

Rural Safari VII

ON THE MEND

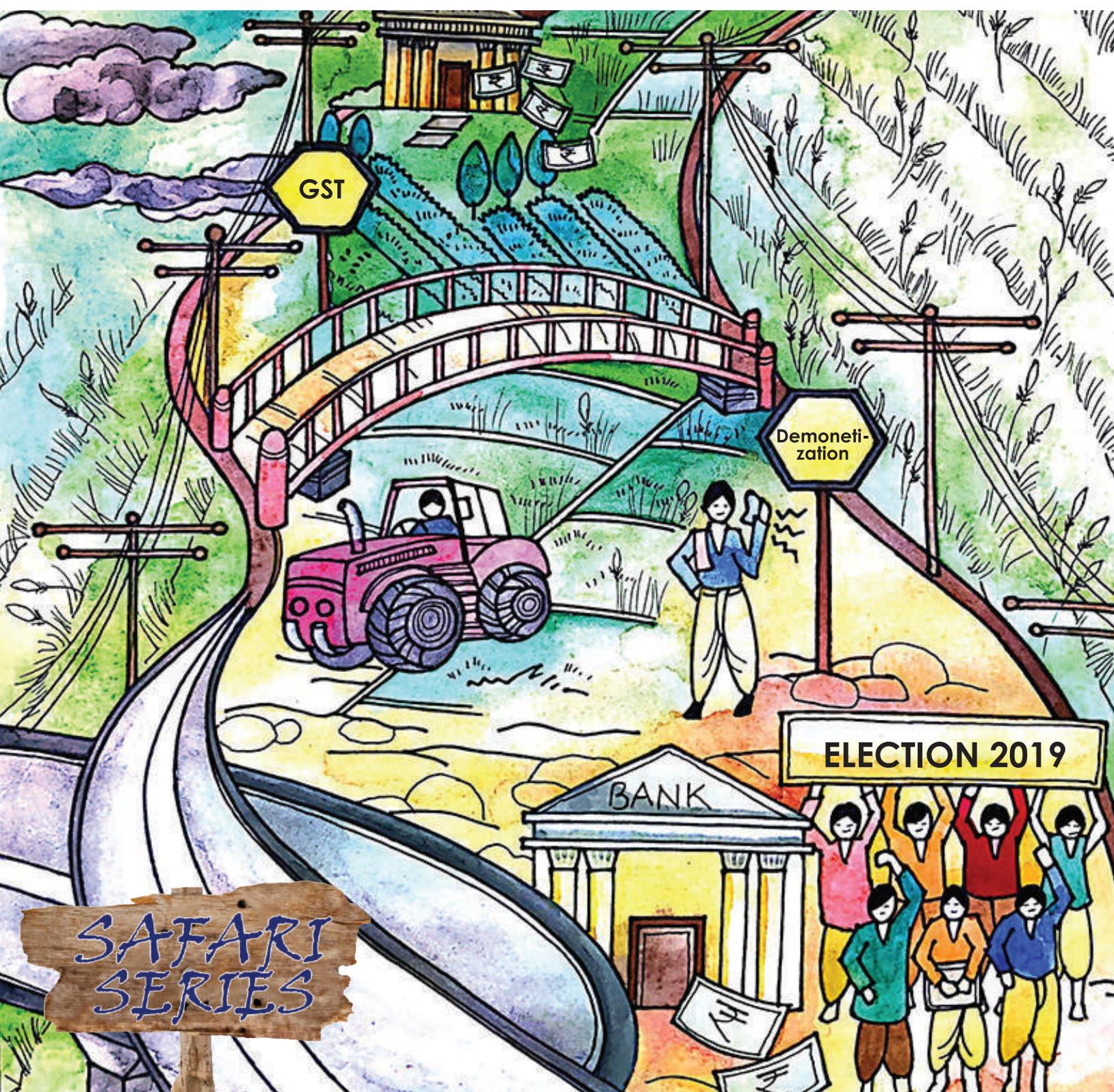


TABLE OF CONTENTS

OVERVIEW

- 03 Introduction
- 05 Key charts
- 09 JM Model Rural Portfolio

ANALYSIS

- 10 Farm income - Recovery in crop output, is pricing next?
- 24 Agri-marketing & procurement infrastructure reforms underway
- 29 Irrigation continues to see healthy traction
- 32 Non-Farm income acceleration remains modest
- 41 Improvement in electricity access and fewer voltage fluctuations
- 48 Wealth effect remains weak, impacting large ticket consumption
- 50 Rural income: Modest acceleration in FY19 aided by Government interventions

SECTOR COMMENTS

- 54 Consumer Goods
- 56 Agrochemicals
- 57 Automobiles
- 64 Cement
- 66 Financials

ANNEXURES

- 71 Crop economics

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Rural Safari I

Rural Safari II

Rural Safari III

Rural Safari IV

Rural Safari V

Rural Safari VI

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On the mend

The rural economy is on the mend, albeit aided primarily by interventions by various state governments and benefiting from the structurally rising penetration of formal financing and electricity in rural India. State governments have, until now, provided ~40bps of fiscal boost in the form of farm loan waivers and are stepping up their rural capex by 21% YoY in FY19. Increased availability of electricity in Northern states and schemes such as "the 24x7 free power for agriculture" are ensuring that farm output does not fall and are driving the penetration of consumer goods.

The stated intent of the Central government on Minimum Support Prices (MSP) can provide another boost if implemented well. Here, we note that the government could be running against time since centres for procurement at MSP have spotty presence in the North and East. Also, it is skewed in favour of large farmers and we have witnessed that where centres exist, prices generally tend to be below MSP. In our view, even if implementation is not best-in-class, overall rural incomes could grow in double digits as interventions can even take place at a later stage. The second order impact on inflation depends on the measures taken on procurement, but suffice to state that fiscally, we estimate 20-30bps of upside risks. A sentiment dampener in rural India continues to be the weak to very weak real estate market and prices. For investors, we have designed a model rural portfolio (see page 9).

"Gram mandir" for 2019:

We estimate farm incomes to grow by double digits in 2019, aided by government interventions, better output and benefits from ongoing, rising penetration of financing and electricity. We expect significant MSP increases across key crops; 12.5%/18.5% YoY for paddy/cotton in Kharif and another 7-10% for Rabi crops. A lot depends on the procurement policies and implementation, the efforts towards which we could be underestimating given micro-level issues (exhibit 60). Given that 4-year CAGR in income is possibly in mid-single digits and weak asset prices are a negative, we believe even partial implementation can generate a "feel-good" factor.

Slow recovery in non-farm incomes:

This component has been volatile over the years owing to Demonetization, GST implementation and the ban on sand mining. We note that state governments are stepping up rural capex (62% of which is irrigation and 70% in 6 states) for FY19. Sand mining – while not fully – is on the path to recovery as well. The wholesale trade, on the other hand, is operating at a lower, probably efficient level. Overall, we expect this component to grow in high single digits despite private real estate activity continuing to remain weak (exhibit 12).

"Induction tops" in rural Bihar:

The consumption of power in Bihar and UP has posted a 3-yr CAGR of 12.4% and 10.7%, respectively, compared with 5.3% across India. The per-capita consumption in these states is 25% and 50% of the pan-India number and the increased penetration of power (exhibit 96) is helping both in farming and income generation and driving sales of electrical goods. While the long-term benefits of free power can be questioned, in the short term, even the 24x7 free power in state of Telengana is helping farm yields (box 10).

Tractors and CVs - the rural Uber:

We noticed continued rising penetration of financing, especially by NBFCs, in rural India with players such as Home Credit (unlisted) competing for market share with aggressive practices. The share of financing in automobiles is likely to have risen as per our interactions with dealers and data from companies (exhibit 104) on the use of these vehicles for income generation. All our channel checks during the trip also suggested higher collection efficiency for rural financing companies.

Rural Safari: 12 states, 15 districts, 3,000+ 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 headquarter of the Indian army. While agriculture is prominent in the region, Jindal steel factory is also located here. Key crops grown in the region are wheat, paddy, cotton, maize and oilseeds

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

Raisen is a rural district about 50km from capital city Bhopal (78% rural population). It has many tourist attractions including Buddhist Sanchi Stupa. Wheat, Soyabean, Rice, Gram, Lentil, Maize, Vegetables are the key crop. Key crops at Sehore district, adjacent to Bhopal are Wheat, Gram, Lentil, Peas and Linseed

Indore

Indore is the most populous city of Madhya Pradesh. Indore has been selected as one of the 100 Indian cities to be developed as a smart city under the Smart Cities Mission. Key crops: Soya bean, wheat, potato, maize and gram.

Aurangabad/Ahmednagar

Located near the Godavari Basin, agriculture in Aurangabad is well diversified with 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.

Varanasi

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 to outside of district remains high on account of low economic activity.

Jaipur

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

Warangal

It is the second-largest city in Telangana. Agriculture and trading are the main economic activities. The city hosts Asia's second-largest grain market. Key crops: Paddy, cotton, mango and wheat.

Guntur & Vijayawada

Guntur is the largest producer of chilies 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

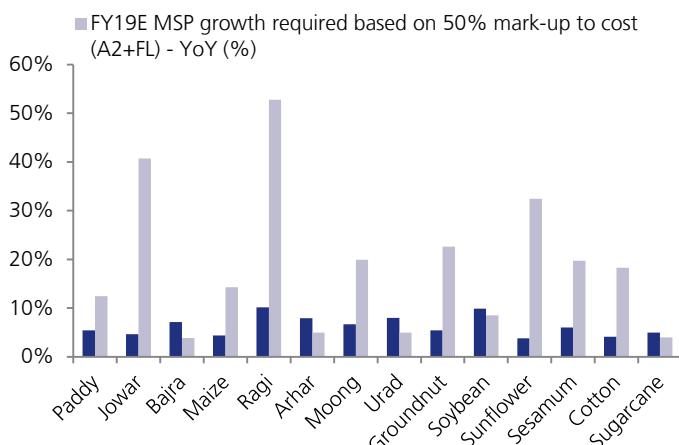
Tumkur/Belgaum

Tumkur is known for the production of Ragi, Maize, Rice, Ground-nut, 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 Sugarcanes (27 factories), Maize, Rice, Vegetables.

Key Charts

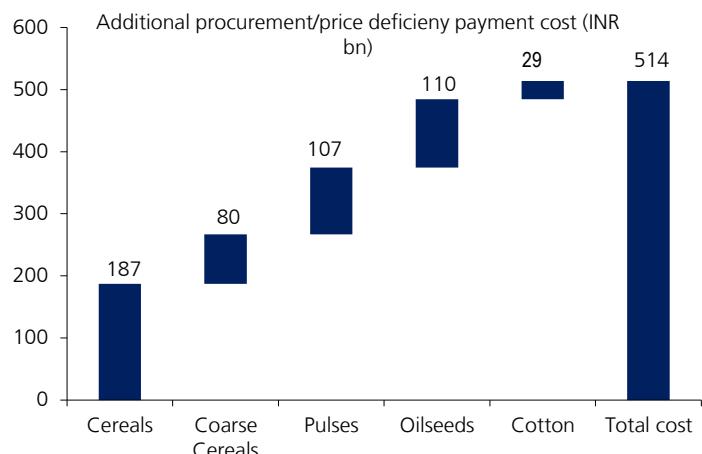
Exhibit 1. MSP rates for crops set to accelerate in FY19

■ FY14-18 MSP CAGR (%)



Source: CACP, JM Financial,

Exhibit 2. Additional procurement/price deficiency payment represents a 20-30bps upside risk for fiscal deficit in FY19



Source: JM Financial, Note: Based on the assumption of market prices lower by 10% from the MSP rates

Exhibit 3. Feedback from JM Financial visit: Modest increase in near term farm income based on Rabi (Nov'17-Apr'18) crop output

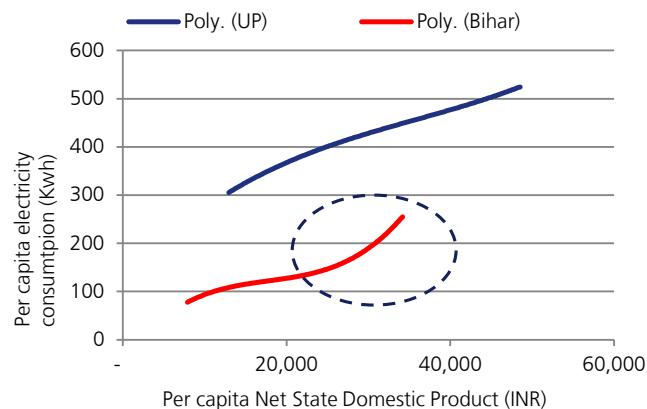
State	Kharif sowing YoY (%)	Rabi Sowing YoY (%)	Farm Income YoY (%)	Comments - Farm productivity/income
UP	-1.5%	-3.2%	↔	Yield of key Rabi crop wheat is broadly stable as compared to last year. No adverse impact from unseasonal rain so far. Sugarcane has seen healthy output, with payment delays.
Haryana	0.2%	0.8%	↑	Wheat output has been better than last year in most of the regions. Mustard (oilseed) production is also higher YoY, but prices are below MSP and procurement is awaited.
Punjab	0.1%	0.0%	↑	Wheat output is broadly stable YoY, though some instances of pest attacks have been noted. Pest infestation in cotton had adversely impacted yield & prices. Also prices for basmati rice have improved
MP	1.8%	-6.3%	↔	Wheat has seen significant decline in yield (10-20% YoY), while gram has a stable yield. State Government's efforts on providing bonus amount for wheat and implementation of Bhavantar (price deficit payment) scheme have held up farm income.
Telangana	1.7%	-4.1%	↔	Paddy crop yield has been stable, market prices have also been favorable and up YoY. A key trend has been diversification to superfine variety of paddy. Chilli (spice) crop faced pest attacks in the state leading to c 40% decline in yields and is expected that acreage will decline next year.
Karnataka	-13.4%	18.4%	↔	Rainfall occurred towards latter half of monsoon and hence kharif sowing was weak, but Rabi was taken up well in the state. In Northern Karnataka, sugarcane production has been healthy, with crushing done during December period and select cases of payment delays had been noticed.
Bihar	2.8%	0.9%	↑	Overall agricultural output in Bihar is likely to be slightly higher (4-5%) yoy given a reasonable monsoon and slight increase in Rabi sowing (up by 1%). Procurement machinery continues to be absent
Maharashtra	-0.8%	-9.3%	↓	Maharashtra faced multiple headwinds in FY18 – pest infestation in the Cotton crop (Pink Bollworm) reduced the yield by almost 30% YoY, onion production was healthy (some districts faced unseasonal rains as well) but prices declined significantly Sugarcane and wheat output however, has been healthy.
AP	-5.9%	17.1%	↔	Key crops of paddy and pulses (accounting for c.50% of sown area) have seen stable output. Very similar to Telangana, yield of chilly has been down due to pest infestations leading higher expense on agro-chemicals.
Gujarat	0.0%	8.6%	↔	Overall crop output has been better, however agri-commodities pricing has been weak and that has adversely impacted the farm income for the state.
Tamil Nadu	-15.9%	35.6%	↑	Tamil Nadu received very healthy rainfall during monsoon (+33% ahead of LPA) as well as between Oct'17-Dec'17. Sowing jumped sharply on YoY basis (+36% YoY), driven primarily by increased acreage of paddy. Yield (crop output/acre) and consequently overall crop output has been healthy in the state.
Rajasthan	3.2%	-10.8%	↓	West Rajasthan received very healthy rainfall (+40% above LPA), while Eastern Rajasthan recorded deficit of 8%. Irrigated coverage is overall weak for the state and sowing during rabi was weak (-11% YoY) primarily in the oilseeds segment. Overall crop output has been soft and YoY lower in the non-irrigated regions.

Source: JM Financial, Legend : Strong : Modest : Flat : Decline, Note: The comparisons are over similar period last year

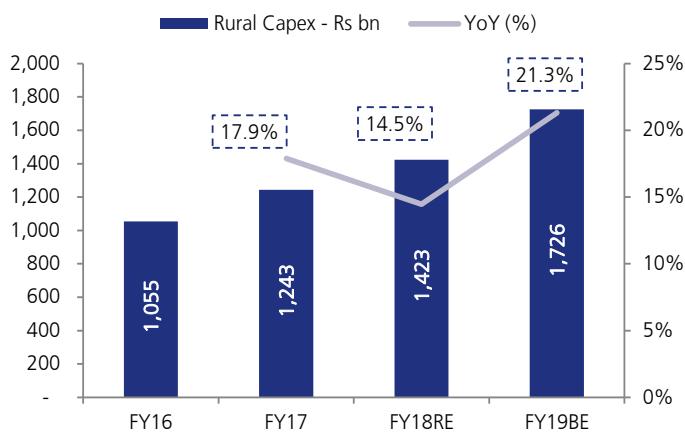
Exhibit 4. Mandi trading activity feedback remains mixed

Mandi	State	Comments
Guntur	Andhra Pradesh	Chosen for model eNAM implementation, gradual uptake of trading post initial resistance by traders and farmers
Warangal	Telangana	Cash remains preferred mode of trading, benefits from the shift of traders from Guntur Mandi, State government stepping up for procurement of Maize as it trades below MSP
Indore	Madhya Pradesh	Prices ahead of MSP across crops due to Bhavantar scheme (Price deficiency payment). Selective complaints of delays in payment to farmers
Hiissar	Haryana	Wheat procurement strong, while mustard falling below MSP. From earlier full cash has shifted to 50% in cheques by now
Rajkot	Gujarat	Trading value higher than last year, returning to cash prices falling below MSP

Source: JM Financial

Exhibit 6. Electricity consumption/capita shows sharp jump in the states of Bihar and UP, consistent with our feedback

Source: Sigma Insights, JM Financial, Note: 3-degree polynomial trendline for per capita electricity consumption vs. per capita net state domestic product (FY05-17)

Exhibit 8. States' rural capex posting a 18% CAGR over the past three years

Source: State budgets, JM Financial, Note: Based on 17 state budgets accounting for 90% of India's GDP

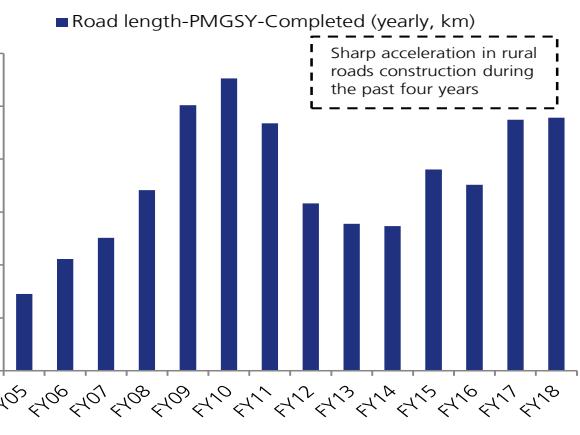
Exhibit 5. Barring Madhya Pradesh, prices of commodities not above MSP at all Mandis, necessitating procurement enhancement

Mandi	State	Price below MSP for major cereals (Paddy/Wheat)	Price below MSP for coarse cereals-pulses/oilseeds
Guntur	Andhra Pradesh	No	Yes
Warangal	Telangana	No	Yes
Indore	Madhya Pradesh	No	No
Jaora	Madhya Pradesh	No	No
Hissar	Haryana	No	Yes
Rajkot	Gujarat	No	Yes
Jaipur	Rajasthan	Yes	Yes
Belgaum	Karnataka	No	Yes
Chandauli	Uttar Pradesh	Yes	Yes
Madhubani	Bihar	Yes	Yes

Source: JM Financial, Note: Prevailing prices in UP & Bihar

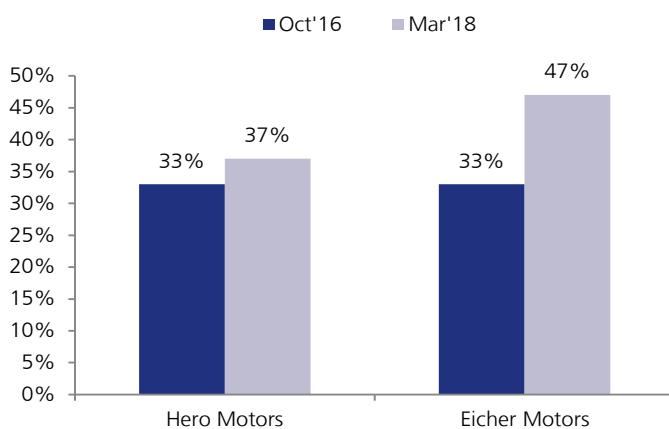
Exhibit 7. Use of induction cooking tops reaching hinterlands

Source: JM Financial

Exhibit 9. Roads construction accelerated to 45K/year against 30K/year three-four years back

Source: PMGSY, JM Financial

Exhibit 10.Increased financialisation aiding consumption growth...Share of sales on financing has seen jump post demonetisation



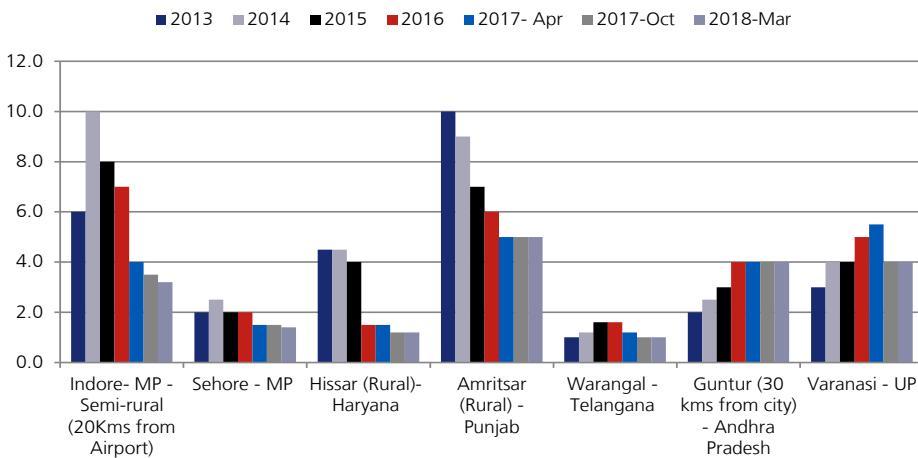
Source: Company, JM Financial

Exhibit 11. Challenges for wholesale based businesses remain

Description	Key message
Retailer of consumer durables, appliances across UP (Value Plus), Varanasi	Steady growth across the organised store aided by Availability of financing. Due to 0% financing there have been instances when a consumer has bought an INR 15,000 cooler, while he had come for a INR5,000 cash purchase. However, the whole sale channel has seen weakness post the GST implementation and remains a concern.
Large FMCG distributor based at Surat, Gujarat	Sales in modern trade has been good and growing, while general trade has shown steady and sharp decline. This is also impacting employment at the retail level.
Textile retailer & wholesaler based at Bhopal, Madhya Pradesh	Overall sales sentiment is not strong. A number of large whole-salers in the textile industry have seen significant declines (such as among wholesalers in Dadar, Mumbai), particularly those operating in cash.
Packaged oil dealer, Jaipur, Rajasthan	Business volumes have gone down significantly and big distributors are directly buying from companies and bypassing Mandis

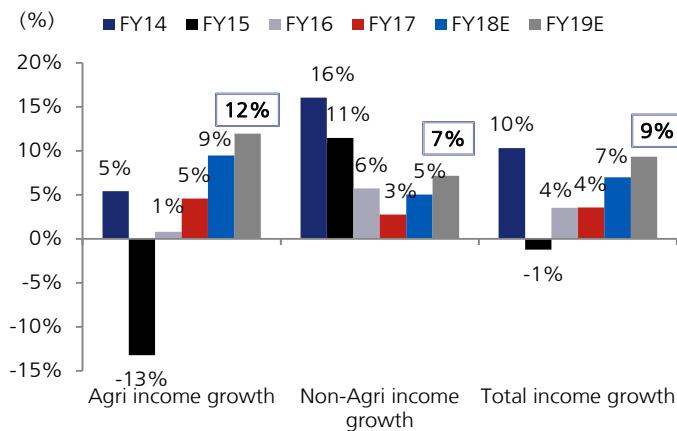
Source: JM Financial

Exhibit 12. Real estate activity remains weak - Sample land price (INR mn per acre) as tracked in JM Financial's survey



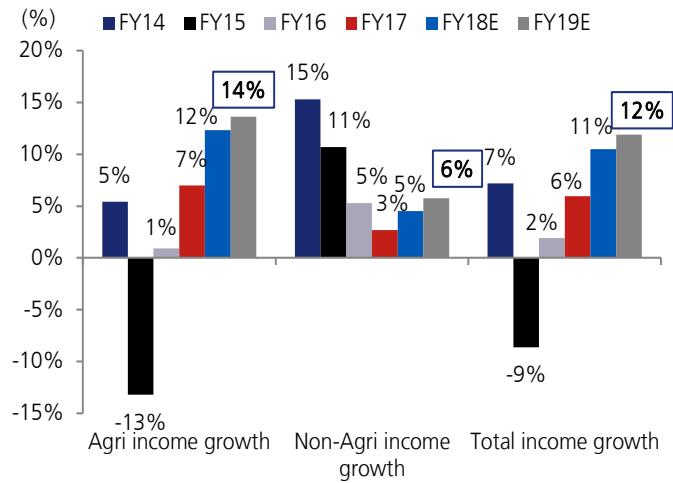
Source: JM Financial

Exhibit 13. ..Overall modest acceleration in income growth for a small farmer (2.7acre) – consumption aided by financialisation and boost from farm loan waivers



Source: JM Financial

Exhibit 14. Steady state income growth for a large farmer



Source: JM Financial

Exhibit 15. Snapshot from currently visited areas; comparison with previous season

	Gujarat Jamnagar	Punjab Bhatinda	Haryana Hissar	UP Varanasi	Bihar Madhubani	MP Sehore	Rajasthan Jaipur	Maharashtra Aurangabad	Karnataka Ahmed-nagar	Andhra/Telangana Tumkur	Vijayawada/ Guntur	Warangal	Tamil Nadu Tiruvallur
Main crops*	Cotton, Gram, Wheat, Ground-nut	Wheat, Paddy, Cotton, Potato	Wheat, Paddy, Cotton, Maize, Oil-seeds	Wheat, Paddy, Bajra, Arhar, Sugarcane	Wheat, Paddy, Gram,	Wheat, Gram, Soya Bean,	Maize, Coarse cereals, Paddy, wheat	Jowar, Paddy, Soya bean, Gram	Maize, Cotton, Paddy, Sugarcane	Maize, Arcanut, Paddy, Fruits and Vegetables	Paddy, Cotton, Maize, Banana, Chilly	Paddy, Castor, Red Gram, Orange	Paddy, Jowar, Maize, Gram, Sugarcane, Chillies, Coconut
Move towards cash crops	⬆️	⬆️	⬆️	⬆️	↔️	⬇️	⬆️	⬆️	⬇️	⬆️	⬇️	⬆️	⬆️
Yield over last year	⬆️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️
Price (non-MSP cash crops) over last year	↔️	↔️	↔️	⬆️	↔️	↔️	⬇️	↔️	↔️	↔️	↔️	↔️	↔️
Overall farm income	⬆️	⬇️	⬇️	↔️	↔️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️
Agriculture financing awareness and usage	⬆️	⬇️	⬆️	↔️	↔️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️
Non-agri Income													
Dairy	⬆️	↔️	⬆️	⬆️	↔️	↔️	⬇️	⬇️	↔️	⬇️	⬇️	⬆️	⬆️
Tractor/Pick-ups	⬆️	⬇️	⬆️	⬇️	↔️	↔️	↔️	↔️	↔️	↔️	↔️	⬇️	⬇️
Remittances	⬇️	↔️	↔️	⬇️	↔️	↔️	⬇️	⬇️	↔️	↔️	⬇️	↔️	↔️
Local jobs	⬇️	⬇️	↔️	↔️	↔️	↔️	⬇️	⬇️	↔️	↔️	⬇️	⬇️	↔️
Wealth effect of land													
Urbanisation	⬆️	⬇️	⬆️	⬆️	⬇️	⬇️	⬇️	⬇️	↔️	⬇️	⬇️	⬇️	⬇️
Road connectivity	⬆️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	↔️	↔️	⬇️	⬇️	↔️	⬇️
Price trend	⬇️	⬇️	⬇️	↔️	↔️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️	⬇️

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

JM Model Rural Portfolio

Exhibit 16. JM Model Rural Portfolio

Company	Portfolio weight (%)	JM Rating	CMP (INR)	Mkt Cap (INR bn)	P/E (x)		EPS growth (18-20E) (%)	EV/EBITDA (x)*	ROE (%)
					FY19E	FY20E			
Consumer Discretionary		37							
Mahindra & Mahindra	10	BUY	788	979	20.7	17.8	16.2	13.2	11.2
Maruti Suzuki	8	BUY	9,204	2,780	28.0	22.9	22.7	18.6	15.5
Hero MotoCorp	5	BUY	3,749	749	18.3	16.0	12.6	12.9	11.1
Eicher Motors	4	BUY	30,682	836	32.6	25.0	29.2	22.0	16.6
Havells India	4	HOLD	548	343	39.1	32.7	23.0	25.1	20.8
V-guard Industries	4	BUY	234	100	43.5	34.3	27.4	31.6	25.1
V-Mart Retail	2	NR	2,104	38	46.1	36.7	23.7	25.0	20.4
Financials*		25							
M&M Financial	15	BUY	498	308	20.9	16.7	39.3	3.0	2.6
Cholamandalam Investment	5	BUY	1,543	241	19.6	16.2	23.8	3.9	3.3
Equitas	5	NR	152	52	31.3	18.3	198.4	2.1	1.9
Consumer Staples		25							
Hindustan Unilever	10	HOLD	1,413	3,058	51.3	44.6	15.2	34.4	29.9
Dabur	5	HOLD	345	608	38.6	34.2	13.6	31.9	27.8
Colgate-Palmolive India	4	HOLD	1,103	300	40.1	34.5	15.3	23.5	20.3
Brittania Industries	4	BUY	5,163	620	50.8	42.6	20.7	33.7	28.3
Bajaj Corp	2	BUY	496	73	27.7	23.8	16.9	22.0	18.4
Agro-chemicals		9							
UPL Ltd.	3	BUY	748	381	15.9	12.8	20.9	9.8	8.1
PI Industries	2	HOLD	852	117	25.6	21.0	21.0	18.6	15.4
Coromandel International	2	NR	525	153	18.5	16.1	14.4	11.8	10.7
Godrej Agrovet	2	NR	703	135	40.5	32.5	24.4	25.9	21.9
Infrastructure		4							
Finolex Industries	2	NR	657	82	21.8	20.5	17.9	14.9	13.1
Supreme Industries	2	NR	1,292	164	33.1	26.8	24.1	18.5	15.5
Total	100								

Source: JM Financial, Bloomberg where not rated (NR), Valuation as of Apr 12, 2018

Farm income - Recovery in crop output, is pricing next?

Despite the declining share of farm income in rural India (c.1/3), agriculture continues to be one of the major drivers of rural economy as farming still employs c.50% of the country's labour force. Therefore, farm income is of critical importance for any recovery in rural spending. Monsoons have been normal (as defined to be within 6% of the Long Period Average - LPA) for the last two years – 2016 and 2017, recovering any loss in crop output. However, a softening of trading volumes impacted by fewer cash-based transactions after demonetization and softer agri-commodity prices have kept the increase in farm income under check.

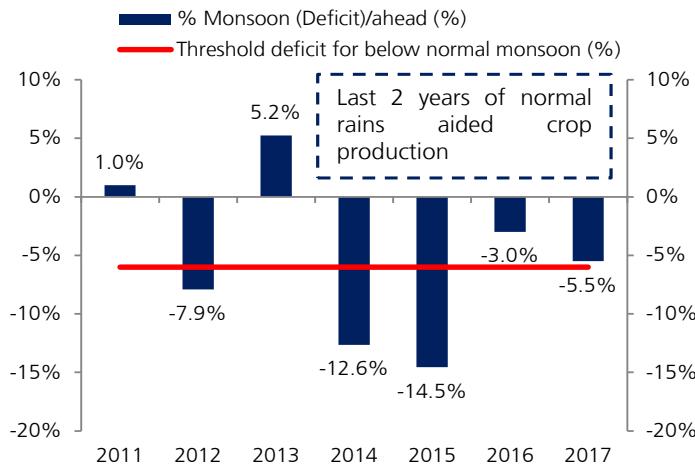
Our recent visits across rural India point to a modest improvement in farm income after the current Rabi harvest. The government's announcement of MSP above 50% of the cost in FY19 implies significant acceleration in MSP growth rates (eg. from mid-single digit growth to early double-digit growth for paddy, which is a key crop). As has been seen historically, except key cereals which are procured by the government (rice and wheat), agri-commodity prices have traded below MSP rates (based on supply demand, global prices, etc.) and have been a cause for weak income growth; they have also driven protests, as seen in Jun'17. The government is working on broad-basing the procurement machinery, including payment of the deficit between the mandi price and MSP, and taking it from the existing Bhavantar scheme currently being implemented in Madhya Pradesh.

We estimate that the additional amount required to cover deficits (if prices remain 10% below MSP for all crops) would be INR 0.5tn or c.27bps of FY19E GDP. The expansion of the procurement mechanism/price deficit payment to the whole country would benefit most farmers, but is an extremely challenging task given the weak institutional delivery mechanisms in several states particularly, in North and East India. Nevertheless, we believe any expansion of the price deficit/procurement mechanism would be beneficial for farm income in FY19. The structural challenges of Indian agriculture (fragmented and small landholdings, lack of high-quality inputs, weak marketing infrastructure, etc.) are medium-term issues and therefore in an election year (General elections by May 2019), there can be heightened news flow around the rural economy and farming in general. Nevertheless, a likely normal monsoon in 2018, an increase in MSP prices, improvement in crop procurement mechanisms and stable – if not increasing – global agri-commodity prices could support a modest acceleration in farm income growth.

Consecutive good monsoons (2016 & 17) have aided in farm output recovery – a normal monsoon in 2018 to set a good base for farm output

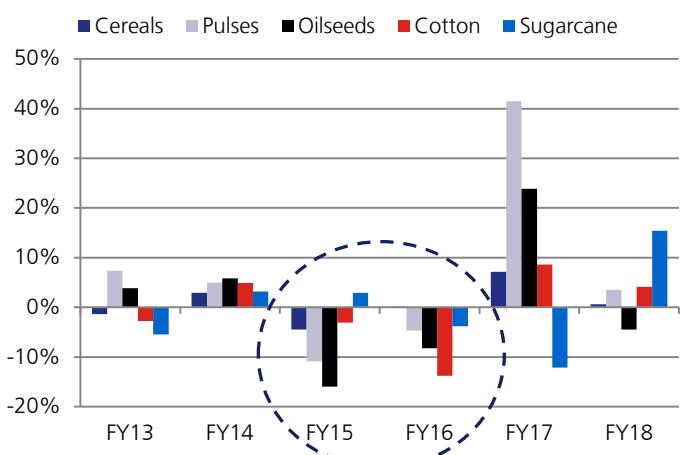
India's monsoon season (Jun-Sep) – which accounts for c.80% of water requirements for agriculture crops – was normal for the second consecutive year in 2017 (although with uneven geographical and spatial distribution), and consequently, agriculture production has seen sharp recovery in the last two years. Apart from the increase in agri-production quantity, normal rains improved the quality of produce and lowered agri-input costs (lower irrigation cost, less pest infestations, etc.), aiding farm income growth.

Exhibit 17. Monsoon has been overall normal during the past two years after a deficit of 12%/14% in 2014/15



Source: IMD, JM Financial

Exhibit 18. Consequently, agri-output (mn tonne, YoY %) recovered in the last two years after consecutive declines over FY15/16



Source: CMIE, JM Financial

The initial forecast for 2018 has been for a normal monsoon (as per private forecaster Skymet); this bodes well for crop output in FY19.

Consecutive good monsoons (2016 and 2017) have aided in farm output recovery – a normal monsoon in 2018 should set a good base for farm output

As previously mentioned, a normal monsoon in 2017 (-5.5% below the LPA) set up a good base for the currently undergoing Rabi (Nov'17-Apr'18) crop season. Interestingly some states that faced a large rain deficit (UP, Punjab, Haryana, etc.) had good irrigation coverage (chart below), therefore limiting any adverse impact on crop output.

Exhibit 19. Monsoon 2017 - Most states with large rain deficits have good irrigation coverage, thereby limiting adverse impact

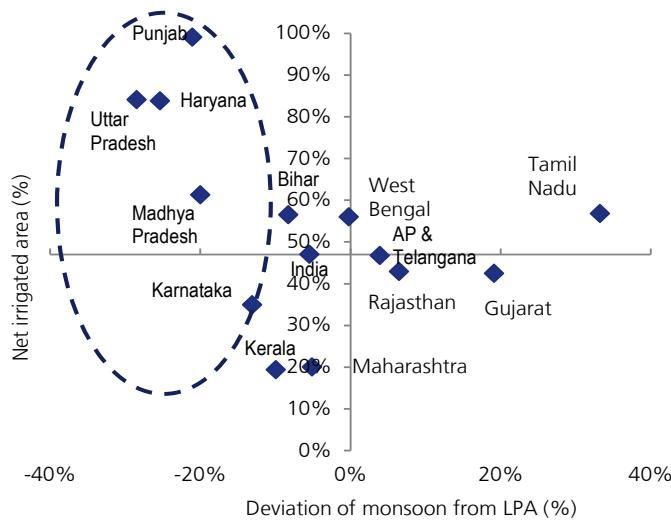
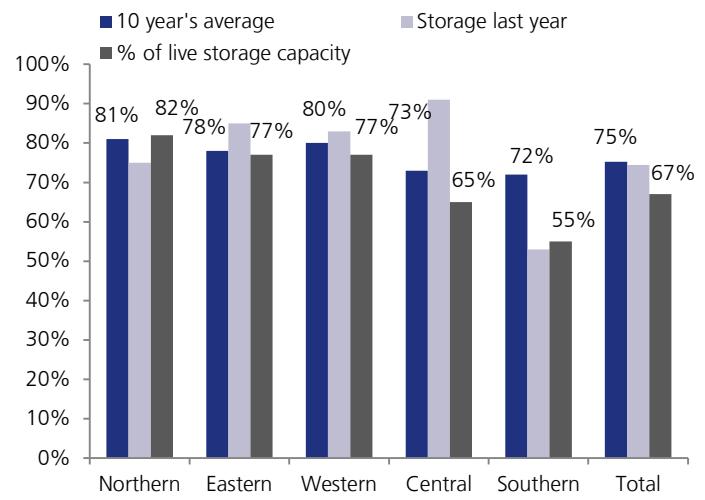


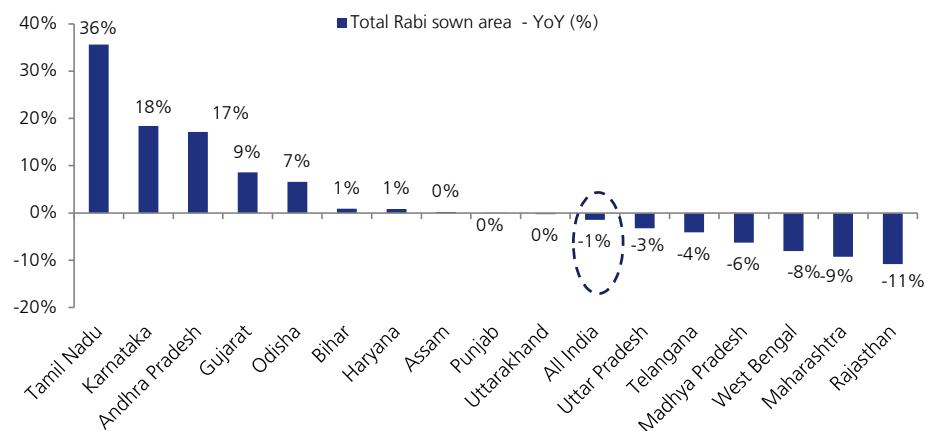
Exhibit 20. Water levels - Barring Central India, water levels were reasonable for a good Rabi (Nov'17-Apr'18) crop



Source: CMIE, JM Financial, Note: Water level as at Oct 12, 2017 at the beginning of Rabi sowing season

Water levels across the country (as measured by reservoir levels) indicated sufficient water levels for most areas barring Central India at the beginning of the Rabi sowing season. Additionally, in 2017, South Indian states saw healthy rainfall towards the latter part of the monsoon (late-August onwards) and therefore, Rabi was expected to be strong in South India, as we had highlighted in our previous report [Rural Safari VI](#). A healthy scenario in South India from a farming (Rabi) perspective reflects in the sowing trend and during our visits in Mar-Apr'18.

Exhibit 21. Trend in FY18 rabi (Nov'17-Apr'18) sown area (mn hectares) – YoY (%) – South Indian states saw a sharp jump in sown area, while overall, it was flat



Source: PIB, JM Financial

The sowing data for the Rabi crop season clearly shows South India's strength. However, an earlier weak Kharif season for this region is likely to moderate overall farm income growth for FY18.

Barring a few pockets in Central India, overall crop output is expected to be YoY better in the current Rabi crop season

The JM Financial team visited 12 large states in India, which account for c.75% of the country's agri-GDP during Mar-Apr'18. Our interactions with farmers/agri-input dealers and mandi staff clearly reflected the overall increase in crop output with some instances of declines/weakness in states such as **Madhya Pradesh, Rajasthan and Maharashtra** (accentuated by unseasonal rains in Feb-Mar'18). **We also noted high incidences of pest infestations in cotton (bollworm attack) and believe farmers could move from sowing cotton to soyabean in the upcoming Kharif season, particularly in Maharashtra.**

Exhibit 22. Andhra Pradesh – Overall healthy rabi crop output



Source: JM Financial

Exhibit 23. Tamil Nadu – benefits from late-monsoon rains



Source: JM Financial

Exhibit 24. Madhya Pradesh – Crop output impacted by adverse weather conditions; state govt support on farm prices



Source: JM Financial

Exhibit 25. Maharashtra – State impacted by unseasonal rains and overall weak water levels (Vidarbha and Marathwada)



Source: JM Financial

Exhibit 26. Karnataka – A healthy rabi output overall, while Kharif output was marred by late rainfall



Source: JM Financial

Exhibit 27. Uttar Pradesh - Crop harvesting under progress - Stable crop output



Source: JM Financial

Exhibit 28. Bihar – Stable crop output in the current rabi season



Source: JM Financial

Exhibit 29. Haryana – Healthy farm output aided by robust irrigation cover



Source: JM Financial

Exhibit 30. Feedback from JM Financial visit – Modest increase in near term farm income based on Rabi (Nov'17-Apr'18) crop output

State	Kharif sowing – YoY (%)	Rabi Sowing – YoY (%)	Farm Income - Comments - Farm productivity/income
UP	-1.5%	-3.2%	↔ Yield of key Rabi crop wheat is broadly stable or slightly higher than last year. There has been no adverse impact from unseasonal rain so far. Other crop such as sugarcane has seen healthy output during the current season, while there have been select instances of delay in receiving payouts.
Haryana	0.2%	0.8%	🟡 Rainfall continues to be below normal in the state (below -20% of LPA) for the sixth consecutive year, but a healthy and operating irrigation coverage has aided crop production. Overall key crop (wheat) output has been generally better than last year in most of the regions. Mustard (oilseed) production is also higher YoY, but prices are weak and Government procurement is still awaited
Punjab	0.1%	0.0%	🟡 Crop output has remained stable for wheat, though some instances of pest attacks have been noted. The key kharif crop, cotton had a stable yield YoY, but witnessed pest attacks. Prices in the local market have been on uptrend, particularly for Rice (basmati), while cotton price has been largely stable
MP	1.8%	-6.3%	↔ Key crop wheat has seen decline in yield (10-20% YoY) on account of deficit rainfall (-20% below LPA) in the state. There was a shift to lower water usage crop Gram (Chana) this year which had a stable yield. The State government initiatives of providing (a) bonus of INR265/qlt on wheat, (b) implementation of the price deficit scheme "Bhavantar" has held up prices of agri-commodity in the state, and raised prices of soyabean crop significantly (+20%).
Telangana	1.7%	-4.1%	↔ Paddy crop yield has been stable and market prices have also been favorable and increased YoY. A key trend has been diversification to superfine variety of paddy which fetches higher price than the Government declared MSP rates. Chilli (spice) crop faced pest attacks in the state leading to c 40% decline in yields and is expected that acreage will decline next year.
Karnataka	-13.4%	18.4%	↔ Rainfall had been normal in the interior regions, while coastal Karnataka faced third consecutive year of rain-deficit (-17% below LPA). Rainfall occurred towards later half of monsoon and hence kharif sowing was weak, but Rabi was taken up well in the state. In Northern Karnataka, sugarcane production has been healthy, with crushing done during December period and select cases of payment delays had been noticed.
Bihar	2.8%	0.9%	🟡 Overall agricultural output in Bihar is likely to be slightly higher (4-5%) yoy given a reasonable monsoon and slight increase in Rabi sowing (up by 1%). The floods last year had impacted some regions of North Bihar during Kharif season, but they also add to the soil fertility and hence expected a good rabi crop from the state.
Maharashtra	-0.8%	-9.3%	🔴 Maharashtra continues to face weather related challenges during the year. Pest infestation in the Cotton crop was high (Pink Bollworm) reducing the yield by almost 30% YoY. Later on, onion production has been healthy but has seen sharp price declines since Mar'18. Overall, sugarcane and wheat production has been good, supporting farm income in the state.
AP	-5.9%	17.1%	↔ Key crops of paddy and pulses (accounting for c.50% of sown area) have seen stable output. Very similar to Telangana, yield of chilly has been down due to pest infestations leading higher expense on agro-chemicals.
Gujarat	0.0%	8.6%	↔ After three weak rainfall years, Gujarat had received healthy rains during 2017 (c.20% above LPA) and consequently Rabi sowing has been better than last year. Overall crop output has been better, however agri-commodities pricing has been weak and that has adversely impacted the farm income for the state.
Tamil Nadu	-15.9%	35.6%	🟡 Tamil Nadu received very healthy rainfall during monsoon (+33% ahead of LPA) as well as between Oct'17-Dec'17. Sowing jumped sharply on YoY basis (+36% YoY), driven primarily by increased acreage of paddy. Yield (crop output/acre) and consequently overall crop output has been healthy in the state.
Rajasthan	3.2%	-10.8%	🔴 West Rajasthan received very healthy rainfall (+40% above LPA), while Eastern Rajasthan recorded deficit of 8%. Irrigated coverage is overall weak for the state and sowing during rabi was weak (-11% YoY) primarily in the oilseeds segment. Overall crop output has been soft and lower in the non-irrigated regions.

Source: JM Financial, Legend : Strong : Modest : Flat : Decline, The comparisons are over similar period last year

Agri-commodity prices – Will they be more supportive going ahead?

The prices of Indian agri-commodities are driven by (a) local supply/demand, (b) minimum support price (MSP) announced by the Government and (c) international price trends. Overall, prices for agri-commodities, particularly ex-cereals are impacted more by global price trends, as barring cereals (paddy and wheat), procurement of most other crop output is not material and is done based on need. **The fluctuations in pricing of agri-commodities remain a significant uncertainty for farm income**, as we had analysed in our previous note ([Rural update – Price](#)). We saw a sharp decline in prices (pulses/oilseeds) during May-Jun'17 eventually driving farmer-led protests across multiple states (Madhya Pradesh and Maharashtra) and led to the expansion of farm loan waivers during the next few months (INR 0.9tn over FY18RE and FY19BE).

One of the key drivers for farm income going ahead would be the trend in agri-commodity prices. In the next few pages, we discuss the current pricing trend, initiatives taken by the government around the pricing of agri-commodities and the most important of all – (a) the likely increase in MSP declaration in FY19 and (b) plans/efforts towards payment to farmers in case prices fall below MSP rates.

Apart from wheat and paddy, procurement of other crops is low, thereby increasing the volatility in pricing

Global agri-commodity price trend remains largely stable

The softness in global agri-commodity prices over 2013-16 has also been a significant cause for weaker farm realisations over FY15-17. Agri-commodity prices stabilised in 2017, and the last few months have seen some strength in pricing for few crops such as **wheat, soyabean and cotton** based on slightly lower production in a strong demand environment. However, a sustained strong rally in agro-commodities is yet to be seen and any increases from present levels would benefit farm realisations.

Exhibit 31. Global commodity indexes – A sustained and increase in crude oil is positively co-related with agri-commodity index

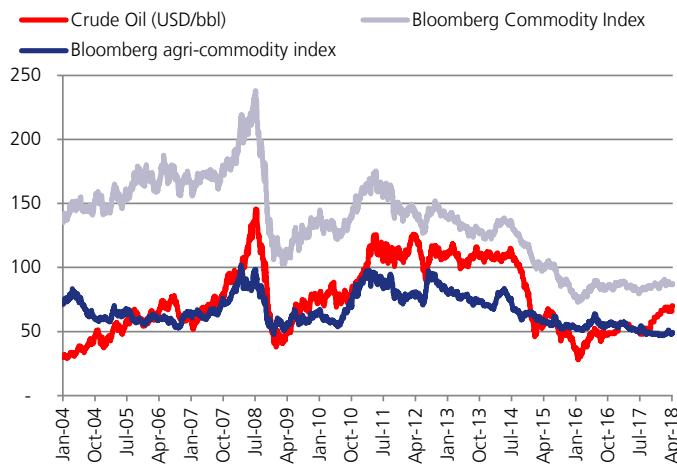
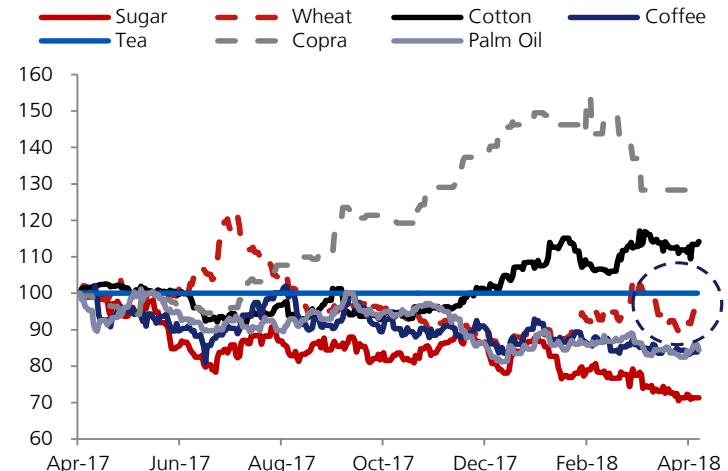
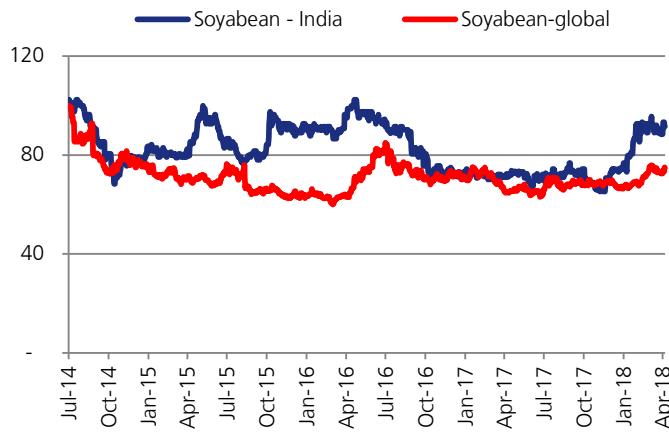


Exhibit 32. Global food prices trend over the past year – Acceleration seen in the past few weeks in wheat/cotton



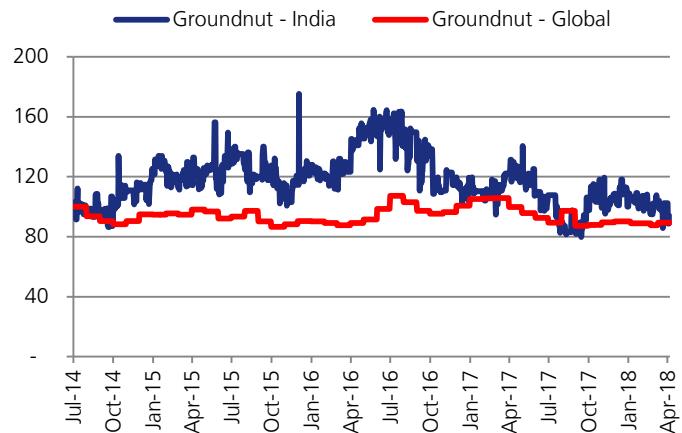
Among crops, soyabean has seen strength in global markets in the past few months and this has reflected in domestic prices. Prices of soyabean also benefited on account of the price deficit scheme in Madhya Pradesh (c.50% of country's production in the state). Among other major oilseeds, groundnut prices have remained largely flat.

Exhibit 33. Soyabean prices have seen a good rebound in the past few months



Source: Bloomberg, JM Financial

Exhibit 34. However, groundnut prices have not seen acceleration in the near term

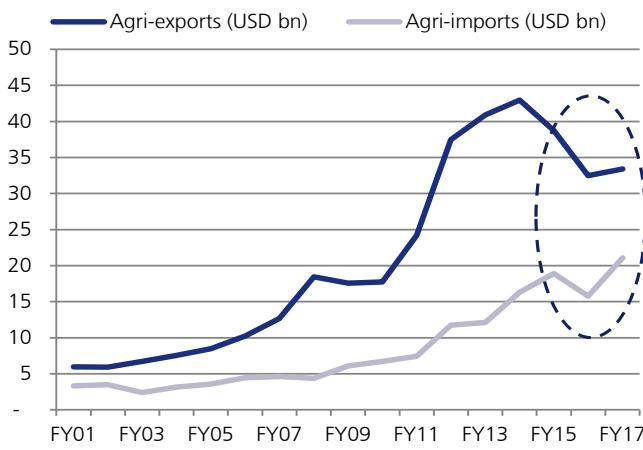


Source: Bloomberg, JM Financial

Recovery in Indian agri-exports in FY18

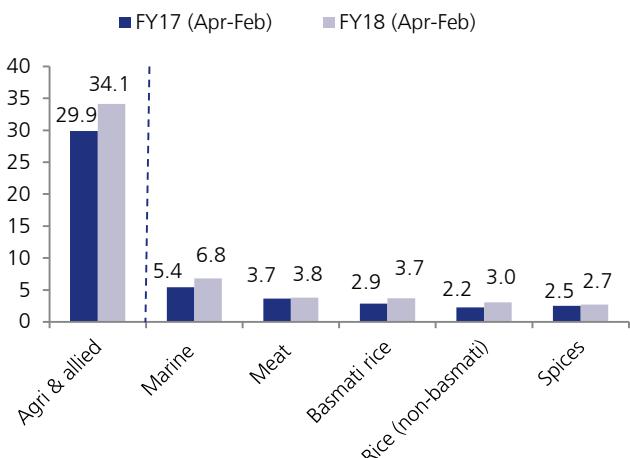
Agri exports from India suffered over the past few years (declined at 5% CAGR over FY15-17 in USD terms) but growth revived in FY18 (14% YoY), driven by exports of marine products and rice.

Exhibit 35. India's export revenues from agriculture suffered over the past few years; FY18 saw revival



Source: CMIE, JM Financial

Exhibit 36. YTD FY18 – Agri-exports up 14% YoY, driven by growth in marine products and rice

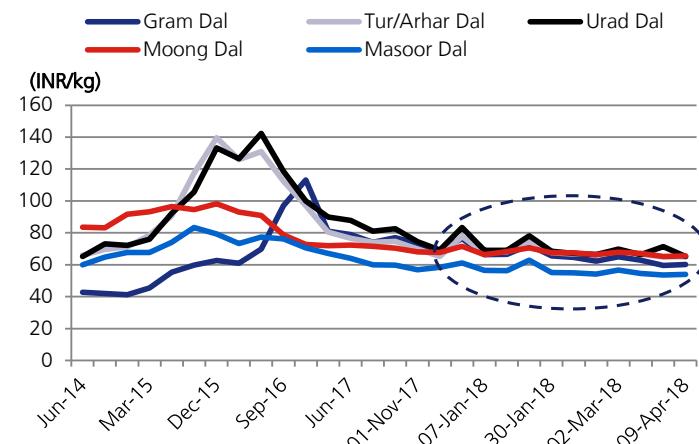


Source: CMIE, JM Financial

Pulse prices continue to remain weak and need to be monitored

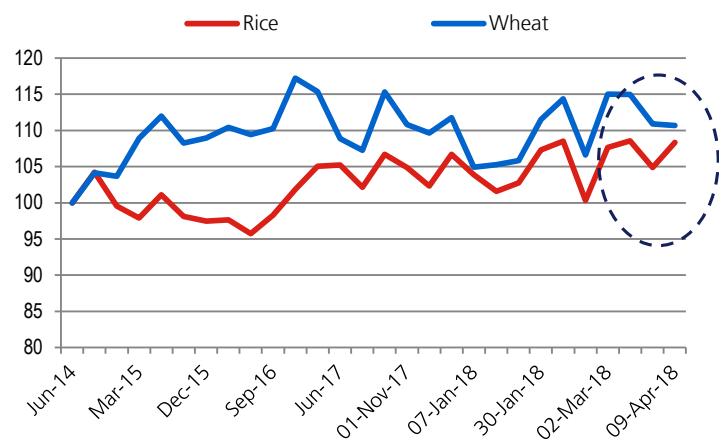
Among major agri-commodities, prices of pulses continue to remain weak and are likely to require procurement (discussed in the next section) over the next few months.

Exhibit 37. Pulse prices have continued to remain subdued largely on account of healthy production estimates for FY18



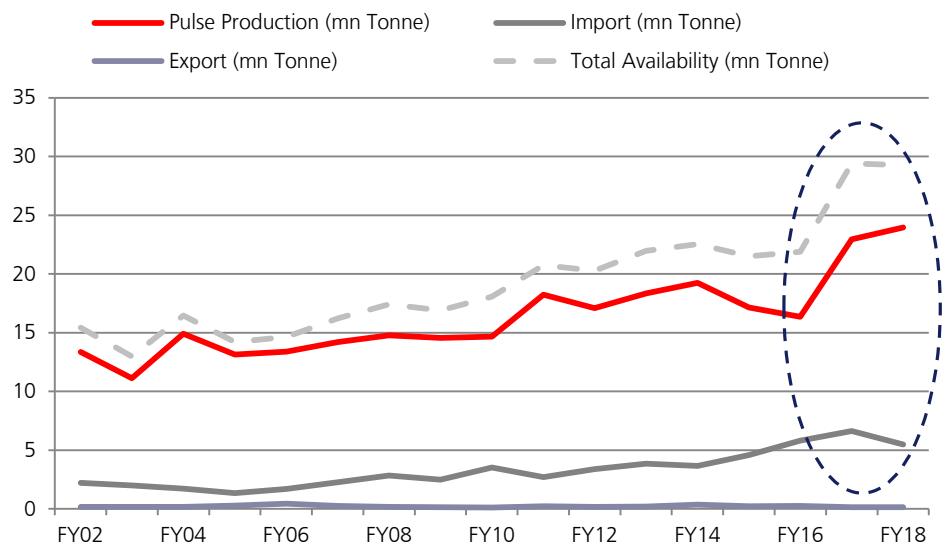
Source: Ministry of Consumer Affairs, JM Financial, Note: Whole sale prices across the country

Exhibit 38. Domestic cereal prices have largely strengthened over the past year



Source: Ministry of Consumer Affairs, JM Financial, Note: Whole sale prices across the country

Exhibit 39. Sharp increase in pulse production from FY17 (+40% YoY), along with continued imports, has led to higher availability and therefore put pressure on prices



Source: CMIE, JM Financial

The annual production of pulses increased from 16-17mn in FY15-16 to 23-24mn in FY17 and FY18. Coupled with continued imports (6.6mn tonne in FY17, 5.5mn tonne in YTD FY18), this has led to increased supply, thereby putting pressure on prices. **The domestic availability of pulses has risen from 23-24mn tonnes to 28mn tonnes currently (estimated consumption: 24-25mn tonnes).**

The government has also taken steps in the past few months (largely from Nov'17) to ease the exports of agri-commodities, while imposing import duties. However, the impact of these steps is yet to be seen.

Exhibit 40. Easing of export restrictions, while hike in import duties set to support Indian agri-commodity prices

Crop category	Key policy initiative	
Pulses		
Export policy		
May-17	Removal of stock-limits of pulses by Department of Food and public distribution	
Sep-17	Ban lifted on export of Tur (Pigeon pea), Urad and Moong daal. The exporter will have to do prior registration with APEDA	
Nov-17	On November 22nd, Centre removed the prohibition on export (without any qualitative ceilings) for all types of pulses	Pulse production is expected to be higher YoY in FY18 after strong growth in FY17 (+40% YoY). To ward off any pressure on prices, import duties have been increased and exports allowed for pulses
Import policy		
Jun-06	Import duty brought down from 10% to 0%	
Jun-17	10% of import duty put on Tur	
Nov-17	50% import duty put on peas (<i>Pisum sativum</i>)	
Dec-17	30% import duty on chickpea and red lentils	
Feb-18	Import duty increased on chickpea to 40%	
Mar-18	Import duty increased on chickpea further to 60%. Imposition of 40% duty on Kabuli chana, another variant of pulses	
Oilseeds and refined oil		
Nov-17	Import duty on Refined palm oil increased to 40% from the earlier 25%	
Nov-17	Import duty on Crude soyabean oil raised to 30% from 17.5% earlier	
Nov-17	Import duty on Refined soyabean oil increased to 35% from earlier 20%	
Nov-17	Import duty on Soyabean seed increased to 45% from existing 30%	
Feb-18	Import duty on Crude palm oil (CPO) raised to 44% from earlier 30%	
Mar-18	Import duty on RBD (Refined, bleached, and deodorized) would be 54% from 40% earlier	
Wheat		
Sep-16	Import duty reduced to 10% from 25%	
Dec-16	Import duty reduced to 0%	
Mar-17	Introduction of 10% import duty on wheat as domestic production was good	
Nov-17	Import duty raised to 20%	
Sugar		
Mar-18	Removed the exports duty on Sugar from 20% to nil; allowed to export 2mn Tonne of sugar (c.7% of estimated production)	
Mar-18	Import duty doubled to 100% from earlier 50%	

Source: PIB, Media articles, CACP, JM Financial

Minimum Support Prices (MSP) growth set to accelerate in FY19

One of the key announcements made in the FY19 budget has been that the MSP for the next Kharif crop would be at least **50% above the “cost”**. The measure of cost which has been used historically for MSP determination is called A2+FL (Input cost+ Family labour cost). The other measure of cost called C2 or Comprehensive cost also includes imputed value of land for cultivation along with the input and family labour.

Analysing the MSP declared and the cost (A2+FL), we have estimated the likely FY19 Kharif MSP (INR/qlt) based on the criteria of being 50% ahead of cost. This leads to an estimate of **12.4% YoY growth for the key crop paddy (c.50% of sown area)** and also sharp jump in MSP of some crops such as Jowar/Ragi (coarse cereals), Cotton, Groundnut, etc.

Exhibit 41. How the costs of cultivation (INR/qlt) and MSP (INR/qlt) are currently related (FY18)

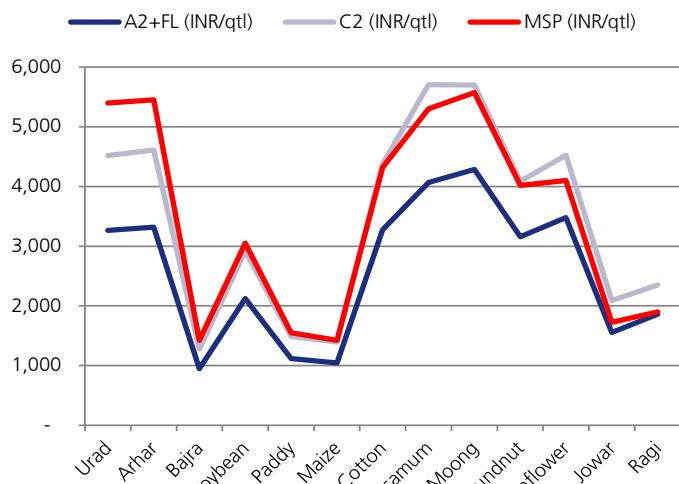
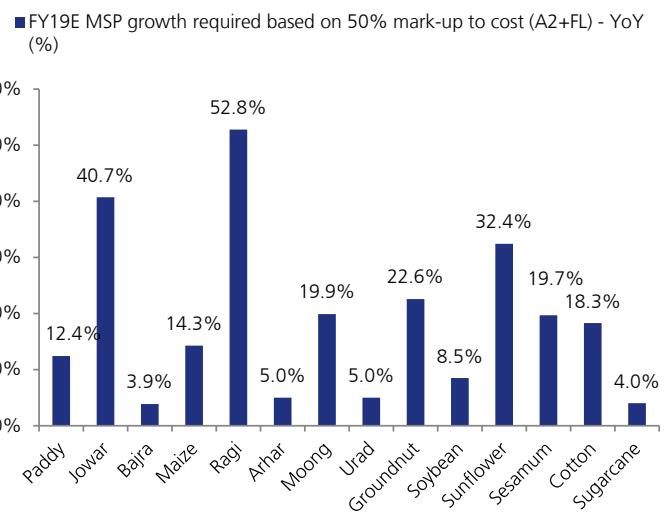


Exhibit 42. MSP growth expected in FY19 if the government fulfills the MSP criteria at 50% above cost (A2+FL) for all Kharif crops

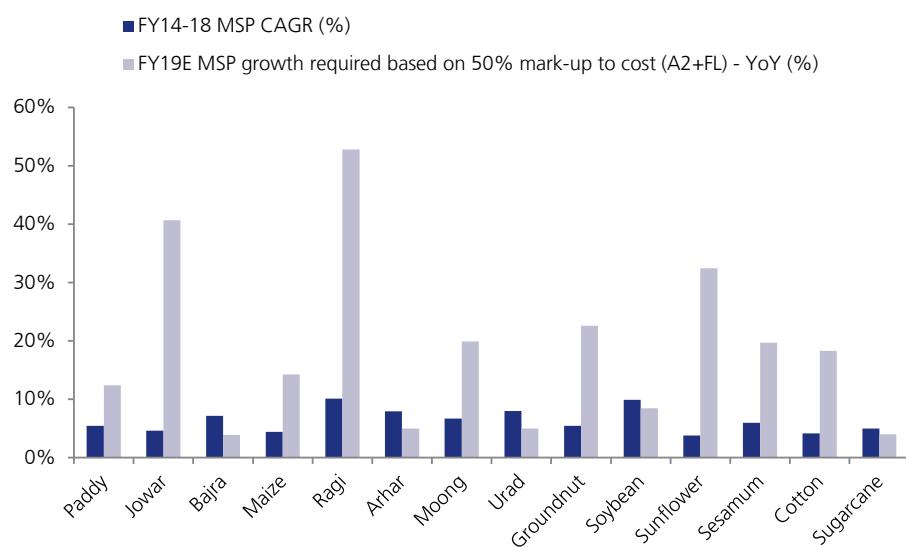


Source: CACP, JM Financial, Note: A2+FL (family labour) is the cost measure used for MSP determination, C2 (Comprehensive cost) includes imputed value of rental value of land as well

Source: JM Financial

Given a busy election year (5 state elections by Dec'18) and general elections by May'19, we expect the government to announce MSP rates (by Jun'18) largely in line with the calculations above, which would imply a **clear acceleration from the mid-single digit growth rate to low double-digit growth for key crops**.

Exhibit 43. FY19 is likely to see a significant acceleration in MSP growth



Source: CACP, JM Financial

Along with higher MSP declaration, procurement process needs to significantly improve for benefits of higher rates to be transmitted.

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

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

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

Exhibit 44. Where do agri-households sell their produce? Mainly to local traders, largely at a discount to MSP rates

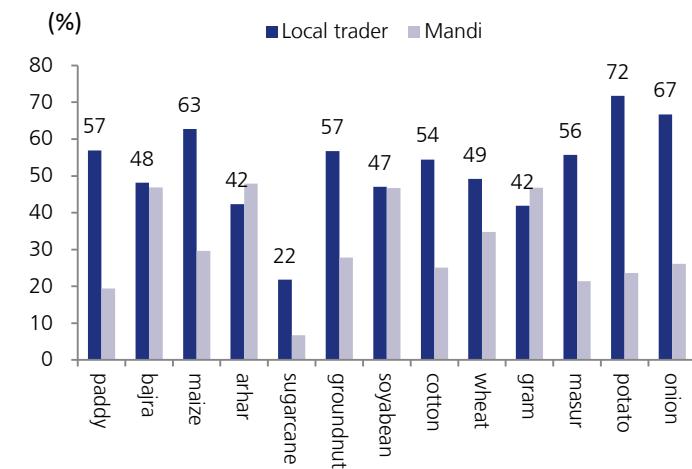
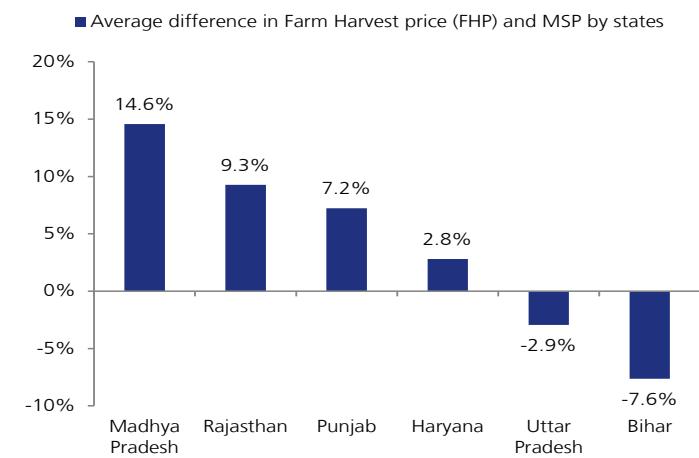


Exhibit 45. Difference in price realised for wheat – States with weak procurement infrastructure have historically reported discount to MSP rates



Source: NSSO,JM Financial

Source: CACP, JM Financial, Note: Average over FY12-15

In addition, the states with weak procurement infrastructure (chiefly in East India) have historically reported a discount to the prevailing prices. **Among crops, procurement has happened materially for only paddy and wheat (sugarcane by private sugar mills).**

Exhibit 46. Procurement as a % of yearly production – Apart from paddy and wheat, there is extremely limited procurement of other crops

	FY14	FY15	FY16	FY17
Paddy (Rice)	29.9%	30.0%	32.8%	34.7%
Wheat	26.2%	30.0%	29.3%	24.8%
Pulses	1.32%	2.13%	1.79%	0.28%*
Oilseeds	2.15%	0.04%	0.02%	0.01%
Coarse cereals	2.84%	1.09%	0.68%	-

Source: CACP, CMIE, JM Financial, Note: Post Jun'17 protests, the Government procured c.1.7mn tonnes of pulses or 7.3% of the production volume

Ensuring MSP is realised to all farmers – Multiple schemes under consideration

In the FY19 Union Budget speech, the Government also made an important announcement around providing adequate prices for crops. Increasing MSP is not adequate and it is more important that farmers should get the full benefit of the announced MSP. For this, it is essential that if price of the agriculture produce market is less than the MSP; in that case, the government should purchase either at MSP or work in a manner to provide MSP for the farmers through some other mechanism. **Niti Ayog, in consultation with Central and State Governments, will put in place a fool-proof mechanism so that farmers will get adequate prices for their produce.**

The government is yet to come out with final details around procurement in FY19 and as per various reports, there are three main schemes under consideration –

- (a) Market Assurance schemes
- (b) Price Deficiency Procurement scheme (PDPS)
- (c) Private procurement and stockists scheme

State Governments will be given flexibility in choosing the required mechanism for the price deficit policy.

Exhibit 47. Three main procurement schemes under consideration

Procurement scheme	Details	Comments
Market Assurance scheme	This policy would be implemented by state governments who can take immediate decisions on the basis of local conditions, to enter the market and begin procurement through their own state agencies or any other private agency authorised by states. States will be responsible for procurement and liquidation of the procured commodity. They would create a corpus fund for this purpose and make all logistics arrangements to handle the procurement. The central government will compensate the operational loss, if any, on value of MSP, up to a maximum 30-40%.	Currently similar schemes are used in states on an as-needed basis
Price Deficiency Procurement scheme (PDPS)	This scheme is similar to the Bhavantar Bhugtan Yojana launched by the Madhya Pradesh government. Under the PDS scheme, if the sale price is below a model price then the farmers would be compensated to the difference between the MSP and actual price, subject to certain conditions and ceilings (land-holding)	Currently undertaken only in the state of Madhya Pradesh (from Oct'17)
Private procurement and stockists scheme	The Central Government is also proposing to bring in private sector in MSP-linked procurement through a transparent e-market platform. States will be allowed to empanel private firms via a transparent bidding for the purchase of farm produce when prices fall below the MSP. The private firms will be given tax incentives and a commission.	Private procurement will take care of inadequate government procurement infrastructure

Source: Media reports, JM Financial

Expanding procurement across the country is a highly challenging task given the weak institutional delivery structure in many states, particularly in the North and East, as our visits and existing data indicate. **Therefore, for an effective expansion, the government needs to finalise the policy soon and start working on setting up the infrastructure ahead of actual procurement for it to be effective.**

Box 1: The Bhavantar scheme implemented in Madhya Pradesh has broadly received a positive response

- One of the models under consideration is similar to the “Mukhya Mantri Bhavantar Yojana” which has been implemented in the state of Madhya Pradesh. The scheme was declared for 8 crops including soyabean, peanut, sesame, maize, toor, urad, moong – in during FY18 in the Kharif season and has now been expanded to all the MSP-based crops in the Rabi marketing season.
- Under this scheme, the state government promised to pay the difference between the “market value” and MSP to the farmers. Farmers had to first register themselves at state co-operatives along with their Aadhaar number and bank accounts. If the sale price goes below a modal price, the farmers are compensated and given the difference between MSP and the actual price, subject to a ceiling which may not exceed 25% of the MSP.
- Our interactions with farmers in Madhya Pradesh indicated broad approval for the Bhavantar scheme. However, there have been few issues regarding registration/delays in payments and concerns that traders in mandis depress prices artificially to benefit from the scheme.
- As with any new scheme, we believe there would be changes required, but overall, there has been a positive response to Bhavantar in Madhya Pradesh, which has aided in a price rise for the key produce soyabean (50% of the country’s output from the state).

Bhavantar (price deficiency scheme) has helped farmers realise MSP rates on selected crops in kharif and has received a positive response

Exhibit 48. MP Price deficit financing scheme – Awareness messages sent to farmers to illustrate the scheme and to enrol until 15Oct'17

प्रिय किसान भाइयों,

मध्यप्रदेश सरकार पूरे राज्य में किसानों के कल्याण और कृषि के क्षेत्र में बेहतर अविद्या के लिए लगातार प्रयत्नसंक्षेप है। किसान भाइयों के लिए ‘मुख्यमंत्री भाष्यात्मक भुगतान’ नामक एक नई योजना शुरू की है। इस योजना में किसान भाइयों को आगर नंदी जै सूखर्यन गृह्ण से अपनी उपज का भाव कम मिलता है, तो उस दान को सरकार किसानों के खाले में सीधे पहुँचाएगी।

इसमें नीचे गढ़कोटा रहली मंडी के भाव दिए गए हैं-

फसल	गढ़कोटा रहली मंडी के भाव (लगातार प्रति किलोटन)	लखर्यन मूल्य	नागर भुगतान योजना से किसानों को प्राप्त विवरण काल्पना
सोयाबीन	1800 - 2600/-	3050/-	450 - 1250/-
मूँग	3000 - 3600/-	5575/-	1975 - 2575/-
उड़द	1800 - 3100/-	5400/-	2300 - 3600/-

इस योजना का लाभ केवल पंजीकृत किसान भाइयों को ही मिलेगा।

Source: JM Financial, Information about the scheme as disseminated to villagers

Exhibit 49. MP – Direct procurement without adequate storage infrastructure results in wastage; illustrated by the procurement of pulses/onions after farmer protests in Jun'17



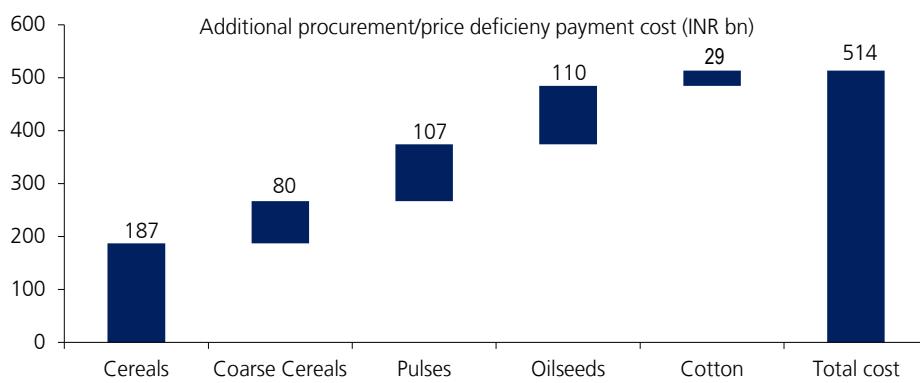
Source: JM Financial. Long queues up to 4km were visible in MP during late Jun'17 as farmers queued up for the procurement of Onions

Potential cost of price deficit payments in FY19

We have done a basic calculation on the possible cost of providing MSP rates to farmers in case crop prices fall below MSP rates. Among key crops, c.30% of produce of paddy/wheat is already procured by the government (under food subsidy) and c.20% of the yearly output is used for domestic consumption by the farming families. **Hence, 50% of the crop output of paddy/wheat is likely to be sold.**

Similarly, we have taken 20% of the output as the share of produce to be used for domestic consumption by farmer families and 80% available for sale in the case of coarse cereals and pulses. We have based FY19 MSP kharif rates using cost+50% and taken the average of a 7% growth rate for Rabi MSP rates (they are already at cost+50%).

Exhibit 50. Additional procurement cost – In case of a 10% discount to MSP, additional procurement cost could be c.INR 514bn or 27bps of FY19BE



Source: JM Financial

In a scenario wherein crop prices are at a 10% discount to the MSP, we estimate an additional cost of INR 514bn for the government in FY19 (c.27bps of FY19BE). The actual cost could be shared between the Central and state governments; nevertheless the expansion of crop procurement needs to be closely watched on account of its significance for the fiscal position. The government has increased the guarantee given to the lender bank for providing credit limits to the National Agricultural Cooperative Marketing Federation of India (NAFED) from INR 95bn to INR 190bn to undertake procurement operations of pulses and oilseeds.

Agri-marketing & procurement infrastructure reforms underway

eNAM remains a medium-term initiative

One of the key challenges in Indian agriculture has been to reform the existing agri-marketing infrastructure process and reduce the price differential between a farmer realisations and retail sales (can range up to 3x-4x in case of vegetables for example). Over the years, many reform measures have been undertaken such as relaxation of strict trading rules at the Agriculture Produce and marketing Committee (APMC) and the establishment of Electronic National Agriculture Marketing (eNAM) to expand the addressable market for a crop produce. **However, during our visits we saw that changes are happening only gradually and the informal network (farmer-commission agent-trader) continues to remain dominant.**

eNAM aims to expand the addressable market for a farmer's produce from the local mandi to the state/national level. In terms of expansion, eNAM has seen healthy growth and by Mar'18, 585 large agri-mandis had been brought on the eNAM platform, in line with initial targets.

Exhibit 51. eNAM – Coverage expanded to 585 mandis by Mar'18, as per initial target

Serial No.	States	Apr-17	Oct-17	Mar-18
1	Uttar Pradesh	66	100	100
2	Gujarat	40	40	79
3	Maharashtra	44	45	60
4	Madhya Pradesh	58	58	58
5	Haryana	54	54	54
6	Telangana	44	44	47
7	Rajasthan	25	25	25
8	Tamil Nadu	-	-	23
9	Andhra Pradesh	22	22	22
10	Himachal Pradesh	17	19	19
11	Jharkhand	19	19	19
12	Punjab	-	-	19
13	West Bengal	-	-	17
14	Uttarakhand	5	5	16
15	Chhattisgarh	14	14	14
16	Odisha	9	10	10
	Other Union territories	-	-	3
	Total	417	455	585

Source: eNAM, JM Financial

However, we saw that the adoption process is gradual with a dominant majority of traders/farmers continuing with the manual auction method. Some aspects that need attention to make eNAM take off along with the spread of platform are:

- (a) Third-party assaying and quality certification mechanisms
- (b) Dispute settlement mechanisms and systems for forwarding goods to buyers
- (c) Digital infrastructure to enable the national market, and
- (d) Encouragement of FPOs (Farmer Producer Organisations)

During the past two months, the government has enacted some changes **(a)** making the registration of farmers on the portal easier, **(b)** expanding the payment options (addition of UPI) and **(c)** extending eNAM trading in six languages.

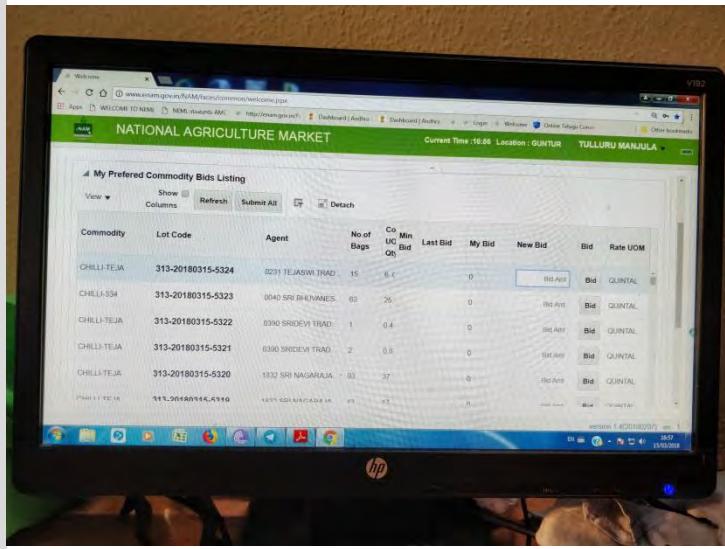
We believe customisation and incorporating the key practises in current trading systems can help improve the system's usage, as clearly illustrated by the experience at Guntur, Andhra Pradesh (example on the next page).

Box 2: eNAM trading at Guntur chilli mandi, Andhra Pradesh

- Guntur chilli mandi, the largest in Asia, was chosen to be a model mandi for eNAM and it was implemented in 2HCY17. However, after implementation, there was a strike for over a month at the Guntur chilli mandi as traders and farmers protested against trading on eNAM.
- The key concerns were the lack of testing facilities for the 16 different varieties of chillies procured in the mandi as well as a break-down of the traditional credit relationship between farmer, commission agent (mandi agent) and the final purchaser. Essentially, the commission agent gave credit to the farmer and also to the final buyer and used to take his share on the execution of a sale. In the earlier plan of eNAM, the payment was to be made near the trading period and directly to the farmer, bypassing the trading agent.
- During our current visit (Mar'18), we saw some improvement in trading and around the adoption of the new system. As per the feedback we received, payments are now being made to the middle-man (commission agent) rather than the farmer. The commission agent then pays the farmer, deducting the interest on informal debt.
- Labs have been established in the market to ascertain the quality of produce and address issues before arriving at the price.

Customisations are necessitated for any-top down plan based on the local conditions, as illustrated by the example in Guntur

Exhibit 52. eNAM dashboard – will be expanded to 6 regional languages



Source: JM Financial

Exhibit 53. e-NAM assaying lab – help ease the quality assessment challenge



Source: JM Financial

We also encountered an encouraging example of steel silo-based procurement and storage at Sehore, Madhya Pradesh. The existing government food grain storage infrastructure (c.75mn tonne capacity) is beset with a lack of quality storage, which results in pilferage, wastage and increase in storage costs.

Over the past few years, there has been a plan to expand modern steel silo-based storage of food-grain (wheat and paddy) for 10mn tonnes by FY20. However, at present, only two states – **Punjab and Madhya Pradesh** – have completed steel silos for procurement (0.65mn tonnes).

Box 3: Improvement in storage infrastructure – Need of “Silos” across more states

- We visited a steel silo-based procurement centre at Sehore district in Madhya Pradesh. There are four steel chambers with a total capacity of 50,000 tonnes.
- The silo is developed near or adjacent to an existing mandi. Apart from the storage facility, the grading, weighing process, etc. is also automated and there is a clear improvement in the infrastructure from a traditional mandi.

Exhibit 54. Silos for procurement



Source: JM Financial

Exhibit 55. Silos ease the procurement



Source: JM Financial

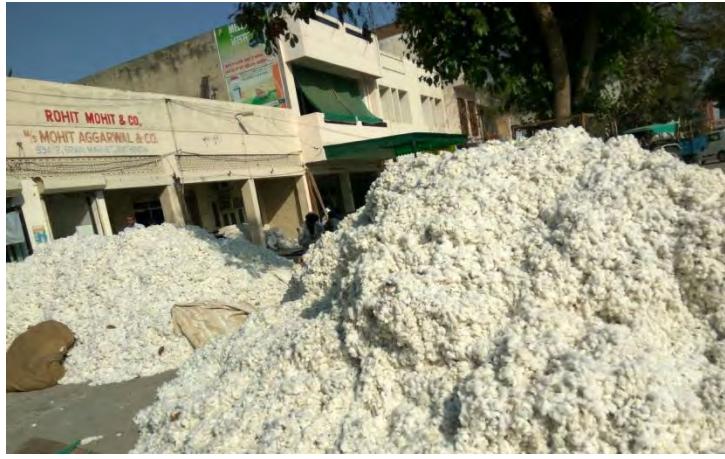
- These silos are developed in a public-private partnership mode and operated on a BOT model. Among players, Adani and LT Foods have entered in the silo space in Punjab and Madhya Pradesh.
- We believe a rapid expansion of the steel silo system would lead to effective storage and reduction in the storage and maintenance costs for the government.

Improvement in trading volumes at agri-mandis, prices for select commodities trading below MSP

Our visits to multiple agri-mandis across states indicated **normalisation of trading activities** and a mixed trend with the use of cash and digital payments. On aggregate, payments have shifted from cash to banking channels, but smaller farmers continue to prefer payments in cash. We could gauge an increase in share of trading in cash as compared with period post demonetisation last year.

We also observed that overall trading volumes/activity have yet to reach pre-Demonetization levels as small and medium traders have reduced their trading volumes, which are being taken up by larger organised players, particularly in states such as Rajasthan, Gujarat and Madhya Pradesh.

Exhibit 56. Punjab Mandi – Trading in Cotton



Source: JM Financial

Exhibit 57. Karnataka Mandi – Belgaum grain trading



Source: JM Financial

Exhibit 58. AP Mandi – Trading in Chilli



Source: JM Financial

Exhibit 59. MP Mandi – Manual auction continues to be the key



Source: JM Financial

Box 4: Summary from feedback around key Mandis – Price support at MP Mandis driven by price deficiency program (“Bhavantar Yojana”)

Exhibit 60. Feedback from key mandis across the country on trading volume trend, prices and any state government initiatives

Mandi/City	State	Detailed Comments	Price for Paddy/wheat below MSP	Prices for other crops below MSP
Guntur	Andhra Pradesh	The Mandi has been chosen as a model mandi for e-NAM implementation. After significant protests during second half of 2017, the Government modified the payment mechanism (from earlier provision of payment to farmer to now payment to the middle-men). Payments are done in digital mode (RTGS, NEFT) and directly in trader accounts.	No	Yes
Warangal	Telangana	As trading has shifted to digital mode in Guntur mandi (Asia's largest chilli mandi), there are feedback around some shift of traders to other Mandis such as in Warangal, despite an additional 300kms of distance from Guntur. Farmers and traders still have a preference for cash and that is driving volumes here. Among crops, maize is trading below MSP rates and state government has announced to set up procurement for Maize in 1-2 weeks to provide price support.	No	Yes
Indore	Madhya Pradesh	The only state to have implemented the price deficit scheme (Bhavantar) which benefited the key kharif output (Soyabean) which saw price increase from INR2,500/qtl to INR3,300/qtl+ in six months. Overall positive feedback from the scheme, despite challenges and complaints around delay in getting back the deficit amounts. The state government is supporting farm income through bonus payments and has announced INR 265/qtl apart from the MSP of INR1735/qtl (+23% YoY)	No*	No*
Jaora	Madhya Pradesh	Trading has reverted more towards cash and away from cheques/NEFT from the past few months and that has held up volumes. Bhavantar scheme is currently underway and farmers are selling key crops at the MSP rates. From earlier trend of selling agri-commodities over a period, now, farmers are selling at one go in order to benefit from the scheme.	No*	No*
Hissar	Haryana	Wheat procurement is done by the state agencies and farmers have started getting the MSP rate of INR1,735/qtl. However, the procurement of mustard (oilseed) is very limited - for example out of 20K qtl/day of incoming mustard, procurement is done for only 1/3rd of that and thereby the market rate is lower from MSP by 20%. Gram has also started to come in the Mandi and here also the prices are below MSP as no procurement is done. The mandi has seen a shift from primarily cash to almost 50% now through banking/financial channel based payments.	No	Yes
Rajkot	Gujarat	Overall trading volume has been good and better than last year given healthy crop output. However, there has been no support from state government in prices as yet and thereby prices continue to go down below MSP rates for few commodities. Most of the trading continues to happen on traditional mode (less digital).	No	Yes
Jaipur	Rajasthan	Overall trading volume (largely for packaged commodities) has been soft and down YoY for medium and small traders. The feedback is that there has been a shift towards large organised players and thereby smaller players are seeing softness in business.	Yes	Yes
Belgaum	Karnataka	One of the large agri-mandis in North Karnataka, business volumes have been largely flattish and yet to pick-up. In terms of official procurement, the state government procures under the Anna Bhagya Scheme of government (which provides 50kg of grains per below poverty line house-hold in the state against the 25-30kg/household in most of other states.	No	Yes
Chandauli	Uttar Pradesh	Continues to have weak procurement infrastructure with only large farmers able to participate	Yes	Yes
Madhubani	Bihar	Very weak procurement machinery in the state. Paddy post kharif is procured at the Panchayat level, while wheat procurement is extremely limited at present	Yes	Yes

Source: JM Financial, Note: * - Even though the price in Mandi falls below the MSP rate, the farmer is able to get the declared rate as the deficit between MSP and Mandi rate (if lower than MSP) is transferred by the state government

Irrigation (60%+ of state's rural capex spending) continues to see healthy traction

In each of our visits to rural India, the one common concern among farmers has been the availability of adequate water. The choice of crop is largely driven by availability of water and in areas where irrigation cover is good, farmers progress from basic crops to horticulture/fish farming, etc., essentially being able to boost their income levels. At present, only c.48% 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). **Therefore, investment in irrigation should remain a key priority for both the Central and state governments.**

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

Exhibit 61. Agriculture growth rate comparison – China has a c.150bps average higher growth rate than India

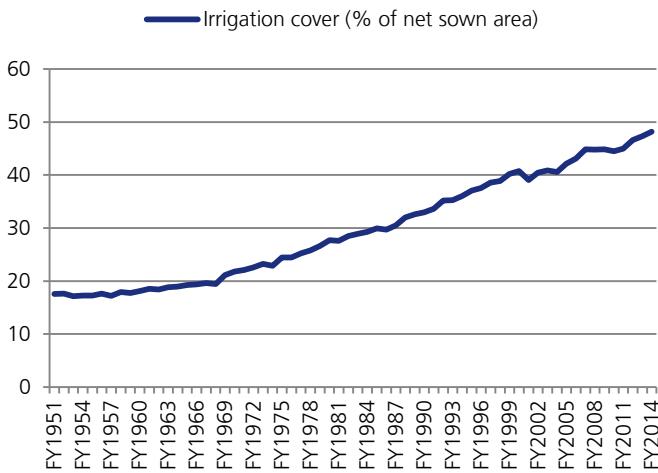
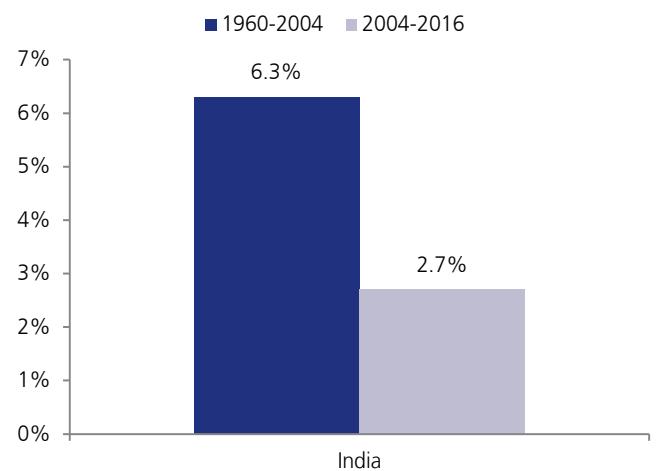


Exhibit 62. Volatility in Indian agriculture GDP growth has reduced over the past few decades



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

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

Given its importance, irrigation accounts for c.62-63% of capital spending by the states and has posted a CAGR of 17% over the past three years.

Exhibit 63. Irrigation spending by 17 states (accounting for 90% of India's GDP) increased by 17% CAGR over the past 3 years, c.70% spend accounted by 6 states

	FY16	FY17	FY18BE	FY18RE	FY19BE
AP	89	100	121	148	159
Telangana	78	137	149	101	144
Karnataka	69	86	124	107	122
Gujarat	81	74	94	94	99
Maharashtra	81	88	93	99	94
MP	64	85	94	69	87
Odisha	42	58	70	72	83
UP	51	52	41	42	80
Rajasthan	13	20	25	23	30
WB	16	16	31	21	30
Tamil Nadu	7	11	29	19	30
Chhattisgarh	17	19	26	21	27
Bihar	17	18	31	29	26
Jharkhand	12	14	21	20	21
Haryana	9	9	8	8	16
Punjab	8	13	9	5	8
Kerala	5	7	8	9	7
TOTAL	658	806	973	885	1,063

Source: State budgets, JM Financial

Box 5: Tank-based irrigation push in Telangana

- The Govt. of Telangana had launched Mission Kakatiya to restore minor irrigation tanks and lakes in Telangana for cultivation to effectively utilise 255TMC of water allocated for minor irrigation sector under Godavari and Krishna basins. A total of 46,000 tanks and lakes are planned to be restored over a period of 5 years (2015-20).
- The scheme envisages to irrigate 1mn hectares by **a)** de-silting the tank beds to restore original water storage capacity of tanks, **b)** by repairing dilapidated sluices, weirs, etc., **c)** by strengthening the tank bunds to its original standards, **d)** by repairing the feeder channels to standards for getting water freely into tanks-part of chain of tanks, and **e)** by re-sectioning of irrigation channels for smooth distribution of water to fields.
- Our ground-checks have indicated improvement in irrigation coverage and alongside an increase in yield for farmers. There has been improvement in ground-water level and increased water availability is aiding fish production, as well. However, a Comptroller and Auditor General (CAG) report has commented on delays in implementation of the project (till Sep'17) as the targets were highly ambitious to begin with.
- Despite the delays in implementation, Mission Kakatiya sets a very good template for restoration of tanks/lakes which can be replicated in many states, particularly in Maharashtra.

Target to restore 46,000 tanks/lakes in Telangana, to expand irrigated area, improve yield and aid in diversification of crops (to fish)

In addition to tank and bore-well based systems, at present, 8.1% or 7.8mn hectares of gross irrigated area is covered under minor-irrigation systems (drip/sprinkler), and industry sources indicate the potential can be up to 60mn hectares. **Micro-irrigation results in improved water usage, higher crop productivity (30-40%) and thereby results in higher income.**

Exhibit 64. Share of alternate irrigation sources across country (Minor irrigation)

State	Drip	Sprinkler
Maharashtra	26.5%	8.5%
Andhra Pradesh	24.6%	7.5%
Karnataka	12.7%	9.5%
Gujarat	12.1%	9.5%
Tamil Nadu	8.6%	0.7%
Rajasthan	5.0%	34.5%
Madhya Pradesh	4.9%	4.2%
Punjab	0.9%	0.3%
Telangana	0.7%	0.1%
Haryana	0.7%	12.5%
Odisha	0.5%	1.9%
Uttar Pradesh	0.5%	0.5%
Bihar	0.1%	2.2%
West Bengal	0.0%	1.2%
Rest of country	2.1%	6.8%
Total	100.0%	100.0%

Source: JM Financial

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.

However, saw some instances of micro-irrigation even in East India, where its use clearly expands diversification in farming and drives growth in incomes.

Box 6: Usage of micro-irrigation enables farming of exotic vegetables; diversification to agro-tourism

- We met two educated youth (MBA & a graduate) who have left their white-collar jobs based in Indian metros and returned to Varanasi to take up farming as a profession.
- After detailed research, including visits to multiple states they decided to farm exotic vegetables and fruits, particularly of the varieties not available in regular markets, eg. zucchini, cherry tomatoes, herbs, Chinese cabbage and bell peppers.
- **To farm exotic vegetables, they needed to have proper irrigation cover and therefore installed a drip irrigation system over the 4 acres of land they have leased.** Among vendors, they have used "Netafilm" for micro-irrigation system installation and for farming using hoop tunnels.
- The investment in farming has been relatively high at INR 6mn (c.40% in infrastructure investments) and their estimate is for a payback period of approximately four years in a normal crop scenario.
- The extreme volatility in the pricing of vegetables and various crop production risks (temperature, weather, pests, etc.) are the key challenges they face. Nevertheless, it is encouraging to know that there is an increasing demand for exotic vegetables in cities such as Varanasi from hotels/restaurants and from residential complexes. So, the problem is of fulfilment, rather than lack of demand.
- The operating cost for farming on an average works out to INR 1.2mn/year and these graduates are reducing costs through innovation. Eg, they prepare organic manure and their cost/acre works out to $1/4^{\text{th}}$ of a traditional vegetable farming set-up cost of INR 10K/month.
- **Improved electricity access in the state of UP** also helps them operate farm pumps on a regular basis, store exotic seeds in refrigerators and use other electrical equipment to aid in farming.



Exhibit 65. Organic farming at Varanasi undertaken by educated youth



Source: JM Financial

Exhibit 66. Use of micro-irrigation in a farm in Varanasi enables growing exotic vegetables fetching higher prices than regular



Source: JM Financial

- The “new age” farmers are also developing other revenue streams such as agro-tourism and plan to enter the fisheries space with pearl farming over the next few months.

Non-farm income acceleration remains modest

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 and as such broader growth, to a large extent, is dependent on the degree of institutional investment as well as other local conditions, which in turn is governed by government policy.

Non-farm income though has been supportive over the past few years (but grew in low single digits, as per our estimate) and compensated partly for the decline in farm income during the past two years. The disruption from GST implementation, sand mining restrictions in a few states (UP, Bihar, Tamil Nadu, Rajasthan and Punjab) impacted 1HFY18 significantly and there was gradual revival in some states such as UP and Bihar in 2HFY18. The wholesale channel continues to adjust to the changes brought by GST implementation and formalisation of the economy. Hence, we expect a modest uptick in non-farm income going forward, aided by the continued focus of the government in rural capex (irrigation, housing, roads, electricity etc.) and boosted by benefit from farm loan waiver.

Growth in FY18 was contained on account of GST implementation, sand mining bans, while agri-related activities continued to drive income growth

A slew of state elections followed by culminating in General Elections by May'19

Rural India accounts for c.67% of the country's population and therefore remains a significant priority in government spending. In addition, 2018 and 1H2019 is crucial in terms of state assembly elections (5 in 2018, 5 in 2019); this is slated to culminate in the General Elections by May'19. Given the electoral importance of rural India, the government is likely to accelerate steps to aid growth in rural India and complete/accelerate projects to develop housing, roads, electrification, irrigation, etc.

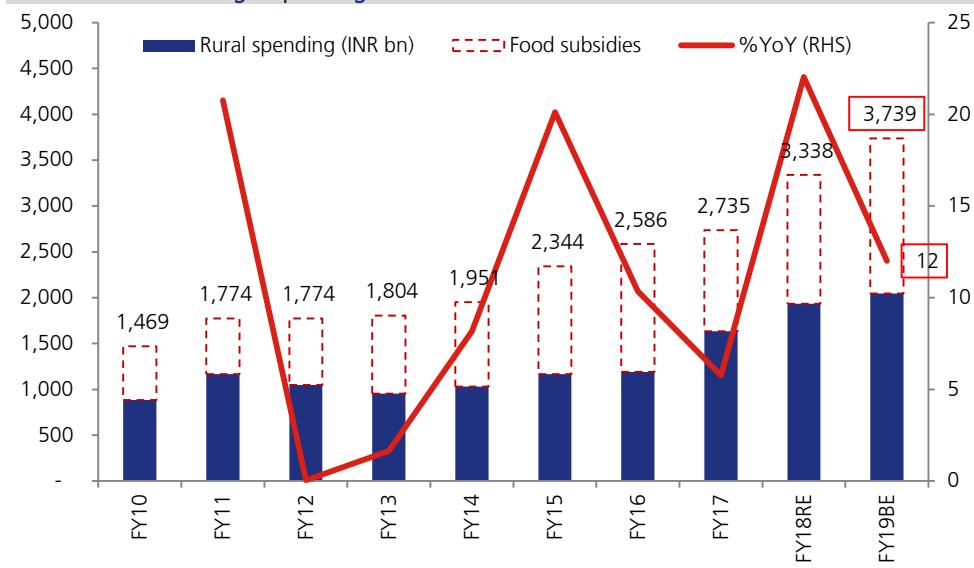
Exhibit 67. A slew of state elections followed by the General Elections by May'19

State	Likely period of elections	Incumbent political party	Incumbent group	Term of state assembly
2018				
Karnataka	May-18	INC	UPA	28-May-18
Mizoram	Dec-18	INC	UPA	15-Dec-18
Chhattisgarh	Dec-18	BJP	NDA	05-Jan-19
Madhya Pradesh	Dec-18	BJP	NDA	07-Jan-19
Rajasthan	Dec-18	BJP	NDA	20-Jan-19
2019				
Sikkim	May-19	SDF	NDA	27-May-19
Arunachal Pradesh	May-19	BJP	NDA	01-Jun-19
Andhra Pradesh	May-19	TDP	NDA	18-Jun-19
Telangana	May-19	TRS	OTH	08-Jun-19
Odisha	May-19	BJD	OTH	11-Jun-19
General Elections	May-19	BJP	NDA	May-19

Source: Niti Aayog, JM Financial

Union budget budgetary spending increases 12% YoY to INR 3.7tn for rural spending

On an elevated base, the FY19 budgetary allocation towards rural spending (including food subsidy) increased 12% YoY to INR 3.7tn. The budgetary allocation across key schemes pertaining to rural India is listed ahead. The government has also provisioned to raise funds through extra budgetary resources for the main schemes around rural housing, electrification, irrigation, hygiene and sanitation, effectively YoY doubling the spending on these schemes during FY19BE.

Exhibit 68. Union budget spending on rural increased 12% YoY in FY19BE

Source: Union budget, JM Financial

Exhibit 69. Budgetary outlay (INR bn) on key schemes around rural India

Scheme	Area	FY16	FY17BE	FY17	FY18BE	FY18RE	FY19BE	FY19BE over FY18RE	FY19BE /FY18BE	FY16-19 CAGR
Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)	Employment	373	385	482	480	550	550	0.0%	14.6%	13.8%
PM Awas Yojana (PMAY: Rural)	Housing	101	150	161	230	230	210	-8.7%	-8.7%	27.6%
National Rural Health Mission (NRHM)	Health	183	181	198	212	255	243	-4.6%	14.6%	10.0%
Pradhan Mantri Gram Sadak Yojana (PMGSY)	Roads	183	190	179	190	169	190	12.4%	0.0%	1.3%
Interest subsidy for short term credit to farmers	Financing	130	150	134	150	148	150	1.7%	0.0%	4.9%
Swachh Bharat Mission (SBM) - Rural	Sanitation	67	90	105	139	169	153	-9.5%	10.0%	31.8%
Green Revolution	Agriculture	98	126	101	137	112	139	24.4%	1.2%	12.5%
Crop Insurance Scheme	Agriculture	30	55	111	90	107	130	21.5%	44.4%	63.3%
Pradhan Mantri Krishi Sinchay Yojana (PMKSY)	Irrigation	78	58	51	74	74	94	27.6%	27.8%	6.6%
National Rural Drinking Water Mission	Water & Sanitation	44	50	60	61	71	70	-0.7%	15.7%	17.0%
Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY)	Electricity	45	30	30	48	54	38	-29.6%	-21.1%	-5.5%
National Rural Livelihood Mission (NRLM)	Employment	25	30	32	45	44	58	32.2%	27.8%	31.8%
Sahaj Bijli Har Ghar Yojana (Rural)- Saubhagya	Electricity			16	28			
White Revolution	Agriculture	9	11	13	16	16	22	35.9%	35.9%	33.3%
Total		1,366	1,506	1,656	1,873	2,013	2,075	3.1%	10.8%	15.0%

Source: Union budget, JM Financial

Exhibit 70. Including the extra budgetary expenditure growth for FY19..key schemes see almost doubling of spending provisions

(INR bn)	FY18RE	Gross Budgetary support –FY19	Extra budgetary expenditure – FY19	FY19- Total
PMKSY	74	94	-	94
PMKSY-AIBP	-	-	150	150
Swachh Bharat Mission (SBM) - Rural	153	153	150	303
PM Awas Yojana (PMAY: Rural)	210	210	120	330
Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY)	38	38	150	188
Total	475	496	570	1,066

Source: Union budget, JM Financial

Rural capex by states up 21% YoY in FY19BE

Apart from the spending by Central government, state governments have kept rural spending as a key focus area. Spending has posted an 18% CAGR over the past three years, with 21% YoY growth in FY19BE. Among the key segments, irrigation takes up the bulk of rural capex (c.62-63%) followed by rural development (roads, housing, etc).

Exhibit 71. A strong rural capex (INR bn) by states – 18% CAGR over past three years, 21% increase on YoY in FY19BE

States	FY16	FY17	FY18BE	FY18RE	FY19BE	YoY	3 year CAGR
Telangana	83	145	197	152	213	40.4%	37.0%
Maharashtra	129	140	180	165	201	22.1%	16.0%
AP	90	101	136	159	181	13.8%	26.1%
Karnataka	81	101	139	150	177	18.6%	30.1%
UP	135	129	94	95	133	40.9%	-0.5%
Bihar	104	98	124	127	127	0.3%	6.9%
MP	92	135	124	98	125	27.9%	10.9%
Gujarat	103	95	118	116	123	6.4%	6.0%
Odisha	48	63	75	76	100	31.9%	27.6%
WB	32	32	59	53	77	43.2%	34.4%
Tamil Nadu	34	37	58	49	70	41.7%	26.4%
Jharkhand	30	41	48	47	55	15.7%	21.6%
Rajasthan	25	34	41	44	48	8.3%	23.5%
Chhattisgarh	26	25	35	31	36	17.2%	10.7%
Kerala	16	20	22	23	22	-4.9%	12.3%
Haryana	13	18	19	10	19	86.4%	13.7%
Punjab	13	29	34	29	19	-34.1%	15.3%
TOTAL	1,055	1,243	1,504	1,423	1,726	21.3%	17.9%

Source: State budgets, JM Financial, 17 states that account for 90% of Indian GDP

Exhibit 72. Irrigation gets the dominant share of capex among states

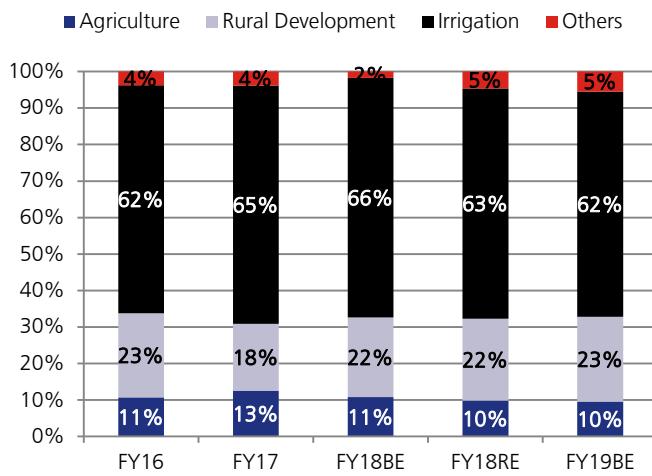
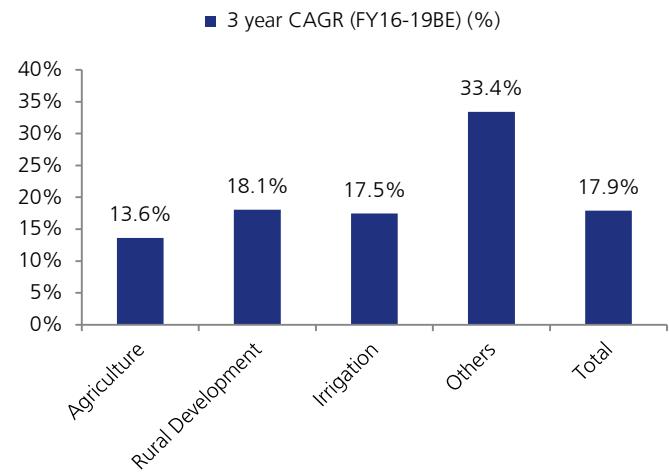


Exhibit 73. Overall rural capex - 18% CAGR over the past three years



Source: State budget, JM Financial

Source: State budget, JM Financial

Farm loan waiver provision of INR 950bn over FY18-19 aids consumption growth in rural

Farm loan waivers have been announced by five state governments in the past year (UP, Maharashtra, Karnataka, Punjab, and Rajasthan) with allocations spread over FY18 and FY19. Based on the budgetary announcements, farm loan waivers account for 0.37bps of states' FY19GSDP.

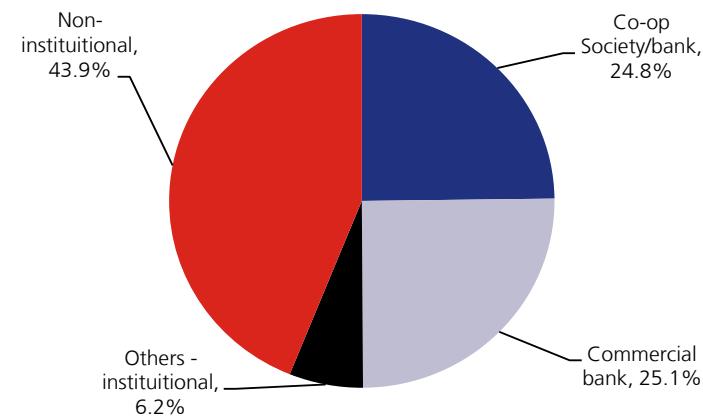
Exhibit 74. Farm loan waivers account for 0.37bps of FY19BE GSDP of states

INR bn	FY15	FY16	FY17	FY18BE	FY18RE	FY19BE	Total	FY19BE GSDP	% of GSDP in FY19
Uttar Pradesh	-	-	-	360	250	116	366	14,889	0.78
Maharashtra	-	-	-	-	167	101	268	27,961	0.36
Karnataka	-	-	-	-	39	40	79	14,087	0.28
Punjab	-	-	-	15	4	43	46	5,182	0.82
Rajasthan	-	-	-	-	-	20	20	9,398	0.21
Andhra Pradesh	50	7	35	36	36	41	170	8,707	0.47
Telangana	42	40	40	36	32	-	154	8,426	0.00
TOTAL	92	48	75	447	527	421	1,163	88,650	0.37

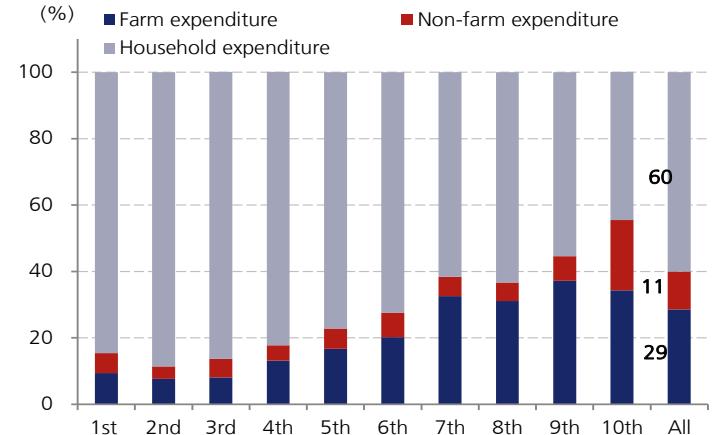
Source: State Budgets, JM Financial, Note: Andhra Pradesh & Telangana had staggered their farm loan waiver announced during 2014

Debt at agri-households geared towards consumption expenditure

Past surveys and our rural interactions clearly indicate that fulfilling of household expenses are the prime driver for indebtedness in rural India, and this is much more enhanced in case of smaller farmers (indicated by the lower decile).

Exhibit 75. Sources of debt in rural India – Non institutional sources account for 44% of debt, higher share in lower income groups

Source: NSSO

Exhibit 76. Use of debt based on income (percentile) – Significant share of debt undertaken to meet consumption expenditure, particularly for the lower income groups

Source: NSSO

Box 7: Farm loan waivers aid in consumption growth

- Among farmers, the key consumption categories – education, medical, housing and other expenses (such as marriages etc.) drive the increase in household debt and therefore the additional inflow from farm loan waiver helps in repaying informal debt/increases current consumption.
- Our interactions with farmers indicated that as some of the farmers earlier declared as “NPA” got farm waiver, they were eligible for new crop loans (on KCC). Some of the beneficiaries used the additional cash inflow for the purchase of automobiles, in particular tractors.
- As we are approaching General elections (May'19), there may be increased demand for loan waivers across more states going ahead.

States saw higher revenue expenditure in FY18 due to farm loan waivers, while capex to see stronger growth during FY19

With regard to state spending, another aspect to note is that due to farm loan waiver allocation, FY18RE saw strong growth in revenue expenditure vs. capital expenditure (37.5% YoY vs. 14.5%), while in FY19, rural capital expenditure takes precedence (21.3% YoY against 4.4% growth for revenue expenditure).

Exhibit 77. State spending on Rural – On account of loan waivers (FY18) revenue expenditure was high, while in FY19, there is a focus on strong capital expenditure growth

(INR tn)	FY16	FY17	FY18BE	FY18RE	FY19BE
Rural Spending	3,259	3,799	4,917	4,938	5,397
Revenue expenditure	2,204	2,555	3,413	3,515	3,671
Capital expenditure	1,055	1,243	1,504	1,423	1,726
YoY (%)					
Rural Spending		16.6%	29.4%	30.0%	9.3%
Revenue expenditure		15.9%	33.5%	37.5%	4.4%
Capital expenditure		17.9%	21.0%	14.5%	21.3%

Source: State budgets, JM Financial, Note: 17 states accounting for 90% of India's GDP

Steady spending around infrastructure – waning impact from sand mining ban in select states

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

Exhibit 78. Rural road construction has seen healthy acceleration from FY14

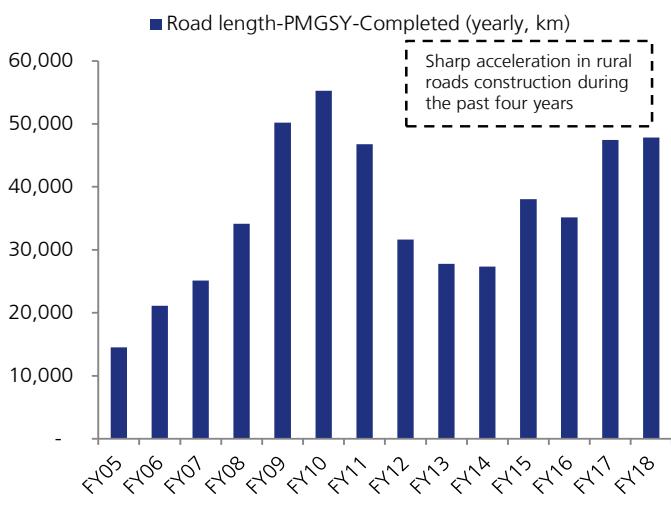
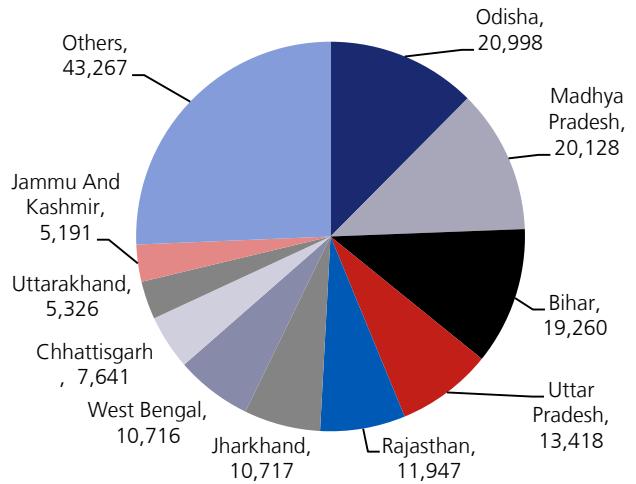


Exhibit 79. Where have the rural roads constructed – Six states, primarily in the North & East accounted for c.60% of roads constructed (FY15-18)



Source: PMGSY, JM Financial

Source: PMGSY, JM Financial

Box 8: Amaravati build-out: A multi-year demand driver for cement/building materials

- We re-visited Amaravati, the new capital city of Andhra Pradesh (AP), to have an on-the-ground view of the development work being undertaken. Our interactions with contractors, builders and building material dealers indicated a positive sentiment around infrastructure creation (universities, roads, irrigation works and housing projects). However, the completion of the city could take 5-10 years and is contingent upon political will and the availability of funding.
- Amravati is being modelled on Singapore and will be spread across a 217 sq km open field in Guntur district at an estimated cost of INR 580bn; it is expected to be completed in three phases. The city is expected to be populated and functional by 2024 with the final phase expected to be complete by 2029.
- Our interactions with tiles/sanitaryware dealers indicated a strong demand scenario on the back of incremental developmental activities (pick-up in housing construction). Building materials companies with local manufacturing presence are better positioned to capture the expected uptick in orders (**Ashirvad, KCP, Cera and Kajaria were the prominently visible brands**). The outlook seemed positive and growth momentum led by construction activities is expected to sustain for the next few years.
- Private educational institutes such as SRM and VIT have been established. We observed rapid construction activity for MLA quarters (by NCC), lift irrigation works (Megha Engineering-unlisted), road construction (Dilip Buildcon-Vijayawada, L&T, NCC, major share - unlisted players.), etc.
- However, although growth prospects look strong, there is still significant construction work pending to build the city. The temporary secretariat building through which the government operates and a few artery roads have been constructed at present, while other areas remain under development.



Construction of Amaravati to drive multi-year demand for building material/related materials, with local players better positioned to benefit

Exhibit 80. Amravati city under construction



Source: JM Financial

Exhibit 81. Strong demand for building materials to sustain over the medium term

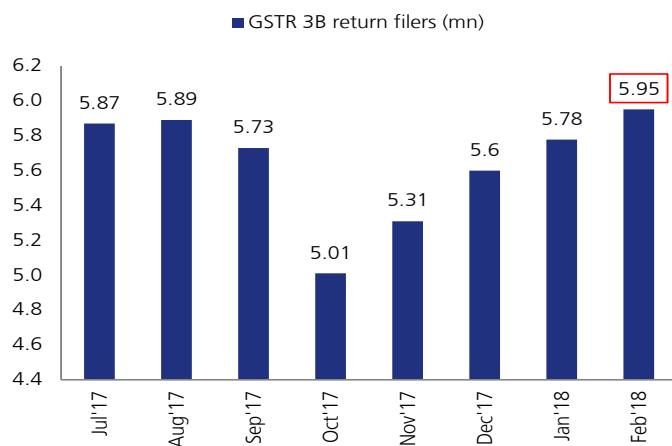


Source: JM Financial

Receding impact from GST adoption – SME credit growth needs to revive sharply for normalisation

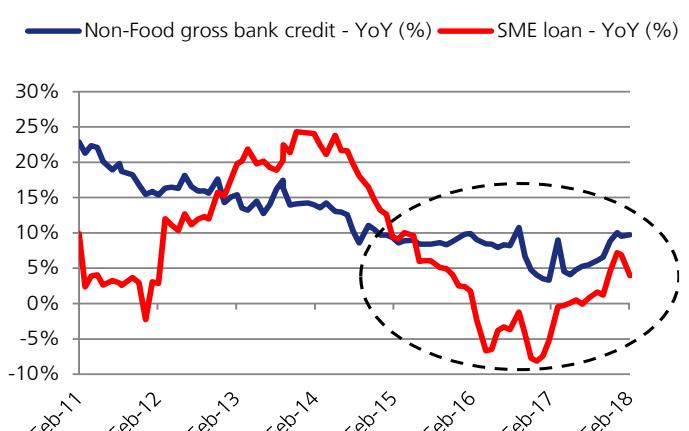
In our interactions with dealers/retailers across states, we saw increasing acceptance of the new taxation and business rules by businesses, and this trend is also reflected in the increase in filers for GST returns; compliance of GSTR had dropped to 60% by Oct'17 and reverted to 70% by Feb'18.

Exhibit 82. GSTR filing – Compliance improved to 70% by Feb'18 from 60% in Oct'17



Source: PIB, JM Financial

Exhibit 83. SME credit growth – Continues to lag and needs sustained and urgent attention



Source: RBI

However, businesses operating in wholesale channels continue to face challenges in adoption. In particular, smaller players in the supply chain of industries such as textiles have seen shift in business towards larger organised players. This has been a consistent feedback across cities/states and has impacted erstwhile cash-based businesses/regions (South India has been relatively less impacted). **There is a clear need to increase financing to the SME channel as it transitions from cash-based businesses to more organised forms.**

Exhibit 84. Some examples of the impact of GST adoption on the wholesale channel

Description	Key message
Retailer of consumer durables, appliances across UP, Uttarakhand and Bihar (Value Plus)	Steady growth across organised stores aided by availability of financing. Due to 0% financing there have been instances when a consumer has bought 15,000 cooler, while he had come for a 5,000 cash purchase. However, the whole sale channel has seen weakness after GST implementation and this remains a concern.
Large FMCG distributor based in Surat, Gujarat	Sales in modern trade has been good and growing, while general trade has shown a steady and sharp decline. This is also impacting employment at the retail level.
Textile retailer & wholesaler based in Bhopal, Madhya Pradesh	Overall sales sentiment is not strong. A number of large wholesalers in the textile industry have seen significant declines (eg. wholesalers at Dadar, Mumbai), especially those whose business involve more cash transactions.

Source: JM Financial

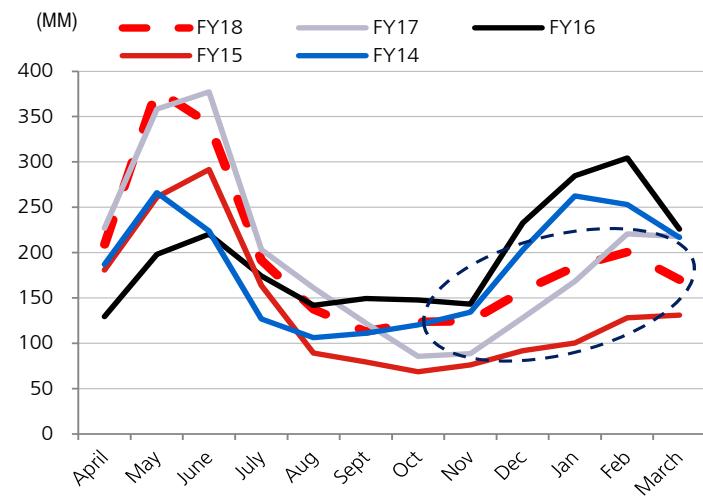
Removal of state toll post eases travel time by 10% on average

During our multiple interactions with truck owners/drivers, we were told that the average time reduction after GST implementation and removal of state check posts is c.10% for 1,500km travel (4-5 states). However, despite the removal of border check-posts, stoppages from state patrolling agencies (mostly for overloading), reduce the time benefit.

In addition to GST, the use of digital payments on highways through "smart tags" (sensor based detection and automatic payment) is helping reduce travel times for longer journeys.

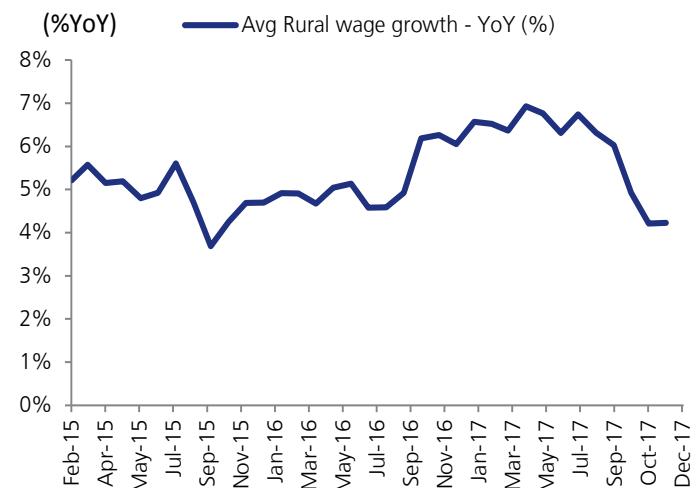
Rural wage growth is yet to see strength

Exhibit 85. MGNREGA person days trend – Demand for labour has come down over past few months



Source: mgnrega, JM Financial

Exhibit 86. Rural wage growth has weakened in the last few months



Source: CMIE, JM Financial

Selected sand mining instances continue to impact construction activities in some states

The impact of the sand mining ban has been visible in states such as **Tamil Nadu, Rajasthan and to a lesser extent in Punjab, Uttar Pradesh and Bihar have seen a revival in sand mining** but sand prices still remain 30-40% higher than the pre-ban period.

Exhibit 87. UP - Construction work in Varanasi – sand mining impact abates



Source: JM Financial

Exhibit 88. Bihar – Construction revival, the completion of highway projects



Source: JM Financial

Exhibit 89. A farm in Gujarat – Use of non-conventional energy sources



Source: JM Financial

Exhibit 90. Toilet constructed in a village in Rajasthan – Provision of water is the key constraint in toilet expansion



Source: JM Financial

Exhibit 91. AP – road construction



Source: JM Financial

Exhibit 92. MP – Housing construction



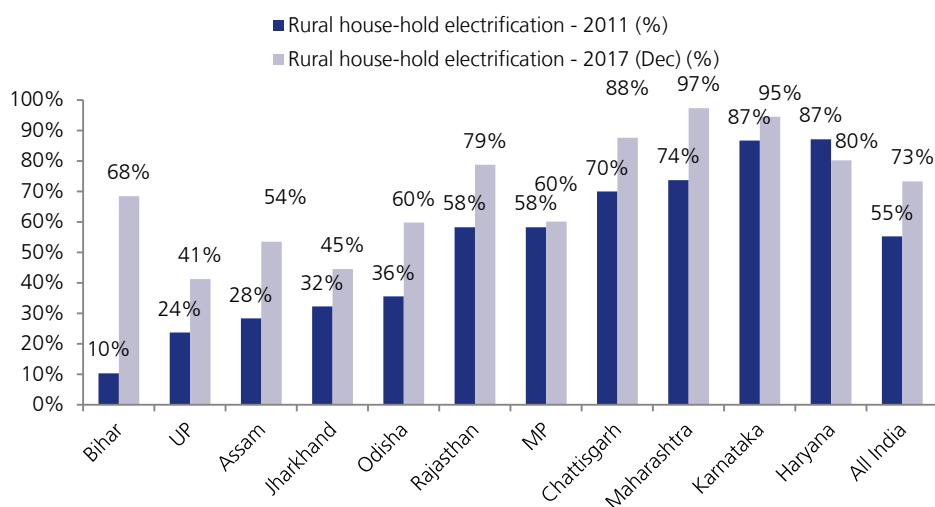
Source: JM Financial

Improvement in electricity access and fewer voltage fluctuations to drive consumer electricals business

One of the most significant changes underway in India is the improvement in electricity access and the duration of the availability of quality electricity (low voltage fluctuation). We have noted during our multiple visits around rural India (particularly in the North and East) that there is (a) improved electricity access, (b) increased use in terms of duration and (c) improved quality (fewer voltage fluctuations). In particular, we have been positively surprised by the consistent and positive feedback with regard to electricity from Bihar and UP, in our current (Mar'18) and last visits (Oct'17).

The data on rural electrification clearly reveals the underlying changes. As of 2011, only 55% of India's rural households had access to electricity; this jumped to 73% by Dec'17. The sharp increase in some North and East Indian states has been more noticeable. Bihar saw a jump from 10% to 68% and UP from 24% to 41%.

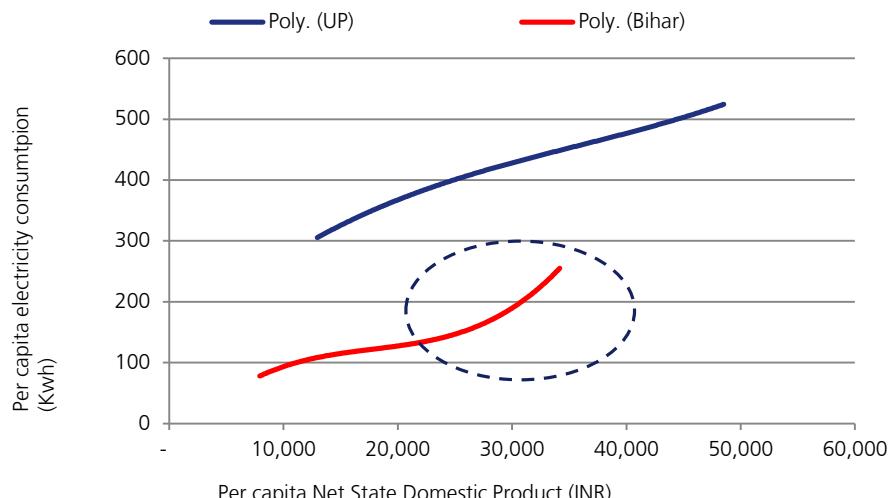
Exhibit 93. Sharp increase in rural electrification – From 55% of rural households in 2011 to 73% by Dec'17 – More noticeable in states such as Bihar and UP



Source: Census, DDUGJY, JM Financial

Apart from the increase in number of households under electrification, the per capita usage of electricity has also risen sharply, particularly in the case of Bihar & UP.

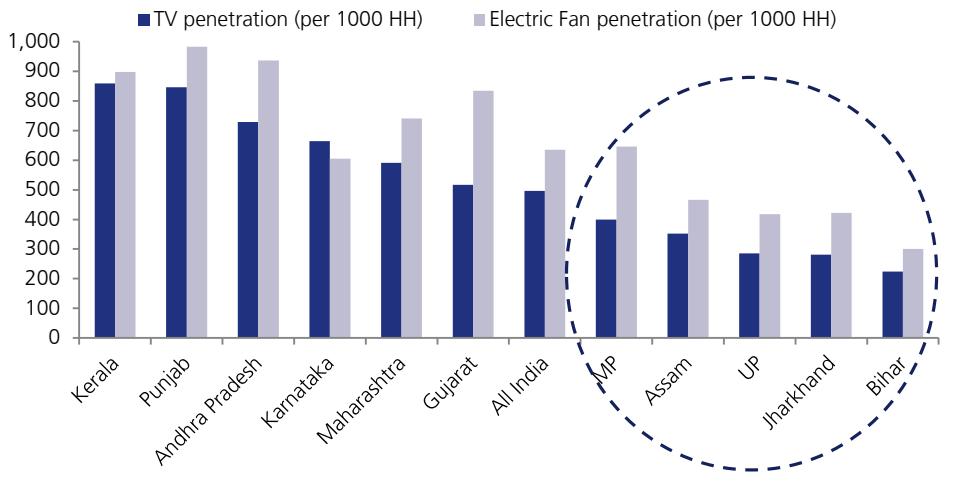
Exhibit 94. Electricity consumption/capita shows sharp jump in the states of Bihar and UP, consistent with our feedback



Source: JM Financial, Sigma Insights, JM Financial, Note: 3-degree polynomial trendline for per capita electricity consumption vs. per capita net state domestic product (FY05-17)

Data from NSSO and our primary checks indicate a sharp variance in the penetration of electrical goods across states, with lower-than-average penetration in low HH electrified states such as Bihar, UP, Jharkhand, Assam and MP. As the power availability sustains, we believe there will be steady and strong demand for electrical goods in these states in particular.

Exhibit 95. Penetration of electrical goods is set to improve in relatively under-penetrated states



Source: NSSO (2012), JM Financial

Box 9: What is changing in rural Bihar and UP in terms of electricity?

- As the electricity availability increases to 17-18 hours/day as against 7-8 hours/day earlier, people are driven to use electrical devices and we could see induction-based cooktops in rural areas. Brand awareness is also increasing in these regions and people consider companies such as Havells as a premium brand in Northern Bihar and in Uttar Pradesh.
- Some rural areas of Bihar and UP had been using alternate sources for electricity, either availing power through diesel-based gen-sets or battery backed-up lights. However, the usage charges of these were high (INR 10-20/unit) and so they used minimal-impact devices such as LED bulbs and low power fans. As the regular grid power is now available at lower rates, people are inclined to purchase consumer durables and appliances.
- Traditionally kutcha houses had good heat resistance, so as people shift to pucca houses, the requirement for cooling appliances is set to increase.

Increased demand for electrical devices as cost of access declines, while quality of available power improves

Exhibit 96. Use of induction cooking tops reaching hinterlands



Source: JM Financial

Exhibit 97. Demand for consumer electicals set to get a fillip



Source: JM Financial

Exhibit 98. Major categories in consumer electricals, market size and key players

Product categories	INR bn	Market Size (INR bn)		Key players with indicative market share (on overall size)
		Organised	Un-Organised	
Lighting	180.0	60%	40%	Philips (12%), Surya (7%), Crompton (6%), Bajaj Electricals (5%), Havells (4%)
Industrial cables	120.0	NA	NA	Polycab, Finolex cables, Havells (15%), KEI Industries (10%)
Housing wire cable	80.0	60%	40%	Finolex cables (20%-25%), Havells (16%), V-Guard (7%), KEI Industries (5%)
Pumps (all types)	92.5	70%	30%	Kirloskar (12%), CRI (12%), Crompton (8%), KSB (7%), V-Guard (2-3%)
Fans	60.0	90%	10%	Crompton (25%), Orient (16%), Usha (16%), Havells (15%), Bajaj Electricals (11%)
UPS/Inverters	56.5	82%	18%	Luminous (40%), Microtek (7%-9%), V-Guard (3%-5%)
Switchgears	42.0	NA	NA	ABB, Siemens, Schneider, Legrand, Havells, Anchor (Panasonic)
Stabiliser	12.5	56%	44%	V-Guard (20-25%), Premier (2%), Blue Bird (1%), Capri (1%)
Water heaters	26.3	66%	34%	Racold (11-12%), V-Guard (9-10%), Bajaj Electricals (7-8%), Havells (4-5%), AO Smith (4-5%), Crompton (3-4%)
Kitchen and Home Appliances	166.3			Bajaj Electricals, TTK Prestige, Preethi (Philips), V-Guard, Havells, Orient, Polycab, Panasonic
Total	836.0			Havells, Polycab, Crompton, Finolex Cables, Bajaj Electricals, V-Guard,

Source: Havells, Crompton, V-Guard, TTK Prestige, ELCOMA, Company annual reports, JM Financial

Apart from the increases seen for consumers, increased availability of power by states (exhibit on the next page) is also resulting in different states' ability to provide power to various groups. One such example is the free 24x7 power to farmers in Telangana, which was started on 1Jan'18.

Box 10: 24x7 Free electricity in Telangana

- The Government of Telangana launched a scheme providing 24x7 free electricity to its farmers (announced in mid-2017) to run their 2.3mn agriculture pump sets, replacing the existing 9 hours/day free power.
- A pilot project was launched in Jul'17 across three districts – Medak, Karimnagar and Nalgonda – comprising 43% of total pump sets in Telangana, after which the scheme was launched across the state on 1Jan'18.
- Agriculture in the state is majorly dependent on bore wells, except for a few areas, which are served by the canal from the Nagarjuna Sagar dam. Therefore, this scheme benefits a farmer such that water is available to the farm as and when needed. Earlier, when free power was given for say 9 hrs/day, a farmer had to plan his day accordingly. With 24 hrs of supply, a farmer can make use of the facility and plan his day to maximise other sources of income.
- In terms of transition from the earlier mode, farmers had to replace the automatic starters in their agriculture pumps with new ones, which increased costs in the short run.
- However, there have been concerns raised around the wastage of water and questions about whether this step can lower water levels in dams.
- However, given the busy election year, we might see more states undertaking similar schemes which would benefit farmers and ensure that water levels are not harmed significantly.

24x7 power gives a farmer flexibility in his timelines and the free time can be utilised to earn additional income

Exhibit 99. Power availability by states (Million units)

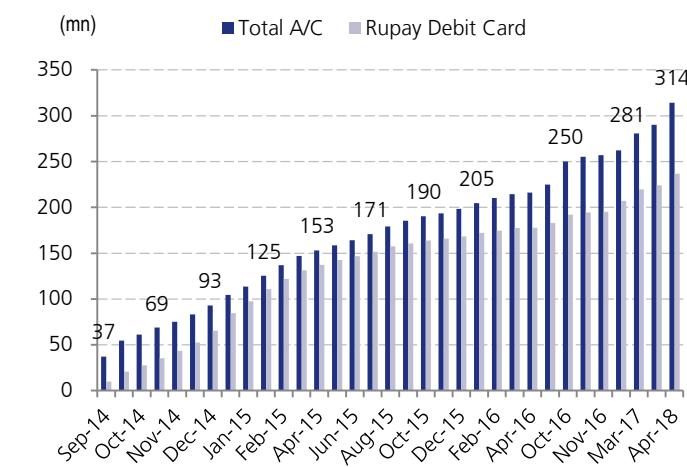
State	CAGR (FY06-18)	CAGR (FY15-18)
Telangana	NA	14.0%
Bihar	11.5%	12.4%
Uttar Pradesh	8.6%	10.7%
Madhya Pradesh	6.8%	9.5%
Damodar Valley corporation	6.6%	6.4%
Chhattisgarh	6.1%	6.3%
All India	6.3%	5.3%
Jammu and Kashmir	5.8%	4.7%
Gujarat	6.4%	4.6%
Tamil Nadu	5.8%	4.4%
Punjab	4.4%	4.4%
Karnataka	5.8%	4.1%
Kerala	5.2%	4.0%
Maharashtra	4.9%	4.0%
Assam	7.4%	3.9%
Pondicherry	3.9%	3.9%
Uttaranchal	8.6%	3.6%
Orissa	5.5%	3.2%
Haryana	7.4%	3.0%
Delhi	3.4%	3.0%
Rajasthan	7.1%	2.6%
West Bengal	6.2%	2.5%
Himachal Pradesh	6.8%	2.3%
Jharkhand	6.0%	1.6%
Goa	4.8%	1.5%
Andhra Pradesh	0.9%	1.1%

Source: Sigma Insights, JM Financial

Increasing financing penetration driving consumption

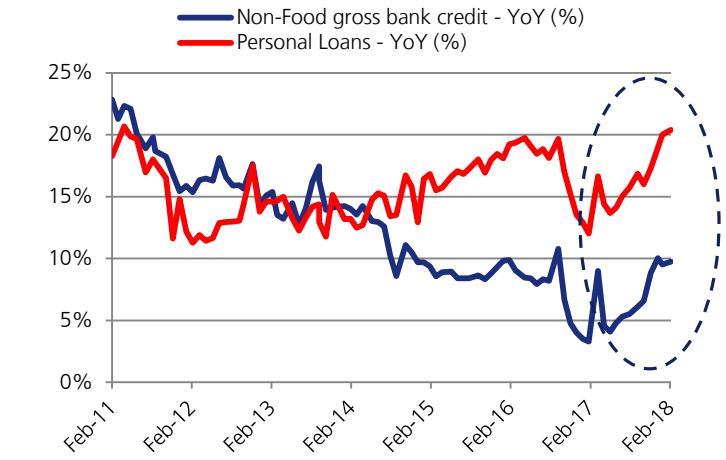
Over the past few years, overall the growth in retail credit has far exceeded (15-20% YoY) the total banking sector's credit growth (mid-to-high single digits). Retail credit has also remained healthy for Non-Banking Financial Channels (NBFCs). Over the past few years, with the expansion in PM Jan Dhan Yojana, 314 mn bank accounts have been opened. As financialisation improves, along with 1bn+ Aadhaar cards, the overall market for credit growth would increase.

Exhibit 100. PM Jan Dhan Yojana account holders at 314 mn; c.60% are rural account holders



Source: JM Financial

Exhibit 101. Personal loans have been sharply outpacing overall credit growth since the past few years



Source: Company

Among personal loans, housing finance accounts for c.50% of the personal loans and as of now, rural/semi-urban India account for almost 1/4th of the market with an average ticket size of INR 0.8-1mn.

Exhibit 102. Market share – Rural+Semi-urban has 25% share in Housing Finance

Housing Finance

Locations	Parameters	Details
Metro	Market Share	47%
	ATS (INR mn)	3.2-3.5
Urban	Market Share	28%
	ATS (INR mn)	2-2.2
Rural+Semi-urban	Market Share	25%
	ATS (INR mn)	0.8-1.0

Source: RBI, JM Financial, ATS: Average Transaction size

In addition to banks, NBFCs have expanded their credit market over the years. As of Mar'17, NBFCs accounted for 16% of the systemic credit. Among some segments such as housing finance, vehicle finance and loan against property, NBFCs have significant market share.

Exhibit 103. NBFCs have expanded financial intermediation, significant share in segments

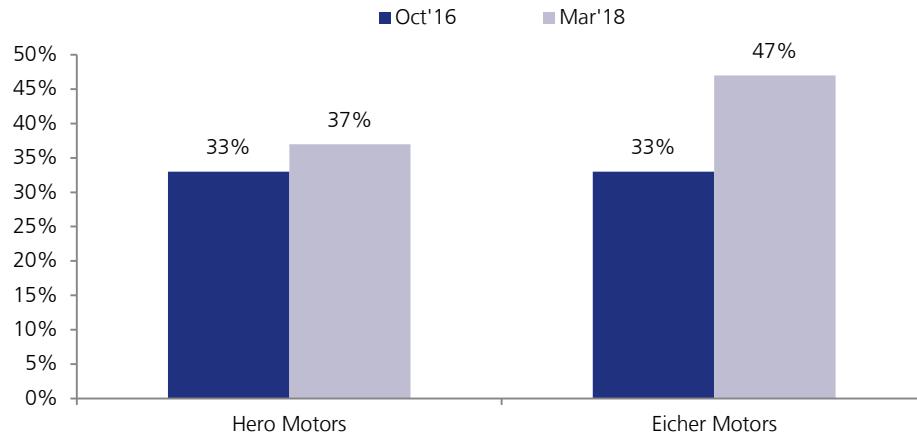
NBFC Segment	Market-share (%)	Competitive positioning
Housing Finance	40%	Competitive interest rates, better customer service; focusing on higher-yielding segments like LAP and developer loans
Auto Finance	50%	Catering to relatively less creditworthy customers, strong presence in used vehicles, faster processing, lower documentation, customised offering
Loan Against Property	51%	Strong origination skills, superior customer knowledge, better collection mechanisms, faster loan processing, cash flow-based credit appraisal
Whole-sale finance	5%	Strong origination skills, customised product offering, focus on real estate funding and structured products

Source: Indostar DRHP, JM Financial

Increased financing seen in consumer purchases

Our interactions with the dealers and data from companies across regions indicate increase in share of financing across consumer categories. As data from two-wheeler companies (exhibit below) also suggest a jump in overall financing share in purchases. We also learnt that the constraint on making purchases above INR 0.2mn in cash is also aiding in the increase in financing, particularly in the case of automobiles (CV, tractors) etc.

Exhibit 104. Increase in share of financing in purchases - Financing share in automobiles has gone up in last 1-2 years



Source: Company, JM Financial

In terms of consumer durables, a significant shift in behaviour is underway and is driven by companies such as Bajaj Finance and Capital First. We could clearly see the increased awareness and usage of 0% financing even in Tier-3 towns and rural regions. Under 0% financing, the consumer does not have to pay interest, while the financier charges commission to the retainer.

Consumer financing companies have been scaling up their presence across rural segments over the past few years, which is reflected in the geographic expansion of leading consumer durables financier Bajaj Finance. From FY15, the number of rural consumer durables stores where it is present increased to 1/3rd of its total retailer base from 0 in FY14.

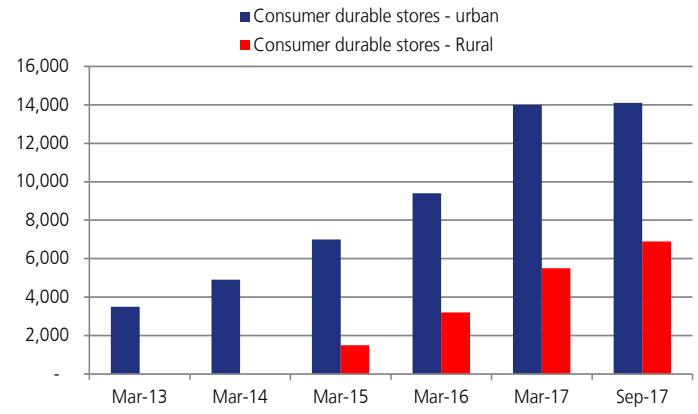
We heard in multiple places about the increase in the share of financing by rural consumers over the past year

Exhibit 105. Increased presence of financing companies in small towns



Source: JM Financial

Exhibit 106. 1/3rd of Bajaj Finance's presence at consumer durables stores now in rural regions, up from 0 a few years ago



Source: Company, JM Financial

The competitive intensity in consumer retail is however likely to further intensify as new players expand in this market. During our rural safari visits, we saw the presence of NBFC **Home Credit in multiple states.**

Box 11: Increased competitive intensity in consumer durables/appliances financing

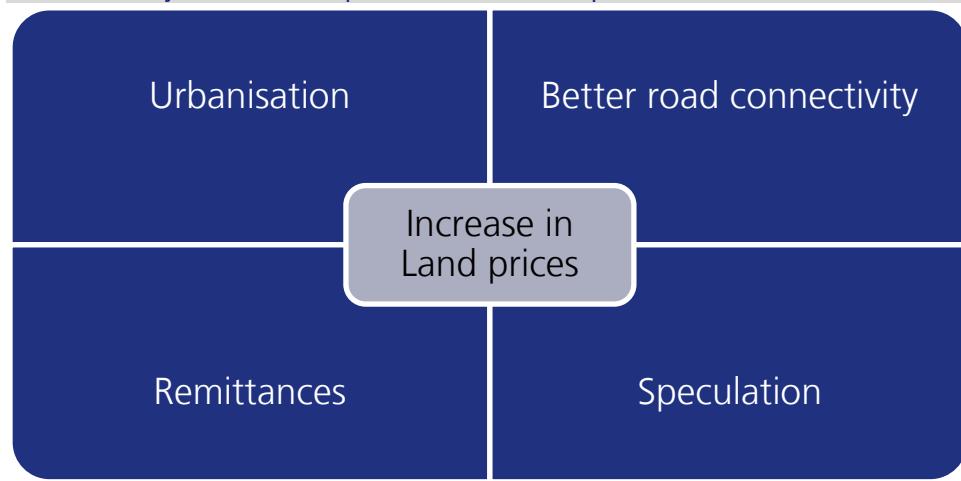
- Home Credit India operates in 89 cities across 19 states in India. The company has a network of over 20,000 points-of-sale with an employee base of 19,000. Its parent is Home Credit B.V. founded in 1997 in the Czech Republic.
- Home Credit offers loans for a range of home appliances, mobile phones, laptops, two-wheelers and varied personal need items.
- We interacted with a mobile retailer in Rajkot, Gujarat where Home Credit has a point of presence.
 - He said Home Credit has market leadership in mobile phone credit in the local market on account of its liberal documentation and credit policy. As against the requirement of a PAN card and age limit of 23 years, Home Credit processes requests based only on a contact number and three references.
- We received similar feedback at other locations in an interaction with a Bajaj Finance staff-member in Sehore, Madhya Pradesh.
 - The overall consumer durables market is growing at 25-30% YoY, with significant growth driven by Home Credit, while Bajaj Finance and HDB remain cautious in their lending practices.
- As per media articles, Home Credit continues its expansion plan, which can further **increase the competitive intensity in consumer durables financing.**



Wealth effect remains weak, impacting large ticket consumption

As highlighted in our earlier reports, rural land prices that had skyrocketed by at least 5x-10x over the past decade on improved road connectivity, urbanisation, remittances and speculation have continued to fall. It may be noted that barring regions adjacent to urban areas or where large infrastructure projects are coming up, we do not see much evidence of land transactions taking place.

Exhibit 107. Key factors for land price increases over the past decade

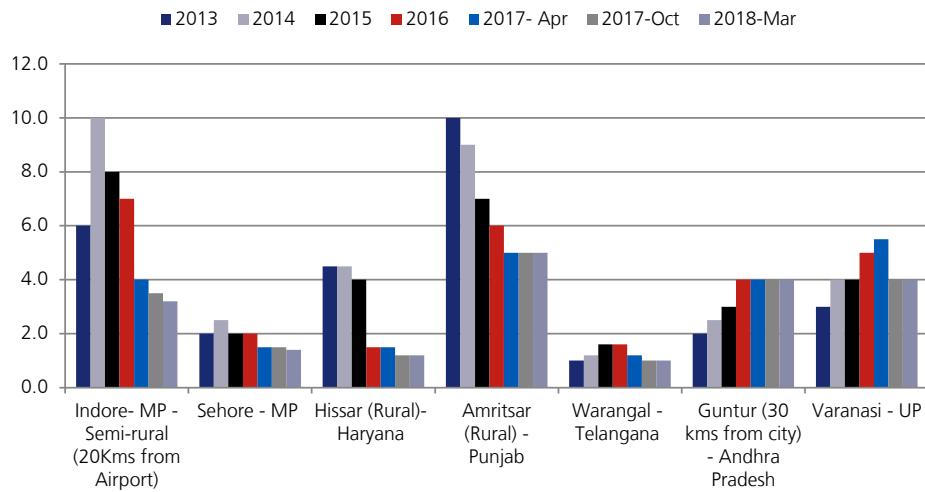


Source: JM Financial

Land prices were weak after 2015 on average, and after Demonetization (Nov'16), transaction volumes have 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 continues to affect real estate prices across regions.

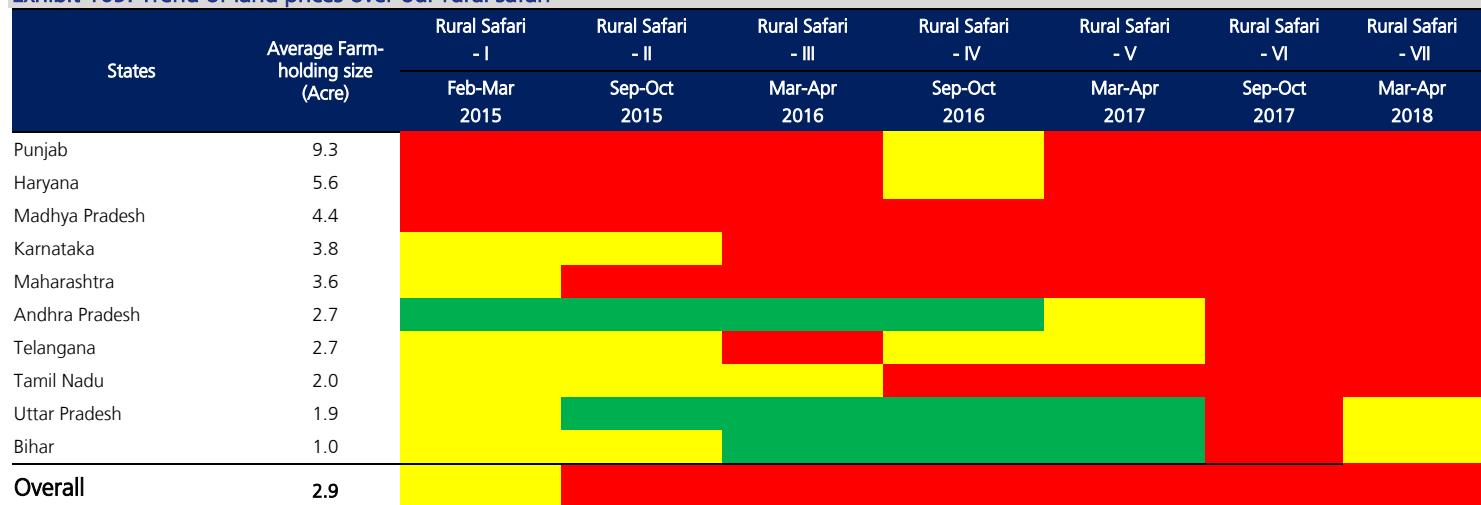
During our current visit, we continued to see overall pressure on land prices, with significant weakness in some states such as Rajasthan and Madhya Pradesh in particular. In Bihar and UP however there are signs of stability in the real estate markets as urbanisation continues.

Exhibit 108. Sample land price (INR mn per acre) as tracked in JM Financial's survey



Source: JM Financial

Exhibit 109. Trend of land prices over our rural safari



Source: JM Financial, Legend



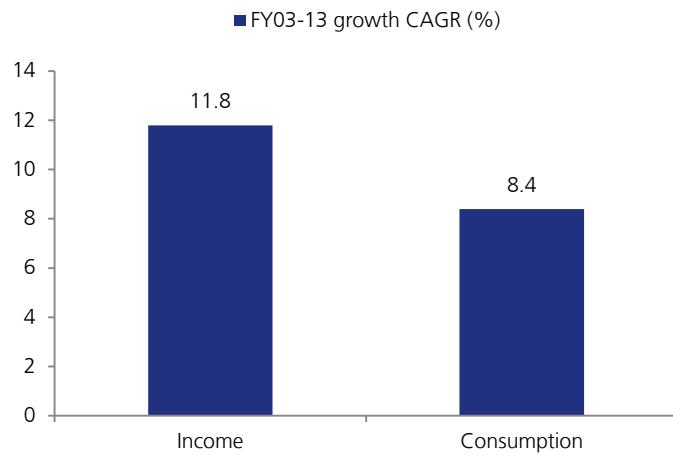
Increase Stable Decline

Rural income: Expect modest acceleration in FY19 aided by Government interventions

Steady agriculture income growth over FY03-13

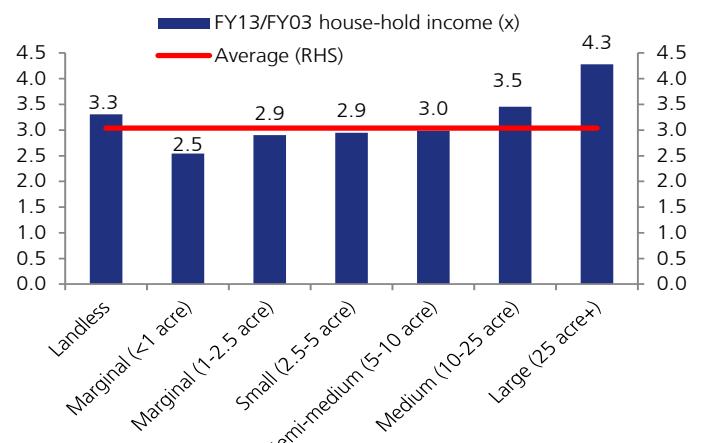
The debate around income growth in rural India continues to be intense. Historically, if we look between FY03-13, the average agri-household income increased at a steady rate of 12%, with consumption growth of 8.4% in that decade. A significant jump in MSP rates as well as rally in global agri-commodity prices aided in income growth, along with diversification of agri-household income, themes which we have discussed in detail in our previous Rural Safaris. Between FY03-13, the yearly income of an agricultural house-hold improved by 3x from INR25,3803 to INR77,112. Income levels improved across all categories of farmers; however large farmers (10+ acre owners) reported higher income growth than the average. **The higher income growth for large farmers was driven by – high growth in agri-income (MSP increase), diversification to high yielding cash crops and remittances (in terms of family member being in a job/small business).**

Exhibit 110. During FY03-13, there was a steady growth in income and consumption



Source: NSSO, JM Financial

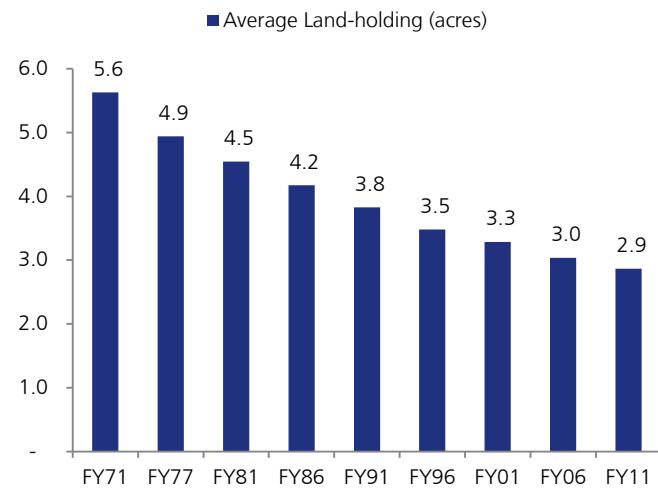
Exhibit 111. Income growth (INR, yearly per house-hold) during the past decade – Large farmers saw higher increases



Source: NSSO, JM Financial

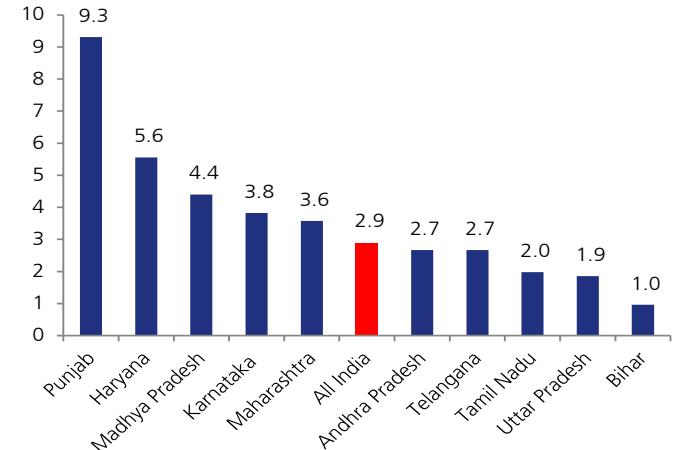
Steady fragmentation of land and low returns from traditional crop adversely impacts farm profitability

Exhibit 112. Steady decline in average land holding over the years



Source: Ministry of Agriculture, JM Financial

Exhibit 113. Sharp variation in average land-holding in states – Eastern states have much higher fragmentation

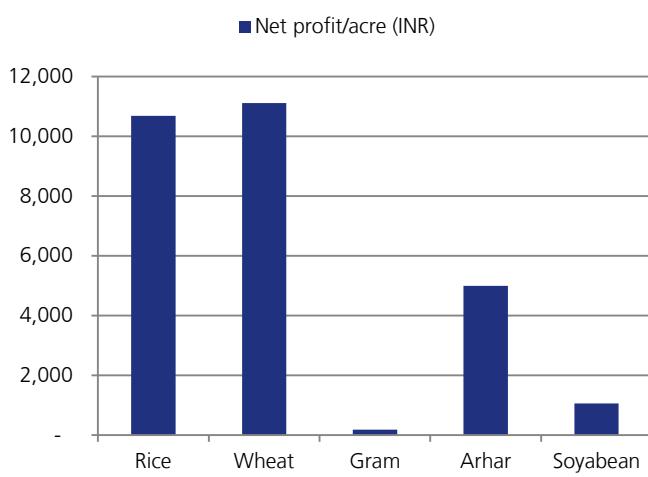


Source: Ministry of Agriculture, JM Financial

Among the structural reasons for decline in farm profitability is the sharp and steady fragmentation of agricultural land – From an average of 4.5 acre/house-hold in FY81, it has come down to 2.9 acre/house-hold in FY11. More noticeable is the wide divergence across the states with some states such as Bihar & UP with average farm-holding sizes of 1/1.9 acre respectively. A small and fragmented land-holding restricts a farmer to gain scale in farming and also to invest in mechanisation/irrigation etc. On an average, 86% of agriculture household in the country own less than 5 acre of land, and therefore achieving scale in agriculture production remains a challenge.

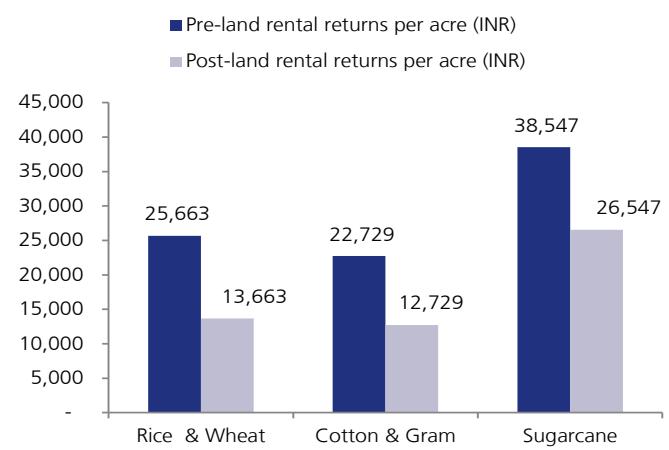
Apart from small land holdings, the average profitability per acre for a majority of traditional crops sown by farmers have limited profitability. The average return (INR) per acre for cereals ranges between INR 10-15k/acre, while pulses have returned sub-10K/acre. In addition, if we consider returns post land rental value, the returns come down further.

Exhibit 114. Net income from cereals/pulses are not remunerative



Source: CACP, For the year FY15

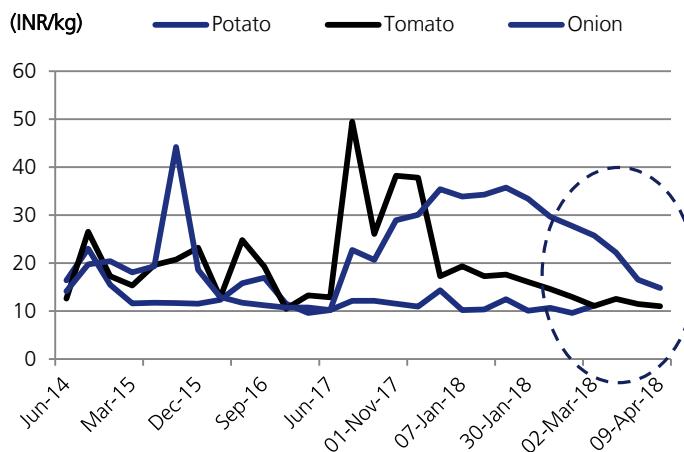
Exhibit 115. Estimated returns from agriculture further reduces post farm rental cost



Source: JM Financial, Estimates based on land rental rates (per acre) for one year

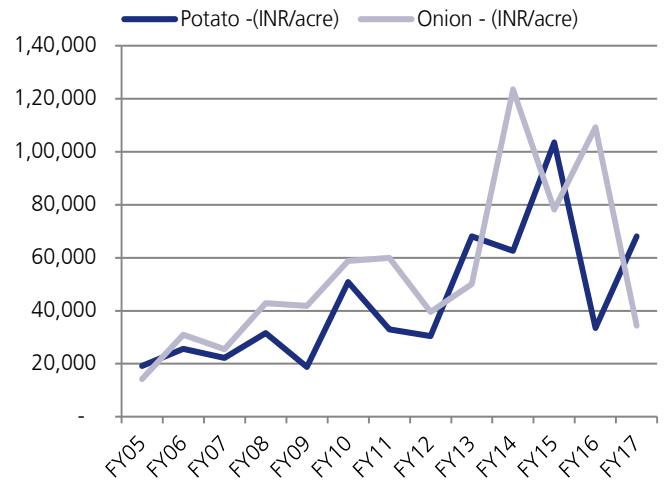
On the other hand, crops such as vegetables, Cotton, Sugarcane have higher returns (also driven by global market rates), but also carry higher risk on account of volatility in prices. One of the drivers for farm income growth during FY18 had been the increase in vegetable prices during the year. But over last two months, there has been sharp declines on account of healthy crop production and thereby FY19 farm income growth.

Exhibit 116. Wholesale prices for vegetables have softened in last few weeks



Source: Ministry of Consumer Affairs, JM Financial, Note: Wholesale prices

Exhibit 117. Extreme volatility in pricing leads to sharp variation in profitability of vegetables

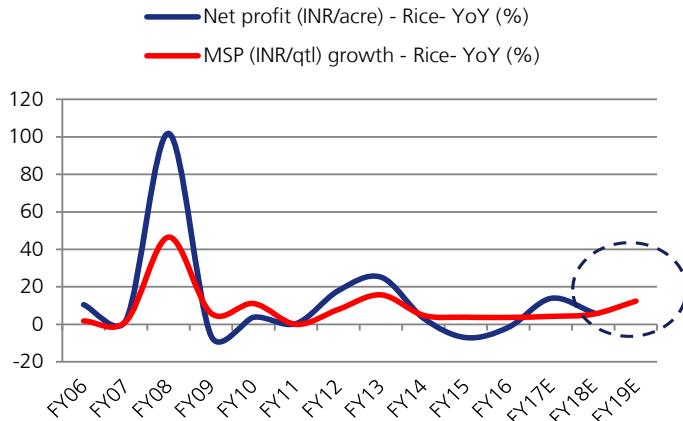


Source: CACP, JM Financial

Deceleration in MSP growth over past few years has impacted crop profitability adversely

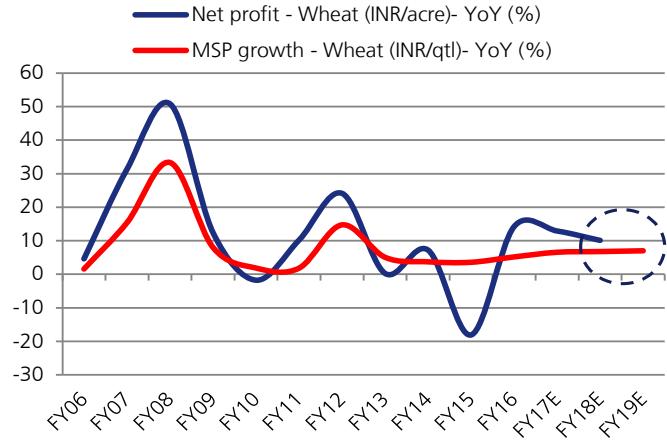
The profitability growth of a majority of crops is highly co-related with the increase in MSP rates. As the MSP growth rate slowed down over the past few years, profitability has also seen a deceleration.

Exhibit 118.MSP growth trend over the years – After double digit growth between FY05-14, it slowed to mid-single digit growth



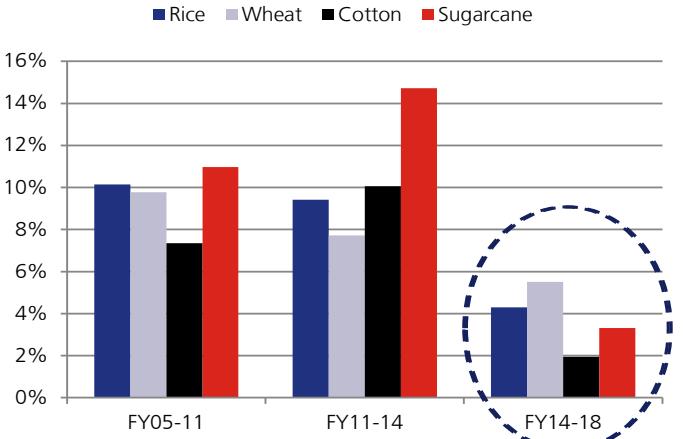
Source: CACP, JM Financial

Exhibit 119... Profitability growth (INR/acre) has also seen sharp moderation in the past few years in line with lower MSP growth



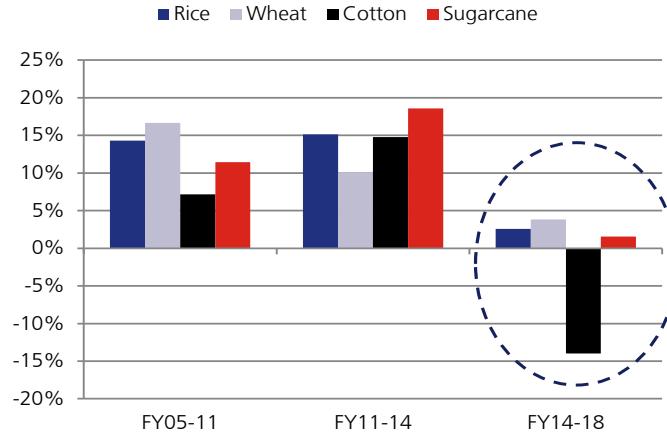
Source: CACP, JM Financial

Exhibit 120.MSP (INR/qtl) trend (CAGR%) over the years – After double digit growth between FY05-14, it slowed to mid-single digit growth during past five years



Source: CACP, JM Financial

Exhibit 121....consequently profitability (INR/acre) growth (CAGR %) has also seen sharp moderation in the past few years in line with lower MSP growth



Source: CACP, JM Financial

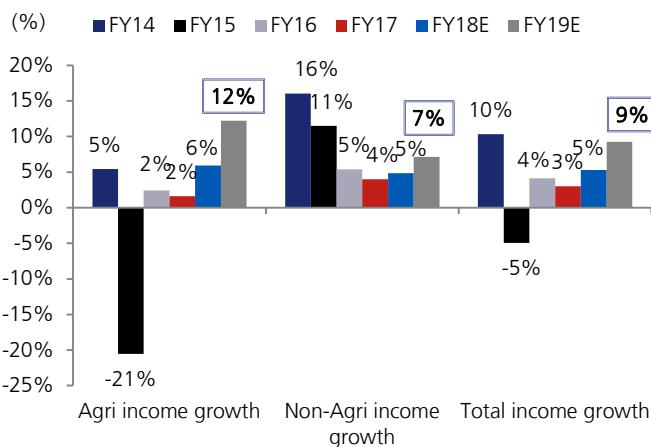
Increase in MSP rates along with likely improvement in procurement to drive income growth in FY19

As discussed earlier in the note (exhibit 42), we expect acceleration in the MSP growth during FY19, based on Government's assurance of cost+50% for all the kharif crops (Rabi crops already have cost+50% mark-up). Therefore, with an enhanced procurement machinery as well, we believe, farm income is set for a rebound during the next year. Global agri-commodity prices are stable, while vegetable prices (c.25% of income basket) is not supportive and thereby constraining growth.

Non-farm income is expected to see a modest acceleration as the disruptive impact from demonetisation, GST, sand mining bans in select states fade slowly. Rural wage growth continues to remain non-supportive (for a small farmer) and whole-sale channel based businesses continue to face challenges, thereby limiting growth in non-farm income.

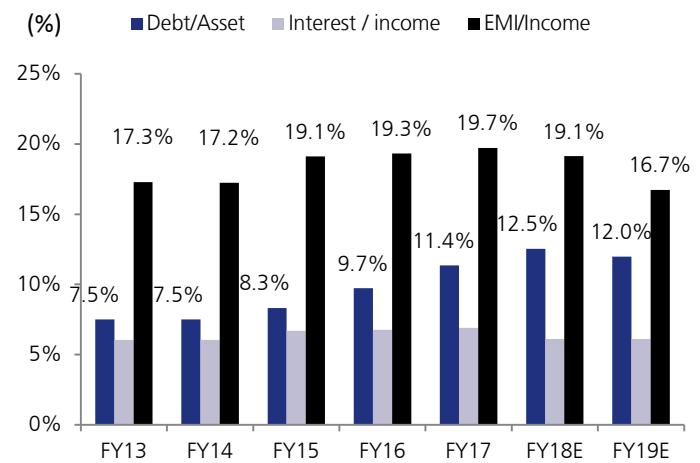
Overall, based on our interactions with agri-households across the country, we estimate agri-household income to improve from 5% growth in FY18 to near double digit growth in FY19. In addition, government efforts around farm loan waiver is likely to reduce the leverage of a small farmer meaningfully, thereby boosting consumption sentiment.

Exhibit 122. Income forecast for a small farmer (2.7 acre) – Modest acceleration driven by raises in MSP growth and improved procurement



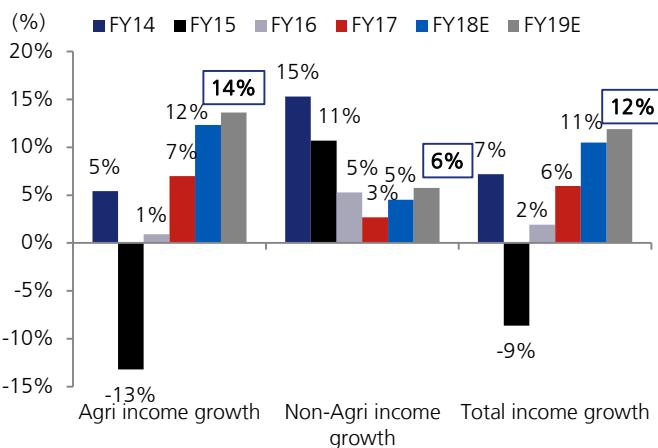
Source: NSSO, JM Financial

Exhibit 123. Leverage movement for a small farmer – Farm loan waiver aids in improving leverage ratios



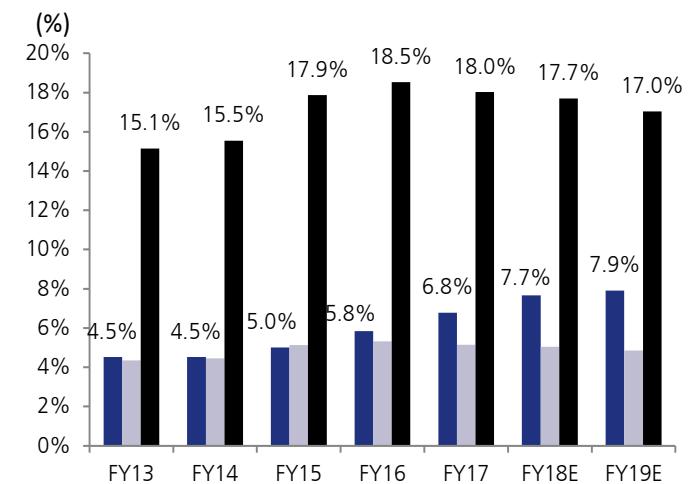
Source: NSSO, JM Financial

Exhibit 124. Income forecast for a large farmer (15 acre) – Overall increase in income growth driven by MSP raise during the year



Source: NSSO, JM Financial

Exhibit 125. Credit metrics movement for a large farmer



Source: NSSO, JM Financial

Our survey across the regions undergoing farm loan waiver indicated the likely usage of additional cash flow from the benefits of farm loan waiver. Given the consumption and investment requirements, larger farmer would be spending a higher share on discretionary consumption, while smaller farmer's discretionary consumption remains limited.

On the whole, consumption sentiment is largely stable with some constraints driven by the uncertainty around non-farm income as businesses continue to transition in a GST & formal business environment.

Sector comments

Consumer Goods

Our recent rural trip has given us some insights that possibly explain most consumer companies' (barring HUL) outlook of a gradual rural recovery. 1) Pricing of most Rabi crops has declined YoY owing to higher yields and 2) real estate price appreciation remains moderate. While we expect state-level interventions such as price assurance schemes and farm loan waivers along with improved penetration of formal financing and electricity to boost rural demand, the pace of rural growth touching previous healthy levels (1.5x-2x urban growth) could take a while. However, discretionary demand is being aided by a sharp increase in retail credit penetration. Hence we expect companies in the discretionary space (paints, jewellery, apparel, etc.) to outperform their staples peers. Additionally, the unorganised space is now steadily becoming organised in terms of doing business; so it is more tax compliant after GST implementation. This has adversely impacted the competitiveness of the unorganised sector and is benefitting its organised counterpart.

Staples demand to return to pre-GST levels, but pace of recovery could be subdued vs. expectations: Staples companies recorded a good 3QFY18, largely owing to a benign base effect (which was impacted by Demonetization). While market research agencies were suggesting a strong revival in retail offtakes, the experience of staples companies has led them to conclude that recovery in rural demand is more gradual than that being suggested by market research companies. Overall, while growth is expected to revert to pre-GST levels (mid-single digits for HUL), it may not reach the levels seen in better times (FY11-12) especially given the still-subdued growth in rural incomes.

Penetration of retail credit should help discretionary consumption: In recent times, there has been a sharp increase in the penetration of retail credit for consumer durables in rural areas. Given that rural incomes are improving, a major part of the surplus would be directed towards the purchase of discretionary items such as apparel and jewellery as well as home renovation items such as paint, in our view. This demand would also be aided by higher credit availability, which would help enhance purchasing power. Some utility items such as bikes/scooters, tractors, warehouses, etc., could also see healthy demand.

Spending on weddings expected to remain stable; base no more favourable: Demand for value fashion apparel has seen a healthy recovery over the past 12 months on a better monsoon and a minor shift from the unorganised segment. However, most of the recovery is now in the base and growth hereon could be moderate, in our view. V-Mart has a higher presence in agrarian states such as UP and Bihar and has been a beneficiary of this trend over the past 1-1.5 years. However, with the base no more favourable and competition catching up, it could face challenges in driving same store sales growth in the near future.

Availability of Patanjali products in rural areas remains limited: As per our survey, the availability of Patanjali products in rural areas remains limited. While stores in some areas prominently displayed Patanjali advertisements, other stores were not even stocking Patanjali products on account of low demand. The attractiveness of ayurvedic/natural products remains lower among farmers on account of lower price competitiveness (synthetic products such as Lifebuoy soaps are available at a lower price) and there is lower fascination with natural products. Patanjali also continues to see competition from other Ayurvedic brands such as Kesh King and Himalaya.

Exhibit 126. Sri Sri products making inroads in Rajasthan, although traction remains low



Source: JM Financial

Exhibit 127. Patanjali continues to dominate shelf space



Source: JM Financial

Agrochemicals

During our travels, we observed 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 (eg. Coromandel, Rallis, Dhanuka, etc), these are yet to make an impact in many remote villages, where farmers entirely rely 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, with rising farm incomes and increased regional penetration by organised players, the Indian agrochemicals sector is capable of growing 8-10% annually.

Domestic agrochemicals industry reported 6-8% YoY sales growth in 3QFY18: The revival of the monsoon in South India towards the end of the Kharif season led to water levels in 91 reservoirs across the country rising YoY. Consequently, the domestic agrochemicals industry saw healthy volume growth in 3QFY18. However, there was down-trading to generics on lower farm incomes during the quarter, leading to negative pricing growth for the quarter. This resulted in a mixed set of results; companies such as Bayer, PI and Dhanuka reported subdued results, but companies such as Rallis, UPL and Insecticides India reported a healthy set of results.

Higher pest infestation to support volume growth for 4Q; down-trading to continue: Based on our recent visits, we can conclude that the untimely rains in the Rabi season (especially in parts of Maharashtra, AP and Karnataka) have resulted in higher pest infestation, particularly in fruits and vegetables. Accordingly, we believe that volume growth momentum should continue in 4QFY18. However, down-trading is expected to continue as rural incomes are yet to recover after GST implementation and Demonetization. We expect key agrochemicals companies in the listed space to grow c.10% YoY in 4QFY18.

DBT in agrochemicals: The implementation of DBT in fertilisers has begun at most of the places we visited and the transition has been gradual.

Exhibit 128. Agrochemicals sales in Tumkur, Karnataka



Source: JM Financial

Exhibit 129. Sale of fertilisers through DBT mechanisms



Source: JM Financial

Automobiles

After registering double-digit growth in most segments in FY18, demand outlook for the auto sector in FY19 continues to remain positive with multiple structural tailwinds. A core theme of our recent rural visit was the recovery in income and consumption. The government's rural impetus through farm loan waivers, increased state level capex, price assurance schemes has put more money in the hands of the rural population. In addition, expectation of a normal monsoon has improved consumption sentiment. Consequently, we believe the healthy two-wheeler sales momentum to sustain in FY19. Improving infrastructure, exciting product launches in the UV segment by M&M and expanding reach of financing are pointing to stronger demand for the PV segment. The revival in tractor demand since FY17 is expected to continue with increasing farm mechanisation and shortening of the replacement cycle.

Two-wheelers

Two-wheelers sales picking-up: In most rural/semi-urban areas we visited two-wheeler sales were recovering and gaining traction. During our travels, we observed the anticipation of healthy sales in FY19, a departure from the pessimism seen earlier, following the demonetization and post-GST implementation period. This observation is further strengthened by volume growth of 14% YoY in FY18 vs. a tepid 3%/7% in FY16/FY17. During our visits to some large auto dealers, we saw that those who were negative on growth prospects until 1QFY18 have now turned optimistic. After demonetization and the implementation of GST, the unorganised sector had taken a hit, impacting non-farm employment in rural India. However, since then, the situation has stabilised, leading to a pick-up in sales over the last couple of months. Driven by an increase in farm incomes on the back of a good monsoon, price assurance schemes and farm loan waivers, we anticipate two-wheeler sales to increase in FY19.

Rural demand for two-wheelers is being driven by an increase in farm incomes, aided by a good monsoon, price assurance schemes and farm loan waivers

Exhibit 130. Overall two-wheeler growth (YoY %) trajectory healthy

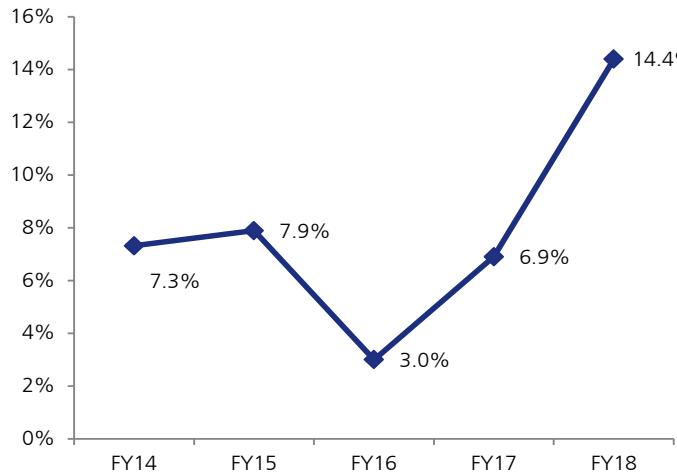
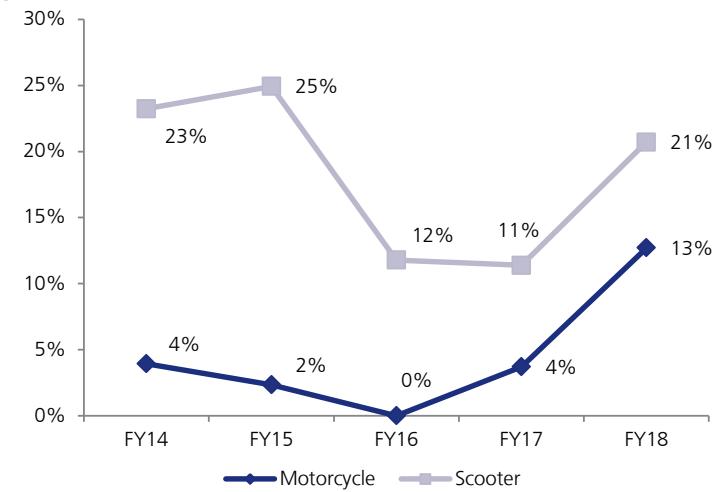


Exhibit 131. Scooter sales growth outpacing that of motorcycles



Source: SIAM

Source: SIAM

Improving rural/semi-urban infrastructure drives demand for scooters: At the industry level, scooters recorded strong 21% growth in FY18 (vs. 11.4% in FY17). Scooters as a percentage of total two-wheeler sales currently stand at 34% (vs. 21% in FY13, Exhibits below). This shift was also clear during our visits. Dealers highlighted that there is an increasing shift towards scooters as they can be used by the entire family (including female members). Most dealers in North (rural) India sounded positive on the demand outlook, owing to improving rural sentiment. While penetration of scooters in rural areas continues to remain below the national average of 32%, we believe as infrastructure improves, scooter penetration would continue to increase.

Scooter volume growth continues to be ahead of motorcycle

Motorcycles gaining momentum: During our visit to dealers in Bihar, we saw that dealers were optimistic about the growth prospects for motorcycles. In Bihar, the overall agriculture output is likely to be slightly higher (4-5% YoY), given a reasonable monsoon and slight increase in Rabi sowing (up 1%). Further, in South India, the North-East monsoon was timely, and we expect broad-based growth across the country. As a result, we anticipate an increase in farm incomes and a pick-up in motorcycle sales, as it is the first large consumer purchase after income improves. In FY18, motorcycles grew 12-13% YoY (vs. 4%, FY17). Further, in 4QFY18, motorcycles grew 28% YoY, indicating a healthy growth outlook for FY19.

Exhibit 132. Segmental share in two-wheelers, FY13

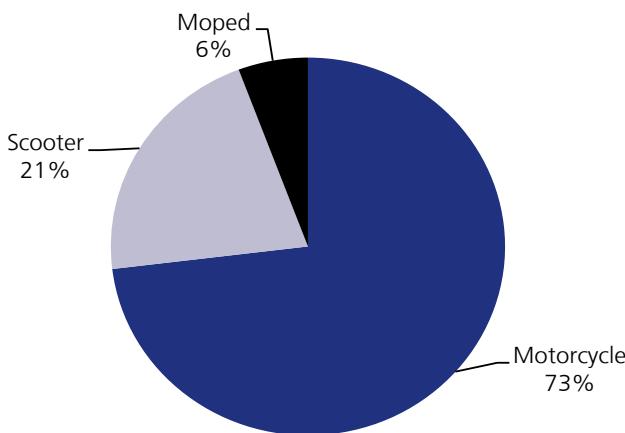
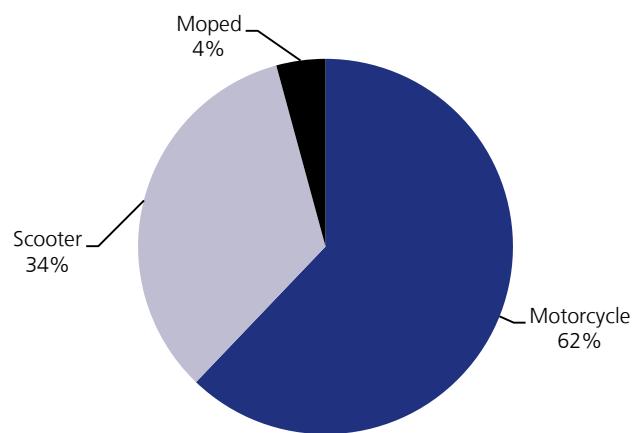


Exhibit 133. Segmental share in two-wheelers, FY18



Source: SIAM, JM Financial

Source: SIAM, JM Financial

Royal Enfield ‘most wanted’ in the premium segment: During each Rural Safari visit, the Royal Enfield (RE) came across as a strong aspirational purchase even in smaller towns. During our visit to dealers in Telangana, we observed a slight reduction in demand for TVS’ premium bikes, while demand for Honda’s premium bikes was rising. RE commanded the highest market share in this segment. Demand for RE is driven by the strong desire to upgrade to higher capacity bikes as well as its cult brand status. **Further, two-wheeler financing by new NBFCs is increasing the financial penetration for RE.** Recently, Chola tied up with Royal Enfield for two-wheeler financing.

Honda gained market share, but Hero is maintaining its market leadership: In FY18, Honda increased its market share to 29% from 27% in FY17, driven by: **a)** demand for motorcycles, where its share increased from 13.8% (FY17) to 15.7% (FY18) and **b)** increasing demand for Honda Activa. Hero has been able to maintain its domestic market share within 51-53%, despite its limited presence in the high-growth premium market. During our visits to dealers, **it was also highlighted that Hero has started efforts to increase its market share through its revamped product portfolio.** We believe that with the revival in rural markets, Hero should remain the key beneficiary owing to its +50% rural exposure. The government’s focus on improving rural incomes as well as favourable schemes ahead of elections (state elections in three large states this year and general elections next year) should help growth.

Hero revamping its product portfolio to increase its market share

Passenger Vehicles

Passenger car penetration to increase as infrastructure improves: Passenger vehicles (PVs) grew at a moderate pace of 8% YoY in FY18, driven by strong growth in utility vehicles (UVs) (21% YoY). During our rural visit, auto dealers were optimistic about auto sales, driven by: **a)** improving road infrastructure, supported by the construction of rural roads through schemes such as Pradhan Mantri Gram Sadak Yojana; **b)** an increase in availability of financing; and **c)** higher consumer awareness, driving demand for specific models. Improving rural infrastructure augurs well for increasing penetration of passenger vehicles. Our

Rural regions account for ~35% of the sales of Vitara Brezza, which is considered an urban product

discussions with dealers suggest an increasing shift towards popular models such as Brezza, Ciaz, Swift and Dzire, aided by increasing incomes in rural and semi-urban areas.

Healthy growth expectations for MSIL dealers: Most rural dealers are expecting higher growth YoY in FY19. During our interactions with Maruti (MSIL) dealers, it was highlighted that for the first time, there is a waiting list for Alto in the state of Madhya Pradesh (although this might be temporary). With most models being in high demand, MSIL has increased its market share from 47.4% (FY17) to 50.1% (FY18). Further, during our interaction with dealers, it was highlighted that 'Vitara Brezza' is gaining traction in the UV segment. Although Brezza is positioned as an urban compact SUV, it has found traction in rural areas as well. As per reports, rural/semi-urban areas contribute ~30% to Vitara Brezza sales. This can also be observed from the increase in MSIL's market share in the UV segment from 25.7 (FY17) to 27.8% (11MFY18). In the compact car segment, Dzire is gaining traction, followed by Ciaz in the mid segment. Dealers are also optimistic about the new Swift. Ending FY18, MSIL rural sales stood at 35% of domestic sales, achieving ~20% YoY growth.

Exhibit 134. Robust growth in PV volume – YoY (%)

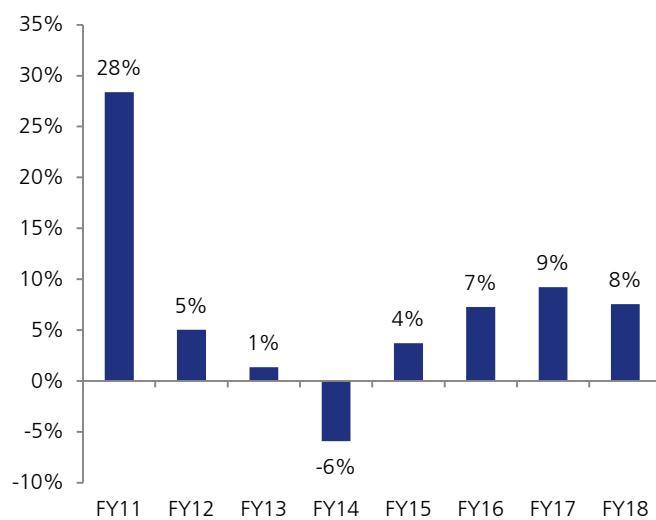
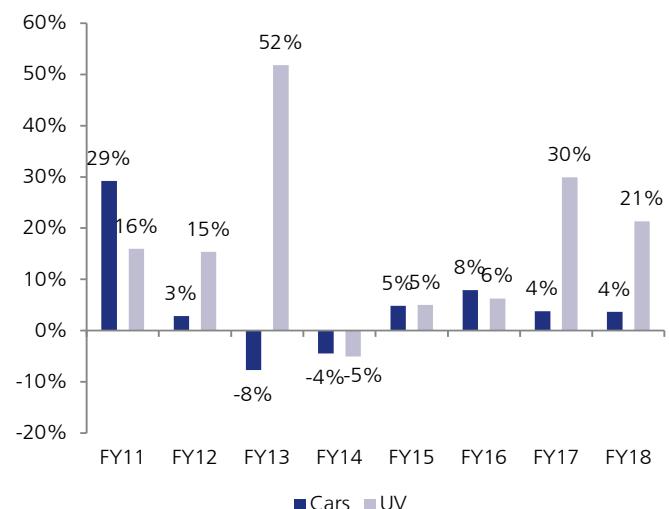


Exhibit 135. UV growth has surpassed car growth

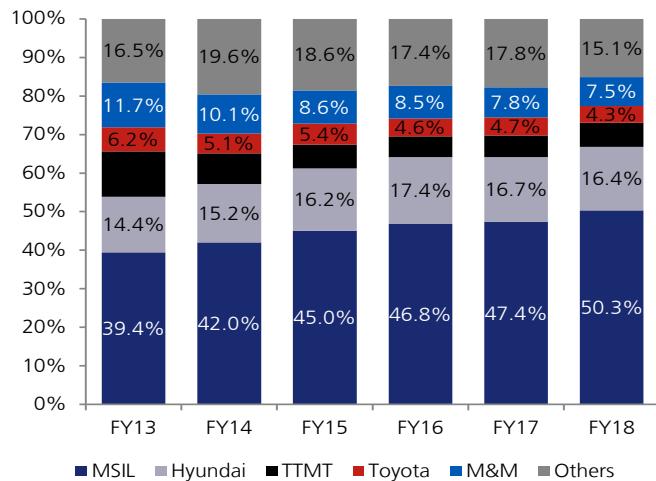


Source: SIAM, JM Financial

Source: SIAM, JM Financial

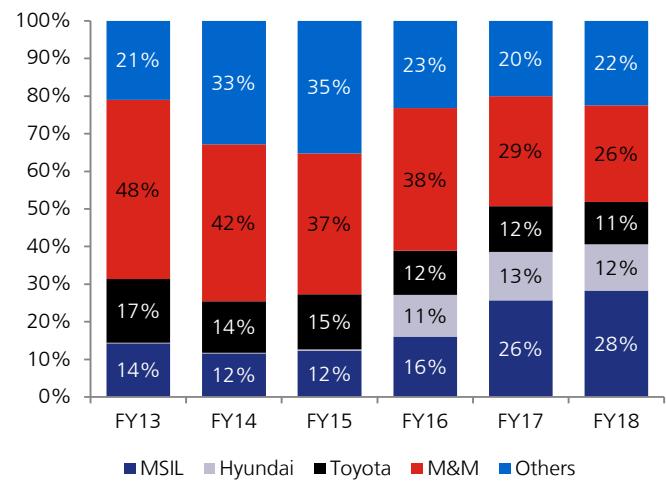
Likely turnaround for Mahindra: During our interactions with dealers, it was highlighted that demand for M&M is supported by large farmers. With increasing farm incomes, farm loan waivers and new models in the pipeline, the demand outlook for M&M remains positive. This observation is supported by significant growth in the sales of Bolero: 33% YoY YTD FY18 (vs. -16%, FY17). However, in 11MFY18, M&M's market share stood at 7.5% (vs. 7.8% in FY17). Like other passenger vehicle segments, growth in sales is largely dependent on the model's acceptability. While M&M struggled with its last few model launches, there are three products that will be launched soon. Also, refreshing the XUV500 and a pick-up in Bolero's sales due to positive rural sentiment would lift the UV segment's overall growth for M&M in FY19.

Exhibit 136. PV market share (%)



Source: SIAM, JM Financial

Exhibit 137. UV market share (%)



Source: SIAM, JM Financial

Exhibit 138. Maruti's continued focus to increase rural penetration



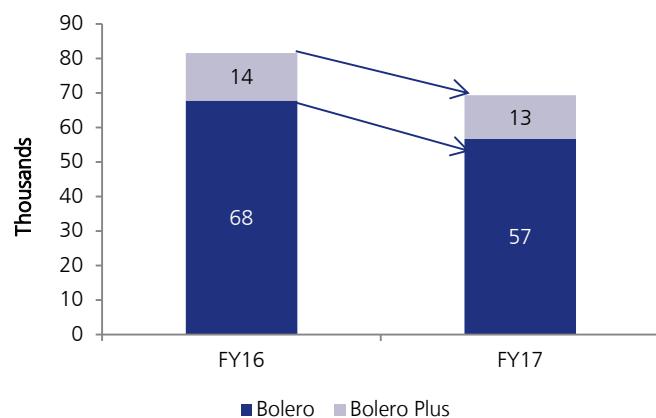
Source: SIAM, JM Financial

Exhibit 139. M&M has seen a healthy pick-up



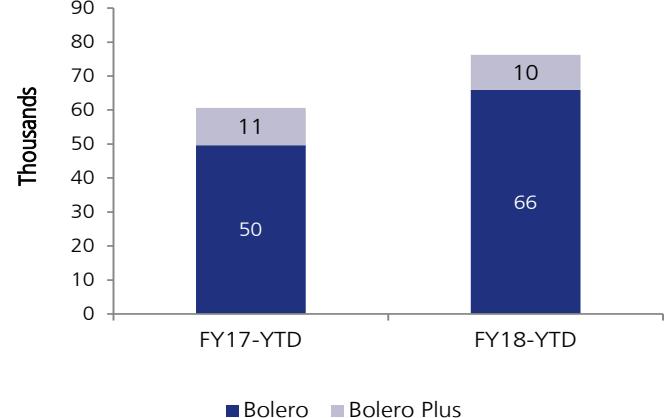
Source: SIAM, JM Financial

Exhibit 140. Bolero sales during FY16-FY17



Source: SIAM, JM Financial

Exhibit 141. Bolero sales during 11MFY17-11MFY18



Source: SIAM, JM Financial

Tractors

Tractor demand to sustain in FY19: After registering two consecutive years of declines during FY14-16, domestic tractor sales bounced-back strongly with 15%/18% in FY17/18 (April-Feb cycle). Demand is expected to remain positive in FY19 with industry growth at 8-10%. Our belief has been reinforced by on-ground checks and the increase in the shift towards higher mechanisation. It is pertinent to note that FY19 would also be supported by pre-general election spending in rural India.

Long-term tractor demand drivers remain intact: Long-term tractor demand growth expectation remains intact, with expected CAGR of 8%, as in the past. Multiple factors are expected to drive this demand:

Increasing farm mechanisation augurs well for tractor demand: Farm mechanisation in India is much lower than the prevailing levels in the developed countries. Also, it is the lowest among the BRIC nations, mainly due to higher cost of implements, lack of skill required to operate the machinery and fragmented land holdings. However, of late, mechanisation has started to pick pace. The Government of India provides capital subsidy to the tune of 40-50% (of the implement cost) and we continue to see increasing usage of harvestors among our rural visits across states. For example during our visit to Guntur district in Andhra Pradesh, we observed, most paddy farmers making use of harvestors. Farmers in that region typically rent the harvestors for a fixed rate per acre (c.INR 2,500 per acre) as opposed to daily labour wages (typically INR 400-500 per day).

Tractor demand to remain strong as revival of sand mining ban across many states would drive sales of tractors

M&M remains the industry leader with 43-44% market share and has gained share during last few quarters

Exhibit 142. Domestic tractor industry (volume in '000)

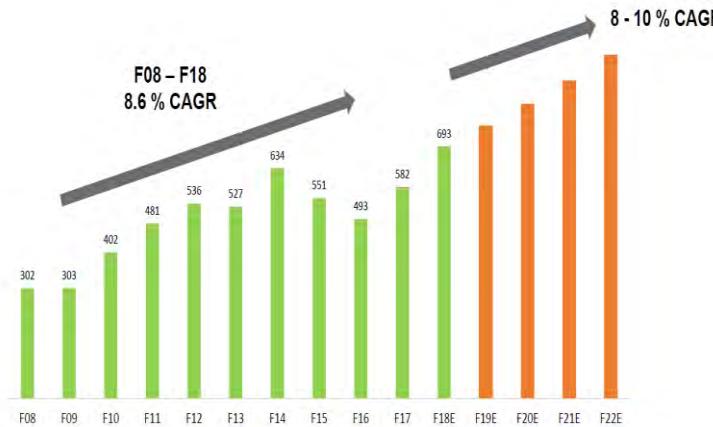


Exhibit 143. Tractor sales momentum remains strong



Source: CRISIL estimate, JM Financial

Source: SIAM, JM Financial

Penetration continues to be low in India: Apart from agriculture activities, the utility of tractors today extend to transportation and construction work in rural areas. Yet the penetration remains low, with only 6% of farm households in India owning a tractor. UP, MP, Telangana and Tamil Nadu continue to face ban on illegal sand mining while Punjab has gone the e-auction way to allow sand mining. The non-agri demand of tractors will gradually pick up as construction and sand mining activities gather pace.

Exhibit 144. Tractor demand remains high across regions we visited



Source: JM Financial

Increasing usage of farm implements also warrants usage of higher HP tractors, since more engine power is required to pull the implements. Hence, in states such as Punjab, where farm mechanisation is high, we saw farmers specifically demanding higher HP (50 HP and above) tractors.

Exhibit 145. Gujarat- A local sprinkler machine



Source: JM Financial

Exhibit 146. Madhya Pradesh- A modern sprinkler machine



Source: JM Financial

Shortening of the replacement cycle: Replacement cycle of tractors has shrunk to 6-7 years from 15 years earlier driven by an increase in the usage of tractors for renting them out for agricultural work and use in construction activities. **We also observed that 80-90% of customers exchange their tractors for new ones while only 10% of customers buy new tractors. This shortening replacement cycle will be a key driver for tractor volume growth.**

Increase in credit penetration: During our visit to tractor dealers, we witnessed increasing reach of credit availability. Companies finance 75% of the purchase cost while the remaining 25% is paid in instalments to the dealer. However, some financing companies have become cautious in tractor financing due to the political uncertainty in some states such as TN and the fear of loan waiver in an election year.

M&M continues to lead the tractor market: Industry leader M&M leads the domestic tractor sales with a formidable c.43-44% market share currently that has increased from c.40% at the beginning for FY17. The company has registered c.23% growth in domestic tractor sales in FY18 ('Industry: 15%). Going forward, we expect M&M to outpace industry growth and maintain their leadership position.

Exhibit 147.MM holds domestic market leadership

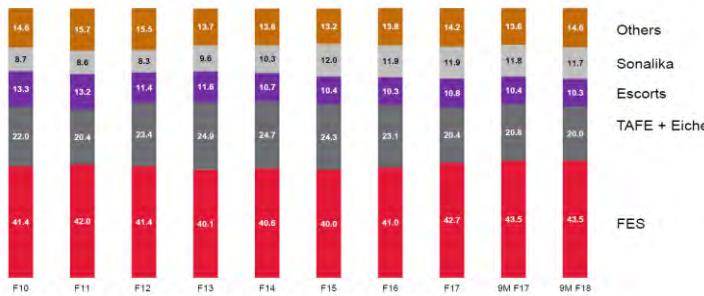


Exhibit 148.Mahindra Tractors - Portfolio



Source: Company, JM Financial

Source: Company, JM Financial

Cement

Rural housing accounts for a major share of cement volumes in India, c.35% of the overall cement demand. We expect the cement volumes to grow at 8% over FY17-21E on the back of growth in Housing and Infrastructure segments. We expect the housing to post a 9% volume CAGR led by rural housing, which is expected to benefit from government schemes targeting the construction of c.29mn houses by 2022. Urban housing (30% volume share) is expected to benefit on account of government schemes promoting affordable housing. Cheaper availability of funds under CLSS would spur growth in urban areas, especially in Economically weak segments (EWS) and Low Income Groups (LIG) segment. We expect cement demand from Infrastructure to grow at 10% CAGR, primarily on government's impetus on road construction. However, even with the impending demand up tick we believe the sector to enter upcycle by FY25-26 owing to supply surplus in the sector ([cement outlook](#)).

Recent trends in the sector:

- Cement production grew by c.6% YoY YTD FY18 (Apr'17-Feb'18), as against a flat growth in same period FY17. The growth was partially on account of low base owing to effect of demonetisation followed by GST implementation and partially on the volumes from infrastructure segment and housing impetus by government.
- Cement prices remained flat in 4QFY18 on a sequential basis on price increases in the month of Dec'17 and Jan'18. Realisations have also been under pressure on account of greater proportion of Non-Trade sales where companies have limited pricing power. Pricing is contingent on demand/capacity utilisation in the sector.

Factors indicating potential revival:

- **Focus on rural Housing:** Rural housing is one of the major initiatives under Pradhan Mantri Aawas Yojana in which government foresees building 29mn houses in the rural areas. Additionally, CLSS schemes are expected to give fillip to the housing demand. These initiatives from the Government are likely to have a positive impact on the cement demand. We expect the cement demand from housing to post a growth of 8% CAGR over FY17-21E on the back of volumes from rural housing.
- **Infrastructure:** Focus on rural infrastructure is also expected to benefit the cement consumption in rural areas. Government's focus on building rural roads is visible through progress of Pradhan Mantri Gram Sadak Yojana. Roads built per day under the scheme has been growing at 8.5% CAGR over FY12-17. We expect the growth rate to continue going forward.
- **Pent up demand:** Cement demand from rural segment was impacted on account of slowdown in the rural economy for last two years. This coupled with the demand decline on account of demonetisation/GST implementation is expected to drive the pent up demand leading to growth in the volumes for cement.

Structural drivers remain intact:

- **Rural/Urban Housing:** There is a shortfall of ~29 mn houses in India. Housing schemes like "Housing for all by 2022" will help drive the demand in this segment. Government foresees construction of 29mn houses under rural housing schemes. Additionally, toilet building initiatives under Swacch Bharat is also expected to drive the cement demand
- **Focus on the 'Pucca' Houses:** Major proportion of houses in the rural areas is either Kutch or Semi-Pucca. Conversion of these to Pucca houses will also drive the cement demand.

Exhibit 149. Volume growth from various segments (mn T)

Cement volumes	FY15	FY16	FY17	FY18E	FY19E	FY20E	FY21E	CAGR over FY17-21E
Housing	175	184	182	196	210	229	253	9%
Rural Housing	94	99	98	106	113	125	142	10%
Urban Housing	82	85	84	90	97	104	111	7%
Infrastructure	52	57	56	61	69	75	81	10%
Roads	16	18	17	20	25	28	31	16%
Power	13	14	14	15	15	16	16	4%
Irrigation	11	12	12	13	14	15	16	8%
Urban Infra	9	10	10	10	11	12	13	8%
Others	3	3	3	4	4	4	5	8%
Commercial	42	43	42	44	46	49	51	5%
Industrial	19	19	19	20	21	22	23	5%
Commercial	23	23	23	24	25	27	28	5%
Total	270	283	280	301	325	352	385	8%

Source: JM Financial, Industry

- We expect the demand from rural housing to grow at a CAGR Of 10% over FY17-21E on the back of Pradhan Mantri Aawas Yojana (PMAY-Grameen/Rural)

Exhibit 150.Cement demand from rural housing

	FY15	FY16	FY17	FY18E	FY19E	FY20E	FY21E
Cement demand from housing construction on population growth/urbanisation/nuclearisation and government schemes (IAY)							
Incremental households (mn Units)	2.8	2.9	2.9	3.0	3.0	3.0	3.1
IAY catering to 66% of the incremental households (mn Units)	2.0	2.0	2.1	2.0	2.0	2.0	2.0
Incremental houses not covered by IAY/PMAY				1.0	1.0	1.0	1.1
Incremental IAY units to cater to houseless (mn Units)				0.4	0.9	1.6	2.7
Demand from Household increase (mnT) (A)	42.6	43.2	43.7	50.4	57.8	69.1	85.9
Cement demand from housing on conversion of semi pucca houses to pucca houses							
Number of houses converting from semi pucca – Rural (mn Units)	1.3	1.3	1.3	1.2	1.2	1.1	1.1
Cement demand from conversion – Rural (mnT) (B)	14.1	13.6	13.2	12.7	12.3	11.8	11.4
Cement demand from repairs/maintenance/expansion/incremental houses/kutcha to pucca houses							
Houses involved (mn Units)	3.6	4.0	3.9	4.1	4.1	4.2	4.3
Cement Demand (mnT) (C)	37.4	42.4	41.0	42.8	43.4	44.1	44.9
Total Rural Cement Demand (mnT) (A+B+C)	94.1	99.2	97.9	105.8	113.5	125.1	142.1

Source: JM Financial, Industry

- Till Mar'18, 32% of the Ministry of Rural Development's FY18 target number of houses had been completed.

Exhibit 151.Rural housing progress under various schemes

	FY15	FY16	FY17	FY18E
Target (mn)	2.48	2.23	4.33	3.24
Completed (mn)	1.96	1.81	2.30	1.03
% achieved	79%	81%	53%	32%

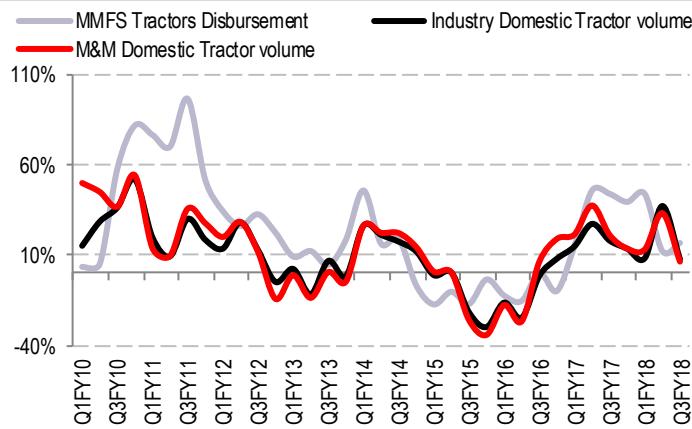
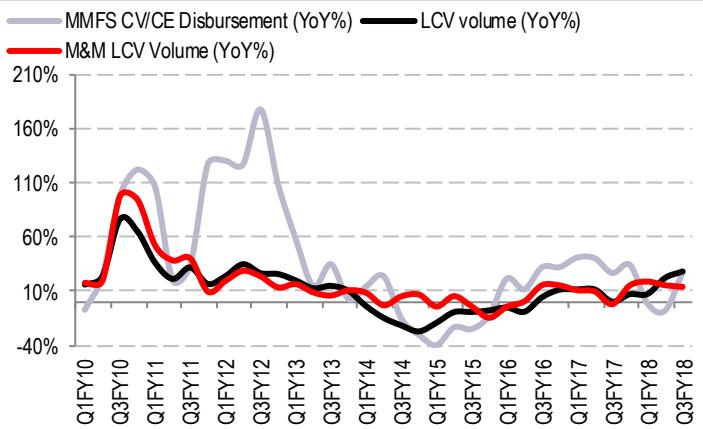
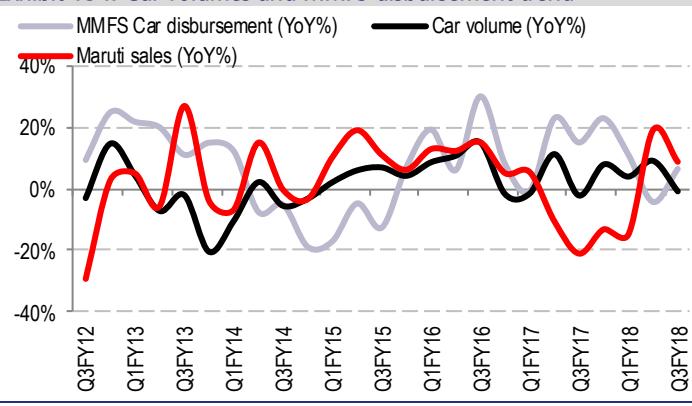
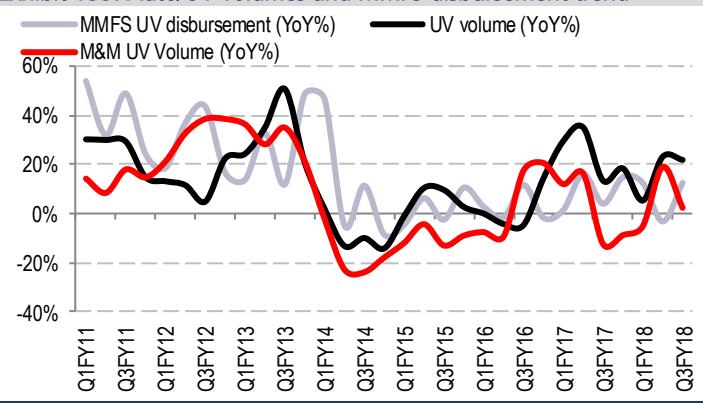
Source: JM Financial, Industry

Financials: Rural Financiers could surprise positively

We visited several financiers' branches during our recent rural travels, including Cholamandalam Finance, Mahindra Finance, Magma Finance and Repco Finance. Our interactions with dealers and customers indicate that rural sentiment has improved in most parts of India due to good monsoons; also, non-farm income is showing positive traction led by improvement in infrastructure. Currently, rural India's growth rate is better than that of urban India and rural-focused financiers are benefiting from such a recovery. We saw healthy growth momentum in segments such as consumer durables, two-wheelers and vehicle finance. Vehicle financiers are recording healthy asset quality with collections efficiency improving YoY. However, the outlook for housing/LAP in some parts of rural India has softened due to weak property prices and an increase in sand prices in some areas (Punjab/TN) due to restrictions on sand mining; this has also impacted real estate activity. Micro-finance institutions are seeing gradual improvement in growth and asset quality. We believe the government's renewed focus on rural economy and infrastructure as well as the significant increase in allocation of funds towards the rural sector in the 2018 Union Budget would help drive demand, which in turn should revive economic growth. We expect growth to bounce back and credit costs to improve for NBFCs due to higher recoveries.

- **Collection trends improving for vehicle financiers:** We interacted with various financial institutions including Cholamandalam Finance, Mahindra Finance and Magma Finance and saw that most have recorded an improvement in collection efficiency over Sept'17-Mar'18. Farm loan waivers and a normal monsoon have lifted sentiment in the rural economy. The focus on collections has also helped companies ensure strong recoveries. A good monsoon in most parts of India has led to improvement in crop yields and farm cash flows. MMFS' asset quality is improving with significant reduction in fresh NPLs as the quality of loan sourcing has improved after restructuring and May, June, Nov and Dec are the main collection months (and these have seen strong collections this year). However, there was slight pressure in the CV segment, particularly in North India, due to the sand mining ban in areas such as Punjab and the impact of the scrappage policy on older vehicles.
- **Growth outlook improves for vehicle financiers:** CV demand has improved due to stricter norms on overloading (especially in the North, which was earlier not so tightly controlled) and improved traction in sectors such as FMCG and e-commerce. Demand for used vehicles too remains strong due to the introduction of the scrappage policy for old vehicles. However, MHCV demand in areas such as TN has remained stagnant as freight rates have remained flat in some areas (such as Chennai and Kolkata). Tractor sales have also improved on account of: i) farm loan waivers announced by the governments of Uttar Pradesh (UP), Maharashtra, Karnataka and Punjab, which have boosted farmer sentiments; ii) government focus on rural infrastructure development, which has also spurred non-farm tractor demand in a few areas; iii) an increase in dealerships, urbanisation and access to finance, which has improved growth for financiers. Currently, rural India's growth rate is better than that of urban India and rural-focused financiers are benefiting from such a recovery. Major vehicle financiers, such as Cholamandalam Finance, MMFS and Shriram Transport have become optimistic about the CV sector and should benefit from the rise in demand.
 - **Chola:** Growth has improved on account of i) ban on overloading vehicles, ii) the introduction of the scrappage policy, especially for older trucks and iii) replacement demand.
 - **Magma:** Growth has remained flat due to i) attrition challenges and the company's focus on the used vehicle segment (new car business has reduced) and ii) Magma becoming cautious in tractor financing owing to its internal policy, political uncertainty and loan waivers in some states.
 - **MMFS:** Growth trend has improved led by i) internal restructuring, ii) increasing penetration in field equipment such as Rippers and Rotavators, iii) the introduction of new products such as margin funding and iv) tie-ups with new OEMs besides Swaraj and M&M.

- Housing – rising traction in affordable segment:** Core housing growth has stabilised after the implementation of RERA; however, overall growth has softened in several parts. While affordable (<INR 3.5 mn) properties are seeing increased traction; sales of medium and high-range properties (>INR 3.5 mn) have slowed down, with prices dropping in some areas. Companies such as Repco have seen pressure on growth due to the rise in construction costs led by the increase in sand prices in TN as well as higher competition.
- Impact of farm loan waivers – increase in the number of wilful defaulters:** After the announcement of loan waivers in many states, some banks such as Axis Bank as well as NBFCs such as Magma Finance have become cautious in tractor financing, but farm loan waivers have helped reduced NPAs for banks in those states. However, as per our interaction, the number of wilful defaulters has drastically increased as a large section of the farmers are awaiting the next farm loan waiver. Further, most farmers who have been granted farm loan waivers have started to take fresh loans.
- Takeaways from MMFS' Management about its performance:** i) Management expects market share in non-Maruti segments (Hyundai and Nissan) to improve from 5-7% to 12% and overall volume growth to remain stable at 10-12%. ii) Management is positive on pre-owned vehicles and expects the share of pre-owned vehicles to increase from 7% of the book to 12%. iii) In order to boost growth, It is planning to expand into an additional 100,000 villages (currently 330,000 villages). On the **asset quality** front, i) MMFS NPLs have reduced from 12.6% in 2QFY18 to 11.8% in 3QFY18 and management expects GNPLs to reduce to 6-7% over the next 3-4 quarters assuming normal monsoons and government focus on rural areas. ii) Further, management expects credit losses to remain below 2%. iii) States that have seen significant improvement include Maharashtra and MP while UP, Bihar, AP and some states in the Northeast have also picked up. MMFS has seen flat growth in Punjab and Gujarat and no growth in Karnataka and Kerala. TN has not shown any improvement as the monsoon was weak.

Exhibit 152. Tractors volumes and MMFS disbursement trend**Exhibit 153. CV volumes and MMFS disbursement trend****Exhibit 154. Car volumes and MMFS disbursement trend****Exhibit 155. Auto/UV volumes and MMFS disbursement trend**

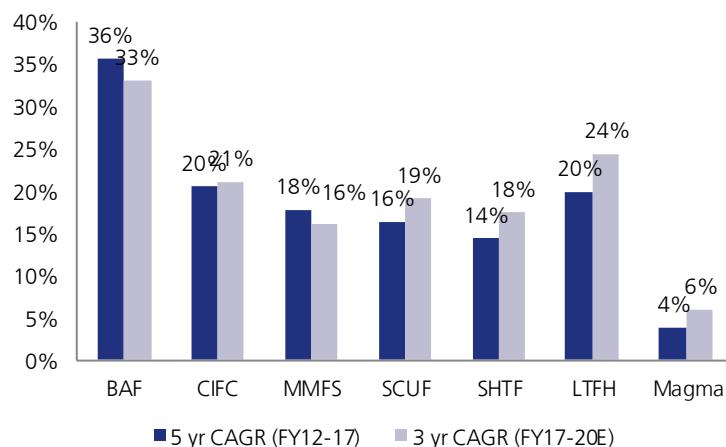
- **Takeaways from SHTF's Management about its performance:** i) AUM growth has been around 18% and is expected to be around 18-20% for the next few quarters. ii) Demand for new vehicles has improved on the rise in economic activity, increase in prices for resale vehicles and pick-up in construction activity and replacement demand; iii) There are stricter norms on overloading, especially in the Northern belt, which was earlier not so tightly controlled and consequently, maximum new vehicle sales demand is coming from the North and East; the overloading ban has impacted the older 25-tonne vehicles and people are now changing into 37-tonne or 31-tonne vehicles; iv) Rural demand is likely to be solid for another 3-4 months because the winter crop has been reasonably good in the North; the only area where the winter crop has not been good is the interiors of Maharashtra; v) Within LCVs, demand is being driven by improvement in agri output and a rise in consumption, especially after Oct'17-Nov'17. Also, e-commerce activity has helped LCV demand in urban and semi urban areas; and vi) Management expects the demand for passenger vehicle and tractors to improve as farm cash flows improve.
- **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. The government's renewed thrust towards improving the rural economy via measures such as doubling farm income by 2022 and increasing spend towards irrigation should help boost demand further.
- **Expect AUM growth to slightly improve in FY20 on the back of normal monsoons:** We expect AUM growth for rural financiers such as Chola, Magma, MMFS and SHTF to improve over the next 2 years, led by a pick-up in the rural economy. For NBFCs under our coverage, we expect 6-33% growth in AUM over FY17-20E, as shown below:

Exhibit 156. NBFC AUM mix

	Corporate	SME	Housing	Vehicle	Consumer / personal loans	Gold loans	Others
BAF	13%	49%	11%	9%	14%	0%	5%
MMFS	0%	0%	0%	100%	0%	0%	0%
Cholamandalam	0%	31%	0%	69%	0%	0%	0%
SCUF	0%	55%	0%	24%	7%	15%	0%
LTFH	62%	0%	19%	0%	0%	0%	19%
STFH	0%	0%	0%	100%	0%	0%	0%
Magma	7%	12%	19%	63%	0%	0%	0%

Source: Company, JM Financial

Exhibit 157. AUM growth trends in NBFCs under our coverage



Source: Company, JM Financial

- CIFC and MMFS are our top picks among rural NBFCs:** We believe CIFC and MMFS are well-placed to benefit from rural recovery, given a normal monsoon and pick-up in government spending and so we prefer them in the rural space.

Exhibit 158. Peer valuations

NBFC	ROA (%)				ROE (%)				P/B				P/E			
	FY17	FY18E	FY19E	FY20E	FY17	FY18E	FY19E	FY20E	FY17	FY18E	FY19E	FY20E	FY17	FY18E	FY19E	FY20E
CIFC	2.5%	2.9%	3.0%	3.0%	18.0%	20.8%	21.9%	22.0%	5.5	4.6	3.8	3.2	33.1	24.2	19.2	15.8
MGMA	0.1%	1.6%	1.9%	2.0%	0.9%	9.6%	10.1%	10.5%	1.8	1.6	1.4	1.3	188.6	17.7	16.0	12.9
MMFS	0.9%	1.9%	2.5%	2.7%	6.4%	12.0%	15.0%	16.8%	4.3	3.3	3.0	2.6	69.9	32.2	20.8	16.6
SHTF	1.8%	2.3%	2.5%	2.7%	11.7%	15.2%	16.9%	17.9%	3.2	2.8	2.4	2.1	28.6	19.5	15.3	12.5
SCUF	2.5%	2.7%	2.8%	3.0%	11.7%	13.3%	14.9%	16.6%	3.0	2.7	2.4	2.1	27.3	21.6	17.1	13.5

Source: Company, JM Financial

Box 12: Rural bank branch visit – A leading private sector bank (Punjab)

- Asset quality in farm loans has taken a hit in Punjab due to loan waivers. We visited the private sector bank's rural branch in Bhatinda (Punjab) and discussed the current scenario related to Kisan Credit Card loans given to farmers.
- The bank's asset quality has come under pressure in the region after the loan waiver was announced. This is because :
 - There has been no improvement in rural income as farmers have not received the benefit from loan waivers in Punjab. Consequently, some farmers have delayed paying their dues. As a result, a substantial portion has moved into the SMA bucket due to defaults on their existing dues. This in turn, has detrimentally impacted their CIBIL scores and the bank is incrementally unable to lend to them further. The mandate for the branch is to lend to farmers with a CIBIL score of 720 and above.
 - Most agri-related NPLs are from loans given to farmers with land holdings over 5 acres. This is because of the high amount of leverage in this segment, leading to loan amounts being over-stretched. Moreover, recoveries continue to remain a challenge as the bank cannot seize the farmer's land.
- The bank's focus has shifted from agri loans to business loans such as those to pesticide dealers, kirana stores, etc.

Box 13: Branch visit at a vehicle finance NBFC (Punjab)**Growth outlook**

The outlook for CV sales growth has improved on account of:

- Ban on overloading: This has been strictly enforced, especially along the Punjab state borders (with Rajasthan and Delhi). Cases of bribing officials to allow overloaded vehicles have also reduced substantially.
- MHCV scrappage policy: The government's move to phase out vehicles older than 15 years has been strongly positive for CV sales growth. This too, has been strictly enforced near state borders.
- Buoyant demand for buses: State bodies are pushing schools to upgrade their bus fleets. There has also been an increase in demand for buses from the state transport corporation.

Asset quality

- NPLs for the branch are at 2.5% (90 dpd). The rate of repossession has also reduced substantially. This had peaked in the aftermath of Demonetization.
- Asset quality for Used CV financiers in Punjab has however come under slight pressure due to:
 - Ban on Sand mining: This has recently been imposed by the state around the region, which has detrimentally impacted CV utilisation levels.
 - MHCV scrappage policy: This has adversely impacted the resale value of pre-2004 MHCVs. These vehicles were earlier valued at c.INR 500,000 and are now valued at scrap value of c.INR 250,000

Other Segments

LAP: The branch also gives out LAP at rates of c.11%, mainly to traders and businessmen/LTVs in these segments are at 50-55%. The current run rate of LAP disbursements for the branch is c. INR 25mn per month.

Annexure: Crop economics

Exhibit 159. Per acre farm economics of Rice (Paddy)

Paddy Common		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Yield Quintal/Acre	Quintal/Acre	12.8	13.5	14.5	14.9	14.6	14.4	14.5	15.4	15.5	15.8
Realisation/Quintal	INR/Quintal	1,000	1,000	1,080	1,250	1,310	1,360	1,410	1,470	1,550	1,742
By-product	INR/Acre	1,136	1,231	1,463	1,610	1,764	2,046	1,971	2,005	2,061	2,123
Total Realisation	INR/Acre	13,973	14,756	17,074	20,193	20,912	21,690	22,411	24,620	26,145	29,734
% YoY	% YoY	8.6	5.6	15.7	18.3	3.6	3.7	3.3	9.9	6.2	13.7
Human Labour	INR/Acre	2,559	3,081	3,296	3,629	3,718	4,262	4,626	5,039	5,341	5,662
Machine Labour	INR/Acre	1,094	1,256	1,364	1,509	1,623	1,910	2,122	2,372	2,609	2,870
Animal Labour	INR/Acre	621	649	840	833	972	885	965	1,003	1,055	1,080
Seeds	INR/Acre	636	649	697	744	823	933	898	914	904	884
Fertilisers & manure	INR/Acre	1,049	1,112	1,419	1,757	1,727	1,939	1,980	1,936	1,951	1,824
Pesticides & Insecticides	INR/Acre	221	246	296	324	335	383	389	428	470	524
Water & Electricity	INR/Acre	479	397	480	567	531	895	1,121	1,233	1,418	1,631
Working Capital	INR/Acre	208	231	262	293	304	351	338	344	340	333
Miscellaneous	INR/Acre	6	7	6	5	5	27	26	26	26	25
Total Cost	INR/Acre	6,873	7,629	8,660	9,661	10,037	11,584	12,465	13,294	14,115	14,832
% YoY	% YoY	14.2	11.0	13.5	11.6	3.9	15.4	7.6	6.7	6.2	5.1
Total Profit	INR/Acre	7,100	7,128	8,414	10,532	10,875	10,106	9,946	11,325	12,029	14,902

Source: CACP, JM Financial, Note: Actuals till 2015

Exhibit 160. Per acre farm economics of Wheat

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Yield Quintal/Acre	Quintal/Acre	11.5	12.1	12.9	12.6	12.7	11.1	12.3	12.9	13.3	13.3
Realization/Quintal	INR/Quintal	1,100	1,120	1,285	1,350	1,400	1,450	1,525	1,625	1,735	1,856
By-product	INR/Acre	2,464	2,958	3,341	3,683	4,321	3,947	3,802	3,867	3,975	4,094
Total Realisation	INR/Acre	15,104	16,504	19,863	20,709	22,142	20,083	22,526	24,891	27,095	28,833
% YoY	% YoY	1.6	9.3	20.4	4.3	6.9	(9.3)	12.2	10.5	8.9	6.4
Human Labour	INR/Acre	864	986	1,155	1,242	1,384	1,419	1,555	1,676	1,808	1,933
Machine Labour	INR/Acre	1,619	1,894	2,081	2,346	2,571	2,641	2,872	3,114	3,344	3,572
Animal Labour	INR/Acre	275	234	167	195	204	220	221	238	250	262
Seeds	INR/Acre	842	853	871	992	1,117	1,178	1,278	1,408	1,536	1,664
Fertilisers & manure	INR/Acre	937	1,012	1,360	1,634	1,634	1,709	1,962	2,155	2,313	2,524
Pesticides & Insecticides	INR/Acre	114	107	110	135	141	126	132	132	132	130
Water & Electricity	INR/Acre	1,032	1,040	1,261	1,252	1,248	1,394	1,505	1,505	1,578	1,674
Working Capital	INR/Acre	178	192	219	244	259	272	297	320	342	367
Miscellaneous	INR/Acre	6	7	5	3	2	5	5	6	7	9
Total Cost	INR/Acre	5,867	6,325	7,229	8,043	8,563	8,964	9,827	10,553	11,309	12,136
% YoY	% YoY	7.4	7.8	14.3	11.3	6.5	4.7	9.6	7.4	7.2	7.3
Total Profit	INR/Acre	9,237	10,178	12,634	12,666	13,579	11,120	12,699	14,338	15,786	16,697

Source: CACP, JM Financial, Note: Actuals till 2015

Exhibit 161. Per acre farm economics of Arhar (pulse)

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Yield Quintal/Acre	Quintal/Acre	2.9	2.7	2.7	3.1	3.3	2.9	2.6	3.3	3.4	3.4
Realisation/Quintal	INR/Quintal	2,300	3,000	3,200	3,850	4,300	4,350	4,625	5,050	5,450	5,723
By-product	INR/Acre	727	624	922	937	1,226	900	866	881	906	933
Total Realisation	INR/Acre	7,345	8,579	9,499	13,027	15,372	13,724	12,957	17,721	19,261	20,206
% YoY	% YoY	21.8	16.8	10.7	37.1	18.0	(10.7)	(5.6)	36.8	8.7	4.9
Human Labour	INR/Acre	1,728	2,360	2,224	2,665	2,669	2,548	2,765	3,012	3,193	3,384
Machine Labour	INR/Acre	760	832	881	1,212	1,629	1,704	1,893	2,116	2,327	2,560
Animal Labour	INR/Acre	1,120	1,084	1,184	1,303	1,323	1,365	1,489	1,548	1,629	1,666
Seeds	INR/Acre	389	427	422	494	524	477	523	575	638	708
Fertilisers & manure	INR/Acre	654	871	688	1,131	1,136	1,174	1,356	1,525	1,672	1,881
Pesticides & Insecticides	INR/Acre	391	549	563	810	907	976	1,093	1,200	1,319	1,471
Water & Electricity	INR/Acre	100	75	130	134	62	181	227	250	287	330
Working Capital	INR/Acre	161	194	191	242	258	264	294	325	358	400
Miscellaneous	INR/Acre	3	3	7	5	3	37	77	181	494	1,575
Total Cost	INR/Acre	5,305	6,394	6,290	7,996	8,510	8,727	9,716	10,732	11,917	13,976
% YoY	% YoY	33.2	20.5	(1.6)	27.1	6.4	2.5	11.3	10.5	11.0	17.3
Total Profit	INR/Acre	2,040	2,185	3,209	5,031	6,861	4,997	3,241	6,989	7,345	6,230

Source: CACP, JM Financial, Note: Actuals till 2015

Exhibit 162. Per acre farm economics of Cotton

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Yield Quintal/Acre	Quintal/Acre	10.1	9.4	9.7	9.7	10.7	10.3	9.9	10.0	8.5	8.9
Realisation/Quintal	INR/Quintal	3,000	3,000	3,300	3,900	4,000	4,050	4,100	4,160	4,320	5,098
By-product	INR/Acre	383	454	508	585	712	788	759	772	794	818
Total Realisation	INR/Acre	30,638	28,730	32,407	38,409	43,428	42,569	41,526	42,270	37,424	46,202
% YoY	% YoY	12.7	(6.2)	12.8	18.5	13.1	(2.0)	(2.5)	1.8	(11.5)	23.5
Human Labour	INR/Acre	2,723	3,873	4,593	5,250	5,674	5,636	6,204	6,698	7,124	7,546
Machine Labour	INR/Acre	695	788	1,100	1,288	1,461	1,832	2,270	2,722	3,285	4,023
Animal Labour	INR/Acre	1,322	1,392	1,296	1,601	1,728	1,695	1,791	1,948	2,048	2,138
Seeds	INR/Acre	991	1,070	1,456	1,557	1,400	1,547	1,715	1,793	1,864	2,003
Fertilisers & manure	INR/Acre	1,374	1,727	2,281	3,028	3,341	3,249	3,836	4,397	4,839	5,323
Pesticides & Insecticides	INR/Acre	586	793	974	986	1,018	1,130	1,356	1,423	1,527	1,639
Water & Electricity	INR/Acre	492	476	661	686	668	960	956	1,004	1,054	1,107
Working Capital	INR/Acre	256	313	387	450	478	504	485	494	488	477
Miscellaneous	INR/Acre	8	7	11	11	11	69	67	68	67	66
Total Cost	INR/Acre	8,447	10,440	12,759	14,857	15,778	16,621	18,680	20,547	22,297	24,323
% YoY	% YoY	3.2	23.6	22.2	16.4	6.2	5.3	12.4	10.0	8.5	9.1
Total Profit	INR/Acre	22,191	18,291	19,648	23,552	27,649	25,948	22,846	21,724	15,127	21,879

Source: CACP, JM Financial, Note: Actuals till 2015

Exhibit 163. Per acre farm economics of Sugarcane

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Yield Quintal/Acre	Quintal/Acre	283	284	290	276	285	289	286	277	291	291
Realisation/Quintal	INR/Quintal	108	139	145	170	210	220	230	230	239	249
By-product	INR/Acre	2,464	2,958	3,341	3,683	4,321	3,947	3,802	3,867	3,975	4,094
Total Realisation	INR/Acre	33,010	42,413	45,395	50,639	64,252	67,615	69,626	67,687	73,666	76,573
% YoY	% YoY	41.2	28.5	7.0	11.6	26.9	5.2	3.0	(2.8)	8.8	3.9
Human Labour	INR/Acre	5,668	7,156	8,925	9,502	9,752	10,235	11,226	11,892	12,582	13,411
Machine Labour	INR/Acre	893	1,554	2,219	2,115	2,621	2,610	3,012	3,269	3,657	3,980
Animal Labour	INR/Acre	650	939	961	1,113	859	1,062	1,112	1,171	1,203	1,313
Seeds	INR/Acre	1,737	3,000	2,478	2,651	2,450	2,719	2,774	2,831	2,872	2,926
Fertilisers & manure	INR/Acre	2,299	2,374	2,922	3,622	3,986	4,486	4,550	4,636	5,036	3,459
Pesticides & Insecticides	INR/Acre	71	87	189	244	192	190	130	130	130	130
Water & Electricity	INR/Acre	1,886	1,899	2,649	2,386	2,419	3,695	3,772	3,583	3,404	3,234
Working Capital	INR/Acre	825	1,063	1,272	1,352	1,392	1,562	1,594	1,627	1,650	1,681
Miscellaneous	INR/Acre	1	1	2	2	0	-	-	-	-	-
Total Cost	INR/Acre	14,031	18,074	21,617	22,987	23,672	26,558	28,170	29,140	30,535	30,136
% YoY	% YoY	15.0	28.8	19.6	6.3	3.0	12.2	6.1	3.4	4.8	(1.3)
Total Profit	INR/Acre	18,979	24,340	23,779	27,652	40,580	41,056	41,456	38,547	43,131	46,437

Source: CACP, JM Financial, Note: Actuals till 2015



Notes



Notes

APPENDIX I

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(formerly known as JM Financial Securities Limited)

Corporate Identity Number: U67100MH2017PLC296081

Member of BSE Ltd., National Stock Exchange of India Ltd. and Metropolitan Stock Exchange of India Ltd.

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