focuses on impact of rural road creation on rural economy and accordingly roads is likely to be a thrust area of both the centre and the states – Additional devolution from centre together with increase in direct road allocation from centre will likely mean an additional ₹577bn for the roads sector this year
- Manufacturing sector has also seen moderation with investments going down – Real Gross capital formation growth has moderated to 2.2% between FY12-15E (new GDP series) vs. 11% between FY05-12 (Old GDP series) and is unlikely to pick up sharply given moderate capacity utilization (c.71%)
- Subsidies which saw a huge rise from 1.3% of GDP to 2.6% of GDP between FY06-13 seem to be rationalizing now at 1.7% of GDP in FY16E (Exhibit 52)

Weak construction activity and a rub-off of weak agri income will ensure that the near-term non-agri incomes remain flattish.

Medium-term outlook:

Non-agri income growth will be a function of government spending and overall economic pick-up and is likely to be gradual in our opinion. Triggers could come in the form of:

- Pick-up in mining activity (beginning FY17 for Greenfield coal mining),
- Targeted direct benefit transfer for subsidies in different forms which formed nearly ₹3.8trn or 4.3% of GDP in FY12 (Exhibit 72) could plug the leakages (as high as 15%/41%/54% in PDS Rice/Kerosene/Wheat)
- Focus on affordable housing (over the course of the tenure of the government)

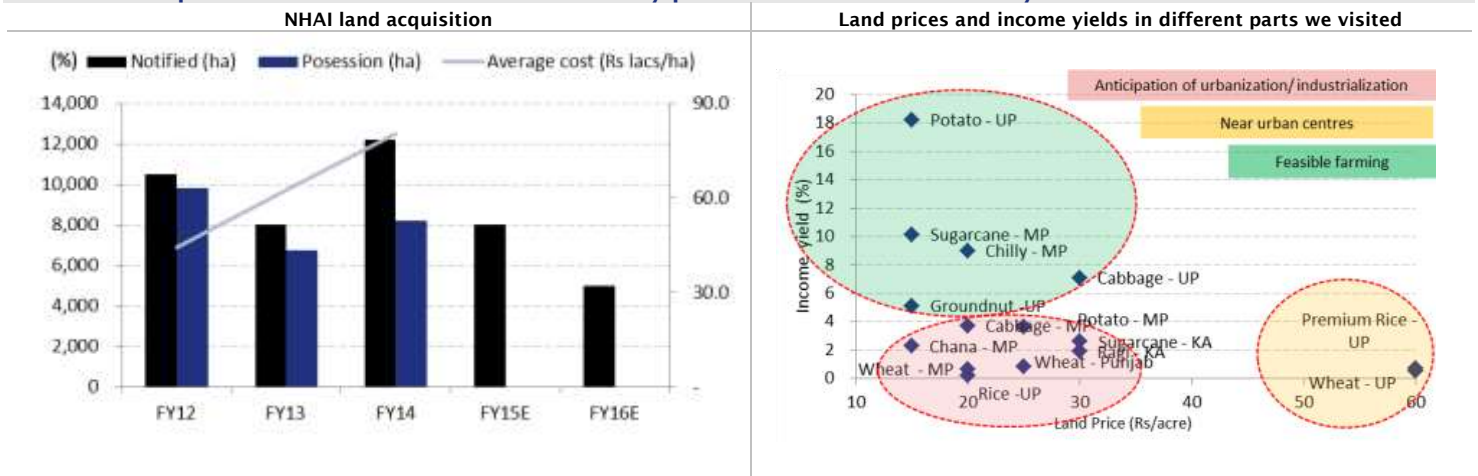
C. Wealth effect from land/gold

What we saw?

- Prime drivers of land price hike include urbanization demand, better road connectivity, remittances and speculation among others
- Wealth effect from sky-rocketing land prices has been instrumental in pushing down rural debt/ land asset ratio from 4.1% in FY06 to 3% in FY15E and increasing the land asset/income ratio from 6x in FY06 to 13x in FY15E (Exhibit 64)
- Agri lands away from urban areas with low income yields are most likely to stagnate compared to still feasible hinterlands or sub-urban agri lands (Exhibit 60)
- Wealth effect increased propensity to consume in the past pushing consumption elasticity of income to nearly 1 between FY10-12 from 0.6 in FY94-05
- Based on our interaction with the farmers, last 10 years saw 5-10x price rise in different places based on location - Our interaction with NHA indicated that, in some cases, the cost of land acquired by NHA rose 5x from ₹3.5mn/ha in FY09 to ₹17.5mn/ha in FY14 and that the Greenfield projects may not be feasible at these costs
- Rural road connectivity through Pradhan Mantri Gram Sadak Yojana (PMGSY) has accounted for nearly 42% of total rural road expansion between FY02-12.

Our interactions suggest that connectivity instantly appreciates land prices by 100% (anecdotes suggest so) on improved access to mandi, etc.

Exhibit 5. But price rise has seen moderation in many places we visited as income yields fall



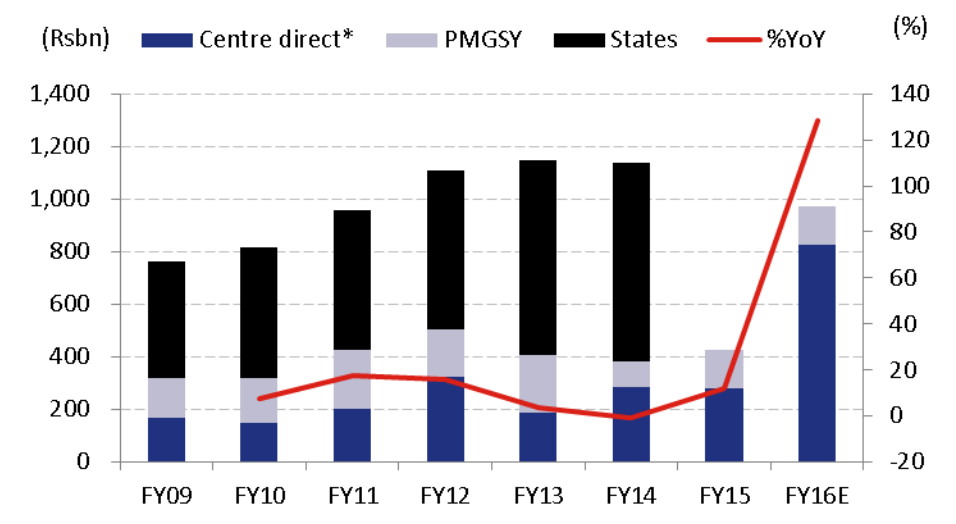
Source: NHA, JM Financial, The numbers do not match with the quoted number of ₹17.5mn/ha as some part of the land acquired by NHA is government land which is free of cost

Exhibit 6. Land categories we came across during rural safari

Type	Location	Agri-income yield	Price appreciation	Comment
Land feasible for farming	Hinterland	5%+	Moderate	Unlike to see any correction given feasible agri-income yields
Candidate for stagnation	75km+ from towns	3-5%	Steep	Most likely candidates for stagnation as speculation about urbanization has seen steep price appreciation
Sub-urban lands	Near towns	0-2%	Sharp	Unlike to see sharp fall. Likely beneficiaries of next leg of urbanization

Source: JM Financial

Exhibit 7. Road allocation by Centre and the states - sharp rise



Source: Union Budget, CMIE, JM Financial

Near-term outlook

Stagnation in land prices is likely to continue in the near future given:

- Very low farm income yields on pockets of agri land - fallen below 1% in some places we visited indicating speculative price hike and unsustainable farming at these prices and
- NHA's land acquisition targets are likely to be down 50% (in hectares) in FY16/17 over FY14

- An event of outright nationwide sharp moderation, which may result into a widespread negative wealth effect, looks unlikely given that actual market tends to be illiquid due to general tendency of farmers to hold onto their lands and complications regarding joint land holdings

Medium-term outlook

That said, transactions picking up is dependent on many factors which will play out gradually over the medium term. These include:

- government spending on infrastructure and gradual pick up in the economic activity - mining, construction as mentioned in the earlier section,
- acquisition by NHAI/states for road activity. Continued thrust on the PMGSY (Exhibit 57)
- The seventh pay commission could help support income growth - a 2.5x rise (including arrears) in the general salary levels would mean an additional ₹910bn (0.8% of FY15E GDP) for government employees (Exhibit 70)
- Higher flexibility and resources for the state governments (to the tune of ₹803bn) under the 14th finance commission. Total direct rural expenditure and quality of direct rural expenditure of the states (18% of total) is better with capital/revenue expenditure mix of 29/71% vs. 1/99% by the center (14% of total expenditure). (Exhibit 68 and 69)
- passage of land acquisition bill amendment in its current form without consent clause and Social Impact Audit (SIA) in certain cases could make land acquisition easier (could be tabled post the recess in the current session)
- Continued urbanization (India's current urbanization at 31% vs. 53% in China and 81% in the US), fillip from seventh pay commission will further support housing and construction activity (Exhibit 55).

We highlight some of the key triggers and possible timelines for a rural recovery:

Exhibit 8. Likely timelines for major rural triggers			
	FY16	FY17	Onwards
Monsoon	1H	1H	
Road construction		2H - NHAI awards likely to start to flow in. Recent state budgets have also seen increased road allocations (AP, MH)	
Mining		2H - round 3 of coal auctions begins in Apr'15 but actual on-the-ground work may begin only later	
Manufacturing		2H - as domestic and global investments pick-up with gradual up-tick in growth	
Rural Infrastructure		Likely thrust in different state governments on higher devolution, mining revenues	

Source: JM Financial

Market Implications - Two fold strategy for rural exposure

- Weak agri and non-agri incomes and stagnant land prices will translate into a fall in the elasticity of rural MPCE to Nominal rural GDP in the near-term which has been rising in the past due to wealth effect from land
- Thus, we see no need to change out FY16 estimates for stocks with significant exposure given fair assumptions amid expectation of a normal monsoon. In fact, we do not rule out downside risks to estimates depending upon how the monsoon season progresses in FY16

Our assumptions for key rural stocks remain moderate and are as given below:

Exhibit 9. Growth assumptions in key consumer stocks

(%)	FY09-14 CAGR	FY16E growth	FY17E growth
M&M Tractor volumes	17.4	10.3	8.4
HMCL 2W volumes	10.9	7.2	6.2
MSIL 4W volumes	7.8	16.3	17.5
MMFS AUM	33.8	8.9	12.3
HUVR sales	11.3	9.0	13.0

Source: JM Financial estimates, See Exhibit 65 for detailed company wise break-up

Medium term drivers of potential demand from rural market however remain intact and will likely continue to drive consumption in autos, tractors, agri-inputs and consumer durables.

- a) Hence, we recommend stocks which retain the “rural/semi-urban optionality” even as other factors drive near term stock performances. Everyone we met wants to own a “Bullt” which reinforced our thesis on Eicher (Capacity/distribution expansion, product line-up). Maruti is another pick for similar reasons (competitive positioning, product launches, and preference for petrol cars)
- b) From valuation perspective, M&M and Mahindra Finance are attractive. However, we recommend only a gradual addition in the run up to the new product launches for M&M in Sep’15 given that 1HFY16 is likely to be challenging
- c) Consumer stocks where one can still be hedged are from the paints sector (Asian Paints, Berger Paints)

Exhibit 10. Valuation of the stocks mentioned

Company	Reco	Mkt Cap (₹ bn)	CMP	% YTD	12M Target Price	(% upside)	EPS			EPS Gr (%) 14-17	PE (x)			PEG	EV/EBITDA		P/BV		ROE	
							FY15E	FY16E	FY17E		FY15E	FY16E	FY17E		FY16E	FY17E	FY16E	FY17E	FY16E	FY17E
Automobiles																				
Eicher Motors	BUY	433	16,020	6.3	19,100	19.2	225.6	389.9	652.1	64.8	71.0	41.1	24.6	0.6	23.2	13.4	12.7	8.6	35.6	41.9
Hero MotoCorp	HOLD	530	2,656	-14.5	2,850	7.3	134.3	159.8	178.7	19.2	19.8	16.6	14.9	0.9	11.4	9.8	6.7	5.8	44.0	42.1
Mahindra & Mahindra	BUY	710	1,202	-2.6	1,500	24.8	54.3	68.6	79.4	8.4	22.1	17.5	15.1	2.1	11.1	9.0	3.2	2.8	19.5	19.6
Maruti Suzuki	BUY	1,101	3,645	9.5	4,100	12.5	117.4	157.7	204.7	31.9	31.0	23.1	17.8	0.7	12.7	9.8	4.0	3.4	18.7	20.8
Asian Paints	HOLD	788	822	9.2	880	7.1	15.8	21.4	25.0	25.1	52.0	38.4	32.8	1.5	24.2	20.8	13.5	11.4	38.7	37.7
Berger Paints India	BUY	149	215	6.8	245	13.9	4.1	5.6	7.0	24.6	52.6	38.5	30.9	1.6	22.5	18.5	9.6	8.0	27.2	28.2
Hindustan Unilever	HOLD	1,911	884	16.2	885	0.2	19.0	22.4	25.3	14.8	46.6	39.4	34.9	2.7	27.8	24.5	47.4	42.3	NA	NA
Rallis India*	NR	45	231	7.0			8.5	10.7	13.2	19.0	27.3	21.6	17.5	0.6	13.1	11.0	4.6	3.9	23.1	24.2
Coromandel International*	NR	78	268	-13.0			15.7	21.2	25.7	27.3	17.0	12.7	10.4	0.8	8.2	7.3	2.6	2.2	20.9	21.9
PI Industries*	NR	83	610	18.2			17.9	22.7	28.8	27.7	34.1	26.9	21.2	0.8	18.4	14.7	7.2	5.6	29.6	29.3
Bajaj Finance	BUY	206	4,140	18.8	4,400	6.3	173.9	199.7	246.7	19.5	23.8	20.7	16.8	1.1			3.1	2.7	18.2	17.2
M&M Financial	BUY	148	263	-20.3	320	21.7	13.5	15.9	19.1	6.6	19.5	16.5	13.8	2.5			2.4	2.1	15.0	16.1
Shriram City Union Finance	BUY	131	1,996	2.8	2,150	7.7	85.8	101.8	123.8	12.1	23.2	19.6	16.1	1.6			2.8	2.4	15.0	16.0
Shriram Transport Finance	BUY	261	1,149	3.7	1,250	8.8	55.1	66.7	81.8	13.7	20.8	17.2	14.0	1.3			2.5	2.1	15.2	16.3

Source: JM Financial, Bloomberg, * Consensus estimates

Exhibit 11. State wise drivers of rural ecosystem

	Maharashtra			Karnataka			Uttar Pradesh			Madhya Pradesh			Telangana	Andhra Pradesh
	Nasik	Nagpur	Tumkur	Bangalore	Chikkaballapura	Mirzapur	Varanasi	Chandauli	Dewas	Indore	Dhar	Warangal	Krishna	
Agri-income														
Main crops	Bajra, Maize, Grapes, Onions	Soyabean, Gram, Cotton, Oranges	Ragi, Groundnut, Rice, Supari, Banana	Ragi, Maize, Vegetables, Fruits	Paddy, Vegetables, Ragi	Wheat, Rice, Gram, Arhar, Bajra	Wheat, Paddy, Bajra, Arhar, Sugarcane	Arhar, Bajra, Barley, Chillies, Gram	Soyabean, Gram, Wheat, Cotton, Maize	Soyabean, Gram, Wheat, Potato, Maize	Soyabean, Wheat, Cotton, Gram, Maize	Cotton, Rice, Chilly	Rice, Chilly	
Cash crops, fruits & vegetables	↔	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑		
Yields over last few years			↑	↑	↑	↑		↑	↑			↑	↑	
Irrigation		↓	↑	↑	↑				↑	↑			↑	
Prices compared to last year	↓	↓	↓	↑	↓	↓	↓	↓	↓	↓	↓	↓		
Output compared to last year	↓	↓						↓	↓		↓	↑	↑	
Non-agri Income - drivers														
Dairy, Poultry		↓	↑	↑	↑				↓					
Tractor/Pick-ups		↑	↑	↑	↑		↑	↑		↑	↑	↑	↑	
Remittances					↑		↑			↑			↑	
Local jobs	↑	↑		↑	↑		↑			↑		↑	↑	
Wealth effect of land - drivers														
Urbanization	↑	↑	↑	↑			↑	↑		↑	↑		↑	
Remittances					↑		↑			↑			↑	
Road connectivity	↑	↑	↑		↑	↓	↓	↓	↑	↑	↑	↑	↑	
Prices rise moderated?	↓	↓	↓	↑	↑	↓	↑	↓	↓		↓	↑	↑	
Farmers monetizing?	↑	↓	↓	↑	↓	↓	↑	↑	↓	↑	↓	↓	↑	
Buying land in hinterland?		↓	↓	↑	↑	↓	↑	↑	↑	↑	↓	↓	↑	

Source: JM Financial. ↑ - Improving ↔ - Flat ↓ - Declining

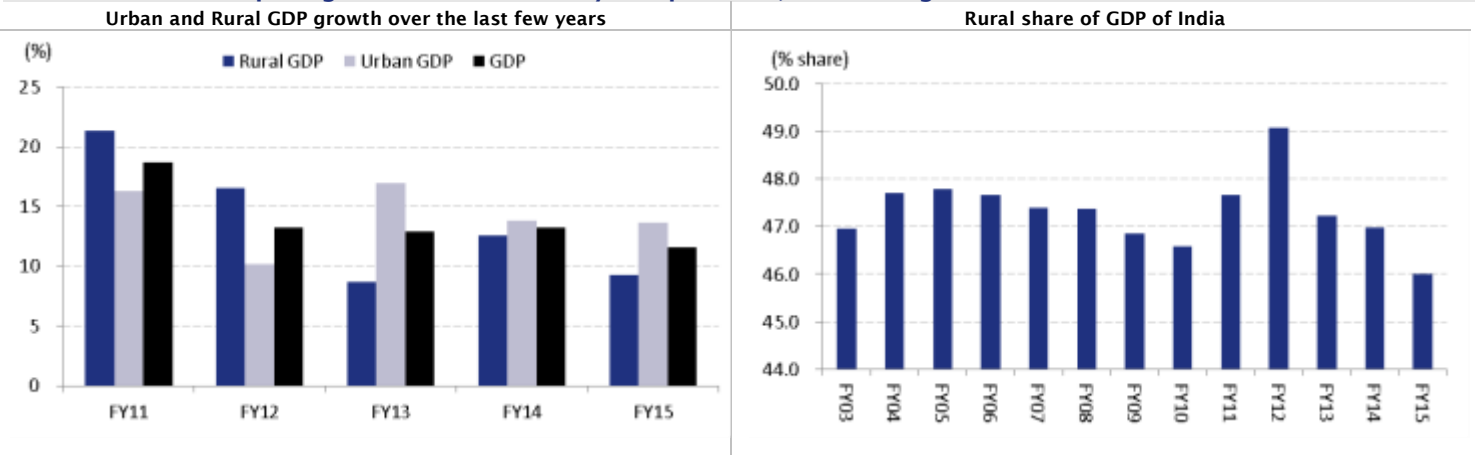
Rural economic moderation in the last two years

Slowdown drivers – Crop losses, Construction activity

Rural GDP growth lent support to economic activity in the post-GFC world

Rural economy lent support to growth in the post Global Financial Crisis (GFC) phase. While the official break-up of the Indian GDP into urban and rural incomes is available latest for 2005, we use change in employment in different sectors as inferred from various NSSO surveys to create an estimate of urban and rural income break-up since 2005. Our analysis indicates that FY10-13 saw nominal rural GDP CAGR of 15.4% vs. urban GDP CAGR of 14.4% during the same period. We note that during this period, rural income growth outpaced urban income growth in almost all the sectors including Agriculture+, Manufacturing, Construction, Finance+ and Community+.

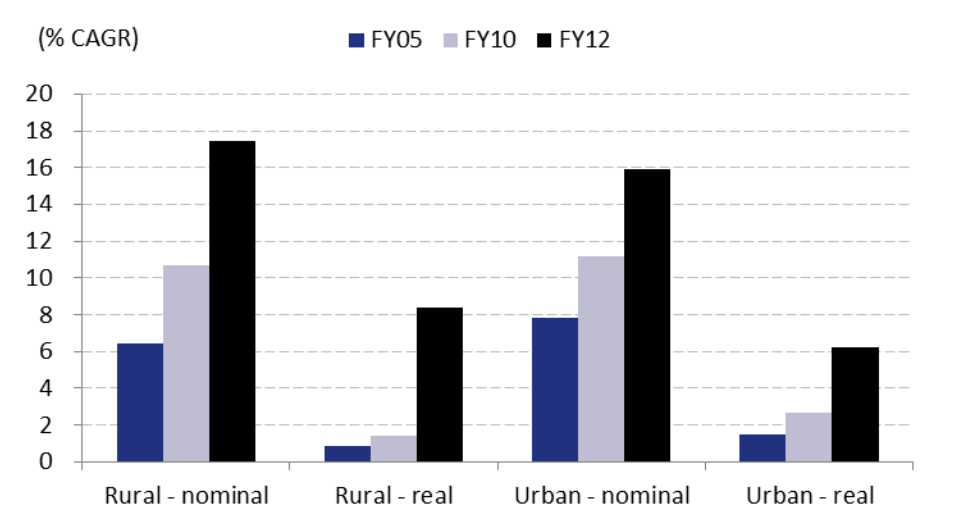
Exhibit 12. After outpacing urban GDP in initial years post-GFC, rural GDP growth has seen moderation



Source: MoSPI, NSSO Surveys, JM Financial estimates, New GDP Series for FY12 onwards

The real/nominal Monthly Per Capita Expenditure (MPCE) growth of 8.4/17.4% in rural India outpaced that in urban India at 6.2/15.9% between FY10-12 (NSSO survey round 70 for which latest data is available).

Exhibit 13. Real Monthly Per Capita Expenditure growth trend

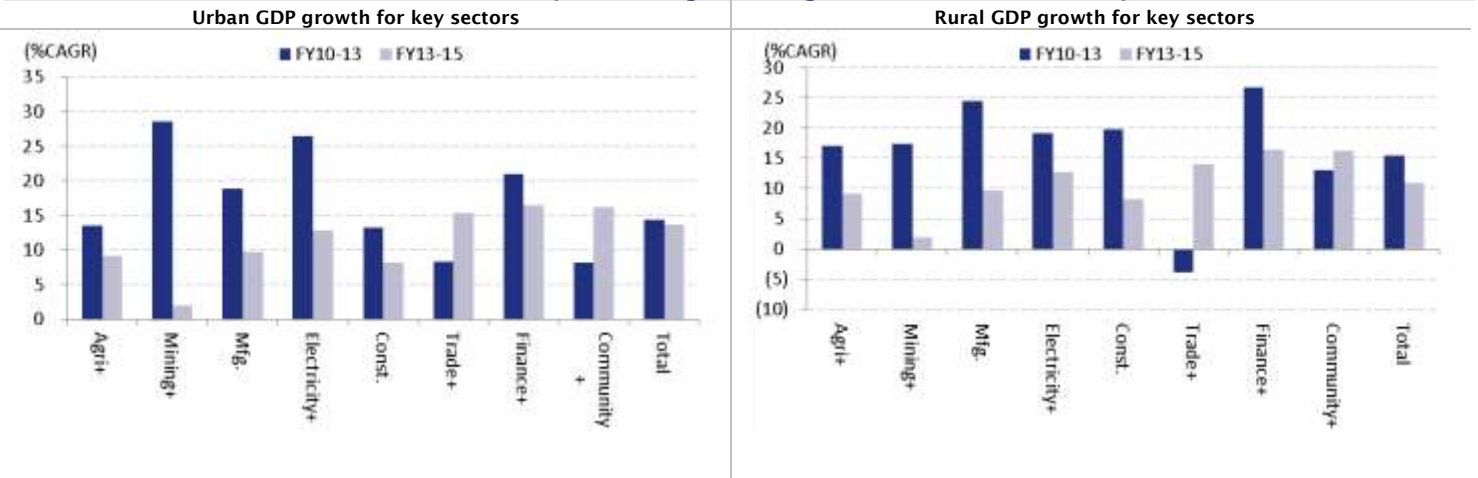


Source: NSSO, JM Financial

Moderation in the last couple of years

However, FY13-15 period saw some moderation in rural economy as rural nominal growth rate dropped below the urban nominal growth rate. Led by slowdown in Agriculture, Mining+ and Construction sectors, rural economy witnessed 10.9% CAGR between FY13-15 compared to urban economy which saw 13.7% CAGR.

Exhibit 14. Moderation in rural GDP driven by weaker agri, mining and construction activity

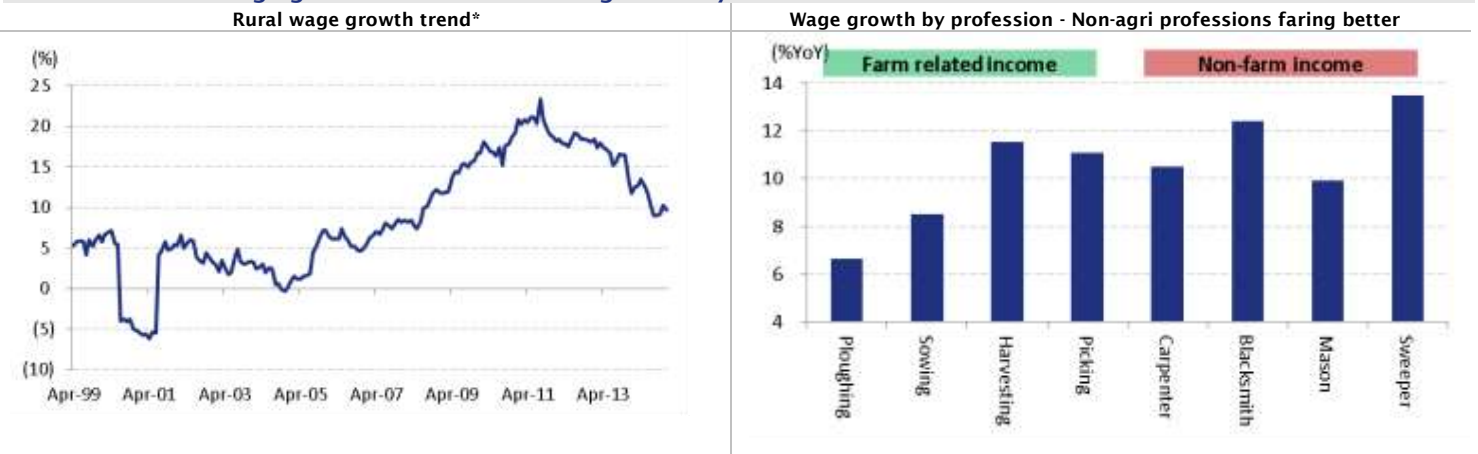


Source: MoSPI, NSSO Surveys, JM Financial estimates, New GDP Series for FY12 onwards

Rural wage growth has been moderating

In-line with the overall weakness in rural economy, rural wage growth too has been moderating. Overall, wage growth seems to have moderated from a peak of 23%+ in Aug-2013 to sub-10% in Dec-2014 (for which latest data is available). A look at the sub-profession wise wages indicates that on a relative basis, non-agri wage growth (blacksmith, carpenter, etc.) has held better than farm wage growth (Exhibit 17). Our interactions with farmers during the rural safari indicated continued shortage of workers and higher instances of mechanization.

Exhibit 15. Rural wage growth has moderated significantly



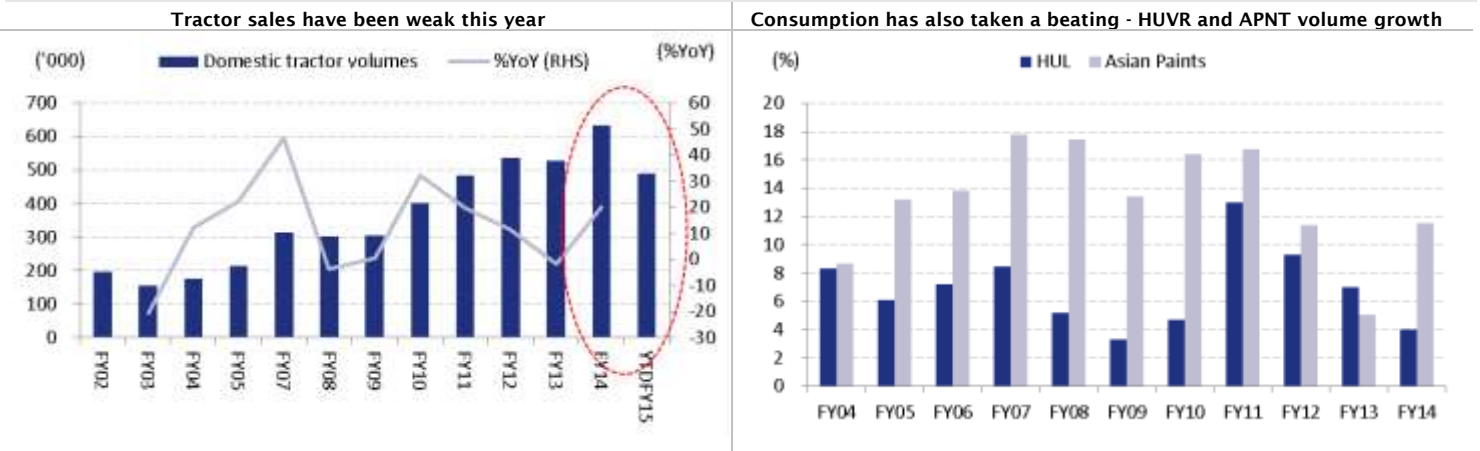
Source: CMIE, JM Financial, * Simple average of all the sub-profession series for which time series data is available

Other indicators of rural weakness – tractor and consumer sales

A look at the volume growth of companies with rural leverage also indicates weakness given that there has been a spate of negative news for the rural economy. Tractor volumes have plummeted to 488,000 in FY15 so far from

634,000 in FY14 (and expected to remain weak in coming months). Consumer related companies have been sounding alarm over rural weakness as well with Hindustan Unilever’s volume growth, which derives nearly 35% of its revenues from rural India, falling to 4% from a high of 13% in FY11.

Exhibit 16. Other indicators of rural weakness



Source: Company, JM Financial

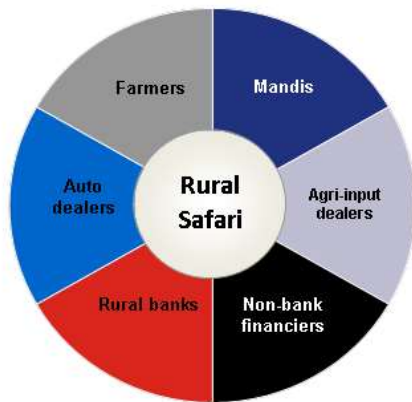
About Rural Safari

Six states, 13 districts, 1000+ kms -- 45% of agri-GDP

Rural Safari - The genesis

We left our desks and got onto the field to understand the reasons for the weakness and peep into the future of rural economy as it unfolds over the next few years. We visited 6 states, 13 districts and covered 1000+ kilometers -- 45% of India's agricultural GDP - to meet farmers, traders at mandis (agricultural market places), agri-input dealers, auto dealers and financiers over the last month.

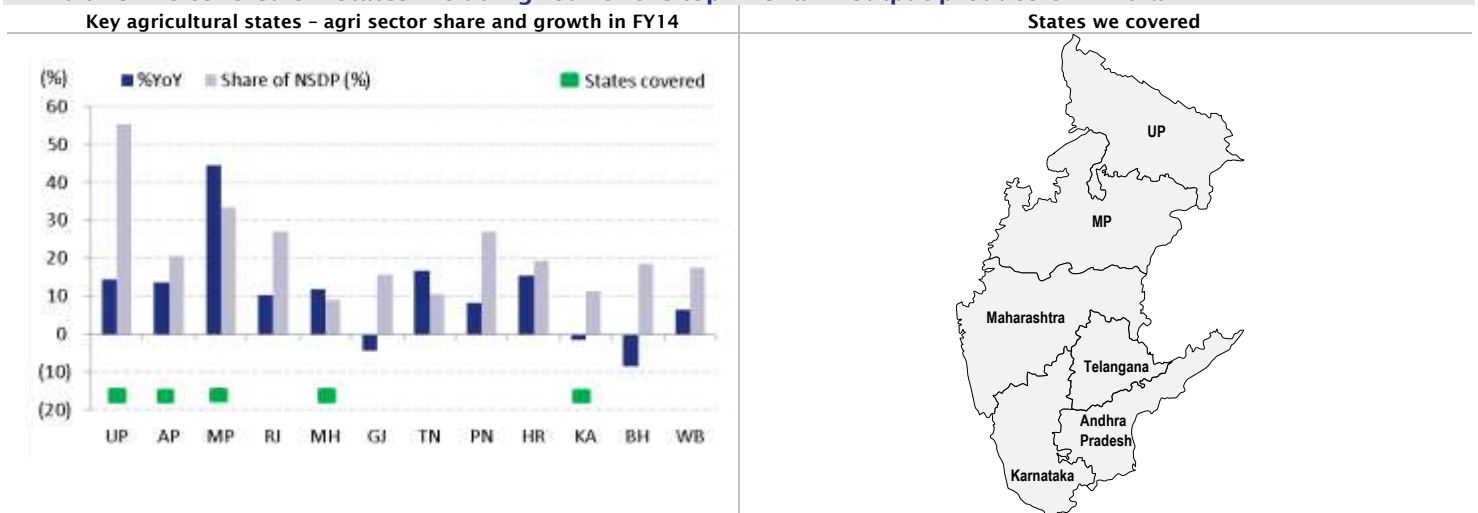
Exhibit 17. Places and people we visited



Source: JM Financial

We visited 6 states including four of the top five agricultural producing states in India and covering Northern (UP), Western (MH), Central (MP) and Southern (KA, AP, TG) regions. We visited places around mandis to understand and get anecdotal evidences about farm and non-agri ecosystems in these places.

Exhibit 18. We covered six states including four of the top five farm output producers in India

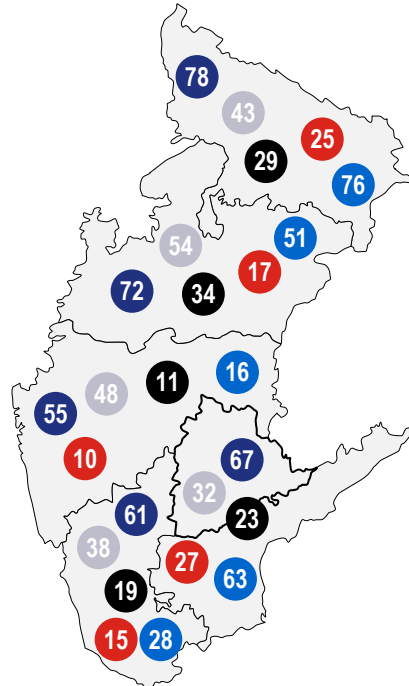


Source: RBI, JM Financial, Erstwhile AP state

Rural India is not a monolith but has many markets with local drivers

Our findings indicate that different land holding patterns, cropping patterns, climatic conditions, yields, demography and government machinery make all rural markets different from each other. For example, our findings indicate that farm and non-agri activities in Madhya Pradesh have been faring better than Uttar Pradesh on account of larger land holdings, awareness of farmers, better institutional machinery and government policies. Availability of labor from neighboring states and cost of labor has resulted into varied levels of agri-equipment penetration in the states of Andhra Pradesh, Telangana and Uttar Pradesh.

Exhibit 19. Diversity across the states we visited



● Share of rural workers (%) ● BPL population share (%) ● Share of Agri GSDP (%) ● Yield (Quintals/ha) FY13 ● Irrigated area (%) - FY12

Source: DAC, JM Financial

Overarching themes across states - framework for understanding rural economy

That said, following broad themes have emerged from our findings -

- Shift towards cash crops, fruits and vegetables which give higher incomes per acre
- Increasing non-agri share of income driven by allied activities such as dairy, poultry, construction and other local non-agri jobs
- Multi-fold increase in land prices in the last few years driven by urbanization, road connectivity and remittances. Recent moderation in land price acceleration
- Weak monsoon and near-term weakness on account of unseasonal climatic changes and deterioration in the farm income growth last year, after a period of good run driven by supportive Minimum Support Prices (MSP)

We summarize these findings and district-wise details in Exhibit 10. Throughout the report we understand the factors driving rural incomes (agri and non-agri) and wealth (land, gold, etc.) and try to gauge structural and transitory trends that will drive these in the future.

Agri Income - Growth has moderated

Deteriorating farm economics hurt by erratic weather

Our interaction with farmers indicates that the share of agri income in rural areas has been declining over last few years (now 36%). That said, farm income still drives the sentiment and purchasing decisions in many parts of rural India. Many farmers we interacted seem to have deferred their purchasing decisions owing to recent climatic uncertainties and resultant crop losses. Farm income (and thus consumer sentiment) in rural areas is affected due to a confluence of factors such as:

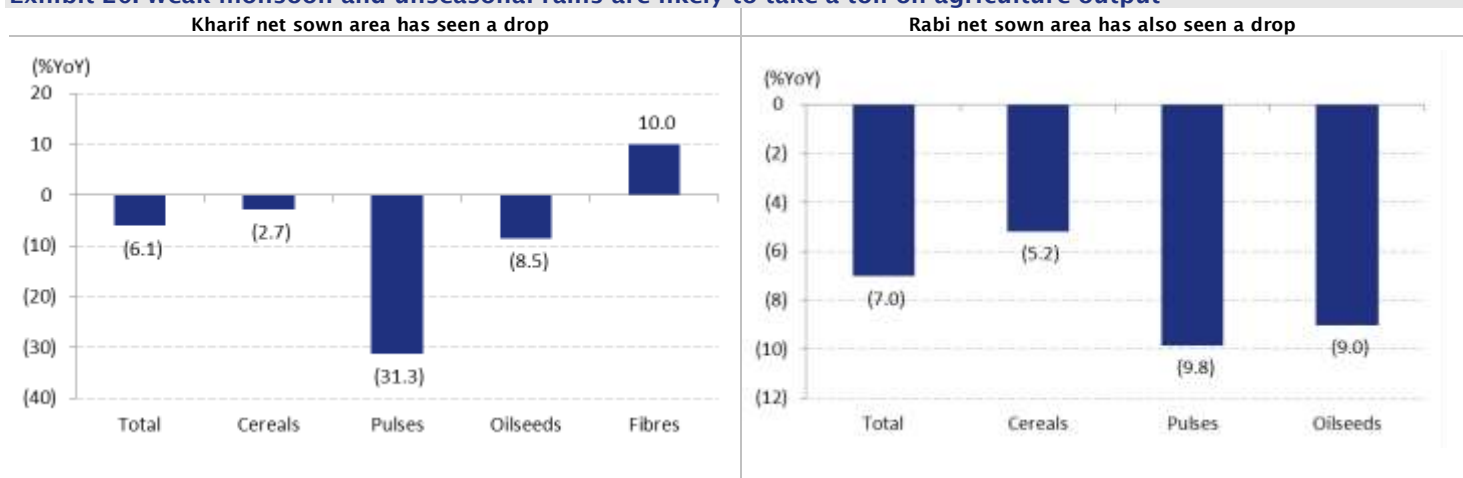
- Erratic weather patterns with weak monsoon earlier this year followed by unseasonal rains in the last few days - up to 16% of Rabi cropping area affected due to unseasonal rains
- Moderate rise in the Minimum Support Prices (MSPs)
- Change in FCI procurement policies in certain states
- Export restrictions and weakness in global agricultural commodity markets

That said, there are structural factors such as shift towards high income yielding fruits, vegetables and cash crops, improving irrigation facilities and agri market place reforms which will continue to provide support to farm incomes in the medium-term.

Erratic weather has hurt crops

In many places we visited, damage to two subsequent crops had impacted farm incomes. The 12% rainfall deficit in southwest monsoon compared to long period average (LPA) led to a fall of 6.1% in the net sown area during Kharif season. Dip in water table after a weak monsoon and recent unseasonal rains and hailstorms in many parts of India have led to a drop of 7% in the Rabi net sown area as on 6-Mar-2015.

Exhibit 20. Weak monsoon and unseasonal rains are likely to take a toll on agriculture output



Source: CMIE, JM Financial

Box 1: Instances of erratic climate on the rise – Unseasonal rains impacted Rabi crop this year – 10.7mn ha (16% of cropping area in FY14) affected

Increasing erratic climatic pattern was a common theme across our visit to the north Indian states. A standing crop near harvesting season tends to be heavy at the top. Unseasonal rain with winds in the northern Indian states has impacted nearly 20% of the produce in some parts. Output from damaged crop tends to be smaller in size, discolored and fetches significantly lower value in the markets. In some fields, we saw manually harvested wheat lying wet; owner of the farm said he will wait for the harvested wheat to dry before it can be taken to mandis. Interestingly, many farmers are now mechanizing by renting harvesters (like the one in Box 10) which instantly separates grains from the straws – it is now a preferred way of harvesting in many states.

Exhibit 21. Wheat crop damaged by unseasonal rain and wind in a field in UP



Source: JM Financial

At the end of February, unseasonal rains, hailstorms and strong wind affected a total of 10.7mn hectares of area (16% of cropped area during last Rabi season) under Rabi crops. During and after our trip, there were unseasonal rains which have further worsened the situation and damaged standing crop.

Unseasonal rains have impacted standing wheat crop in UP and MP

Box 2: Crop insurance penetration limited and relief inadequate

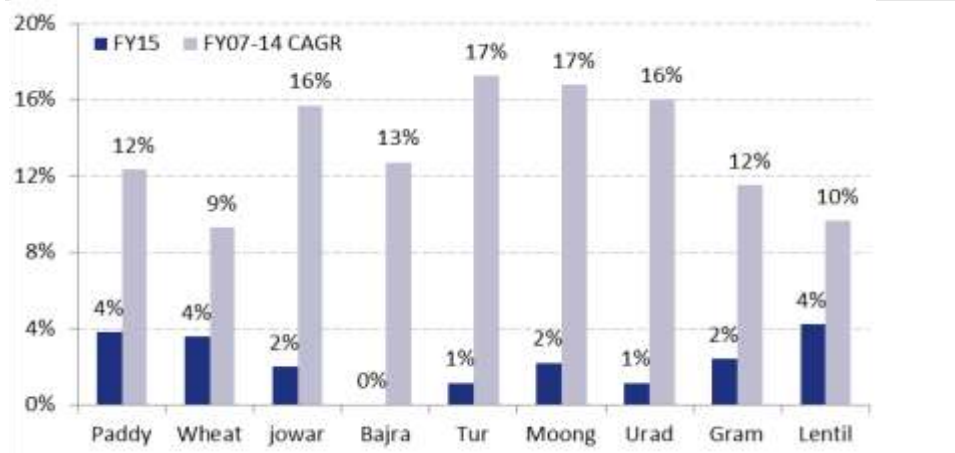
The relief machinery and its efficacy defers across states. According to farmers in UP, the crop insurance scheme is availed by a few farmers. The state relief is generally very limited and covers costs as per standardized rates if the damage to the crop is beyond some threshold. Some farmers (especially during erratic monsoon season) carry out subsequent sowing if the first sowing is damaged. Such costs are also not covered under the relief package.

The crop insurance and relief schemes are availed by only a few farmers and cover only the cost of cultivation

Moderate hike in MSPs has not helped either

The impact of adverse weather was further amplified when the government announced a modest Minimum Support Price (MSP) hike for the Rabi season – 3.6%YoY to ₹1450/quintal for Wheat and 3.8%YoY to ₹1310/quintal for paddy. The hike comes after a period of last seven years which saw the MSPs rise at a CAGR of 12/9% for paddy/wheat and even higher at 17/16% for pulses/jowar. Many farmers we visited complained about MSPs not compensating for the rise in other farm inputs.

Exhibit 22. MSP hike for key crops



Source: CACP, JM Financial

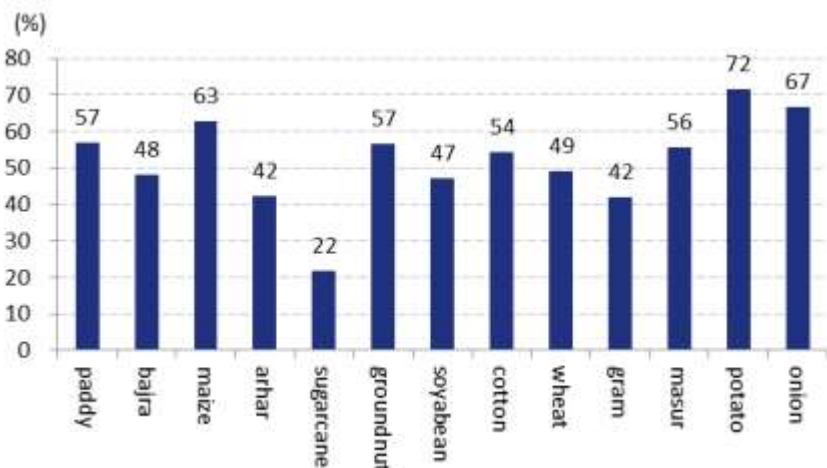
Local demand-supply matters more to farmers than MSPs – Nearly 50% of the households sell their produce to local trades

Our interactions with farmers indicated that local demand-supply dynamics play a larger role in deciding the realizations for the farmers than the MSPs. Larger; more informed farmers get MSP for their produce. However, smaller farmers and farmers located in the hinterland often do not get the MSP for their produce as:

- a) The small production quantity makes it feasible to sell the produce to local middleman who aggregates produce of many farmers and takes it to mandis
- b) Procurement by the government agencies happens only at particular location (in many states) and during a specific period and for a specified quantity – lack access to storage facilities forces farmers to sell their produce for cash
- c) Quality (which is often subjective) is an important determinant of MSP

According to the NSSO report on Key Indicators of Situation Assessment of Agricultural Households, more than 50% of farmers across different crops sell their produce to local traders than in mandis (Exhibit 23).

Exhibit 23. Share of rural households selling their produce to local traders



Source: NSSO, JM Financial

Box 3: Declining role of the middle man in APMC market in Telangana and Andhra Pradesh

Our interactions indicated that in Telangana/Andhra Pradesh, importance of middle man's role between the farmer and final purchaser of farmer's produce is gradually declining. Waranagal APMC office (locally called as Enumamula market - Asia's second biggest grain market) over the last 2-3 years has frozen the number of licenses to middleman and is steadily increasing final purchasers licenses (15-20% growth in every year). Currently it has 426 licenses for middle man and 527 licenses to final purchases. There are other markets like Mahabubabad, Narsampet in Warangal district where there are no middle men in mandis and farmers sell directly to final purchasers.

Role of middlemen is declining in some states

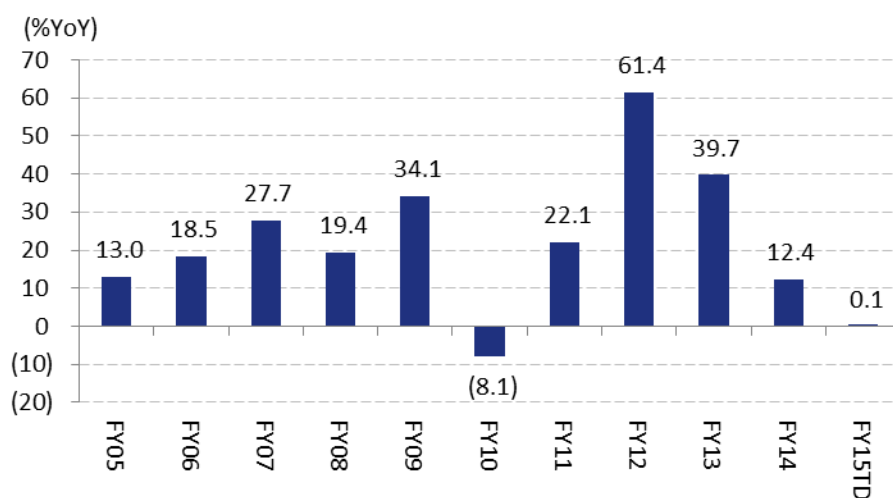
Change in the FCI policy for procurement without bonus payment is another negative - No excess procurements from states giving bonus over MSPs

The decision of the FCI to stop procuring excess food grains from the states which dole out additional bonus over and above the central MSP, has successfully led to dropping of the practice of giving bonus over and above MSP in states like Chhattisgarh and Madhya Pradesh. The procurement levels in KMS 2014-15 are lower in both Chhattisgarh and Madhya Pradesh as compared to the previous year and there is reemergence of competition in the market. While this practice will help develop distortion free agricultural market across states in the medium term, it will impact farm incomes and rural sentiment.

Curb on exports in order to ensure domestic supplies hurting realizations

The government has restricted exports and imposed Minimum Export Price (MEP) on many agricultural commodities in a bid to keep domestic prices in check. Accordingly, Indian agricultural exports have remained flat in FY15TD (0.1% YoY) vs. 33% CAGR between FY10-14. Many farmers we met (especially those in MP and UP) talked about rice export ban (by Iran) hurting export realizations (indirectly). The government notified MEP for Potato (at US\$450/tonne - now removed) and Onions (US\$500/tonnes). Accordingly, onion exports this year have tumbled 21% till date.

Exhibit 24. Agricultural export growth flat after a period of strong growth*

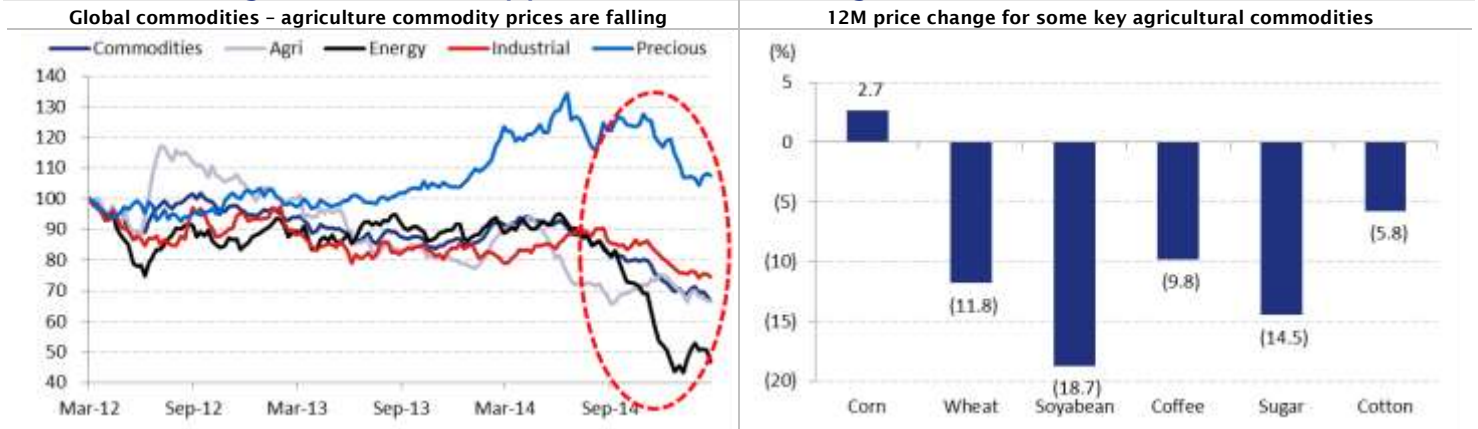


Source: CMIE, JM Financial, *Growth in INR to capture the income aspect for agri-ecosystem

Suppressed global agricultural commodity prices impacting domestic realizations

Global agricultural commodities have been correcting leaving an impact on domestic farmer realizations with the S&P GSCI Agriculture Commodity Index has fallen 35% in the last 12 months. These prices have translated into lower domestic prices for global commodities such as Cotton, Coffee and Soyabean and impacted Indian exports.

Exhibit 25. Global agricultural commodity prices have been correcting since 2012

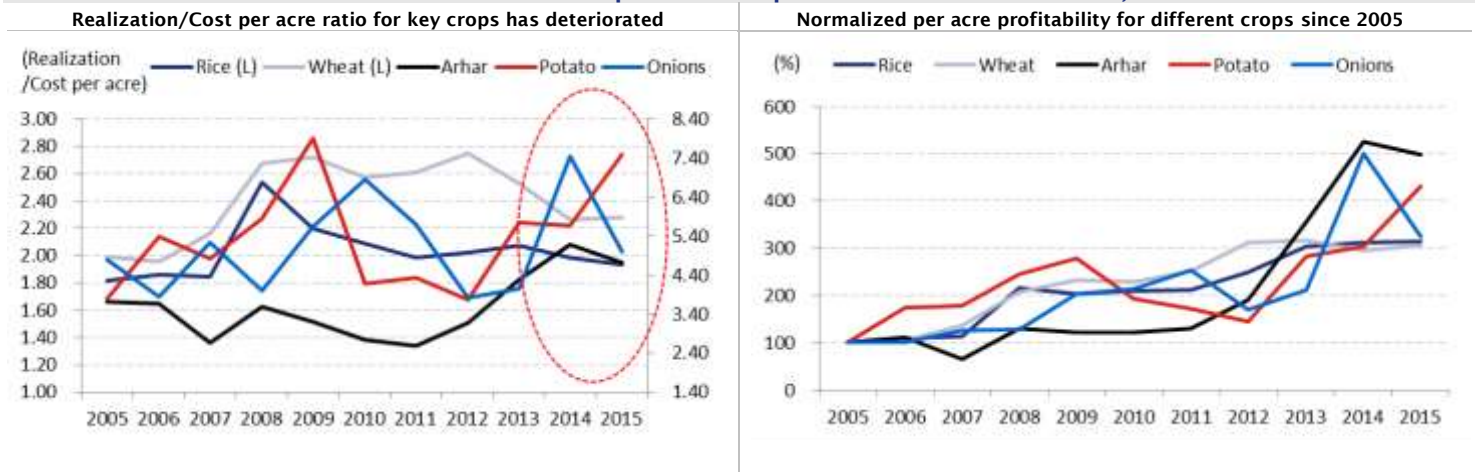


Source: Bloomberg, JM Financial

Deterioration in farm economics after improvements in last few years

Given a confluence of factors mentioned above, realizations have failed to grow faster than costs in the last two years (in real terms). The recent fall in the cost of fuel and overall moderation in inflation is likely to be supportive in the future, but that said, benefit-cost ratio of key crops deteriorated in the last year for most of the crops (See Annexure for detailed cost of cultivation indices).

Exhibit 26. Farm economics has deteriorated compared to the past on moderate MSP hikes, erratic weather



Source: CMIE, JM Financial, See annexure for detailed calculations

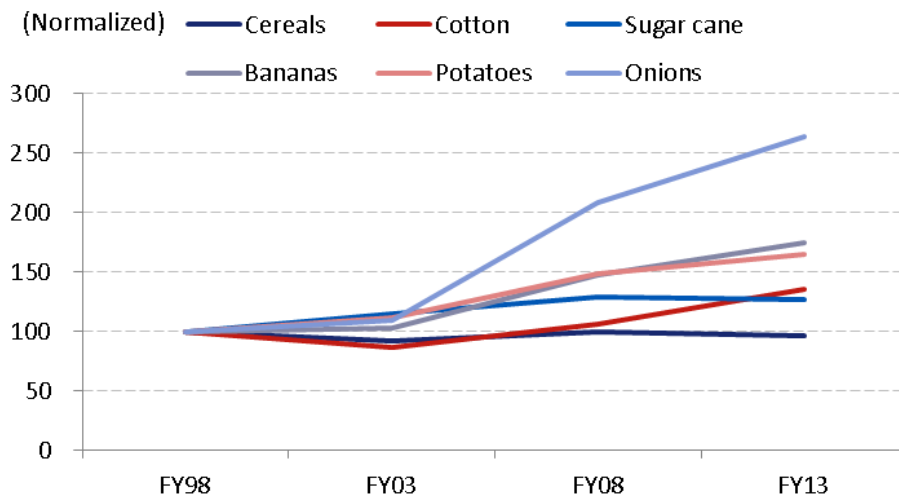
Farmers increasingly taking to growing fruits and vegetables, cash crops

Common feedback in all states was the changing farm economics in favor of cash crops, fruits and vegetables instead of more traditional cereals and pulses. Per acre farm income yields of fruits, vegetables and cash crops are far higher than many cereals, pulses and oilseeds. Calculations suggest net profit per acre (volatile depending upon the time of the season the crop is harvested) of

₹98,630/acre in onion, ₹1,50,821/acre in Potato and ₹37,000/acre in Cabbage turn out to be far higher as compared to ₹12,361/acre in wheat and ₹11,192/acre in paddy.

Between FY98-13, the area under cultivation for Cereals dropped by 3.7mn hectares to 97.5mn hectares. On the other hand area under cultivation for Cotton (up 3.1mn hectares - 35.1%), Sugarcane (up 1.1mn hectares - 27.2%), Banana (up 0.33mn hectares - 74.1%), Potato (up 0.79mn hectares - 65.2%), and Onions (up 0.65mn hectares - 164.3%) saw a jump.

Exhibit 27. Trend in area under cultivation - Normalized at FY98 base



Source: CMIE, JM Financial

We believe that barring a few blips on account of unresponsive weather conditions, this broad based shift towards higher income fruits, vegetables and cash crops will continue to enhance farm incomes in the years to come and drive demand for certain agri inputs such as pesticides and insecticides which are consumed in larger quantities.

Lack of labor, storage and price support are the key concerns of farmers

Many farmers we visited conceded that fruits, vegetables and cash crops are more profitable as compared to cereals and pulses. However, despite favorable economics for most fruits and vegetables, farmers are still reluctant to take to these in a big way given:

- Growing fruits and vegetables needs dedicated labor and continuous monitoring for pests, insects, etc. as well as periodic watering
- Unavailability of labor has made large scale farming difficult
- Fruits and vegetables are perishable commodities with highly volatile prices and wastage during transportation
- Lack of cold storage facilities coupled with lack of any price support mechanism (as in case of cereals, pulses) is one of the key reasons for lazy farming of wheat and rice

Box 4: Need for mechanization - Get me a machine that can dig these carrots and pack them

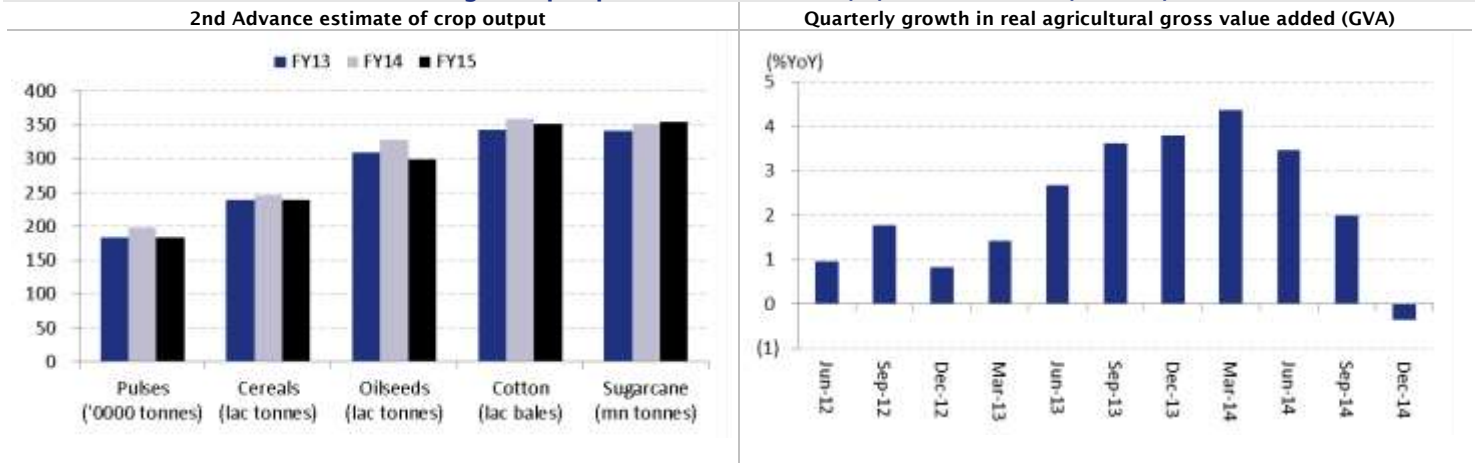
In Madhya Pradesh, some farmers are increasingly taking to cultivating vegetables such as carrots. We visited a farmer with nearly 10 acres of land and a carrot farm. The owner was worried since the carrots needed to be dug out and picked up by the labor in large quantities. “Availability of food at cheap rates and other means of income have led to drying up of farm labor these days. Mostly women and children work in farms and we have to pay excess money to get labor from hinterlands. Like we have harvesters for wheat, please get me a machine that can dig these carrots and pack them”, said the farmer jokingly.

Availability of labor has been an issue. Cheap food from PDS and alternative means of income have been the main causes

Agri GDP growth of 1% this year after a CAGR of 4.9% in FY10-14

As per the 2nd advance estimate published on 18-Feb (before the unseasonal rains), Cereals, Pulses and Oilseeds production is expected to fall by 2.9%, 6.8% and 8.9% respectively in FY15. From farmers’ perspective, a disturbed weather pattern impacts quantity and quality of the produce, thereby ensuring that the farmer realization drops during such periods. The real agricultural and allied GDP is expected to grow at 0% in H2FY15 (new series) compared to a CAGR of 4.9% between FY10-14 (old series).

Exhibit 28. 2nd advance estimate for agri-output points to a fall of c.9/7/3% in Oilseeds/Pulses/Cereals



Source: CMIE, JM Financial

Near-term weakness to persist - Monsoon crucial

A look at our average farmer income model suggests that agriculture income plays a crucial role in driving the sentiment in the rural economy. Even as the impact of wealth effect from land and cushion from non-agri incomes have tended to reduce the impact of a weak monsoon, a failed crop eats into the annual savings of the farmer by 50% (Exhibit 64). This means that a normal monsoon season in FY16 is crucial to damage repair. Transitory factors of Monsoon aside, there are clearly structural trends which will drive medium term agricultural incomes higher. We examine them in the following sections.

The role of state governments has been (and will continue to remain) the single largest factor governing variations in welfare of farmers across the states

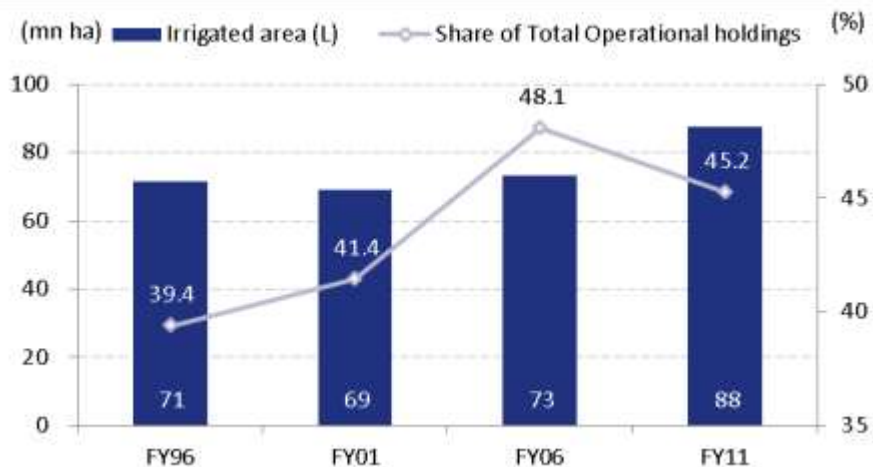
A divergent trend that we witnessed across different states is the level of scientific approach used in farming in different states. The administrative machinery and policy efficacy was very different in different states. For example few farmers we visited in the states of Uttar Pradesh and Maharashtra had carried out soil tests from government laboratories and were awaiting results for many months now. Another farmer told us that results from the state lab are often not reliable and he prefers to get his soil tested from a university lab nearby for a small fee. The procurement policies, rules for appropriating entitlements, and consequently welfare of farmers and their opinion about the efficiency of government have differed in many states.

For example, while wheat farmers in the state of Madhya Pradesh showed concern over non availability of bonus over and above MSP this year, they expressed support for a) procurement of produce by the FCI and related state nodal agencies at the PDS outlets, b) procurement quantity from farmers based on their land holdings (to avoid siphoning off of cereals from PDS and its re-umping in the FCI procurement).

Availability of irrigation facilities could easily push up yields by 20-30%

The general feedback in all the states that we visited was an overall increase in the irrigation facilities over the last decade and many farmers opined that availability of adequate water can easily push up yields by 20-30% in many cases. A look at national level statistic indicates that 45.2% of the gross cropped area was under some form of irrigation in FY11 compared to 41.4% in FY01.

Exhibit 29. Share of Irrigated land in the total operational land holdings



Source: CMIE, JM Financial

Box 5: “I can earn more this year due to availability of adequate water”

Mr. Kumar, a wheat farmer in Madhya Pradesh, owned 5 acres of land and was worried earlier this year after a series of bad crops (Hailstorm impacting last wheat crop, weak Soyabean on delayed monsoon/extended precipitation, and unseasonal rains now impacting wheat). He had to borrow to ensure he cultivates his land in this wheat season. While unseasonal rains have damaged his crop to the extent of 5%, availability of adequate water due to Narmada Kshipra Linking Project (which pumps nearly 5000 litres/sec from Narmada through a 47km long pipeline into Kshipra river). Mr. Kumar said that availability of water increases the crop yield in his farm by nearly 50% to 18quintals/acre. He also fetches a higher market price of ₹1800+/quintal (above MSP) and expects to earn nearly ₹15,000 more than his usual annual realization due to increased yields next season.

Exhibit 30. Narmada river water being circulated for fields in Indore

Source: JM Financial

River linking in action - A canal from the Narmada Kshipra Linking Project

Box 6: Single agricultural market for India could be a game changer for agri-economy

During our visits to mandis and APMCs (Agricultural Produce Market Committees), one common thread running across all of them was the manual grading and auction process which is prone to manipulation. The produce of the farmers is lined up in the mandi and then the dealers, traders and farmers bid for one truck/sample at a time, often again and again checking the produce with hand. The charges for transacting are on the selling price and on higher side. Streamlining the process and disseminating information across different mandis by integrating them together can also reduce volatility in the farm prices which is one of the biggest concerns in farming today.

Exhibit 31. Mandis use human gut based auctioning without scientific grading of produce

Onion trucks in Lasalgaon onion market



Auction process in Devi Ahilyabai Holkar Mandi, Madhya Pradesh



Source: JM Financial

Exhibit 32. Total APMC taxes/levies as a % of MSP for wheat and rice

State	Paddy	Wheat	State	Paddy	Wheat
Andhra Pradesh	19.5	5.0	Maharashtra	3.6	-
Bihar	6.5	6.0	Odisha	15.5	5.0
Chhattisgarh	9.7	2.2	Punjab	14.5	14.5
Gujarat	3.5	0.8	Rajasthan	3.6	3.6
Haryana	11.5	11.5	Uttar Pradesh	9.0	8.5
Jharkhand	3.5	3.5	Uttarakhand	9.0	7.5
Karnataka	4.0	-	West Bengal	3.0	2.9
Madhya Pradesh	4.7	9.2			

Source: Economic Survey, JM Financial

The government has talked about dismantling the APMCs and the Model APMC act has been around for some time now. Private modern market-places have failed to take off given the provision that the owner of the private market will have to collect the APMC fees/taxes, for and on behalf of the APMC, from the buyers/sellers in addition to the fee that he wants to charge for providing trading platform and other services, such as loading, unloading, grading, weighing etc. This will naturally put private mandis at a disadvantage.

Some farmers said that the middle man commissions seemed to have gone down and many farmers now get better realization for their produce thanks to better connectivity and access to mandis but a single national agricultural market, as envisioned by the government will reduce these further and ensure less volatile prices.

Recommendations on the restructuring of the FCI

The NDA government has indicated that it wants to restructure FCI operations. Report of the High Level Committee on Reorienting the Role and Restructuring of Food Corporation of India chaired by Shanta Kumar put out in Jan 2015 makes following recommendations which could address many of the problems suggested by farmers during our visits:

- FCI should hand over all procurement operations of wheat, paddy and rice to states with sufficient experience and infrastructure (AP, CG, HR, MP, PD, PU) for procurement
- FCI should move on to help states where farmers are dominated by small holdings and suffer from distress sales at prices below MSP (East UP, BH, WB, AS)
- Bring down the statutory levies including commissions (2% in GJ/WB - 14.5% PU) to a uniform nationwide rate of 3-4% of MSP and included in MSP itself
- In case of any bonus being given by the states on top of MSP, Centre should not accept grains under the central pool beyond the quantity needed by the state for its own PDS and OWS – already being implemented
- Negotiable warehouse receipt system (NW[₹]) - Under this system, farmers can deposit their produce to the registered warehouses, and get say 80% advance from banks against their produce valued at MSP. They can sell later when they feel prices are good for them. This will bring back the private sector, reduce massively the costs of storage to the government, and be more compatible with a market economy
- Despite announced MSPs for 23 commodities, effective price support operates in wheat and rice and only in selected states creating highly skewed incentive structures in favor of wheat and rice
- Pulses and oilseeds deserve priority and government must provide better price support operations for them, and dovetail their MSP policy with trade policy so that their landed costs are not below their MSP
- 67% coverage of population is on much higher side, and should be brought down to around 40%, which will comfortably cover BPL families and some even above that
- Pricing for priority households must be linked to MSP, (50% of MSP) to avoid putting undue financial burden on the exchequer
- Targeted beneficiaries under NFSA or TPDS are given 6 months ration immediately after the procurement season ends. This will save the consumers from various hassles of monthly arrivals at FPS and also save on the storage costs of agencies
- Gradual introduction of cash transfers in PDS, starting with large cities with more than 1mn population; extending it to grain surplus states, and then giving option to deficit states to opt for cash or physical grain distribution
- A transparent liquidation policy for excess FCI stocks

Non-agri Income: Accounts for a significant share

Weakness on low const., mining and economic activity

Share of non-agri income in rural economy has risen over the last few years. The share of non-agri income has likely increased to 64% of total rural income. Apart from agriculture, the rural economy is increasingly levered to mining, manufacturing and construction sectors as well which have seen their share of rural GDP rise in the last decade. Moderation in construction activity, uncertainty on mining policy in many states and weakness in rural agri-income has impacted non-agri incomes in the last two years.

Going forward, the government spending on infrastructure and pick up in mining and construction activity is very important for rural non-agri incomes. The new government is intent on rationalizing subsidies but targeted subsidies through direct benefit transfer and higher devolution to states (which tend to do higher capital rural expenditure than center) will continue to support rural non-agri incomes in the medium term.

How significant is non-agri income?

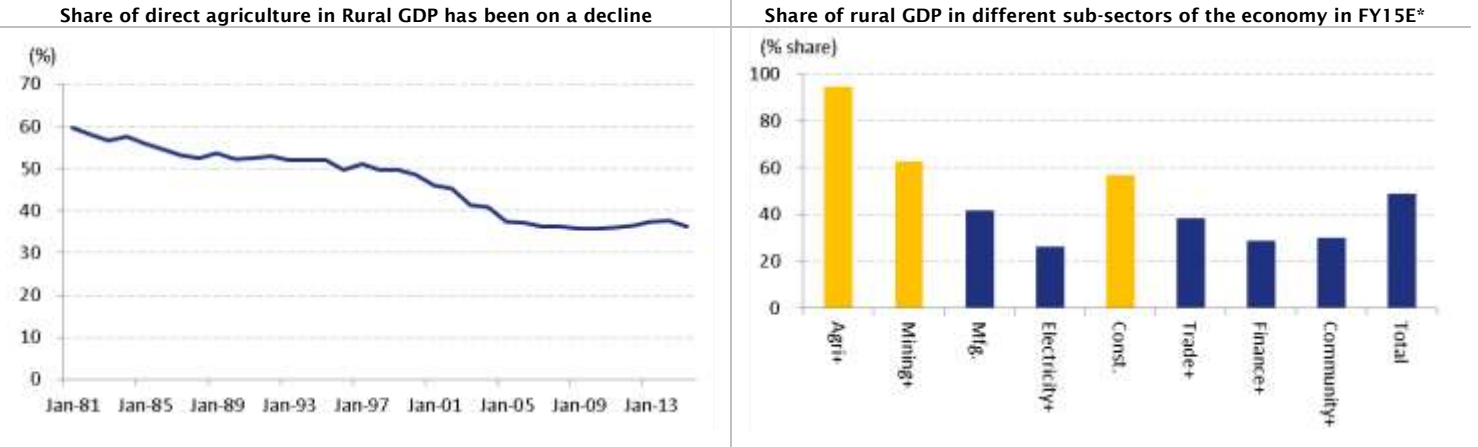
According to NSSO survey (round 70), 57.8% of rural households were agri-households (where at least one person of the family is working in the agriculture sector). The number is different for different states with a high of 75% for Rajasthan and a low of 27% for Kerala. Even within the rural agricultural households, the share of direct farm income from cultivation is 47.9% with other major income sources being wages/salaries, livestock and non-agri businesses. Many farmers we interacted with quoted that nearly 50% of the total income in many cases now comes from non-agri activities. Share of agriculture and allied sector in the rural GDP has also gone down to 36% in FY15 from 49% in FY00.

Exhibit 33. Share of agri-households in total rural households in different states (in mn)

State	Rural households	Agri-households	Agri-households' share (%)
Andhra Pradesh	8.7	3.6	41.5
Assam	5.2	3.4	65.2
Bihar	14.1	7.1	50.5
Chhattisgarh	3.7	2.6	68.3
Gujarat	5.9	3.9	66.9
Haryana	2.6	1.6	60.7
Jharkhand	3.8	2.2	59.5
Karnataka	7.7	4.2	54.8
Kerala	5.1	1.4	27.3
Madhya Pradesh	8.5	6.0	70.8
Maharashtra	12.5	7.1	56.7
Odisha	7.8	4.5	57.5
Punjab	2.8	1.4	51.1
Rajasthan	8.3	6.5	78.4
Tamil Nadu	9.4	3.2	34.7
Telangana	4.9	2.5	51.5
Uttar Pradesh	24.1	18.0	74.8
West Bengal	14.1	6.4	45
India	156.1	90.2	57.8

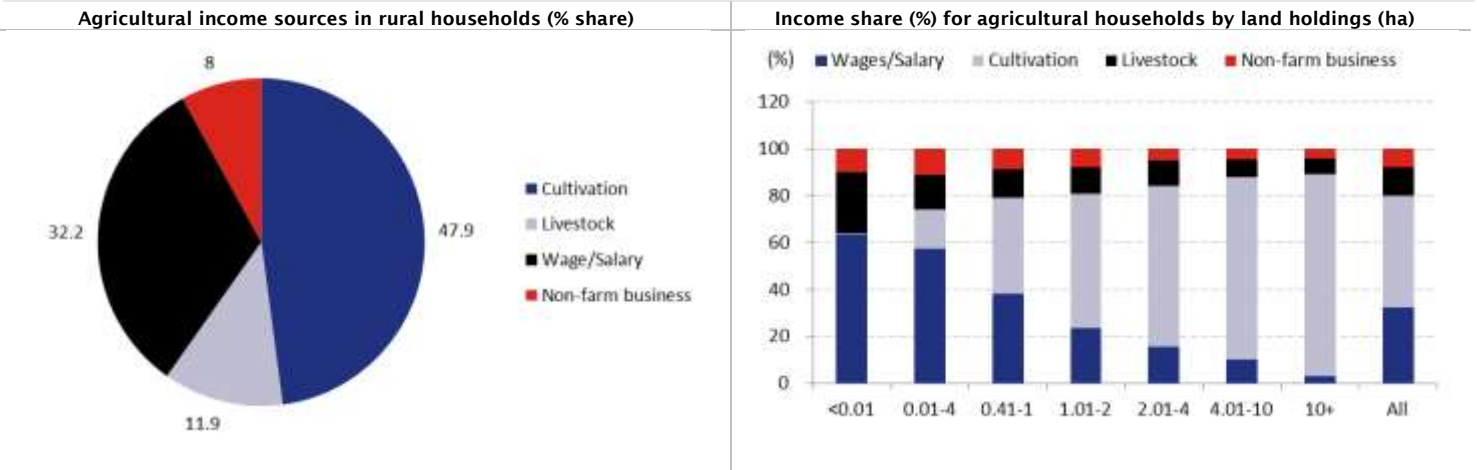
Source: NSSO, JM Financial

Exhibit 34. Source of income for rural India has increasingly been diversified into non-agri avenues



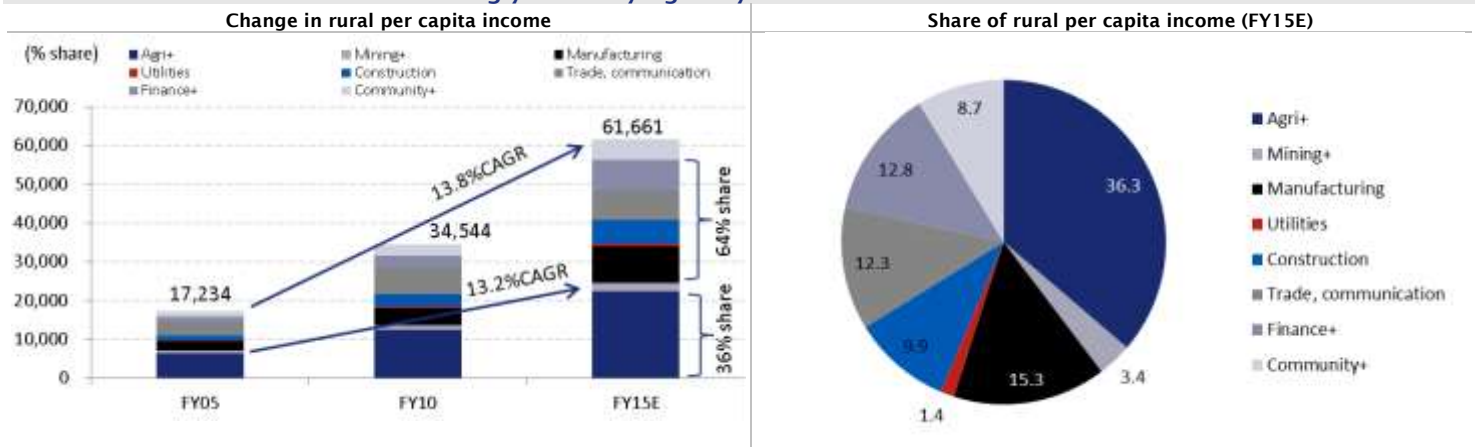
Source: MoSPI, NSSO, JM Financial estimates (* FY12 onwards)

Exhibit 35. Income share of rural India



Source: NSSO, JM Financial

Exhibit 36. Rural incomes are increasingly diversifying away from farm-income



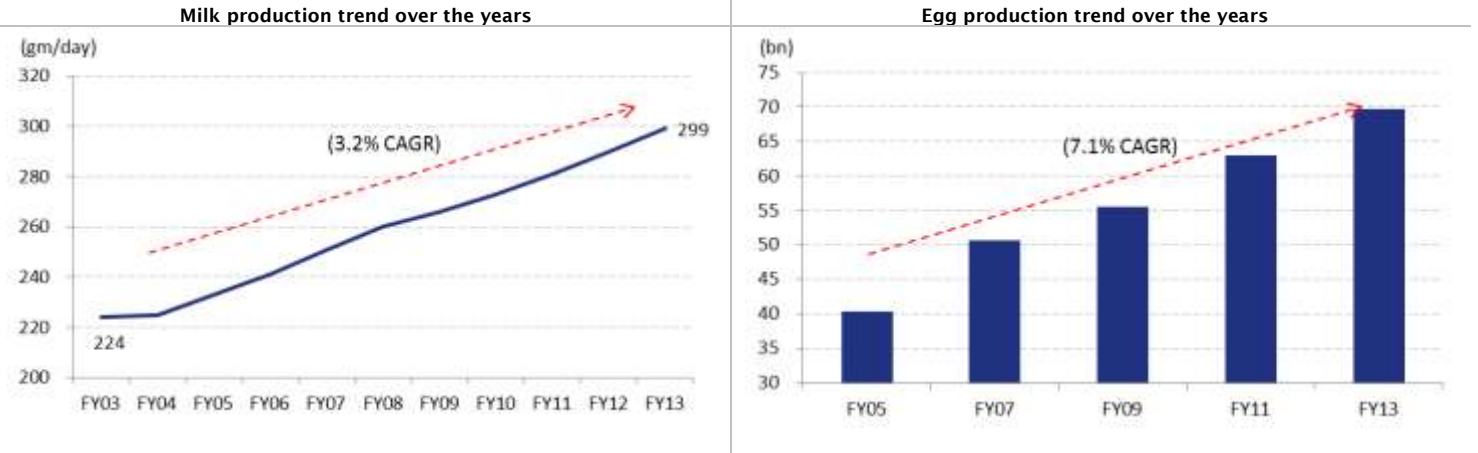
Source: NSSO, Interactions during Rural safari, JM Financial estimates

Farmers have been taking to Dairy, Poultry and Services

A major means of diversification for farmers is Dairy and Poultry. Rising incomes in the rural areas and resultant domestic as well as urban export demand coupled with availability of financing and subsidies to set up dairy and poultry

businesses has resulted into diversification into these professions. There has been a steady rise of 3.2% and 7.1% in India’s milk and egg production since 2005. So much so that some farmers in Bangalore area complained of a supply glut in the eggs market putting pressure on realizations. Barring a few transition years, we believe that dairy and poultry production is a positive given “protein inflation” in India in the last few years.

Exhibit 37. Dairy and Poultry growth trend



Source: Department of Animal Husbandry, Dairying & Fisheries, JM Financial

Box 7: Meet the modern seasonal farmer (and Mason / Carpenter / Construction worker)

Increased rural economic activity has meant that marginal farmers are now taking to alternate professions in addition to farming.

Case of Mr. Singh in UP

While on our way back to the Airport in Varanasi, we met Mr. Singh. He owns a 0.5 acre land in a nearby village. He grows wheat and his crop is badly damaged due to the unseasonal rains. Even as the situation looked grim, Mr. Singh's joyous mood left us puzzled. On further inquiry, he told that he is not unduly worried of a bad crop as he has also started carpentry in the village a few years back as people were spending on houses and furniture and that side of the business is holding up and will help the likes of Mr. Singh compensate a failed crop.

Marginal farmers are resorting to dual professions – Farming during season and other professions (Mason, carpenter, etc.) during off-season

Exhibit 38. Interacting with carpenters (And farmers) returning home

Source: JM Financial

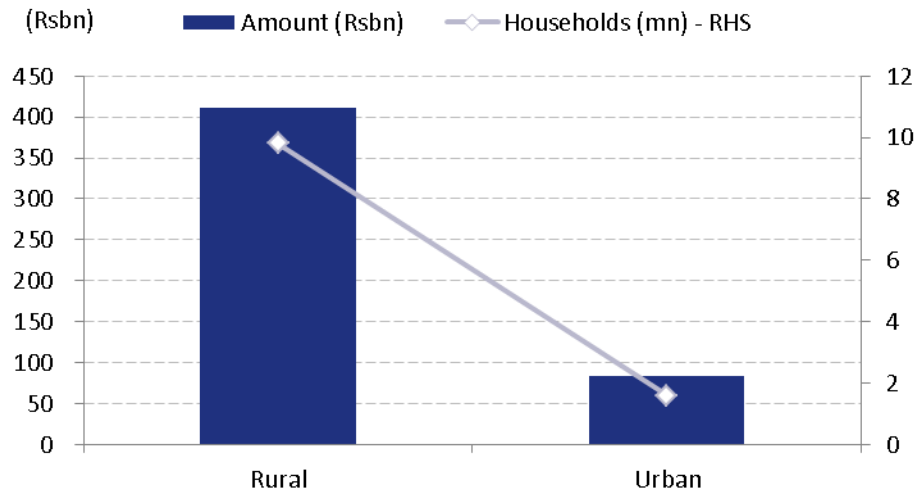
Mr. Ahmed, like many farmers in MP, has taken a private sector job in the Indore city.

Mr. Ahmed has an acre of land 35kms away from the city in Dhar district. The timing of monsoon arrival and lack of irrigation facilities in his farm meant that the quality and quantity of his Paddy production suffered and he was barely able to break even in the Kharif season given the ₹700/quintal price that he fetched through the mediator. On asking about the sustenance of his family during such periods he said he also has a job with a private company that has recently opened in the village and earns ₹11,000/month for this. The farm output in case of weak production also takes care of the grains demand for the family.

Remittances from family members working in urban areas have also been significant

A trend observed in the rural households was significant diversification of income sources. Typically, in a joint household with 4 working men, we often found 2 to be working on farming while other two in nearby town/some non-agri related activity in the village itself. As per NCAER survey, for FY11, rural households account for as much as 83% of the total remittances with ₹410bn (1.2% of rural GDP) (higher than NREGA allocation) transferred to 9.8mn households vs. 17% share of urban remittances amounting to ₹84bn for 1.6mn households.

Exhibit 39. Remittances in FY11 for rural and urban households



Source: NCAER: NSHIE 2010-11, JM Financial

Box 8: Diversification of rural income sources – Remittances fuel consumption

Diversification of rural income sources, away from farm income, has been an ongoing development for some time now. Here's a case study of a farmer we met in Andhra Pradesh whose family earned annual income of ₹0.9mn.

Mr. Tulabandula in the state of Andhra Pradesh has been farming for 25 years on his 15 acre land. He has managed to educate his children well and they are now working in the cities. In addition to the ₹0.45mn of annual farm income from growing Paddy in his farm, both his children send ₹40,000/month to him. According to Mr. Tulabandula, while he could comfortably make his ends meet with his agricultural income, uncertainty regarding weather and the price that his produce may fetch in the market kept him from spending a substantial chunk of his income and inclined him to save. The steady flow of remittances from his children has reduced volatility of his income and in turn improved his overall lifestyle.

Family members working in cities send back a steady stream of income and reduce volatility of farm incomes

Exhibit 40. Interacting with Mr. Tulabandula in AP



Source: JM Financial

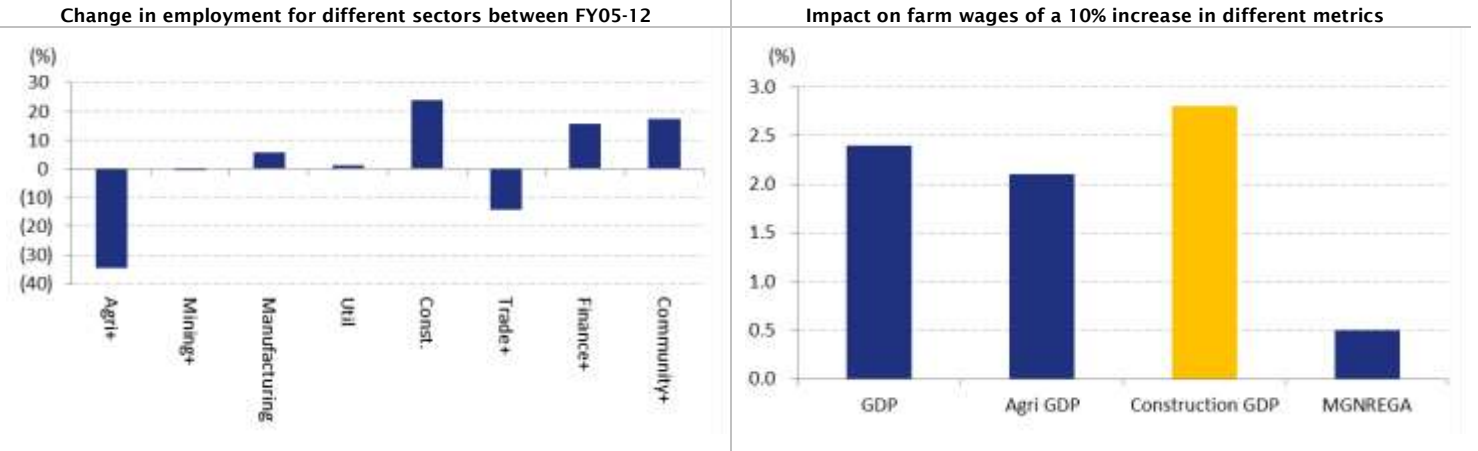
Construction activity has been a strong driver of non-agri income

Another sight which was common across the districts that we visited (more so in the areas near larger towns) was the presence of brick kilns and sand transportation networks. These have been major drivers of tractor growth demand in the past (especially during the non-farming seasons) and result in additional income support to the farmers.

The share of workforce engaged in Indian agriculture declined from almost 56.6% in FY05 to only about 47.5% in FY12, and that of construction increased from 5.6% to 10.6% over the same period.

A look at the Commission for Agricultural Costs and Prices (CACP) study named Rising farm wages in India – The pull and the push factors, indicates that a 10% increase in lagged GSDP (overall), GSDP (agri) and GSDP (construction) leads to 2.4%, 2.1% and 2.8% increase in farm wage rates respectively. This indicates that growth in construction sector GDP has somewhat stronger influence on farm wages than the growth of overall GDP or even agri GDP.

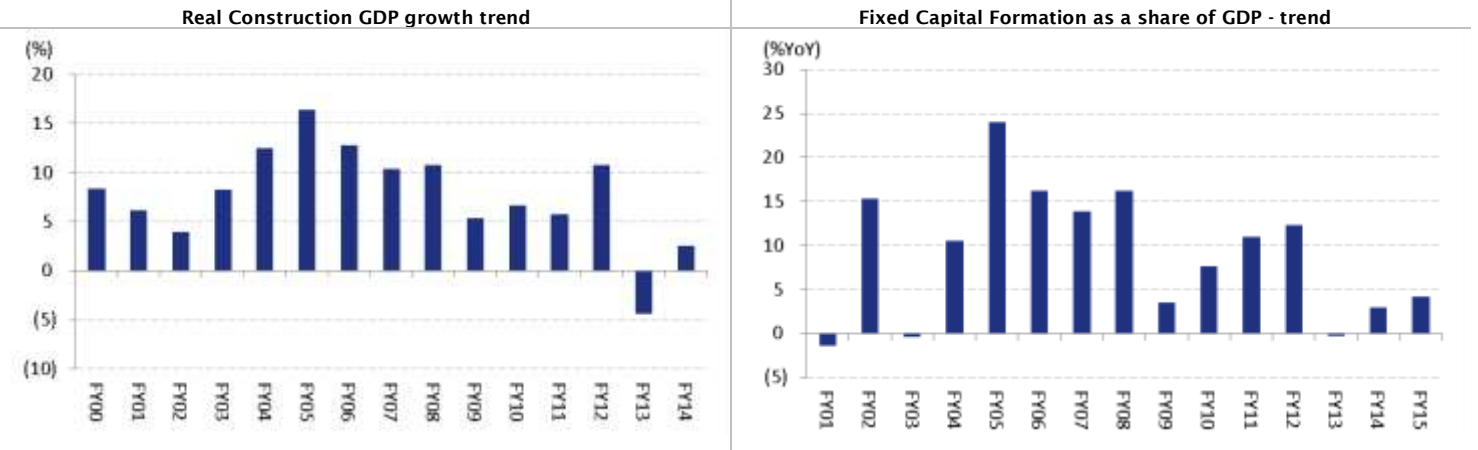
Exhibit 41. Non-agri income share of rural India has been going up



Source: NSSO, CACP, JM Financial

FY05-12 saw construction sector clock the highest employment gain. The last two years have seen weakness in the investments in the economy with the real Gross Fixed Capital formation growth of 3% in FY14 vs. 19% CAGR between FY04-12. Accordingly, real construction GDP registered saw -4.4/2.5% growth in FY13/14 vs. 10% CAGR between FY04-12.

Exhibit 42. Investment and construction activity slowdown has impacted rural economy



Source: CMIE, JM Financial

Renting of tractors and agri-equipment has been a major source of non-agri income

Labor shortage and availability of non-agri avenues such as construction and renting out to other farmers have supported tractor sales.

Exhibit 43. Tractors, pick-ups have been a big source of non-agri incomes



Source: JM Financial

Construction activity has moderated in many parts but remains an important non-agri source of income

Replacement age of tractors also goes down during periods of high construction activity

Exhibit 44. Tractors, pick-ups have been a big source of non-agri incomes



Source: JM Financial, Andhra Pradesh

Tractors double up as transporters in most of the mandis. Hourly rental for tractor varies between ₹350-700/hour

Exhibit 45. Brick Kilns showing weakness on muted construction activity



Source: JM Financial, Maharashtra

Box 9: Economics of owning a tractor for a marginal farmer

Our field visits highlighted that increasing avenues to hire (in construction, brick kilns and farms), capital appreciation of the land prices and increasing availability of finance have helped tractor economics in last few years. Consequently, today even a marginal farmer (holding 2-3 acre land) is able to afford tractor. We further tried looking at the tractor economics for an average farmer using the range of rates (₹400-700/hour) that we came across in different states. The analysis below completely ignores the income from farmer's existing crop and just looks at the income from letting out of tractor.

Availability of financing, capital (wealth effect of land) and demand from agri and construction sectors have seen many farmers earn additional income from tractor renting

Exhibit 46.- Working out the tractor economics

Tractor Cost (₹)	550,000	
Down payment	50,000	
Loan amount	500,000	
Interest rate	15%	
Number of payments (installment paid every six months)	6	
Interest paid	132,118	
Total cost	682,118	
	Case 1	Case 2
Tractor rent (₹/hr)	700	400
Diesel cost (₹/hr)	150	150
Maintenance (₹/hr)	50	50
Saving (₹/hr)	500	200
Number of days tractor is used	120	120
Hours in a day tractor is let out	6	6
Profit per year	360,000	144,000
Payback period (years)	1.89	4.74

Source: JM Financial

Box 10: In search of non-agri incomes: Agri-equipment owner farmers from Punjab

On our way, we met Mr. Santok Singh, a farmer from Punjab who brings his harvester by road in Madhya Pradesh every year for renting in the harvesting season. The farmers said that every season, nearly 30-40K harvesters in Punjab/Haryana region move to other states such as Uttar Pradesh, Madhya Pradesh. These farmers come to other states for nearly 45 days (the time when the harvesters would otherwise lie idle in Punjab) and stay for 10-15 days at a place to work for anywhere between 5 to 16 hours/day. The equipment is manufactured in Punjab and costs nearly ₹1.8mn today. A season can yield nearly ₹0.3mn of additional income per equipment. The farmers said that availability of capital (through wealth effect from land and availability of financing) has enabled the farmers to create additional sources of income.

Exhibit 47. Non-agri income for a Punjab farmer from renting out one harvester in MP

Head	Amount (₹)	Comment
Cost of Equipment	1,800,000	
Acres covered in a season	656	Nearly 45 days and on an average 13.5 hrs/ working day
Rent charged - ₹/Acre	1,120	
Total Revenue	735,000	
Food	22,500	Assuming ₹100/person day for food for 5 people for 45 days
Maintenance	75,000	Maintenance and Complete overhauling after every season
Cost of Fuel	98,141	Diesel cost - To and Fro travel (800ltrs) and operating diesel cost (984ltrs)
Other Costs	10,000	Toll taxes and maintenance
Cost of Helpers	100,000	Drivers, Fork-man, 2 Helpers and Cook
Depreciation/Interest	120,000	Assuming usable life of 15 years. Can assume as interest payment on the cost of harvester
Total Expenditure	425,641	
Total profit	309,359	

Source: Company, JM Financial

Exhibit 48. Interacting with farmers from Punjab with harvesters in MP



Source: JM Financial

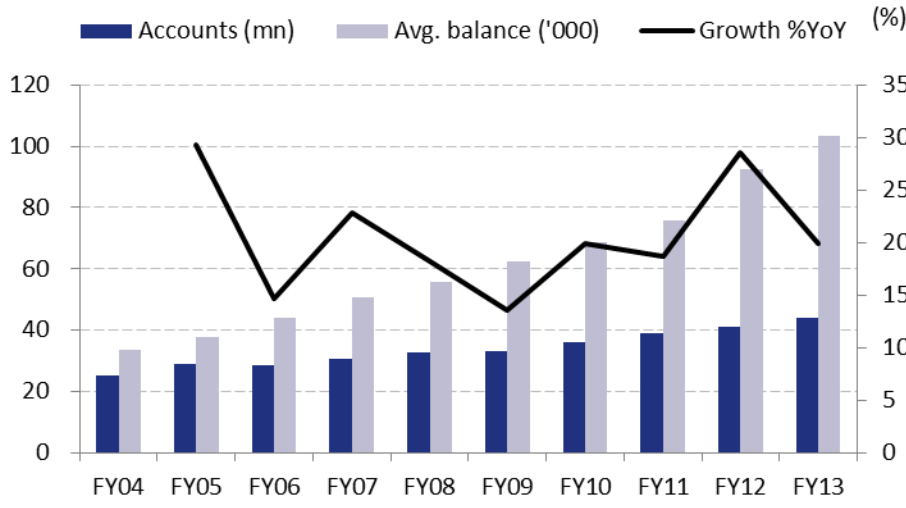
A wheat season can fetch ₹0.3mn for the farmer per harvester. Availability of capital (on account of land prices and financing) has made possible many non-agri activities

Availability of capital and finance has opened up opportunities

Our interactions with farmers suggested that use of (appreciated) land as collateral and availability of financing avenues have been a major driver of the growth in the rural non-agri activities. Rural credit growth has grown at 20.5% CAGR between FY04-13 and the number of rural branches has grown at 3% CAGR during the same period. That said, availability of finance is still much skewed with benefits available to large farmers. Some of the smaller farmers, farm

laborers we interacted with indicated preference for non-PSU banks on account of due diligence requirements and procedural delays, etc. We believe that the PMJDY roll-out can be a real help at the lower end of the rural ecosystem.

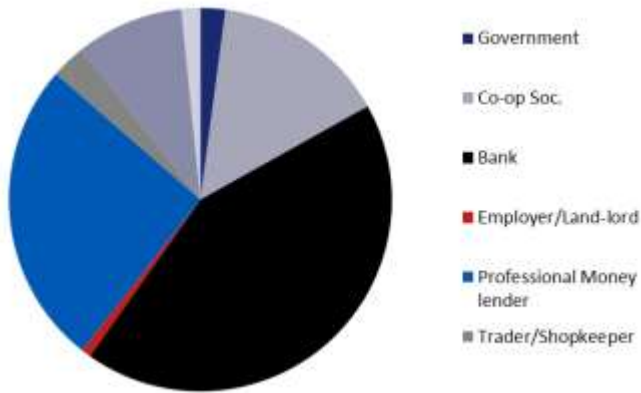
Exhibit 49. Growth in rural branches, accounts and credit



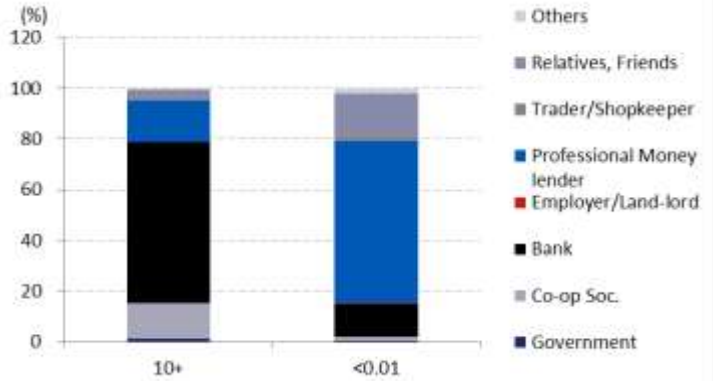
Source: RBI, JM Financial

Exhibit 50. Borrowing profile of rural India indicates higher penetration amid stark disparities

Sources of borrowing for rural India in FY12



Stark disparities exist between upper and lower strata of rural economy



Source: RBI, NSSO, JM Financial

Box 11: The drivers for Gramin banks and Private financiers

Another trend that we noticed, especially among marginal farmers is their bias against the PSU banks. “Why don’t you go to a PSU bank to maintain your account?”, we asked an accountholder waiting for a loan sanction in the Kashi Gomati Samyukt Gramin Bank branch in Mugalsarai. “They do not entertain us much there. There are a lot of delays in carrying out loan formalities”. He said. This one theme came across in most of our interactions. People seemed to prefer private financiers and other alternatives to PSU banks given:

- a) Procedural delays involved in dealing with the PSU banks
- b) Customer service aspect where the alternatives reach out to the customers for their needs and regular service
- c) Excessive (and strict) documentation required in case of PSU banks and requirement for clear demarcated land holdings
- d) Most private financiers provide loans against vehicle being bought on loans as a collateral whereas PSU banks would ask for land as a collateral

Procedural delays and requirements of PSU banks have seen the customers (especially the marginal farmers) incline towards alternatives

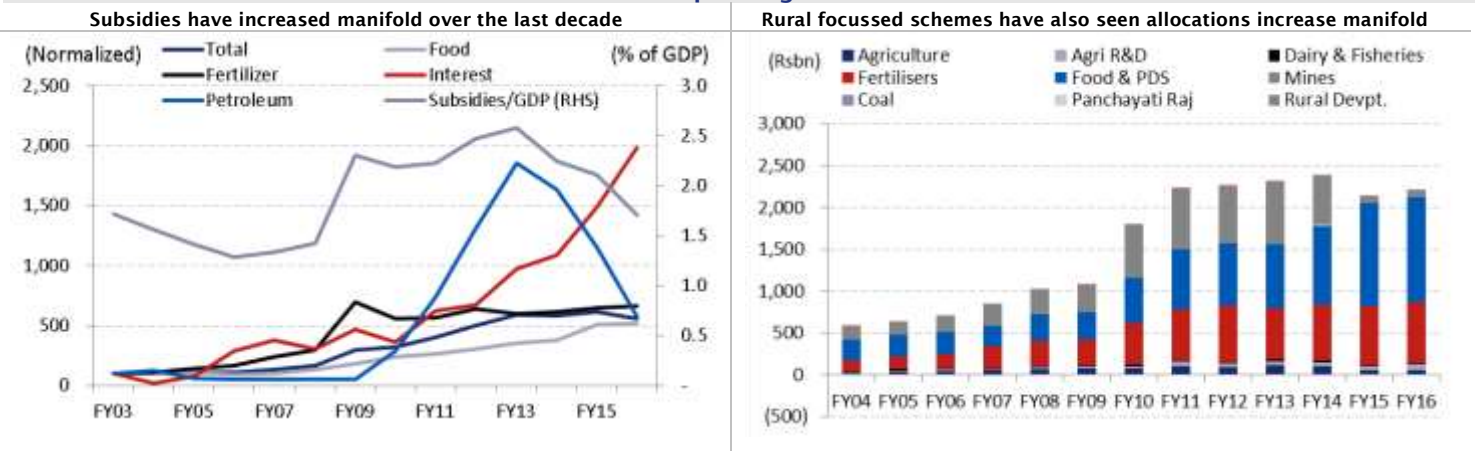
Exhibit 51. Gramin bank branch in UP

Source: JM Financial

Government rural expenditure, Entitlements rose in the last decade

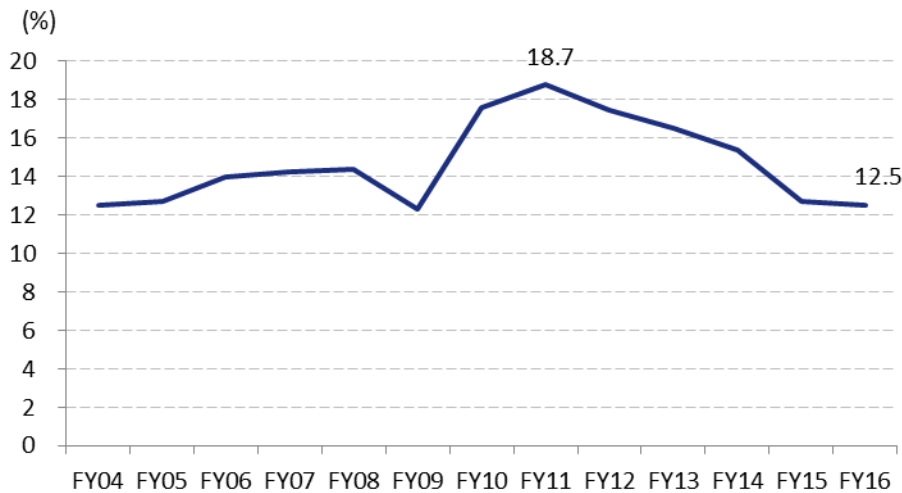
Another reason for rising incomes in the rural areas has been entitlements that the government has been doling out in the form schemes like NREGS, food, fertilizer subsidies and other rural schemes. Share of direct rural expenditure in the central budget (allocation to rural related ministries) averaged 15% between FY04-13 and moderated to 12.5% in FY16E. Central direct rural expenditure increased by a CAGR of 15% between FY04-14, faster than the overall expenditure growth of 12.7%. Food and Fertilizer subsidies accounted for a majority of the increase with a CAGR of 15.6% during the same period). Our interactions with farmers in most of the states hinted at a possible anecdotal evidence of significant leakages leading to a possible cornering of this rural expenditure in the hands of a few.

Exhibit 52. Last decade saw increased rural and social spending



Source: CMIE, India Union Budgets, JM Financial

Exhibit 53. Share of direct rural expenditure in total expenditure



Source: JM Financial

New government has been cautious on the policy of doles

Subsidy expenditure as a share of total GDP has been falling from a peak of 2.6% of GDP in FY13 to 1.7% in FY16E. The BJP has seemingly moved away from the politics of doles if its early actions are any indications.

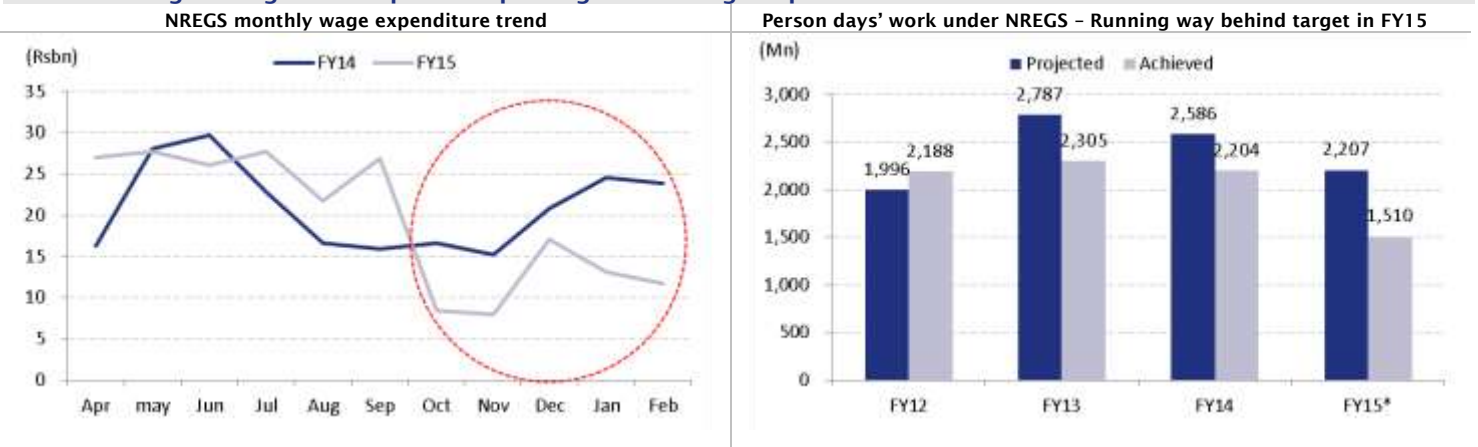
a) Firstly, the government kept to itself major benefit of the fall in the crude oil prices by imposing additional duties on petrol and diesel to correct fiscal imbalance and create space for some infrastructure spending instead of fully passing on the benefits to the consumers.

b) While the overall allocation to NREGS was maintained at 340bn, the government recently increased the proportion of skilled labor/machinery in the total expenditure under the scheme to 49% from 40% currently with the objective of asset creation through the scheme.

NREGS wage expenditure has fallen sharply in 2HFY15

Lower NREGA wage expenditure is expected to add to the other rural headwinds of weaker agri-output on account of lower net sown area in the near-term. The NREGS wage expenditure has shown a sharp deceleration in the last few months with ₹13bn/11.6bn wage expenditure in Jan/Feb’15 vs. ₹24.6bn/23.8bn for the same months last year.

Exhibit 54. Tightening of Govt. purse impacting NREGS wage expenditure



Source: nrega.nic.in, JM Financial

Even as the actual achieved person days of work granted under NREGS has been below the projected levels in FY13/14, the sharp fall in FY15 looks more a function of overall fiscal consolidation by the Govt. So far, 1.1bn person days of work have been achieved in FY15, half of 2.2bn projected.

The weakness in non-agri incomes persists for now on account of weak agriculture output, subdued mining activity and weak construction activity. Next, we look at the wealth effect of land in the rural areas.

Wealth effect of land

Driven by urbanization, road connectivity and remittances

Land prices in rural India have sky-rocketed in the last few years. Prime drivers of land price hike include urbanization demand, better road connectivity and remittances among others. Our interactions in the rural safari indicated that the rural economy has strong linkages with the nearby urban economic centers on account of:

- a) income impact from construction, remittances and other non-agri income sources and
- b) wealth effect from urbanization demand

While there has been a moderation in the momentum in the recent year, event of an outright nationwide moderation looks unlikely given that

- a) supply is constrained due to joint holdings of farmers, their expectations of prices in the context of recent run-up, their emotional attachment with the land as their only means of income, and
- b) likely up-tick in demand if infrastructure push and revival in mining and industrial activity as envisaged by the government really comes through

Wealth effect from sky-rocketing land prices has been major demand driver

Growth of cities in peripheral areas and construction activity has translated in a massive increase in the demand for land and resulted in a multifold rise in land prices in rural areas. As it becomes economically infeasible (with agricultural income yields of less than 1%) to do farming on this land, farmers in the area (especially the ones near town centers) sell their lands and move into hinterlands. This wealth effect has been the major driver of the consumption demand in the rural economy.

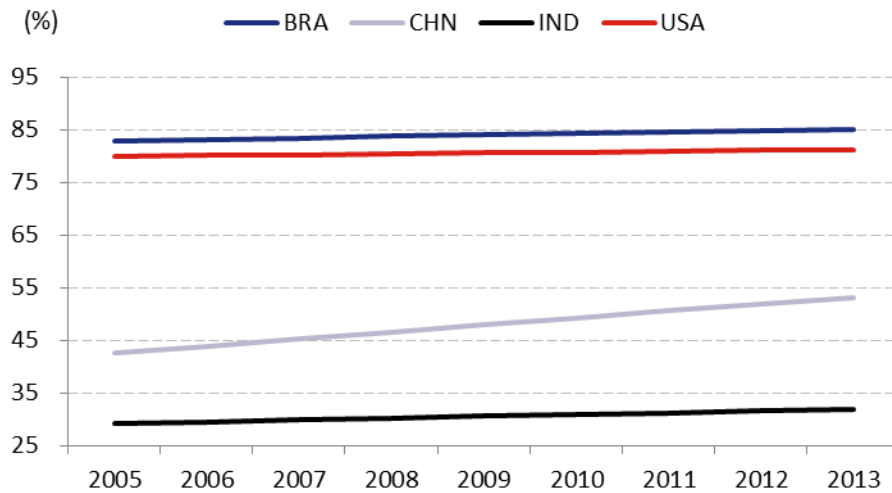
The urban linkage of the rural economy

In many places we visited, a common theme surfaced around expansion of smaller cities. Land price appreciation in anticipation of the growth of the city in peripheral areas and driven by:

- a) migration of urban population to larger cities, thereby remitting money back into the city to propel investment demand
- b) migration of labor from other states/hinterland pushing land demand further, and
- c) continuation of investments from the shadow economy which tends to have longer holding periods.

This land has been plotted into colonies or bought by local/national builders and municipalities. The farmers which found themselves to be instant millionaires on account of skyrocketing prices then moved into hinterland buying lands there for farming and further pushing up prices (though moderately). These wealthy farmers in addition to driving consumption also engage in other non-agri activities such as renting of agri-equipment (tractors, harvesters) and transportation. The sellers of lands to these wealthy farmers (which are mostly marginal farmers) and the wealthy farmers themselves in turn drive urban land demand through their health, education and investment needs.

Exhibit 55. Urbanization trends in key economies

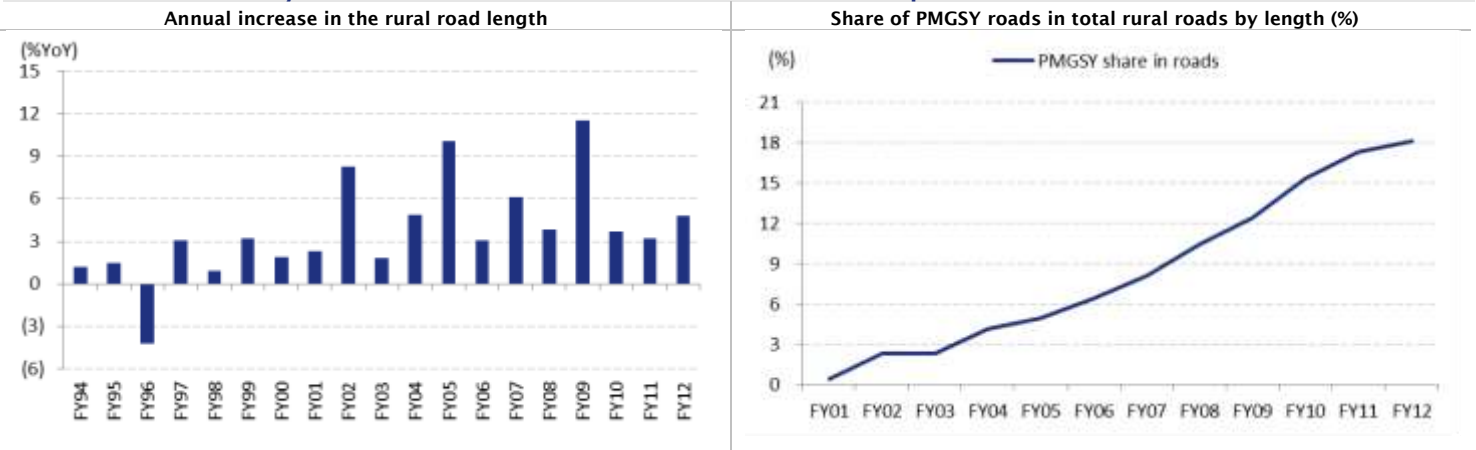


Source: World Development Indicators, JM Financial

Road connectivity has been a big driver of rising prices

Better connectivity with town centers has also been one of the driving factors of and prices in the rural areas. An impact assessment study for the Pradhan Mantri Gram Sadak Yojana (PMGSY) in Madhya Pradesh (MP) indicates that the average income recorded increase in one year by 7.7-10.6% post improved connectivity. The past 10 years saw a total of ₹1.5trn spent on PMGSY (up by 14%CAGR from ₹38bn in FY06 to ₹143bn in FY16E) and 350,000km of roads being created.

Exhibit 56. Connectivity has been one of the reasons for increase in land prices as well



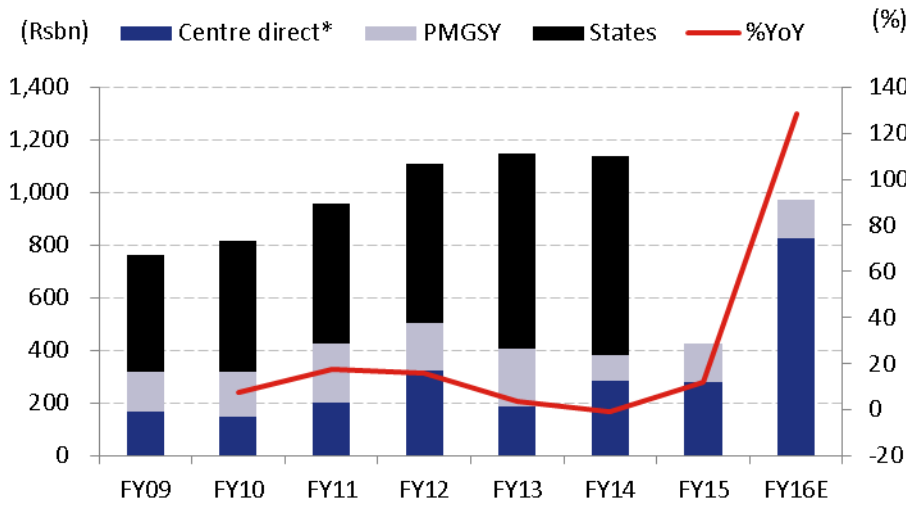
Source: pib.nic.in, DAC, JM Financial

Interactions through the course of the rural safari indicate that better road connectivity leads to appreciation in land prices on account of:

- a) Better access to markets for the farm produce which helps farmers get better price for their produce (some farmers indicated that the middlemen commissions have been going down over the last decade as farmers with fairly large produce can directly travel to mandis to sell)
- b) Better market access helps farmers to cultivate fruits and vegetables which were earlier considered infeasible on account of lack of storage facilities
- c) Better access to markets leading to newer income sources such as Dairy as direct procurement of milk over larger area is now possible at low cost

- d) The industry scouts for relatively better priced land having good road connectivity thus pushing up prices in areas with good roads
- e) Saving in travel time and access to better health and education facilities

Exhibit 57. Road allocation by Centre and the states



The union budget has seen a big jump in the budget allocation (and IEBR) for the roads sector. Some state government budgets such as AP, MH have also put a thrust on roads

Source: Union Budget, JM Financial

The economic survey makes a case of rural roads based on its impact on the rural job creation (The Employment Effects of Road Construction in Rural India, 2014). Accordingly, the union budget saw a sharp jump in the allocation to the road sector from ₹281bn in FY15 to ₹827bn in FY16 (including IEBR). Some recent state government budgets also see increased allocations (AP budget saw a jump of 18% from ₹27bn to ₹32bn. MH budget saw creation of Mukhyamantri Gramin Marg Yojana with allocation of ₹24bn with an increase of ₹10bn every year).

Exhibit 58. Road connecting a remote village in Madhya Pradesh



Road connectivity has also been one of the major factors driving up land prices in hinterlands

Source: JM Financial

Our interactions with the industry personnel indicate that the road sector activity could pick-up in 2HFY16 giving support to the rural economy. Assuming share of roads expenditure of 4% (as in FY14) by the state governments, a pro-rata

allocation for the additional ₹803bn received on account of higher devolution to the states coupled with higher central allocation will likely mean ₹577bn of additional allocation to the roads sector this year.

Momentum on land prices has moderated

With moderation in the overall economic activity, the momentum in the land price rise has moderated (and even reversed) in the districts we visited. Our interaction with NHAI suggests that the average cost of acquisition has increased nearly five-fold from ₹3.5mn/ha to ₹17.5mn/ha in the last five years. At these land prices, the economic viability of the projects is under pressure. The acquisition is biased towards rural lands given that most of the highway length falls in the rural area.

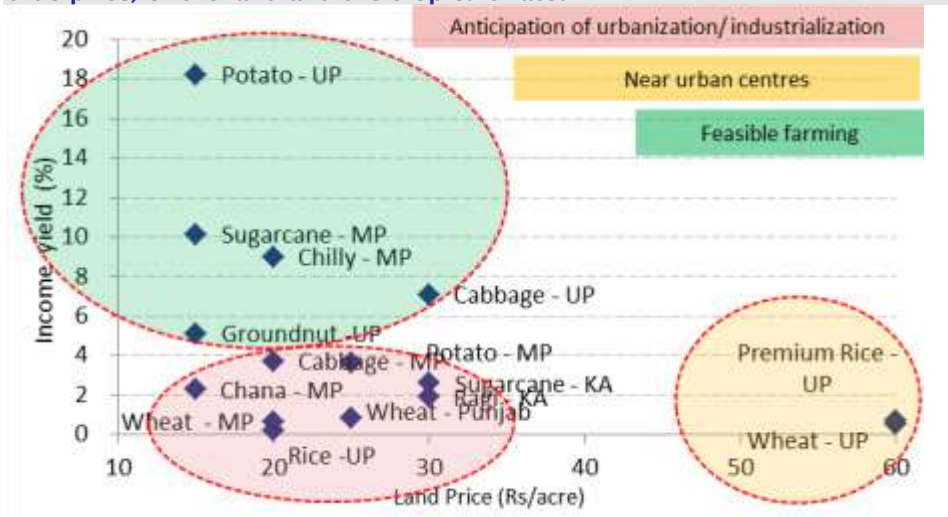
While the road sector has been a focus sector in the budget, our interaction with NHAI indicated that bulk of the land acquisition for future expansion (more brownfield than Greenfield) has been done and that the quantum of acquisitions will go down further in FY15E and FY16E at 8000 and 5000 hectares respectively.

Exhibit 59. NHAI land acquisition trend

	FY12	FY13	FY14	FY15E	FY16E
Notified (ha)	10,500	8,002	12,220	8,000	5,000
Possession (ha)	9,800	6,762	8,229		
Funds Released (₹mn)	45,070	46,080	82,290		
KMs awarded (Km)	6,000	1,300	1,400		
Average cost (₹ mn/ha)	4.44	6.24	8.05		

Source: NHAI, Average cost calculated by taking average of land notified and in possession over funds released

Exhibit 60. Income yields vary significantly depending on the location (and thus price) of the land and the crop cultivated



Source: JM Financial

Income yields have fallen significantly in many areas

Actual realizations for different crops of farmers that we met deferred significantly based on the location of their lands and the realizations they managed to get (which is a function of the local demand supply dynamics in their area). It is interesting to note that for several farmers we met, the agricultural income yields are between 0-2% if the price appreciation of their land is taken into consideration. These lands could be categorized into three categories:

- a) **Land feasible for farming** - Lands with high income yield of 5-10% and in the hinterland. These lands have seen relatively lower appreciation and form

majority of the rural agri land. Given the feasibility of agriculture, the land prices in this category are unlikely to see much correction

- b) **Land whose price has gone up in anticipation of urbanization** - These lands away from town have yields of 2-4% and have seen their prices go up in the past - These are the pockets which have seen some price moderation
- c) **Land near urban areas** - where the income yield is less than 1% and the farmers are open to selling the land to the developers for plotting

Most of the farmers we met were reluctant to sell their lands primarily due to:

- a) Land is a non-depleting asset and were inclined to sell their land only at the time of needs (common reasons - Education, Marriage and Health)
- b) Being skilled only in farming, many farmers said that they will not have any other profession to adapt after they sell their land

Box 12: “Why don’t farmers sell the land and put the money in an FD?”

One question that startled us was that if the agriculture income yields are so low in many regions, why don’t the farmers just sell the land and invest in FDs?

Mr. Hunnar Singh, a farmer in Malwa region, in his mid-40s, explained to us why:

- a) Land holdings are in the joint names of the family and not in individual names and it is difficult to sell a piece of family land. This puts a constraint on the actual availability of supply
- b) Noticeably, acceleration in land prices in the region has moderated now but given that the farmers have seen the rise in the last decade, there is a tendency to hold onto the land especially when the prices are weak
- c) There’s a fear that if the lands are monetized, the next generation will just while away their time as there’s little skill availability in the youth (a trend which some people alluded to in the areas near town centers)
- d) Lack of skills other than farming which can be monetized is yet another reason why farmers stick to their lands
- e) In the event of a sale, farm owners in the vicinity of his farm would buy a small piece of land (if they can afford), or the farmer can get loan on the land

Exhibit 61. Mr. Hunnar Singh showing us around his farm

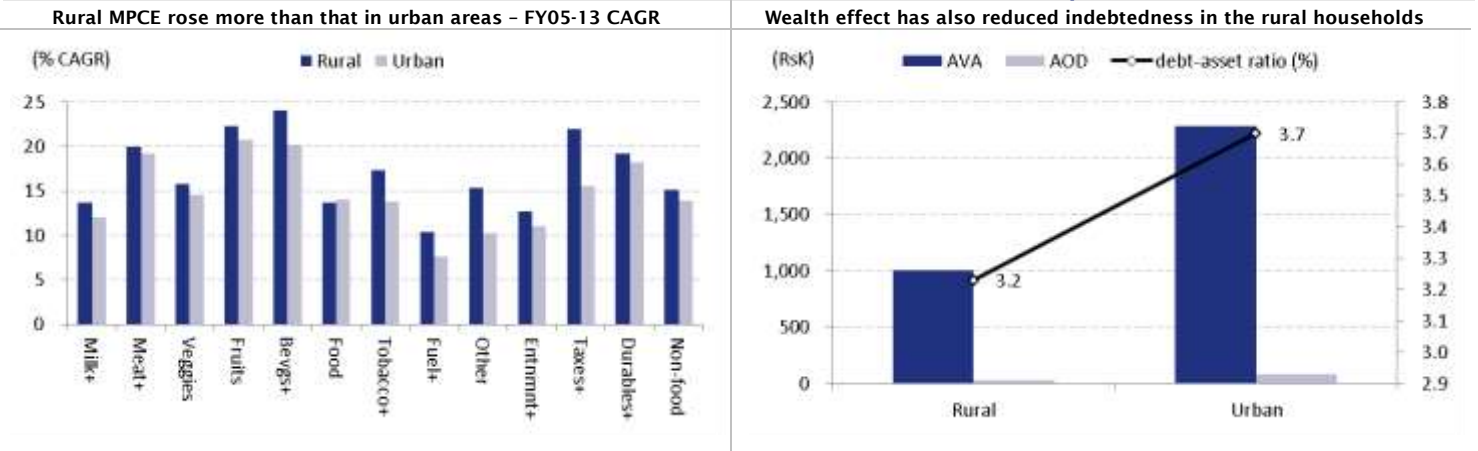


Source: JM Financial

Wealth effect in action

The wealth effect from land prices and higher share of non-agri income (which tends to be less volatile), has increased propensity to consumer in the rural households over the last few years. To gauge the impact of wealth effect, we look at the actual Monthly Per Capita Expenditure (MPCE) data in rural and urban households from 61st and 68th rounds of NSSO surveys held in FY05 and FY13 respectively. While the nominal rural GDP growth during this period was 15.1% lower than nominal urban GDP growth rate of 15.4%, the rural MPCE registered a CAGR of 14.8% over the urban MPCE growth of 14% per annum. Diving into the details, rural expenditure on milk & milk products, beverages, refreshments & proc. food and misc. goods, entertainment rose by 14, 24 and 13% as compared to urban MPCE which rose at 12, 20 and 11% during the same period for these categories.

Exhibit 62. The wealth effect of land has reduced indebtedness and increased consumption



Source: NSSO Surveys, JM Financial, AVA – Average value of assets, AOD – Average value of Debt

While the real estate prices also rose in urban areas, anecdotal evidence during our visits suggests that the land prices rose at a faster pace. As a result, the debt/asset ratio in rural area stood at 3.2% vs. 3.7% in urban area in FY14 as per NSSO survey round 70 held in FY14.

Given that the appreciation in land prices has now moderated and will continue to remain at these levels, the comfort created on account of multi-fold rise in the prices and resultant borrowing capacity (on higher value of collateral) is here to stay. Thus, even as the near term decisions will continue to get weighed by income dynamics, longer term consumption story remains intact as higher wealth translates into vibrant economic activity.

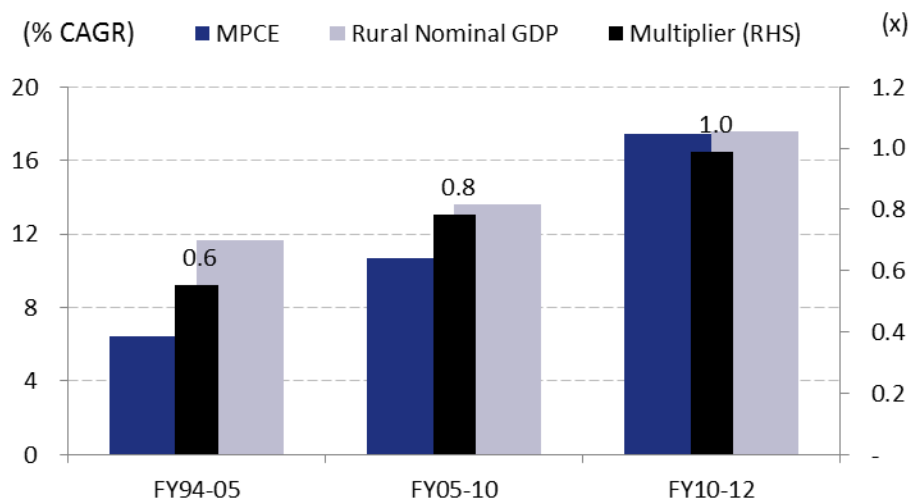
Near-term outlook: Weak agri/non-agri incomes

Government spending, Monsoon crucial for a recovery in 2HFY16

Failed crop can wipe out up to 54% of the annual savings of a farmer

We try to understand the impact of a failed crop on the overall economics of an average Indian farmer having 2.7 acres of land (national average), growing wheat and having 50% non-agri income. We take the average value of land from the recently published NSSO survey (Round 70 – Key indicators of household debt and investment in India). Next we assess the impact of a failed crop (assuming 25% reduction in agri income – we haven't factored in any collateral damage to non-agri incomes) on the wealth and income of the farmer. Even as higher value of land (Which contributes to up to 73% of total wealth in rural India) has continued to reduce leverage in India with Debt/Assets falling from an estimated 4.1% in FY06 to 3% now, deterioration in farm economics has resulted into overall debt/income go up from 25% in FY06 to 39% now.

Exhibit 63. Elasticity of rural MPCE to nominal GDP per capita growth



Source: NSSO, JM Financial

A look at the nominal per capita consumption growth in the rural India also highlights a rising elasticity of MPCE to nominal rural GDP per capita. The elasticity has risen from 0.6x between FY94-05 to 0.8x between FY05-10 and further to 1x in FY10-12. We reckon this is on account of wealth effect which tends to increase propensity to consume. Given the near-term weakness in the agri and non-agri incomes coupled with stagnating land prices, we believe that this multiplier is likely to fall in FY16 driving weaker rural consumption.

While the share of non-agri income has been rising over the years, a failed crop with 25% damage can wipe out as much as 54% of the annual savings and thus agri incomes continue to drive rural sentiment and consumption decisions.

Exhibit 64. Impact of a weak monsoon on an average farmer

	Unit	FY06	FY11	Now	Comment/Source/Estimation method
Average Land Holding	Acres	3.0	2.8	2.7	FY06 and FY11 numbers from Agriculture census - Size of operational land holdings by farmers. Estimates based on CAGR trend
Value of Land	₹ '000/Acre	86	257	643	FY11 number based on average value of land holdings in rural area from key indicators of debt in India NSSO 70th Round. FY06 and Now estimates assuming a 2x rise between stated periods
Land Value	₹ '000	261	731	1,732	
Average Debt	₹ '000	11	25	52	FY11 based on NSSO data. FY06/Now based on rural credit growth during stated periods
Annual agri Income	₹ '000	26	58	67	Current numbers based on cost of cultivation index for wheat. Previous numbers based on yield and MSP movement data
Share of Non-agri Income	%	40	45	50	Assumption based on anecdotal evidence and with the backing of NSSO survey data
Non-agri Income	₹ '000/year	17	47	67	
Total Income	₹ '000/year	43	105	133	
Short-term debt	%	40.5	45.0	45.0	From NSSO Survey for FY11 and FY06 (Avg. of FY01-11) and same as FY11 for now
Short-term debt	₹ '000	4	11	23	
Debt/Land Asset	%	4.1	3.5	3.0	Land forms nearly 73% of total rural assets. Other asset drivers fairly common between rural and urban India
Debt/Income	%	25.2	24.0	38.7	
Savings rate	%	23.5	23.1	23.0	Household savings rate From CSO - National accounts 2004-05 GDP series. Assumption for Now
Savings	₹ '000/year	10	24	31	
Impact of a failed crop	% of Savings	63.7	59.4	54.3	Assuming that a damaged crop reduces agri income by 25%
Land asset/income	x	6.1	7.0	13.0	

Source: NSSO, JM Financial estimates

This makes coming monsoon very crucial for a rural revival given the contribution of the agri income to the flow (which drives consumption decisions in the short-term) as against a sharp rise in wealth (stock) which is often monetized only during emergencies and tends to be fairly illiquid.

Weak agri and non-agri incomes and stagnant land prices will translate into a fall in the elasticity of rural MPCE to Nominal rural GDP in the near-term which has been rising in the past due to wealth effect from land.

Thus, we see no need to change out FY16 estimates for stocks with significant exposure given fair assumptions amid expectation of a normal monsoon. In fact, we do not rule out downside risks to estimates depending upon how the monsoon season progresses in FY16.

Exhibit 65. Volume/Sales growth assumptions for key rural stocks

Stock	FY10	FY11	FY12	FY13	FY14	FY15E	FY16E	FY17E
Bajaj Auto	38.0	33.6	5.7	(2.9)	(15.0)	(9.0)	14.2	7.7
Hero Motocorp	23.7	17.0	15.2	(2.5)	3.4	7.0	7.2	6.2
TVS Motors	20.7	30.5	6.3	(5.4)	(2.2)	21.8	10.6	8.7
Maruti Suzuki	20.6	30.1	(11.2)	4.4	0.3	10.4	16.3	17.5
M&M Tractors	45.3	22.7	10.4	(5.4)	19.5	(8.9)	10.3	8.4
M&M UVs	30.3	31.3	31.6	19.2	(10.3)	(7.1)	23.6	14.2
HUL*	6.4	10.6	17.0	14.5	8.4	11.3	9.0	13.0
Dabur*	20.9	20.3	29.6	16.3	15.1	11.6	13.9	14.0
Marico*	11.4	17.5	26.9	15.5	2.0	21.3	9.4	13.5
Colgate*	15.8	13.2	18.2	17.5	14.9	12.6	11.1	13.7
GSK Cons*	24.6	20.0	16.5	14.7	21.6	11.9	11.3	16.0
Asian paints*	22.4	15.8	25.5	13.3	15.7	14.0	10.9	16.6
Berger*	16.5	23.1	26.1	13.5	15.6	12.9	10.8	17.3
MMFS AUM	30.1	46.8	36.2	35.2	22.3	8.0	8.9	12.3

Source: JM Financial estimates, Company, * Sales growth

Medium-term outlook: Structural drivers intact

Down but not out

Weakness in the agri incomes, non-agri incomes and land prices are all pointing towards a near-term weakness in the rural economy. This makes us believe that there is no upside to FY16 earnings for the stocks levered to the rural economy. That said, the structural story of shift towards higher income crops and higher share of non-agri income will continue to play out and we could see a revival in the rural demand in FY17 if the monsoon rainfall is normal, the mining activity revives in the rural area after the recent passage of the Coal bill and the MMDR bill and the government gets into execution mode on its widely publicized schemes such as affordable housing and infrastructure spending. We believe that given the linkages of the rural economy to an urban revival (through non-agri incomes, remittances and land prices), India story could be better played to stocks with high rural exposure in the longer term. That said, the weakness in the near-term could be closely watched for a possible entry point to play rural revival in FY17.

Construction/Infrastructure spending could improve on the back of government spending

Investments were a clear focus of the recent union budget with direct, indirect allocation to public investments and innovative ways of funding the need for capital of the infrastructure sector. Center's plan outlay has increased by c.26% (by ₹490bn) with focus on sectors such as Railways (53%YoY), Roads (194%YoY) and Shipping (75%YoY). While the crusade against black money could be negative for land prices in certain parcels, genuine industrial, residential and infrastructure demand for land should help arrest fall in prices. With the increasing share of non-agri incomes, rural economy is fairly geared to improvement in the construction and mining sectors where some recent legislation could help in gaining momentum. Of the 204 coal blocks cancelled by the Supreme Court, so far, a total of 33 coal blocks have been auctioned and remaining blocks from the 204 cancelled blocks will be auctioned over the next few years where Greenfield mining infrastructure could support local incomes around mines.

Exhibit 66. Government's planned infrastructure push

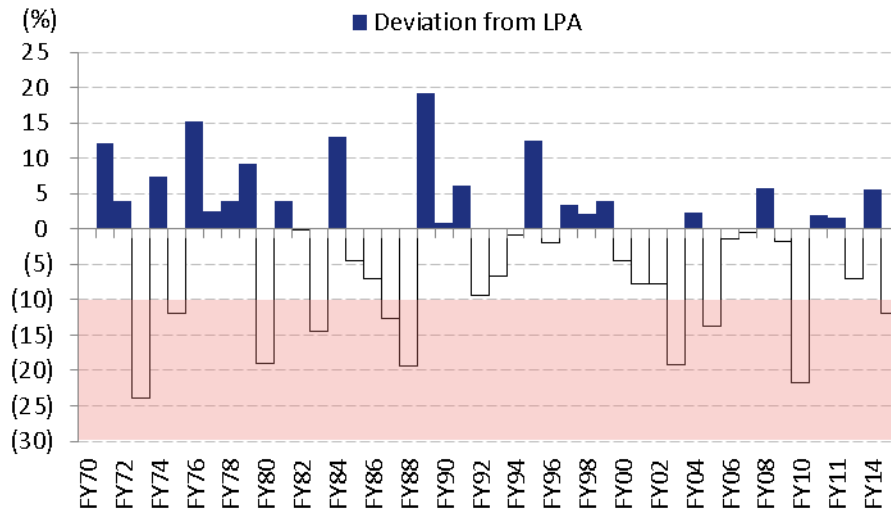
Infrastructure activity	Impact
Infrastructure and Road development	Road sector plan outlay increased by 174% from ₹310bn in FY15 to ₹ 852bn in FY16. The government has proposed establishment of National Investment and Infrastructure Fund (NIIF) with an annual infusion of ₹200bn will enable the NIIF to raise debt, and in turn, invest as equity, in infrastructure finance companies such as the IRFC and NHB. The infrastructure finance companies can then leverage this extra equity, manifold. Our interaction with NHAI indicated that
Land acquisition Bill	Makes land acquisition easier in some areas by exempting them from several provisions of current law (especially Social Impact Analysis and Consent clause). While the government has not touched the compensation part, land acquisition bill amendment could pave way for faster land acquisition, especially for roads and infrastructure sectors.
Coal mines (Special provisions) Bill	The recently cleared Coal mines (special provisions) Bill ensures uninterrupted mining in existing operational mines and paves way for up-surge in the coal mining activity in the country in the next few years. The Coal mines bill classifies mines into Schedule II mines (operational or where operations will begin soon) and schedule III mines (where Greenfield mining projects will have to be set up). Positive for rural employment and construction activity. Positive for rural employment and construction activity.
The Mines and Minerals (Development and Regulation) Amendment Bill, 2015	The recently cleared MMDR bill, while increasing royalty payments and costs, allows auction policy in grant of mining leases for both bulk minerals and notified minerals and grants longer tenures over mines, increasing the period from 30 years to 50 years for minerals other than coal, lignite and atomic minerals. Clarity on licensing terms, auctions, transfer of concessions will enable the sector, which has been plagued by regulatory uncertainties at the state levels, to attract investment.
Housing for all by 2022	The BJP government at the center has talked about its ambitious plan of Housing for all by 2022 under which 20mn homes to be built in urban areas and 40mn homes in the rural areas. It could be a great demand spinner and lead to urbanization in smaller towns.

Source: JM Financial

Monsoon is generally not bad for two consecutive years

The Jun-Sep'15 south-west monsoon ended with c.12% deficit to long period average. A look at historical monsoon rainfall trend suggests that since 1901, there are only three instances (1904-05, 1965-66, 1986-87) of back-to-back monsoon deficits in two consecutive years. We await Indian Meteorological Department's (IMD) monsoon forecast for the year but recent reports indicate that the Australian Bureau of Meteorology (BoM) has upgraded its El Nino outlook (The phenomenon that causes below-normal south-west monsoon rainfall in Indian sub-continent) from neutral to watch with a 50% chance of El Nino forming this year. A normal monsoon is crucial to repair the damage of the last two affected crops (Kharif on weak monsoon and Rabi on unseasonal rains).

Exhibit 67. Historical monsoon rainfall trend

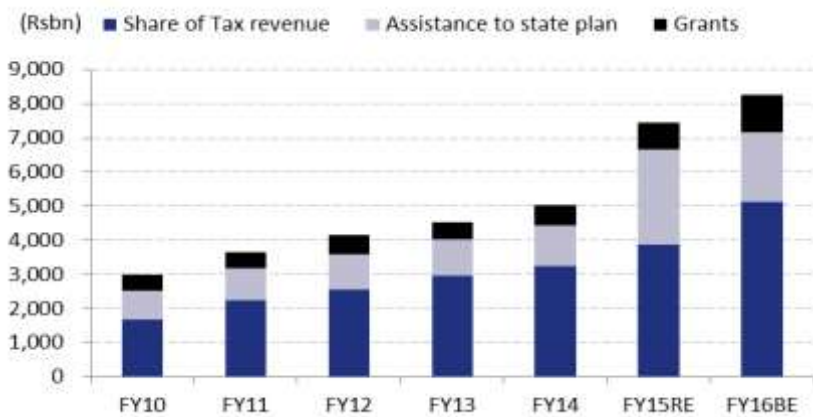


Source: IMD, JM Financial

Impacts of higher devolution to states – states tend to spend higher on rural capital expenditure

As per the provisions of the fourteenth finance commission, the states' share of the central tax revenue pool will increase from 32% to 42% from the FY16E union budget. Not adjusting for the centrally sponsored schemes spending, this will mean an additional ₹803bn for the states to spend. Higher transfers to states will give them more power in determining how they want to spend the resources available to them.

Exhibit 68. Transfer to states from the center



Source: India Union Budget FY16E JM Financial

A look at the expenditure pattern indicates that while the share of direct rural spending of the states is higher at 18% of total spending compared to 14% for the centre. Also, the states tend to spend on rural capital expenditure (29/71% capital/revenue mix) whereas the center rural spend is largely on the revenue side (1/99% capital/revenue mix). So, higher flexibility and resources for the state governments will likely to be positive for the rural expenditure in general.

Exhibit 69. Capital expenditure of state budgets in rural areas tends to be higher

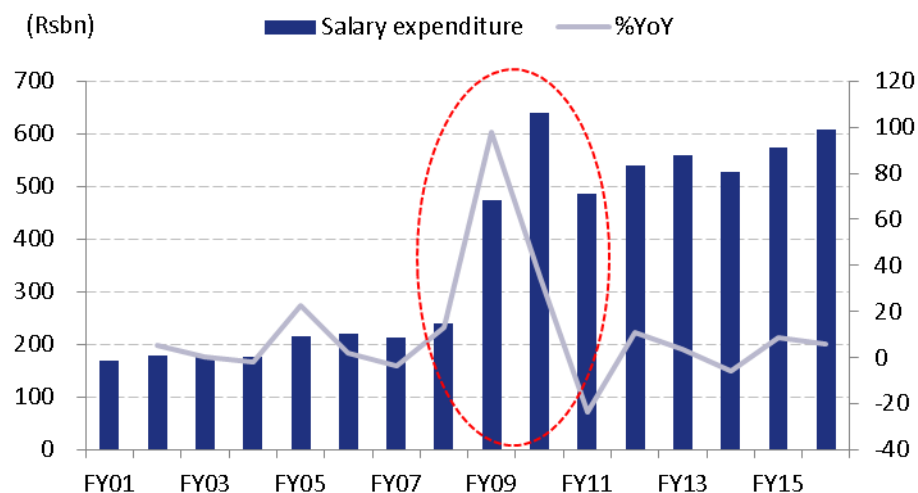
	States			Center		
	Capital	Revenue	Total	Capital	Revenue	Total
Both	50.1	68.4	64.5	47.8	30.1	32.1
Interest/Loans/Transfers	21.9	12.9	14.8	-	42.0	37.4
Defense	-	-	-	47.3	9.1	13.3
Rural	24.8	15.8	17.7	0.6	15.1	13.5
Urban	3.2	2.9	3.0	4.3	3.6	3.7

Source: RBI, India Union Budget – FY14, JM Financial

Seventh pay commission could put an additional ₹910bn in the hands of central government employees

The Cabinet in Feb-2014 gave mandate to the 7th Pay Commission for revision of salaries of over 5mn central government employees and remuneration of 3mn pensioners and asked the commission to make its recommendations within 18 months from the date of its constitution. Previous pay commission with across the board hikes of between 40%-70% saw a jump of 2.5x in the expenditure for salaries of the employees of the central government (including arrears) from average of ₹213bn/annum in FY04-08 to ₹540bn/annum in FY09-13. The pay commission suggested scales have been applied retrospectively in the past resulting into substantial accumulated arrears which result in a wealth effect of sorts. The recommendations of the commission are generally accepted by the government and many state governments follow up with similar revisions for their employees. A 2.5x rise in the general salary levels would mean an additional ₹910bn (0.8% of FY15E GDP) in the hands of government employees. We have seen government employees driving up demand for plots in several geographies like sub-urban areas of Varanasi and Indore.

Exhibit 70. Sixth pay commission impact on government finances



Source: India Union Budget, JM Financial

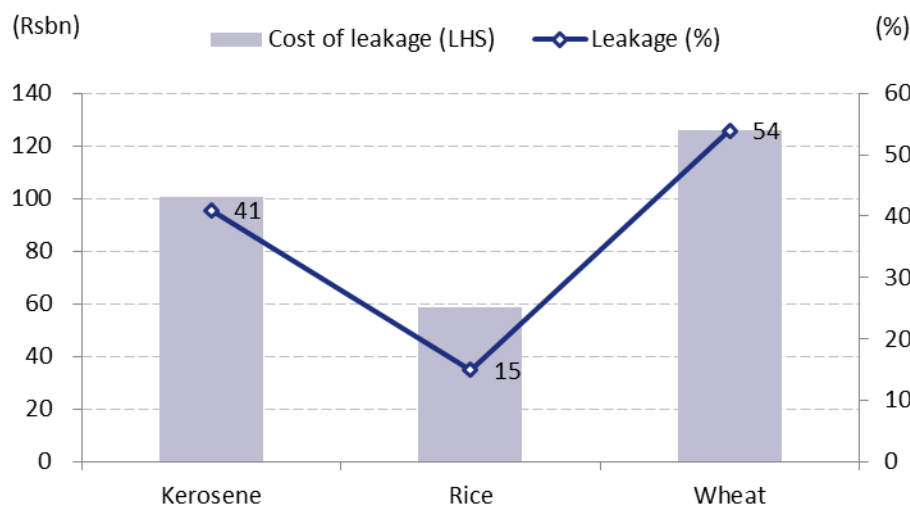
Box 13: “As much as 50% leakage in certain government schemes” – A farmer in UP

Another trend that we observed was that, as per the farmers (especially the marginal and medium ones), in many cases, the benefits of different schemes fail to reach the real intended recipients of different government schemes. Non-awareness about numerous benefits and subsidies available plays a crucial role but very limited efforts are being made to increase awareness. “As much as 50% leakage in certain government schemes does not reach to the intended recipients”, said a farmer. “The general trend is that a lot of below poverty line recipients (aware of their entitlements) avail of the PDS benefits but a lot of above poverty line (APL) recipients do not avail the benefits and are many times siphoned off only to again enter the PDS distribution chain through FCI procurement (for wheat). For some schemes like NREGA as much as 50% of the total benefits do not reach bottom”, continued the farmer. While the exact numbers and the claims could be debatable, the economic survey accepts the widespread leakages in the subsidy distribution system.

Direct benefit transfer can be a game changer

A targeted subsidy regime could lead to the subsidy benefits flowing through to the intended recipients and savings of as much as 1.2% of the GDP according to our estimates. The new government at the center has continued the subsidy rationalization that the UPA-2 initiated during the last phase of its tenure.

Exhibit 71. Leakage in PDS – Kerosene, Wheat and Rice



Source: Economic Survey, JM Financial

JAM trinity is well positioned to ensure lower leakages

The economic survey states that eliminating or phasing down subsidies is neither feasible nor desirable unless accompanied by other forms of support to cushion the poor and the vulnerable and enable them to achieve their economic aspirations. The economic survey talks about the JAM (Jan Dhan Yojana, Aadhar and Mobile) to ensure lower leakages in the Public Distribution System (PDS) and plug the leakages in the India’s massive ₹3.7trn subsidy program.

As per the estimates of the economic survey, nearly 15% of the subsidy on rice PDS leaks out of the system whereas the number is even higher at 41% for Kerosene and 54% for wheat. Another study in the economic survey reveals that in a price based subsidy regime, most of the benefits of the subsidies accrue to top deciles in the income pyramid. For example, the bottom 50% account for only

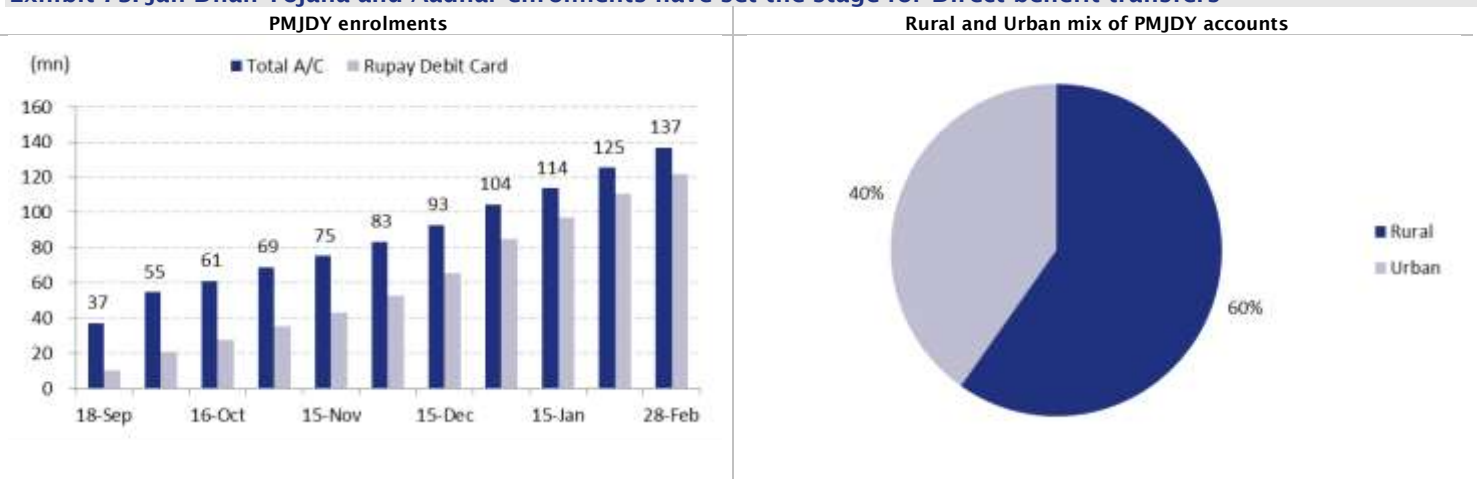
25% of the LPG consumption. Given that the stage is set for direct benefit transfer with combination of 137mn accounts being opened in Pradhan Mantri Jan Dhan Yojana (PMJDY) and 798mn enrolments under Aadhar, over the next few years we expect the intended recipients of these subsidies to benefit. Also, lower leakages would reduce subsidies and free up resources for infrastructure spends by the government.

Exhibit 72. How much do subsidies benefit the poor?

Product	Producer subsidy	Consumer subsidy	Fiscal expenditure (₹Cr)	Fiscal expenditure (%of FY12 GDP)	What share of benefits accrues to the poor?
Railways	NA	Subsidized passenger fares	51,000	0.57	The bottom 80 percent of households constitute only 28.1 percent of total passenger through fare on railways
LPG	NA	Subsidy (now via DBT)	23,746	0.26	The bottom 50 percent of households only consume 25 percent of LPG
Kerosene	NA	Subsidy via PDS	20,415	0.23	41 percent of PDS kerosene allocation are lost as leakage, and only 46 percent of the remainder is consumed by poor households
Fertilizers	Firm and nutrient specific subsidies to manufacturers the Import of urea regulated by government	Maximum Retail Price for urea is determined by the government	73,790	0.82	Urea and P&K manufacturers derive most economic benefit from the subsidy, since farmers, especially poor farmers, have elastic demand for fertilizer
Rice	Price floor (minimum support price)	Subsidy via PDS	129,000	1.14	15 percent of PDS rice is lost as leakage. Households in the bottom 3 deciles consume 53 percent of the remaining 85 percent that reaches households
Wheat					54 percent of PDS wheat is lost as leakage. Households in the bottom 3 deciles consume 56 percent of the remaining 46 percent that reaches households
Pulses	Price floor (MSP)	Subsidy via PDS	158	0.002	The bottom 3 deciles consume 36 percent of subsidized pulses
Electricity	Subsidy	Capped below market price	32,300	0.36	Average monthly consumption of bottom quintile = 45 kWh vs top quintile = 121 kWh. Bottom quintile captures only 10percent of the total electricity subsidies, top quintile captures 37 ercent of subsidy
Water	NA	Subsidy	14,208	0.50	Most water subsidies are allocated to private taps, whereas 60 percent of poor households get their water from public taps
Sugar	Minimum price for sugar cane farmers, subsidy to mills	Subsidy via PDS	33,000	0.37	48 percent of PDS sugar is lost as leakage. Households in the bottom 3 deciles consume 44 percent of the remaining 52 percent that reaches households
Total			377,617	4.25	

Source: Economic Survey, JM Financial

Exhibit 73. Jan Dhan Yojana and Aadhar enrolments have set the stage for Direct benefit transfers



Source: Economic Survey, PMJDY and Aadhar official websites, JM Financial

Government’s JAM push has only intensified in the last few months

What is interesting to note is that the pace of Aadhar enrolments and PMJDY accounts has only increased in the last few months. The share of Zero balance PMJDY accounts has also been falling over the last few months from 88% in Sep’14 to 63% in Feb’15. Our interactions indicate that there are still awareness gaps in the rural area with many farmers not aware of these schemes (PMJDY in particular) and that the portrayed benefits such as insurance (in some cases farmers mentioned a number as high as ₹1.5mn which is clearly an exaggeration), etc. have been the reason why people in rural areas have been enrolling.

Exhibit 74. Jan Dhan Yojana and Aadhar enrolments have set the stage for Direct benefit transfers



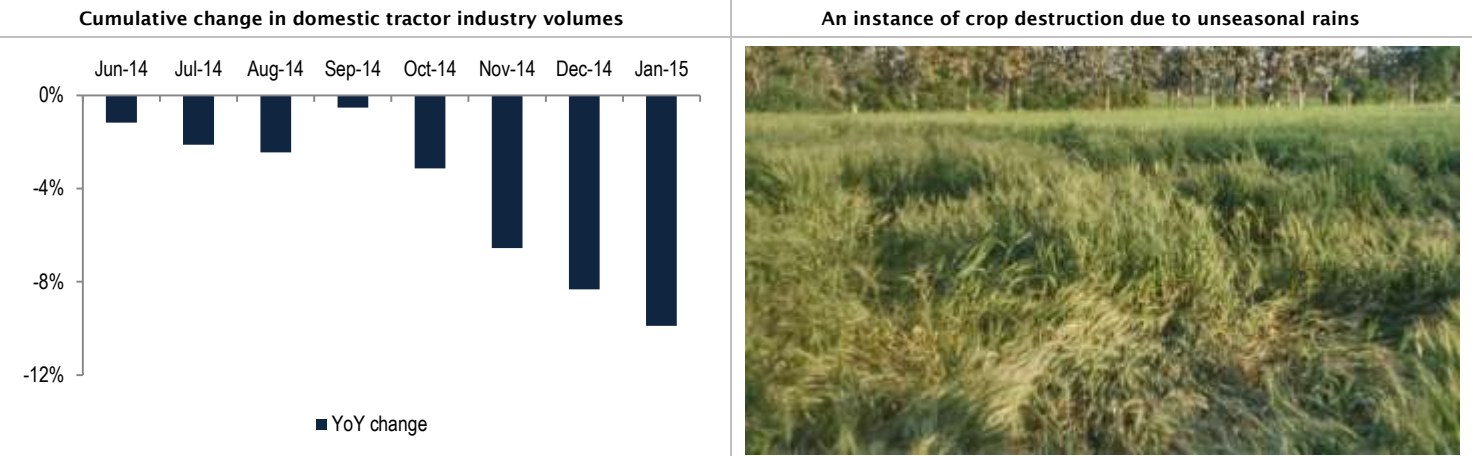
Source: Economic Survey, PMJDY and Aadhar official websites, JM Financial

Automobiles

Tractors

Uneven/poor monsoon impacted FY15 tractor demand...: YTD FY15 domestic tractor volumes have declined by c.10%, impacted by a) erratic rainfall, b) decline in MSP, c) slowing commercial activity, and d) lower spend under schemes like MNREGA. The decline in tractor volumes has worsened in last few months, impacted by unseasonal rains/hailstorms.

Exhibit 75. Tractor volumes have declined sharply in last few months



Source: Crisil, JM Financial

...but underlying demand levers remain intact: Although in last few months, rural economy has come under increased pressure, our interactions with the stakeholders in rural India indicated little risk to structural tractor growth story as factors like a) labor shortage, b) rising labor cost, c) improving infrastructure, d) increasing access to finance, e) increasing share of non-agri income, f) increasing commercial usage of tractors, and g) improving information flow continue to support tractor volume growth in medium-long term. However, in near term, factors like 2015 monsoon, government spending and crop prices would have a major bearing on domestic tractor demand.

Exhibit 76. Increasing non-agri income/usage of tractors will continue to support tractor demand in longer run

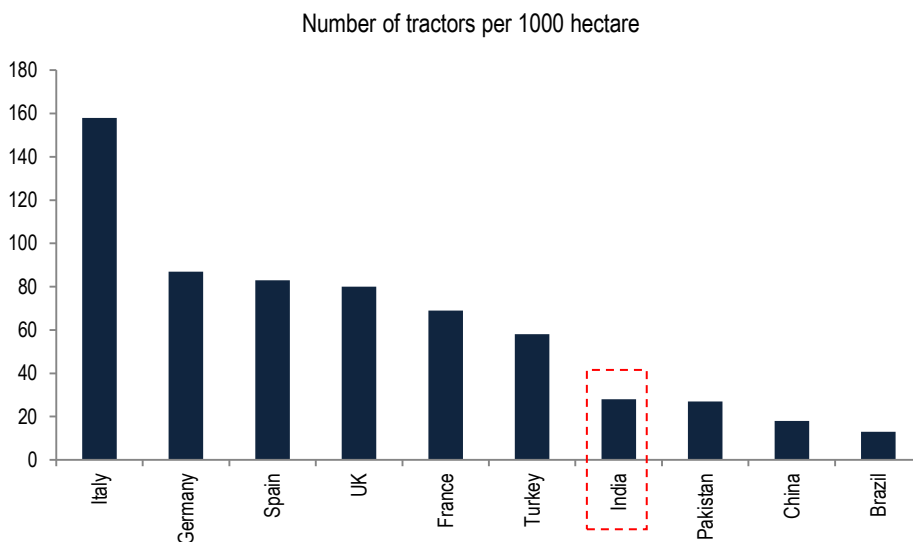


Source: JM Financial

Normal monsoon could trigger recovery in 2HFY16: While the area dependent on rainfall for irrigation has come down in last few decades, rainfall continues to play an important part in overall farm economics as a) still a large portion of land is dependent on rainfall (still more than 50%), b) inadequate rainfall in successive seasons impact water table, which then impacts irrigation, and c) heavy/erratic downpour affects standing crop even in irrigated land. Given that 2014 monsoon was both erratic and deficient, stakes on 2015 monsoon have increased considerably. Given recent softness in crop MSPs, slowing construction activity, softening crop prices, normal monsoon could be a significant trigger in 2HFY16.

The potential is still huge: While India is already one of the large tractor market, tractor usage in the country continues to increase supported by a) labor shortage, b) increasing labor cost, c) increased awareness, and d) growing non-agri usage. While these factors continue to play out in longer run, tractor volumes in near term get significantly impacted by rural income levels and monsoon as seen in last one year. Also, tractor size in India in terms of its horsepower is low compared to ones in developed countries, so penetration levels tend to underplay the lack of farm mechanization in India, again in terms of power available in the economy compared to other developed countries.

Exhibit 77. Tractor penetration – India Vs World



The tractor size in India in terms of its power is low compared to ones available in developed countries, so the penetration levels tends to underplay the lack of farm mechanization in India

Source: Company, JM Financial

Historically, one of the biggest barriers for higher tractor usage in the country has been smaller land holdings, though with access to capital and increased hiring activity, this threshold seems coming down. During our visits we came across couple of cases wherein farmers holding less than 5 acres were able to own a tractor, helped by access to finance and greater avenues to monetize the tractor ownership. Our analysis on potential tractor market indicates that tractor population can potentially double from the current size. This has been further corroborated by M&M management, based on the number of households. M&M management has indicated it expects tractor population to double by 2023 and growth to taper henceforth.

Box 14: What is the potential tractor market size in India

Slowing rural economy in last one year has significantly impacted tractor volumes in India. Given this backdrop and recent instances of unseasonal rainfall, we tried estimating the size of Indian tractor market in medium-long term, on the basis of total arable land and also number rural households in the country.

Arable land: Based on total arable land, as per our analysis, compared to current population of c.3.8 mn tractors, tractor population in India could double in near to medium term. However, due to lack of details we have excluded the following from our analysis -

- 1) We have not provided for difference in usage under various crops. So while almost all crops can use tractor for soil preparation, certain cash crops and vegetables require relatively little tractor usage afterwards.
- 2) Due to non-availability of data, we have not provided for commercial usage.

The table below gives further details -

Exhibit 78. Potential tractor population – based on arable land

Total Arable land in India (mn acres)	351		
land supported by each tractor (in acres)	30	45	60
Potential tractor population (in mn)	11.7	7.8	5.8

During recent interaction with auto analysts, M&M management indicated potential tractor market in India. However the analysis below ignores that some bigger households can have more than one tractor.

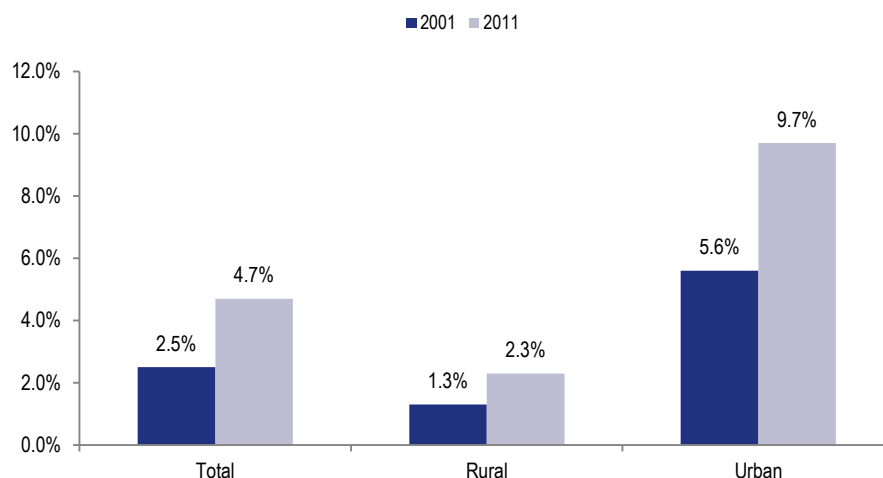
Exhibit 79. Potential tractor population – as suggested by M&M

Total rural households with land holding of more than 5 acres (mn)	15
Tractor penetration among the target households (%)	50
Potential tractor population in India (mn)	7.5

Passenger Vehicles

An aspirational purchase: Although the aspirational value of mass market, mid-segment PVs have come off sharply in most metros and urban cities (due to growing congestion, availability of public transport/taxis and increasing cost of ownership), the same remains high in rural India, partly due to still lower penetration levels. While near term demand will remain dependent on factors like monsoon, government spending etc, our recent field trips reinforced our belief on the long term growth outlook for PVs, given a) growing aspiration levels, b) improving infrastructure, and c) growing income levels.

Exhibit 80. PV penetration is still low in rural India



Source: 2011 Census, JM Financial; % of households having car/jeep/van

Maruti Suzuki and M&M enjoy exceptionally strong brand image and recall:

Among the automotive companies, Maruti and M&M not only boast of best in class distribution network but also enjoy exceptionally strong brand image in rural India. Both Maruti and M&M vehicles are seen as cheaper to maintain and more rugged (compared to competition), characteristics that are highly valued in rural hinterland. Further, both Maruti and M&M have been able to capture customer movement to higher segments in last decade by launching products like Swift, Dzire, Scorpio and XUV500.

Exhibit 81. Both MSIL and M&M have been able to capture up trading by customers in rural India



Source: JM Financial

Pick-ups - a sweet spot for M&M: Our interaction during the rural trip also highlighted the growing usage of pick-ups in the rural hinterland. The trend in last decade has been driven by improving infrastructure (mainly roads) and improved access to local mandis/APMC, some dealers indicated that pick-ups are eating into LCV segment, as they are more rugged and better placed to counter rough terrain of farmlands. Plus, a pick-up can also be used as a UV unlike LCV which is completely a commercial vehicle.

Exhibit 82. Growing pick-up usage



Source: JM Financial

Two Wheelers – Playing the demographic story

Hero still remains preferred motorcycle choice...: In 2W segment, the trip once again highlighted the strength of Hero brand in rural hinterland, even after its split from Honda. In particular, there seems to be little threat to hero's famed twins – 'Splendor' and 'Passion', at least in near-medium term. This has been supported by best in class network, particularly in terms of its sub dealer network. This has been partly due to the fact that competition (including Honda and Bajaj) has been unable to launch any blockbuster product/brand in the executive segment (motorcycle).

Exhibit 83. Hero brand remains very strong in rural India



Source: JM Financial

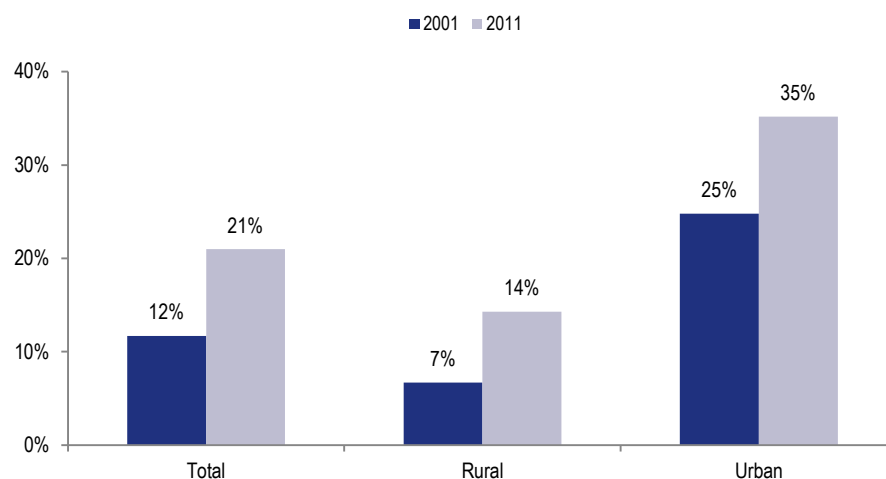
...while Scooterisation theme catching up with rural India: While increasing scooter penetration in Urban India is already well documented and spoken about, our visit to smaller towns indicated significant increase in scooter penetration even in smaller cities and villages. In several smaller cities, dealers indicated that scooter contribution could be as high as 50%, surprisingly matching the trend in bigger cities. Even in villages, where we expected to see no scooters (due to little infra and lower proportion of women riders) we were surprised to see significant scooter presence. Based on our interaction, assumption that scooterisation trend will continue has been reinforced.

Exhibit 84. Even in rural households, we saw growing scooter penetration



Source: JM Financial

2-wheeler penetration has improved significantly: 2W penetration has improved significantly in last decade, supported by growing rural income, improving rural connectivity and easy access to finance.

Exhibit 85. Growing 2W penetration (% of households with 2W ownership)

Source: 2011 Census, JM Financial.

Honda is also scaling up fast: While Hero continues to dominate the rural 2W market; we also saw signs of growing Honda presence. This has also been supported by growing preference for scooters, even in smaller towns and villages. Although, we do not expect Hero dominance to come under pressure anytime soon in rural India, the competition would continue to increase.

Exhibit 86. Growing Honda network in tier 2/3 cities

Source: JM Financial

Royal Enfield well placed to capture growing aspirational buying: Echoing the trends seen in urban cities, we saw huge brand awareness and following for Royal Enfield in rural India as well. With 100cc bikes already well penetrated, our discussions indicated a desire to move to higher capacities in smaller cities. Further, in terms of their aspirational needs and upgrading in 2W segment, Royal Enfield seems the only brand people could think of in higher cc (engine size) segments, mainly due to REs cult brand status. This is also driven by the fact that, unlike Royal Enfield which remains essentially all metal bike, most bigger bikes from competition (like Bajaj, Hero and Honda) make use of plastic panels and are therefore seen as better suited to urban landscape. Finally, in terms of competition from players like Harley Davidson, network and initial cost would remain their biggest handicaps going forward, at least in rural India.

Exhibit 87. Royal Enfield showroom in Indore - Leveraging growing aspirations

Source: JM Financial

Box 15: 30% of the new customers are farmers - Royal Enfield dealer in Indore

The Royal Enfield showroom in Indore is flourishing. Our interaction with the largest Royal Enfield dealer in the state of Madhya Pradesh indicated a strong demand and waiting period (Especially 300cc category). The dealer pointed out that nearly 30% of new customers are farmers. The Royal Enfield brand is very strong and people buy the Bullet “because they are not very common and everyone around them wants to buy one”. Some farmers we interacted with in the region also vindicated the aspirational positioning for Royal Enfield. The dealer said that the accessories business was started and replenished little over a year ago and is seeing good demand.

30% of the new customers are farmers and they tend to buy in up-front cash

Consumer Sector

Our recent rural trip has also highlighted a few surprises on consumer side. Families in rural areas seemed quite happy with the way their incomes have progressed over last few years and were unconcerned with inflation on account of availability of food at subsidized prices which is in stark contrast to scenario in urban areas. Rural income has benefitted from structural factors like rising crop prices, mechanization, increased sources of non-agri income, higher land prices and higher remittances on account of migration. Near-term, however, some concerns emerged on account of crop failure due to unseasonal rainfall in many parts of India which could impact demand. Henceforth, though structurally positive, growth in rural income could moderate given curtailment of subsidies and lower wage growth. We analyze the earnings impact on consumer companies in two parts, 1) For staples, it is expected to be limited as current estimates are already discounting a recovery in rural demand and sharp increases in operating margin led by benign RM prices, and 2) For discretionary segment, an improvement in rural sentiment post a good monsoon and a pick-up in construction and industrial activity could provide upside for earnings in our view. We are especially positive on organized paints sector which, in our view, is well-positioned to capitalize on 10%+ volume growth opportunity over next decade.

Consumer Staples

Structural factors for rural demand intact, scope for premiumization remains high: The rural safari highlighted a series of structural factors that would continue aiding rural incomes positively as mentioned above. The sources of non-agri income like carpentry and leasing of tractors have increased while farm costs have reduced on account of mechanization. The families we met earned c.50% of their income from non-agri sources. Higher incomes have historically manifested in the form of improved lifestyles for rural consumers. Our key takeaways were, 1) Most rural farmers have already moved on to branded products though entry level brands are the ones that are most consumed implying high opportunity for brand premiumization, 2) Purchases are generally of sachets and not bottles implying scope for premiumization on SKU level as well, 3) Inflation is not their prime concern on account of subsidized food availability. Crop prices and unseasonal rains are the major near term concerns in their mind, and 4) As income level increases, there has been a propensity to incur higher expenditure on improving lifestyle as wealth security has been realized through higher land prices.

Subdued trends in 1st half coupled with unwinding of fiscal benefits for consumer companies could impact revenue growth: The important feedback from our trip was that unseasonal rainfall has impacted crop output across many parts of India. This coupled with lower growth in rural wages, in our view, could keep rural demand rather subdued and impact revenue growth for consumer companies over next 2 quarters. Furthermore, revenue growth for consumer companies like HUL and Colgate would also be impacted by unwinding of location based excise exemptions. The behavior of monsoon would be the next key data point that would determine the trend of rural demand. A good monsoon could aid rural sentiment positively and drive rural demand, in our view.

Margin gains on benign RM prices - a key earnings growth driver: Consumer companies are well poised to benefit from the recent fall in crude oil prices coupled with other RM prices being rather benign. In our view, the quantum of impact from falling RM costs would be a key earnings driver in FY16 and would also depend on the benefits being passed on to consumers in the form of price-

offs/free grammages. However, given the steep fall in RM prices we expect margin gains to be significant.

Risk to estimates and peak valuations could limit near term return:

Consensus estimates on earnings are already factoring a sharp margin expansion for consumer staples companies. While margin expansion in the initial phase is expected to be sharp, sustainability of such sharp expansion could be debatable given high competition from unorganized players in a deflationary environment. Our consumer coverage universe is currently trading near peak valuation of 40x 1-year forward earnings leaving little margin of safety and hence we expect returns on staples to be subdued.

Consumer Discretionary

Concretization of houses presents penetration opportunity for paints and home improvement industry: One of the key takeaways from our visit was that over last few years most houses in rural areas are getting concretized. Increased agri incomes coupled with remittances from migration has led rural families to increase expenditure on lifestyle improvement and there has also been a trend of converting temporary shed into permanent concretized houses as per our conversations. Also, few middle class families in rural areas have already invested behind improving the look and feel of their houses. One of the families we met attributed the home improvement expenditure that they had recently undertaken, to remittances received from their children as it provided a stable source of income. Secondly, in mid-tier towns, new buildings being constructed have invested behind appearance which implies that once real estate activity improves, it could further add to the demand for paint and other home improvement products. This reaffirms our view that structural opportunity for paints industry remains quite attractive.

Exhibit 10: Mr Tulabandula, a middle class farmer, has invested in improving the appearance of his house aided by remittances from his son.



Source: Companies data, Bloomberg, JM Financial

Exhibit 10: Buildings coming-up in Guntur district investing in exterior appearance – implies real-estate revival in mid-tier towns to aid demand for paints and other home-improvement products



Source: Companies data, Bloomberg, JM Financial

Scope for higher growth exists in discretionary products: Quite a few families in rural areas owned durable goods like television, air conditioner, motorcycle etc, though some of these products were quite old and of outdated technology. The important takeaway being that rural families are willing to spend on durables for convenience and entertainment. As rural income improves further, this aspect would act as a strong driver for accelerating discretionary demand, in our view. Given low penetration of discretionary products in India, growth could still surprise on the upside in our view. However, demand over next 2 quarters could remain subdued on account of pressure on agri incomes and low rural wage growth.

Given strong support from structural factors for the paints industry, high valuations could sustain unless growth disappoints for a prolonged period: Based on our conclusions, we expect paints industry to be a big beneficiary of structural improvements in rural areas as mentioned above. Our framework, devised to examine growth potential based on the interplay of different variables, also supports the case of the organized sector's volume growing at compounded double-digit rate over a decade or longer, notwithstanding near term demand weakness. We continue to like both Asian Paints and Berger Paints given their high exposure to decorative paints segment and strong market positioning.

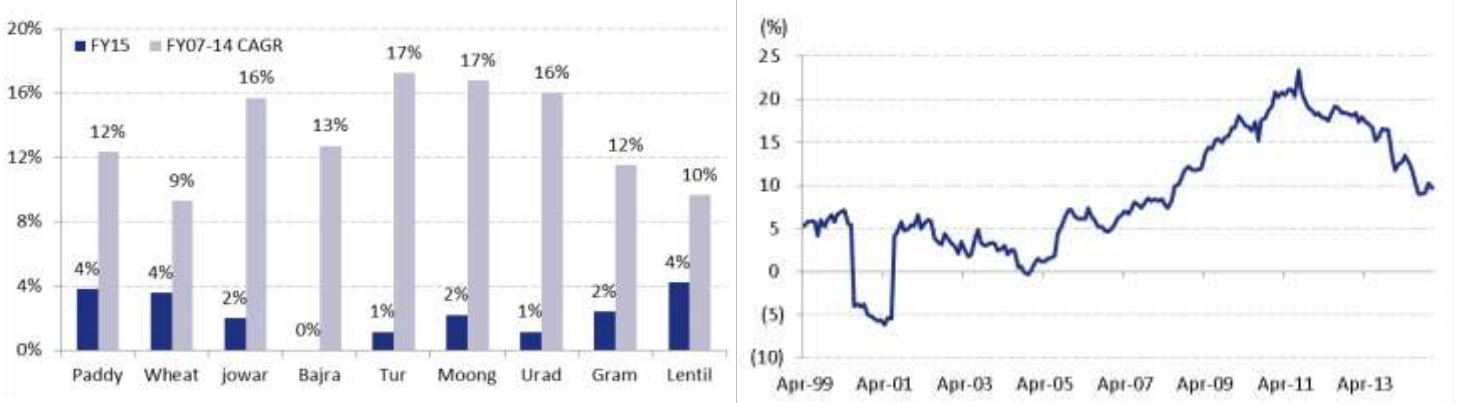
Rural NBFC

Growth to revive in FY17

Rural economy facing multiple challenges in near term due to erratic weather, marginal increase in MSP and lack of infra activities.

The 12% rainfall deficit in the southwest monsoon compared to long period average (LPA) led to a fall of 6.1% in the net sown area during Kharif season. Dip in water table after a weak monsoon and erratic weather patterns (recent unseasonal rains and hailstorms in many parts of India) have led to a drop of 7% in the Rabi net sown area as well. Coupled with other factors such as a) marginal increase in MSP, b) absence of infra activities, c) pressure on yields due to crop failures, and d) stagnating real estate prices led to strain on cash flows of farmers impacting his repayment ability.

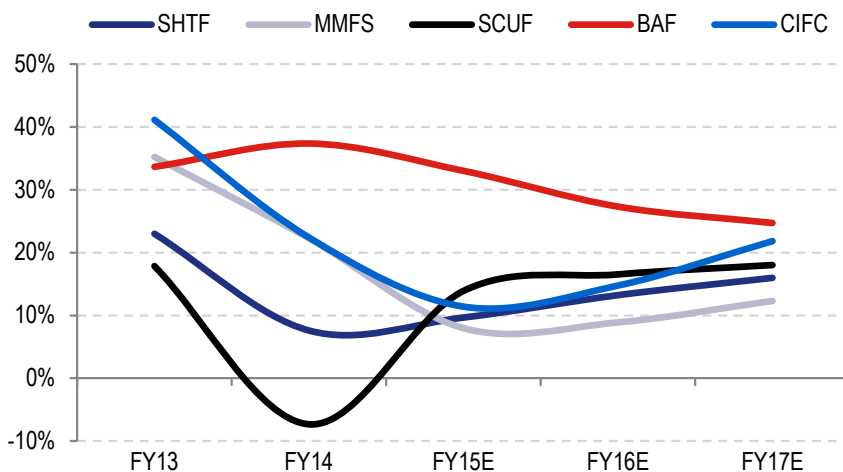
Exhibit 88. Trend in MSP and rural wages



Source: CACP, JM Financial

Upcoming monsoon and pick up in infra activities will be key growth drive for rural India: Going forward, we believe normal rainfall will support crop output and improve crop yields. Further government spending in rural India coupled with pick up in infra activities (e.g. opening of mining activities) should improve non-agri income for farmers. Thus FY16 will be a year of consolidation and base will be set for rural growth revival in FY17.

Exhibit 89. AUM Growth trends in NBFCs under coverage



Source: JM Financial

Estimates remain conservative; factoring substantial pick up only in FY17:

We expect FY16 to be a year of consolidation and our estimates remain conservative. E.g. in case of Mahindra Finance we are factoring 9% growth in AUM for FY16 with tractor growth remaining flat and pick up in cars and UVs. However in FY17 we are factoring in substantial pick up in AUM growth. For NBFCs under coverage we expect 15-25% growth in AUM in FY17 as shown below.

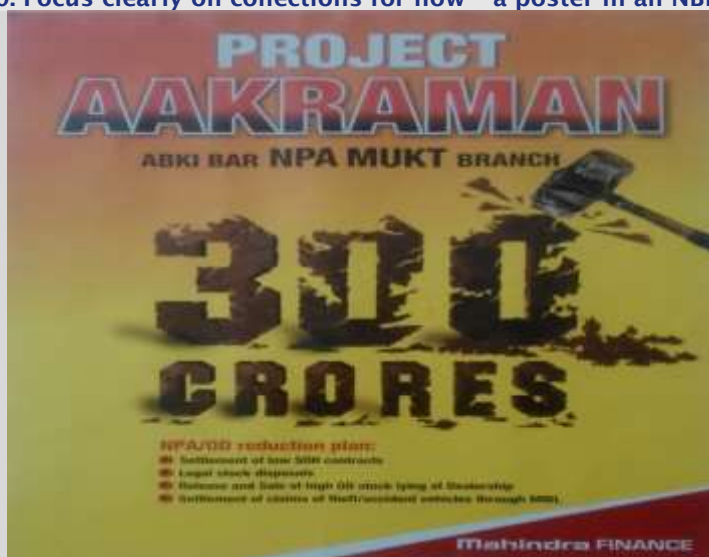
Prefer CV and urban financiers with BAF and SHTF in the near-term: We believe pick up in rural India will lag pick-up in manufacturing and industrial activities and expect urban and CV financiers to be a key early beneficiaries of improvement in economic activity. We prefer Shriram Transport as top pick in CV financing space followed by Bajaj Finance and Shriram City Union Finance. We like MMFS as a play on rural India revival from a medium term perspective.

Box 16: Focus on recoveries - Mahindra Finance's Nashik Branch visit

Last 2 years have been difficult for Nashik region as agriculture output suffered due to untimely rains/hailstorms (Feb'14 and Mar'15) and delayed monsoon (June'14). In that backdrop, we visited Nashik branch of Mahindra Finance to understand extent of stress on asset quality and initiatives taken by the financier to improve collection efficiency. Key takeaways are:

- Kharif crop was impacted due to delayed rains while rabi crop is getting impacted due to untimely rain/hailstorms, putting asset quality under pressure. Collection efficiency in 4Q15 is not as per expectations
- Stress is across all product categories. Impact on demand is more severe on car segment which is more of a discretionary spending
- Focusing on recoveries and in constantly touch with customers for collection
- 4% of excise duty has more impact on auto sales than petrol/diesel prices
- Vehicle costs have gone up by 30-35% but income of farmers has not gone up in sync due to flattish MSP/no offtake from government at MSP/bad crop.

Role of crop insurance: Interaction with financiers indicated that crop insurance if designed properly, can solve issue of bad crop and give relief to farmers as well as financiers. However duration of crop insurance should be increased to give cover till crop is sold in the market. E.g. crop insurance available for grape is from October till February. However for domestic consumption season for grapes is Mar-Apr'15.

Exhibit 90. Focus clearly on collections for now - a poster in an NBFC branch

Source: JM Financial

Box 17: Diwali sees highest repayments - Visit to a large gold loan financier

We visited one of the large gold loan financiers in Nashik region to understand the demand dynamics. The gold loan as product has good level of acceptability however has become 'push product' (vs earlier 'pull product'). Another interesting finding was elevated levels of loan repayment during Diwali season as customers take back gold during festivals. Other findings are as follows:

- a) 3.5 year old branch with c.₹60mn of loan book vs ₹45mn in March 2013
- b) Current customer footfall of around 40-45 per day - ₹8-10mn of disbursements annually - Personal loan is the main reason for taking gold loan
- c) Currently its doing PSU Banks charge 11-13% rate of interest while co-op banks charge 13-14%
- d) Farmer gets farm loan against gold at 4% rate of interest up to ₹3 lacs which is in turn invested in fixed deposit of the same bank. Banks are happy doing that as it helps to achieve PSL and deposit targets.
- e) It allows part payment facility which is not available at banks
- f) Branch currently has 1700 customer base with addition of 30-40 customers every year - Maximum repayment during Diwali season

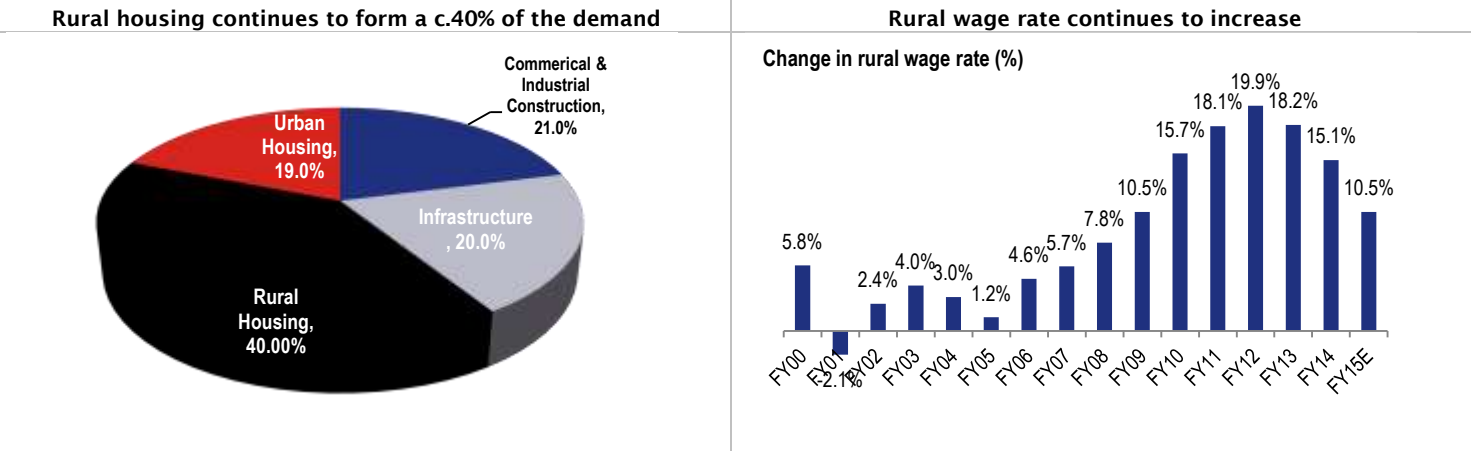
Exhibit 91. Easy gold loan schemes – posters in Nashik

Source: Company, JM Financial.

Cement

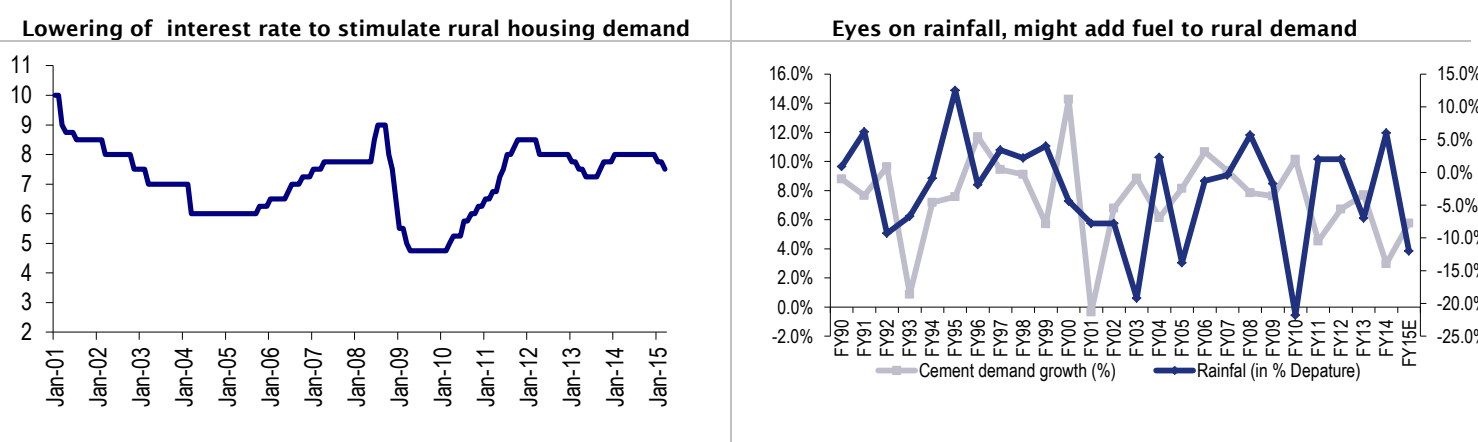
Rural housing is an important driver of cement demand contributing c.40% to the total demand. Rural housing shortfall stood at c.43.7mn units as per 12th Five Year Plan and increasingly there has been a trend towards pucca houses. We believe rural economy will remain significant driver of cement demand in India as we draw comfort from new government’s renewed focus on ‘Housing for All by 2022’ and development of concrete roads. Besides government schemes promoting rural housing, rural demand is driven by wage levels, rainfall and interest rates.

Exhibit 92. Cement demand – Rural demand is an important demand driver



Source: RBI, CRISIL, JM Financial

Exhibit 93. Good monsoon and lower interest rates could provide support for rural housing demand



Source: RBI, CRISIL, JM Financial

Lowering of interest rate to stimulate rural housing demand: In recent monetary policy announcements, RBI has reduced the repo rates twice by 25bps to 7.50% and indicated that the interest rates are likely to further decline from here with moderation of inflation. Reduction in interest rates should drive the cement demand owing to surge in demand from rural housing sector and increased private participation in infrastructure projects.

Eyes on monsoons to drive housing demand from rural sector: Good monsoon is likely to have a positive impact on rural housing demand. Good monsoon leads to improved agricultural productivity and increased income in rural areas, leading to uptick in housing demand from rural areas.

Few Government schemes providing push to rural demand

a) Indira Awaas Yojna (IAY) (1985): It is a public housing scheme for BPL households in rural areas under which financial assistance is provided for house construction. The financial assistance provided for new construction is ₹70k per house for plain areas and ₹75k for hilly/difficult areas.

b) Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS) (2006): Enforced by law it aims to guarantee 'right to work' and ensure livelihood security in rural areas by providing at least 100 days of wage employment in a financial year to every household where adult members volunteer to do unskilled manual work. The wages per day have been notified statewide, ranging from ₹100-200/day.

c) Interest subvention on crop loans (2013): Farmer who repays short term crop loans on time is given interest subvention of 4%.

d) Govt. Financial Institutions: National Housing Bank (NHB), National Bank for Agriculture and Rural Development (NABARD) and Housing and Urban Development Corporation (HUDCO) provide support for rural housing. NHB runs schemes like Rural Housing Fund (RHF), Golden Jubilee Rural Housing Refinance Scheme (GJRHFS) and Productive Housing in Rural Areas (PHIRA). NABARD extends refinance to banks for provision of loans to individuals/cooperative housing societies. HUDCO has been supporting by extending loan assistance for weaker sections at concessional rates. Of the total c.15mn housing units supported by HUDCO, over c.9mn units have been constructed in rural areas.

Uptick trend towards pucca houses: Though number of houses has grown at a modest rate of 2%, trend towards pucca housing is distinctly visible with growth rate being higher for houses with pucca roof, wall and floor. This should lead to higher cement demand.

Exhibit 94. India – Pucca 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, JM Financial.

Eicher Motors | EIM IN | CMP: ₹15,491

In a sweet spot

Cult brand equity, niche positioning, network expansion, new launches and weak/limited competition, are driving an unprecedented demand for Royal Enfield (RE). Further, while a large part of the growth in recent few years has come from urban centres, RE is now targetting tier 2/3 cities as well going forward. Our rural survey reinforced our belief that RE enjoys unmatched brand following and strong demand potential. Going forward, we see little risk to RE's growth momentum due to a) increasing distribution network, b) capacity ramp up, c) pent up demand (average waiting period of 4-5 months), d) extension of product range (models/engine platforms), e) management's attention to customer satisfaction, and e) potential in export markets.

- Royal Enfield in a sweet spot:** Cult brand equity, niche positioning, lack of competition and successful new launches are resulting in an unprecedented demand. Royal Enfield has been posting record volume growth and we expect the trend to continue driven by a) cult brand status, b) increasing traction of new models like "Thunderbird" and "Café Racer", c) huge waiting list (c.5 months), d) expansion in dealer network, and e) capacity ramp-up. While volumes witnessed 55% CAGR between CY10-14 (c.303k in CY13), we expect the same to increase to c.657k by CY16 (47% CAGR - CY14-16).
- Shifting gears:** With capacity issues in RE largely taken care of (with commissioning and ramp up of Oragadam phase 2 in next 12-15 months), management indicated that demand creation and sustenance would be their core focus going forward. In CY15, RE plans to invest ₹5bn on a) setting up of R&D centers in Chennai and UK, which will help company extend the RE product range, b) network expansion (RE has c.400 dealers and is targeting 500 dealerships by end of 2015), and c) rolling of new retail format across all RE dealers by end-CY15.
- RE focusing on export markets:** RE is gradually building on export markets and has been investing in certain key markets to support/expand its brand and distribution footprint. In 2014, RE hired Rod Copes, former sales and customer service head at US-based 'Harley-Davidson Inc.' to head its North American business. While the company continues to invest in existing export markets like USA and UK, it is focusing hard on Latin America and ASEAN as it sees them developing as one of RE's bigger markets overseas in medium-long term. RE would launch its products in Columbia and would then progressively target other countries in these regions, along with capacity additions.
- VECV well placed to leverage from recovery in domestic CV demand:** While domestic MHCV environment has remained challenging, VECV remains well placed to leverage from recovery in domestic CV demand, helped by a) increasing dealer network and HCV penetration among existing dealers, b) extensive product overhaul that was completed recently, and c) capacity expansion.
- Significant upside from engine deal:** Apart from additional source of revenues the engine outsourcing deal also gives VECV a huge technology lead over domestic peers. Management has also indicated that this could lead to more outsourcing projects.

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Key Data

Market cap (bn)	₹ 419.9 / US\$ 6.7
Shares in issue (mn)	27.0
Diluted share (mn)	27.0
3-mon avg daily val (mn)	₹ 1222.6/US\$ 19.6
52-week range	₹ 17200.0/5724.8
Sensex/Nifty	27,459/8,341
₹/US\$	62.5

Daily Performance



%	1M	3M	12M
Absolute	-2.0	2.4	161.7
Relative	4.0	1.6	138.1

* To the BSE Sensex

Shareholding Pattern	(%)	
	Dec-14	Dec-13
Promoters	55.0	55.1
FII	19.5	20.0
DII	4.7	5.2
Public / others	20.9	19.8

Financial Tables (Consolidated)

Profit & Loss						Balance Sheet					
Y/E December	CY12A	CY13A	CY14A	CY15E	CY16E	Y/E December	CY12A	CY13A	CY14A	CY15E	CY16E
Net sales (Net of excise)	63,899	68,098	87,383	115,566	161,694	Share capital	270	270	270	270	270
Growth (%)	12.4	6.6	28.3	32.3	39.9	Other capital	0	0	0	0	0
Other operational income	0	0	0	0	0	Reserves and surplus	17,279	20,284	24,826	33,788	49,839
Raw material (or COGS)	45,852	46,387	57,660	76,712	106,769	Networth	17,549	20,554	25,097	34,058	50,110
Personnel cost	4,573	5,333	6,596	7,839	9,322	Total loans	560	1,238	1,016	1,792	1,802
Other expenses (or SG&A)	7,984	9,246	11,979	13,172	15,769	Minority interest	9,485	10,397	10,851	12,472	15,505
EBITDA	5,490	7,132	11,148	17,843	29,834	Sources of funds	27,593	32,189	36,963	48,323	67,417
EBITDA (%)	8.6	10.5	12.8	15.4	18.5	Intangible assets	0	0	0	0	0
Growth (%)	-6.8	29.9	56.3	60.1	67.2	Fixed assets	15,260	22,993	33,368	42,338	51,425
Other non-op. income	462	405	706	1,097	1,348	Less: Deprn. and amort.	5,342	6,431	8,571	11,316	14,607
Depreciation and amort.	822	1,300	2,198	2,745	3,292	Net block	9,918	16,561	24,797	31,022	36,818
EBIT	5,130	6,236	9,656	16,196	27,891	Capital WIP	5,044	4,636	4,420	3,737	5,142
Add: Net interest income	867	469	271	630	684	Investments	6,385	8,255	10,777	11,055	12,655
Pre tax profit	5,997	6,706	9,927	16,826	28,575	Def tax assets/- liability	-1,232	-1,805	-2,394	-2,491	-2,673
Taxes	1,249	1,452	2,963	4,661	7,908	Current assets	23,368	23,914	25,963	35,930	54,180
Add: Extraordinary items	0	0	0	0	0	Inventories	4,888	5,268	6,455	9,119	12,800
Less: Minority interest	1,506	1,314	864	1,622	3,033	Sundry debtors	4,459	5,125	5,622	7,147	9,364
Reported net profit	3,242	3,939	6,100	10,543	17,633	Cash & bank balances	8,035	6,826	4,752	10,279	21,143
Adjusted net profit	3,242	3,939	6,100	10,543	17,633	Other current assets	483	532	557	996	1,006
Margin (%)	5.1	5.8	7.0	9.1	10.9	Loans & advances	5,503	6,163	8,578	8,389	9,867
Diluted share cap. (mn)	27	27	27	27	27	Current liabilities & prov.	15,890	19,372	26,601	30,931	38,705
Diluted EPS (₹)	120.1	145.7	225.6	389.9	652.1	Current liabilities	14,186	17,213	22,588	26,779	34,104
Growth (%)	4.9	21.3	54.8	72.8	67.2	Provisions and others	1,704	2,159	4,013	4,152	4,602
Total Dividend + Tax	556	777	1,555	1,582	1,582	Net current assets	7,478	4,542	-637	4,999	15,475
						Others (net)	0	0	0	0	0
						Application of funds	27,593	32,189	36,963	48,323	67,417

Source: Company, JM Financial

Source: Company, JM Financial

Cash flow statement						Key Ratios					
Y/E March	CY12A	CY13A	CY14A	CY15E	CY16E	Y/E March	CY12A	CY13A	CY14A	CY15E	CY16E
Reported net profit	3,242	3,939	6,100	10,543	17,633	BV/Share (₹)	650.0	760.1	928.1	1,259.6	1,853.2
Depreciation and amort.	499	1,090	2,140	2,745	3,292	ROCE (%)	37.2	28.5	32.5	43.0	60.8
-Inc/dec in working cap.	255	1,806	93	289	864	ROE (%)	20.0	20.7	26.7	35.6	41.9
Others	1,108	913	453	1,622	3,033	Net Debt/equity ratio (x)	-0.8	-0.7	-0.6	-0.6	-0.6
Cash from operations (a)	5,104	7,748	8,786	15,198	24,822	Valuation ratios (x)					
-Inc/dec in investments	-1,259	-1,870	-2,522	-278	-1,600	PER	NA	NA	68.7	39.7	23.8
Capex	-6,893	-7,325	-10,159	-8,287	-10,492	PBV	23.8	20.4	16.7	12.3	8.4
Others	-707	-79	3,012	-398	-476	EV/EBITDA	73.7	56.8	36.3	22.4	13.0
Cash flow from inv. (b)	-8,859	-9,274	-9,670	-8,963	-12,569	EV/Sales	6.3	5.9	4.6	3.5	2.4
Inc/-dec in capital	-69	-157	-3	0	0	Turnover ratios (no.)					
Dividend+Tax thereon	-556	-777	-1,555	-1,582	-1,582	Debtor days	25	27	23	23	21
Inc/-dec in loans	-88	678	-222	777	10	Inventory days	28	28	27	29	29
Others	587	573	589	97	182	Creditor days	84	105	96	93	90
Financial cash flow (c)	-125	317	-1,191	-708	-1,390						
Inc/-dec in cash (a+b+c)	-3,880	-1,209	-2,074	5,527	10,864						
Opening cash balance	11,915	8,035	6,826	4,752	10,279						
Closing cash balance	8,035	6,826	4,752	10,279	21,143						

Source: Company, JM Financial

Source: Company, JM Financial

Long-term story intact

Amongst all 4-wheeler players, M&M enjoys some structural advantages like – i) relatively low competitive intensity in core UV/tractor business, ii) rising focus on farm mechanization, iii) very strong financing arm in Mahindra Finance, and iv) higher reach and exposure to rural/semi-urban markets (c.70% of domestic sales). However, our recent visits/interaction with stakeholders in rural India highlighted sluggishness in rural economy, impacted by unseasonal rains, lower support prices (MSP), slowing construction/infrastructure activity and reduced government spending. While we acknowledge the challenges in rural hinterland in near term, we see little risk to our medium-long term thesis on M&M; reiterate +ve stance.

- Tractor industry to see 7-8% CAGR over long term:** FY15 is turning out to be challenging for domestic tractor industry, however, our interaction with the stakeholders across several rural cities/villages indicate little risk to farm mechanisation trends in medium-long run (driven by improving infrastructure, labor shortage, improving information flow and access to finance). As per our analysis, tractor population in India can potentially double (based on arable land in India) in medium term. However, volume growth could be volatile given that rural income in India is still significantly dependent on yearly monsoons and local government policies/execution.
- Automotive volume outlook getting better:** While in the last few quarters, M&M suffered due to lack of products in compact UV segment, FY16 promises to be an exciting year for M&M, as it leverages its investment in R&D and product development. In 9MFY16, M&M plans to launch three new platforms, 3 major refreshes and 3 variants, making Apr'15 – Dec'15 an interesting time for the company. M&M is also working on a 1.2ltr petrol engine for its compact SUV segment, thereby attracting petrol customers.
- Best placed to capitalize on India's farm mechanization opportunity:** M&M plans to built upon its leadership in farm equipment by targeting the value chain in farm mechanization. M&M estimates size of opportunity for farm mechanization at ₹35bn and plans to focus on land preparation/harvesting. M&M has already established presence in segments like crop care and micro irrigation by organic efforts and acquisitions (like EPC Industries).
- SsangYong (SYMC) to augment product range and new market access:** In our view, SYMC acquisition has been a strategic fit for M&M. Going forward, SYMC will not only carry synergies on advance engine technologies and SUV designing capabilities, but also create cross selling opportunities in respective strong/growing markets. Ssangyong latest launch 'Tivoli' has been well received in the market and company has sold more than 8k units in less than a month. Going forward, M&M expects Ssangyong volumes to remain healthy, despite weak demand in Russia (one of the largest market for the company), helped by a) successful launch of 'Tivoli' across the world, b) expansion in new markets like China and Western Europe, and c) aggressive launch pipeline (working on two new products – Y400, C300).

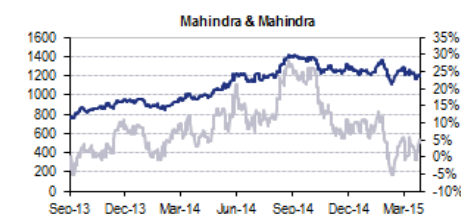
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Key Data

Market cap (bn)	₹ 738.2 / US\$ 11.8
Shares in issue (mn)	590.3
Diluted share (mn)	590.3
3-mon avg daily val (mn)	₹ 1524.7/US\$ 24.4
52-week range	₹ 1433.7/954.8
Sensex/Nifty	27,459/8,341
₹/US\$	62.5

Daily Performance



%	1M	3M	12M
Absolute	-7.2	-5.3	23.2
Relative	-1.2	-6.1	-0.4

* To the BSE Sensex

Shareholding Pattern	(%)	
	Dec-14	Dec-13
Promoters	25.7	25.2
FII	37.4	36.7
DII	17.6	16.0
Public / others	19.3	22.1

Financial Tables

Profit & Loss		(₹ mn)				
Y/E December	FY13A	FY14A	FY15E	FY16E	FY17E	
Net sales (Net of excise)	395,308	396,289	386,089	465,033	548,481	
Growth (%)	27.4	0.2	-2.6	20.4	17.9	
Other operational income	6,231	6,624	7,796	9,081	10,551	
Raw material (or COGS)	304,152	294,323	283,969	346,450	411,361	
Personnel cost	18,665	21,637	23,883	26,271	29,424	
Other expenses (or SG&A)	34,502	41,887	43,716	48,526	55,053	
EBITDA	44,220	45,066	42,318	52,868	63,194	
EBITDA (%)	11.0	11.2	10.7	11.2	11.3	
Growth (%)	25.3	1.9	-6.1	24.9	19.5	
Other non-op. income	6,993	7,857	9,245	10,242	11,326	
Depreciation and amort.	7,108	8,633	9,816	11,338	13,112	
EBIT	44,105	44,290	41,747	51,772	61,409	
Add: Net interest income	-540	-1,365	-1,191	-1,166	-1,293	
Pre tax profit	43,565	42,924	40,556	50,607	60,116	
Taxes	10,943	6,111	8,517	10,121	13,226	
Add: Extraordinary items	906	528	2,993	0	0	
Less: Minority interest	0	0	0	0	0	
Reported net profit	33,528	37,342	35,032	40,485	46,891	
Adjusted net profit	32,622	36,814	32,039	40,485	46,891	
Margin (%)	8.1	9.1	8.1	8.5	8.4	
Diluted share cap. (mn)	590	590	590	590	590	
Diluted EPS (₹)	55.3	62.4	54.3	68.6	79.4	
Growth (%)	17.4	12.7	-13.0	26.4	15.8	
Total Dividend + Tax	8,912	9,587	10,272	10,956	12,326	

Source: Company, JM Financial

Balance Sheet		(₹ mn)				
Y/E December	FY13A	FY14A	FY15E	FY16E	FY17E	
Share capital	2,952	2,952	2,952	2,952	2,952	
Other capital	0	0	0	0	0	
Reserves and surplus	143,638	164,960	189,721	219,250	253,815	
Networth	146,589	167,912	192,673	222,202	256,766	
Total loans	34,886	43,314	43,314	43,314	43,314	
Minority interest	0	0	0	0	0	
Sources of funds	181,475	211,226	235,987	265,516	300,081	
Intangible assets	0	0	0	0	0	
Fixed assets	90,058	111,193	131,166	152,283	175,511	
Less: Depn. and amort.	40,479	49,113	58,928	70,266	83,378	
Net block	49,579	62,080	72,238	82,017	92,133	
Capital WIP	8,635	8,974	13,117	15,228	17,551	
Investments	118,335	113,799	122,799	132,799	142,799	
Def tax assets/- liability	-6,149	-8,897	-9,708	-10,720	-11,922	
Current assets	97,988	128,034	124,252	144,511	170,967	
Inventories	24,198	28,036	26,444	31,852	37,567	
Sundry debtors	22,084	25,098	23,271	28,029	33,059	
Cash & bank balances	17,814	29,504	26,172	32,620	43,742	
Other current assets	0	0	0	0	0	
Loans & advances	33,893	45,396	48,364	52,011	56,599	
Current liabilities & prov.	86,912	92,764	86,711	98,320	111,447	
Current liabilities	67,858	72,024	65,843	77,297	89,559	
Provisions and others	19,055	20,740	20,867	21,022	21,889	
Net current assets	11,076	35,270	37,541	46,192	59,520	
Others (net)	0	0	0	0	0	
Application of funds	181,475	211,226	235,987	265,516	300,081	

Source: Company, JM Financial

Cash flow statement		(₹ mn)				
Y/E March	FY13A	FY14A	FY15E	FY16E	FY17E	
Reported net profit	33,528	37,342	35,032	40,485	46,891	
Depreciation and amort.	4,758	8,633	9,816	11,338	13,112	
-Inc/dec in working cap.	3,314	-2,687	-2,761	1,289	1,516	
Others	0	0	0	0	0	
Cash from operations (a)	41,600	43,287	42,087	53,112	61,519	
-Inc/dec in investments	-15,361	4,536	-9,000	-10,000	-10,000	
Capex	-12,091	-21,474	-24,117	-23,228	-25,551	
Others	-189	-9,817	-2,842	-3,491	-3,722	
Cash flow from inv. (b)	-27,640	-26,755	-35,958	-36,720	-39,273	
Inc/-dec in capital	926	-6,432	0	0	0	
Dividend+Tax thereon	-8,912	-9,587	-10,272	-10,956	-12,326	
Inc/-dec in loans	-922	8,428	0	0	0	
Others	877	2,748	811	1,012	1,202	
Financial cash flow (c)	-8,030	-4,842	-9,460	-9,944	-11,124	
Inc/-dec in cash (a+b+c)	5,930	11,690	-3,332	6,448	11,122	
Opening cash balance	11,884	17,814	29,504	26,172	32,620	
Closing cash balance	17,814	29,504	26,172	32,620	43,742	

Source: Company, JM Financial

Key Ratios						
Y/E March	FY13A	FY14A	FY15E	FY16E	FY17E	
BV/Share (₹)	248.6	284.4	326.4	376.4	435.0	
ROCE (%)	21.4	22.0	16.8	18.7	19.6	
ROE (%)	24.4	23.4	17.8	19.5	19.6	
Net Debt/equity ratio (x)	-0.7	-0.6	-0.5	-0.5	-0.6	
Valuation ratios (x)						
PER	21.5	19.1	21.9	17.3	15.0	
PBV	4.8	4.2	3.6	3.2	2.7	
EV/EBITDA	13.6	13.3	14.1	11.0	8.8	
EV/Sales	1.5	1.5	1.5	1.2	1.0	
Turnover ratios (no.)						
Debtor days	20	23	22	22	22	
Inventory days	22	26	25	25	25	
Creditor days	72	79	74	73	72	

Source: Company, JM Financial

Holding its fort

Over the last few years, Maruti Suzuki has consistently outgrown domestic car industry, helped by increasing rural penetration and entry in new segments. Although our recent rural survey indicated slowing rural economy, we expect the same to be more than compensated by improving demand in urban centers (still account for c.65% of volumes) and recent launches. Going forward, we expect MSIL volume growth to remain healthy, supported by a) aggressive launch pipeline (helping company target new segments as well), b) increasing preference for gasoline cars, c) recovery in demand from first time buyers, and d) introduction of AMT across more models. Further, our interaction with rural stakeholders highlighted that MSIL enjoys huge brand loyalty in rural India and would be a prime beneficiary of increasing PV penetration in medium-long run.

- MSIL at its competitive best in recent times:** Compared to past few years, we believe MSIL's competitive positioning is far stronger today, driven by new product launches (new segments), extensive product range and extensive distribution network. In last few years we have seen quite a few global car companies like Skoda, Volkswagen, Renault and Toyota scaling down their India targets. This, we believe is an indication of maturing competitive landscape. Consequently, we believe this would help MSIL maintain its market leadership without compromising on profitability going forward.
- Prime beneficiary of recovery in domestic demand:** We believe MSIL remains best placed to leverage recovery in domestic PV demand going forward, given a) its extensive product range, specially in entry level segment (would benefit from recovery in demand from first time buyers), b) growing preference for gasoline cars, c) Recent launches like Celerio and Ciaz, d) aggressive launch pipeline (including products in new segments like compact UV and launch of AMT variants in existing models) and best in class network.
- New launches in last decade have helped MSIL retain customers as they upgrade to higher segments:** New launches in last decade (like Wagon R, Swift, Ciaz) have supported MSIL brand and helped company match growing customer aspirations, thereby helping it retain exiting customers and attracting new customers in higher segments. Over the years, MSIL has also been quick in identifying gaps in the market and exploiting them (Dzire, Ertiga). While MSIL already dominates the domestic hatchback segment (both entry and premium) and compact sedan segment, its latest launch in sedan segment - Ciaz, has also been well received. Going forward, company is preparing to launch SX4 cross (to be positioned above Ciaz) and an offering in compact SUV segment.
- Tailwinds to EBITDA margin, estimate c.150bps improvement:** We expect MSIL margins to remain steady on a) healthy volume performance (expect volume CAGR of 17% over FY15-17E), b) economies of scale (MSIL will use current facilities to meet domestic/export demand until FY17), c) stable RM cost (as indicated by management), d) favorable currency (Yen exposure stands at c.18%), and e) cost control.

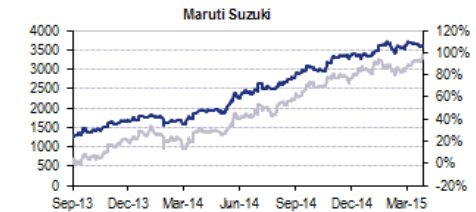
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Key Data

Market cap (bn)	₹ 1090.5 / US\$ 17.4
Shares in issue (mn)	302.0
Diluted share (mn)	302.0
3-mon avg daily val (mn)	₹ 1246.9/US\$ 20.0
52-week range	₹ 3789.7/1866.0
Sensex/Nifty	27,459/8,341
₹/US\$	62.5

Daily Performance



%	1M	3M	12M
Absolute	0.2	8.3	86.5
Relative	6.2	7.5	62.9

* To the BSE Sensex

Shareholding Pattern (%)

	Dec-14	Dec-13
Promoters	56.2	56.2
FII	22.0	21.5
DII	14.9	14.0
Public / others	6.9	8.3

Financial Tables

Profit & Loss						Balance Sheet					
(₹ mn)						(₹ mn)					
Y/E December	FY13A	FY14A	FY15E	FY16E	FY17E	Y/E December	FY13A	FY14A	FY15E	FY16E	FY17E
Net sales (Net of excise)	428,378	429,557	484,906	567,293	685,950	Share capital	1,510	1,510	1,510	1,510	1,510
Growth (%)	22.8	0.3	12.9	17.0	20.9	Other capital	0	0	0	0	0
Other operational income	3,597	3,575	3,933	4,522	5,201	Reserves and surplus	184,279	208,270	234,595	271,657	319,410
Raw material (or COGS)	327,454	315,135	354,161	409,218	493,781	Networth	185,789	209,780	236,105	273,167	320,920
Personnel cost	10,696	13,681	15,275	18,153	21,264	Total loans	16,395	20,625	20,625	20,625	20,625
Other expenses (or SG&A)	53,914	54,426	60,041	68,894	82,592	Minority interest	0	0	0	0	0
EBITDA	39,910	49,890	59,361	75,549	93,513	Sources of funds	202,184	230,405	256,730	293,792	341,545
EBITDA (%)	9.2	11.5	12.1	13.2	13.5	Intangible assets	0	0	0	0	0
Growth (%)	75.1	25.0	19.0	27.3	23.8	Fixed assets	198,007	227,018	275,232	306,994	337,273
Other non-op. income	8,422	8,922	10,260	11,862	13,720	Less: Deprn. and amort.	100,015	119,114	143,574	170,502	199,494
Depreciation and amort.	18,612	20,844	24,460	26,928	28,992	Net block	97,992	107,904	131,658	136,492	137,780
EBIT	29,721	37,968	45,162	60,483	78,241	Capital WIP	19,409	26,214	13,762	12,280	13,491
Add: Net interest income	1,236	510	1,202	1,762	2,577	Investments	70,783	101,179	111,179	121,179	131,179
Pre tax profit	30,957	38,478	46,364	62,245	80,818	Def tax assets/- liability	-4,087	-5,866	-5,866	-5,866	-5,866
Taxes	5,989	8,755	10,896	14,628	18,992	Current assets	79,158	70,060	85,625	121,740	175,300
Add: Extraordinary items	-1,047	-1,893	-700	0	0	Inventories	18,407	17,059	19,928	23,313	28,190
Less: Minority interest	0	0	0	0	0	Sundry debtors	14,699	14,137	15,942	18,651	22,552
Reported net profit	23,921	27,830	34,769	47,618	61,825	Cash & bank balances	7,750	6,297	15,636	39,586	76,065
Adjusted net profit	23,449	26,918	35,469	47,618	61,825	Other current assets	14,349	3,672	4,590	5,508	6,610
Margin (%)	5.4	6.2	7.3	8.3	8.9	Loans & advances	23,953	28,895	29,529	34,682	41,884
Diluted share cap. (mn)	302	302	302	302	302	Current liabilities & prov.	61,071	69,086	79,628	92,032	110,339
Diluted EPS (₹)	77.6	89.1	117.4	157.7	204.7	Current liabilities	52,330	60,329	66,217	76,013	90,255
Growth (%)	47.0	14.8	31.8	34.3	29.8	Provisions and others	8,741	8,757	13,412	16,019	20,084
Total Dividend + Tax	2,828	4,241	8,444	10,555	14,073	Net current assets	18,087	974	5,997	29,708	64,961
						Others (net)	0	0	0	0	0
						Application of funds	202,184	230,405	256,730	293,792	341,545

Source: Company, JM Financial

Source: Company, JM Financial

Cash flow statement						Key Ratios					
(₹ mn)											
Y/E March	FY13A	FY14A	FY15E	FY16E	FY17E	Y/E March	FY13A	FY14A	FY15E	FY16E	FY17E
Reported net profit	23,921	27,830	34,769	47,618	61,825	BV/Share (₹)	615.0	694.6	781.8	904.5	1,062.6
Depreciation and amort.	27,875	19,099	24,460	26,928	28,992	ROCE (%)	13.5	12.7	14.9	18.7	23.0
-Inc/dec in working cap.	2,315	9,306	-282	2,202	3,965	ROE (%)	13.9	13.6	15.9	18.7	20.8
Others	0	0	0	0	0	Net Debt/equity ratio (x)	-0.3	-0.4	-0.4	-0.5	-0.6
Cash from operations (a)	54,111	56,235	58,946	76,747	94,783	Valuation ratios (x)					
-Inc/dec in investments	-9,309	-30,396	-10,000	-10,000	-10,000	PER	46.5	40.5	30.7	22.9	17.6
Capex	-60,650	-35,816	-35,762	-30,280	-31,491	PBV	5.9	5.2	4.6	4.0	3.4
Others	-16,467	6,354	4,598	-1,963	-2,739	EV/EBITDA	25.8	20.1	16.6	12.6	9.7
Cash flow from inv. (b)	-86,426	-59,858	-41,163	-42,243	-44,230	EV/Sales	2.4	2.3	2.0	1.7	1.3
Inc/-dec in capital	12,822	402	0	0	0	Turnover ratios (no.)					
Dividend+Tax thereon	-2,828	-4,241	-8,444	-10,555	-14,073	Debtor days	13	12	12	12	12
Inc/-dec in loans	4,646	4,230	0	0	0	Inventory days	16	14	15	15	15
Others	1,064	1,779	0	0	0	Creditor days	46	57	55	55	55
Financial cash flow (c)	15,704	2,170	-8,444	-10,555	-14,073						
Inc/-dec in cash (a+b+c)	-16,611	-1,453	9,339	23,950	36,479						
Opening cash balance	24,361	7,750	6,297	15,636	39,586						
Closing cash balance	7,750	6,297	15,636	39,586	76,065						

Source: Company, JM Financial

Source: Company, JM Financial

A compelling business for the long-term

Asian Paints continues to grow its leadership in the Indian Paints industry, which as per our proprietary framework, has an imminent potential to grow volumes at 10%+ CAGR over next decade. Despite being the largest player in the industry (50%+ market share), its growth rate is still the fastest amongst the key players in the industry. Low share of painting expenses in consumer-wallet (c.2% of household's disposable income over a repainting cycle) coupled with low per-capita consumption (half of Malaysia, one-tenth of USA) back our conviction in the industry's long-term growth opportunity. Commodity-price deflation apart, Asian Paints' SG&A-efficiencies (a key factor that influenced margin-expansion in the past; mere 2.3% CAGR in SG&A per unit over FY05-12 – details in para below) could turn out to be a wildcard margin-driver in the coming few years, in our view.

- We see potential for 10%+ volume CAGR for the organized paints sector over the next decade; Our proprietary framework built to analyse volume drivers backs our conviction:** The Indian decorative paints market offers a steady and attractive growth opportunity – harvestable over the next decade and possibly longer, in our view. Our framework, devised to examine growth potential based on the interplay of different variables, supports the case of the organized sector's volume growing at compounded double-digit rate over a decade or longer. Painting expenses, on an average, currently account for just 2.1% of a household's disposable income over a re-painting cycle, making the case for its transformation into somewhat of a non-discretionary spend, given increased demand for better living standards. A mere 2.5kg per-capita consumption (half of Malaysia, one-tenth of USA) further highlights that the market is indeed small relative to the size and population of the country.
- SG&A efficiency could be a wildcard margin-driver in the coming years:** Asian Paints has been, in our view, one of the most-efficient companies in the Indian consumer space. Over FY05-12, the company was successful in consistently reducing its SG&A (as a % of sales) by c.70bps p.a. on an average (29.3% in FY05 to 24.3% in FY12). SG&A per unit of paints increased at merely 2.3% CAGR between FY05-12, as per our workings. This cost-efficiency did not show through subsequently in FY13/14 due to commissioning of the company's mega capacity-expansion at Khandala (added 47% to then existing capacity). Given that the costs of the new capacity are now largely in the base, we expect Asian Paints to regain some of the SG&A efficiencies lost over the last few years. Interestingly, the entire operating margin expansion reported by the company over FY04-14 (13.6% to 15.9%) were driven by SG&A efficiencies as gross profit margin for the business declined 166bps during this period. In our view, margin-drivers as internal as these are something that no competitor can possibly erode.

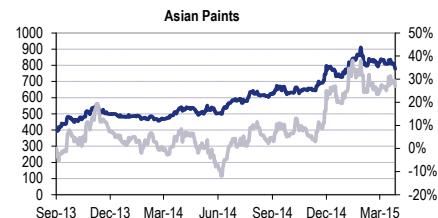
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Key Data

Market cap (bn)	₹ 746.4 / US\$ 11.9
Shares in issue (mn)	959.2
Diluted share (mn)	959.2
3-mon avg daily val (mn)	₹ 1452.9/US\$ 23.2
52-week range	₹ 922.8/494.7
Sensex/Nifty	27,459/8,341
₹/US\$	62.5

Daily Performance

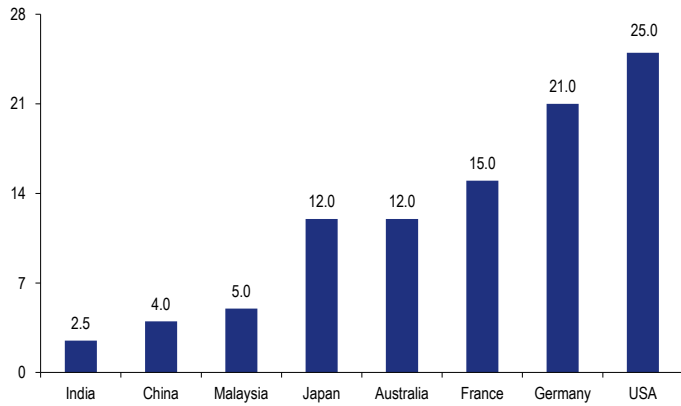


%	1M	3M	12M
Absolute	-3.6	7.0	44.4
Relative	2.4	6.2	20.7

* To the BSE Sensex

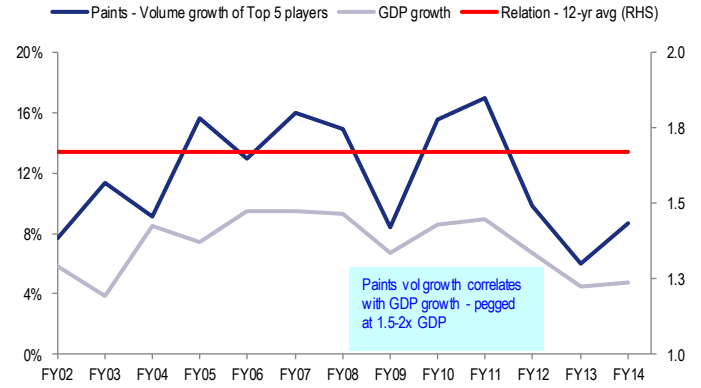
Shareholding Pattern	(%)	
	Dec-14	Dec-13
Promoters	52.8	52.8
FII	17.3	19.5
DII	9.9	7.9
Public / others	20.1	19.9

Exhibit 1: India's per-capita consumption abysmally low vs other countries



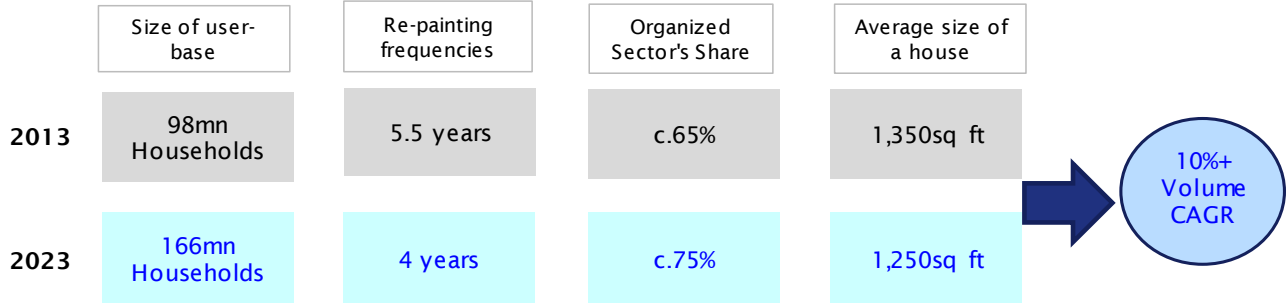
Source: Company, JM Financial

Exhibit 2: Paints volume growth trend and its correlation with GDP growth



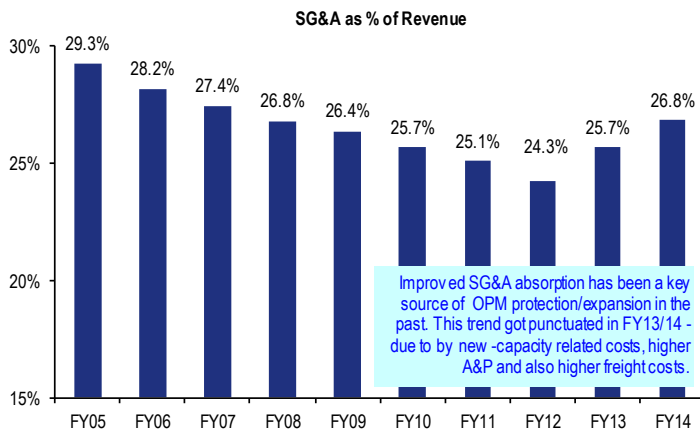
Source: Companies data, CMIE, JM Financial

Exhibit 3: Drivers of 10%+ volume CAGR for the organized paints sector



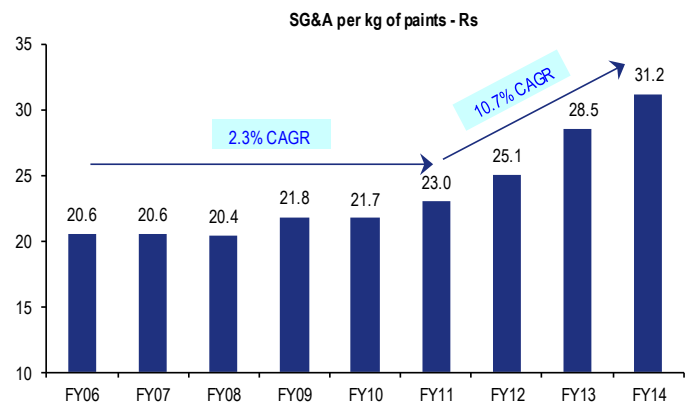
Source: Company, JM Financial

Exhibit 4: Asian Paints' SG&A efficiencies have been the corner-stone of its margin-expansion in the past ...



Source: Company, JM Financial

Exhibit 5: ...as SG&A per unit grew at merely 2.3% CAGR over FY06-11



Source: Company, JM Financial

Financial Tables (Consolidated)

Profit & Loss Statement		(₹ mn)				
Y/E March	FY 13 A	FY 14 A	FY 15 E	FY 16 E	FY 17 E	
Net sales (Net of excise)	108,744	125,816	143,376	159,000	185,364	
Growth (%)	13.3	15.7	14.0	10.9	16.6	
Other operational income	643	1,332	1,595	1,768	2,062	
Raw material (or COGS)	64,130	73,407	81,258	83,530	98,839	
Personnel cost	6,236	7,597	9,206	10,289	11,714	
Other expenses (or SG&A)	21,701	26,165	30,836	35,416	40,468	
EBITDA	17,320	19,979	23,671	31,533	36,405	
EBITDA (%)	15.8	15.7	16.3	19.6	19.4	
Growth (%)	14.8	15.4	18.5	33.2	15.5	
Other non-op. income	1,145	1,342	1,782	2,254	2,946	
Depreciation and amort.	1,546	2,457	2,676	3,067	3,508	
EBIT	16,919	18,865	22,777	30,720	35,844	
Add: Net interest income	-367	-422	-364	-346	-329	
Pre tax profit	16,552	18,442	22,413	30,374	35,515	
Taxes	4,957	5,715	6,956	9,427	11,023	
Add: Extraordinary items	0	0	0	0	0	
Less: Minority interest	456	440	309	419	490	
Reported net profit	11,139	12,288	15,147	20,528	24,002	
Adjusted net profit	11,109	12,270	15,147	20,528	24,002	
Margin (%)	10.2	9.7	10.4	12.8	12.8	
Diluted share cap. (mn)	959	959	959	959	959	
Diluted EPS (₹)	11.6	12.8	15.8	21.4	25.0	
Growth (%)	12.6	10.5	23.4	35.5	16.9	
Total Dividend + Tax	5,155	5,904	7,574	10,264	13,201	

Cash Flow statement		(₹ mn)				
Y/E March	FY 13 A	FY 14 A	FY 15 E	FY 16 E	FY 17 E	
Reported net profit	11,139	12,288	15,147	20,528	24,002	
Depreciation and amort.	1,431	2,535	2,676	3,067	3,508	
-Inc/dec in working cap.	-845	-165	-1,115	-2,005	-1,313	
Others	241	853	309	419	490	
Cash from operations (a)	11,966	15,511	17,018	22,009	26,686	
-Inc/dec in investments	4,550	-4,255	-1,323	-1,653	-2,067	
Capex	-7,257	-3,865	-5,468	-6,026	-6,934	
Others	891	-18	-1,054	1,105	710	
Cash flow from inv. (b)	-1,816	-8,139	-7,844	-6,574	-8,291	
Inc/-dec in capital	374	165	0	0	0	
Dividend+Tax thereon	-5,155	-5,904	-7,574	-10,264	-13,201	
Inc/-dec in loans	-902	-18	-125	-118	-112	
Others	616	334	412	558	652	
Financial cash flow (c)	-5,067	-5,422	-7,287	-9,824	-12,661	
Inc/-dec in cash (a+b+c)	5,083	1,950	1,887	5,610	5,735	
Opening cash balance	2,283	7,367	9,317	11,204	16,814	
Closing cash balance	7,367	9,317	11,204	16,814	22,549	

Balance Sheet		(₹ mn)				
Y/E March	FY 13 A	FY 14 A	FY 15 E	FY 16 E	FY 17 E	
Share capital	959	959	959	959	959	
Other capital	0	0	0	0	0	
Reserves and surplus	32,884	39,433	47,007	57,271	68,072	
Networth	33,843	40,392	47,966	58,230	69,031	
Total loans	2,510	2,492	2,367	2,249	2,136	
Minority interest	1,608	2,460	2,769	3,188	3,678	
Sources of funds	37,960	45,344	53,102	63,667	74,845	
Intangible assets	442	1,414	1,414	1,414	1,414	
Fixed assets	33,851	36,621	42,089	48,115	55,049	
Less: Depn. and amort.	9,884	12,419	15,096	18,163	21,670	
Net block	24,410	25,616	28,407	31,367	34,793	
Capital WIP	592	716	716	716	716	
Investments	2,957	7,212	8,535	10,188	12,255	
Def tax assets/- liability	-1,544	-1,878	-2,290	-2,848	-3,501	
Current assets	39,886	46,829	53,651	63,887	77,427	
Inventories	18,303	20,699	23,587	26,158	30,495	
Sundry debtors	9,809	11,103	12,766	14,158	16,505	
Cash & bank balances	7,367	9,317	11,204	16,814	22,549	
Other current assets	1,215	1,944	1,792	1,987	2,317	
Loans & advances	3,193	3,767	4,301	4,770	5,561	
Current liabilities & prov.	28,341	33,150	35,917	39,643	46,845	
Current liabilities	22,947	26,472	29,910	31,866	37,238	
Provisions and others	5,394	6,679	6,008	7,777	9,607	
Net current assets	11,545	13,678	17,734	24,244	30,582	
Others (net)	0	0	0	0	0	
Application of funds	37,960	45,344	53,102	63,667	74,845	

Key Ratios						
Y/E March	FY 13 A	FY 14 A	FY 15 E	FY 16 E	FY 17 E	
BV/Share (₹)	35.3	42.1	50.0	60.7	72.0	
ROIC (%)	39.5	40.2	42.4	50.2	52.5	
ROE (%)	36.2	33.1	34.3	38.7	37.7	
Net Debt/equity ratio (x)	-0.2	-0.3	-0.4	-0.4	-0.5	
Valuation ratios (x)						
PER	67.2	60.8	49.3	36.4	31.1	
PBV	22.1	18.5	15.6	12.8	10.8	
EV/EBITDA	42.6	36.7	30.8	22.9	19.6	
EV/Sales	6.8	5.8	5.1	4.5	3.9	
Turnover ratios (no.)						
Debtor days	33	32	33	33	33	
Inventory days	61	60	60	60	60	
Creditor days	131	132	134	139	138	

Berger Paints | BRGR IN | CMP: ₹205

Deserving a place of its own

Berger Paints, being India's second largest paints player, is well-positioned to leverage the growth opportunity in the industry. The Indian paints market offers a steady and attractive growth opportunity - harvestable over the next decade and possibly longer, in our view. Our framework, devised to examine growth potential based on the interplay of different variables, supports the case of the organized sector's volume growing at compounded double-digit rate over a decade or longer - premised on urbanisation, faster growth in the number of middle-class households, continued shift in market share in favour of organised players, higher re-painting frequency and offset by possibly smaller size of the houses in the future, considering that cities and towns are getting incrementally more congested. Given paints demand has historically grown at a pace of 1.5-2x real GDP growth, we expect Berger Paints to get back to a mid-teens volume growth trajectory over the medium-term vs 8-10% level being clocked currently. The paints sector did grow volumes by 15-17% during the FY07-11 period (barring FY09 which turned out to be a relatively bad year for the sector - 8% growth).

- Industry driver: We see potential for 10%+ volume CAGR for the organized paints sector over the next decade; Our proprietary framework built to analyse volume drivers backs our conviction:** Our framework, devised to examine growth potential based on the interplay of different variables, supports the case of the organized sector's volume growing at compounded double-digit rate over a decade or longer. Painting expenses, on an average, currently account for just 2.1% of a household's disposable income over a re-painting cycle, making the case for its transformation into somewhat of a non-discretionary spend, given increased demand for better living standards. A mere 2.5kg per-capita consumption (half of Malaysia, one-tenth of USA) further highlights that the market is indeed small relative to the size and population of the country.

- Company-specific drivers: Premiumisation, Working-capital improvement:**
 - The paints industry has benefitted immensely from premiumisation in recent times vide the fast-growing emulsions segment, which enjoys a much higher realisation and earns a significantly higher gross margin. Berger has traditionally had a relatively higher share of distemper in its sales-mix which has historically kept its GPM relatively low as margin for distemper is approx. 10ppt lower vs emulsions. In recent years, Berger has invested behind its brand and been successful in driving volumes of its premium products higher - this helped drive its margin structure higher. Over the last couple of years, Berger has already witnessed c.300bps GPM expansion - aided to a significant extent by a richer product-mix.
 - Berger's net working capital stands at 58 days of sales currently relative to a mere 28 days for Asian Paints. Though the company has successfully narrowed its working capital requirement from 76 days of sales back in FY08, we see more scope for improvement so as to gradually narrow the gap with Asian Paints in this regard. Receivables and suppliers are two major areas, in our view. In case Berger is able to further reduce its net working capital by 10 days, it could lead to incremental cash generation of c.1.3bn (FY16 basis), as per our calculations. As per management, working capital is an important area of focus and the same is being approached on a war-footing to realise an improvement of at least 10-12 days over a 2-3 years' timeframe.

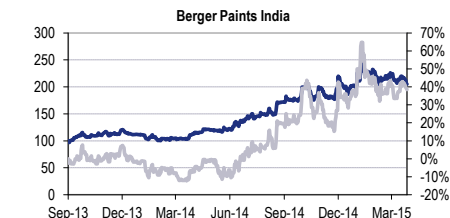
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Key Data

Market cap (bn)	₹ 142.2 / US\$ 2.3
Shares in issue (mn)	693.0
Diluted share (mn)	693.0
3-mon avg daily val (mn)	₹ 235.8/US\$ 3.8
52-week range	₹ 252.7/111.0
Sensex/Nifty	27,459/8,341
₹/US\$	62.5

Daily Performance

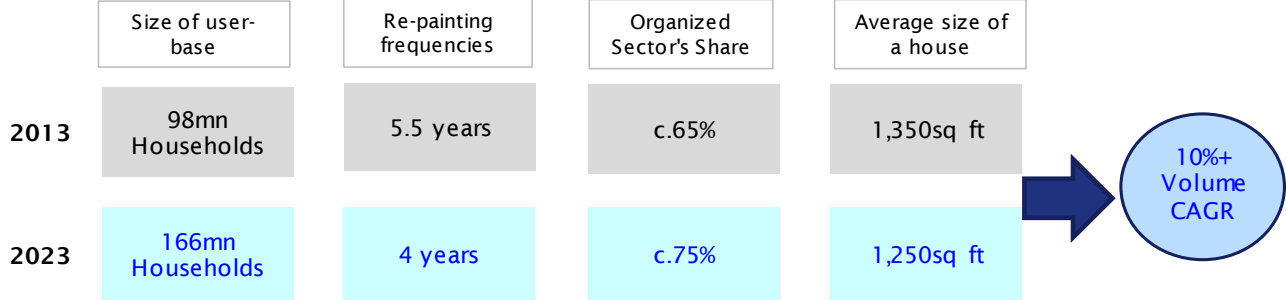


%	1M	3M	12M
Absolute	-9.3	0.8	83.3
Relative	-3.3	0.0	59.7

* To the BSE Sensex

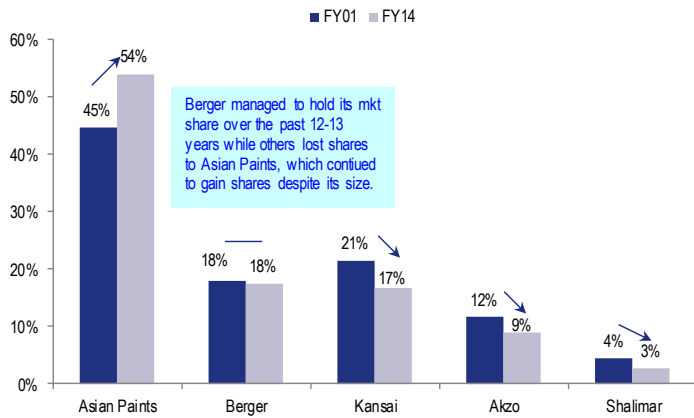
	Shareholding Pattern (%)	
	Dec-14	Dec-13
Promoters	75.0	75.0
FII	11.5	11.8
DII	2.1	2.7
Public / others	11.4	10.6

Exhibit 1: Drivers of 10%+ volume CAGR for the organized paints sector



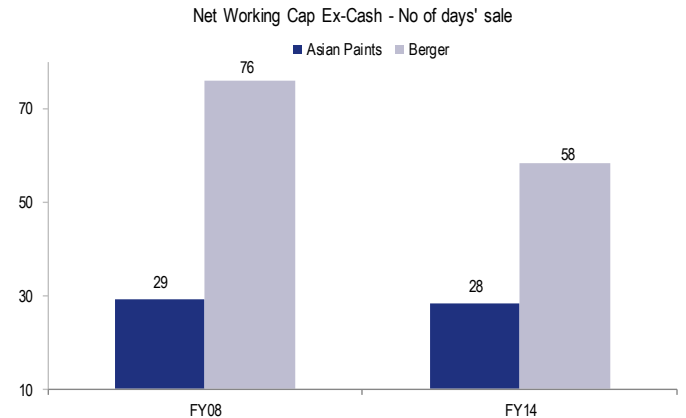
Source: Company, JM Financial

Exhibit 2: Berger held its market share over past 12-13 years while others ceded share to Asian Paints



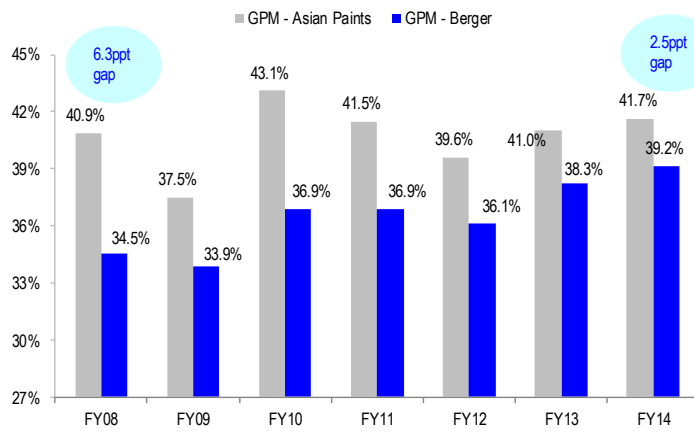
Source: Companies data, JM Financial

Exhibit 3: Berger's working-cap, while improved vs past, is still much higher vs Asian Paints'



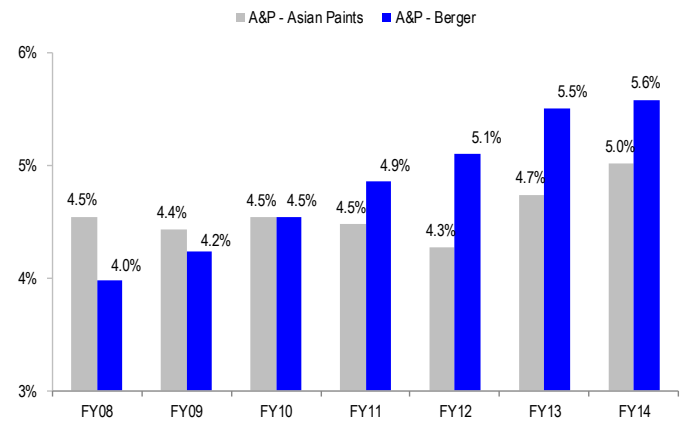
Source: Companies data, JM Financial

Exhibit 4: GPM - Berger vs Asian Paints



Source: Companies data, JM Financial

Exhibit 5: A&P as % of Sales - Berger vs Asian Paints



Source: Companies data, JM Financial

Financial Tables (Consolidated)

Profit & Loss Statement					
	(₹ mn)				
Y/E March	FY 13 A	FY 14 A	FY 15 E	FY 16 E	FY 17 E
Net sales (Net of excise)	33,339	38,545	43,517	48,238	56,572
Growth (%)	13.5	15.6	12.9	10.8	17.3
Other operational income	125	153	152	169	198
Raw material (or COGS)	20,586	23,454	25,929	27,343	32,158
Personnel cost	1,871	2,252	2,611	2,991	3,451
Other expenses (or SG&A)	7,295	8,678	9,971	11,398	13,108
EBITDA	3,712	4,314	5,159	6,675	8,053
EBITDA (%)	11.1	11.1	11.8	13.8	14.2
Growth (%)	22.3	16.2	19.6	29.4	20.6
Other non-op. income	314	360	367	396	453
Depreciation and amort.	567	707	874	953	1,069
EBIT	3,459	3,966	4,652	6,118	7,437
Add: Net interest income	-377	-466	-461	-382	-305
Pre tax profit	3,082	3,500	4,190	5,736	7,131
Taxes	898	1,006	1,358	1,859	2,311
Add: Extraordinary items	0	0	0	0	0
Less: Minority interest	0	0	0	0	0
Reported net profit	2,184	2,494	2,833	3,878	4,821
Adjusted net profit	2,184	2,494	2,833	3,878	4,821
Margin (%)	6.5	6.4	6.5	8.0	8.5
Diluted share cap. (mn)	693	693	693	693	693
Diluted EPS (₹)	3.2	3.6	4.1	5.6	7.0
Growth (%)	21.3	14.1	13.6	36.9	24.3
Total Dividend + Tax	729	892	1,013	1,387	1,724

Cash Flow statement					
	(₹ mn)				
Y/E March	FY 13 A	FY 14 A	FY 15 E	FY 16 E	FY 17 E
Reported net profit	2,184	2,494	2,833	3,878	4,821
Depreciation and amort.	579	776	874	953	1,069
-Inc/dec in working cap.	-891	76	-692	-719	-1,148
Others	0	0	0	0	0
Cash from operations (a)	1,871	3,346	3,015	4,111	4,742
-Inc/dec in investments	-69	-799	0	0	0
Capex	-2,474	-3,033	-1,306	-1,447	-2,546
Others	268	12	78	361	360
Cash flow from inv. (b)	-2,274	-3,819	-1,228	-1,086	-2,186
Inc/-dec in capital	162	73	0	0	0
Dividend+Tax thereon	-729	-892	-1,013	-1,387	-1,724
Inc/-dec in loans	1,316	739	-935	-1,060	-848
Others	101	124	101	138	171
Financial cash flow (c)	849	44	-1,848	-2,309	-2,401
Inc/-dec in cash (a+b+c)	446	-429	-61	716	156
Opening cash balance	1,824	2,270	1,841	1,780	2,496
Closing cash balance	2,270	1,841	1,780	2,496	2,652

Balance Sheet					
	(₹ mn)				
Y/E March	FY 13 A	FY 14 A	FY 15 E	FY 16 E	FY 17 E
Share capital	693	693	693	693	693
Other capital	0	0	0	0	0
Reserves and surplus	8,839	10,514	12,334	14,825	17,922
Networth	9,532	11,207	13,027	15,518	18,615
Total loans	5,497	6,235	5,300	4,240	3,392
Minority interest	0	0	0	0	0
Sources of funds	15,028	17,442	18,327	19,758	22,007
Intangible assets	0	0	0	0	0
Fixed assets	9,795	13,220	14,525	15,972	18,518
Less: Depn. and amort.	3,806	4,582	5,456	6,409	7,478
Net block	5,989	8,638	9,069	9,563	11,040
Capital WIP	1,725	1,333	1,333	1,333	1,333
Investments	108	907	907	907	907
Def tax assets/- liability	-408	-538	-639	-776	-948
Current assets	14,034	15,060	16,577	18,700	21,413
Inventories	6,353	6,957	7,794	8,574	9,978
Sundry debtors	4,114	4,857	5,364	5,814	6,663
Cash & bank balances	2,270	1,841	1,780	2,496	2,652
Other current assets	103	105	116	127	140
Loans & advances	1,194	1,301	1,523	1,688	1,980
Current liabilities & prov.	6,425	7,968	8,932	9,980	11,750
Current liabilities	5,514	6,887	7,702	8,346	9,743
Provisions and others	911	1,081	1,230	1,634	2,006
Net current assets	7,609	7,092	7,645	8,720	9,663
Others (net)	5	11	11	11	11
Application of funds	15,028	17,442	18,327	19,758	22,007

Key Ratios					
Y/E March	FY 13 A	FY 14 A	FY 15 E	FY 16 E	FY 17 E
BV/Share (₹)	13.8	16.2	18.8	22.4	26.9
ROIC (%)	21.3	19.9	19.6	24.5	27.5
ROE (%)	25.0	24.1	23.4	27.2	28.2
Net Debt/equity ratio (x)	0.3	0.3	0.2	0.1	0.0
Valuation ratios (x)					
PER	65.0	57.0	50.2	36.7	29.5
PBV	14.9	12.7	10.9	9.2	7.6
EV/EBITDA	39.1	33.8	28.1	21.4	17.6
EV/Sales	4.4	3.8	3.3	3.0	2.5
Turnover ratios (no.)					
Debtor days	45	46	45	44	43
Inventory days	70	66	65	65	64
Creditor days	71	85	86	88	88

FY14 and FY15 was challenging year for rural financiers like MMFS due to weak monsoon and slowdown in government spending. Going forward, we believe normal rainfall should support crop output and improve crop yields. Further government spending in rural India coupled with pick up in infra activities (e.g. opening of mining activities) should improve non-agri income for farmers. Thus FY16 will be a year of consolidation and base will be set for rural growth revival in FY17

■ Estimates remain conservative; factoring in substantial pick up only in FY17

We expect FY16 to be a year of consolidation and our estimates remain conservative. E.g. in case of Mahindra Finance (MMFS) we are factoring in 9% growth in AUM for FY16 with tractor growth remaining flattish and pick up in cars and UVs. However in FY17 we are factoring in substantial pick up in AUM growth. For NBFCs under coverage we expect 15-25% growth in AUM in FY17 as shown below. Management expects long term growth rate of 15-20% though near term growth outlook remains cautious and company continues to focus on quality. MMFS does not expect new product additions and will focus on CV once it picks up

- **Expect improvement in NIM in FY16 driven by decline in funding costs:** Funding cost is moderating with 70-80bps decline in bond yields while c.45% of liabilities is base rate linked. Thus company expects 50bps decline in funding cost over next 12 months; coupled with improvement in asset quality, should improve margin (46bps) over next 2 years.
- **Investment in distribution network to continue:** Investment in distribution network (to add 100 branches) should continue, aiding collection initially and supporting growth later.
- **Capital raising contingent upon growth pick up:** Capital raising will be function of a) provisioning policy if MMFS decides to migrate early to 90dpd norms, b) higher than expected growth pick up (20%+).
- **Multiples factor in worst scenario; Maintain BUY with TP of ₹320:** We expect growth to pick up from 2nd half of FY16 and expect 19% CAGR in earnings. The stock has de-rated from 3.3x one year fwd. to 2.3x and factors in worst case scenario. We expect return ratios to remain healthy with ROA of 2.7% and ROE of 16% by FY17E. We value MMFS – standalone at 2.4x Mar'17 BV, implying value of ₹307. We value MRHF at ₹3 per share while MIBL at ₹9 per share, implying TP of ₹320.

Exhibit 1. Financial Summary					
	₹ mn				
Y/E March	FY13	FY14	FY15E	FY16E	FY17E
Net Profit	8,827	8,873	7,606	8,973	10,741
Net Profit (YoY) (%)	42.3%	0.5%	-14.3%	18.0%	19.7%
Assets (YoY) (%)	37.3%	24.2%	9.6%	10.0%	12.2%
ROA (%)	4.01%	3.10%	2.29%	2.46%	2.65%
ROE (%)	23.9%	18.6%	14.2%	15.0%	16.1%
EPS (₹)	15.7	15.7	13.5	15.9	19.1
EPS (YoY) (%)	29.8%	0.4%	-14.3%	18.0%	19.7%
PE (x)	16.3	16.3	19.0	16.1	13.4
BV (₹)	79	90	100	112	126
BV (YoY) (%)	38%	14%	11%	12%	12%
P/BV (x)	3.24	2.84	2.56	2.29	2.04

Source: Company data, JM Financial. Note: Valuations as of 27/03/15.

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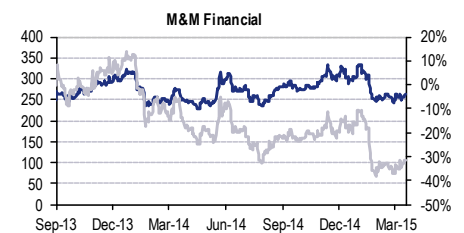
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Key Data

Market cap (bn)	₹ 148.9 / US\$ 2.4
Shares in issue (mn)	563.0
Diluted share (mn)	563.0
3- mon avg daily val (mn)	₹ 685.3/US\$ 10.9
52- week range	₹ 344.9/229.3
Sensex/Nifty	28,622/8,686
₹/US\$	62.7

Daily Performance



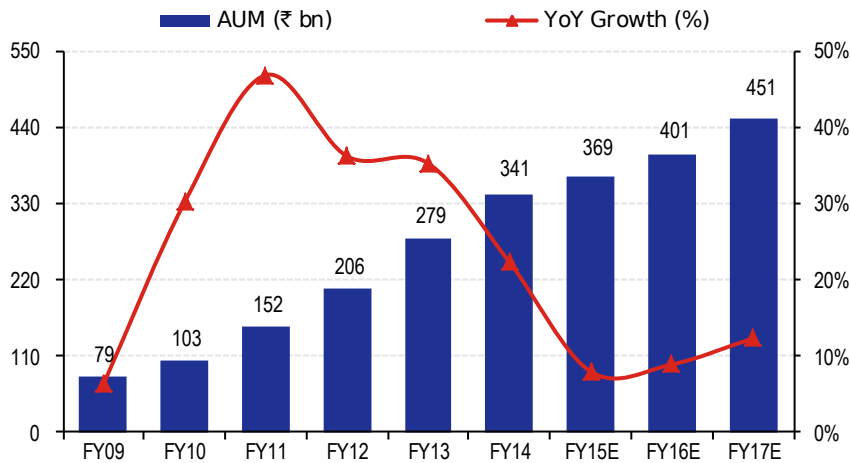
%	1M	3M	12M
Absolute	0.7	-12.3	-6.2
Relative	3.1	-17.8	-37.3

* To the BSE Sensex

Shareholding Pattern	(%)	
	Dec-14	Dec-13
Promoters	52.0	52.2
FII	41.6	40.8
DII	1.4	1.9
Public / Others	4.9	5.1

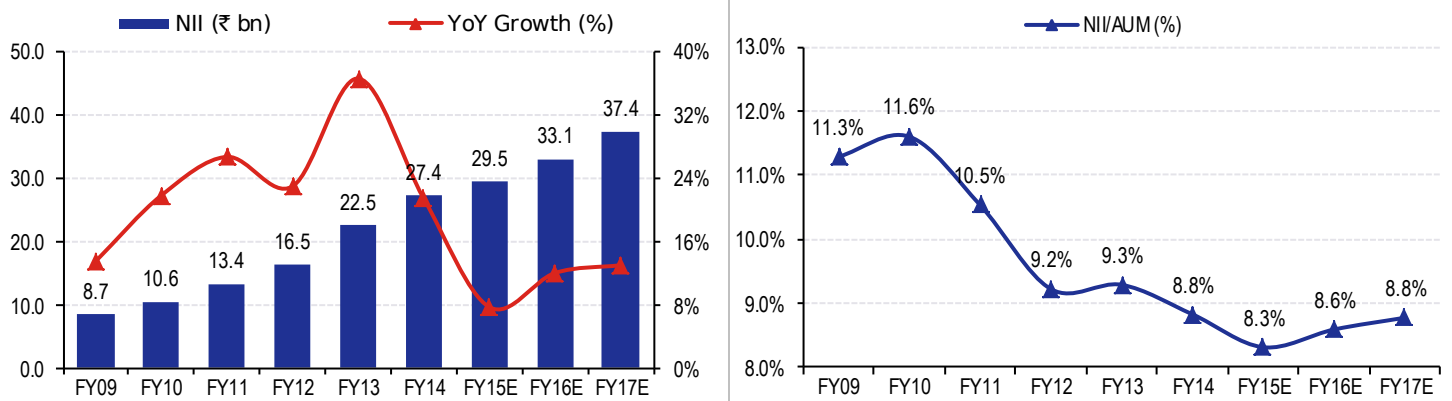
MMFS - Annual Trends

Exhibit 96. MMFS: Trend in AUM (₹ bn)



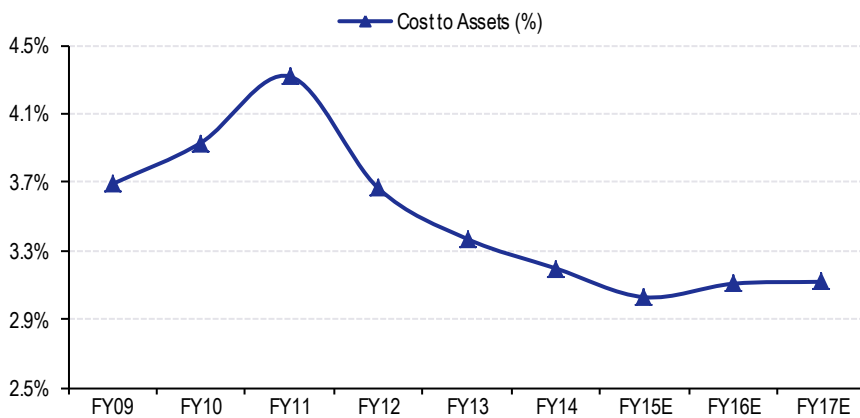
Source: Company, JM Financial.

Exhibit 97. MMFS: Trend in NII (₹ bn) and NII/AUM (%)



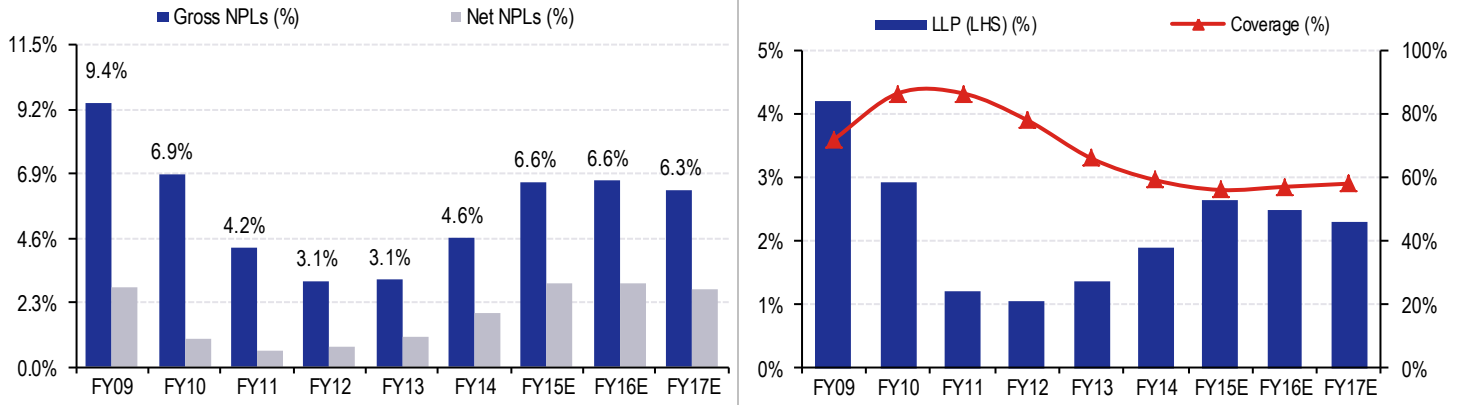
Source: Company, JM Financial.

Exhibit 98. MMFS: Trend in cost to assets



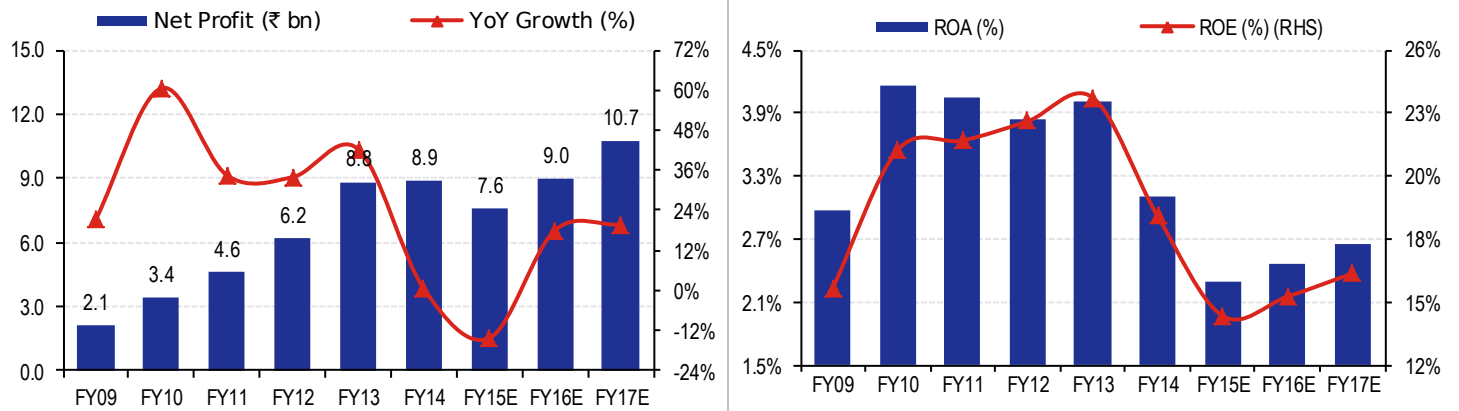
Source: Company, JM Financial.

Exhibit 99. MMFS: Trend in asset quality



Source: Company, JM Financial.

Exhibit 100. MMFS: Trend in earnings growth



Source: Company, JM Financial.

Financial Tables (Standalone)

Profit & Loss (₹ Mn)	FY 13	FY 14	FY 15E	FY 16E	FY 17E
Net Interest Income (NII)	22,546	27,382	29,504	33,059	37,369
Non-Interest Income	213	268	343	372	404
Total Income	22,759	27,650	29,847	33,431	37,774
Operating Expenses	7,420	9,134	10,049	11,320	12,623
Pre-provisioning Profits	15,340	18,516	19,798	22,112	25,151
Loan Loss Provisions	2,674	4,847	8,052	8,281	8,577
Other Provisions	160	211	135	131	176
Total Provisions	2,833	5,058	8,187	8,413	8,753
PBT	12,506	13,458	11,612	13,699	16,398
Tax	3,833	4,585	4,006	4,726	5,657
PAT (Pre-Extra ordinaries)	8,673	8,873	7,606	8,973	10,741
Extra ordinaries (Net of Tax)	154	0	0	0	0
Reported Profits	8,827	8,873	7,606	8,973	10,741
Dividend	2,389	2,515	2,054	2,423	2,900
Retained Profits	6,284	6,358	5,552	6,550	7,841

Source: Company, JM Financial

Balance Sheet (₹ Mn)	FY 13	FY 14	FY 15E	FY 16E	FY 17E
Equity Capital	1,126	1,127	1,127	1,127	1,127
Reserves & Surplus	43,342	49,728	55,280	61,830	69,671
Stock Option Outstanding	78	87	92	96	101
Shareholders' Equity	44,546	50,942	56,499	63,053	70,899
Preference Share Capital	0	0	0	0	0
Borrowed Funds	188,723	239,306	261,682	286,803	321,506
Deferred tax liabilities	0	0	0	0	0
Current Liabilities	21,655	26,409	28,950	31,832	35,703
Total Liabilities	254,924	316,657	347,130	381,689	428,108
Loans & Advances	240,384	296,170	324,295	357,131	401,074
Investments	5,610	8,692	10,377	11,071	12,032
Intangible Assets	0	0	0	0	0
Cash & Bank Balances	5,132	6,892	7,134	7,678	8,623
Other Current Assets - CA	349	558	628	723	761
Fixed Assets	1,068	1,195	1,241	1,288	1,359
Miscellaneous expenditure	0	0	0	0	0
Deferred Tax Asset	2,382	3,151	3,454	3,798	4,260
Total Assets	254,924	316,657	347,130	381,689	428,108

Source: Company, JM Financial

Key Ratios (%)	FY 13	FY 14	FY 15E	FY 16E	FY 17E
Growth (YoY) (%)					
Borrowed Funds	35.2%	26.8%	9.3%	9.6%	12.1%
Advances	37.4%	23.2%	9.5%	10.1%	12.3%
Total Assets	37.3%	24.2%	9.6%	10.0%	12.2%
NII	36.6%	21.4%	7.7%	12.0%	13.0%
Non-Interest Income	-10.1%	25.7%	27.9%	8.5%	8.7%
Operating Expenses	25.3%	23.1%	10.0%	12.6%	11.5%
Operating Profits	41.7%	20.7%	6.9%	11.7%	13.7%
Core Operating Profits	42.5%	20.9%	6.7%	11.7%	13.8%
Provisions	80.5%	78.5%	61.9%	2.8%	4.0%
Reported PAT	42.3%	0.5%	-14.3%	18.0%	19.7%
Yields / Margins (%)					
Interest Spread (%)	8.01%	7.28%	6.69%	6.90%	7.09%
NIM (Incl. securitization) (%)	10.40%	9.73%	9.03%	9.21%	9.37%
Profitability (%)					
ROA (%)	4.01%	3.10%	2.29%	2.46%	2.65%
ROE (%)	23.9%	18.6%	14.2%	15.0%	16.1%
Cost to Income (%)	32.6%	33.0%	33.7%	33.9%	33.4%
Assets Quality (%)					
Gross NPAs (%)	3.11%	4.62%	6.59%	6.64%	6.31%
LLP (%)	1.60%	2.19%	2.64%	2.47%	2.31%
Capital Adequacy (%)					
Tier I (%)	17.26%	16.29%	16.55%	16.87%	16.98%
CAR (%)	19.73%	18.63%	19.00%	19.43%	19.60%

Source: Company, JM Financial

Du-pont Analysis (%)	FY 13	FY 14	FY 15E	FY 16E	FY 17E
NII / Assets (%)	10.24%	9.58%	8.89%	9.07%	9.23%
Other income / Assets (%)	0.10%	0.09%	0.10%	0.10%	0.10%
Total Income / Assets (%)	10.33%	9.68%	8.99%	9.17%	9.33%
Cost to Assets (%)	3.37%	3.20%	3.03%	3.11%	3.12%
PPP / Assets (%)	6.96%	6.48%	5.97%	6.07%	6.21%
Provisions / Assets (%)	1.29%	1.77%	2.47%	2.31%	2.16%
PBT / Assets (%)	5.68%	4.71%	3.50%	3.76%	4.05%
Tax Rate (%)	30.65%	34.07%	34.50%	34.50%	34.50%
ROA (%)	4.01%	3.10%	2.29%	2.46%	2.65%
Leverage (%)	6.0	6.0	6.2	6.1	6.1
ROE (%)	23.89%	18.62%	14.18%	15.03%	16.06%

Source: Company, JM Financial

Valuations	FY 13	FY 14	FY 15E	FY 16E	FY 17E
Shares in issue (mn)	563.0	563.5	563.5	563.5	563.5
EPS (Rs.)	15.7	15.7	13.5	15.9	19.1
EPS (YoY) (%)	29.8%	0.4%	-14.3%	18.0%	19.7%
PE (x)	16.6	16.5	19.3	16.3	13.6
BV (Rs.)	79	90	100	112	126
BV (YoY) (%)	38%	14%	11%	12%	12%
P/BV (x)	3.29	2.88	2.60	2.33	2.07
DPS (Rs.)	4.2	4.5	3.6	4.3	5.1
Div. yield (%)	1.6%	1.7%	1.4%	1.7%	2.0%

Source: Company, JM Financial

Annexure

Exhibit 101. Per acre farm economics for Rice – Costs rising faster than Realizations

	2009	2010	2011	2012	2013	2014	2015
Yield Quintal/Acre	13.2	12.8	13.5	14.5	14.9	15.3	15.3
Realization/Quintal	930	1,030	1,030	1,110	1,280	1,345	1,400
By-product	1,022	1,136	1,231	1,463	1,812	1,793	1,793
Total Realization	13,256	14,358	15,162	17,508	20,831	22,337	23,177
%YoY	4.3	8.3	5.6	15.5	19.0	7.2	3.8
Human Labor	2,339	2,559	3,081	3,296	3,896	4,486	4,959
Machine Labor	964	1,094	1,256	1,364	1,612	1,856	2,051
Animal Labor	584	621	649	840	993	1,143	1,263
Seeds	480	636	649	697	749	793	785
Fertilizers & manure	957	1,049	1,112	1,419	1,594	1,629	1,663
Pesticides & Insecticides	201	221	246	296	312	324	355
Water & Electricity	308	479	397	480	585	724	608
Working Capital	182	208	231	262	282	299	296
Miscellaneous	5	6	7	6	8	6	5
Total Cost	6,020	6,873	7,629	8,660	10,030	11,260	11,985
%YoY	20.2	14.2	11.0	13.5	15.8	12.3	6.4
Total Profit	7,236	7,485	7,533	8,848	10,801	11,077	11,192
Realization/Cost ratio	2.20	2.09	1.99	2.02	2.08	1.98	1.93

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 102. Per acre farm economics for Wheat – Costs rising faster than Realizations

	2009	2010	2011	2012	2013	2014	2015
Yield Quintal/Acre	11.8	11.5	12.1	12.9	12.6	12.4	12.4
Realization/Quintal	1,080	1,100	1,120	1,285	1,350	1,400	1,450
By-product	2,161	2,464	2,958	3,341	4,137	4,095	4,095
Total Realization	14,867	15,104	16,504	19,863	21,164	21,415	22,034
%YoY	11.3	1.6	9.3	20.4	6.5	1.2	2.9
Human Labor	779	864	986	1,155	1,366	1,572	1,738
Machine Labor	1,528	1,619	1,894	2,081	2,460	2,832	3,131
Animal Labor	249	275	234	167	197	227	251
Seeds	720	842	853	871	935	991	981
Fertilizers & manure	915	937	1,012	1,360	1,529	1,562	1,594
Pesticides & Insecticides	101	114	107	110	116	120	131
Water & Electricity	997	1,032	1,040	1,261	1,535	1,901	1,596
Working Capital	166	178	192	219	235	249	247
Miscellaneous	8	6	7	5	7	5	5
Total Cost	5,463	5,867	6,325	7,229	8,379	9,460	9,673
%YoY	2.7	2.6	2.6	2.8	2.5	2.3	2.3
Total Profit	9,404	9,237	10,178	12,634	12,785	11,955	12,361
Realization/Cost ratio	11.8	11.5	12.1	12.9	12.6	12.4	12.4

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

Exhibit 103. Per acre farm economics for Onion – Profitable but volatile earnings

	2009	2010	2011	2012	2013	2014	2015
Yield Quintal/Acre	65.8	65.1	57.5	65.2	64.7	64.2	64.2
Realization/Quintal	1,141	1,161	1,623	1,068	1,314	2,727	1,914
By-product	193	299	447	490	520	514	514
Total Realization	75,206	75,845	93,804	70,096	85,561	175,536	123,325
%YoY	45.5	0.8	23.7	(25.3)	22.1	105.2	(29.7)
Human Labor	4,955	4,024	4,669	7,461	8,820	10,154	11,225
Machine Labor	1,090	1,008	1,177	1,721	2,035	2,343	2,590
Animal Labor	560	501	513	457	541	622	688
Seeds	2,655	2,313	5,365	3,530	3,790	4,017	3,976
Fertilizers & manure	2,030	1,333	2,601	2,698	3,032	3,099	3,162
Pesticides & Insecticides	323	301	362	618	651	677	741
Water & Electricity	1,294	1,240	1,301	1,323	1,611	1,995	1,675
Working Capital	403	335	500	557	598	634	627
Miscellaneous	-	-	-	12	14	12	10
Total Cost	13,312	11,054	16,487	18,378	21,093	23,552	24,694
%YoY	3.1	(17.0)	49.2	11.5	14.8	11.7	4.8
Total Profit	61,894	64,791	77,317	51,718	64,468	151,983	98,630
Realization/Cost ratio	5.65	6.86	5.69	3.81	4.06	7.45	4.99

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

Exhibit 104. Per acre farm economics for Potato – Profitable but volatile earnings

	2009	2010	2011	2012	2013	2014	2015
Yield Quintal/Acre	76.1	80.7	91.9	88.0	92.1	92.8	93
Realization/Quintal	1,466	1,101	845	788	1,298	1,392	1,876
By-product	-	15	-	-	-	-	-
Total Realization	111,514	88,778	77,697	69,360	119,572	129,160	174,039
%YoY	7.9	(20.4)	(12.5)	(10.7)	72.4	8.0	34.7
Human Labor	2,382	2,448	3,306	3,240	3,831	4,410	4,875
Machine Labor	893	883	1,186	1,753	2,072	2,386	2,637
Animal Labor	293	624	403	418	494	569	629
Seeds	6,066	12,618	7,793	6,540	7,022	7,441	7,366
Fertilizers & manure	2,644	2,656	3,175	3,880	4,360	4,457	4,547
Pesticides & Insecticides	397	192	284	353	373	387	424
Water & Electricity	977	1,158	1,187	1,667	2,030	2,514	2,111
Working Capital	427	643	542	558	599	635	628
Miscellaneous	8	5	0	1	1	1	1
Total Cost	14,087	21,227	17,876	18,411	20,782	22,799	23,218
%YoY	(20.3)	50.7	(15.8)	3.0	12.9	9.7	1.8
Total Profit	97,427	67,551	59,821	50,949	98,790	106,361	150,821
Realization/Cost ratio	7.92	4.18	4.35	3.77	5.75	5.67	7.50

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



Notes

APPENDIX I

JM Financial Institutional Securities Limited

(Formerly known as JM Financial Institutional Securities Private Limited)

Corporate Identity Number: U65192MH1995PLC092522**Member of BSE Ltd. and National Stock Exchange of India Ltd. and MCX Stock Exchange Ltd.****SEBI Registration Nos.: BSE - INZ010012532, NSE - INZ230012536 and MCX-SX - INZ260012539****Registered Office: 7th Floor, Cnergy, Appasaheb Marathe Marg, Prabhadevi, Mumbai 400 025, India.****Board: +9122 6630 3030 | Fax: +91 22 6630 3488 | Email: jmfinancial.research@jmfl.com | www.jmfl.com****Analyst(s) Certification**

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