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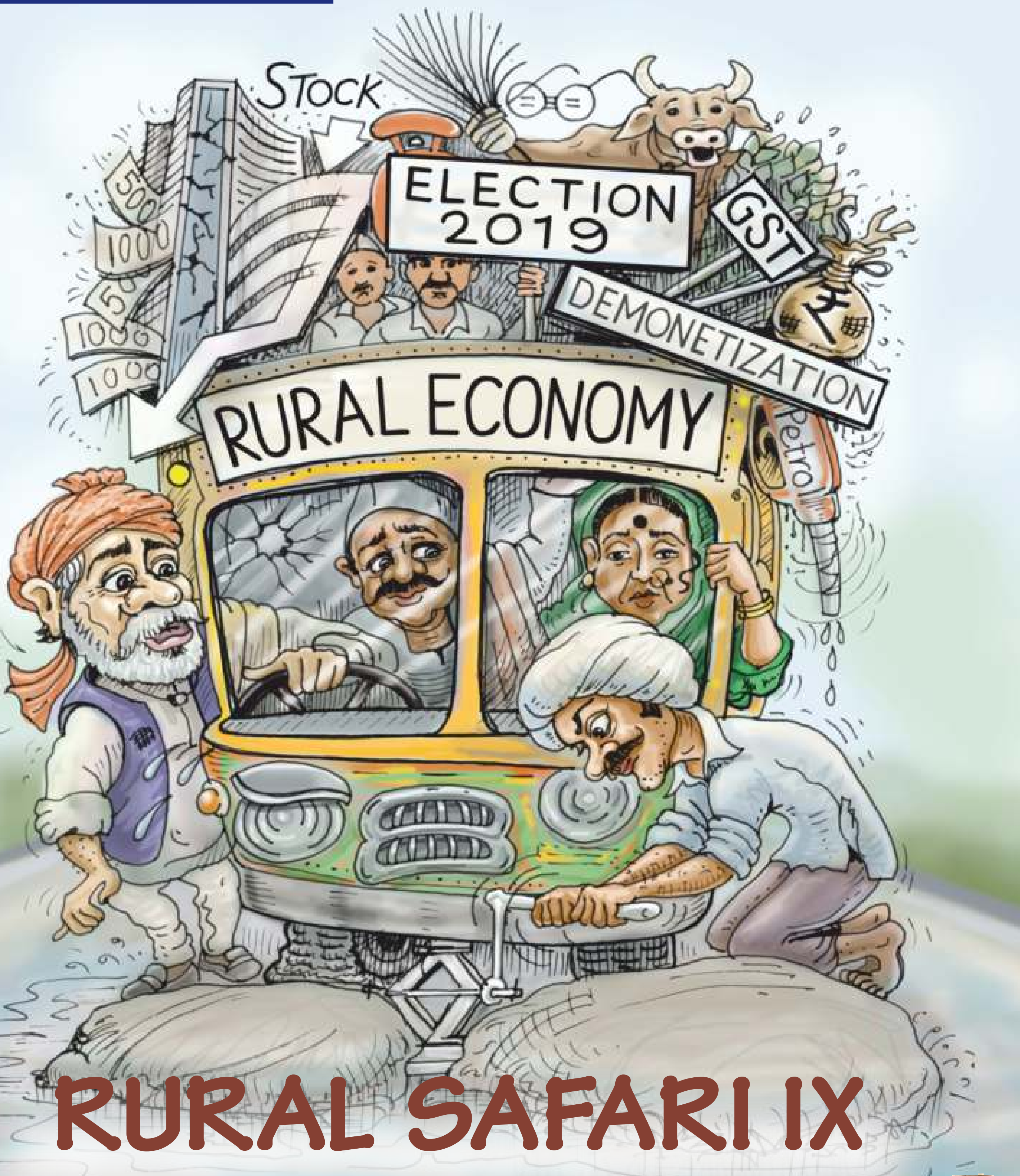

RURAL SAFARI IX

Still on a bumpy road

SAFARI SERIES

JM FINANCIAL

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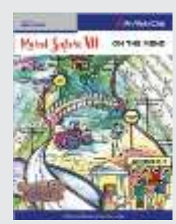
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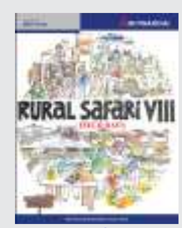


Rural Safari VIII

TEAM

Arshad Perwez
arshad.perwez@jmfl.com
Tel: (+91 22) 66303080

Vivek Kumar
vivek.kumar@jmfl.com
Tel: (+91 22) 66303019

S. Parameswaran
s.parameswaran@jmfl.com
Tel: (+91 22) 66303075

Shrenik Bachhawat
shrenik.bachhawat@jmfl.com
Tel: (+91 22) 6630304

Akshay Jain
akshay.jain@jmfl.com
Tel: (+91 22) 66303099

Vaikam Kumar
vaikam.kumar@jmfl.com
Tel: (+91 22) 66303018

Bunny Babjee
bunny.babjee@jmfl.com
Tel: (+91 22) 66303263

Koundinya Nimmagadda
koundinya.nimmagadda@jmfl.com
Tel: (+91 22) 66303574

Nikita Maheshwari
nikita.maheshwari@jmfl.com
Tel: (+91 22) 66303077

Manish Agrawal
manish.agrawal@jmfl.com
Tel: (+91 22) 66303068

Jayesh Gupta
jayesh.gupta@jmfl.com
Tel: (+91 22) 66303054

Vicky Punjabi
vicky.punjabi@jmfl.com
Tel: (+91 22) 66303085

Aishwarya Pratik Sonker
aishwarya.sonker@jmfl.com
Tel: (+91 22) 6630335

Ashish Mendhekar
ashish.mendhekar@jmfl.com
Tel: (+91 22) 66303073

Ankit Kabra
ankit.kabra@jmfl.com
Tel: (+91 22) 66301877

Suhas Harinarayanan
suhas.hari@jmfl.com
Tel: (+91 22) 66303037

Still on a bumpy road

- The 9th Rural Safari undertaken amidst the political slugfest, while not getting us any closer to answering the looming questions, has helped us gauge that the rural growth is likely weaker to flat compared to our Sep'18 safari in 10 out of the 13 states (better in 3 of them) we visited.
- While it is well known that the resilience of crop yields, one of the success stories of Indian agriculture, along with a poorly executed procurement policy have led to depressed crop prices, it is not so widely known that the "informal" sector in many parts of rural India is yet to recover from the multiple disruptions over the past several months.
- Hence, even with the possibility of a short burst of growth in discretionary consumption (say in two- and four-wheelers) after the general election, a market-led sustained recovery may be more gradual than earlier estimated. We have already trimmed our estimates for the auto sector and are beginning to see earnings cuts for staples. In our view, a "pure" rural portfolio could underperform in FY20.

1) The success story in yields

The 16%CAGR (FY16-19) in irrigation capex, 45% expansion in areas under micro-irrigation (Exhibit 21), better use of agro-chemicals and crop methods have ensured crop production is higher than usual even in the face of a poorer monsoon (Exhibit 23-24). This is true for large crops as well as for horticulture where the 10-year CAGR in production is 2x that of cereals at c.4%. We expect this resilience to persist. This, along with below par procurement and liquidity constraint at the local "mandis" (agri-markets), should ensure that the prices pick up only modestly in FY20 despite the base effect, and estimated shortfall in certain baskets (onions). We are looking for CPI to be between 4-4.5% by mid-CY19 (Exhibit 5).

2) The informal sector, the Achilles heel

The informal sector represented by small businesses in rural India had been weak even before the latest survey. The slowdown in NBFC and banks' lending to small and medium businesses (MSMEs) since Oct'18 (Exhibit 95&96) along with the formalisation of sectors such as retail, restrictions in usage of cash, continued weakness in real estate (see Exhibit 7) and regulations on sand mining (a big contributor pan-India to non-farm income given the linkages to construction – Exhibit 101) have led to increase in the weakness in informal sector. The weakness in the labour market is reflected in the 14% YoY demand increase for NREGA (million persondays) in FY19 against flattish demand trend over the past two years.

3) Income growth to pick up albeit gradually

Considering the above, and hand-outs from the centre and the states, we estimate the overall income growth in FY20 to be better than that in FY19, albeit a modest mid-single digit growth. Again, the big farmers will likely gain more than the smaller farmers. Both volume and prices are expected to contribute equally to the income growth. In terms of market implications, we do think there could be a short burst of growth after the elections (we did notice pre-election postponement) but we need more evidence to support a hypothesis for a sustained recovery. For now we have only considered the existing "income support scheme" into our income model.

4) Politics evenly poised in rural India

Of the voters in India, 69% are in rural India. The states we have covered in our safari account for 85% of the agri-GDP. The top issues, in the order of importance, that can influence the voters' decisions in these states are as follows: a) the performance of the rural economy, b) security concerns and geopolitics, c) popularity of the prime minister and d) local candidates. Hence, there are reasons to believe that despite the weak rural economy, the odds are evenly positioned.

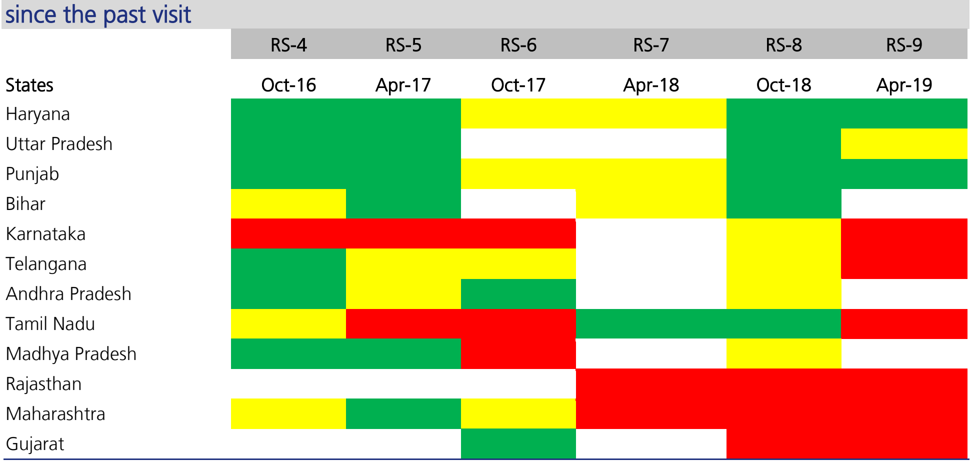
Focus Charts

Exhibit 1. JM Financial's observations from Rural Safari IX – 10 out of 13 states have flat to declining farm income

State	FY19 Kharif sowing YoY (%)	FY19 Rabi Sowing YoY (%)	Rabi area / Kharif area (x)	2018 Rainfall Deficit (%)	Irrigation Cover %	Farm Income - YoY (%)	Comments - Farm productivity / income
North and East India							
Haryana	4.1%	-1.7%	1.2	-9.3%	84%	Strong	YoY wheat crop yield higher; while mustard sale has started below MSP. Expect state government to increase procurement given the assembly elections in the state.
Punjab	0.7%	-0.1%	1.0	7.2%	99%	Strong	Wheat yield is expected to be marginally better YoY. Cotton price was also higher YoY
Uttar Pradesh	2.5%	1.3%	1.1	-8.1%	84%	Modest	Wheat crop yield is expected to be stable YoY barring a few patches in between. Paddy continued to be sold below MSP. Decline in potato prices in 2HFY19 adversely impacted farm income.
West Bengal	4.6%	0.3%	0.3	-18.0%	56%	⇔	Weak paddy procurement and low prices. Potato prices declined and reduced crop in many regions. Shift from paddy (Rabi) to pulses in the state.
Bihar	-3.9%	-0.5%	0.8	-25.0%	57%	⇔	Rainfall has not been uniform, leading to adverse yield on non-irrigated farms. Overall, crop output would be stable. No improvement in crop procurement and continued sale below MSP.
South India							
Andhra Pradesh	-3.6%	3.8%	0.6	-14.9%	47%	⇔	Yield of cash crop chilli lower (up to 50%) due to pest attack, while pricing is up 20%+. Paddy yield is stable with modest procurement, while higher input cost reduced margins.
Karnataka	9.1%	-15.4%	0.5	-3.4%	35%	Decline	Farm yields have been adversely impacted by patchy and weak rainfall. In addition, sustained weak pricing of fruits and vegetables has impacted farm income adversely.
Telangana	5.9%	-15.7%	0.3	-2.4%	47%	Decline	Rice is a key Rabi crop for Telangana and low water levels have led to a 16% YoY decline in sowing. Prices of pulses and oilseeds have been below MSP adversely impacting farm income.
Tamil Nadu	-4.1%	-8.8%	1.5	-8.4%	57%	Decline	The crops in northern and southern regions of the state have been adversely impacted because of lack of rain and effect of cyclone Gaja (Nov'18). Only the areas with water from Kaveri have seen stable yield this year.
Central and West India							
Madhya Pradesh	3.0%	4.8%	0.9	-8.8%	61%	⇔	A colder than usual winter has adversely impacted yield of gram (pulse) and also the wheat crop at multiple locations. Delayed and partial price realisation of soyabean (Kharif crop), weak vegetable prices and expected flat YoY prices for wheat would lead to overall lacklustre farm income.
Rajasthan	2.8%	3.3%	0.6	-4.8%	43%	Decline	Largely flat to modest decline in yield. Rainfall in early March'19 to help crops, but key concern remains weak pricing of agri-produce (spices, pulses etc.)
Maharashtra	-1.7%	-32.5%	0.3	-12.3%	20%	Decline	Farm income to be sharply down in this state given weaker yield on account of water shortage (even for kharif crops). Prevailing low prices of vegetable such as onions and fruits drags down income.
Gujarat	-4.3%	-22.8%	0.2	-27.3%	43%	Decline	A low rainfall prompted switch to crops such as cumin (takes 1/2-1/3rd water as compared to wheat). As more farmers changed, prices have come down by 20-30% YoY. Overall income from farm products to record decline in the state.
All India	**0.7%**	**-4%**	**0.6**		**47%**	**Decline**	**Overall down**

Source: JM Financial, Legend Strong Modest ⇔: Flat Decline

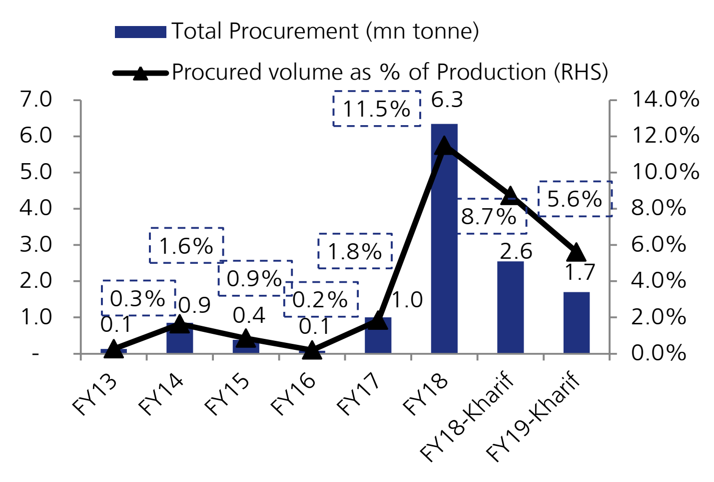
Exhibit 2. Farm income trend across our last few visits – Deteriorarating trend in farm income since the past visit



Source: JM Financial

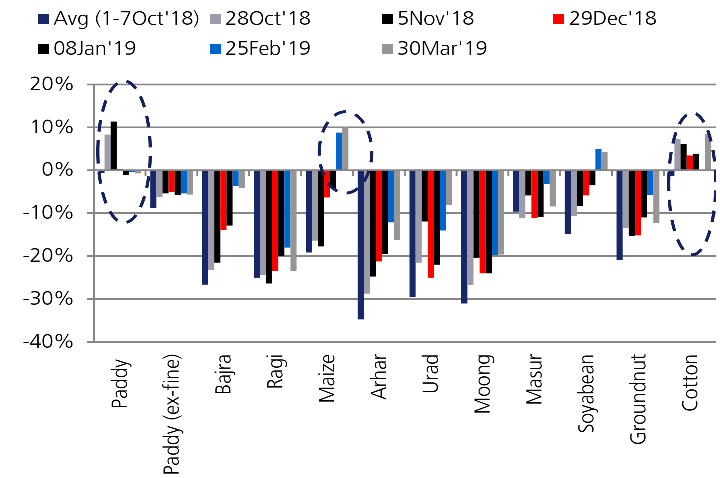
Legend: Decline | Flat | Modest growth | High Single digit

Exhibit 3. Pulses & oilseeds procurement in FY19 Kharif at 5.6% of production, much lower than expected 25% and even from last year



Source: CMIE, JM Financial

Exhibit 4. Mandi price of crops at a discount to FY19 Kharif MSP – Low procurement reflected in weak pricing during harvest period



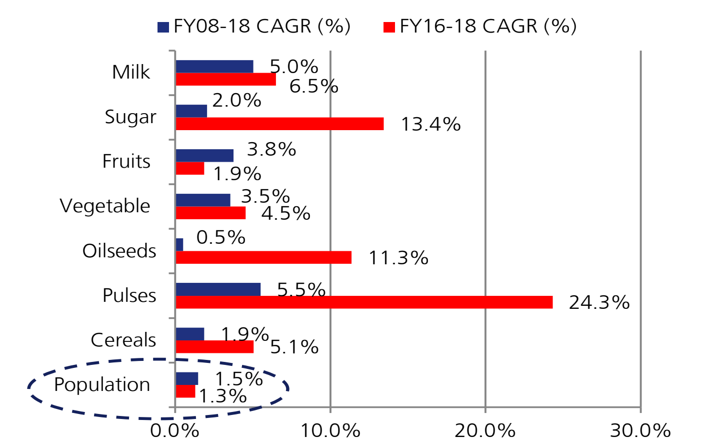
Source: agmarknet, JM Financial

Exhibit 5. Outlook on food inflation

Category	Weight in CPI	FY19 CPI-Food	Mar'19	Outlook (3-6) months 3
Cereals & Products	9.7	2.1	1.3	Stable
Pulses and Products	2.4	-8.3	-2.3	Marginal uptick
Vegetables	6.0	-5.2	-1.5	Uptick
Fruits	2.9	2.3	-5.9	Marginal Uptick
Sugar & Condiments	1.4	-7.0	-6.1	Marginal Uptick
Spices	2.5	2.2	1.2	Stable
Oils & Fat	3.6	2.1	1.1	Stable
Egg, fish and meat	4.0	4.0	6.6	Marginal uptick
Milk	6.6	1.8	0.8	Uptick
CPI - Food inflation	39.1	0.1	0.3	Uptick (< 4-4.5)
CPI	100	3.4	2.8	

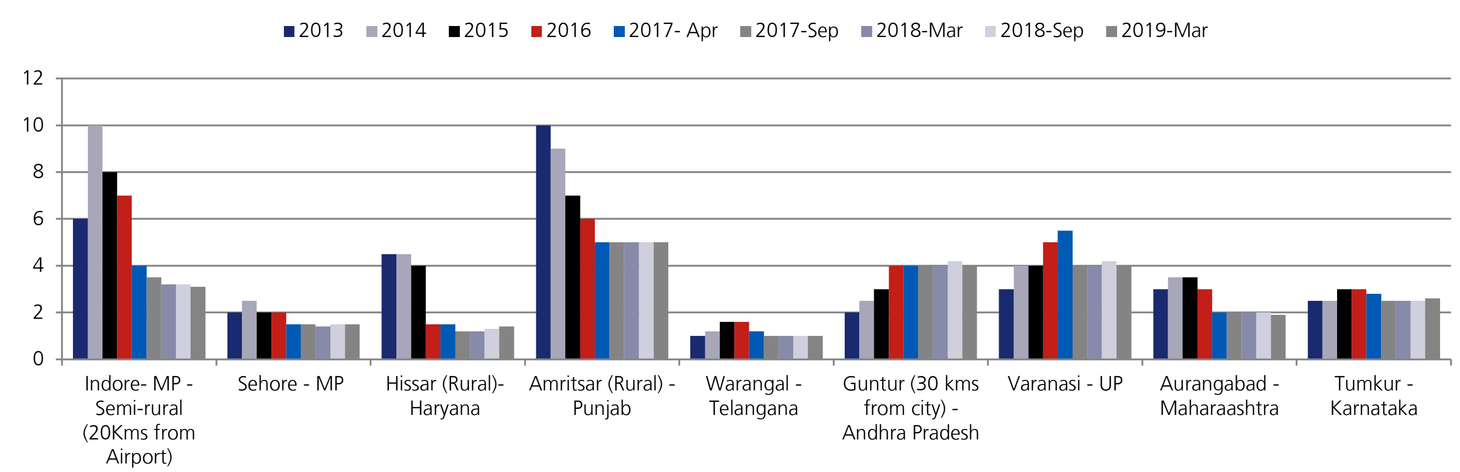
Source: CMIE, JM Financial

Exhibit 6. Agri & allied products output growth, particularly in FY16-18, far exceeded population growth, creating a glut



Source: CMIE, JM Financial

Exhibit 7. Rural land prices (INR mn/acre) yet to show an uptick



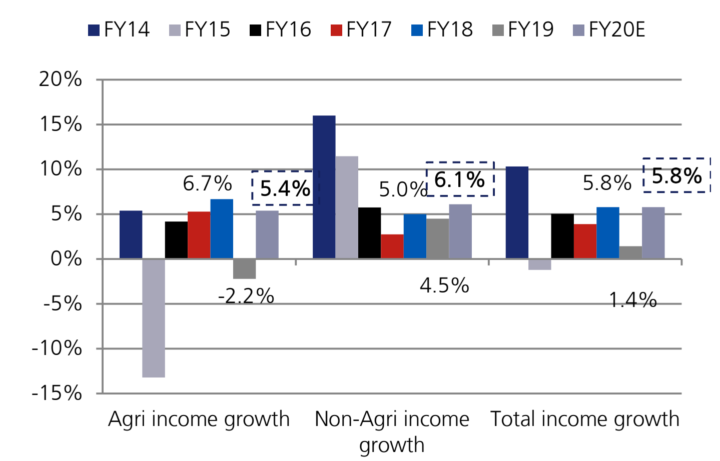
Source: JM Financial

Exhibit 8. General elections 2019 – 69% of Lok Sabha seats can be categorised as rural – Our visits to rural India indicated significant variation in key themes across the major states going into the election

Region and state visited under Rural Safari	Total Seats	2014 Actuals BJP	2014 Actuals INC	Seats by Category (no.) Rural	Seats by Category (no.) Rural Seat share	Farm income trend	Security issue dominating discourse in Rural regions?
North and East India							
Haryana	10	7	1	6	60%	Strong	
Punjab	13	6	3	9	69%	Strong	
Uttar Pradesh	80	71	2	67	84%	Modest	
West Bengal	42	2	4	29	69%	⇔	
Bihar	40	22	2	39	98%	⇔	
South India							
Andhra Pradesh	25	2	-	20	80%	⇔	
Karnataka	28	17	9	18	64%	Decline	
Telangana	17	1	2	11	65%	Decline	
Tamil Nadu	39	1	-	14	36%	Decline	
Central and West India							
Madhya Pradesh	29	27	2	24	83%	⇔	
Rajasthan	25	25	0	21	84%	Decline	
Maharashtra	48	41	2	27	56%	Decline	
Gujarat	26	26	0	13	50%	Decline	
Total	422	248	27	298	71%		
All India	543	282	44	377	69%		

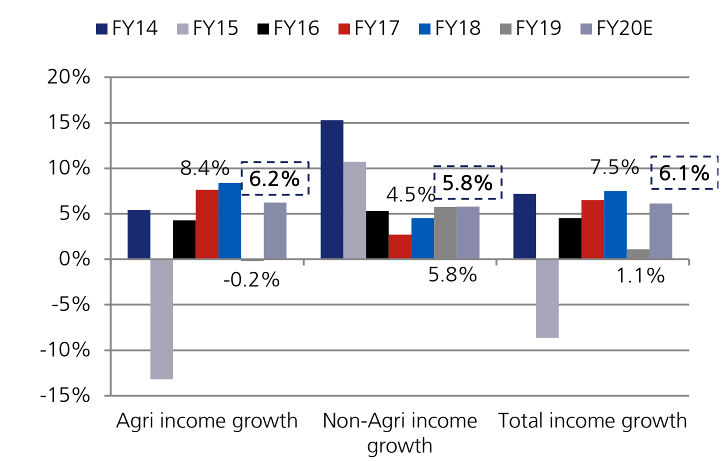
Source: Election Commission, electionsinindia, JM Financial, Legend Strong : Modest ⇔: Flat Decline, : Blue shade highlights high impact of national security issue on local economic issues

Exhibit 9. Income trend for a small farmer (2.7 acre) – Lack of MSP realisation, price deflation leads to weak income growth in FY19, FY20 to see modest pick-up aided by income transfer scheme



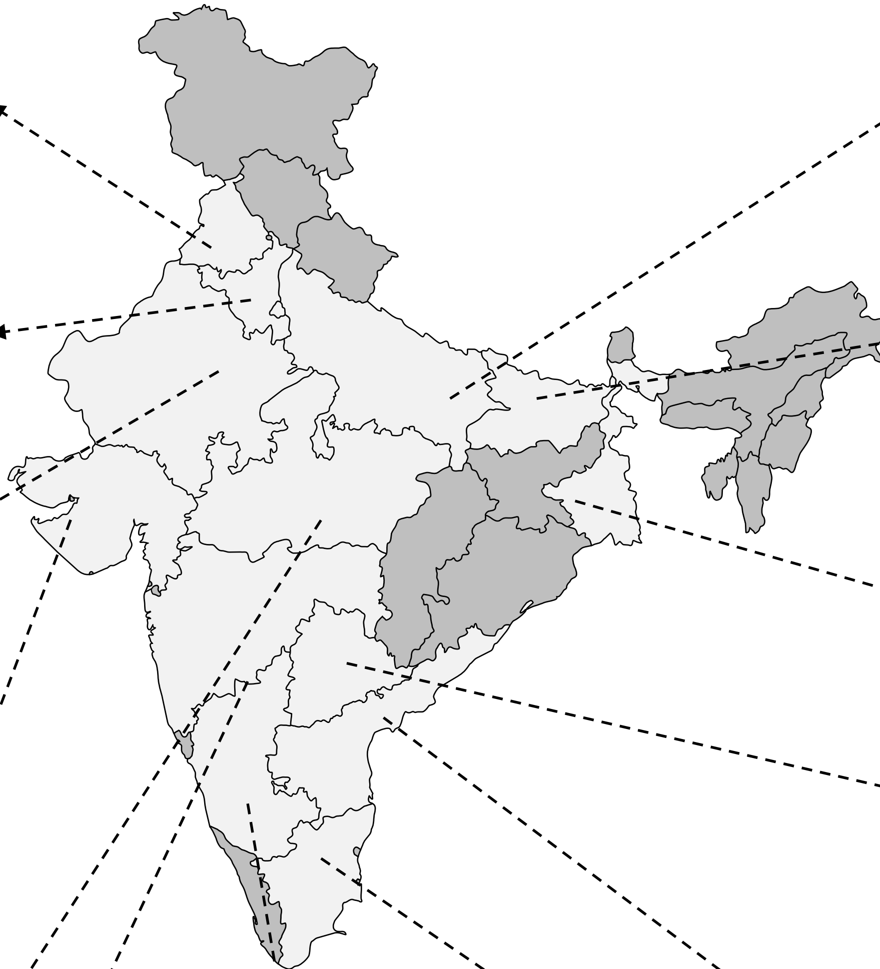
Source: NSSO, JM Financial

Exhibit 10. Income trend for a large farmer (15 acre) – Price deflation to impact FY19 income, expect revival in pricing in FY20 to aid in income growth



Source: NSSO, JM Financial

Rural Safari: 13 states, 15 districts, 3,500+ km — we travelled to rural areas around the following cities / towns



Bhatinda
Bhatinda is the fifth-largest city in southern Punjab, in the Malwa belt. The district has thermal power plants, cement plants and also a large oil refinery. Key crops: Cotton, wheat and vegetables.

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

Jaipur
Jaipur is the capital city of Rajasthan and famous for tourism. Key crops in the region are wheat, maize, bajra, vegetables, pulses and oilseeds. The rain-fed regions of the district have 1 crop a year, migration is therefore high from rural regions

Jamnagar
Jamnagar is the fifth-largest city of Gujarat and is famous for Reliance's oil refinery. It is part of the Saurashtra region of Gujarat. Rainfall has been mixed over the district leading to irregular crop output. Key crops: cotton, groundnut and wheat.

Raisen & Sehore (& Indore)
Raisen is a rural district about 50km from capital city of MP, Bhopal (78% rural population). It has many tourist attractions including Buddhist Sanchi Stupa. Wheat, soyabean, rice, gram, lentil, maize, vegetables are the key crops. Key crops at Sehore district, adjacent to Bhopal are wheat, gram, lentil, peas and linseed

Aurangabad / Ahmednagar
Located near the Godavari Basin, agriculture in Aurangabad is well diversified with a wide range of crops such as jowar, pearl millet, wheat, gram, soya bean and cotton. Ahmednagar is a rural district of Maharashtra (80% rural population). Key crops: Jowar, sugarcane, wheat, gram and cotton.

Tumkur / Belgaum
Tumkur is known for the production of ragi, maize, rice, groundnut, fruits and vegetables; these are key crops in the region. Tumkur also has one of the 9 operational Mega Food Park stores, run by Future Consumer. Belgaum, in North Karnataka is the second largest district by size and has production of sugarcane (27 factories), maize, rice, vegetables.

Varanasi/Jaunpur/Bareilly
Varanasi is the largest trading hub for agri-commodities in eastern UP and a famous religious tourist destination. Key crops: Wheat, paddy, bajra, arhar, sugarcane and potato.

Madhubani
Madhubani, a district in northern Bihar is famous for its art – Madhubani paintings. Paddy, wheat, arhar, gram, bajra, barley, vegetables are grown here. Migration outside the district remains high on account of low economic activity.

Asansol
Asansol, in the Burdhaman district has major crops of paddy, oilseeds, jute and potato. Bardhman district is located 200kms from capital city and is known for agricultural and industrial activities.

. Suryapet
Suryapet district is carved out of erstwhile Nalgonda district. The district having a vast expanse of river Krishna basin, witnessed widespread agriculture while Nagarjuna Sagar canal is its chief source of irrigation. Key crops grown in the region are paddy, jowar, vegetables and groundnut

Guntur & Vijayawada
Guntur is the largest producer of chiliies in India. Vijayawada, a city on the banks of the Krishna River, is also known as "The Business Capital of Andhra Pradesh". Key crops: Paddy, cotton, chillies and maize.

. Tiruvallur
Tiruvallur is located on the banks of the Cooum River about 42 km (26 mi) northwest of Chennai, the capital city of Tamil Nadu. It is well known because of the Veera Raghavar temple, which is one of the 108 sacred shrines of Vaishnavites. Key crops: paddy, jowar, maize, gram, sugarcane, chillies and coconut

Source: JM Financial

Exhibit 11. Snapshot from currently visited areas; comparison with the previous season

	Gujarat	Punjab	Haryana	UP	Bihar	MP	Rajasthan	Maharashtra	West Bengal	Karnataka	AP/Telangana		Tamil Nadu
	Jamnagar	Patiala	Hissar	Varanasi	Madhubani	Sehore	Jaipur	Aurangabad	Asansol	Tumkur	Vijayawada/ Guntur	Suryapet	Tiruvallur
Main crops*	Cotton, Gram, Wheat, Ground-nut	Wheat, Paddy, Cotton, Potato	Paddy, Cotton, Wheat Maize, Oil-seeds	Paddy, Wheat, Bajra, Arhar, Sugarcane	Paddy, Wheat, Gram,	Soyabean, Wheat, Gram ,	Paddy, Maize, Coarse cereals,	Jowar, Paddy, Soya bean, Gram	Paddy, Potato, Vegetables	Maize, Arcanut, Paddy, Fruits and Vegetables	Paddy, Cotton, Maize, Banana, Chilli	Paddy, Green Gram, Castor, Red Gram, Orange	Paddy, Jowar, Maize, Gram, Sugarcane, Chillies, Coconut
Move towards cash crops	Strong	Strong	Strong	Strong	Flat	Strong	Strong	Strong	Flat	Strong	Strong	Strong	Strong
Yield over last year	Decline	Modest	Modest	Modest	Decline	Flat	Decline	Decline	Modest	Decline	Flat	Decline	Strong
Price (non-MSP cash crops) over last year	Decline	Strong	Strong	Strong	Modest	Strong	Flat	Decline	Decline	Decline	Decline	Decline	Flat
Overall farm income	Decline	Strong	Strong	Modest	Flat	Flat	Decline	Decline	Flat	Decline	Flat	Decline	Decline
Agriculture financing awareness and usage	Strong	Strong	Strong	Flat	Flat	Strong	Modest	Strong	Flat	Strong	Strong	Strong	Strong
Non-agri Income													
Dairy	Flat	Flat	Strong	Flat	Flat	Decline	Flat	Flat	Modest	Decline	Flat	Flat	Flat
Tractor/Pick-ups	Decline	Strong	Flat	Decline	Decline	Flat	Flat	Strong	Flat	Flat	Strong	Flat	Flat
Remittances	Modest	Flat	Flat	Modest	Flat	Flat	Modest	Modest	Flat	Modest	Strong	Flat	Flat
Local jobs	Decline	Modest	Flat	Flat	Decline	Decline	Decline	Modest	Decline	Flat	Flat	Decline	Decline
Wealth effect of land													
Urbanisation	Strong	Strong	Strong	Strong	Modest	Strong	Strong	Strong	Flat	Strong	Strong	Strong	Strong
Road connectivity	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Flat	Flat	Strong	Strong	Flat	Strong
Price trend	Decline	Decline	Flat	Modest	Modest	Decline	Decline	Decline	Decline	Decline	Flat	Decline	Decline

Source: JM Financial: Legend Strong Modest : Flat Decline, Note: *Fruits and Pulses grown at all the locations. The comparisons are over similar period last year

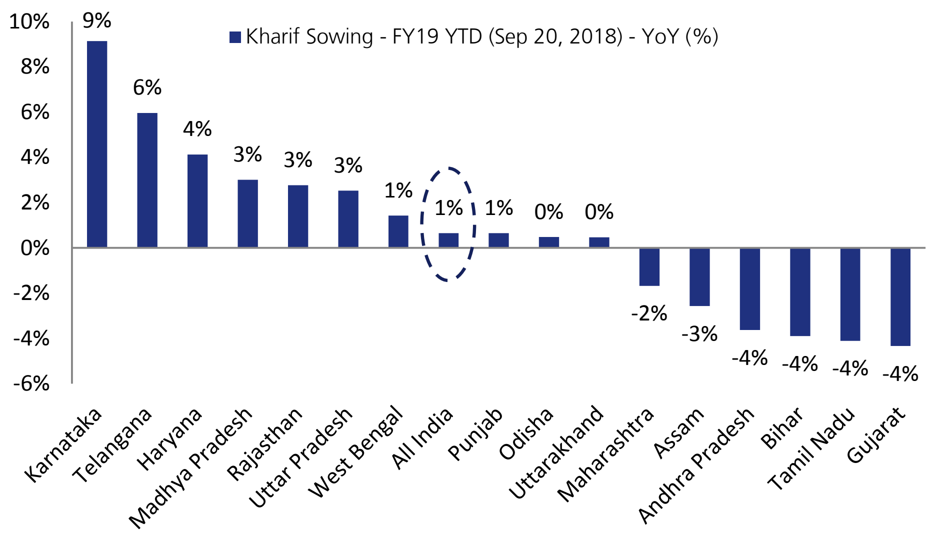
FY19 Farm income: Steady output, while weak pricing impacts income growth

FY19 started on a positive note for farm income, given the expectation of a normal monsoon (IMD, Apr'18) and a sharp uptick in the kharif MSP as compared to the previous year (paddy 13%, other crops 5-53% YoY), along with an expectation of expansion in crop procurement. By the end of Sep'18, monsoon turned out to be 9.4% deficient with a severe impact on the western regions compounded by a weak irrigation cover.

During our visits we also noted that the distribution of rainfall has been patchy and irregular in many states, and thereby impacting the crop yield and output to a varying degree (highlighted in our detailed feedback across states in the next section).

We had highlighted the weakness in the Kharif output in the western region, particularly in Maharashtra and Gujarat in our previous edition of rural safari (Rural Safari VIII) in October'18. Curiously, rainfall during the month of Jul'18 was near normal and as July to mid-August is the key sowing period, kharif sowing was not affected much ending with a higher sown area by 0.7% YoY.

Exhibit 12. FY19 Kharif Sowing – Overall up by 1% YoY

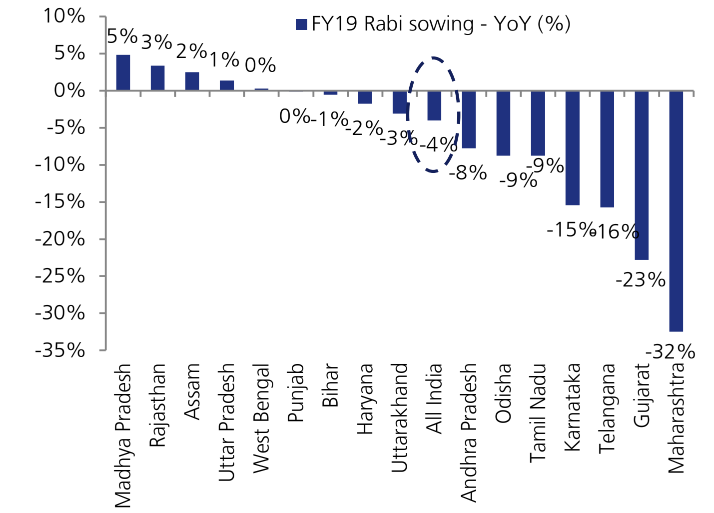


Source: PIB, JM Financial

Afterwards, the North East rainfall (October-Dec) which is important for south India (particularly TN, which gets 50% of its water requirement from rains) was deficient adding to the challenges in the current year. **As a result, Rabi sown area saw YoY declines in southern India, along with the expected decline in western regions.**

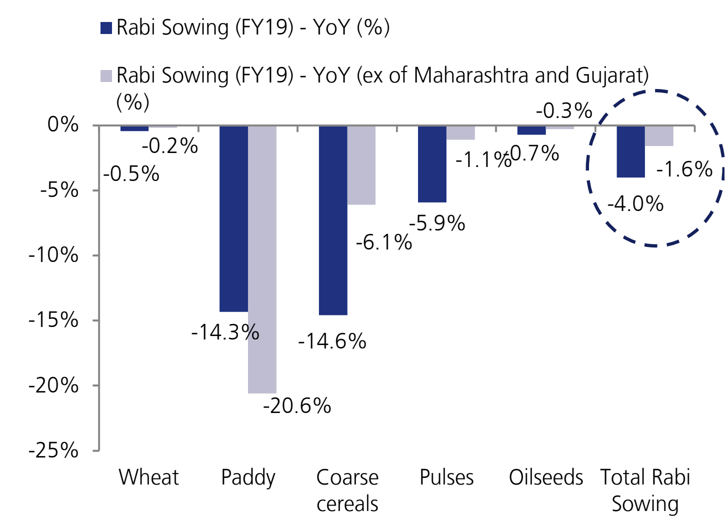
The western states of Maharashtra and Gujarat, expectedly recorded a high decline in Rabi sowing (32% YoY and 23% YoY respectively). The sharp decline in water levels in the western region (22% of reservoir levels vs. 33% over past ten years) indicates high stress in the region, **which could impact output of various crops – coarse cereals, pulses and horticulture crops (particularly onions) in the months going ahead. Overall sowing in Rabi 2019 was 4% below last year's levels.**

Exhibit 13. Rabi sowing – Western and south Indian states have seen YoY decline in Rabi sown area



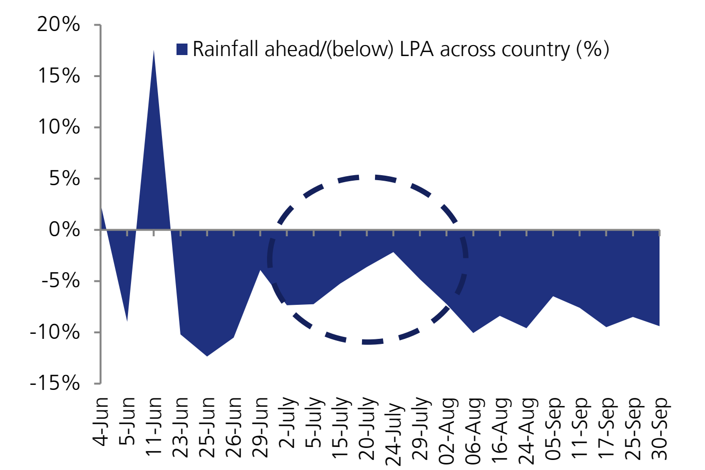
Source: Ministry of Agriculture, JM Financial, Note: Data as on Feb 15, 2019

Exhibit 14. Rabi sowing decline by crops – Major crop wheat is largely flat; overall ex of Maharashtra & Gujarat, decline is 1.6% YoY



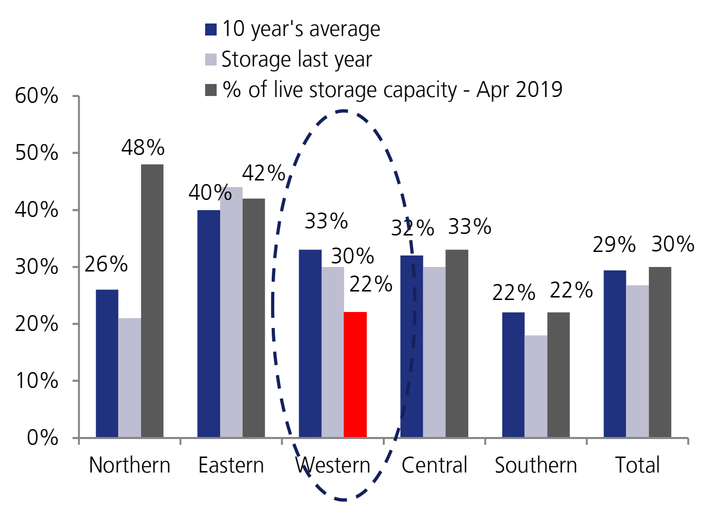
Source: Ministry of Agriculture, JM Financial, Note: Data as on Feb 15, 2019

Exhibit 15. How monsoon panned out in 2018 – Rainfall during the critical sowing period (July-mid August) led to low impact on Kharif sowing



Source: CMIE, JM Financial, Note: Data as on Apr 4, 2019

Exhibit 16. Reservoir water levels – Western regions have high deficit and could witness pressure in the summer months



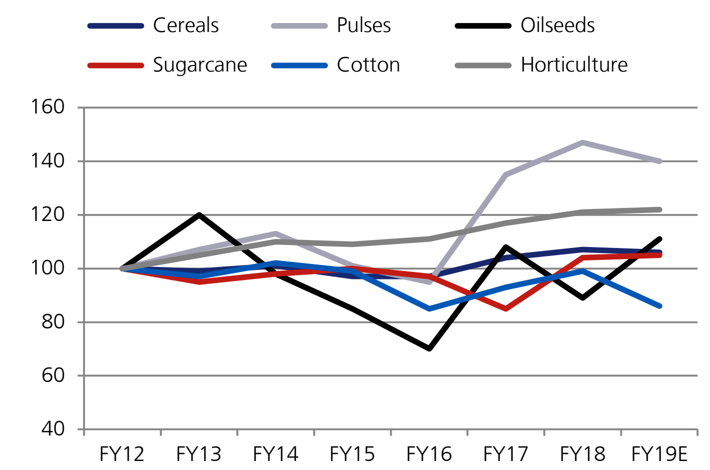
Source: JM Financial

Overall crop output remains resilient in FY19

The second crop production estimate for FY19 builds in a 1.2% YoY decline in foodgrain output, with output of cereals (led by coarse cereals) down 0.9% YoY, while the pulses output is expected to be down 4.8% YoY.

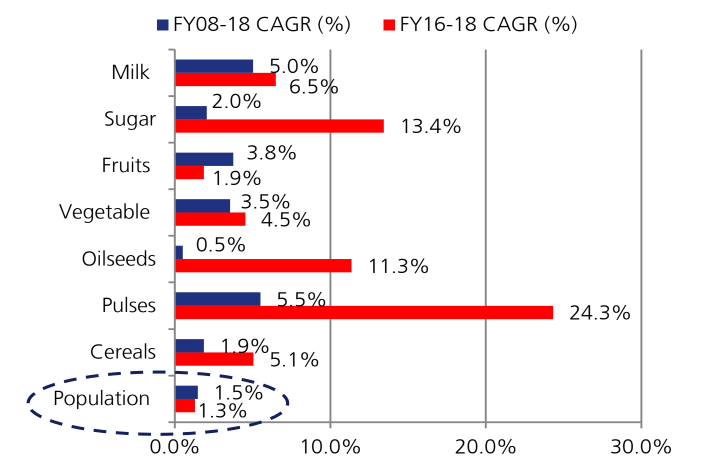
As we have highlighted in our previous note on food inflation (What killed India's food inflation), overall agri and allied products' output has seen high growth over the past few years. **A moderation in output can help balance out the supply-demand dynamics. Even if we compare with the recent past, apart from cotton, the overall output of other crops continues to be on a higher trajectory in FY19.**

Exhibit 17. Crop output remains resilient in FY19 (indexed to 100 for FY12 production output)



Source: CMIE, JM Financial

Exhibit 18. Agri & allied products output growth, particularly in FY16-18, far exceeds population growth, creating a glut



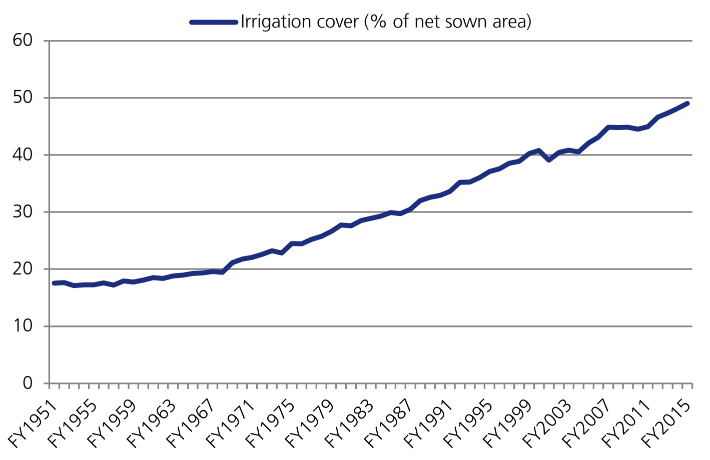
Source: CMIE, NDDB, JM Financial

For horticulture, though the initial government estimate for FY19 does not indicate a decline, we do believe that there is a downside risk to select crops, **particularly to fruits and vegetables (onions in particular) grown in the western region.**

Increasing irrigation coverage, expansion of micro-irrigation (MI) improves crop yield

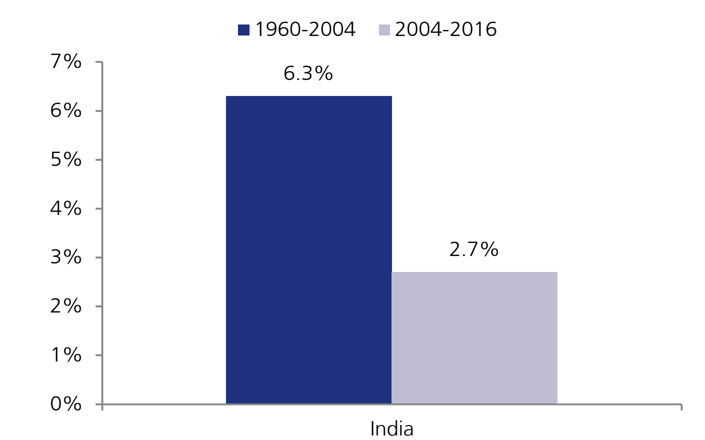
Over the years, an increase in irrigation coverage in the country has reduced the volatility in agricultural output growth. Historically, if we look at the past few decades, the volatility in agricultural GDP growth rate has continued to drop (exhibit below), largely due to the increase in irrigation cover from c.20% in 1960 to almost 50% at present.

Exhibit 19. Irrigation cover increase over the years



Source: Economic survey, JM Financial

Exhibit 20. Volatility in Indian agriculture GDP growth has reduced over the past few decades



Source: Economic Survey, JM Financial, Note: Real agriculture GDP growth rate

Apart from the investments made in traditional irrigation areas (canals, tanks, tube-wells), the coverage area under micro-irrigation (drip, sprinkler) has seen a healthy expansion of 45% over the period FY16-19. **Among states, Andhra Pradesh (AP), Karnataka and Gujarat have led in expansion of micro-irrigation coverage.**

Exhibit 21. Area under micro-irrigation (MI) up by 3.5mn hectares over FY16-19 (45% expansion of the area in the past three years)

State	Area under MI till FY15 (mn ha)	FY16-19 addition to MI (mn ha)	Total area under MI (mn ha)	Share in addition during FY16-19	Share in MI area of the country
Andhra Pradesh	1.2	0.6	1.8	17.8%	15.8%
Karnataka	0.8	0.6	1.5	17.5%	12.9%
Gujarat	0.8	0.6	1.4	17.0%	12.6%
Maharashtra	1.3	0.4	1.7	11.9%	15.0%
Tamil Nadu	0.3	0.4	0.7	10.2%	6.0%
Telangana	0.0	0.2	0.3	6.6%	2.3%
Rajasthan	1.7	0.2	1.9	5.6%	16.7%
Madhya Pradesh	0.4	0.2	0.5	5.2%	4.7%
Uttar Pradesh	0.0	0.1	0.1	3.2%	1.3%
Rest of country	0.4	0.1	0.5	2.8%	4.2%
Haryana	0.6	0.0	0.6	0.8%	5.3%
Odisha	0.1	0.0	0.1	0.5%	1.1%
West Bengal	0.1	0.0	0.1	0.4%	0.6%
Bihar	0.1	0.0	0.1	0.2%	1.0%
Punjab	0.0	0.0	0.0	0.1%	0.4%
Total	**7.8**	**3.5**	**11.3**	**100.0%**	**100.0%**

Source: PMKSY, JM Financial

However, the coverage of MI remains low at 8.5% of the aggregate net sown area. Therefore the expansion of MI can be a multi-year theme. Over our visits, we continue to witness increased uptake of micro-irrigation, particularly in the west and south and there is encouraging adoption of PVC pipes for better water retention. Some of the brand names we heard are **Finolex and Supreme Industries**.

Usage of MI systems saves c.30-50% of the water requirement and enhances yields by 15-50% on an average, compared to a traditional irrigated system. Hence, expansion of MI coverage is beneficial for water usage and also for a significant hike in crop yields.

Exhibit 22. Usage of micro-irrigation saves water usage by almost half and significantly improves yield (15-50%) from traditional irrigation systems

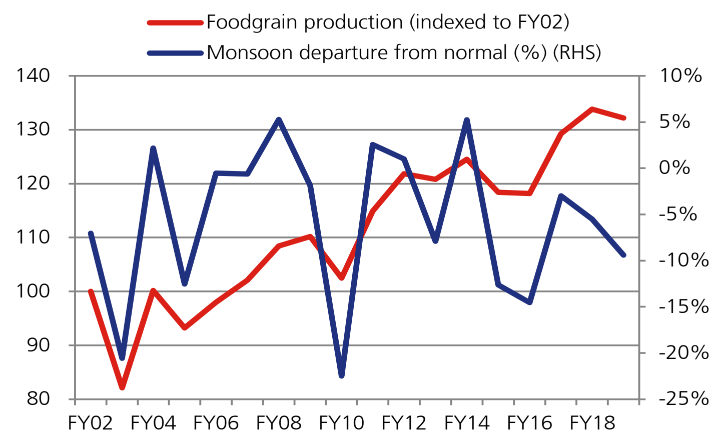
	Traditional irrigation systems			Drip irrigation systems		
Crop	Water requirement (mm)	Water requirement (mm)	% saving in water	Yield - ton/hectare	Yield - ton/hectare	% increase in yield
Banana	1,760	970	45	58	88	**52**
Grapes	532	278	48	26	33	**23**
Citrus	1,660	640	61	100	150	**50**
Tomato	300	180	39	32	48	**50**
Brinjal	90	42	53	28	32	**14**
Chilli	100	42	62	4	6	**44**
Sugarcane	2,150	940	56	128	170	**33**
Cotton	90	42	53	2	3	**27**

Source: Horticulture statistics, JM Financial

Increased resilience of crop production

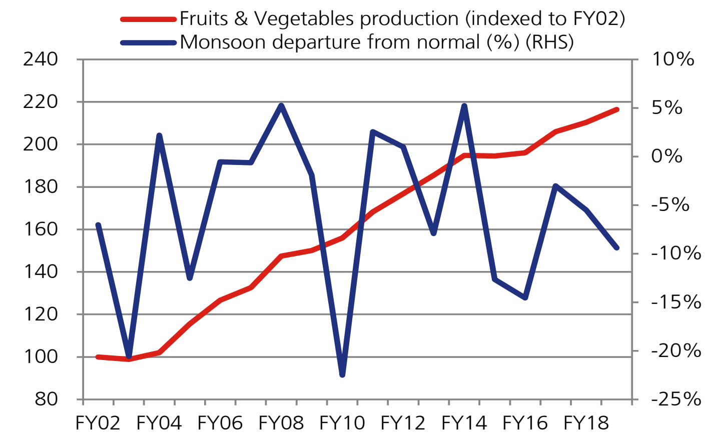
In spite of variations in rainfall and unsuitable weather, factors including the overall rise in use of agrochemicals, expansion in irrigated area (both large-scale and micro-irrigation), increasing awareness and shift of farmers towards new and advanced agricultural techniques **would likely shield from a large-scale production shock, unless there is a severe drought across the country.**

Exhibit 23. Food grain production and rainfall – Increased resilience of crop production with rainfall variation in recent years



Source: PIB, CMIE, JM Financial

Exhibit 24. Production of fruits & vegetables continues to be steady, given higher cultivation in irrigated farms



Source: PIB, CMIE, JM Financial

This trend is clearly reflected in the increased resilience of food crop output with the monsoon (lower YoY variability at present as compared to early 2000s). Similarly, even the output of fruits and vegetables (on an aggregate) has been largely unaffected by variations in rainfall over the years, **highlighting strong resilience in the total output across the country.**

However, it is to be noted that crop yields from un-irrigated (50% of net sown area) does get impacted in case of adverse weather, particularly rainfall deficits that necessitates schemes such as crop insurance for the farmer house-holds.

Spending on irrigation to be a key priority for government

In each of our visits to rural India, the one common concern among farmers has been the availability of adequate water, as the net income from irrigated and un-irrigated farms can be 2x+. At present, c.50% of India's net cultivated area is under irrigation and there is high variation within the states as well (for example 99% coverage in Punjab to only 20% for Maharashtra / Kerala). Overall investment in irrigation by states has grown at 16.4% CAGR over FY16-19, and though some states have budgeted for a modest increase and even some decrease in YoY allocation in FY20BE, **we believe spending on irrigation will continue to remain a key priority over the medium-term, as it is critical for improving the farming yields and income.**

Exhibit 25. Irrigation capex spending by states – After 16.4% CAGR over FY16-19, a modest growth in FY20BE; Maharashtra & Gujarat slow down capex in FY20BE

States – Amounts in INR bn	FY16	FY17	FY18	FY19RE	FY20BE	CAGR – FY16-20BE
Andhra Pradesh	89	100	82	138	156	14.9%
Karnataka	69	86	104	122	132	17.4%
Telangana	78	137	126	116	126	12.9%
Maharashtra	81	88	94	125	101	5.8%
Gujarat	81	74	91	121	98	4.7%
MP	64	85	80	88	87	8.2%
UP	51	52	31	80	84	13.6%
Odisha	42	58	68	76	74	15.4%
Tamil Nadu	7	11	12	24	38	50.2%
West Bengal	16	16	16	21	31	18.0%
Rajasthan	13	20	22	25	29	21.6%
Bihar	17	18	27	30	28	13.4%
Jharkhand	12	14	17	23	25	21.5%
Chhattisgarh	17	19	17	21	23	7.0%
Haryana	9	9	10	16	16	16.6%
Punjab	8	13	3	6	10	6.1%
Kerala	5	7	5	6	5	1.0%
Total	**658**	**806**	**804**	**1,037**	**1,063**	**12.7%**

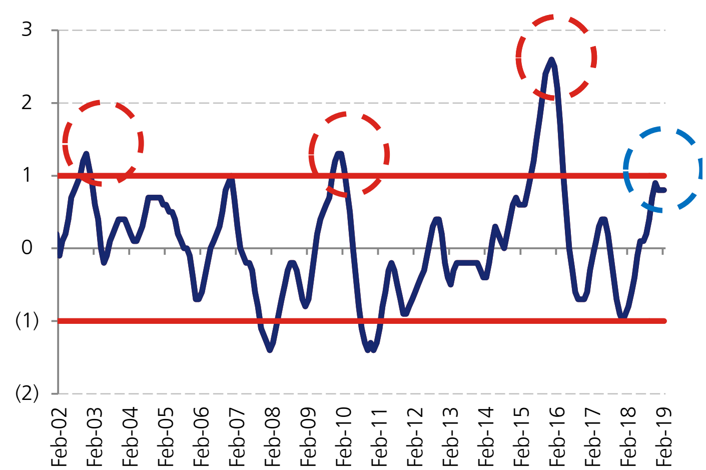
Source: State budgets, JM Financial

Spending by the central government on the flagship irrigation scheme, Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) has also grown at the rate of 22.8% CAGR over FY17-20 BE to INR95bn in FY20BE.

Is there a risk to 2019 monsoon?

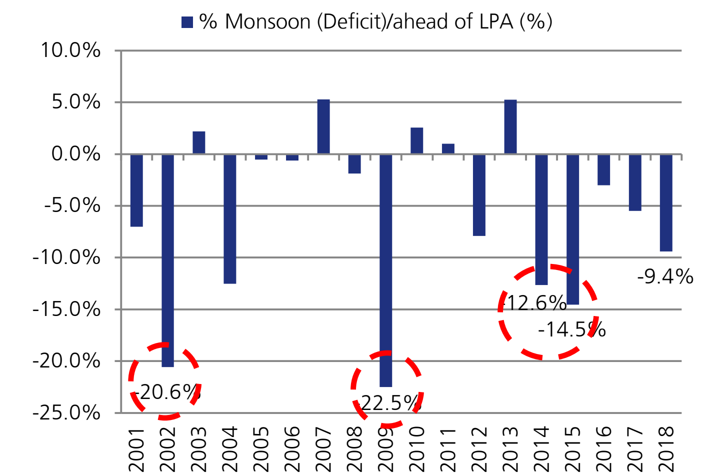
Reports from various weather agencies indicate a high probability of the occurrence of El Nino (the phenomena of warmer ocean water and consequently a weak monsoon rainfall) in the country. Historically, we have seen period of El Nino (illustrated by ENSO indicator (El Niño-Southern Oscillation) reaching 1 and above levels) with a weak monsoon rainfall (exhibit below). **Initial indications suggest that the 2019 monsoon could be weaker than normal with a slow start impacting initial sowing.**

Exhibit 26. Progress of ENSO indicator needs to be closely monitored given it is closer to the El-Nino threshold (at 1)



Source: CPC, JM Financial

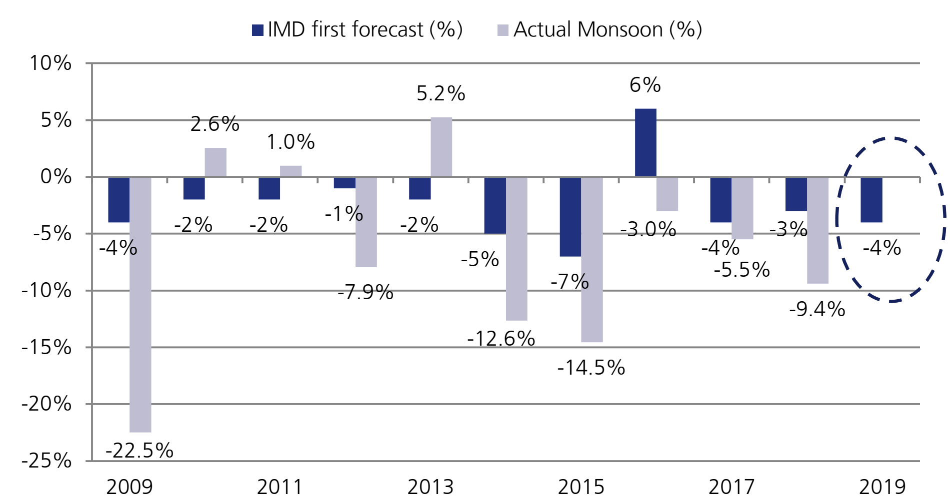
Exhibit 27. Monsoon trend over past few years – El Nino years have resulted in rainfall deficits



Source: IMD, JM Financial

IMD has come out with an initial forecast for 2019 monsoon as near normal and at 4% below the Long Period Average (LPA). However, the movement around El Nino needs to be tracked closely and a clear picture on the monsoon would emerge only by Jun'19.

Exhibit 28. IMD's initial monsoon forecast (% above below Long Period Average) and actual monsoon over the years



Source: IMD, JM Financial

As discussed earlier, we do believe that unless there is high rain deficit across the country simultaneously, **the risk of a sharp output shock across crop categories is limited, given that 50% of the cropped area is irrigated and that the use of modern agricultural practices has been on the rise.**

No improvement in MSP-based procurement reflects in weak agri-prices

On the back drop of weak global agri-commodity prices and steady crop output, FY19 has turned out to be a year with weak pricing for a large number of agri-commodities, reflecting the benign nature of food inflation (turned negative for the past few months). **In this section, we take a detailed look at the MSP-based crop procurement undertaken by the government and price trends across crops.**

No improvement in procurement of crops under MSP

In India, although c.35% of the agriculture and livestock output (by value) has a defined minimum support price (MSP) (exhibit below), its effectiveness is limited to paddy, wheat and sugarcane, which account for 18% by value.

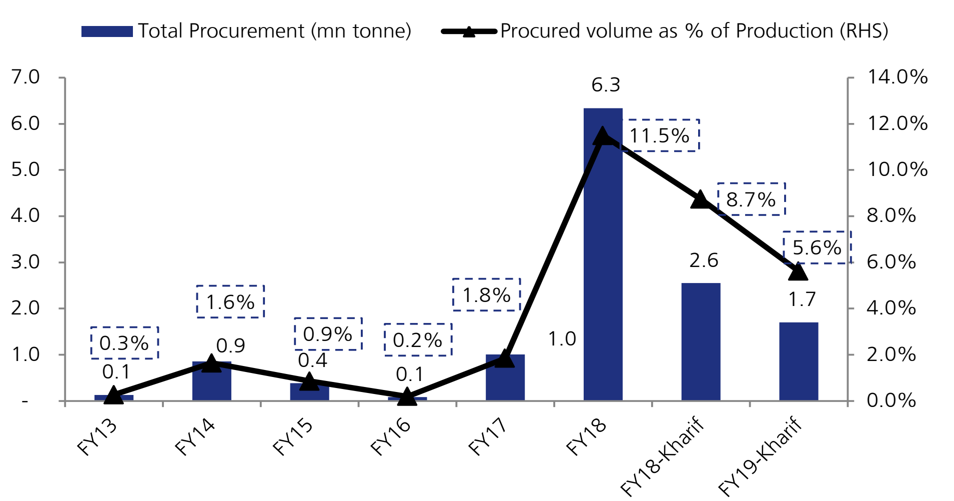
Exhibit 29. Value of output from crops and livestock – c.35% of output under MSP

Category	Value of output (INR tn)	Share of output (%)	Under MSP
Paddy+Wheat	4.2	15.2%	Yes
Pulses	1.6	5.8%	Yes
Oilseeds	1.5	5.4%	Yes
Sugar*	0.9	3.3%	Yes
Fibre (Cotton)	0.9	3.3%	Yes
Coarse Cereals	0.7	2.7%	Yes
Fruits & Vegetables	5.1	18.4%	No
Condiment, Spices & Drugs	1.7	6.0%	No
Other crops	2.0	7.4%	No
Total Crops	18.6	**67.3%**	
Milk	6.1	22.2%	No
Meat	1.8	6.5%	No
Other Animal related output	1.1	3.9%	No
Total Value	27.7	**100.0%**	

Source: CMIE, JM Financial, Note: Gross Output for FY17 at current prices, *Fair and Remunerative price (FRP) for Sugarcane

The proposed improvement in procurement in FY19 through the unveiling of the new scheme PM-AASHA (PM-Annadata Aay Sanrakshan Abhyan) in Sep'18 has been a topic of discussion. It envisages providing price support to pulses and oilseeds in particular. It was expected that the government would procure up to 25% of the output across states to support the prices of these crops.

Exhibit 30. Trend of pulses & oilseeds procurement – Only c.6% of production of these crops procured so far in FY19, lower than even 9% done last year

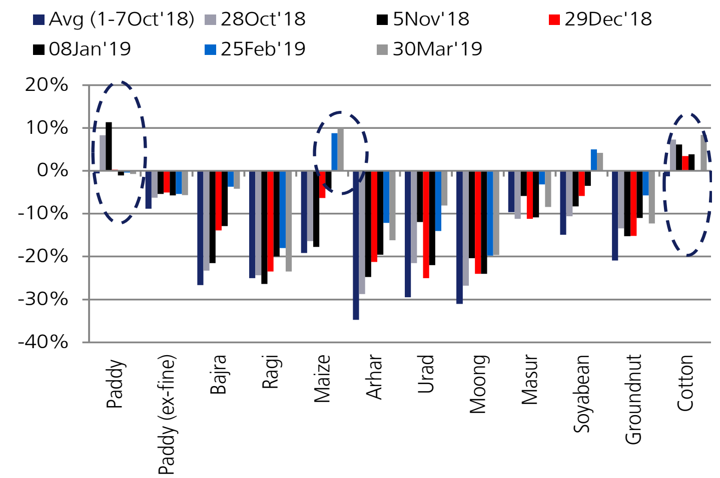


Source: NAFED, CACP, Media reports, JM Financial

However, according to media reports, in the FY19 Kharif season, (up to 15Mar'19) the procurement of pulses and oilseeds was only 1.7 million tonnes, i.e., 5.6% of the total production. This was lower than even the previous year's procurement of 2.6 million tonnes (c.8% of production).

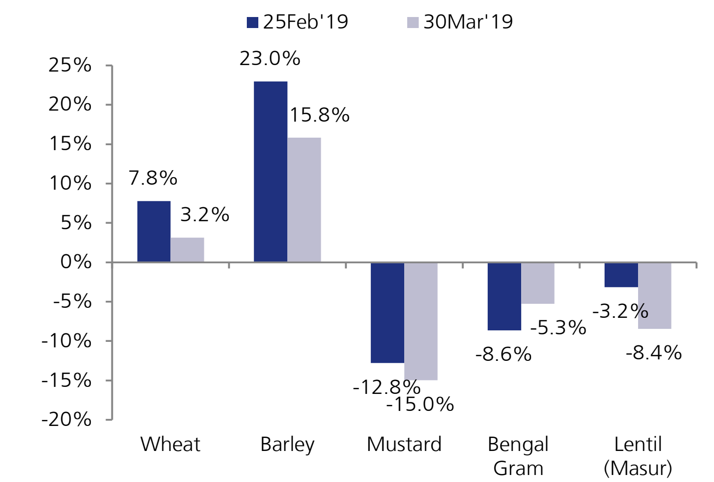
Expectedly, the agri-mandi prices reflected a weak trend, and the chart clearly shows the discount of average agri-mandi prices with the Kharif MSP over the harvest period to present. **The discount narrowed for a few crops such as maize and select pulses after the harvest period (in Feb'19 and Mar'19).**

Exhibit 31. Agri-mandi prices vs. FY19 Kharif MSP – Overall crop prices at a discount to MSP



Source: Agmarknet, JM Financial

Exhibit 32. Trend of market price for Rabi crops – Apart from wheat and barley, other crops below MSP

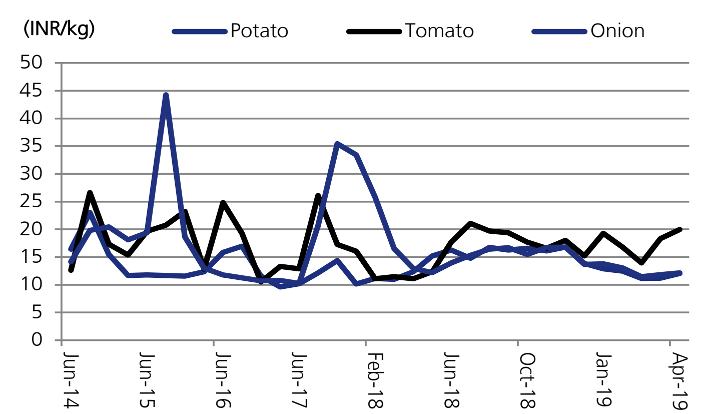


Source: Agmarknet, JM Financial

The Rabi harvest season is underway and initial indications show higher-than-MSP prices for wheat and barley, while prices of other crops languish below MSP. We will continue to monitor the progress of procurement of pulses and oilseeds in the upcoming Rabi harvest. It may be noted that in FY18 the government ended up procuring 4 million tonnes (16% of Rabi produce) following farmer led protests in Jun'17.

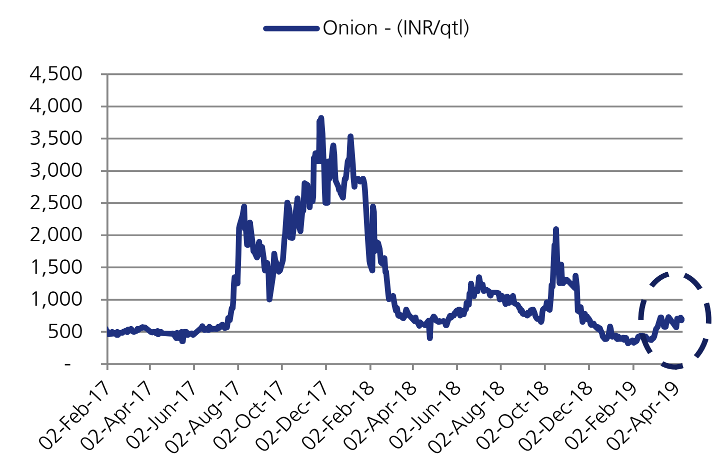
Among other crops, prices of fruits and vegetables have remained depressed in CY18, **and we expect an uptick over the next few months as output of a few crops gets affected by the weak Rabi harvest (particularly onions which have c.31% share of production in Maharashtra).**

Exhibit 33. Whole sale prices of key vegetables had languished for the past 18 months



Source: Ministry of Consumer Affairs, JM Financial

Exhibit 34. Onion prices at Nashik mandi – Marginal uptick noted from late March, expect prices to increase by May / Jun'19



Source: Agmarknet, JM Financial

Timelines of crop procurement had to be in synchronisation with harvest

As our interactions across rural visits have shown, small and medium farmers sell their produce near the harvest period and only large farmers who have wherewithal to store the crop benefit from increased prices when selling later. **Hence, the quantum of price increase / decrease and also its timing is important to assess the impact on farm / rural income.**

The data on paddy procurement across states also highlights the improvements / changes required for procurement timelines. Against the typical harvest period (Oct-Dec) for paddy in most of the states, **procurement timelines indicate significant delays in states barring Punjab, Haryana and Uttarakhand.** This is one area where policymakers should take a closer look and improve the procurement timelines in the near future.

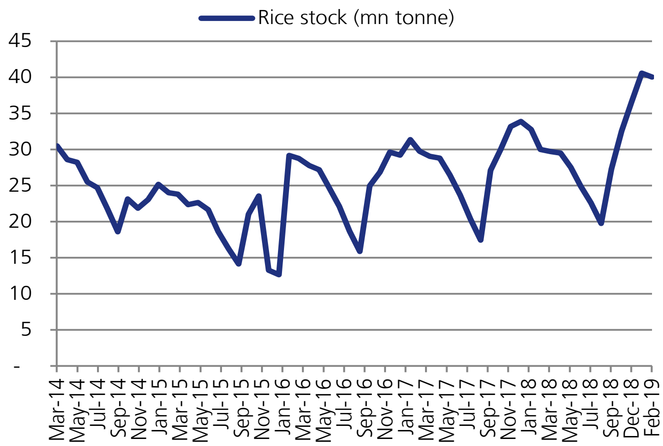
Exhibit 35. Timelines for rice procurement – Rice procured (cumulative, mn tn) across states – Against the harvest period of October-December, many states undertake procurement during later months, which benefits only the larger farmers (who can store the produce)

(mn tonnes)	FY18	25Nov'18	7Dec'18	24Dec'18	4Jan'19	18Feb'19	4Apr'19	YTD Procured as % of FY18 procurement
Harvest period								
Punjab	11.8	11.2	11.3	11.3	11.3	11.3	11.3	96%
Andhra Pradesh	4.0	-	0.2	1.0	1.3	2.6	3.0	75%
Haryana	4.0	3.9	3.9	3.9	3.9	3.9	3.9	98%
Telangana	3.6	1.2	1.8	2.2	2.4	2.7	2.7	75%
Odisha	3.3	0.1	0.2	0.6	1.1	3.0	3.4	104%
Chhattisgarh	3.3	0.4	1.1	2.1	3.2	4.1	4.1	125%
Uttar Pradesh	2.9	0.1	0.4	1.1	1.7	3.1	3.2	112%
West Bengal	1.7	-	-	0.0	0.0	1.1	1.3	77%
Madhya Pradesh	1.1	-	0.0	0.1	0.5	1.4	1.4	127%
Tamil Nadu	1.0	0.1	0.1	0.1	0.1	0.6	1.1	107%
Bihar	0.8	-	-	0.0	0.0	0.3	0.8	97%
Kerala	0.3	0.1	0.1	0.1	0.1	0.1	0.3	78%
Maharashtra	0.2	0.0	0.1	0.1	0.2	0.3	0.4	234%
Jharkhand	0.1	-	-	0.0	0.0	0.1	0.1	99%
Uttarakhand	0.0	0.2	0.3	0.4	0.4	0.5	0.5	1216%
Others					0.0	0.1		
Total - Rice	**38.2**	**17.3**	**19.4**	**23.0**	**26.3**	**35.0**	**37.5**	92%
Procured as % of FY18 procurement		**45.3%**	**50.9%**	**60.3%**	**68.8%**	**91.6%**	**98.1%**	

Source: FCI, JM Financial

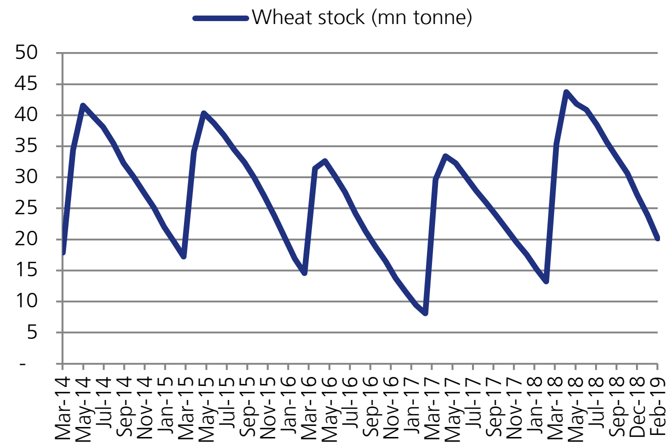
We also note that the current stock levels for rice and wheat are higher than last year and any sale by the government in the open market can put further pressure on prices, particularly on rice.

Exhibit 36. FCI stock data – Rice stock level up by 22% YoY in end Feb'19; Sale in open market by govt. to keep a check on prices



Source: CMIE, JM Financial

Exhibit 37. Wheat stock level up 33% YoY in end Feb'19, could see further increase with upcoming procurement



Source: CMIE, JM Financial

Agri-marketing gets low focus from policy makers

Our visits to various agri-mandis in Mar'19 indicated no material change in the infrastructure or the processes for procurement. This means the procurement for crops other than wheat (done under food subsidy by PDS) would remain ad-hoc and sporadic in the upcoming Rabi crop season. **Hence, any immediate recovery of crop prices from high procurement is not expected.**

eNAM remains a medium-term initiative, not aiding farm income at present

eNAM (electronic National Agriculture Marketing) has been a key initiative towards improving agri-marketing, (launched in Apr'16) to broadbase the agri crop sales and improve transparency in the process. In terms of reach across states, 585 mandis have been brought on the platform across 16 states and 2 union territories (UT), which makes for a good base.

However, our visits and interactions across agri-mandi's indicates that eNAM remains a medium-term initiative and is still less than 5% of the total transactions undertaken on the platform. Overall, commission agents, traders and farmers are reluctant to transition to a new trading platform.

Exhibit 38. eNAM snapshot – Implemented in 18 states / UT, 15.8mn registered farmers, 12mn traders registered

S.No.	Name of state/UT	Mandis registered on Enam	% of Mandi's
1	Uttar Pradesh	100	17%
2	Gujarat	79	14%
3	Maharashtra	60	10%
4	Madhya Pradesh	58	10%
5	Haryana	54	9%
6	Telangana	47	8%
7	Rajasthan	25	4%
8	Tamil Nadu	23	4%
9	Andhra Pradesh	22	4%
10	Himachal Pradesh	19	3%
11	Jharkhand	19	3%
12	Punjab	19	3%
13	West Bengal	17	3%
14	Uttarakhand	16	3%
15	Chhattisgarh	14	2%
16	Odisha	10	2%
17	Puducherry	2	0%
18	Chandigarh	1	0%
	Total	**585**	

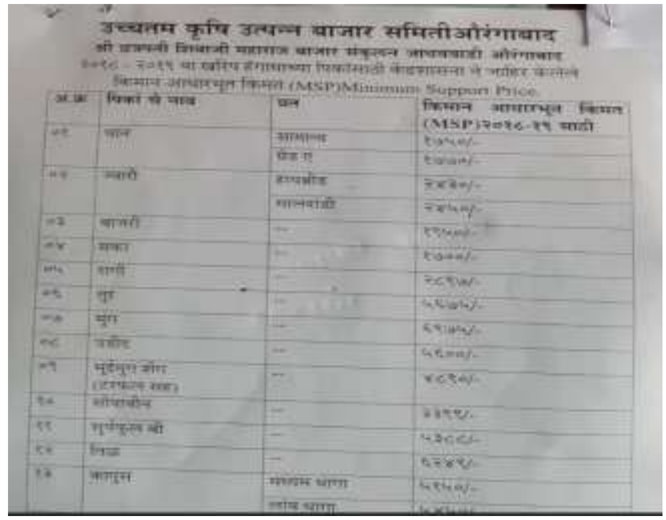
Source: eNAM, JM Financial, Note: As of Mar 31, 2019

Some of the challenges in eNAM implementation continue to be **(a)** a shift away from earlier cash-based transactions to a formal channel, **(b)** lack of infrastructure on grading / quality, **(c)** change in the traditional relationship of informal credit between the farmer, commission agent and the buyer. Our previous editions of the Rural Safari contain detailed discussions on the above points which continue to hamper the wider adoption of the scheme.

Exhibit 39. Details on eNAM in the mandi are displayed, but low adoption by traders, agents

Source: JM Financial

Exhibit 40. Similarly MSP rates are highlighted in mandis, but procurement remains lagging



Source: JM Financial

We also observed differences in agri-mandi rules which are impacting trading particularly relating to the use of cash. For example, in Aurangabad district of Maharashtra, two mandis have different rules on cash transactions – The Jadhav mandi has a cash transaction limit of INR 10,000 and rest of the amount is received in the bank account, while in the same district, Lasur Mandi has a cash transaction limit of INR 200,000.

Despite issues of transparency, a well-functioning mandi is still required for price discovery. We encountered instances of farmers selling their crop produce (onions) on roads in Sikar district, Rajasthan as the main mandi has seen frequent closures. According to the farmers, there is an additional price discount and operational challenges in taking up sales outside the mandis.

Exhibit 41. Sale of vegetables on the highways with lack of mandi – Sikar, Rajasthan

Source: JM Financial

Exhibit 42. Suryapet Mandi, Telangana – MSP is displayed for farmer information, while procurement is limited

Source: JM Financial

This brings us back to the necessity of well-functioning mandis for farmers across the country and the government's intention of revamping 22,000 grameen haats or markets (announced in the Feb'18 budget) is commendable. **We did come across few examples of new grameen haats in north Bihar constructed by private players. However, the overall progress on grameen haats in north India has been quite limited so far, as per our interactions.**

Exhibit 43. A grameen haat in Muzaffarpur, Bihar

Source: JM Financial

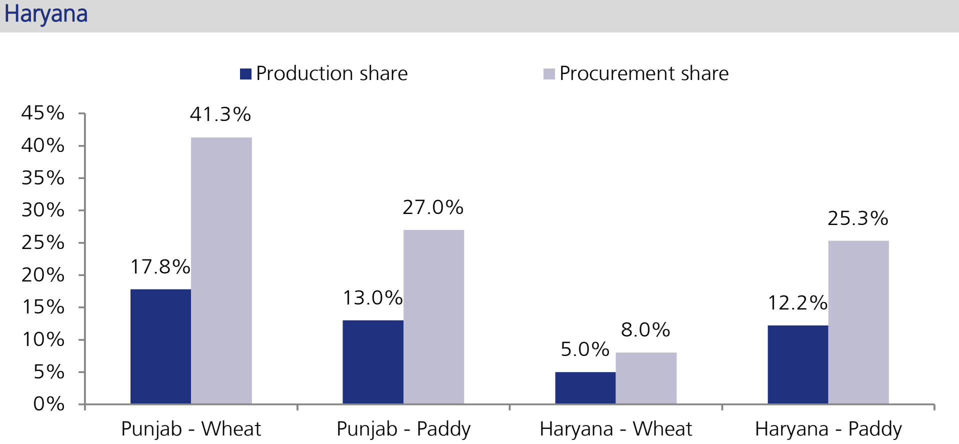
Exhibit 44. Grameen haat under construction in Bihar, aided with private participation

Source: JM Financial, Note: CSR initiative of a global agri-input MNC

Box 1: Will change in adhatiya system adversely impact procurement in Punjab & Haryana?

- According to news reports and our interactions with mandi officials in Punjab and Haryana the central government has been working towards removing the "adhatiyas" (commission agents) from the MSP based procurement of paddy and wheat and undertake procurement through the state government machinery. One of the concerns is that the "adhatiyas" act as money lenders and if the government starts paying farmers directly, their influence would reduce.
- Overall, cereal procurement in Punjab and Haryana is highly efficient with both states achieving a much higher share than their production. This was aided by the procurement mechanism run by "adhatiyas" who are responsible for verification, storage and delivery of the final output, for a charge of 2.5% of the sales value as commission.
- Ideally, though payments should go to the farmer directly, any sudden change in the current procurement mechanism is bound to be highly disruptive, given the patchy execution history of most state governments' procurement machinery. Our visits and historical data indicate that in most of the states, only the larger farmer benefits from MSP-based procurement, while smaller farmers sell to traders etc. except in Punjab and Haryana.
- We strongly believe that the existing system in Punjab and Haryana is quite efficient and the government should focus on improving the procurement machinery / infrastructure in other states, rather than changing a system that seems to be working.

Exhibit 45. Share in crop production and in crop procurement under MSP for Punjab and Haryana

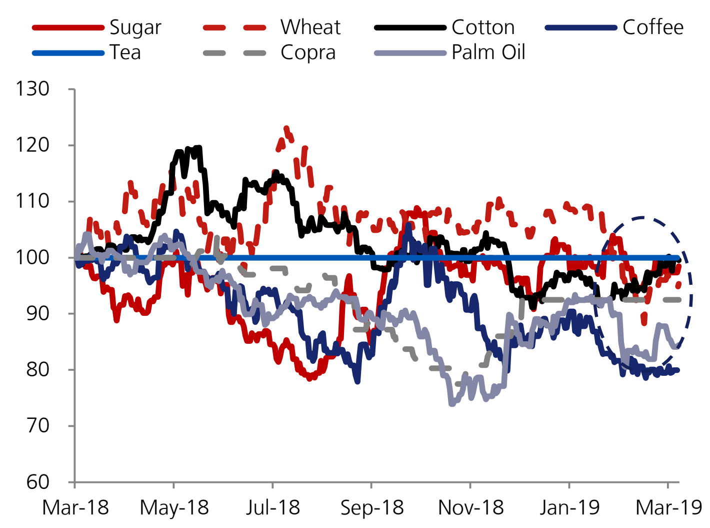


Source: CACP, JM Financial, For FY17

Global agri-prices remain lacklustre

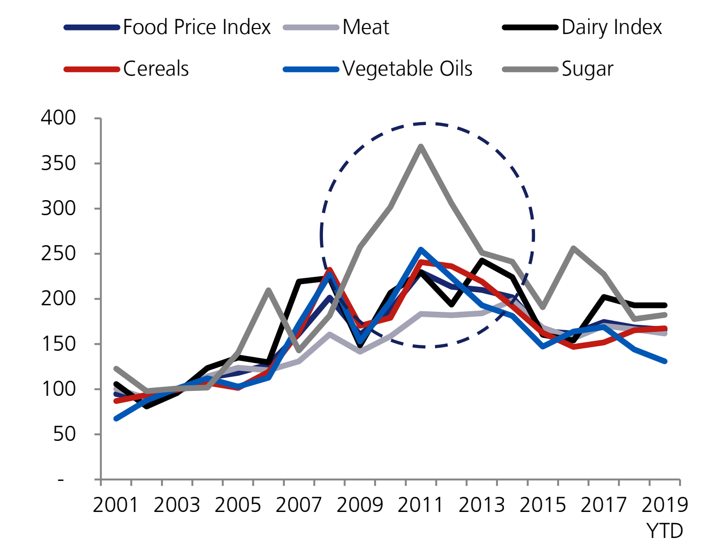
Global agri-commodity prices continue to remain soft with periodic changes in select crops. However, by and large prices remain depressed. In the section ahead, we deep dive into the fundamental reasons and believe unless there is a sharp crude price uptick or a global demand slowdown, steady crop production growth and moderating demand will keep global agri-commodity prices away from sharp spikes.

Exhibit 46.Global food prices (Last 1 year) remain lacklustre – Cotton and wheat had seen intermittent growth, but have softened in past few months



Source: Bloomberg, JM Financial

Exhibit 47. FAO Food Price Index – Most sub-indices continue to remain stable



Source: FAO, JM Financial

Exhibit 48. Global production and trade forecast – Indicates prices can remain firm for wheat & cotton; increase in production of most other major crops in 2018 / 19

Crops	Production		Ending Stocks	
	2017/18	2018/19	2017/18	2018/19
Wheat	0.9%	-4.0%	7.5%	-2.2%
Cotton	16.0%	-3.9%	0.8%	-6.1%
Rice	0.9%	1.2%	8.3%	5.5%
Coarse Cereals	-4.0%	1.5%	-3.9%	-7.8%
Oil meals	3.6%	2.0%	-3.6%	-5.5%
Corn	-4.2%	2.3%	-2.9%	-9.4%
Soyabean	3.0%	2.5%	-6.8%	-3.7%
Vegetable Oils	5.3%	2.9%	5.9%	-4.6%
Oilseeds	0.9%	2.9%	5.4%	6.8%

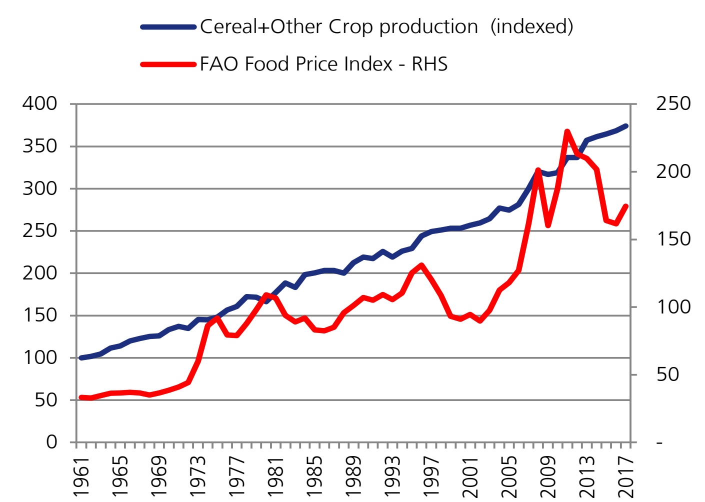
Source: USDA, JM Financial, Note: Based on Apr'19 forecasts

The global backdrop of agri-commodity pricing remains mixed, with growth expected in the cereal prices, but remaining low for most other commodities, given a healthy crop production outlook.

Longer term - Global agri-commodity prices to remain lacklustre

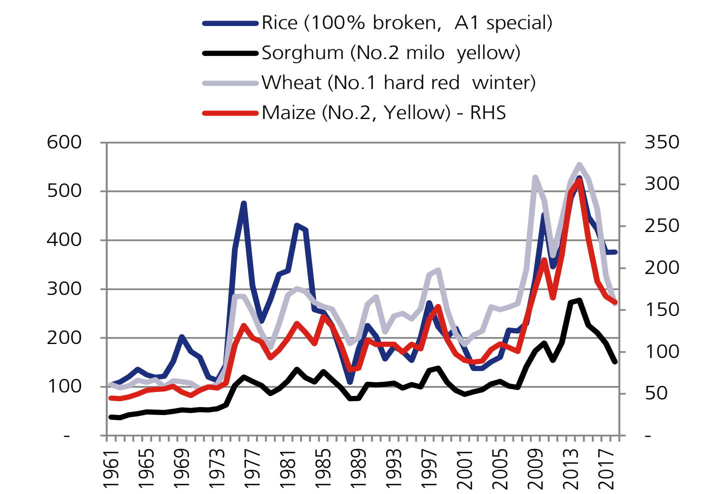
We have analysed various factors influencing global agri-commodity prices to identify if they also follow super cycles like crude oil or other commodities. Overall the data indicates that crop production has largely continued to be steady on a growing trajectory, clearly showing that YoY change in production is **not a significant influencing factor.**

Exhibit 49. Global Food Price Index and crop production (indexed) – Not a very significant factor



Source: FAO, JM Financial

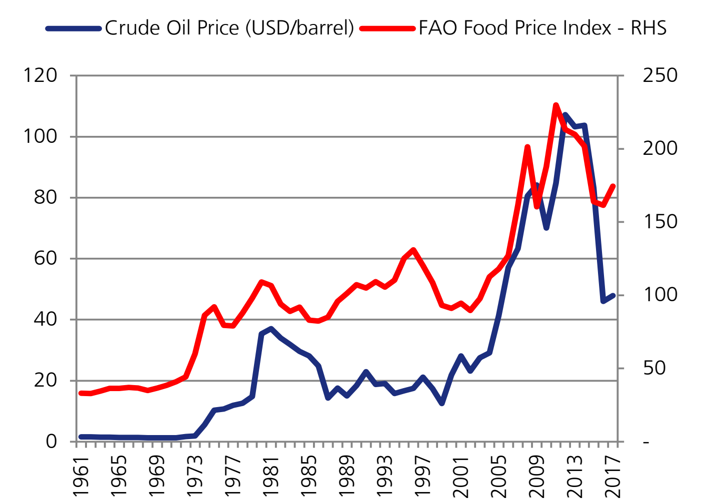
Exhibit 50. Prices across crops have seen simultaneous surge / declines in the past



Source: FAO, JM Financial

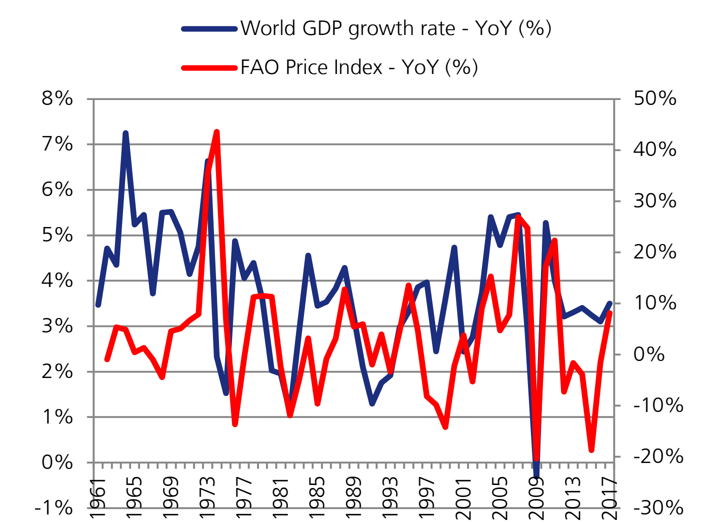
Rise in crude oil prices drives up farming input costs (fertilisers, insecticides), global shipping costs and also leads to diversion of selected crops for use of bio-fuels. All this drives up the overall agri-commodity prices.

Exhibit 51. Crude Oil price and Food Price Index – Strong co-relation over the years



Source: FAO, Bloomberg, JM Financial

Exhibit 52. Global GDP growth and Food Price Index



Source: FAO, Bloomberg, JM Financial

Looking at the price data and production from 1961 to present, the price surges have been during 1973-75, 1979 and then a sharp rise was seen from 2004-08, in line with global crude prices. As crude prices collapsed in 2009, agri prices also came down, but rose again as crude prices rose. **Post 2014, with the decline in crude prices, global agri-commodity prices have remained depressed.**

We also studied the link between global GDP growth rates and agri food prices, but found that the relation is not as direct as with crude oil.

As mentioned earlier, we can clearly note the impact of crude prices on cost inflation for farming. As per available data on production cost (up to 2017 annuals), the operating cost has been declining across crops from 2014 in line with the weakening crude oil prices. **The attached table has data on the cost trend of a few crops over 1998-2004, 2004-14, 2014-17 and it clearly indicates a decline in the last three years and a pick-up during the high commodity price growth period of 2004-14.**

Exhibit 53. Operating cost growth (CAGR %)

Crops	1998-2004	2004-2014	2014-2017
Wheat	3.6%	6.0%	-5.4%
Corn	1.8%	7.3%	-2.1%
Soyabeans	0.5%	8.0%	-3.7%
Cotton	5.3%	5.1%	-6.6%
Total Cost			
Wheat	**2.4%**	**5.2%**	**-1.5%**
Corn	0.7%	6.2%	-0.4%
Soyabeans	0.1%	6.5%	-1.7%
Cotton	1.4%	5.2%	-4.6%

Source: FAO, JM Financial

Expect a benign global agri-pricing scenario over the medium term

Exhibit 54. Forecast of global food demand – Expect a slowing world demand growth in 2018-27 vs. 2008-17

Crop Category	Demand growth CAGR	Demand growth projected	Driven by population Growth (%)		Per capita demand growth (food & other uses)	
	2008-17	2018-27	2008-17	2018-27	2008-17	2018-27
Cereals	2.0%	1.1%	1.0%	0.8%	1.0%	0.3%
Meat	1.9%	1.1%	1.0%	0.8%	0.9%	0.3%
Fish	2.4%	1.0%	1.1%	1.0%	1.2%	0.1%
Fresh Dairy	2.1%	2.2%	1.0%	0.9%	1.1%	1.3%
Sugar	1.7%	1.5%	1.1%	0.9%	0.6%	0.6%
Vegetable Oil	4.5%	1.7%	1.1%	0.9%	3.4%	0.7%

Source: FAO, JM Financial, Note: 2018 Outlook

According to a study by the UN Food and Agricultural Organization (FAO) on crop-wise demand growth over the past decade (2008-17) and (2018-27), the influence of population growth is likely to be higher than per capita demand growth in the coming years. So, as the global population growth continues to slow down, and high growth is driven from lower per capita income countries of Africa, **the incremental demand for food items is likely to be lower in the next decade 2018-2027, as compared to the past.** (Source: FAO, 2018 Outlook).

Further, during 2006-16, China contributed a high share to the growth of many food commodities. For example, it accounted for 60%+ of the incremental growth in poultry, pig meat consumption driving demand in feed growth globally.

Lower diversion of food crops to bio-fuels in the last cycle

The share of crops used for bio-fuel (ethanol and biodiesel) had jumped in the 2000s driven by policy initiatives and high fuel prices. For example, the share of maize (produced in a year) used for ethanol increased from 4% in 2000 to 18% by 2011, sugarcane (10% to 20%), and vegetable oils from 1% to 13%. Overall, the rate of growth of ethanol was 10% CAGR between 2000 to 2010 and came down to 4% by 2017 (2010-2017) and is expected to now increase at 1% CAGR between 2017 to 2026.

To conclude, a healthy global crop production, lower crude prices for a longer period, no further diversion of crop for alternative fuels, and a slowdown in population growth, can let global agri-prices remain benign for long. Only <u>an upside risks to global growth or sharp increase in crude prices / shock can lead to a sustained spike in global agri prices.</u>

Feedback from JM Rural visits – Lower prices and adverse impact on crop quality leads to weakness in farm income

Exhibit 55. Crop output in irrigated fields – Paddy in Andhra Pradesh

Source: JM Financial

Exhibit 56. Crop output remains steady in Punjab

Source: JM Financial

Exhibit 57. Increased automation leading to lowering demand for manual labour – Wheat harvesting by large farmers in MP

Source: JM Financial

Exhibit 58. Unirrigated fields experience yield decline – Harvesting of gram in eastern MP

Source: JM Financial

Exhibit 59. Weak rainfall in western India – Adverse impact on yield in Maharashtra

Source: JM Financial

Exhibit 60. Unseasonal rains impact crop output – Loss of potato crop in West Bengal

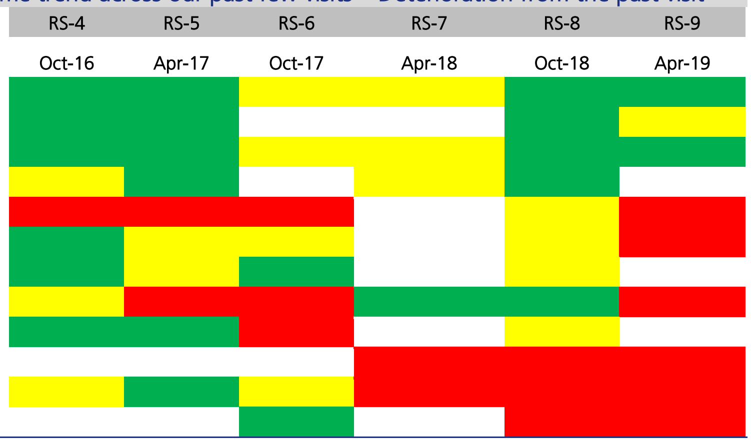
Source: JM Financial

Exhibit 61. JM Financial observation from Rural Safari IX– 10 out of 13 states will see flat to declining farm income

State	FY19 Kharif sowing - YoY (%)	FY19 Rabi Sowing YoY (%)	Rabi area/Kharif area (x)	2018 Rainfall deficit (%)	Irrigation Cover %	Farm Income - YoY (%)	Comments - Farm productivity/income
North and East India							
Haryana	4.1%	-1.7%	1.2	-9.3%	84%	↑	Wheat crop yield has been better YoY aided by a longer winter and expected realisation of MSP. Mustard, however, continues to be sold at below MSP. Expect state government to increase procurement of mustard, given that this is the year for assembly elections in the state.
Punjab	0.7%	-0.1%	1.0	7.2%	99%	↑	Wheat yield is expected to be marginally better than last year, despite some unseasonal rains. However, the realisation for previous Kharif crop has been delayed this year as per our feedback.
Uttar Pradesh	2.5%	1.3%	1.1	-8.1%	84%	↑	Wheat crop yield is expected to be stable YoY barring a few patches in between. Procurement (of paddy) remained disappointing in terms of timelines (late procurement, lack of clarity on rules) etc. and thereby realisations remain below MSP, although higher YoY. The potato output has been healthy, but weak pricing towards end of FY19 negated any benefit from higher yield. Delay in realisation to sugarcane farmers in Western UP also came up in discussions.
West Bengal	4.6%	0.3%	0.3	-18.0%	56%	⇔	Paddy (Kharif) produce continued to be sold below MSP in the state. Potato prices have come down in the past few months, adversely impacting income. In addition, there have been high incidences of potato crop failure, particularly in the non-irrigated farms. Paddy (Rabi) sowing has been very weak with a shift towards pulses in the state.
Bihar	-3.9%	-0.5%	0.8	-25.0%	57%	⇔	Rainfall has not been uniform, leading to adverse yield on non-irrigated farms. Overall, crop output would be stable. No, improvement in crop procurement and continued sale below MSP.
South India							
Andhra Pradesh	-3.6%	3.8%	0.6	-14.9%	47%	⇔	Yield of cash crop chilli is significantly down (up to 50%) driven by pest attacks, unseasonal rains and drought, while realisations have improved (c.20% YoY). Yield for cotton and gram has also been impacted by low rainfall but cotton fares better YoY (last year impacted by pink bollworms) along with higher realisations. Paddy yields have remained stable, and from input side higher agri-input costs have reduced farmer margins.
Karnataka	9.1%	-15.4%	0.5	-3.4%	35%	↓	Farm yields have been adversely impacted by patchy and weak rainfall. In addition, sustained weak pricing of fruits and vegetables has impacted farm income adversely. Plantation crops (such as coconut, arcenaut) have steady production, but prices have come down YoY.
Telangana	5.9%	-15.7%	0.3	-2.4%	47%	↓	Rice is key Rabi crop for Telangana and low water levels have led to decline of 16% YoY in sowing. Prices of pulses and oilseeds have been below MSP leading to adverse impact on farm income.
Tamil Nadu	-4.1%	-8.8%	1.5	-8.4%	57%	↓	The crops in northern and southern regions of the state have been adversely impacted because of lack of rain and adverse impact from cyclone Gaja (Nov'18). Only the areas with water from Kaveri have seen stable yield this year.
Central and West India							
Madhya Pradesh	3.0%	4.8%	0.9	-8.8%	61%	⇔	A colder than usual winter has adversely impacted yield of gram (pulse) and also the wheat crop at multiple locations. But overall, wheat output is likely to be stable in the state. Delayed price realisation on soyabean (Kharif crop), weak vegetable prices and expected flat YoY prices for wheat would lead to overall lacklustre farm income.
Rajasthan	2.8%	3.3%	0.6	-4.8%	43%	↓	Rabi is not significant for Rajasthan, given low irrigation cover. Some areas received rainfall in early March'19 which will benefit the produce and overall, yield would be largely flattish or marginal up. The key challenge remains weak pricing of agri-produce (spices, pulses etc.)
Maharashtra	-1.7%	-32.5%	0.3	-12.3%	20%	↓	Farm income to be sharply down in this state given weaker yield on account of water shortage. Prevailing low prices of vegetables such as onions have adversely impacted farm income.
Gujarat	-4.3%	-22.8%	0.2	-27.3%	43%	↓	A low rainfall prompted switch to crops such as cumin (takes 1/2-1/3rd water as compared to wheat), and as more farmers changed, prices have come down by 20-30% YoY. Overall income from farm products to record decline in the state.
All India	**0.7%**	**-4%**	**0.6**		**47%**	↓	**Overall down**

Source: JM Financial, Legend ↑ Strong ↑ Modest ⇔ : Flat ↓ Decline

Exhibit 62. Farm income trend across our past few visits – Deterioration from the past visit

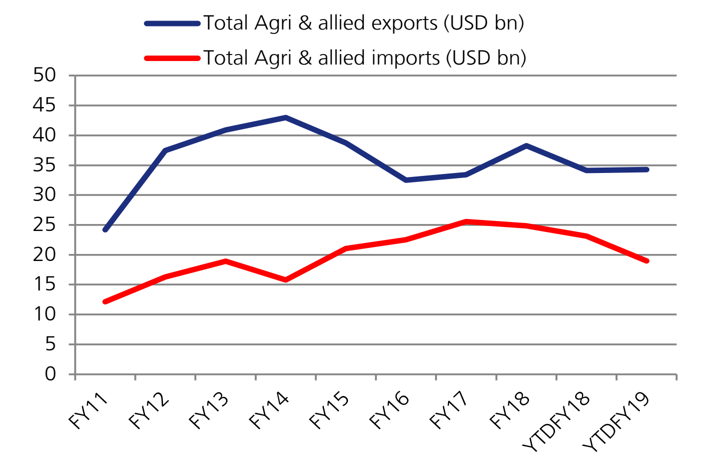


Source: JM Financial

Legend Decline Flat Modest growth High Single digit

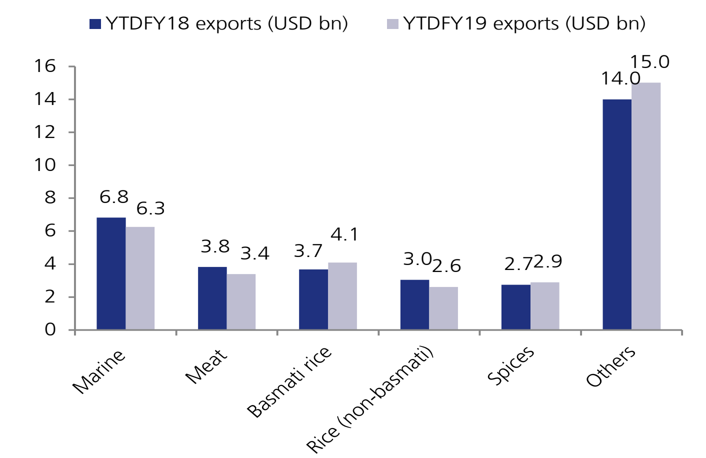
In terms of agri-exports, FY19 has turned out to be a lacklustre year with flattish YoY exports (USD). While agri-imports decreased on account of lower import of pulses and vegetable oils, **the exports of marine, meat and non-basmati rice have also been lower. There is also overall pricing pressure.**

Exhibit 63.YTD FY19 Agri exports flattish YoY, while imports are down by 19% mainly due to lower pulse and vegetable oil imports



Source: CMIE, JM Financial

Exhibit 64. YTD FY19 agri & allied exports – Decline in marine and meat export drives down export realisations



Source: CMIE, JM Financial

Food inflation to see an uptick from its benign trajectory over next few months

As we had highlighted in our detailed note on food inflation, we expect a turn-around (in food inflation) in the next three months (by May-Jun'19) driven by

(a) increase in fruits and vegetable inflation,

(b) increase in milk prices,

(c) support of sugar prices.

Initial indicators do point to hardening of vegetable prices (from Mar'19) and increase in milk procurement prices, while the pass-through to the retail consumer could be after the general elections (23May'19).

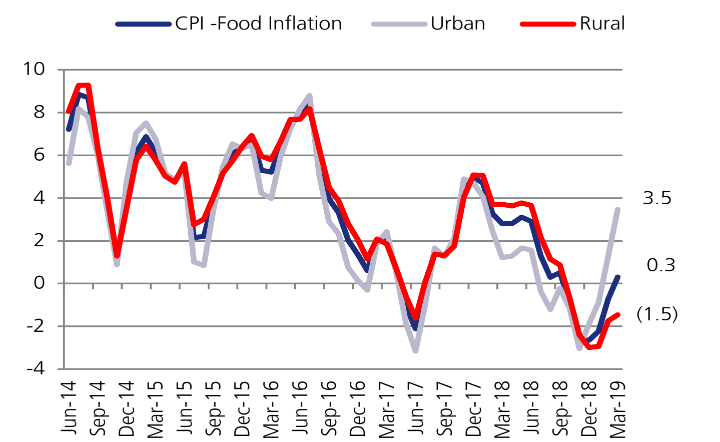
The summary table below highlights our outlook across the sub-segments of food inflation over the next few months.

Exhibit 65. Summary outlook on food inflation

	CPI-Food					
Category	Wt	FY18	FY19	Mar'19	Movement in next few months	Comments
Cereals & Products	9.7	3.5	2.1	1.3	Stable	The price of wheat is expected to remain firm and is already reflecting in CPI. The price of rice price is expected to be contained given the high global production and declining exports. The stock levels at end Feb'19 is higher by 20-30% YoY and the government is also planning to offload cereals in the open market during Apr-May'19, which can continue to put pressure on prices.
Pulses and Products	2.4	-21.0	-8.3	-2.3	Increase	Pulses procurement has been lower than expected (c.6% of the production volume by mid-Mar'19 against up to 25% of production), while high existing storage from last year's procured volume would continue to put pressure on prices. The increase in import duties in late 2017 & 2018 has finally reflected in lower import volume of pulses in the YTD FY19 that will improve the demand-supply scenario over the next few months. Still, a meaningful increase in pulse prices would be few months away.
Vegetables	6	5.9	-5.2	-1.5	Increase	Fruits and vegetables suffer from the structural weakness of low storage and weak marketing, while production continues to be ahead of population growth (4.5%CAGR between FY08-18 against 1.5% population growth, while food grain production increased at 2.3% CAGR). However, an unfavourable pricing base (from Feb-Mar'19) and weakness in Rabi sowing in a few states (Maharashtra, north Karnataka) would likely lead to price increases for a few crops (such as onions, fruits) by April-May'19.
Fruits	2.9	4.6	2.3	-5.9	Increase	Fruit prices likely to increase, but on an average lower than the increase in vegetable prices.
Sugar & Condiments	1.4	6.1	-7.0	-6.1	Increase	India's total sugar production reached a record high of 32.5 million tonnes in (Sugar Season) SS18 and is expected to be in the range of c.32 million tonnes in SS19. The domestic demand continues to be around 26 million tonnes while it is expected another 3 million tonnes will be exported. Nevertheless, we would be having over 13 million tonnes as closing stock for SS19 (50% of domestic demand). Going forward, in SS20 production is expected to inch downwards to 30 million tonnes on account of lower plantation in Maharashtra and the diversion of additional sugar into ethanol. However government efforts around fixing MSP of sugar, benefits such as soft loans / export incentives etc. are likely to arrest price decline.
Spices	2.5	-1.1	2.2	1.2	Stable	Prices expected to remain largely in similar range.
Oils & Fat	3.6	1.6	2.1	1.1	Stable	The government has reduced the import duty on palm oil (Jan'19) and given the weakness in the global palm oil prices, inflation is expected to remain at the current trajectory.
Egg, fish and meat	4	3.2	4.0	6.6	Stable	Fish and meat have seen a steady increase over the past few months and are likely to remain in similar range. Prices of eggs could see an uptick.
Milk	6.6	4.1	1.8	0.8	Increase	Similar to sugar, milk had also seen oversupply and consequent weakness in procurement prices during 2018. Aided by multiple initiatives from the government (MSP in Maharashtra, exports incentives) and likely weaker production in 1HFY19 (as per Amul), industry procurement prices are witnessing an uptick. However, the pass-through to retail prices could await the completion of general elections (results- 23May'19)
CPI – Food inflation	**39.1**	**1.8**	**0.1**	**0.3**	**4.0-4.5**	

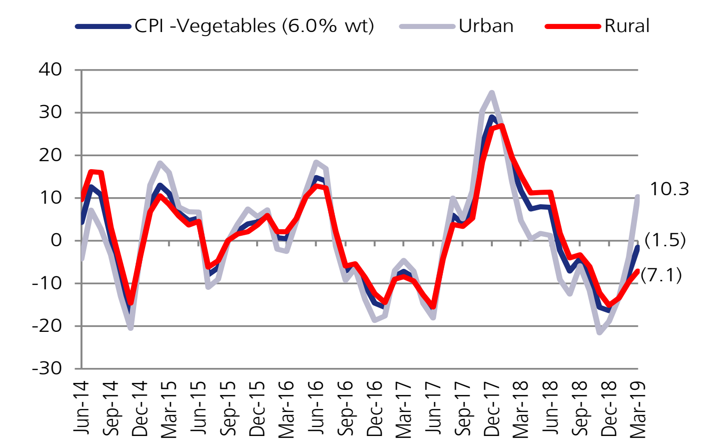
Source: CMIE, JM Financial

Exhibit 66.CPI- Food inflation (39% wt) – Food inflation in urban has seen sharp uptick, rural continues to be in deflation



Source: CMIE, JM Financial

Exhibit 67. CPI – Vegetable inflation (6% wt) – Expect uptick in vegetable prices post a weak output in western India



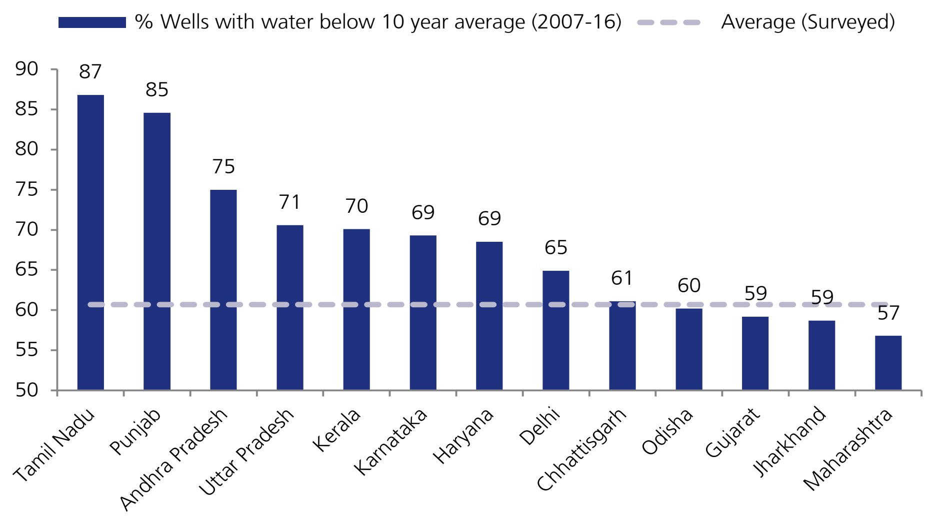
Source: CMIE, JM Financial

Medium-term concern - India's depleting water level

Despite surface water forming more than two-thirds of the total usable water in the country, dependence on groundwater for agricultural activities is 60%, while 85% and 50% of the total drinking water requirements in rural and urban regions are also met by groundwater. This means, around 89% of the 251 BCM groundwater extracted in the country (~60% of annual available groundwater) is used for irrigation purposes (well above the global average of 38%).

Consequently, India's ground water levels have seen significant YoY depletion (according to one estimate, annual groundwater depletion in India ranges between 122-199 BCM). A pre-monsoon study done by Central Ground Water Board (CGWB) in 2017 indicated that water levels have fallen below the 10-year average in more than 60% of the wells in the surveyed states. **If the current depletion levels were to sustain, per capita water availability in India in 2050 will drop to 22% of the current availability.**

Exhibit 68. Water level depletion in a CGWB survey (2017)



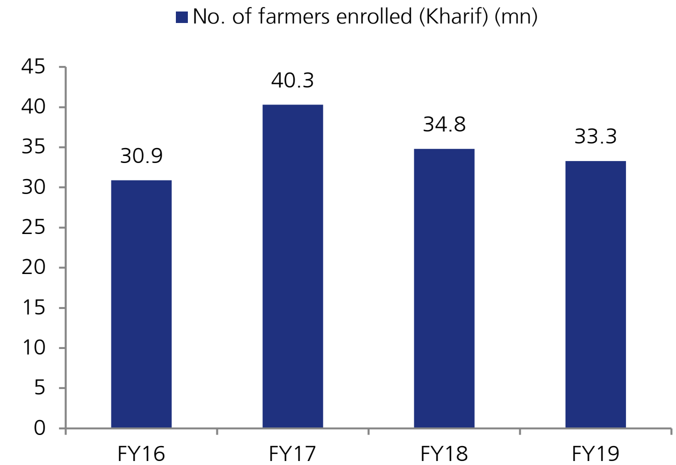
Source: CGWB, JM Financial

The increasing risks from water and also from rainfall necessitate expansion of the crop insurance scheme.

Crop insurance continues to expand, still need to spread awareness on details

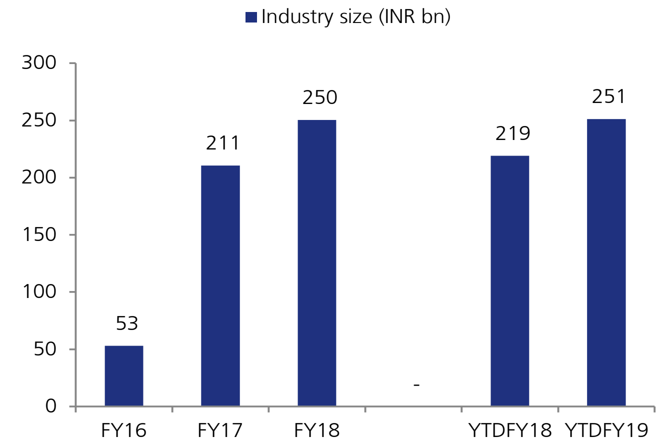
The implementation of PMFBY (Kharif 2016, FY17) has led to a significant expansion of the crop insurance programme. The premium (limited to 1.5-2% of sum assured for food grains / oilseeds and 5% for commercial crops for a farmer) jumped 4x between FY16 to FY17 (INR 211 billion) and grew by a further 19% YoY in FY18 to INR 250 billion. However, the uptake has seen volatility and YTD FY19 (Apr'18-Feb'19), the growth is 14.7% YoY. **In terms of farmer enrolment, it went up from 31 million to 40 million in FY17, but has declined c.20% to 33 million in FY19 (Kharif).**

Exhibit 69. Crop insurance (PMFBY) – Enrolment trend has not been encouraging, FY19 farmers enrolled down by 17% from FY17 levels



Source: PIB, JM Financial

Exhibit 70. Industry (premiums) growth slightly weaker from the past year's trajectory – YTDFY19 up by 14.7% YoY against 18% YoY growth in FY18



Source: IRDAI, JM Financial, Note: YTDFY19 (Apr'18-Feb'19)

Overall, the feedback from farmers remains mixed with

(a) Delay in receiving payments and

(b) Lack of clarity on filing of claims, coming out as the main areas obstructing expansion.

Over the longer term, crop insurance is an essential scheme and we would expect modifications in the scheme from policy makers to ensure increase in adoption.

Exhibit 71. MP – Encountered many instances of crop failure in gram in MP during our visit

Source: JM Financial

Exhibit 72. Interacting with farmers growing potato in West Bengal

Source: JM Financial

Exhibit 73. Progress of crop insurance industry

	Industry premium (INR bn)					Share (%)				
Company	FY16	FY17	FY18	YTDFY18	YTDFY19	FY16	FY17	FY18	YTDFY18	YTDFY19
AIC	**35**	**71**	**78**	**72**	**69**	**66%**	**34%**	**31%**	**33%**	**27%**
Specialised	**35**	**71**	**78**	**72**	**69**	**66%**	**34%**	**31%**	**33%**	**27%**
Oriental	-	9	8	7	15	-	4%	3%	3%	6%
New India	-	10	17	16	10	-	5%	7%	7%	4%
United India	0	13	14	11	10	0.00	6%	6%	5%	4%
National	-	8	14	8	4	-	4%	6%	4%	1%
Public Sector Players	**0**	**41**	**53**	**42**	**39**	**0%**	**19%**	**21%**	**19%**	**15%**
ICICI-Lombard	6	22	24	23	25	11%	10%	9%	11%	10%
HDFC ERGO	2	20	22	20	19	3%	10%	9%	9%	8%
IFFCO-Tokio	-	13	11	6	16	0%	6%	4%	3%	6%
Universal Sompo	2	5	12	8	17	4%	2%	5%	4%	7%
Reliance	1	11	12	11	13	2%	5%	5%	5%	5%
SBI	1	3	7	6	12	2%	1%	3%	3%	5%
Tata-AIG	1	4	4	4	11	1%	2%	2%	2%	4%
Bajaj Allianz	4	14	18	18	14	7%	7%	7%	8%	5%
Bharti AXA	-	-	4	3	5	0%	0%	2%	1%	2%
Royal Sundaram	-	-	0	0	4	0%	0%	0%	0%	1%
Cholamandalam	1	3	5	5	4	3%	1%	2%	2%	2%
Future Generali	0	2	(0)	(0)	4	1%	1%	0%	0%	1%
Shriram	-	2	(0)	-	-	0%	1%	0%	0%	0%
Private Sector Players	**18**	**99**	**119**	**105**	**143**	**34%**	**47%**	**48%**	**48%**	**57%**
Total Industry	**53**	**211**	**250**	**219**	**251**					

Source: IRDAI, JM Financial, Note- YTDFY19 refers to Apr'18-Feb'19 period

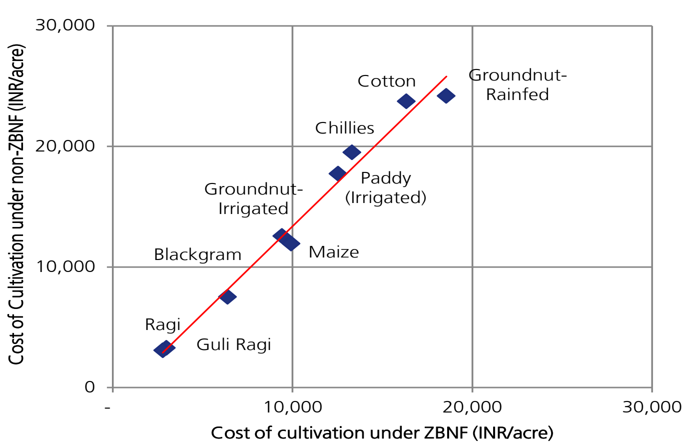
In terms of the market, Agriculture Insurance Corporation (AIC) has seen its share declining from 34% levels in FY17, to 27% in FY19. The share of private players has seen expansion from 47% to 57% in FY19. Among the players, Universal-Sompo, SBI, Tata AIG, Bharti Axa have expanded their market share.

Additional agriculture-based themes

(A) Zero Budget Natural Farming (ZBNF)

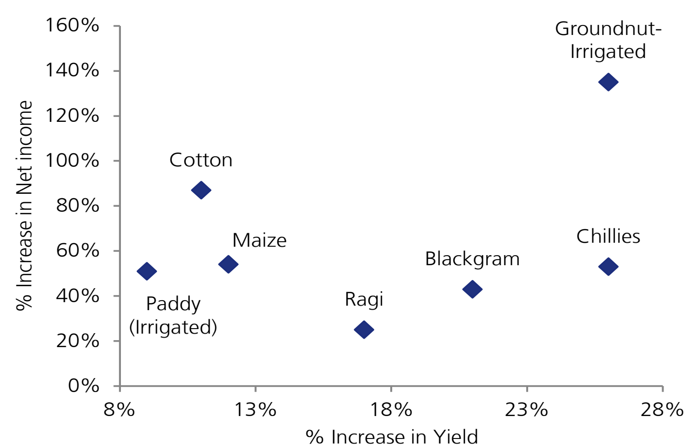
- Pioneered by Mr. Subhash Palekar, Zero Budget Natural Farming (ZBNF) is proposed as an alternative to chemical-based agriculture, in line with the principles of regenerative agriculture and agro-ecology promoted by UN-FAO (link).
- Under ZBNF, crops are grown without adding synthetic fertilisers / pesticides or other products / inputs outside the farming system while expenditure for main crops is from income from short-duration inter-crops implying a zero net expenditure.
- ZBNF focuses on livestock integration. The government of Andhra Pradesh (AP) is promoting ZBNF through the state-owned non-profit company **Rythu Sadhikara Samstha (RySS)**. It believes native cow species have higher adaptive capability to climatic changes and hence ZBNF is also climate-resilient. The government aims to reach out to c.6 million farmers and convert c.8 million hectares into natural farming fields. As per the government of AP c.35 million farmers spanning across c.33 million acres are enrolled under ZBNF as of Sep'18. Crop Cutting Experiments (CCEs) conducted by RySS gave positive results with 88% of the experiments reporting an increased net income led by decrease in cost of cultivation.

Exhibit 74. Cost of cultivation (INR/ha)



Source: APZBNF, JM Financial

Exhibit 75. Net increase in yields / net-Income



Source: APZBNF, JM Financial, Note: Steady state, based on crop cutting experiments done by state government

We met two farmers each in the states of AP and Telangana practising ZBNF. While one of the farmers cultivates it for self-consumption, the other also sells his produce and has been practising it for four crop seasons now.

Box 2: Impact of ZBNF

- Farmers are quite satisfied with the quality of produce and profitability but awareness levels are low. Upfront investments to create infrastructure is a hindrance for farmers to switch to ZBNF. While the government of AP is providing a subsidy of c.INR 21,000 / farmer towards the creation of infrastructure, farmers believe more needs to be done.
- Based on our interactions with farmers, under ZBNF yields are low in crop-2 and crop-3 as the soil regains its composure. Based on the indicative costs quoted by the farmers, we find that the net income is also lower than in agro-chemical based farming implying farmers do not have an incentive to continue ZBNF. **Although the government of AP is advising to adopt ZBNF in a phased manner, given low farm incomes, very few farmers may have the ability to sail through the first phase.**
- The farmers also indicate a better conversion ratio for paddy for ZBNF (67 kg / quintal of paddy) vs. agro-chemical based farming (c.62kg / quintal of paddy) while ZBNF also commands a premium price. Significant part of the net income differential in a ZBNF product is derived from the pricing premium of organic products over commoditised agro-chemical based produce.

Exhibit 76. Farm: agro-chemical based- dense but non-resilient

Source: JM Financial

Exhibit 77. ZBNF Farm: Not dense but resilient

Source: JM Financial

(B) Farmer Producer Company / Organisation formation should be boosted

The concept of Farmer Producer Organisations (FPO) consists of a collective of producers – especially small and marginal farmers – to form an effective alliance to collectively address the many challenges of agriculture and demanding rights such as **improved access to investment, technology, inputs and markets. It is aimed at engaging the farmer companies to procure agricultural products and sell them.** There are 844 FPOs across the country with 0.8 million farmers, with Madhya Pradesh, Karnataka and West Bengal being the states with the largest mobilisation (As on 1Oct'18).

(C) Contract Farming adoption remains limited

We also investigated contract farming over our various rural surveys, an area that has the potential to improve average farm incomes as well as reduce the price and volume offtake concerns for an average farmer.

Under contract farming, bipartite agreements are made between the farmer and the company; the latter contributes directly to the management of the farm through input supply as well as technical guidance and markets the produce. Our interactions indicated that guidelines and regulations need to be strengthened for increased adoption of contract farming in India and that there is a need for wider information dissemination of the new model contract law.

We also saw initiatives undertaken by a few companies that have formed long-term relationships with the farming community around their area of operations and are enabling farmers to generate higher incomes.

Non-farm income on a weak trajectory

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

Non-farm income has been supportive earlier but we could clearly observe a weakening of economic activity across regions. While, there were issues of lower farm prices in some regions, we believe multiple reasons have been at play causing the soft trajectory of non-farm income. Key reasons ascribed to the softness in non-farm income have been:

(a) Formalisation of the economy impacting the MSME segment, and challenges in cash flow post lower disbursement by select NBFCs after Sep'18

(b) Regulatory / environmental driven restrictions on activities such as sand mining and brick kilns

(c) Weak real estate / construction demand, increased mechanisation impacting labour demand and depressing rural wages

(d) Caution and slower economic activity preceding the general elections

Union budget increases allocation for rural schemes by 28% YoY in FY20 led by income transfer scheme

The allocation for key rural schemes has gone up by a significant 28% YoY in FY20BE, primarily on account of implementing the income transfer scheme – The PM KISAN scheme entails transfer of INR 6,000 per marginal and small farmer and would benefit c120 million farmer households. The scheme is effective from 1Dec'18 and during FY19, INR 2,000 / farmer would be transferred; INR 200 billion has been allocated in FY19RE.

Exhibit 78. Key schemes relating to rural India – Allocation up by 28% YoY in FY20BE driven by the income support scheme

Schemes – Amount in INR bn	FY18	FY19BE	FY19RE	FY20BE
Mahatma Gandhi National Rural Employment Guarantee Program	552	550	611	600
National Health Mission - Rural	262	243	252	258
Pradhan Mantri Gram Sadak Yojna	169	190	155	190
Pradhan Mantri Awas Yojna (PMAY) - Rural	226	210	199	190
Interest Subsidy for Short Term Credit to Farmers	130	150	150	180
Crop Insurance Scheme	94	130	130	140
Green Revolution	111	139	118	126
Swachh Bharat Mission - Rural	167	153	145	100
Pradhan Mantri Krishi Sinchai Yojna	66	94	83	95
National Social Assistance Progam	87	100	89	92
National Livelihood Mission - Ajeevika (Rural)	43	58	58	90
National Rural Drinking Water Mission	70	70	55	82
Deen Dayal Upadhyaya Gram Jyoti Yojna	50	38	38	41
Market Intervention Scheme and Price Support Scheme (MIS-PSS)	7	2	20	30
LPG Connection to Poor Households	23	32	32	27
White Revolution	16	22	24	21
Procurement of Cotton by Cotton Corporation under Price Support Scheme	1	9	9	20
Price Stabilisation Fund	35	15	15	20
Pradhan Mantri Annadata Aay Sanrakshan Yojna (PM-AASHA)	-	-	14	15
Pradhan Mantri Kisan Sampada Yojana	-	13	9	11
Feedstock	11	11	11	11
Scheme for Assistance to Sugar Mills for 2018-19 season	-	-	-	10
Rashtriya Gram Swaraj Abhiyan(RGSA)	-	-	7	8
Distribution of Pulses to State / Union Territories for Welfare Schemes	-	-	6	8
Central Silk Board	5	5	6	7
Crop Science	4	8	7	7
Promotion of Agricultural Mechanization for in-situ Management of Crop Residue	-	-	6	6
Agricultural Universities and Institutions	7	7	5	6
Blue Revolution	3	6	5	6
Scheme for Creation and Maintenance of Buffer Stock of Sugar	-	-	5	6
Total Schemes	**2,139**	**2,256**	**2,262**	**2,403**
YoY (%)		**5.5%**	**5.8%**	**6.3%**
Income Support Scheme	-	-	200	750
Total Schemes+ Income Support	**2,139**	**2,256**	**2,462**	**3,153**
YoY (%)		**5.5%**	**15.1%**	**28.1%**
Food Subsidy	1,003	1,693	1,713	1,842
Total Schemes+ Subsidy	**3,142**	**3,949**	**4,175**	**4,995**
YoY (%)		**25.7%**	**32.9%**	**19.7%**

Source: Union budget, JM Financial

Rural remains focus area for states

Rural sector in the spotlight: Rural sector has always been the key focus area for the government. For states, rural spending accounts for c.2.6% of the GDP, and holds around 16% share in the total expenditure. We estimate rural spending at INR 5.5 trillion for FY20BE. With the recent price deflation and nearing state / general elections, almost 13 states have either announced or are running farmer welfare schemes, in the form of i) direct income transfer or ii) farm loan waivers, or both.

Rural spending growth at 7% YoY, moderating vs. FY19RE: Due to the YoY decline in rural spending in three states, UP, Gujarat and Chhattisgarh (which together account for c.16% share in total rural spending), overall rural spending is budgeted to moderate to 7% YoY in FY20BE vs. 33% YoY last year. **While the decline is mainly due to declining farm loan waiver allocations, ex-UP and Gujarat, states rural spending is budgeted to grow at 11% YoY vs. 38% YoY in FY19RE, driven by AP and Telangana.**

Rural capex (32% of total state budget capex) too has been strong over the past four years, at 14%. In fact, the two-year CAGR (FY18-FY20BE) also stands at a healthy 18%. In FY20BE, however, rural capex growth is budgeted to moderate to 4% YoY vs. 34% in FY19RE as 7 states have budgeted for a decline in rural capex. This was due to decline in allocation for micro irrigation projects for Gujarat, and fall in assistance (in the form of loans) to apex bank towards loan waiver scheme for Karnataka. **Ex-Karnataka, Gujarat, rural capex is projected to expand 8% YoY (vs. 39% YoY).**

Exhibit 79. Rural Spending allocation by states – 17% CAGR over FY16-20BE, moderates to 7% YoY in FY20BE

States	FY16	FY17	FY18	FY19RE	FY20BE	FY16-FY20BE
UP	316	378	618	683	630	18.9%
Maharashtra	309	370	510	600	590	17.5%
Karnataka	262	297	372	508	545	20.1%
Telangana	227	292	248	436	503	22.1%
MP	234	333	301	430	484	20.0%
AP	228	285	254	334	451	18.6%
Bihar	200	215	254	342	384	17.7%
Odisha	198	227	240	297	325	13.2%
Rajasthan	206	216	265	284	307	10.5%
Chhattisgarh	97	141	155	289	284	30.7%
Tamil Nadu	200	209	200	263	269	7.6%
Gujarat	191	192	233	285	248	6.8%
Jharkhand	90	139	129	181	203	22.6%
Punjab	92	101	102	189	193	20.2%
Kerala	95	101	94	113	160	14.0%
Haryana	69	86	97	123	134	18.2%
Total	**3,014**	**3,582**	**4,071**	**5,357**	**5,712**	**17.3%**

Source: State budget, JM Financial

Farmers of 5 states to avail additional benefit from governments income transfer schemes: In the interim budget of 2019-20, the Centre announced its direct income transfer scheme- PM Kisan Samman Nidhi (PM-KISAN), where transfer of INR 6,000 per marginal and small farmer would be granted to c.120 million farmer households.

To supplement this, 5 states have also announced similar income transfer schemes. The description of these schemes suggests that the transfer would be based on number of acres the farmer holds. However, a closer glance at the budgeted allocations reveals that barring Telangana, states have an upper limit to the transfer that can be received by these farmers.

It is interesting to note two points:

i) all states except West Bengal have announced these schemes ahead of elections, and

ii) Odisha's KALIA scheme aims to benefit landless cultivators also, scrapping the land-holding criteria, which is the key criticism of the PM-KISAN scheme. **The total allocation for these income transfer schemes stands at INR 267billion, which is almost 13bps of India's GDP. Supplemented by another INR 160 billion by Centre's PM-KISAAN (as per our calculations),** the farmers of these states will benefit the most from direct transfer schemes; i.e. by c.20bps of the GDP. These states constitute c. 21% of the total small and marginal farmers.

Exhibit 80. Direct income transfer and farm loan waiver schemes have now been announced by 13 states so far

States	Scheme	Assembly elections	Announced	FY20BE allocation (INR bn)	Comments (media/ budget speech)
Telangana	Rythu Bandhu (Direct Income transfer)	December 2018	10-05-2018	120	Providing investment support, i.e. providing INR 4,000/- per acre each season to all farmers for purchase of inputs like (1) seeds, (2) fertilisers, 3) pesticides & (4) other investments in the field operations, of farmers' choice, for the crop season. In the Budget of 2019-20, income support under Rythu Bandhu scheme was raised by INR 1,000 (to INR 5,000) per acre per season
Jharkhand	Direct income transfer: Mukhaymantri Krushi Ashirwaad Yojna	2HCY19	21-12-2018	20	Announced an INR 22.5 billion scheme to the state government. Will give INR 5,000 per acre to 22.76 lakh medium and marginal farmers of the state to double their income by 2022.
Odisha	KALIA: Krushak Assistance for Livelihood and Income Augmentation	Apr-May 2019	22-12-2018	45	Assistance from i) cultivation: INR 25,000 per farm family over 5 seasons, the assistance has been aligned to two agricultural seasons of Kharif and Rabi and shall be provided on Akshaya Tritiya and Nua Khai days, every year ii) livelihood (INR 12,500 each landless agri. households) - esp benefit SC/ST, iii) Vulnerable agri households: cultivators / landless agricultural labourers will get financial assistance of INR 10,000/- per family per year to enable them to take care of their sustenance. The vulnerable cultivators / landless agricultural labourers who are aged, having disability / disease and are vulnerable for any other reason. The scheme also includes i) Life insurance cover of INR 0.2 million at a very nominal premium of INR 330/- will be provided to all savings bank account holders aged between 18-50 years, and iii) interest-free crop loan for vulnerable landless labourers, cultivators, share croppers and agricultural families identified by gram panchayats.
West Bengal	Krishak Bandhu: Direct Income transfer	2021	31-12-2018	32	7.2 million farmers and Bhagchasis (Share cropper of the state owning agri land will be given every year an assured grant of INR 5,000 up to 1 acre of land, in two instalments. Those with land less than 1 acre, will be given grant on proportionate basis depending on the size of the land with minimum guarantee of INR 2,000 every year, in two equal instalments. Additionally, one time grant of INR 0.2 million will be given to the family of under Krishak Bondhu on the event of death.
Andhra Pradesh	Direct Income Transfer: Annadatha Sukhibhava	Apr-May 2019	05-02-2019	50	After announcement of the scheme in the budget, the state declared in early Feb'19 that total financial assistance stood at INR 10,000 per year (of which, Centre would pay INR 6,000 as per PM-KISAN), while the state contributes INR 4,000 per year for the 5.5 million farmer families in the state.
TOTAL				267	

Source: Budget documents, JM Financial; $ Budget docs awaited; #: Relevant documents unavailable; @ Not given in budget documents, but if we assume that indeed INR90bn is spent by the state, the farm loan waiver costs would surge to INR 630bn, 30bps of the GDP

Exhibit 81. Farm loan waiver over the past few years

INR bn	FY15	FY16	FY17	FY18	FY19RE	FY20BE
Uttar Pradesh	-	-	-	211	55	5
Maharashtra	-	-	-	150	68	4
Karnataka	-	-	-		65	65
Chhattisgarh					30	15
Punjab	-	-	-	3	55	30
Rajasthan	-	-	-		30	32
Andhra Pradesh	50	7	35			
Telangana	42	40	40			
Madhya Pradesh (announced INR500bn)					NA	NA
TOTAL	92	47	75	364	303	151

Source: State budgets, JM Financial, Note: The allocation for Maharashtra is interim and MP is unavailable

The progress of PM-KISAN: 17% of farmers received pay-out in initial March, up to 37% can get benefit before completion of general elections

By 7Mar'19, the Centre had transferred around INR 43.7billion (vs. budgeted INR 2,00 billion) under its direct income transfer scheme- PM Kisan Samman Nidhi (PM-KISAN), while benefitting 21.8 million farmers. Around 79% of these beneficiaries belonged to 6 states - UP, AP, Gujarat, Telangana, Tamil Nadu and Maharashtra. However, it should be noted that only 0.2% of the farmers from six states, namely, Bihar, Madhya Pradesh, Karnataka, West Bengal, Rajasthan and Chhattisgarh, that constitute 36% of total eligible beneficiaries received the required aid (exhibit below). Progress has been the highest in Gujarat, Punjab and Haryana (70%+ each) which together comprise of only 4% of the total 126 million beneficiaries.

Exhibit 82. Progress of PM-KISAN – The relatively developed and high per capita states have received payout by initial March'19

State/UT	Farmers benefited from first instalment of Kisan (mn)	No. of eligible farmers in the state (mn)	Amount received (INR bn)	State's share in total eligible farmers (%)	Share of farmers in the state receiving payout (%)
Haryana	0.8	1.1	1.7	0.9%	75%
Punjab	0.3	0.4	0.5	0.3%	73%
Gujarat	2.6	3.6	5.1	2.9%	70%
Andhra Pradesh	3.2	7.5	6.4	6.0%	43%
Uttarakhand	0.3	0.8	0.6	0.6%	37%
Assam	0.8	2.4	1.6	1.9%	34%
Uttar Pradesh	7.5	22.1	14.9	17.6%	34%
Himachal Pradesh	0.3	0.9	0.6	0.7%	32%
Telangana	1.4	5.2	2.9	4.2%	27%
J&K	0.3	1.3	0.7	1.1%	25%
Jharkhand	0.5	2.3	0.9	1.8%	20%
Tamil Nadu	1.4	7.3	2.8	5.8%	19%
Odisha	0.8	4.5	1.6	3.6%	18%
Tripura	0.1	0.6	0.1	0.4%	11%
Maharashtra	1.2	11.9	2.3	9.4%	10%
Kerala	0.3	7.5	0.7	6.0%	4%
Bihar	0.1	15.9	0.1	12.7%	0%
Chhattisgarh	0.0	3.3	0.0	2.6%	0%
Karnataka	0.0	7.0	0.0	5.6%	0%
Madhya Pradesh	-	7.6	-	6.0%	0%
West Bengal	-	7.0	-	5.5%	0%
Rajasthan	-	4.7	-	3.8%	0%
Others	0.0	0.7	0.0	0.5%	2%
Grand Total	**21.8**	**125.6**	**43.7**	**100.0%**	**17%**

Source: PIB, JM Financial, Note: As of Mar 7, 2019

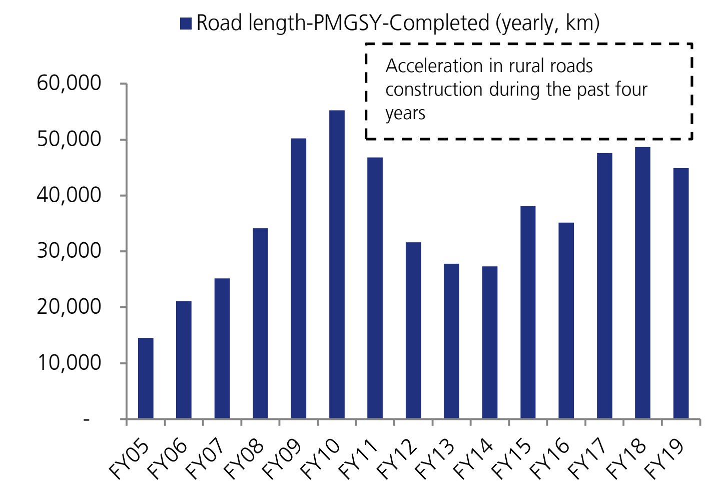
As per news reports, there are 47.4 million farmers (c.38% of total) whose data was received before the model code of conduct came in effect (12Mar'19). The government plans to make the second tranche of payments (INR 2,000 / household) to the 47.4 million farmers in Apr'19/May'19.

Steady infrastructure spending

(A) Road construction continues to be strong

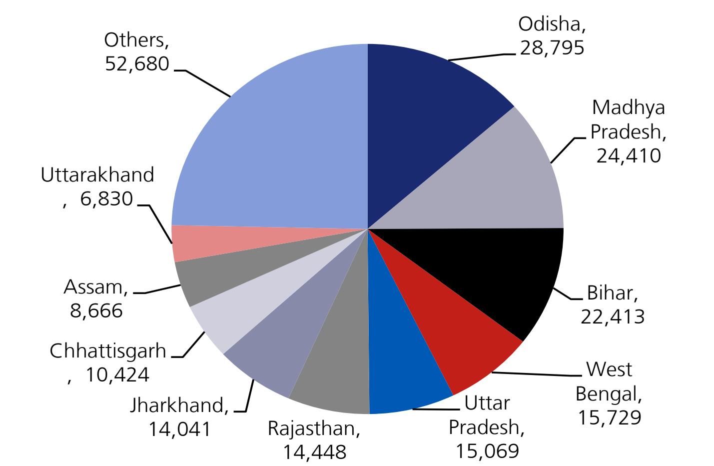
The construction of road infrastructure (rural roads) has seen a healthy jump to c.45-50,000 kms / year from 30,000 kms / year a few years ago. Among states, Odisha, Madhya Pradesh, Bihar, West Bengal, UP account for c.50% of the roads constructed over the past four years. **Improved road infrastructure is reflected in increased demand for automobiles and driving initial signs of a shift from motorcycles to scooters in rural hinterlands.**

Exhibit 83. Road construction has been healthy in the past few years



Source: PMGSY, JM Financial

Exhibit 84. State-wise construction of PMGSY roads in India – Top 5 states led by Odisha account for 50% of roads made (FY15-19)



Source: PMGSY, JM Financial

We also noted the pick-up in construction activity at the capital city of AP, Amaravati. While a few road projects and lift irrigation works etc. were completed by our last visit (Oct'18), have witnessed the execution of a few more government building like MLA quarters, employee quarters etc., underground utility works by L&T. Key construction players seen at Amaravati are - L&T, NCC, Shapoorji Pallonji. However, political risks remain and the policy of new state government of AP (results on 23May'19) would be keenly watched.

Exhibit 85. Amaravati construction progress

Source: JM Financial

Exhibit 86. Key infrastructure players at Amaravati

Source: JM Financial

(B) Rural housing completion varies significantly across states

Rural housing under PMAY-G is one of the government's flagship schemes and has been a key driver of demand for cement, building material and electrical appliances in construction areas. In terms of completion, the scheme had envisaged the construction of 10 million rural houses by Mar'19; **and had seen the completion of 7.7 million by end Mar'19**. However, 9.4 million households have received the first instalment and given that the construction of a typical house takes 3-4 months, there is a high probability of reaching the target in the next few months.

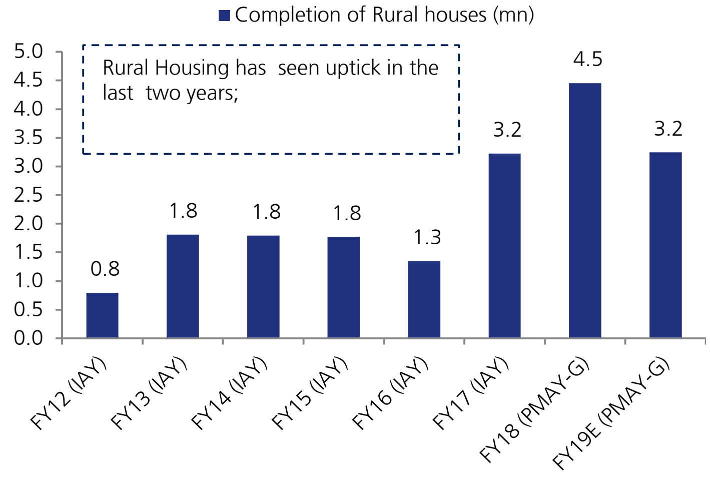
Exhibit 87. Completion of rural houses by states – Bihar continues to drag down completion averages

State	MoRD Target (mn)	Share of MoRD target (%)	Sanctions (mn)	Instalment (mn)			Completed (mn)	Progress as % of Target		
				1st	2nd	3rd		1st instalment	3rd instalment	Completed
Madhya Pradesh	1.4	14.0%	1.4	1.4	1.4	1.3	1.3	99.8%	95.5%	92.0%
West Bengal	1.4	14.0%	1.4	1.4	1.4	1.3	1.2	99.4%	92.9%	89.0%
Uttar Pradesh	1.3	12.8%	1.3	1.3	1.2	1.2	1.2	98.8%	93.3%	95.2%
Bihar	**1.2**	**11.8%**	**1.0**	**0.9**	**0.7**	**0.4**	**0.5**	**79.5%**	**37.3%**	**40.5%**
Odisha	1.0	9.9%	1.0	1.0	0.9	0.9	0.8	99.8%	86.2%	80.9%
Chhattisgarh	0.8	7.9%	0.8	0.8	0.7	0.6	0.6	99.6%	80.0%	77.1%
Rajasthan	0.7	6.9%	0.7	0.7	0.7	0.6	0.6	99.6%	85.8%	85.7%
Jharkhand	0.5	5.3%	0.5	0.5	0.5	0.4	0.4	99.5%	74.2%	80.6%
Maharashtra	0.4	4.5%	0.4	0.4	0.4	0.3	0.3	92.7%	75.0%	71.2%
Tamil Nadu	**0.3**	**3.3%**	**0.3**	**0.3**	**0.2**	**0.2**	**0.2**	**83.6%**	**50.8%**	**47.2%**
Assam	0.3	2.6%	0.2	0.2	0.2	0.2	0.2	86.1%	66.5%	60.6%
Gujarat	0.2	2.0%	0.2	0.2	0.2	0.1	0.2	97.0%	67.3%	80.7%
Karnataka	**0.1**	**1.5%**	**-**	**0.1**	**0.1**	**0.1**	**0.1**	**70.7%**	**54.4%**	**49.9%**
Andhra Pradesh	0.1	1.2%	-	0.1	0.0	0.0	0.0	49.2%	34.0%	31.7%
Kerala	0.0	0.4%	0.0	0.0	0.0	0.0	0.0	39.9%	35.9%	36.3%
Others	0.2	1.9%	0.2	0.1	0.1	0.1	0.1			
Total	10.0	100.0%	9.4	9.4	8.7	7.8	7.7	94.1%	77.9%	76.7%

Source: IAY, JM Financial, Note: As of 4Apr'19

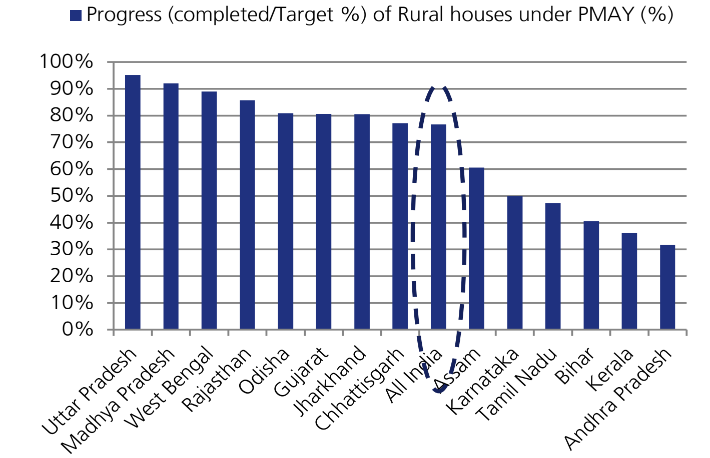
Among states, the key laggard remains Bihar in terms of completion of houses; however, compared with our last visit, we could see heavily improved dissemination of funds. Furthermore, with the sand mining ban-related challenges over, the state could see continued build-up of house construction over the next few months.

Exhibit 88. Progress of rural housing under PMAY (G) till Mar'19



Source: IAY, JM Financial

Exhibit 89. PMAY completion by states – Bihar lags in completion, given a slow start to the scheme

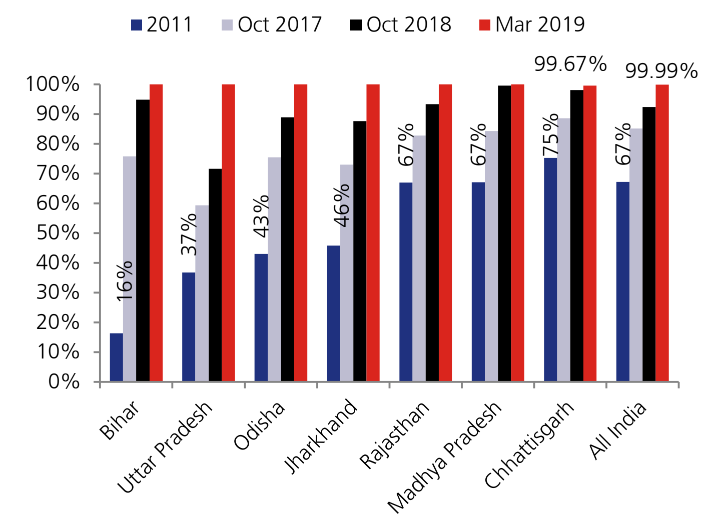


Source: JM Financial

(C) Increased electricity access benefiting north and east India

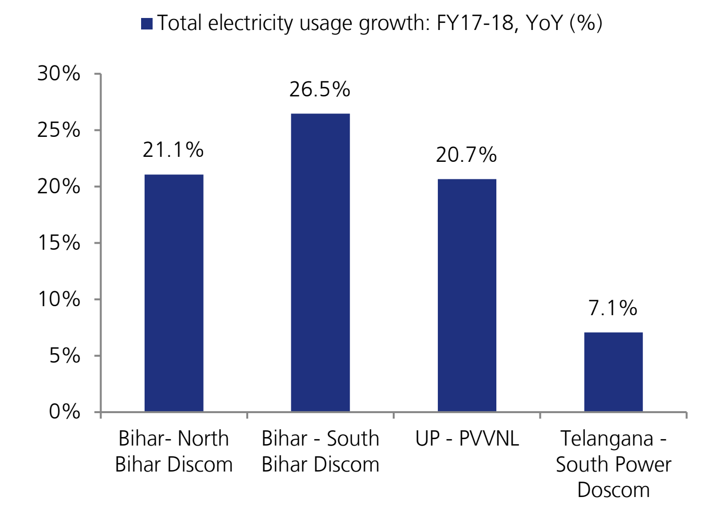
At an all-India level, 67% of households had been electrified until 2011, which improved to 85% by Oct'17 and 92% by Oct'18. The most dramatic changes have been witnessed in the state of Bihar (from 16% in 2011 to 96% in Oct'18) followed by Uttar Pradesh (UP) (37% in 2011 to 72% in Oct'18). Over the past six months, the rate of electrification further improved and overall household electrification has jumped to 99.99% across the country by Mar'19.

Exhibit 90. House-hold electricity penetration reaches 99.99%



Source: Saubhagya, JM Financial

Exhibit 91. Electricity consumption growth had been strong in the eastern states



Source: DISCOMS, JM Financial

As the electricity availability increases to 17-18 hours / day as against 7-8 hours / day earlier, people would be driven to use electrical and electronic devices and have more time to operate businesses, which aids income growth. The growth was more prominent in the states of UP and Bihar. **However, recent data also alludes to variations in the demand growth across states and could also be due to fluctuation in demand from the industrial / SME segments.**

Why has non-farm income been soft?

One unmistakable observation across our travels in Mar'19 was feedback on the decline in economic activity across regions. While there were issues of lower farm prices in some regions, we believe multiple reasons have been at play causing the soft trajectory of non-farm income. Key reasons ascribed to the softness in non-farm income have been:

(a) Formalisation of the economy impacting the MSME segment, and challenges in cash flow post lower disbursement by select NBFCs after Sep'18

(b) Regulatory / environmental-driven restrictions on activities such as sand mining and brick kilns

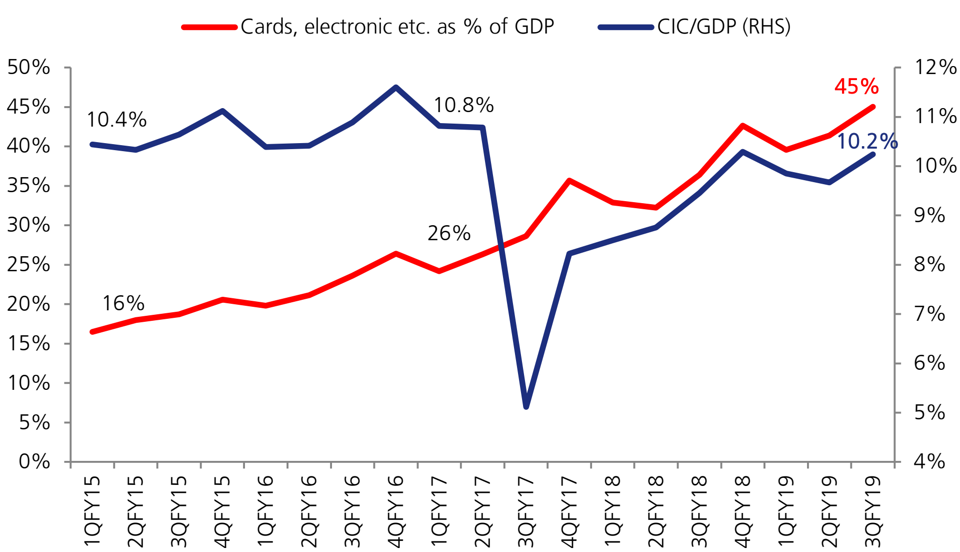
(c) Weak real estate / construction demand, increased mechanisation impacting labour demand and depressed rural wages

(d) Caution and slower economic activity preceding the general elections

(A) Challenges in formalisation – GST transition etc.

Over our travels and interactions with SMEs across the country, we continue to get feedback around operational challenges for the unorganised sector. The new taxation regime (GST, Jul'17) and the usage of e-way bills for transportation of goods which are aiding the formalisation of the economy are also leading to cash flow challenges for the informal sector in the medium-term. The cash in circulation (CIC) for the overall economy has recovered from the post-demonetization levels (Nov'16), but as a percentage of GDP is at lower level than pre-demonetization period, indicating a further shift towards formal financing channels.

Exhibit 92. Cash in circulation as % of GDP has reduced from pre-Demonetization period, indicating increased financialisation

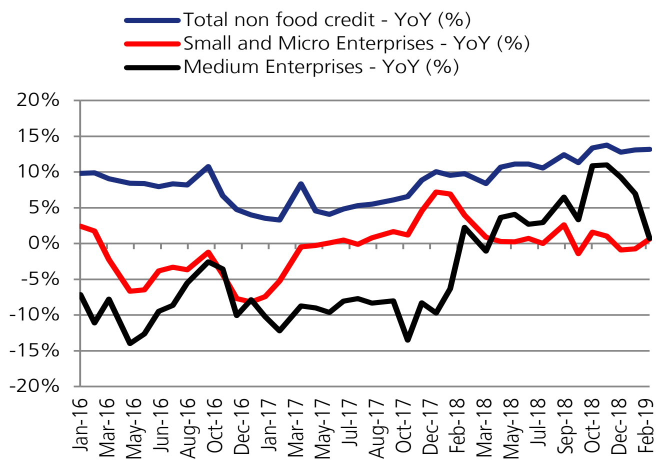


Source: CMIE, JM Financial

The credit growth for the small and medium enterprises (SMEs) has been lacklustre over the past few years and NBFCs have gained an increasing share in overall credit. A large segment of the informal / rural / SME segment has benefited from the credit availability from NBFC's. However, post the liquidity challenge after IL&FS crisis (Dec'18 quarter), disbursements across NBFC's had slowed down.

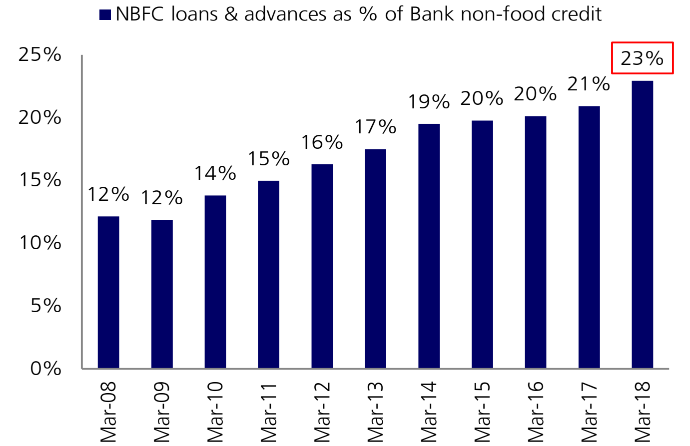
Our channel checks indicate improvement in disbursements in the Mar'19 quarter, but overall disbursements are yet to normalise. Therefore, lack of credit to the SMEs continues to affect their cash flow.

Exhibit 93. Banking credit growth (YoY %) has recovered to double digits, but credit growth to SME (manufacturing) languishes



Source: RBI, JM Financial

Exhibit 94. Over the years, NBFCs have increased share in overall credit



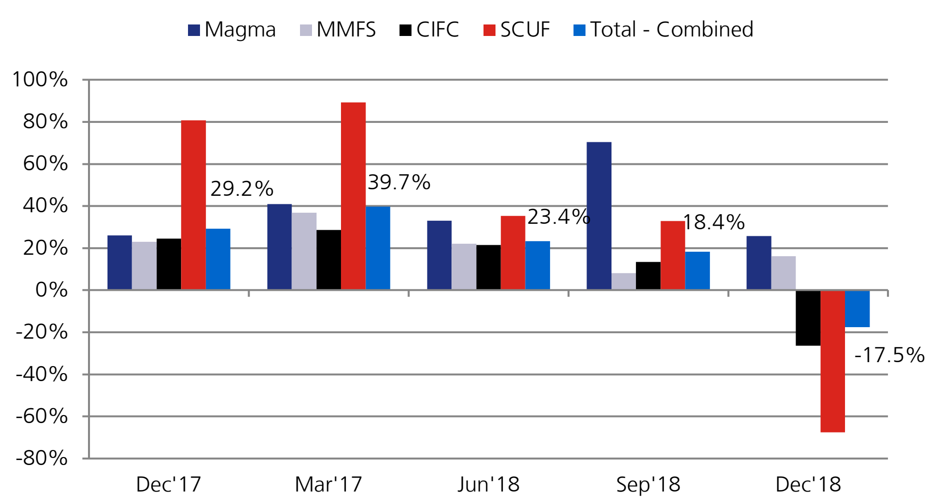
Source: RBI, JM Financial

Exhibit 95. Disbursement trend (YoY %) across NBFCs – Disbursements recorded sharp deceleration in Dec'18 quarter, have yet to normalise

Companies	Mar'16	Jun'16	Sep'16	Dec'16	Mar'16	Jun'17	Sep'17	Dec'17	Mar'17	Jun'18	Sep'18	Dec'18
Mahindra Finance	8%	8%	29%	15%	23%	16%	0%	17%	42%	35%	43%	24%
Cholamandalam	41%	30%	21%	3%	6%	6%	24%	55%	54%	45%	26%	13%
Repco	20%	3%	13%	-16%	-26%	-9%	-14%	31%	28%	28%	3%	12%
Magma	-20%	2%	-1%	-5%	-21%	-16%	-9%	15%	51%	25%	34%	10%
LICHF	33%	23%	9%	15%	15%	15%	20%	27%	15%	10%	30%	4%
PNBHF	79%	69%	32%	28%	46%	54%	45%	110%	45%	25%	14%	1%
LTFH	20%	-13%	22%	-7%	51%	89%	38%	41%	40%	3%	9%	-20%
SCUF	12%	27%	23%	10%	20%	7%	10%	23%	6%	11%	5%	-28%
SHTF	39%	16%	5%	-17%	-17%	1%	33%	55%	44%	24%	6%	-29%
Indostar									53%	304%	11%	-42%
Combined (ex of Indostar)	27.1%	15.5%	16.6%	1.3%	15.2%	25.2%	24.3%	42.0%	33.5%	18.5%	16.9%	-7.4%

Source: Company, JM Financial

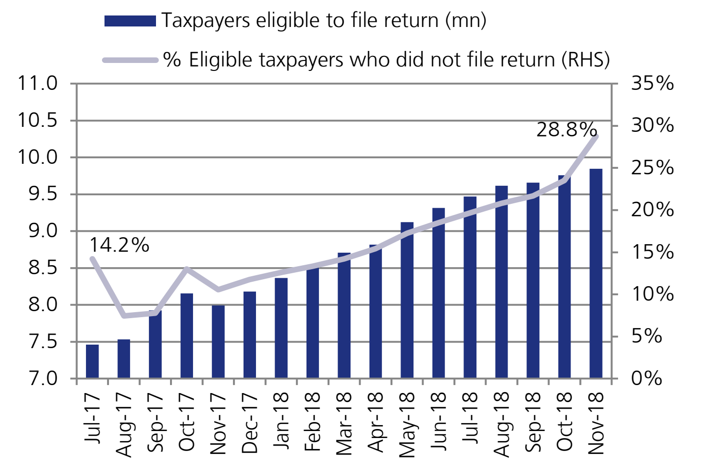
Exhibit 96. Disbursement trend (YoY %) across NBFCs – SME and small business loans – Sharp deceleration in SME and business loan disbursement in Dec'18 quarter



Source: Company, JM Financial

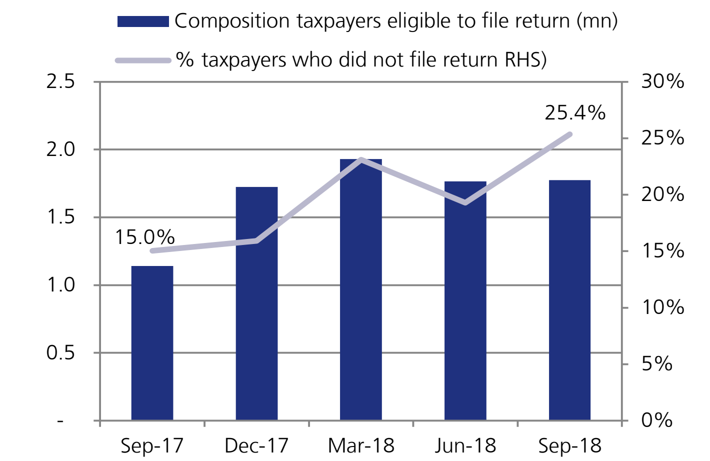
Over the past two years, we continue to get feedback on the complexity of tax filings under GST from the SME businesses. **Data indicates non-compliance of tax filing remains high (25 %+), and the concerns should be addressed immediately.**

Exhibit 97. GST returns filing trend – Share of GST taxpayers not filing return has been increasing over 2018



Source: Lok Sabha query, Jan 4, 2019, JM Financial

Exhibit 98. Composition dealer GST tax filing trend – 1/4th of eligible taxpayers have not been filing tax returns

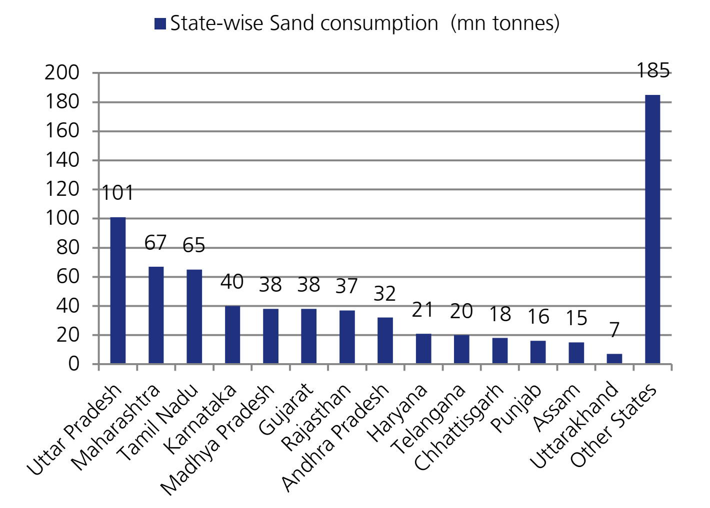


Source: Lok Sabha query, Jan 4, 2019 JM Financial

(B) Restrictions on sand mining activities

Sand mining is among the activities which have seen a marked shift in rural India driven by regulatory / political related changes. According to the Ministry of Mines, India consumed around 700 million tonnes of sand in FY17 for construction related activities. On an average the ratio of sand / cement usage is 2.5x and overall sand demand has been increasing at a 7% pa run rate.

Exhibit 99. State-wise sand consumption in the country



Source: Ministry of Mines, JM Financial, Note: FY17 estimates

Exhibit 100. Sand mining activity has either subsided or going through "formalisation" across states

Source: JM Financial

In India, the main source of sand is from river beds, in-stream mining, coastal areas and agricultural fields. Among all the sources, river beds are the most common and prevalent source of sand in the country. Sand is mined / removed from these areas either manually or through mechanical extractors. Historically, in the absence of strong regulations and regulatory frameworks, and widening supply and demand gap, unregulated and illegal sand mining from rivers was fostered in rural India. Over the years, a significant proportion of the rural populace gained from these activities as it not only provided alternative employment opportunities but also offered higher wages.

Struggling with issues such as environmental damages, growth of the sand mafia, exponential increase in sand prices and questions over the quality of sand mined, the Indian judiciary and the National Green Tribunal have passed several orders since Feb'12, that have tried to arrest the widespread prevalence of illegal sand mining across the country.

Exhibit 101. Regulatory and state policy changes have modified / reduced sand mining activity across states

Period	State	Action by	Action
Feb-19	Countrywide	Central Government	Private beach sand miners can no longer mine the coasts of India
Nov-17	Rajasthan	Supreme Court	Blanket ban on mining of sand and bajri in Rajasthan as the mines were operating without environmental clearance
Nov-17	Tamil Nadu	Chennai High Court	Ordered shut down of sand quarries in Tamil Nadu within a period of 6 months
Aug-17	Bihar	State Government	Introduction of new policy by state government to undertake sand mining and earn royalty income, to curb illegal mining
Jun-17	Uttar Pradesh	National Green Tribunal	Directed the UP government to ensure that no mechanised sand mining is carried out in the Yamuna riverbeds in Kanpur district
Apr-17	Uttar Pradesh	State Government	Revamp of the sand mining lease post the formation of new government
May-16	Uttar Pradesh	National Green Tribunal	Banned illegal extraction of sand through mechanised mining in Gonda and Faizabad districts of UP and ordered a probe into the unauthorised activities there
Mar-17	Uttarakhand	Uttarakhand High court	4-month ban on mining in the state during which no fresh lease or prospective licence for mining could be issued
May-17	Maharashtra	National Green Tribunal	Banned illegal sand mining in the middle river of Bhima, district Solapur, Maharashtra
Aug-13	Countrywide	National Green Tribunal	Restrained removal of minerals from riverbeds across the country until requisite approvals by the Ministry of Environment, Forests and Climate Change (MoEFCC) and the concerned State Level Environment Impact Assessment Authorities (SEIAA)
Feb-12	Countrywide	Supreme Court	Mining of minor minerals (which includes sand) in less than 5 hectares lease area will require environment clearance

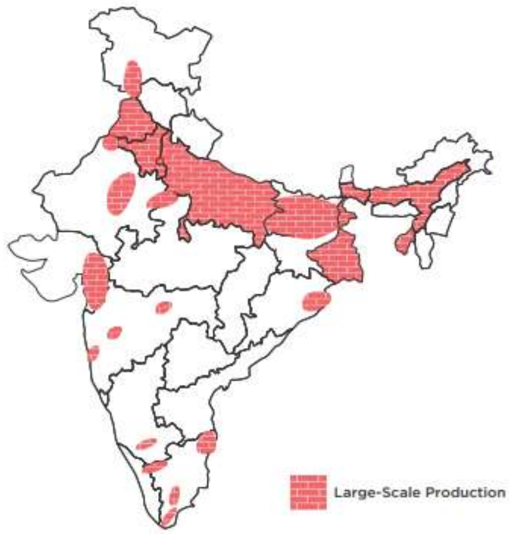
Source: Media sources, JM Financial

Moreover, in the last 2-3 years, some states have explored alternative options to river sand such as M-sand and imported sand, with a few others considering the use of sand from the overburden of coal mines. The construction activity over the last few years has also slowed, on account of increase in number of stalled real estate and infrastructure projects and rising debt related stress in the economy. **A combination of these factors has narrowed the supply-demand gap and led to a correction in river sand prices. This in turn has led to a significant decline in river sand mining activities in most parts of the country, directly affecting rural employment and wages.**

(C) Brick kiln activity hampered

India's brick kiln industry is the second largest in the world behind China. There are an estimated 200,000 brick kilns spread across the country, of which a significant proportion are located in the Delhi NCR region, producing more than 200 billion bricks per annum (13% of global production) and providing employment opportunities to around 10 million people (mostly rural populace). On the flip side, around 60% of the brick kilns in the country are either unregistered or illegal (less than 0.1% brick production in India is industrialised, compared to 40% and 80% in the UK and US, respectively), and are primarily dependent on the traditional and highly polluting fixed-chimney bull's trench kiln technology.

Exhibit 102. Major brick making zones in India



Source: Indian Ceramic, JM Financial

Exhibit 103. An operating brick kiln in western UP

Source: JM Financial

The increase in pollution caused by traditional brick production necessitated the Central Pollution Control board and the Environment Pollution (Prevention and Control) Authority for NCR (EPCA) to pass several orders aimed at curbing traditional production methods, with the ultimate orders mandating all brick kilns in the NCR region to either convert to the zigzag based technology for production or cease operations from June 30, 2018. Since then, orders were also passed by state authorities in Bihar, Maharashtra and Punjab, which emphasised on reducing the dependence on traditional way of brick production.

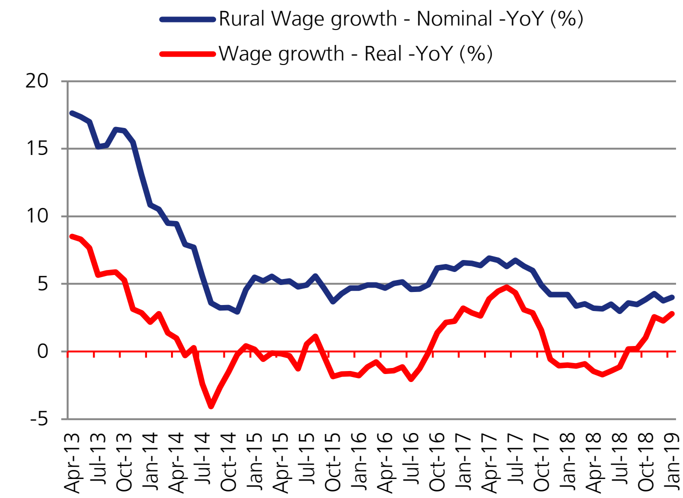
Further, the central government passed an order for mandatory conversion of red clay brick kiln units to fly ash-based bricks or blocks if they are located within 300 km off a coal or lignite-based thermal power plant. However, the procurement of top quality fly ash for brick production is presently posing multiple challenges for unit owners as fly ash is in high demand from cement companies. Moreover, bricks produced using fly ash technology are marginally costlier than the conventional bricks and hence haven't yet gained wide spread acceptance in the market (despite other cost benefits). Consequently, many fly ash-based brick-producing units are currently operating significantly below their installed capacities.

In September 2018, the Bihar government came out with an order proposing a complete ban on manufacturing of clay bricks and to use fly ash bricks as a replacement. A fallout of these actions / orders have led to significant losses to the owners of the brick kiln units as they had to incur a high one-time expense on the conversion. Plus, they faced a shortage of skilled labour to convert the brick kilns to zigzag technology. This has also led to complete closure of some of the traditional brick kiln units, affecting several jobs and wages in rural India.

(D) Wage growth rate languishes; MGNREGA work demand increases

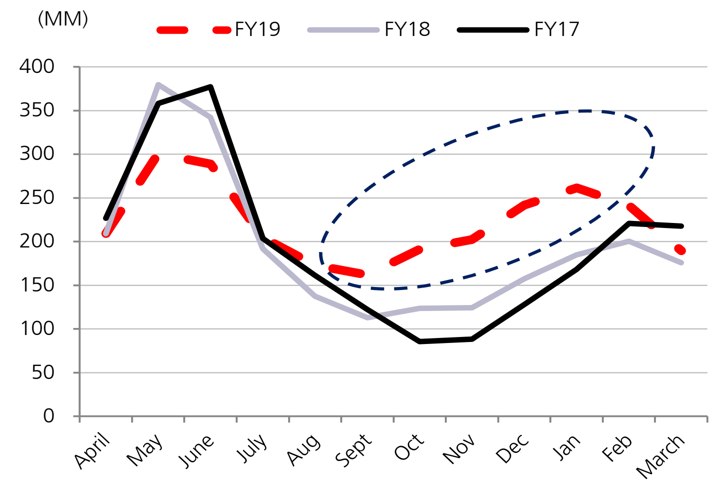
Rural wage growth remains lacklustre and has been growing at sub-5% YoY. The demand for work under Mahatma Gandhi National Rural Employment Guarantee act (MGNREGA) was flat during FY17 and FY18, but has seen a jump of 14% YoY in FY19, indicating reducing work opportunities in other areas. **Among states, Rajasthan, Madhya Pradesh and Bihar have seen a sharp growth from last year.**

Exhibit 104. Rural wage growth continues to remain lacklustre



Source: CMIE, JM Financial

Exhibit 105. MGNREGA work demand (persondays, millions) increased in FY19, indicating weakness in labour market



Source: nrega, JM Financial

Exhibit 106. MGNREGA demand by states – Overall increase of 14% YoY in FY19 against decline of 1% in FY18

	Person days (million)			YoY (%)	
State	**FY17**	**FY18**	**FY19**	**FY18/FY17**	**FY19/FY18**
West Bengal	236	313	338	33%	8%
Rajasthan	260	240	289	-8%	20%
Tamil Nadu	400	239	257	-40%	8%
Andhra Pradesh	206	212	244	3%	15%
Uttar Pradesh	158	182	213	15%	17%
Madhya Pradesh	113	162	203	44%	25%
Chhattisgarh	89	120	138	35%	15%
Bihar	86	82	123	-5%	50%
Telangana	108	115	115	6%	1%
Karnataka	91	86	105	-6%	22%
Kerala	68	62	97	-9%	57%
Maharashtra	71	83	84	16%	2%
Odisha	77	92	83	19%	-10%
Jharkhand	71	59	54	-16%	-9%
Assam	47	48	53	3%	10%
Gujarat	27	35	42	30%	18%
Others	249	209	229	-16%	10%
Total	**2,356**	**2,337**	**2,667**	**-1%**	**14%**

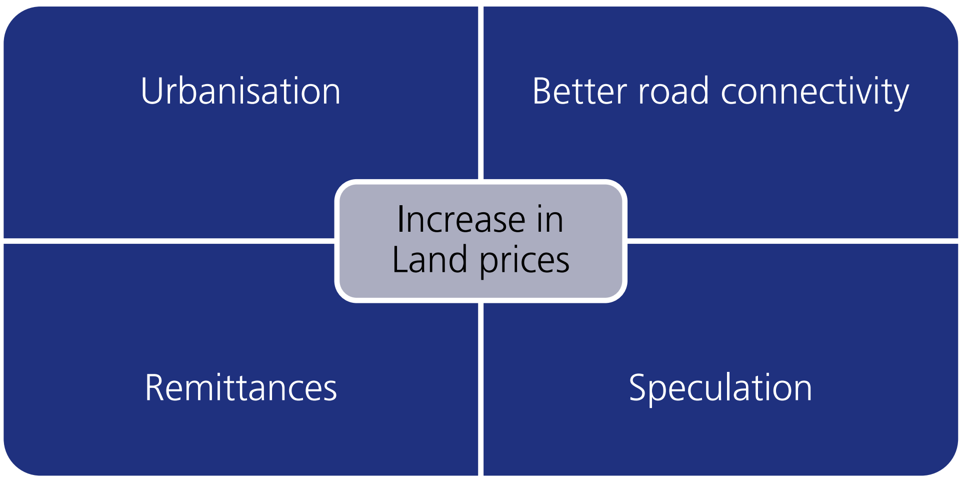
Source: nrega, JM Financial

We also received varied feedback on the implementation and payment delays of MGNREGA. Among other activities, the disruption in cattle trade over the last few years has also increased labour supply, thereby keeping wage growth in check. **In addition, the increased mechanisation of farming will continue to keep a check on labour demand and thereby rural wages could languish in the current range in the near-term.**

Wealth effect remains weak, impacting large-ticket consumption

As highlighted in our earlier reports, rural land prices that had skyrocketed by 5x-10x over the past decade on improved road connectivity, urbanisation, remittances and speculation, have been soft for the past few quarters. We are yet to encounter a sustained increase in rural land prices and barring regions adjacent to urban areas or where large infrastructure projects are coming up, we do not see much evidence of land transactions taking place as yet.

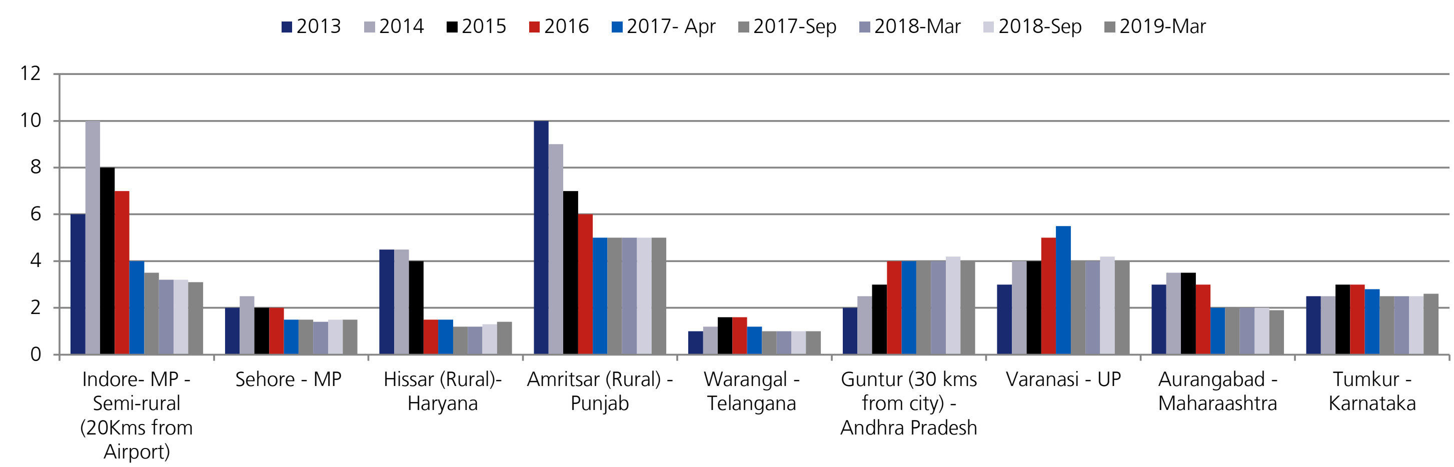
Exhibit 107. Key factors for increase in land-prices over the past decade



Source: JM Financial

Land prices have softened after Demonetization with a sharp decline in transaction volumes

Exhibit 108. Rural land prices (INR mn/acre) yet to show an uptick



Source: JM Financial

Land prices, on average, were weak after 2015, and after Demonetization (Nov'16), transaction volumes significantly eased. Measures to reduce the flow of black money, leading to restrictions on cash-based transactions, disruptions through GST implementation and lack of speculation continue to affect real estate prices across regions.

During our current visit, we continued to witness overall pressure on land prices, with significant weakness in states like Rajasthan, Gujarat and Madhya Pradesh in particular. We could see limited positive momentum in states such as Bihar, eastern UP (Mar'19).

Indian general elections – Mixed trends across states

Among the key events, the parliamentary general elections are taking place between 11Apr19 to 19May'19 and the results would be declared on 23May'19. In addition, four states (AP, Odisha, Sikkim and Arunachal Pradesh) will also elect their state governments.

The general elections will take place in seven phases and among the states Uttar Pradesh, Bihar and West Bengal will have elections on all the seven days.

Exhibit 109. Schedule of the general elections – 2019

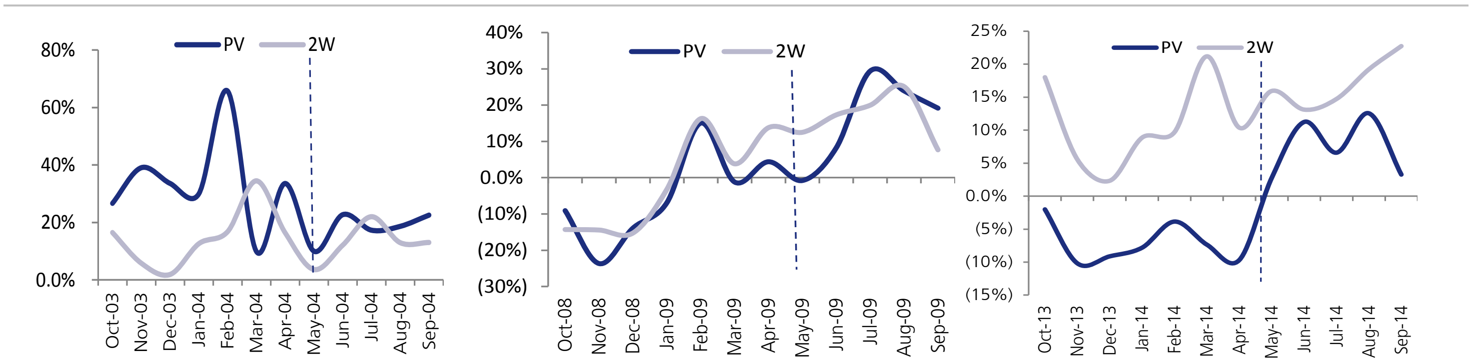
					Seats won in 2014 on seats undergoing elections		Distribution of seats by states undergoing elections					
Phase of elections	Date	Day	Total Seats	No. of states undergoing elections	BJP	INC	UP	Maharashtra	West Bengal	Bihar	Other states	Other major states and seats
1	11-Apr	Thursday	91	20	**32**	**7**	8	7	2	4	70	AP (25), Telangana (17), Uttarakhand (5), Assam (5), Odisha (4)
2	18-Apr	Thursday	97	13	**27**	**12**	8	10	3	5	71	TN (39), Karnataka (14), Odisha (5)
3	23-Apr	Tuesday	115	14	**62**	**16**	10	14	5	5	81	Gujarat (26), Kerala (20, Karnataka (14), Odisha (6), Chhattisgarh (7)
4	29-Apr	Monday	71	9	**45**	**2**	13	17	8	5	28	Rajasthan (13), MP (6)
5	6-May	Monday	51	7	**39**	**2**	14	-	7	5	25	Rajasthan (12), MP (7), Jharkhand (4)
6	12-May	Sunday	59	7	**44**	**2**	15	-	8	8	28	Haryana (10), Delhi(7),MP (7), Jharkhand (4)
7	19-May	Sunday	59	8	**33**	**3**	12	-	9	8	30	Punjab (13), MP (9), Jharkhand (3)
	Total		543		282	44	80	48	42	40		
	23-May	Thursday						Results day				

Source: Elections Commission, JM Financial

Our interactions across the states also indicated pre-election caution in consumer spending, particularly in automobiles. Looking at past data, there does appear to be acceleration in automobile sales following general elections. Also, closer to the elections, payments from government contracts / projects slows down, and could be a possible reason for lower spending.

Exhibit 110. YoY sales trend in automobiles near general elections - On an average growth has picked up post elections

Pick-up in sales post elections (2004) | Growth recovery post elections (2009) | Maintained growth trajectory (2014)

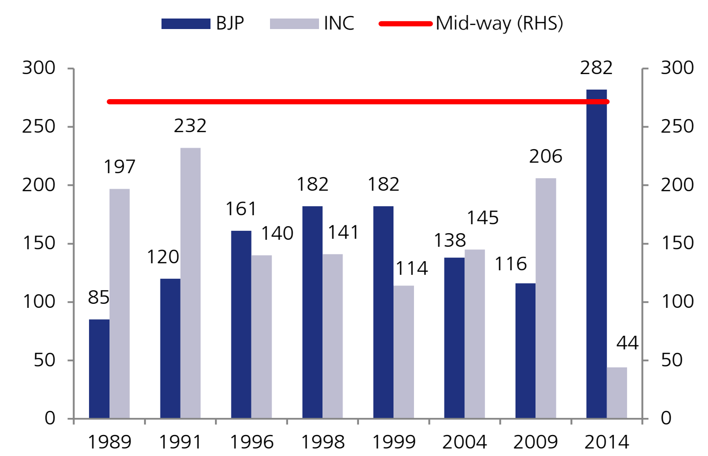


Source: SIAM, JM Financial.

In 2014, BJP recorded a surge in vote share in north, central and western India

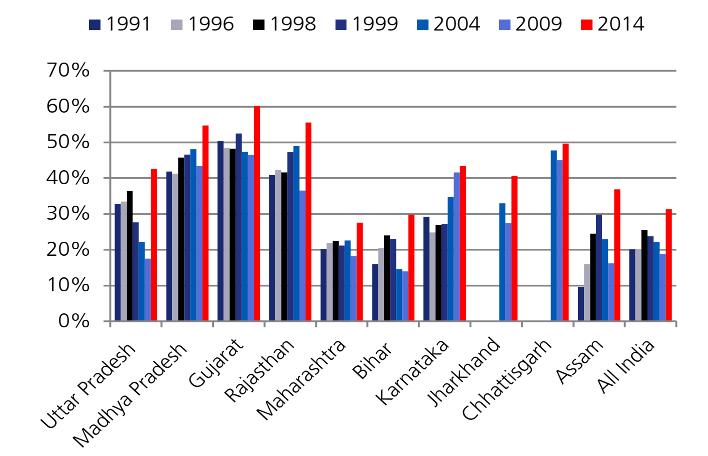
Just to recap, the Bharatiya Janata Party (BJP) won the 2014 general elections with a full majority (282 or 52% of seats out of 543 seats in Lok Sabha (LS) while National Democratic Alliance (NDA), along with its allies, got 336 seats. After 1984, this was the first year when a single party achieved 50%+ seats in the LS and formed a majority government.

Exhibit 111. Seat wins by the largest two national parties in general elections – BJP won absolute majority in 2014



Source: Election Commission, JM Financial

Exhibit 112. Lok Sabha vote share (%) by key states for BJP; Sustenance of 2014 vote share crucial in the 2019 elections



Source: Election Commission, JM Financial

In terms of seat wins, BJP more than doubled its seats in 2014 from 116 in 2009, while the other major national party Indian National Congress (INC) was reduced to 44 seats, down from 206 in 2009.

This strong win of BJP was aided by near sweep in most of north, central and western Indian states. Ten states (led by Uttar Pradesh) accounted for BJP's 240 seat wins from a total 315 seats, i.e. more than 75% of the seats in these states were bagged by BJP. **If we look at BJP's vote-share across states in 2014, the surge was massive with vote share exceeding 50% in Madhya Pradesh, Gujarat, Rajasthan, and Chhattisgarh in particular (exhibit above). BJP had won 42% of its seats with 20%+ margins and only 10% of seats with less than 5% margins.**

Exhibit 113. Seat wins of BJP across general elections from 10 states which account for 85-90% of its wins

		No. of seats in Lok Sabha - BJP							
States	Total	1989	1991	1996	1998	1999	2004	2009	2014
Uttar Pradesh	80	8	51	52	57	29	10	10	71
Madhya Pradesh*	29	27	12	27	30	29	25	16	27
Gujarat	26	12	20	16	19	20	14	15	26
Rajasthan	25	13	12	12	5	16	21	4	25
Maharashtra	48	10	5	18	4	13	13	9	23
Bihar	40	8	5	18	20	23	5	12	22
Karnataka	28	0	4	6	13	7	18	19	17
Jharkhand**	14	-	-	-	-	-	1	8	12
Chhattisgarh**	11	-	-	-	-	-	10	10	10
Assam	14	0	2	1	1	2	2	4	7
Total (10 states)	315	78	111	150	149	139	119	107	240
Total (all states)	543	85	120	161	182	182	138	116	282
10 states as % of total seats	58.0%	91.8%	92.5%	93.2%	81.9%	76.4%	86.2%	92.2%	85.1%

Source: Election Commission, JM Financial, Note:*- State divided in 2000, total 40 seats till 2000, ** - States formed in 2000

2019 general elections – Trend in rural India could determine the final outcome

Is the electoral scenario going in 2019 elections similar to 2014 or is it markedly different? To assess the voter opinion and current mood, we interacted with a wide range of people in rural India across 13 states accounting for 422 seats (78% of total). Among the states visited, 9 out of 13 states have 75%+ seats dominated by rural, clearly underscoring its importance. The key issues that they highlighted are:

(a) Concern on farm income due to crop price deflation,

(b) Slow growth in rural wages /availability of work among the labour class.

On the other hand, we received positive feedback for the central government from the beneficiaries of the rural housing (PMAY) and other schemes such as Ujjawala, which has eased women's lifestyle and personal popularity of current PM remains very high.

Among the current schemes to aid rural income, the first payment of INR 2,000 per household under PM-KISAN has been made to 17% of the total beneficiaries (out of c.120 million rural households) and it is expected that another 37% of the beneficiaries would receive the payments before the election result on 23May'19. As the model code of conduct became effective 10Mar'19, only the farmer households who had registered till then could avail the benefits. We received positive feedback from the limited number of beneficiaries encountered, while a large majority are still awaiting their inflows under the scheme.

Another major theme around the current general elections is the security issue, which has become a key consideration after the Pulwama attack (14Feb'19) and subsequent action taken by the Indian government. In a few states it appears that security issues dominate the election narrative (4 out of 13 in our visits), while in a significant number of states, local livelihood issues also rank high (exhibit below).

Exhibit 114. General elections 2019 – Rural seats by state, views on farm income and key theme going in the elections

Region and state visited under Rural Safari	Total Seats	2014 Actuals: BJP	2014 Actuals: INC	Seats by Category (no.): Rural	Seats by Category (no.): Rural Seat share	Farm income trend	Security issue dominating discourse in Rural regions?
North and East India							
Haryana	10	7	1	6	60%	↑	●
Punjab	13	6	3	9	69%	↑	◕
Uttar Pradesh	80	71	2	67	84%	↑	◔
West Bengal	42	2	4	29	69%	⇔	◔
Bihar	40	22	2	39	98%	⇔	◔
South India							
Andhra Pradesh	25	2	-	20	80%	⇔	○
Karnataka	28	17	9	18	64%	↓	●
Telangana	17	1	2	11	65%	↓	○
Tamil Nadu	39	1	-	14	36%	↓	○
Central and West India							
Madhya Pradesh	29	27	2	24	83%	⇔	◔
Rajasthan	25	25	0	21	84%	↓	◕
Maharashtra	48	41	2	27	56%	↓	◔
Gujarat	26	26	0	13	50%	↓	◕
Total	**422**	**248**	**27**	**298**	71%		
All India	**543**	**282**	**44**	**377**	69%		◑

Source: Election Commission, electionsinindia, JM Financial, Legend ↑ Strong ↑ : Modest ⇔ : Flat ↓ Decline ◕ Blue shade highlights high impact of national security issue on local economic issues

Although we don't crystal gaze the outcome of the 2019 general elections, there are some notable differences from 2014. The key differences from the current ruling party perspective is that in 2014 general elections there was a strong anti-incumbency against the erstwhile United progressive alliance (UPA-II) government and high opposition fragmentation; both these factors have changed in the 2019 general elections.

Going into the elections, pre-poll alliances have emerged between a few opposition parties in select states, such as in Uttar Pradesh, Bihar, Jharkhand, Karnataka, Tamil Nadu, which can shift the arithmetic of elections, particularly in the state of UP (discussed later).

The data on voting percentage indicates a surge in 2014 as compared to 2009, with sharp increases in the states of north, central and west India.

Exhibit 115. Voting percentage (%) in the past 3 general elections– 2014 recorded a surge of 8% points nationally, with 9 out of top 20 states having 10%+ rise in voting %

State	2004	2009	2014	2009 over 2004	2014 over 2009
Uttar Pradesh	48.5	48.2	58.7	-0.3	10.6
Maharashtra	55.4	51.0	60.5	-4.4	9.5
West Bengal	77.7	81.6	82.2	3.9	0.7
Bihar	58.0	44.7	56.5	-13.3	11.8
Tamil Nadu	61.5	73.1	74.0	11.6	0.9
Madhya Pradesh	48.4	51.3	61.7	3.0	10.4
Karnataka	66.1	59.6	67.8	-6.5	8.1
Gujarat	45.9	47.9	63.7	2.0	15.8
Andhra Pradesh	69.0	76.3	79.0	7.4	2.6
Rajasthan	49.6	48.5	63.1	-1.2	14.6
Odisha	66.1	65.4	73.9	-0.8	8.5
Kerala	71.5	73.5	74.0	2.0	0.5
Telangana	73.6	68.9	71.2	-4.7	2.2
Assam	69.2	69.5	79.8	0.3	10.3
Jharkhand	55.6	51.5	64.0	-4.1	12.5
Punjab	61.7	69.8	70.7	8.1	0.9
Chhattisgarh	52.4	55.4	69.5	3.0	14.1
Haryana	66.2	67.4	71.5	1.2	4.1
NCT OF Delhi	49.1	52.0	65.2	3.0	13.2
Jammu & Kashmir	38.7	43.4	50.7	4.7	7.3
Other states (ex of top 20)	60.2	60.9	69.1	0.7	8.2
India	**58.1**	**58.2**	**66.4**	**0.1**	**8.2**

Source: Election Commission, JM Financial, Note: Simple average of voter percentages by constituency

Box 3: Formation of SP+BSP+RLD alliance in state of UP makes the arithmetic different from 2014

- Among the states undergoing elections, the outcome in UP would be the most keenly watched – this state accounts for 80 seats or 16% of the total, and 25% for BJP with 71 seats.
- The key change that has occurred in UP from the previous general election is the alliance between Samajwadi Party (SP), Bahujan Samaj Party (BSP) and also Rashtriya Lok Dal (RLD), erstwhile rivals. As a result, the election in the state which was a contest among four players in 2014 has now become a contest between three players – BJP and its alliance, Mahagathbandhan (SP+BSP+RLD) and INC. Given the limited influence of INC in the state, the contest is effectively bipolar for a large majority (more than 2/3rds) of seats.
- To assess the impact of opposition alliance on BJP's tally in the state, we have considered a hypothetical scenario with the presence of same alliance in 2014. Based on the vote-share, we find that BJP and allies could have seen a decline of 37 seats from their combined tally of 73.
- In case BJP and its allies are able to gain a 2% higher vote share, the loss could decline to 28 seats and if they are able to gain 5% vote share, then the loss would be limited to 14 seats.

Exhibit 116. Example to study impact from alliance on UP general election results – If the SP+BSP alliance was present in 2014; how the UP results would have changed

Scenario	BJP + AD	SP + BSP + RLD	INC
5% vote share gain for BJP	-14	14	-
2% vote share gain for BJP	-28	28	-
2014 Results if SP+BSP+RLD alliance was there	-37	37	-
2% vote share loss for BJP	-41	41	-
5% vote share loss for BJP	-55	52	3

Source: Election Commission, JM Financial

- Our multiple visits to the state indicates (a) Strong recall of prime minister Narendra Modi in the state, particularly in the urban and semi-urban regions, (b) Relatively smooth functioning of the SP+BSP+RLD alliance on ground, (c) Low to moderate impact of the presence of INC in the state, even after the efforts from Priyanka Gandhi. However, the issues from stray cattle grazing, crop price deflation and overall slackness in SME-based businesses does figure in the electoral discussions of the state.

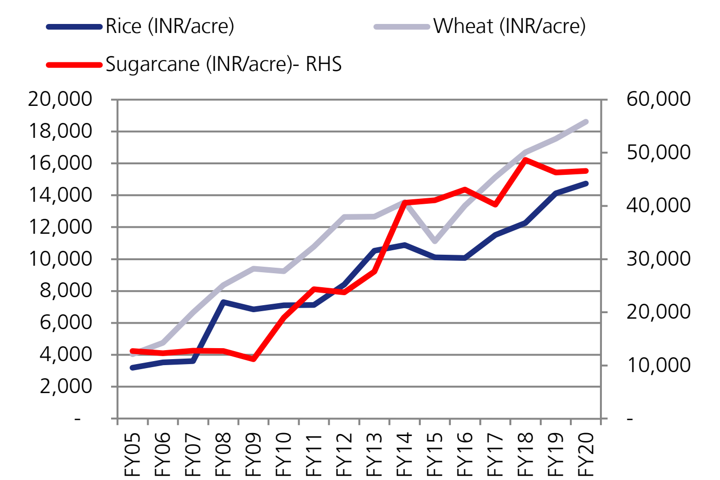
FY20 Rural income: Modest growth aided by government intervention

After a weak FY19, modest growth is seen in FY20 driven by expected increase in crop prices and government income transfer

Rural income growth in FY19 has been adversely impacted by weak agri-pricing as overall crop production has not been disappointing. In terms of agri-related income, the expected rise of 13% YoY for paddy and 5-53% YoY for other crops in Kharif season clearly did not materialise, barring few states which have good procurement infrastructure.

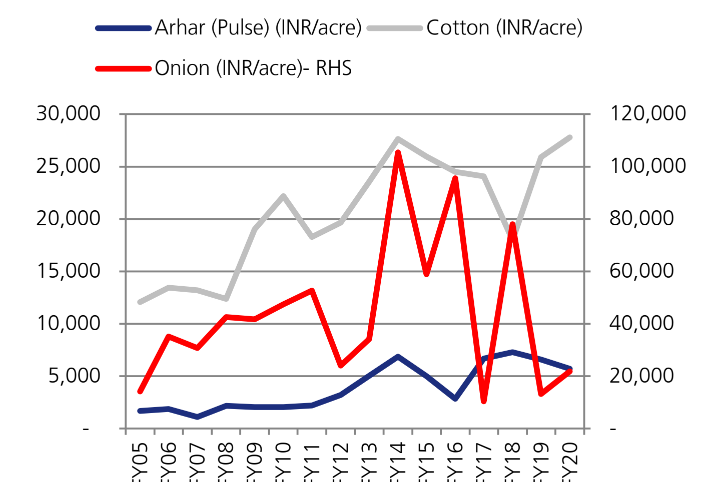
From the income perspective, a clear disappointment has been the steady decline in prices for most food crops, notably the continued downtick in fruits and vegetables prices, particularly in 2HFY19. Our current survey indicates a mixed trend in output across states given the lack of rainfall in western India (monsoon) and a weaker North East monsoon (Oct-Dec) impacting southern India. As has been seen historically, safer crops (wheat, paddy, sugarcane) continue to find favour with farmers and have much lower volatility. On the other hand, there was high volatility in income for farmers growing vegetables and fruits, pulses and cotton, and barring cotton, income declined for a large section of commercial crops in FY19 due to weak pricing levels.

Exhibit 117. Crop profitability (INR / acre) for safer crops – Overall steady growth trend and low volatility



Source: CACP, JM Financial

Exhibit 118. Crop profitability (INR / acre) – Highly volatile for fruits & vegetables, Pulses and commercial crop such as Cotton



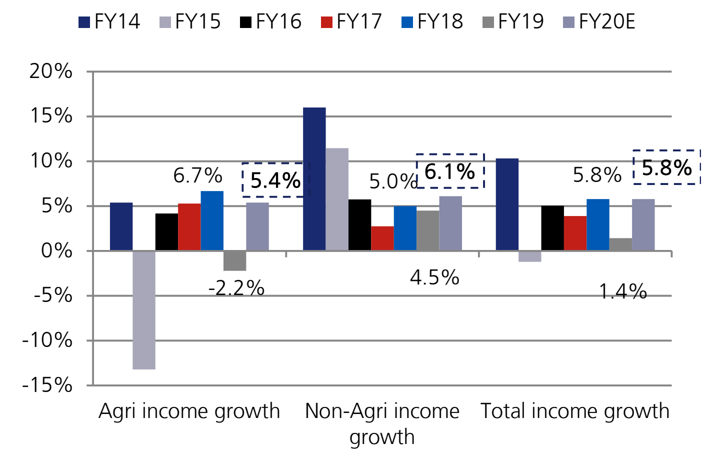
Source: CACP, JM Financial

In addition, the difference in output and hence in income from irrigated and non-irrigated farms continues to rise given the patchy and erratic rainfall pattern (9.4% below normal in 2018). **The productivity levels in the irrigated farms continue to see enhancement with the usage of agro-chemicals and expansion of modern farming practises, and thereby total crop output remains stable even if smaller / un-irrigated farmers may have seen a decline in production**.

The prices of associated products such as milk had also been weak in the first half of FY19. However going into FY20 there have been reports on abatement of output, prices have stabilised and could see an uptick going ahead aided by government support (subsidy of INR 5 / litre in Maharashtra).

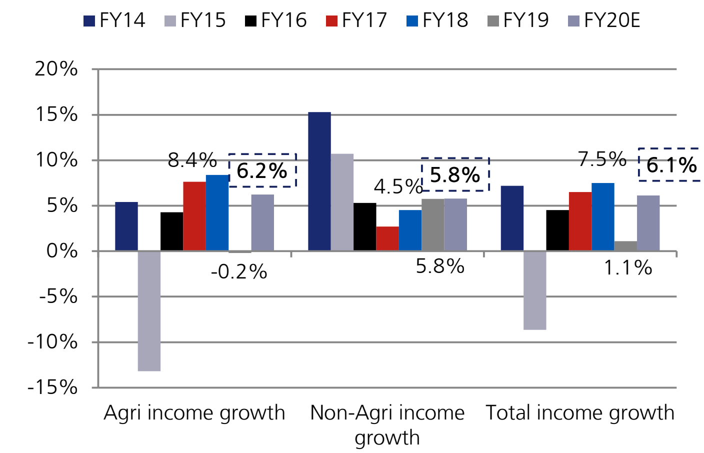
From the income perspective therefore, agri-income suffered in FY19 from last year and decline was higher for small farmers, while large farmers were still able to get better prices because of their ability to store and also have better market access.

Exhibit 119. Income trend for a small farmer (2.7 acre) – Lack of MSP realisation, price deflation leads to weak income growth in FY19, FY20 to see modest pick-up aided by income transfer scheme



Source: NSSO, JM Financial

Exhibit 120. Income trend for a large farmer (15 acre) – Low agri-crop pricing to impact FY19 income, expect revival in pricing in FY20 to aid in income growth



Source: NSSO, JM Financial

For the year ahead, we expect recovery in prices of select crops (onions for example) as the produce has been impacted by weak rainfall in Maharashtra and Gujarat. Given the comfortable crop production levels, we don't forecast a sharp surge in pricing as yet, unless there is a global rally or a very weak monsoon in 2019. **We expect that some of the crops such as pulses, oilseeds could see a price revival during FY20 leading to mid- to single-digit growth in agri-income.**

Income transfer schemes to aid overall income growth in FY20

In terms of non-agri income, as discussed in the earlier sections, the whole effort to formalise the economy with measures like Demonetization / GST has put pressure on the SME cash flow which has been accentuated by the NBFC disbursement slowdown in 2HFY19. We do believe that disbursements from NBFCs have started reviving (particularly retail credit), though it is yet to reach the pre-crisis levels of Aug'18. Rural wage growth continues to languish and unless there is a sharp pick-up in construction / real estate activities, we don't foresee a change in trajectory.

Income transfer schemes from the centre (PM KISAN, INR 6,000 / farmer household) and select states (Telangana, AP, Odisha, West Bengal) will complement rural income growth in FY20.

We do expect income transfer schemes to take centre stage after the general elections. In terms of promises by key political parties **(a)** BJP manifesto states that PM KISAN scheme would be broad-based to all farmers from presently covering small and marginal farmers **(b)** INC manifesto states that "NYAY" scheme would transfer INR 72,000 / year to 20% of the most poor families in the country; the implementation could be in stages.

In the midst of all the noise around income transfer schemes, we don't see any credible plan to address the pricing of agri-crops (ex of MSP) as yet. As highlighted in the earlier section, the government needs to ensure that the transactional challenges at agri-mandi's are eased, expansion of grameen haat takes place at a fast pace, and a revival in crop pricing. Unless the agri-marketing related challenges are addressed a steady and improving farm income would not be possible.

Given the boost from additional schemes, we expect income growth in FY20 to be higher than FY19 at least, but still remaining in mid-single digits and there would be caution on overall consumption. In our view, a revival in real estate prices and improved SME sentiment would be essential for a sustainable increase in rural consumption.

Expect moderation in consumer spending in the near-term

We expect moderation in consumer demand to persist in the near-term and revive in line with improvements in crop realisations and increase in economic activity. Monsoon 2019 remains a risk in case the deficit turns out high (less than 90% of long period average or LPA). Another monitorable would be the normalisation of credit availability / growth, particularly to the SME segment.

We continue to view the structural themes of increased traction in organised apparel and consumer durables, health care services, particularly in north and east India. The summer of 2019 is forecast to be warmer than last year, and therefore products for air cooling could be another beneficiary.

Better access to finance continues to aid consumption

Recurring themes in semi-urban / rural India include increased access to finance (aided by expansion of Jan Dhan accounts - over 300 million), acceptance of credit in hitherto underpenetrated areas (east India) and better financing aided by the non-banking finance companies (NBFCs). Despite the current regulatory changes, we believe underlying demand remains robust and NBFCs / banks with streamlined processes would be able to increase their market share going forward.

Our interactions with dealers and data from companies across regions indicate an increase in the share of financing across consumer categories. **We also learnt that the constraint on making purchases above INR 0.2 million in cash is aiding access to finance, particularly in the case of automobiles (CV, tractors, etc).** The use of biometric information, mobile technology and efficient processes has made credit appraisal quick and efficient and allowed companies to achieve scale. For example, micro-finance companies have seen the timelines of group formation and disbursement drop to 3-4 days from 10-12 days 2-3 years ago.

Exhibit 121. Steady increase in broad-band penetrartion in rural India driven by Jio

Source: JM Financial

Exhibit 122. Increased financialisation and retail credit aiding consumption demand

Source: JM Financial

Sector Comments

Consumer Goods

Our recent rural survey leads us to a conclusion that there has been a moderation in consumer demand which can largely be attributed to a patchy monsoon and lower crop realisations that have adversely impacted rural economy. This corroborates with the feedback from consumer companies that the lower-end consumer off-takes are beginning to show signs of weakness. These companies have also highlighted that the rural growth multiplier to urban has come down sequentially – less than 1.2x vs 1.3x seen earlier. That apart, an extended winter also means that demand for products that picks up with rising heat took a beating. Unlike staples, discretionary spending has not witnessed moderation per se; however stress on consumer income can lead to a downside risk that is very evident from the rough phase that the auto segment is going through. While we expect the deceleration in consumer demand to have a negative impact on earnings across our universe, on a relative basis, we prefer staples over discretionary as they have better visibility on growth. Valuations too have come off their peak levels. Discretionary continues to remain expensive.

- Prefer staples over discretionary on a relative basis: Our estimates on revenue growth for staples (home and personal care - HPC + food) has now decelerated to single digits vs. 11-13% seen over the past 3 quarters owing to weakness in rural demand. Further, early monsoon forecasts have not been very encouraging; they are expected to be below the long-term average levels. Given the current slowdown in rural consumption, a monsoon failure could further dampen rural sentiment and adversely impact the revenue growth trajectory for companies dealing in staples. However, our staples universe is currently trading at 43x and has corrected 20% from peak levels seen in the past one year implying the slowdown is partially factored in valuations. Discretionary remains quite expensive, however weak consumer sentiment may lead to some deceleration in growth rates and downward earnings revision.
- Rural incomes impacted by subdued realisations and stress on non-farm income: Slackening of rural demand due to agrarian income challenge is now more widespread vis-à-vis only in western regions earlier. This is largely due to crop prices being deflationary. Stress on non-farm income due to various reasons - ban on sand mining, closure of brick kilns and disruption in NBFCs further aggravated the situation. This slowdown is likely to remain in the near-term owing to lower than expected rainfall.
- Shift from unorganised to organised playing well for Tanishq: Titan has been one of the key beneficiaries of consumer preferences shifting to the formal jewellers market. Our survey of Tanishq stores across regions have however led us to a conclusion that stores operating in regions impacted by farm distress have seen a deceleration in revenue growth while most urban cities have been witnessing good demand. The company's recent pre-quarter update has been very encouraging which mentions of good growth momentum in its jewellery business and is confident of achieving its targeted growth rate. Increase in rural credit penetration should further help. However, valuations remain quite expensive – currently trading at 52x- 23% premium to its 3-yr average. A slowdown in discretionary spending could have some adverse impact its revenue trajectory and may lead to correction in valuation (as seen in 1QFY19).
- Availability of Patanjali products in rural areas remains limited: As per our survey, availability of Patanjali products in rural areas remains limited. The products that have found some favour include soaps, shampoos and toothpaste. On pricing though, Patanjali products were a little cheaper relative to its nearest competitors. While stores in some areas prominently displayed Patanjali advertisements, other stores were not even stocking Patanjali products on account of low demand. Ayurvedic / natural products attractiveness remains lower among farmers on account of lower price competitiveness (synthetic products like lifebuoy soaps available at lower price points) and lower fascination with natural products. Patanjali also continues to witness competition from other Ayurvedic brands like Kesh King and Himalaya.

Exhibit 123. A retailer in Aurangabad: Sales have slowed down due to poor rainfall

Source: JM Financial

Exhibit 124. Retailer at MP: Sales have been lacklustre

Source: JM Financial

Exhibit 125. Increased presence of organised retail in tier-3 & tier 4 towns – V-mart at Jaunpur, Uttar Pradesh

Source: JM Financial

Exhibit 126. Increased visitibly of wine and beer shops in north & central India

Source: JM Financial

Exhibit 127. Marriage season to aid in spending during 1QFY20

Source: JM Financial

Exhibit 128. Weak sales trend at Patanjali stores

Source: JM Financial

Automobiles

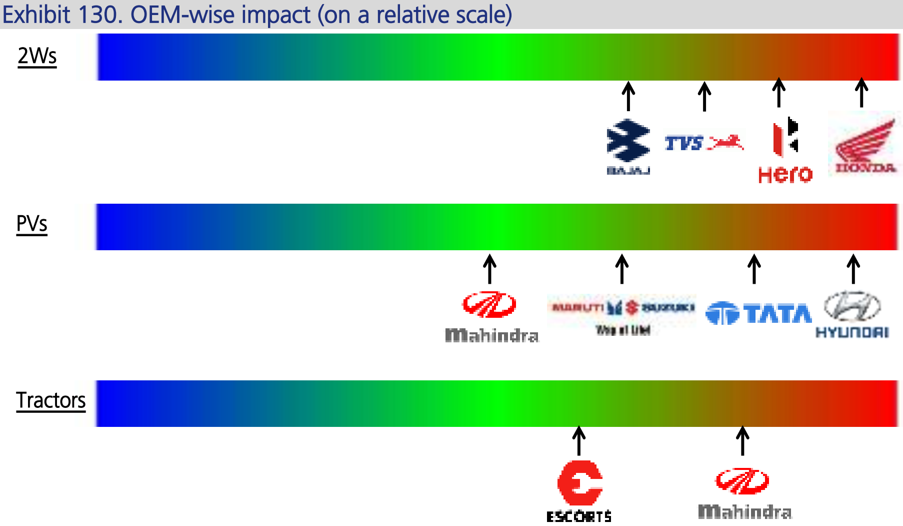
Our latest trip across India's rural hinterlands over the past few weeks brought to light challenges across the board and across segments, due to lower crop realisation. While we observed no issues with availability of finance for auto sales, the indirect impact on demand through liquidity issues arising in SMEs cannot be ruled out. Despite the challenging situation, dealers in UP (state with the highest share of two-wheeler sales) are looking forward to the upcoming festive period (starting first week of April) to see some recovery in demand led by wedding-related sales. Dealers in the southern states expect a gradual recovery after the general elections (indicating a tough 1QFY20) and states that are affected the most like Gujarat and Maharashtra are expected to see normalisation only by the festive period in the latter part of the year around Diwali. Lower crop realisation and a patchy monsoon have made rural customers cautious, leading to a cut in discretionary purchases. Limited fleet expansion by Ola / Uber and issues in Canteen Stores Department (CSD) purchases also added pressure to the sales. Uncoordinated, substantial price increase (insurance, commodity and safety features related hikes) dented 2W sales. Feedback on tractors too was weak barring a few pockets. Given the current situation, companies with new model launches and aggressive sales and marketing promotions are faring better than others. Both, Bajaj Auto and MSIL have gained market share during the year. With a positive response to the XUV300, M&M dealers too are relatively better placed. Out of the major OEMs, we found both Hyundai and Honda 2Ws struggling in the market. With the end of FY19 in March, we feel limited inventory cuts will come through during the month and excess inventory will continue to keep the wholesale in check during 1QFY20.

Exhibit 129.State share in total sales*

State		2Ws (covered under channel checks)	PVs	Tractors
Uttar Pradesh (incl. Uttaranchal)		14.8%	10.2%	17.4%
Haryana	North	2.9%	NC	5.0%
Punjab		3.5%	3.2%	NC
Rajasthan		5.8%	5.0%	NC
Gujarat	West	6.5%	8.5%	7.1%
Maharashtra		9.1%	10.7%	7.8%
Madhya Pradesh	Central	6.3%	4.0%	NC
Tamil Nadu		8.2%	NC	NC
AP, Telangana	South	8.8%	7.1%	14.7%
West Bengal	East	NC^	3.2%	NC
Total		66%	52%	52%

Source: JM Financial, SIAM, CRISIL, * till 3QFY19 for 2Ws and PVs, Apr'18-Feb'19 for Tractors, ^ NC – Not Covered

Exhibit 130. OEM-wise impact (on a relative scale)



Comments:
1. Bajaj: Outperforming the industry through aggressive promotion scheme, marketing program and dealer support.
2. TVS: Bajaj aggression hurting entry level motorcycle and to an extent moped. Supply of Radeon still a constraint.
3. Honda 2Ws: Slowdown witnessed in Activa sales
4. Hero: Fall in market share impacted by Bajaj.
5. Mahindra: Positive traction of newly launched XUV300, company revamping dealer outlets for better experience, courteous sales staff. However fleet operators going slow on Marazzo (awaiting long term feedback).
6. Hyundai: Customer complaints on engine of Grand i10 and Xcent. Customers not satisfied with pricing of Santro.
7. Maruti: First time buyers in India are starting to prefer the mid-size segment with cars like Dzire over entry segment
8. Tata: Halt to new vehicle addition by Ola/Uber impacting sales of models like Zest.
9. Escorts: Sales contingent on Monsoon. Likely to outperform Mahindra driven by support from Escorts credit.

Source: JM Financial

Two-wheelers

High dealer inventory and weak retail demand continues to weigh on the two-wheeler (2W) segment: During our checks, most dealerships we visited had few walk-in customers. Dealers mainly attribute this to the insurance price hike, among other reasons. This is leading to postponement of sales as customers are planning to extend the life of their existing vehicle. **Western states like Gujarat and Maharashtra continue to have the highest dealer inventory, well above 80-90 days, followed by central states like MP and northern states like UP (c.60 days).** Interestingly, the timeline for sales recovery, as highlighted by dealers, is different for different regions. **Dealers in north expect sales to start recovering from first week of Apr'19, with the onset of the wedding season. Dealers in the southern states are expecting recovery post general elections. Western states like Gujarat and Maharashtra indicate that sales are likely to recover only around the festive season during Oct-Nov'19.**

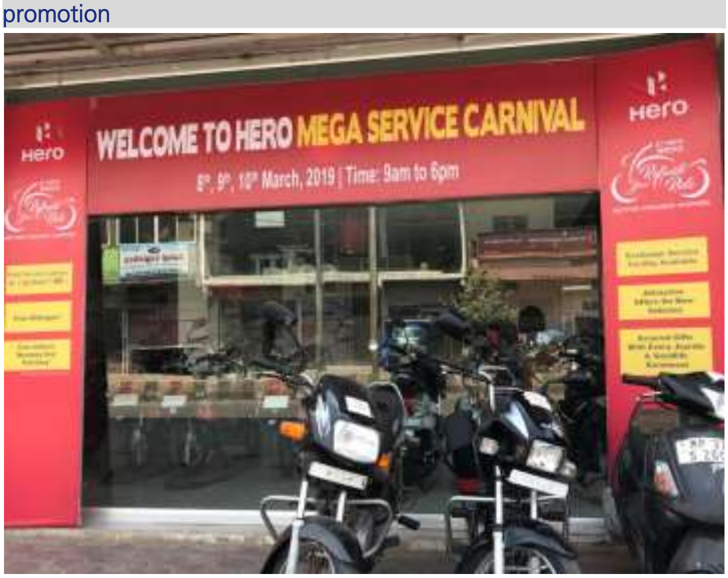
Exhibit 131.Sales slowdown witnessed in Honda's scooter portfolio

Source: JM Financial

Exhibit 132.Aggressive promotion strategy by Suzuki

Source: JM Financial

Exhibit 133.High dealer inventory leading to increase in sales promotion



Source: JM Financial

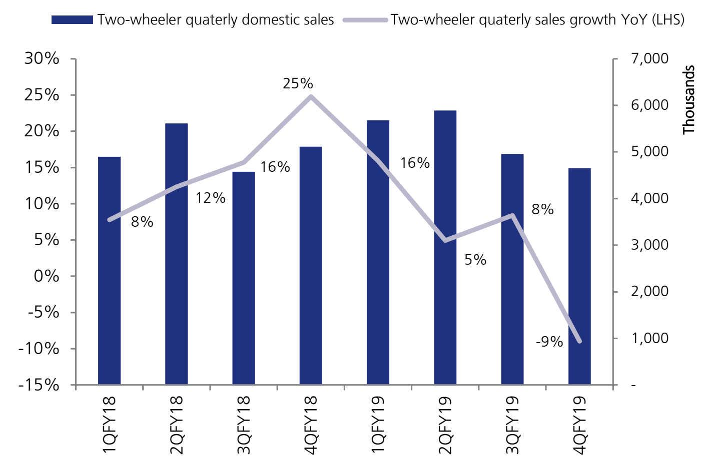
Exhibit 134. Business use of two-wheelers

Source: JM Financial

Bajaj Auto seems to be least impacted due to its aggressive promotions and BTL activities. The company has adopted a target-based, dealer support programme to keep up the tempo. **Hero seems to be catching up in terms of support to dealers. It has also rolled out an inventory support programme, where the interest cost is waived off on inventory over 30days for 30days. In case of TVS, its scooter portfolio continues to perform reasonably well.**

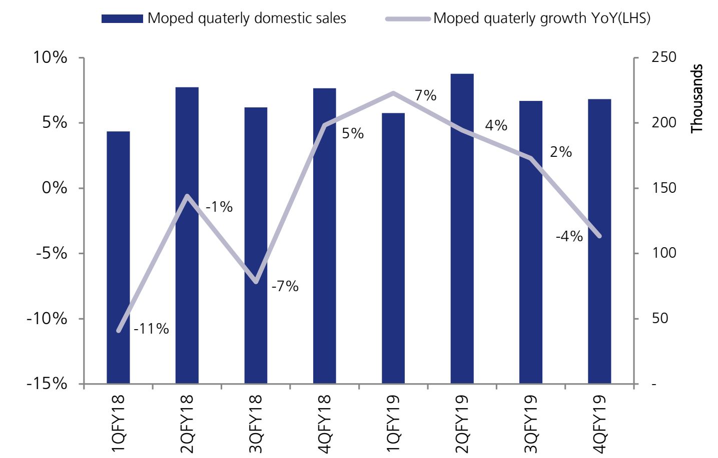
However, the company is witnessing sustained pressure on its moped and entry motorcycle portfolio on account of Bajaj's aggressive strategy. Bajaj CT100 (on-road price) is cheaper by almost 20% as compared to TVS XL100 moped.

Exhibit 135. Declining 2W sales trend



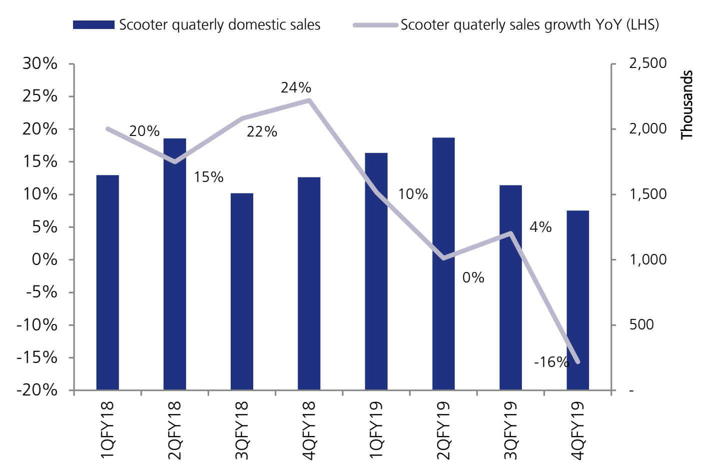
Source: SIAM, JM Financial

Exhibit 136. Declining moped sales also impacted by aggressive strategy of Bajaj (CT100)



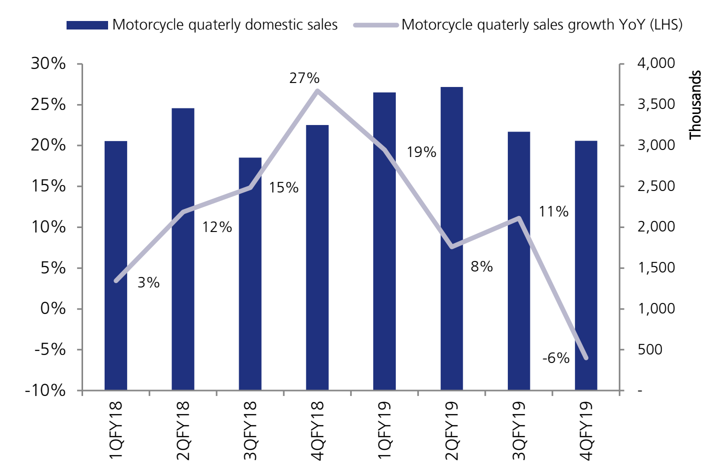
Source: SIAM, JM Financial

Exhibit 137. Scooter sales continues to slowdown



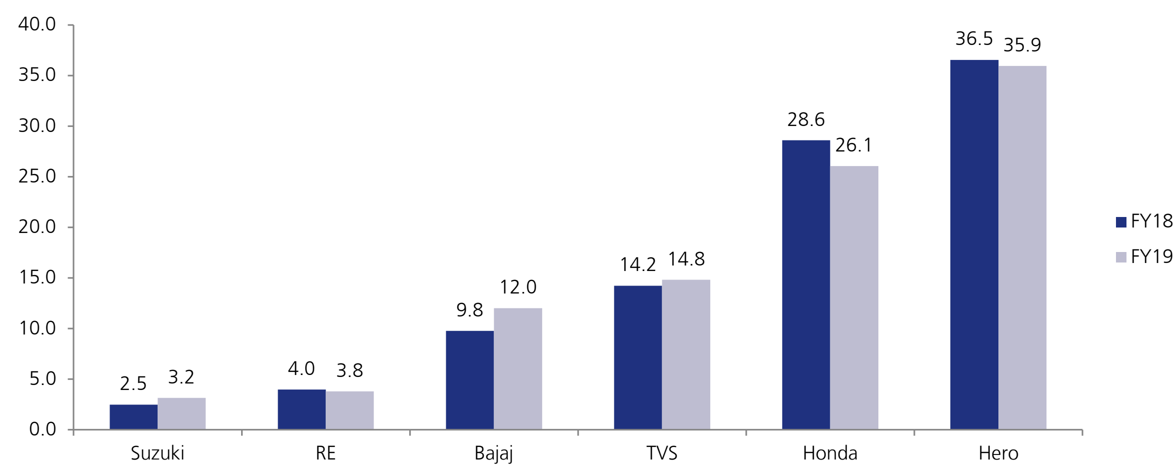
Source: SIAM, JM Financial

Exhibit 138. Decline in motorcycle sales during 4QFY19



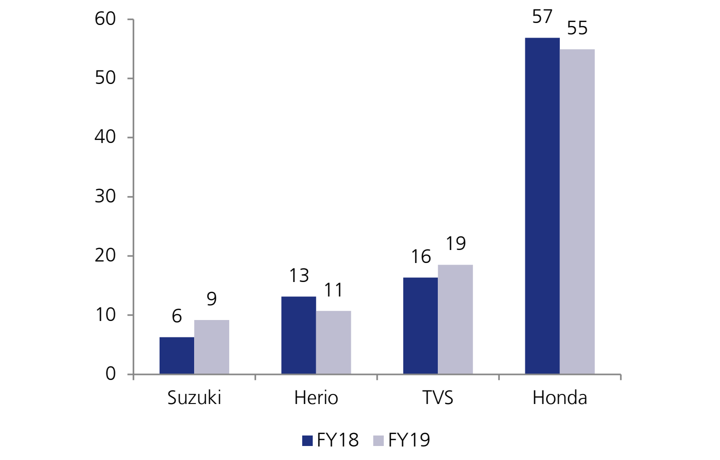
Source: SIAM, JM Financial

Exhibit 139. 2W market share



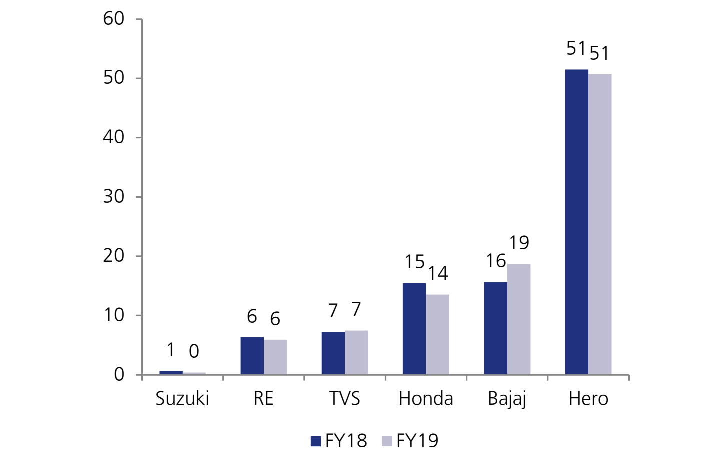
Source: JM Financial, SIAM

Exhibit 140. Scooter market share



Source: SIAM, JM Financial

Exhibit 141. Motorcycle market share



Source: SIAM, JM Financial

Exhibit 142. Promotion of Hero Electric bike in Haryana

Source: JM Financial

Exhibit 143. Royal Enfield visibility continues to increase

Source: JM Financial

Passenger vehicles

Tepid market conditions in passenger vehicle (PV) segment: Even in PVs, the situation is not too different from 2Ws. **Petrol vehicle sales are holding-up well despite continued weakness in diesel demand.** OEMs with new model launches like XUV300, Ertiga, WagonR, and Amaze are relatively better placed than others**. So far, there is no impact on Brezza sales from XUV300.** New Honda Amaze (and WRV) is helping Honda dealers tide over the current weak period. **While self-drive vehicle rental firms are increasingly picking up more vehicles, their numbers are not sufficient to compensate for the fall in fleet addition by Ola / Uber.** With FY19 coming to a close, PV wholesales are expected to remain broadly on-track with limited cuts during March, if any. **Based on our interaction, we expect an inventory correction during 1QFY20.** With the Santro not taking off on expected lines (due to steep pricing), product / engine related issues in Xcent / Grand i10 (Diesel) and limited availability of the popular Creta (in some regions) sales are struggling. **M&M is upgrading its sales network to a more premium look and feel. We also found a marked improvement in dealer sales interaction.**

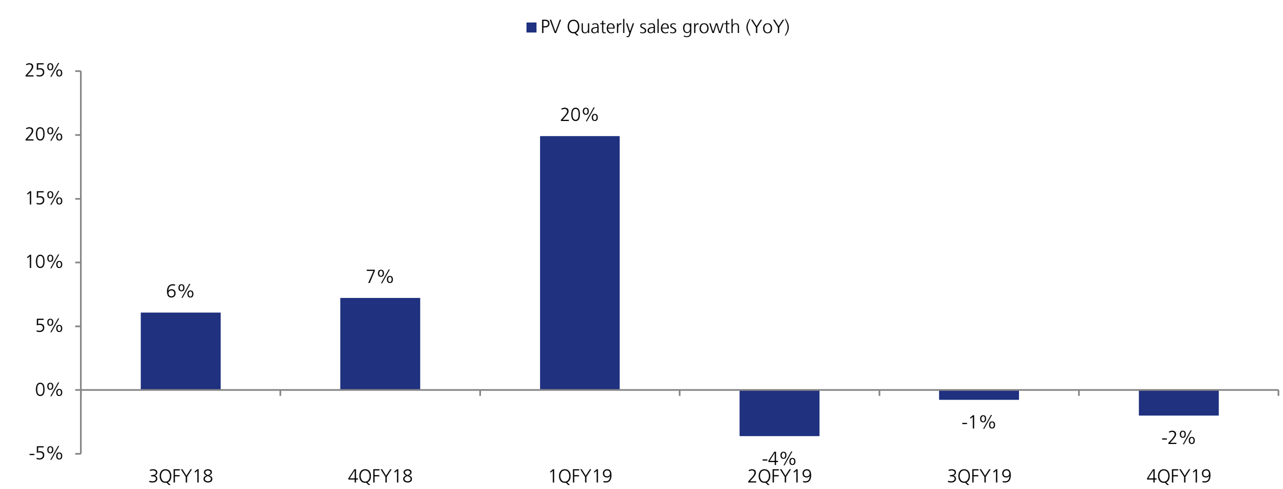
Exhibit 144. Revamped Mahindra outlet providing better in-store experience

Source: JM Financial

Exhibit 145. Response to XUV300 has been good in most regions (as seen at a dealership in Gujarat)

Source: JM Financial

Exhibit 146. Subdued quaterly PV sales performance

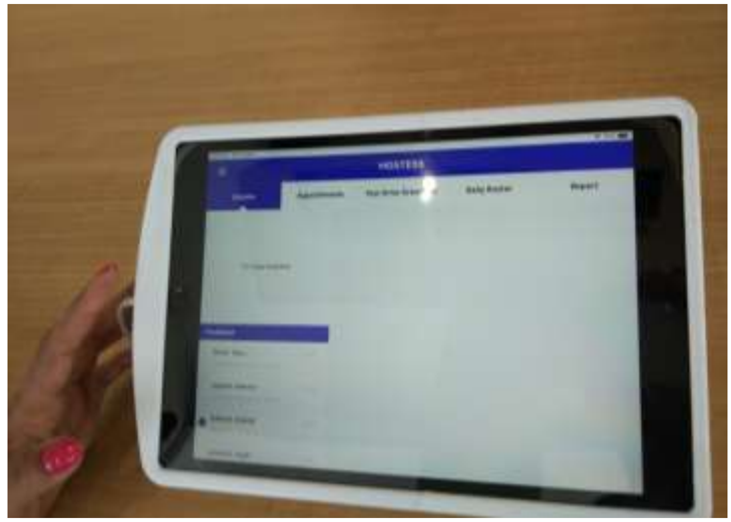


Source: JM Financial, SIAM

Exhibit 147. Maruti dealership – Digital medium to capture data

Source: JM Financial

Exhibit 148. Maruti dealership - Enhancing customer experience through digitalisation



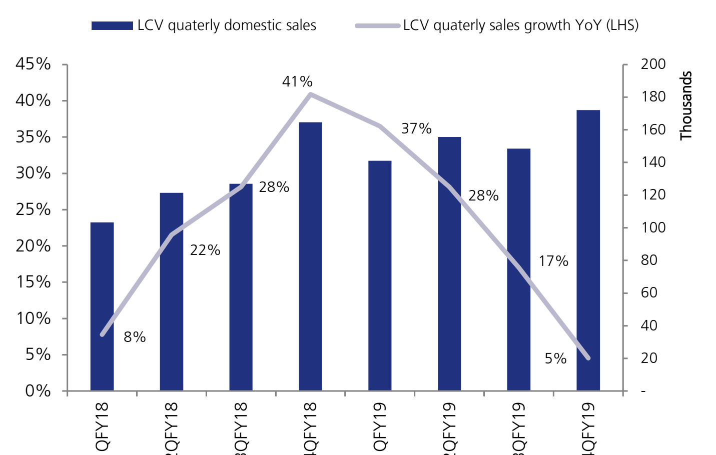
Source: JM Financial

Commercial vehicles

New axle load norms and financing constraints continue to impact MHCV sales

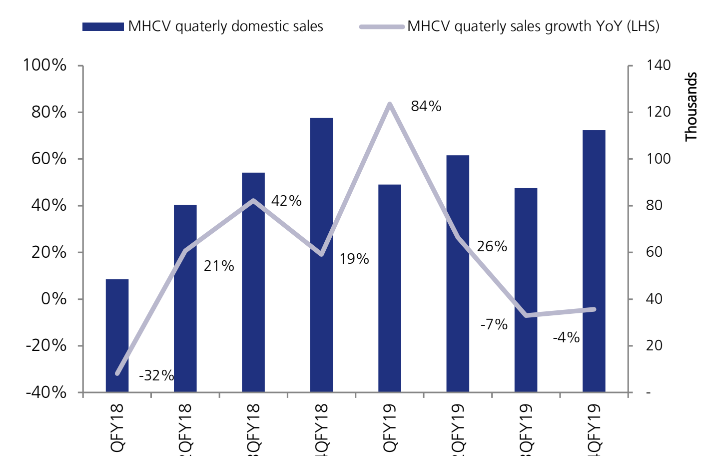
Financing constraints faced by NBFCs and the new axle load norms continued to impact MHCV sales. Also, the high base for 4QFY19 limited the YoY growth during the quarter. In case of LCV, after a prolonged phase of muted growth between FY13 and FY17, the segment has had five consecutive quarters of 20%+ YoY growth. Strong growth in LCV is driven by prevalence of unemployment, since owning an LCV provides an opportunity to engage in some commercial activity and earn a livelihood. LCV sales continued to be driven by demand at spokes (implementation of GST) and last-mile connectivity (arising from growth in e-commerce). However in 4QFY19, LCV sales were also impacted by high base.

Exhibit 149. High base impacts LCV sales during 4QFY19



Source: SIAM, JM Financial

Exhibit 150. High base and new axle load norms impact MHCV sales during 4QFY19



Source: SIAM, JM Financial

Exhibit 151.Overloading continues

Source: JM Financial,

Exhibit 152. Tractor-Overloading

Source: JM Financial

Tractors

Weakness in agriculture demand leading to slowdown, full year outlook contingent on monsoon: While state-specific factors such as assembly elections, subsidies etc. continue to influence tractor demand, **at a macro level, monsoon and agricultural activity remain key determinants.** In most states, while the commercial segment is holding up, weakness in agriculture demand (constituting c.80% of tractor demand in some rural areas) has led to a growth slowdown following strong volume growth over the last two years. Companies are coming up with differentiated strategy to gain market share. John Deere, for instance, has introduced new models with superior technology while Escorts has benefitted through in-house financing. **Dealers anticipate a delay in replacement demand in case of a weak monsoon this year. At the same time, used tractors are seeing good traction among farmers due to NBFC support. While direct subsidies have reduced corruption in the system, delay in receiving it and ongoing elections are expected to impact demand in 1HFY20. However, normal monsoon and increased rural support after elections are likely to support full year volume growth.**

Exhibit 153. Inventory build-up seen at Sonalika (Varanasi)

Source: SIAM, JM Financial

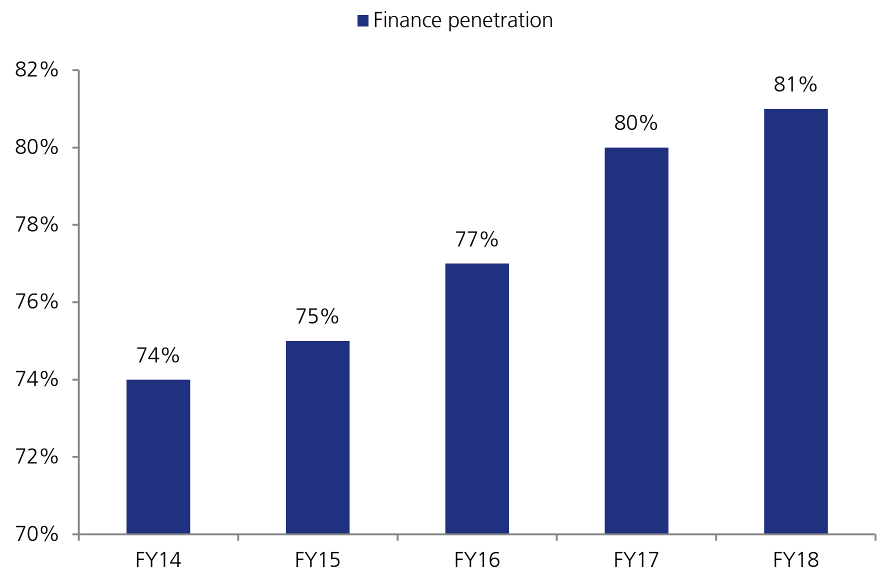
Exhibit 154. Award winning Escorts dealer (Gujarat) remains cautious on FY20 tractor sales

Source: SIAM, JM Financial

Vehicle financing continues to inch ahead

While the availability of auto financing is not a major constraint, concerns on financial stress faced by SMEs are likely to impact retail demand.

Exhibit 155.. Despite rising auto finance, financial constraints at SMEs continue to impact sales (Maruti Suzuki)



Source: MSIL AR, JM Financial

Increase in used car sales

One of the recurring themes during our rural visit was the robustness in the used car market. Vehicle financiers, known for CV lending, had rejigged their portfolio to accommodate more used car lending.

The reasons were twofold:

a) the spread is better, and

b) the probability of a bad asset is relatively low.

But, fundamentally, the used car segment is being viewed as a growth driver with sustained high demand especially in the formal space. The shift towards formalisation of the market is quite evident. Volumes in the pre-owned car space, at around 3.6 million units was ahead of those in the new passenger vehicles market which reported sales volumes of 3.2 million in 2017-18. According to a few estimates, the ratio of new to used cars in India has grown to 1:2.2 and approaching that of mature market like US (a ratio of 1:3). Sale of used PVs is estimated to have grown at 10-12% in 4QFY19 compared to c.3% for new cars.

It is important to note that this growth in the organised used car space is not entirely driven by substituting new car sales. **Based on our feedback, there has been a definitive shift towards formalisation of the market with dedicated used car channels being set-up by prominent OEMs. Reliability, transparency and options are better in the formal channel.** Customers now feel comfortable in going for a used car deal. Services like warranty, refurbishment, and easy financing schemes are easily available now.

Box 4: Visit to a used car broker in Maharashtra

- A popular used car broker (Cars24) indicated a conversion ratio of 30%+ in the outlet we visited. In Maharashtra alone, there were 2,500+ listed bidders on the platform. Sourcing has risen from 2,200 cars p.m., to 10,500 cars p.m in three years. Customers were primarily categorized into four groups as follows

Exhibit 156. Category wise customers

Category	Description	Share	Typical reason for selling
Category 1	Families with multiple cars	c.25%	Under-utilisation
Category 2	Replacement customers/ received a new company car	c.35%	Looking for upgrade
Category 3	Job transfer abroad/other states	c.25%	Liquidation
Category 4	Distress sells	c.15%	Cash crunch

Source: JM Financial

- Such players derived their competitiveness from being able to provide
  - -A competitive marketplace
  - -A plethora of options across brands and segments
  - -Quality assurance through warranty
  - -Price benchmarking
- Demand from rural areas for used cars is now better. **Brokers have the ability to sell at 1.2x to 2x the price in rural areas.**

Conclusion

With broader slowdown across the auto industry and limited visibility of a quick recovery within the next quarter, **we remain cautious on the volume growth in the months to follow.** However, some players stand out even in the challenging environment, driven by aggressive sales / promotion strategy and new model launches. **M&M's XUV300 is gaining good traction and helping support company sales. LCV demand stays robust. Diesel pre-buy is also likely to drive sales northward during 2HFY20. In case of tractors, demand remains contingent on a decent monsoon. Driven by valuation comfort in Mahindra, traction in XUV300 and likely diesel pre-buy in FY20 we continue to prefer M&M over other PV players.**

Within the 2W pack, we remain cautious on all the names given significant inventory build-up across dealerships. Bajaj has outperformed the industry and gained market share driven by aggressive sales and promotion strategy. Based on our recent global autos note, we have found LATAM markets are doing much better than other regions. Along with that, better export realisations due to hedge benefits will provide additional cushion. **On the basis of current valuation we prefer Bajaj over other 2W players.**

Exhibit 157. State-wise feedback : Recovery timeline

Region	2Ws	PVs	Tractors
North	First week of Apr'19	First week of Apr'19	Contingent on Monsoon
South	After general election	After general election	Contingent on Monsoon
West	Festive season (Oct-Nov'19)	After general election	FY21 (irrespective of good monsoon this season)
Central	Post 1QFY20	Post 1QFY20	NA

Source: JM Financial

Financials: NBFCs – return to normalcy post liquidity crisis

During our Mar'19 rural visits, we interacted with Mahindra Finance, SCUF, Magma Finance, Satin Credit care, Ujjivan Finance, AU Finance and other financier's branches during. Overall, rural sentiment has turned cautious on the back of crop price deflation, prolonged water shortage in Maharashtra / Gujarat, pest attacks in states like AP / West Bengal and unseasonal rains in AP thus throwing a shadow on core agri-based farm incomes. Non-farm incomes, on the other hand, are improving on the back of infra spending. Rural financiers especially pan-India, vintage players are preparing for a pick-up in growth as competition from new / small NBFCs wanes. While disbursement growth has picked up post Nov'18, in the wake of the liquidity crisis, NBFCs have tightened yields and stepped up collection efforts. These have translated into stable-to-improving early delinquency / asset quality trends across NBFCs we met. Product wise, the used segment within vehicle finance, MFI, consumer durables and affordable housing are seeing good growth trends while SME / LAP loans are yet to revert to pre-Oct'18 levels. We expect healthy growth trend to continue for strong promoter backed, highly rated NBFCs with credit costs improving by 30bps over FY19-21E for rural / vehicle financiers (MMFS, SHTF and CIFC) and c.20bps for diversified NBFCs like BAF.

- **Disbursement growth returning to normal:** Disbursement growth for the NBFCs we interacted with has normalised (c.20% on average in Jan-Feb'19 vs negative-to-flat growth during Oct-Nov'18 period). MFI, affordable housing and consumer loan demand are expected to remain robust. For vehicle financiers, short-term demand is being held up due to a) upcoming elections, b) farmer's anxiety over prolonged weak monsoon in states like Maharashtra, Gujarat, and c) customer expectations of discounts given the widely known inventory situation. Product-wise, financiers continue to be wary of big-ticket SME / LAP loans which have witnessed ticket size and LTV revisions.

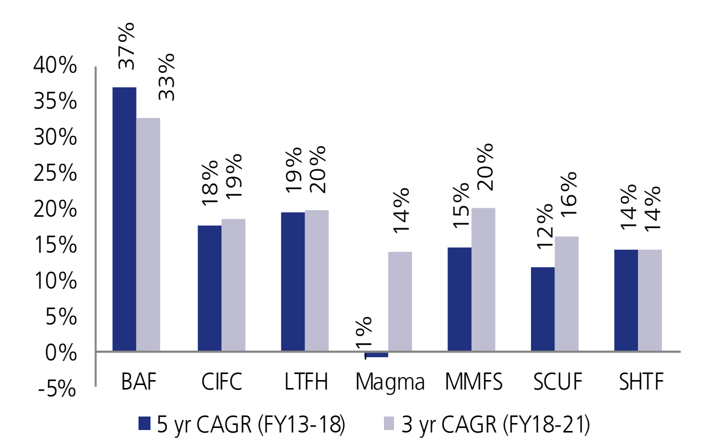
Exhibit 158. Takeaways – segment wise

Segment	Takeaway
Housing	— Self-construction segment within affordable housing is witnessing good growth especially in T2/T3 cities. Similarly, demand form blue collar segment is seeing strong demand as cost of ownership comes down owing to PMAY scheme. — Overall housing sector disbursement ye to reach pre-Sep'18 levels
LAP	— Both LTVs and ticket sizes have seen downward revision with competitive intensity easing off a bit post the liquidity crisis. — Banks continue to dominate large ticket size LAP space
CV	— Overall, CV industry expects a demand revival in 2HFY20 due to BS6 pre-buy but currently the segment remains muted prior to elections — LCV / ICV demand is expected to remain steady on expectation of stronger demand from consumption-driven sectors and E-commerce supported by pent-up demand from semi-urban and rural regions — GST-led warehousing consolidation, improving road infrastructure, pick up in infra / construction are expected to further support demand for CVs — Competition from banks in large ticket H&MCVs has picked up
2W loans	— Overfunded market with almost everyone NBFCs, SFBs, private banks including captive financiers like TVS Finance, Hero Fincorp present; competition continues to be high — 2W demand weak in line with cautious rural sentiment — Market leader, SCUF did not stop disbursements even during peak crisis to maintain dealer relationships
Tractors	— Weak monsoons in states like Maharashtra, Gujarat can negatively impact tractor demand — Commercial tractor demand has been subdued due to increased government regulation on illegal mining however rural road construction and rural electrification have supported non-farm demand — Financiers continue to be wary of financing subsidy based tractors
Personal Loans	— Consumer durable loans, lifestyle financing is expected to remain strong especially ACs given forecasts of early summer, higher awareness with villagers buying ACs using EMI option — NBFCs we met stopped personal loans disbursement during the Oct-Nov'18 months; currently financiers prefer to do PL on cross-sell format — Customer profiling now being done using social media; CIBIL has come to be well recognised and respected aiding credit quality
Gold	— Pledging gold for loan steadily gaining acceptance in non-South markets; rising gold investments in Morbi town near Rajkot, Gujarat has attracted branches of gold loan NBFCs — Remains highly competitive space; under-penetration of organised players main driver of growth with NBFCs like SCUF targeting pawn brokers
MFI	— Liquidity crisis did not impact disbursements for larger pan-India MFIs like Satin — Collection efficiency has reached pre-Demonetization levels of >99% — States like Maharashtra, MP facing certain election, ring-leader menace
MUDRA loans	— Banks unwilling to lend beyond branch wise targets; also feedback of branches demanding security for MUDRA loans

Source: Company, JM Financial

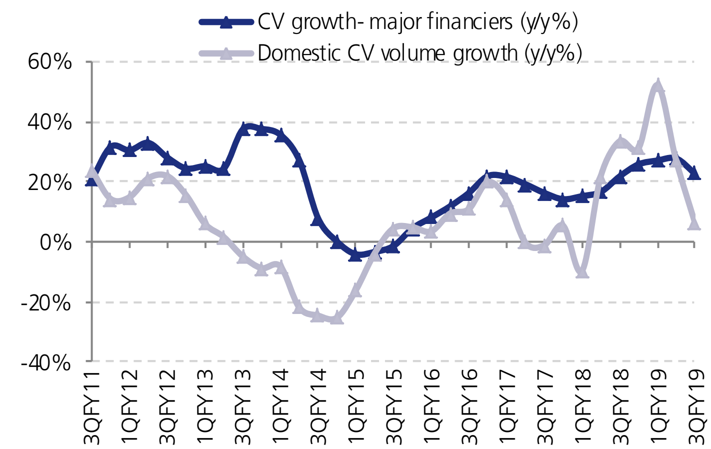
- **Long-term structural drivers intact for rural economy:** We believe long-term structural trends for rural India remain firm on: (a) increasing profitability through cash crops and allied activities, (b) increased diversification through non-farming income, (c) targeted direct benefit transfer, and (d) usage of higher mechanisation and awareness of technical advancements. Government's renewed thrust towards improving the rural economy, via measures such as doubling farm income by 2022, increasing spend towards irrigation should help boost the demand further.
- **Expect AUM growth to remain healthy over FY19-21E led by pick-up in rural market post elections:** We expect AUM growth for rural financiers such as Chola, Magma, MMFS and SHTF to remain strong over the coming years led by strong pickup in rural market. For NBFCs under coverage we expect 14–33% growth in AUM over FY18-21E, as shown below:

Exhibit 159.AUM growth trends in NBFCs under coverage



Source: CMIE , Company, JM Financial

Exhibit 160.CV growth and disbursement trend



Source: CMIE, Company, JM Financial

Exhibit 161. Peer valuations

	ROA (%)				ROE (%)				P/B				P/E			
NBFC	FY18	FY19E	FY20E	FY21E	FY18	FY19E	FY20E	FY21E	FY18	FY19E	FY20E	FY21E	FY18	FY19E	FY20E	FY21E
CIFC	2.6%	3.0%	3.2%	3.1%	20.7%	24.5%	23.9%	22.9%	4.38	3.52	2.85	2.33	22.9	15.9	13.2	11.2
MGMA	1.6%	1.9%	2.0%	2.0%	11.3%	13.2%	12.5%	13.2%	1.38	1.12	1.01	0.90	11.6	9.9	8.5	7.2
MMFS	1.8%	2.4%	2.6%	2.6%	11.2%	14.6%	16.5%	17.7%	2.40	2.15	1.90	1.66	25.3	15.5	12.2	10.0
SHTF	1.9%	2.6%	2.7%	2.7%	12.7%	16.8%	17.3%	17.6%	2.10	1.84	1.60	1.39	18.8	14.3	11.7	9.1
SCUF	2.3%	2.6%	2.7%	2.9%	11.8%	14.0%	15.3%	17.2%	2.12	1.90	1.68	1.46	16.9	13.5	11.0	11.0
IndoStar	3.7%	3.0%	3.1%	3.2%	11.7%	10.4%	10.6%	11.4%	1.36	1.09	0.98	0.87	12.2	12.4	9.7	8.1

Source: Company, JM Financial, Bloomberg

Box 5: Vehicle financier serving small entrepreneurs, self-employed individuals – Rajasthan (Jaipur)

Growth outlook

- Slow pick up in disbursements; expect full recovery in 2HFY20 following the elections: NBFC liquidity crisis was at its peak in Oct-Nov'18 and since then sanctions / disbursements are slowly improving. During this period, the branch had tightened credit policies, increased lending rates by c.100bps across products, reduced average LTVs from 50% to 40%. Moreover, schemes like processing fee waiver of 50bps were removed.
- **In the wake of the crisis, the cross-sell route has become a preferred sourcing channel given lower acquisition costs and better asset quality** - channel revenue in 2HFY19 is 2x 1HFY19 levels. Overall, disbursements continued to remain muted owing to elections rather than liquidity constraints. The branch expects disbursements to touch pre-Oct'18 levels in 2HFY20. The branch has increased focus on used category within vehicle finance given better yields.

Box 6: SME financiers giving collateral-free loans for working capital, capex and other business needs – Tamil Nadu (Chennai)

Growth outlook

- In TN, the company focuses on Chennai, Madurai, Salem, Trichy and Pondicherry. Business momentum is slow (challenging and uncertain) in TN due to elections. YTD FY19, disbursements have recorded 20% YoY growth in part due to increased volume post liquidity crisis as smaller NBFCs pulled back.
- SME space in south is crowded with 38-43 players including banks, NBFCs and FinTech companies. The important players (in order of prominence) are Bajaj Finance, Tata Capital, AB Capital, Standard Chartered Bank (recent entrant), Capital First, Neo Growth, Kapitaltech, Capital Float and Kotak Mahindra Bank.
- Factors ailing the SME segment in TN include cuts in small manufacturing jobs due to GST, struggling textile export industry due to delay in duty drawback and GST ITC, stressed profitability of the trading businesses.

Box 7: 18-month-old affordable housing branch with ticket sizes INR 1.4mn – Maharashtra (Aurangabad)

Growth outlook

- Mainly services blue collar salaried customers (60-70%) including cash salaried segment (10%) and self-employed. Top branch heads had all come from another leading affordable housing player.
- Since the branch is only 18mths old, it is witnessing super-normal growth - RMs are logging in sales of **INR 5 million / month vs. the internal target of INR 2.5 million / month.** Max LTV is 60% (55% for self-construction) with average ticket sizes of INR 1.–1.1 million with yields of 13.5-14.0%. The branch services 30-35kms radius with plans to expand the same to 60kms starting 2HFY20.
- The HFC is currently taking business from Aadhaar Housing (Dewan HFC), Muthoot Finance and Aspire (MOSL).

Asset Quality

- Early delinquencies in the form of cheque bounce rate have fallen to 3.5% vs. 8%, 18 months ago. Since the loan book isn't seasoned, AQ is immaterial

Box 8: One of the top 3 pure pan-India MFIs – Branch visit summary

We visited MFI centres in Haryana, Bihar and Punjab. No concerns on the asset quality, while disbursements continue at normal pace.

Haryana: 2 centre visits - Rohtak

- 25% YoY growth in loan outstanding to INR 200 million with an average ticket size of INR 18,000. Number of customers have grown to 11,000 from 8,000 over the past year. These loans are primarily used for trading (40%), transportation (30%) and farming (20%). The company recently reduced the first cycle tenure from 2 years to 1 year – likely due to rising competition, constant demand to increase ticket size and better non-farm cash flows. In the same spirit, the MFI launched a new loan product, mid-term loan (MTL) – an INR 15,000, 1.5 year loan. MTL is directed towards first-cycle borrowers who have paid 11 instalments of current loan – a conscious effort to retain good quality first-cycle borrowers.
- **Competition (major):** SKS (Bharat Financial), Fusion, Swatantra, Ujjivan, Bandhan Bank, and HDFC Bank
- **Asset quality:** Attendance in meetings has been 80%+ with the fortnightly collection model working well for the company. PAR cases are minimal, 44 out of 11,000 customers, of which 22 are due to death of borrowers.

Bihar - Chhapra

- Apart from income-generating MFI loans, the pure play MFI is also giving loans for
  - Sanitation (ticket size INR 15,000), which are repaid when the borrower gets reimbursed by the government.
  - Cycle financing, mainly Hero, under two ticket sizes: INR 4,450 (6 months, INR 400 EMI) and INR 4,250 (6 month, INR 400 EMI). Financed 6,000 cycles in Jan-Mar'19 period
  - Financing solar lights under two ticket sizes INR 2,495 (6 months) and INR 5,595 (9 months)
- Cross-selling is picking up, however the same cannot be followed at IndusInd Bank BC dedicated branches due to re-vetting requirements
- **Competition:** Bandhan, Bharat Financial, Cashpor, Utkarsh, Ujjivan, HDFC Bank and Axis Bank
- **Asset Quality:** Cashless disbursement is currently 80%

Punjab - Patiala

- Disbursements not impacted by the liquidity crisis as the MFI benefitted from the IndusInd strategic relationship. Moreover, the MFI has had no adverse experience from the recent announcements of loan waivers.
- **Competition:** SKS (Bharat Financial), Ujjivan and Midland are its key competitors. Bandhan has recently entered the market and is trying to grow aggressively by disbursing loans with ticket sizes of INR 0.1mn and above (vs. INR 50,000 max limit for the pure play MFI)
- Percentage of cashless disbursements is inching up as technology use deepens. The pure play MFI is also implementing a psychometric test-based appraisal of borrowers on a pilot basis. This has resulted rejection of fresh loan disbursal for many existing borrowers. The MFI is working on improving parameters. If successful, this could significantly reduce turn-around time (TAT) in one of the most operationally intensive borrower base.
- **Asset quality:** Centre meetings have an average attendance of 80%. Collection efficiency on loans

Box 9: Diversified financier: pan -India leader in 2W financing in rural, semi-urban areas – Maharashtra (Aurangabad)

- **Growth outlook:** During the liquidity crisis, there was a freeze on approvals starting 20th Oct – Nov'18 on all products except 2Ws which has continued to maintain dealer relationships and market share. 80% of 2Ws financed are for Hero, Honda and TVS in that order. LTVs have remained stable at 70-75% with average ticket sizes of INR 40-45,000.
- Within Autos (30-35% CVs; 50% Cars; 15% tractors), the disbursement freeze by the NBFC is estimated to have cost dealers c.20% in sales during the Oct-Nov'18 period. Within cars, c.60% of loans comes from Maruti, 20% from Hyundai and remaining from Ford / VW.
- Post Nov'18, monthly disbursement run rate is trending at 1.1-1.2x monthly targets. Despite this, the branch expects to only meet 90% of the FY19 target due to lacklustre festival season.
- **Asset Quality**: Given the freeze on disbursements during the Oct-Nov'18, the NBFC was focusing on collections only (rural customers had cash flows from Kharif harvest). Branch's 2W NPAs are 1% (lower than 9.4% consolidated 2W GNPA); Auto loans NPA below 5% (vs. 11.0% consolidated). Personal loans NPA 1-2% vs. 10.12% consolidated; this is now only done through cross-sell. The branch says the high NPA ratio is a legacy from the time the NBFC used to do primary personal loans (not cross-sell)
- SME has a NPA ratio of 10% - as a few accounts with high ticket sizes have turned delinquent. However, the NBFC is confident of recovering the same given its relationship-based lending.

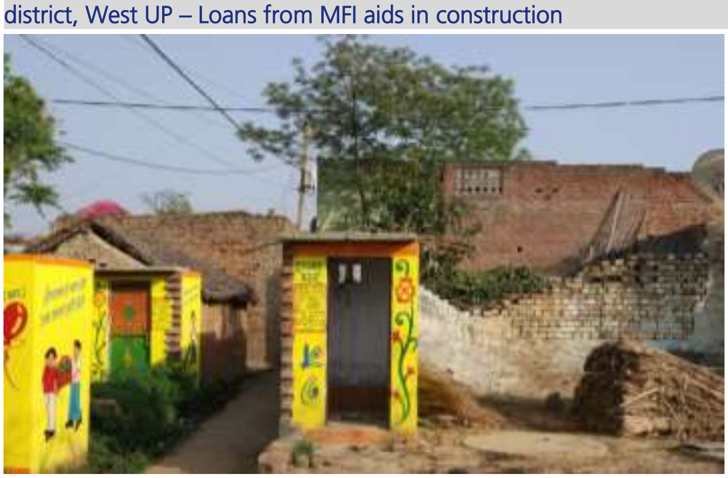
Exhibit 162. Meeting with MFI customers in Punjab

Source: JM Financial

Exhibit 163. Meeting with MFI customers in Karnataka

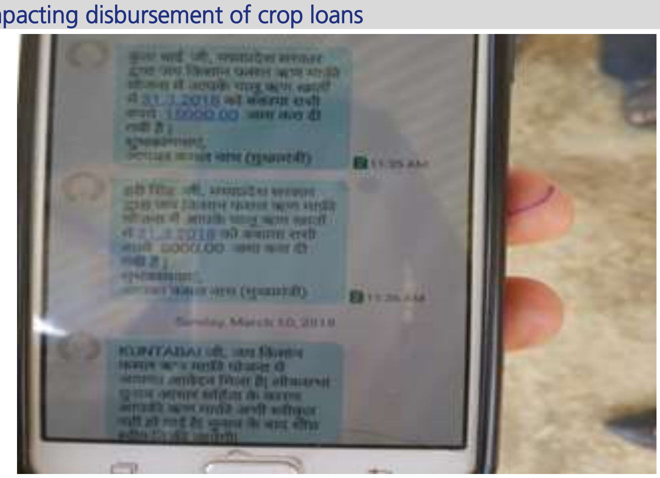
Source: JM Financial

Exhibit 164.Toilets constructed under Swachha Bharat in Bulandshahr district, West UP – Loans from MFI aids in construction



Source: JM Financial

Exhibit 165. Partial implementation of MP farm loan waiver – Impacting disbursement of crop loans



Source: JM Financial

Agri-inputs

During our travels, we continue to observe a wide disparity in brand awareness and decision-making criteria with regard to pesticide purchases among farmers in various states. For example, while brand awareness was as high as 80% in AP and Telangana, it was as low as 10% in UP and Bihar and 50-60% in Maharashtra and Gujarat. The use of spurious pesticides (based on dealers' recommendations) is still high in many states and this has impacted the quality of agricultural produce to a large extent. While companies have taken up several farmer engagement initiatives in the organised space (e.g. Coromandel, Rallis, Dhanuka, etc.), these are yet to make an impact in many remote villages, where farmers rely entirely on dealers' recommendations to make purchases. We believe there is significant potential lying ahead in the sector, driven by the rising number of farmers realising the need to use high-quality agri-inputs. So, over the medium-term increase in regional penetration by organised players, the Indian agrochemicals sector is capable of accelerating annual growth to double digits. The severe agri-price deflation in 2HFY19 has impacted domestic market growth and could reflect in weak results for domestic agrochemical companies.

- Farmers facing a double whammy of low income and higher input costs: Our interaction with dealers and farmers indicate substantial increase (of at least 10% YoY) in prices of both fertilisers and pesticides over the last six months, mainly driven by higher raw material costs (mainly potash and phosphate). Given that many farmers were already reeling under the pressure of low productivity and lower than expected MSP's, higher agrichemicals prices has pushed them to take the piecemeal approach which in turn has led to destocking of inventory by several dealers.
- Domestic agrochemicals industry reported in 3QFY19: Companies like UPL and Dhanuka Agritech, reported sub-par performance in 3QFY19 as volumes were under pressure due to below normal South West Monsoon, less sowing during the Rabi season, high raw material prices and adverse currency movements. Moreover, the companies were unable to completely pass on the raw materials price inflation to its customers, primarily on account of weak farm sentiments and high channel inventory. In terms of growth, 4QFY19 could also turn out to be weak for domestic agro-chemicals industry.
- DBT in agrochemicals: Based on our interaction with the dealers, majority of the sales are being effected through the POS (point of sale machine), which in turn is linked to the farmer's Aadhaar/ bank account.

Exhibit 166. Interacting with agri-input supplier at Guntur, Andhra Pradesh

Source: JM Financial

Exhibit 167. Rain deficit in Saurashtra (Gujarat) has adversely impacted sales of agro-chemicals

Source: JM Financial

Box 10: Feedback from management of a private unlisted agri-input player

- The company has 6,000 dealers / distributors and 200+sales personnel across the country.
- In terms of performance, growth was good till H1 FY19, but H2FY19 has been bad and would drag down full year growth. Overall, would come down from double digit growth in H1FY19 to low single digit growth for FY19.
- Patchy rainfall, weak vegetable and fruit prices has dampened usage significantly. Inventory levels are high and cash flow is stuck, higher than earlier years. Collection cost will increase for all the players. When farmers would see price increase, they will come back
- Among MNC players, Adama is gaining ground, while Bayer and Syngenta are on stable trajectory.
- Agrochemical companies cannot rely on generic products in an intensely competitive market. They need to continually add products in each sub-segment and bring out differentiated
- The problem of spurious products is severe and probably has seen some increase in recent quarters.

Appendix 1: Crop economics

Exhibit 168. Crop economcis of paddy (rice) (INR/acre)

Paddy Common		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Yield Quintal/Acre	Quintal/Acre	13.5	14.5	14.9	14.6	14.4	14.5	15.4	15.5	15.5	15.5
Realization/Quintal	INR/Quintal	1,000	1,080	1,250	1,310	1,360	1,410	1,470	1,550	1,750	1,873
By-product	INR/Acre	1,231	1,463	1,610	1,764	2,046	1,979	2,013	2,073	2,163	2,296
Total Realization	**INR/Acre**	**14,756**	**17,074**	**20,193**	**20,912**	**21,690**	**22,418**	**24,628**	**26,156**	**29,354**	**31,391**
% YoY	% YoY	**5.6**	**15.7**	**18.3**	**3.6**	**3.7**	**3.4**	**9.9**	**6.2**	**12.2**	**6.9**
Human Labour	INR/Acre	3,081	3,296	3,629	3,718	4,262	4,452	4,804	5,093	5,398	5,722
Machine Labour	INR/Acre	1,256	1,364	1,509	1,623	1,910	2,144	2,402	2,642	2,906	3,197
Animal Labour	INR/Acre	649	840	833	972	885	875	888	906	943	980
Seeds	INR/Acre	649	697	744	823	933	990	1,007	997	1,093	1,188
Fertilizers & manure	INR/Acre	1,112	1,419	1,757	1,727	1,939	2,031	1,986	2,002	2,303	2,579
Pesticides & Insecticides	INR/Acre	246	296	324	335	383	469	527	596	716	859
Water & Electricity	INR/Acre	397	480	567	531	895	979	1,076	1,238	1,424	1,637
Working Capital	INR/Acre	231	262	293	304	351	374	381	377	415	451
Miscellaneous	INR/Acre	7	6	5	5	27	41	41	41	40	40
Total Cost	**INR/Acre**	**7,629**	**8,660**	**9,661**	**10,037**	**11,584**	**12,356**	**13,114**	**13,892**	**15,237**	**16,654**
% YoY	% YoY	11.0	13.5	11.6	3.9	15.4	6.7	6.1	5.9	9.7	9.3
Total Profit	**INR/Acre**	**7,128**	**8,414**	**10,532**	**10,875**	**10,106**	**10,063**	**11,514**	**12,264**	**14,117**	**14,737**

Source: CMIE, JM Financial

Exhibit 169. Crop economics of wheat (INR/acre)

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Yield Quintal/Acre	Quintal/Acre	12.1	12.9	12.6	12.7	11.1	12.3	12.9	13.3	13.3	13.3
Realization/Quintal	INR/Quintal	1,170	1,285	1,350	1,400	1,450	1,525	1,625	1,735	1,840	1,969
By-product	INR/Acre	2,958	3,341	3,683	4,321	3,947	4,239	4,312	4,440	4,633	4,919
Total Realization	**INR/Acre**	**17,108**	**19,863**	**20,709**	**22,142**	**20,083**	**22,963**	**25,336**	**27,560**	**29,153**	**31,155**
% YoY	% YoY	**13.3**	**16.1**	**4.3**	**6.9**	**(9.3)**	**14.3**	**10.3**	**8.8**	**5.8**	**6.9**
Human Labour	INR/Acre	986	1,155	1,242	1,384	1,419	1,482	1,578	1,676	1,758	1,855
Machine Labour	INR/Acre	1,894	2,081	2,346	2,571	2,641	2,790	3,004	3,197	3,376	3,590
Animal Labour	INR/Acre	234	167	195	204	220	233	253	270	290	310
Seeds	INR/Acre	853	871	992	1,117	1,178	1,229	1,341	1,446	1,543	1,651
Fertilizers & manure	INR/Acre	1,012	1,360	1,634	1,634	1,709	1,723	1,833	1,887	1,957	2,025
Pesticides & Insecticides	INR/Acre	107	110	135	141	126	149	149	153	157	166
Water & Electricity	INR/Acre	1,040	1,261	1,252	1,248	1,394	1,703	1,703	1,846	2,041	2,250
Working Capital	INR/Acre	192	219	244	259	272	291	313	333	355	379
Miscellaneous	INR/Acre	7	5	3	2	5	17	29	57	132	314
Total Cost	**INR/Acre**	**6,325**	**7,229**	**8,043**	**8,563**	**8,964**	**9,617**	**10,202**	**10,866**	**11,608**	**12,540**
% YoY	% YoY	7.8	14.3	11.3	6.5	4.7	7.3	6.1	6.5	6.8	8.0
Total Profit	**INR/Acre**	**10,783**	**12,634**	**12,666**	**13,579**	**11,120**	**13,346**	**15,134**	**16,695**	**17,545**	**18,615**

Source: CMIE, JM Financial

Exhibit 170. Crop economcis of arhar (pulse) (INR/acre)

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Yield Quintal/Acre	Quintal/Acre	2.7	2.7	3.1	3.3	2.9	2.6	3.3	3.4	3.4	3.4
Realization/Quintal	INR/Quintal	3,000	3,200	3,850	4,300	4,350	4,625	5,050	5,450	5,675	5,959
By-product	INR/Acre	624	922	937	1,226	900	1,133	1,153	1,187	1,238	1,315
Total Realization	**INR/Acre**	**8,579**	**9,499**	**13,027**	**15,372**	**13,724**	**13,224**	**17,992**	**19,542**	**20,351**	**21,383**
% YoY	% YoY	16.8	10.7	37.1	18.0	(10.7)	(3.6)	36.1	8.6	4.1	5.1
Human Labour	INR/Acre	2,360	2,224	2,665	2,669	2,548	2,831	3,055	3,238	3,433	3,639
Machine Labour	INR/Acre	832	881	1,212	1,629	1,704	1,832	2,052	2,258	2,483	2,732
Animal Labour	INR/Acre	1,084	1,184	1,303	1,323	1,365	1,811	1,838	1,875	1,950	2,028
Seeds	INR/Acre	427	422	494	524	477	794	867	952	1,044	1,135
Fertilizers & manure	INR/Acre	871	688	1,131	1,136	1,174	1,301	1,428	1,518	1,746	1,955
Pesticides & Insecticides	INR/Acre	549	563	810	907	976	1,019	1,146	1,296	1,556	1,867
Water & Electricity	INR/Acre	75	130	134	62	181	471	518	596	685	788
Working Capital	INR/Acre	194	191	242	258	264	315	345	375	413	449
Miscellaneous	INR/Acre	3	7	5	3	37	28	61	157	468	1,086
Total Cost	**Rs/Acre**	**6,394**	**6,290**	**7,996**	**8,510**	**8,727**	**10,402**	**11,311**	**12,266**	**13,778**	**15,679**
% YoY	% YoY	20.5	(1.6)	27.1	6.4	2.5	19.2	8.7	8.4	12.3	13.8
Total Profit	**Rs/Acre**	**2,185**	**3,209**	**5,031**	**6,861**	**4,997**	**2,822**	**6,681**	**7,276**	**6,573**	**5,705**

Source: CMIE, JM Financial

Exhibit 171. Crop economics of cotton (INR/acre)

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Yield Quintal/Acre	Quintal/Acre	9.4	9.7	9.7	10.7	10.3	9.9	10.0	8.5	8.5	8.7
Realization/Quintal	INR/Quintal	3,000	3,300	3,900	4,000	4,050	4,100	4,160	4,320	5,450	5,668
By-product	INR/Acre	454	508	585	712	788	609	620	638	666	707
Total Realization	**INR/Acre**	**28,730**	**32,407**	**38,409**	**43,428**	**42,569**	**41,376**	**42,118**	**37,268**	**46,878**	**50,209**
% YoY	% YoY	**(6.2)**	**12.8**	**18.5**	**13.1**	**(2.0)**	**(2.8)**	**1.8**	**(11.5)**	**25.8**	**7.1**
Human Labour	INR/Acre	3,873	4,593	5,250	5,674	5,636	5,789	6,143	6,392	6,587	6,849
Machine Labour	INR/Acre	788	1,100	1,288	1,461	1,832	1,817	2,068	2,336	2,636	2,891
Animal Labour	INR/Acre	1,392	1,296	1,601	1,728	1,695	1,773	1,925	2,017	2,099	2,214
Seeds	INR/Acre	1,070	1,456	1,557	1,400	1,547	1,571	1,605	1,766	2,031	2,234
Fertilizers & manure	INR/Acre	1,727	2,281	3,028	3,341	3,249	3,054	3,317	3,648	4,196	4,615
Pesticides & Insecticides	INR/Acre	793	974	986	1,018	1,130	1,235	1,297	1,392	1,601	1,718
Water & Electricity	INR/Acre	476	661	686	668	960	994	1,044	1,096	1,206	1,266
Working Capital	INR/Acre	313	387	450	478	504	511	520	515	503	507
Miscellaneous	INR/Acre	7	11	11	11	69	129	131	130	127	128
Total Cost	**INR/Acre**	**10,440**	**12,759**	**14,857**	**15,778**	**16,621**	**16,875**	**18,051**	**19,292**	**20,984**	**22,422**
% YoY	% YoY	23.6	22.2	16.4	6.2	5.3	1.5	7.0	6.9	8.8	6.9
Total Profit	**INR/Acre**	**18,291**	**19,648**	**23,552**	**27,649**	**25,948**	**24,501**	**24,067**	**17,976**	**25,893**	**27,786**

Source: CMIE, JM Financial

Exhibit 172. Crop economics of sugarcane (INR/acre)

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Yield Quintal/Acre	Quintal/Acre	284	290	276	285	289	286	277	291	291	291
Realization/Quintal	INR/Quintal	139	145	170	210	220	230	230	255	255	265
By-product	INR/Acre	2,958	3,341	3,683	4,321	3,947	4,239	4,312	4,440	4,633	4,919
Total Realization	**INR/Acre**	**42,413**	**45,395**	**50,639**	**64,252**	**67,615**	**70,063**	**68,132**	**78,734**	**78,927**	**82,185**
% YoY	% YoY	**28.5**	**7.0**	**11.6**	**26.9**	**5.2**	**3.6**	**(2.8)**	**15.6**	**0.2**	**4.1**
Human Labour	INR/Acre	7,156	8,925	9,502	9,752	10,235	10,543	11,168	11,816	12,595	13,477
Machine Labour	INR/Acre	1,554	2,219	2,115	2,621	2,610	2,984	3,239	3,624	3,944	4,384
Animal Labour	INR/Acre	939	961	1,113	859	1,062	767	807	829	905	955
Seeds	INR/Acre	3,000	2,478	2,651	2,450	2,719	3,056	3,119	3,149	3,246	3,282
Fertilizers & manure	INR/Acre	2,374	2,922	3,622	3,986	4,486	4,481	4,566	5,205	5,985	6,918
Pesticides & Insecticides	INR/Acre	87	189	244	192	190	224	224	224	258	297
Water & Electricity	INR/Acre	1,899	2,649	2,386	2,419	3,695	3,311	3,146	3,460	3,806	4,187
Working Capital	INR/Acre	1,063	1,272	1,352	1,392	1,562	1,585	1,618	1,753	1,923	2,098
Miscellaneous	INR/Acre	1	2	2	0	-	1	1	0	0	0
Total Cost	**INR/Acre**	**18,074**	**21,617**	**22,987**	**23,672**	**26,558**	**26,953**	**27,889**	**30,061**	**32,662**	**35,596**
% YoY	% YoY	28.8	19.6	6.3	3.0	12.2	1.5	3.5	7.8	8.7	9.0
Total Profit	**INR/Acre**	**24,340**	**23,779**	**27,652**	**40,580**	**41,056**	**43,110**	**40,243**	**48,673**	**46,266**	**46,589**

Source: CMIE, JM Financial

Exhibit 173. Crop economics of onion (INR/acre) – Highly volatile

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Yield	Quintal/Acre	57.5	65.2	64.7	65.2	65.3	64.2	64.3	66.9	63.5	60.3
Realization	INR/Quintal	1,195	643	801	2,016	1,399	1,987	688	1,686	782	1,017
By-product	INR/Acre	447	490	470	688	435	771	784	808	843	895
Total Realization	**INR/Acre**	**69,174**	**42,413**	**52,273**	**132,223**	**91,737**	**128,304**	**44,991**	**113,532**	**50,530**	**62,259**
% YoY	% YoY	18.2	(38.7)	23.2	152.9	(30.6)	39.9	(64.9)	152.3	(55.5)	23.2
Human Labour	INR/Acre	4,669	7,461	7,809	10,421	10,595	11,743	12,826	13,595	14,411	15,276
Machine Labour	INR/Acre	1,177	1,721	1,496	1,856	2,270	2,901	3,088	3,397	3,737	4,111
Animal Labour	INR/Acre	513	457	334	654	610	637	649	662	689	716
Seeds	INR/Acre	5,365	3,530	2,554	6,204	10,652	8,161	8,130	8,301	8,731	8,841
Fertilizers & manure	INR/Acre	2,601	2,698	3,390	4,108	4,154	4,322	4,546	4,604	4,676	6,349
Pesticides & Insecticides	INR/Acre	362	618	641	1,100	949	1,046	1,421	758	833	833
Water & Electricity	INR/Acre	1,301	1,323	1,325	1,676	2,639	2,919	2,981	3,135	3,175	3,225
Working Capital	INR/Acre	500	557	550	813	996	992	988	1,009	1,061	1,074
Miscellaneous	INR/Acre	-	12	36	2	20	7	7	7	8	8
Total Cost	**INR/Acre**	**16,487**	**18,378**	**18,134**	**26,834**	**32,885**	**32,729**	**34,635**	**35,468**	**37,320**	**40,433**
% YoY	% YoY	49.2	11.5	(1.3)	48.0	22.5	(0.5)	5.8	2.4	5.2	8.3
Total Profit	**INR/Acre**	**52,687**	**24,036**	**34,139**	**105,389**	**58,852**	**95,575**	**10,355**	**78,064**	**13,210**	**21,826**

Source: CMIE, JM Financial, Note: Price based at Lasalgaon mandi, Pune

APPENDIX I

JM Financial Institutional Securities Limited

(formerly known as JM Financial Securities Limited)

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Member of BSE Ltd., National Stock Exchange of India Ltd. and Metropolitan Stock Exchange of India Ltd.
SEBI Registration Nos.: Stock Broker - INZ000163434, Research Analyst – INH000000610
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
Compliance Officer: Mr. Sunny Shah | Tel: +91 22 6630 3383 | Email: sunny.shah@jmfl.com

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