

Strategy update

Rural India: Another hump to scale

Following our rural survey ([Rural Safari- IV](#)), we revisited seven states during early December to check progress on: (a) cash flow after the Kharif harvest, (b) Rabi sowing progress, and (c) discretionary consumption trends. Our key findings are: (a) the Kharif produce has been unequivocally better YoY at most places we visited, however, liquidity challenges after 08Nov'16 has impacted realisations adversely, particularly for small farmers, (b) Rabi sowing overall has been good (up 6% YoY until 16Dec'16), despite select down-trading in seeds/fertilizers, and (c) discretionary consumption has taken a hit and will likely revive with the normalisation of cash levels. We revisit our estimates for farmer income and estimate total income growth of 6%/13% YoY for a small/large farmer in FY17 (down from 12%/17% earlier), along with the worsening of credit profile for the small farmer (Exhibits 10 and 13). Interestingly, despite a delay in cash flow, (a) informal lending, (b) scaling down of discretionary consumption, and (c) social/community help, have reduced the adverse impact on small/marginal farmers. We found "demonetisation" has healthy approval, but has also raised expectations of a change in policy execution (e.g., less corruption) and immediate benefits to the poor. We are encouraged by the acceptance of digital payment modes in smaller towns/cities, but also realise the enormity of spreading financial/digital literacy across 0.64mn villages (c.69% of population). Therefore, normalisation of cash circulation is imperative for near-term revival in growth and consumption in the rural economy (c.47% of GDP).

- **Slow revival in trading across agri. markets:** After 08Nov'16, agri. markets witnessed massive decline (c.70–80%) in trading volumes and our visits indicated partial revival along with sharp regional variations—adoption of financial channels has been faster in southern and western India, while activity levels are still below 50% of normal levels in the north and east, barring MP. Small farmers, in particular, have sold their Kharif produce at discounted rates/on credit to intermediaries during the past one month; among them, higher loss has been incurred in the case of perishables (vegetable and fruits). Non-farm income has also been under pressure, as reduced economic activity has impacted wages, tractor rentals, construction activity and more.
- **Rabi sowing progressing well:** Healthy ground moisture, normal water reservoir level, and timely and early winter (in North India) bode well for the upcoming Rabi crop output (sown area up 6% YoY, with wheat sowing up 7%, as of 16Dec'16).
- **Consumption sentiment remains subdued:** Debt, largely through informal channels (c.44% of rural credit) has increased, particularly for the smaller/marginal farmers, thereby depressing discretionary consumption. Large farmer families, on the other hand, have reduced consumption due to: (1) lack of new currency notes, and (2) uncertainty on the government's subsequent actions. Our visits indicated spending on marriages have reduced due to shortage of cash with spending cuts most on durables/vehicles and select instances of even postponement of marriages to next year.
- **Encouraging adoption of digital channels in non-metro towns and cities, much less in villages at present:** During our trip we found: (a) *Pandits* in Varanasi now accept *dakshina* (payment) in "cheques", (2) installation of POS at "tunday kabab shop" in Aminabad (unorganised market), Lucknow, since mid-Dec, (3) 300–400 businesses/day add "Paytm" in Bhagalpur, Bihar, and (4) youth are driving efforts for financial literacy in villages, but a large scale organised effort for financial inclusion is not yet visible in villages.

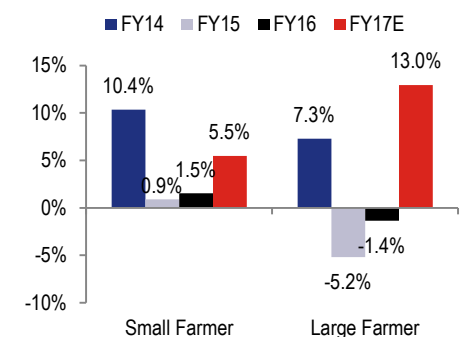
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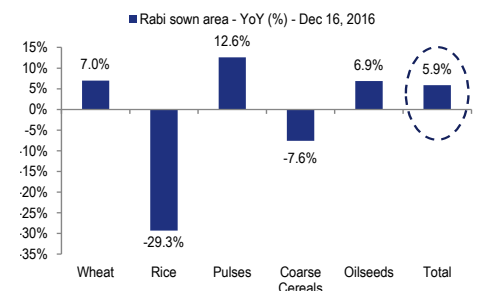
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Exhibit 1: Small/large farmer total income growth expected at 6%/13% YoY in FY17E



Source: NSSO, JM Financial

Exhibit 2: Decent progress of Rabi sowing – YoY up by 6%



Source: PIB

Healthy Kharif output, Rabi sowing progressing well

We travelled to seven states—Gujarat, Madhya Pradesh, Uttar Pradesh, Haryana, Delhi, Andhra Pradesh and Telangana—which account for c.40% of the total rural population of the country. In rural areas, we met large and small farmers, small business owners, financiers, visited *mandis* (markets), FMCG dealers, cement dealers, and agri. input dealers during our trip.

Rural India lacks financial infrastructure, as evident from the presence of only 19% of the country's ATMs (Jun'16) for c.69% of the population. Lack of financial infrastructure results in pre-dominant cash-based transactions and the current liquidity disruption has impacted through sharp decline in agri-mandi trading.

However, Kharif (Jun-Nov) crop output has been unequivocally better than the past year in terms of yield at almost every place we visited with healthy progress in the current on-going Rabi crop sowing.



Exhibit 3. Key observations from our visit across seven states during the first half of December

State	Comments
Gujarat	Dominated by cash crops (cotton, groundnut) with Kharif yield better YoY in 2016. Following initial liquidity challenges, Rabi sowing and sales have been progressing well. High financial awareness among farmers has enabled them to manage amid a low liquidity scenario with a minor share of small farmers resorting to use of seeds saved for consumption (low yield) against hybrid seeds from the market and lower use of agro-chemicals.
Haryana	Harvesting of paddy is done, while cotton is still being harvested. Rabi sowing has progressed well, but use of agri. inputs has declined. Most inputs purchased on credit and smaller farmers have been adversely impacted. <i>Mandi</i> trading remains below 50% and is likely to take few more weeks to normalise.
National Capital Region	Agri. trading (vegetables, fruits) has been impacted adversely due to prevalence of cash-based transactions. Trading volume remains below normal levels with enhanced impact on small traders and daily wage earners.
Madhya Pradesh	After two weeks of decline after 08Nov'16, <i>mandi</i> trading has resumed with increased use of cheque and banking channels and has reached c.75% of normalised levels. There has been an increase in leverage of smaller farmers for procurement of seeds, agri. inputs and more.
Uttar Pradesh	<i>Mandi</i> trading volume remains low, acceptance and transition to banking channels on slow path, and quality of inputs for Rabi crop adversely impacted in case of small farmers. Yield of Kharif crop has been higher than last year. North India has seen the onset of winter in time, which is good for the Rabi output.
Andhra Pradesh	Kharif crop has been better than last year, barring select areas, where there were pest attacks. Harvesting has just begun and will be done by mid-January. There have been transaction issues due to lack of currency in rural areas.
Telangana	There has been a rise in the Kharif output YoY; however, increased sales done through mediators and overall sales in <i>mandis</i> are yet to normalise.

Source: Company, JM Financial

Exhibit 4. Kharif output is YoY better at almost all places we visited; Rabi sowing has been equally good

A good Cotton crop in Saurashtra, Gujarat (Kharif)



Wheat sown in Madhya Pradesh (Rabi)

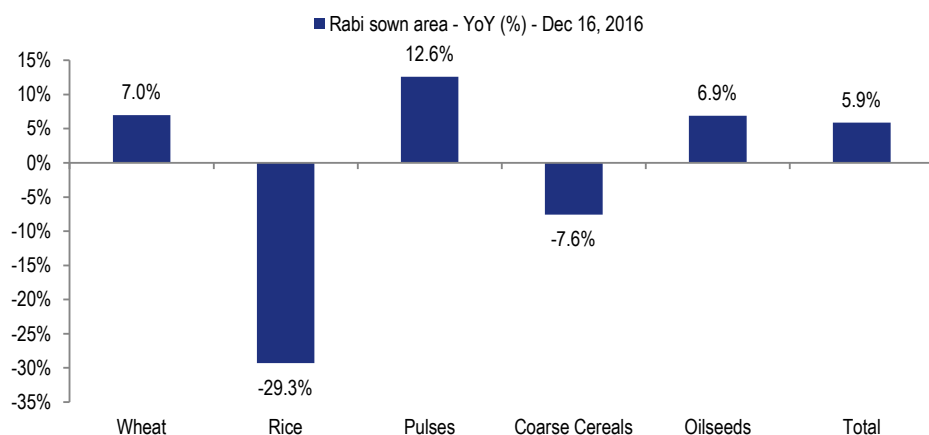


Source: JM Financial

Rabi sowing ahead at 6% YoY by 16Dec'16

The sowing for Rabi (Nov–Apr) continues to progress well, given high moisture levels in the ground and adequate water levels as measured through 91 reservoirs across the country. Wheat sowing (c.50% of sown area) is up by 7% YoY, while pulses and oilseeds are up 13%/7%, respectively. Sowing of rice has been weak, chiefly due to weakness in Tamil Nadu (lower rainfall from the north-eastern monsoon) and coarse cereals (down 8%). Despite improvement on YoY basis, Rabi sowing is still below the levels attained in 2012–13.

Exhibit 5. Rabi sown area up 6% YoY as of 16Dec'16

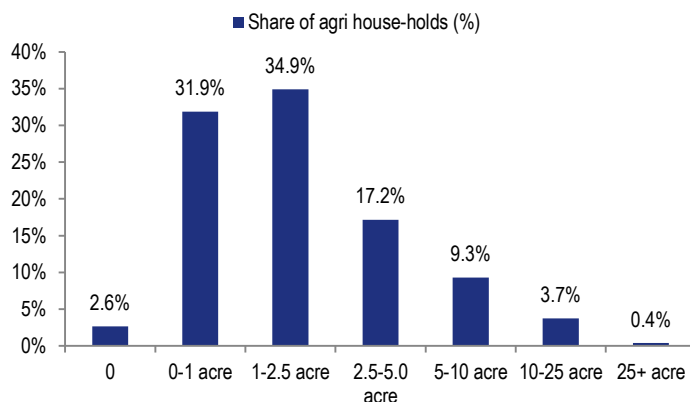


Source: PIB

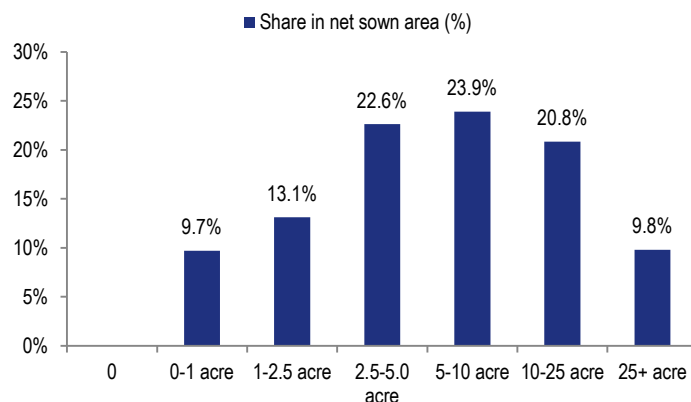
We also heard instances of the use of lower quality inputs (seeds, agro-chemicals) during Rabi sowing due to liquidity constraints. However, our interactions indicated large farmers have mostly been able to avail quality inputs either through use of banking channels or through credit (as they have better credit profiles). As small farmers (< 2.5 acre) account for only 23% of the net sown area, we reckon, the quality of overall Rabi sowing would not get materially impacted.

Exhibit 6. Small/marginal agri. households account for only 23% of the net sown area; therefore any adverse impact on the quality of Rabi sowing (due to use of low quality seed, less agro-chemicals) will be limited

70% of agri. households (total: 91mn) have farm area less than 2.5 acres



Share in net sown area by size of farm-holding



Source: NSSO

Agri. trading impacted due to liquidity constraints, revival of trading varies across states

We visited *mandis* (agri. trading market) across our trips and overall we could see activity level remains lower than normal at most of them due to lack of currency (most of them traded in cash). However, *mandis* in the south have seen higher transition to banking channels than *mandis* in North and East India, barring Madhya Pradesh.

Exhibit 7. Agri. trading activity varies significantly across states

Signs of increased agri. trading across MP aided by high adoption of banking channels



Trading in Hissar (Haryana) agri. *mandi* was lukewarm: Commission agents or “*adhatias*” were largely without work



Source: JM Financial

Exhibit 8. Normalisation slowly returning across states

Organised produce storage centre at Kodad in Telangana helps small farmers



Slow progress in *mandis* of North India; volume of trading remains subdued at Najafgarh Mandi, Delhi



Source: JM Financial

Revisiting income and leverage

Our interactions across villages clearly highlighted that liquidity challenges led decline in *mandi* trading, impacting realisations for the Kharif crop. The adverse impact on income has been more prominent in the case of small/marginal farmers due to their relative lack of banking access and weaker credit profile. Discretionary consumption consequently has been impacted and is likely to revive along with the normalisation of cash levels.

Box 1: Divergence in crop realisation across small and large farmers

We visited Benipur village at the outskirts of Varanasi, Uttar Pradesh. The village has around 110 households with land-holding of 0–2 acres, essentially a locality of marginal/small farmers.

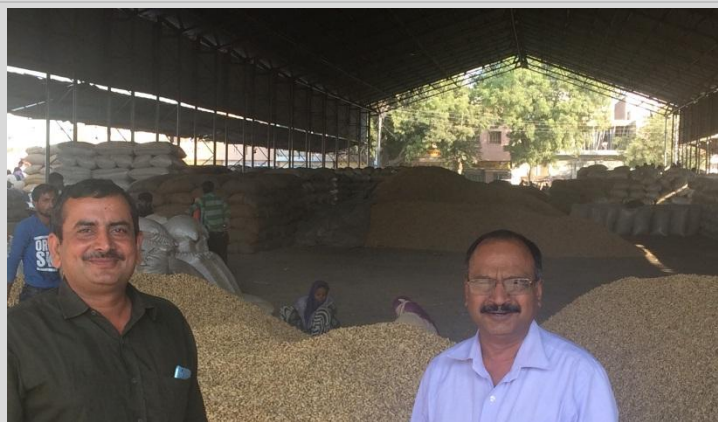
The Kharif produce in 2016 has been better than the previous year and farmers sell their produce to middle-men/traders. The shortage of cash has impacted realisations and the produce has been sold at a discount to the prevailing market rates. Some farmers who do not need immediate cash have held back the produce to be sold at a later period. This theme was recurring across our visits—small farmers who had to sell for immediate consumption/Rabi sowing etc. have sold at a discount. In case of perishables (fruits/vegetables), the discount for farmers has been much worse (more than 40–50% in many cases).

Exhibit 9. Varied impact of liquidity squeeze on different income groups

Villages with marginal/small farmers have seen adverse impact on income—a village near Varanasi



Large farmers have been able to sell their produce at prevailing rates aided by access to banking channels and credit—a trader and farmer in Haryana



Source: JM Financial

On the other hand, large farmers (Exhibit 9, right) have been largely able to sell at prevailing prices aided by the use of banking channels and their ability to time the sale.

Large farmers have been able to avail credit; also for Rabi sowing, they have been able to obtain agri. inputs (seeds, fertilizers) on credit and thereby did not need to immediately sell in depressed markets.

Total income of small farmers to increase 6% YoY in FY17

We revisited our income and leverage estimates for the small (average) and large farmer, taking in account liquidity-related challenges. We reckon, a small farmer has received lower realisations (particularly in vegetables and fruits, which form c.15% of the net sown area), and hence we apply a higher discount in low teens to the small farmer's income against a mid-single digit discount to a large farmer's Kharif income as liquidity adjustment. Our estimates have assumed normalisation of cash flow in the rural ecosystem for the Rabi season produce (Mar/Apr).

Exhibit 10. Income calculations for an average farmer (Yearly)

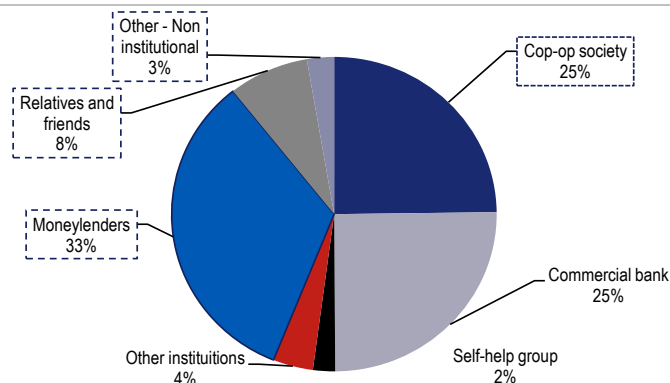
		FY13	FY14	FY15	FY16	FY17E	Assumptions
Average land holding	Acres	2.7	2.7	2.7	2.7	2.7	NSSO 68th round, avg. land holding: 1.1 ha
Cost of land	Rs	270,758	297,834	282,942	254,648	229,183	Value of land from NSSO Survey & assumptions
Land value	Rs	731,047	804,152	763,944	687,550	618,795	
Kharif Crop - Rice							
Adjustment of net crop sown area	(x)	0.70	0.70	0.68	0.58	0.63	Initial assumption to adjust income to NSSO survey. Varied based on yearly net sown area
Liquidity adjustment	(x)	1.0	1.0	1.0	1.0	0.9	Discount in realisations due to liquidity squeeze led challenges
Productivity	(qtl/acre)	14.9	14.6	14.4	14.4	14.8	Calculated as ratio of sown area and production
Price	MSP - Rs	1,280	1,345	1,400	1,450	1,510	MSP price
Revenue from crop	Rs	13,320	13,762	13,730	12,063	12,331	
By-product	Rs	1,127	1,235	1,222	1,012	970	Value of by-product for planting the crop
Cost	Rs	6,763	7,026	7,074	6,257	6,918	Cost assumptions based on NSSO survey & WPI
Rabi Crop - Wheat							
Adjustment of net crop sown area	(x)	0.70	0.70	0.68	0.58	0.65	Initial assumption to adjust income to NSSO survey. Varied based on yearly net sown area
Liquidity adjustment	(x)	1.0	1.0	1.0	1.0	1.0	Assumption of normalisation for Rabi produce sale
Productivity	(qtl/acre)	12.6	12.7	11.1	13.1	13.1	Calculated as ratio of sown area and production
Price	MSP - Rs	1,350	1,400	1,450	1,525	1,625	MSP price till FY16, JMFe for FY17
Revenue	Rs	11,918	12,474	10,957	11,487	13,769	
By-product	Rs	2,578	3,025	2,994	2,137	2,432	Value of by-product for planting the crop
Cost	Rs	5,630	5,994	5,905	5,033	5,817	Cost assumptions based on NSSO survey & WPI
Annual agri. income	Rs	44,687	47,186	42,992	41,605	45,271	
% of non-agri. income	(%)	46%	48%	53%	55%	54%	
Wages	Rs	20,736	24,883	28,616	30,762	31,685	Rural wage growth from CMIE
Farming of animals	Rs	9,816	10,994	11,654	11,887	12,124	NDDB release on value of livestock
Others	Rs	7,116	7,828	8,454	8,876	9,143	JMF Estimate
Non-agri. income	Rs	37,668	43,705	48,723	51,525	52,952	
Total Income	Rs	82,355	90,891	91,715	93,130	98,223	
Consumption	Rs	77,084	84,793	89,032	90,813	98,078	NSSO survey and JMF estimate
Surplus/Deficit	Rs	5,271	6,098	2,683	2,317	145	
Average debt	Rs	54,800	60,280	63,294	66,459	73,105	NSSO Survey and JMF estimate
Additional debt /repay	Rs		0	0	0	0	Now no de-leveraging in FY17 due to wiping out of savings
Total Debt	Rs	54,800	60,280	63,294	66,459	73,105	
Debt/Asset	x	7.5%	7.5%	8.3%	9.7%	11.8%	
Debt/Income	x	66.5%	66.3%	69.0%	71.4%	74.4%	
Interest	Rs	6,576	7,234	7,595	7,975	8,773	
Interest / income	x	8.0%	8.0%	8.3%	8.6%	8.9%	
EMI	Rs	18,042	19,846	20,839	21,880	24,833	
EMI/Income	x	21.9%	21.8%	22.7%	23.5%	25.3%	

Source: NSSO, JM Financial

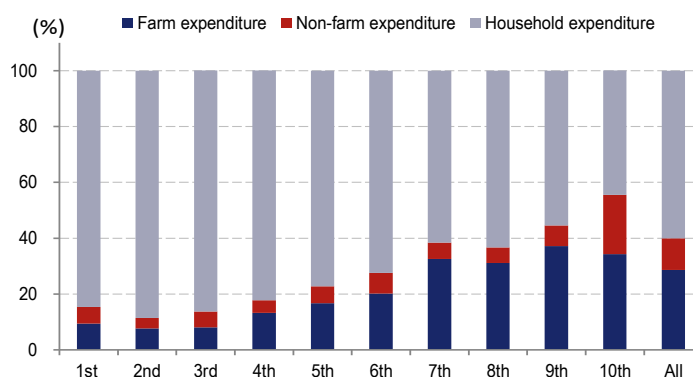
Reduced cash flow after the Kharif season has clearly increased the current debt levels and that too from informal channels (moneylenders, agri. traders). Overall, 44% of rural credit is through informal channels and 25% by co-operative societies. Due to liquidity-related challenges and issues with co-operative banks after demonetisation, dependence on money lenders has increased for the small farmer in the interim.

Exhibit 11. Sources of credit in rural India

44% of total rural credit is availed from informal channels



In terms of use, household expense forms major share of debt usage, particularly for lower income groups (low deciles below)



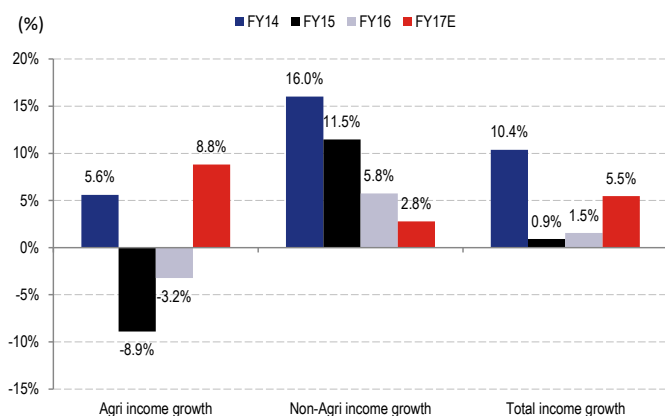
Source: NSSO

We now estimate an FY17 agri. (farm) income growth of 9% and non-agri. income growth of 3%, driving a 6% YoY growth in total income for a small farmer. Despite liquidity-related challenges, total income growth at 6% YoY in FY17 for a small farmer will still be the highest in the past three years.

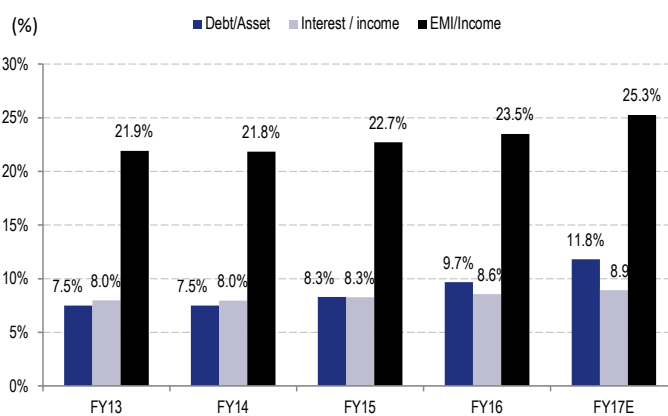
Leverage metrics, however, deteriorate temporarily due to an increase in debt levels along with a rise in interest expense (more debt from informal channels). Overall, we also reckon a decline in real estate prices would deteriorate the debt/asset ratio for the small farmer. However, a likely good Rabi crop would ease the cash flow pressure and would lead towards de-leveraging, in our view.

Exhibit 12. Demonetisation-led liquidity squeeze leads to partial disruption in agri. supply chain and thereby impacting income, particularly for the small farmer

Healthy Rabi crop to still enable high single-digit growth in agri. income for small farmers in FY17



Increase in debt, largely from informal channels leads to deterioration in credit metrics for small farmers



Source: JM Financial

Large farmer income remains more resilient—FY17 income growth of 13% YoY:

For a large farmer, a decline in income during FY17 is likely to be limited due to access to banking channels and a strong credit profile. Therefore, for a large farmer, we expect total income growth of 13% YoY in FY17, ahead of growth during the past two years. The debt/asset ratio deteriorates slightly owing to the likely decline in real estate prices, but overall other credit metrics improve/remain stable for a large farmer.

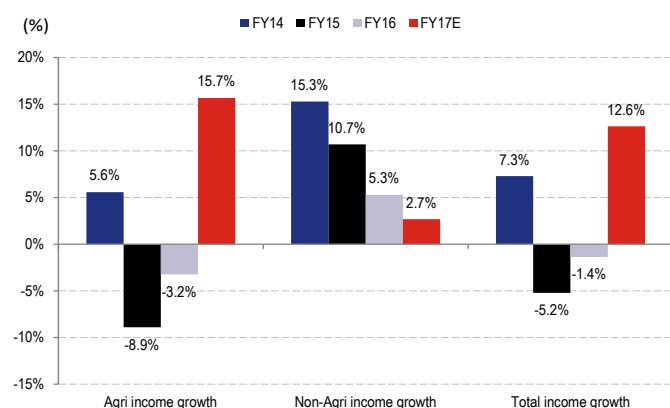
Exhibit 13. Income calculations for a large farmer

		FY13	FY14	FY15	FY16	FY17E	Assumptions
Average land holding	Acres	15.0	15.0	15.0	15.0	15.0	
Cost of land	Rs	270,758	297,834	282,942	254,648	229,183	Value of land from NSSO Survey & assumptions
Land value	Rs	4,061,372	4,467,509	4,244,134	3,819,721	3,437,749	
Kharif Crop - Rice							
Adjustment of net crop sown area	(x)	0.70	0.70	0.68	0.58	0.63	Initial assumption to adjust income to NSSO survey. Varied based on yearly net sown area
Liquidity adjustment	(x)	1.0	1.0	1.0	1.0	0.95	Discount in realization due to liquidity squeeze led challenges
Productivity	(qtl/acre)	14.9	14.6	14.4	14.4	14.8	Calculated as ratio of sown area & production
Price	MSP - Rs	1,280	1,345	1,400	1,450	1,510	MSP price
Revenue from crop	Rs	13,320	13,762	13,730	12,063	13,311	
By-product	Rs	1,127	1,235	1,222	1,012	1,047	Value of by-product for planting the crop
Cost	Rs	6,763	7,026	7,074	6,257	6,918	Cost assumptions based on NSSO survey & WPI
Rabi Crop - Wheat							
Adjustment of net crop sown area	(x)	0.70	0.70	0.68	0.58	0.65	Initial assumption to adjust income to NSSO survey. Varied based on yearly net sown area
Liquidity adjustment	(x)	1.0	1.0	1.0	1.0	1.0	Assumption of normalisation for Rabi produce sale
Productivity	(qtl/acre)	12.6	12.7	11.1	13.1	13.1	Calculated as ratio of sown area & production
Price	MSP - Rs	1,350	1,400	1,450	1,525	1,625	MSP price till FY16, JMFe for FY17
Revenue	Rs	11,918	12,474	10,957	11,487	13,854	
By-product	Rs	2,578	3,025	2,994	2,137	2,447	Value of by-product for planting the crop
Cost	Rs	5,630	5,994	5,905	5,033	5,853	Cost assumptions based on NSSO survey & WPI
Annual agri. income	Rs	248,261	262,146	238,844	231,138	268,342	
% of non-agri. income	(%)	18%	19%	22%	23%	21%	
Wages	Rs	24,372	29,246	33,633	36,156	37,241	Rural wage growth from CMIE
Farming of animals	Rs	18,012	20,173	21,384	21,812	22,248	NDDDB release on value of livestock
Others	Rs	10,332	11,365	12,274	12,888	13,275	JMFe
Non-agri. income	Rs	52,716	60,785	67,292	70,856	72,763	
Total Income	Rs	300,977	322,931	306,136	301,993	341,105	
Consumption	Rs	225,733	252,820	271,782	285,371	299,640	NSSO survey and JMF estimate
Surplus/Deficit	Rs	75,244	70,111	34,354	16,622	41,465	
Average debt	Rs	184,000	202,400	212,520	223,146	234,303	NSSO Survey and JMF estimate
Additional debt	Rs		0	0	0	-12,440	De-leveraging in FY17
Total Debt	Rs	184,000	202,400	212,520	223,146	221,864	
Debt/Asset	x	4.5%	4.5%	5.0%	5.8%	6.5%	
Debt/Income	x	61.1%	62.7%	69.4%	73.9%	65.0%	
Interest	Rs	22,080	24,288	25,502	26,778	26,624	
Interest / income	x	7.3%	7.5%	8.3%	8.9%	7.8%	
EMI	Rs	51,043	56,148	58,955	61,903	66,616	
EMI/Income	x	17.0%	17.4%	19.3%	20.5%	19.5%	

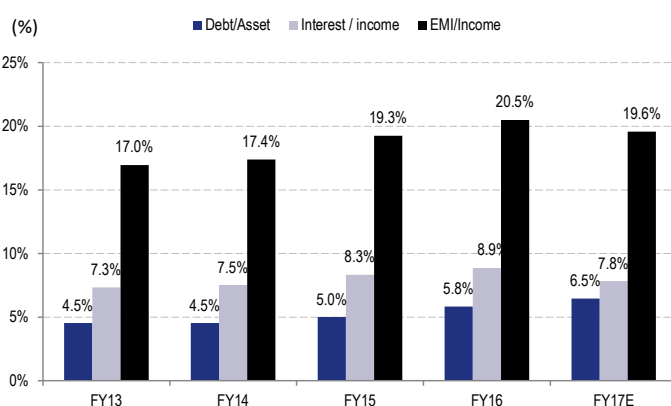
Source: NSSO, JM Financial

Exhibit 14. A large farmer has been able to manage Kharif sale at good prices aided by use of banking channels, ability to time the sale; strong credit profile also helped obtain quality inputs for current on-going Rabi sowing

Large farmers to still record income growth in high teens during FY17



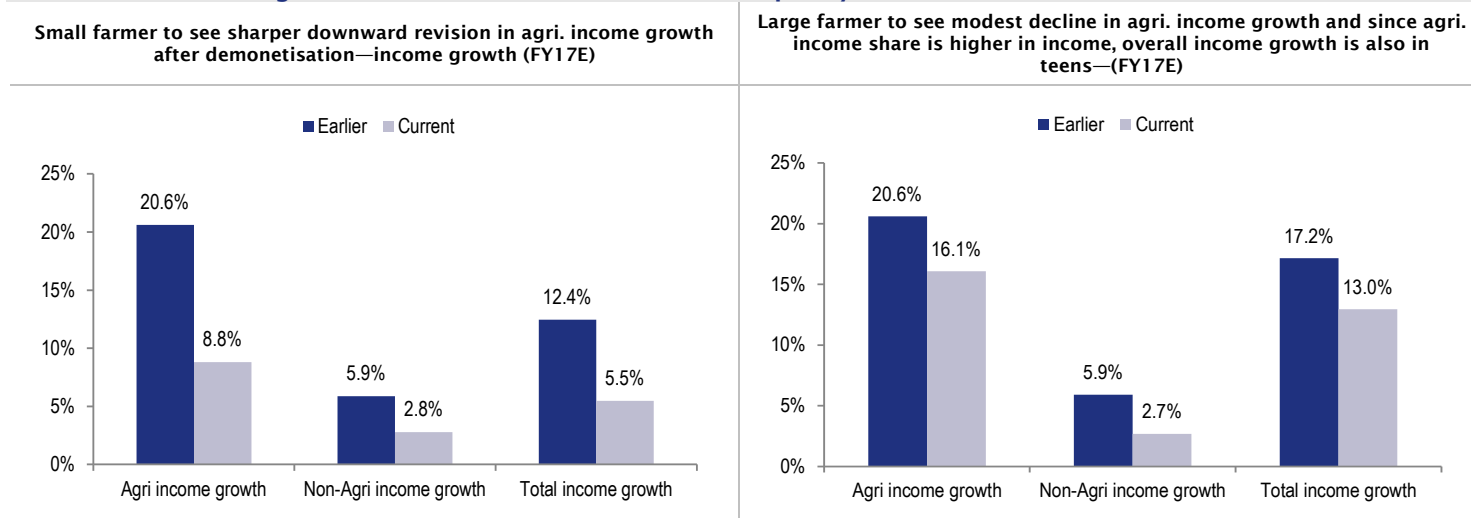
Credit metrics are impacted, but still remain better than the average farmer



Source: JM Financial

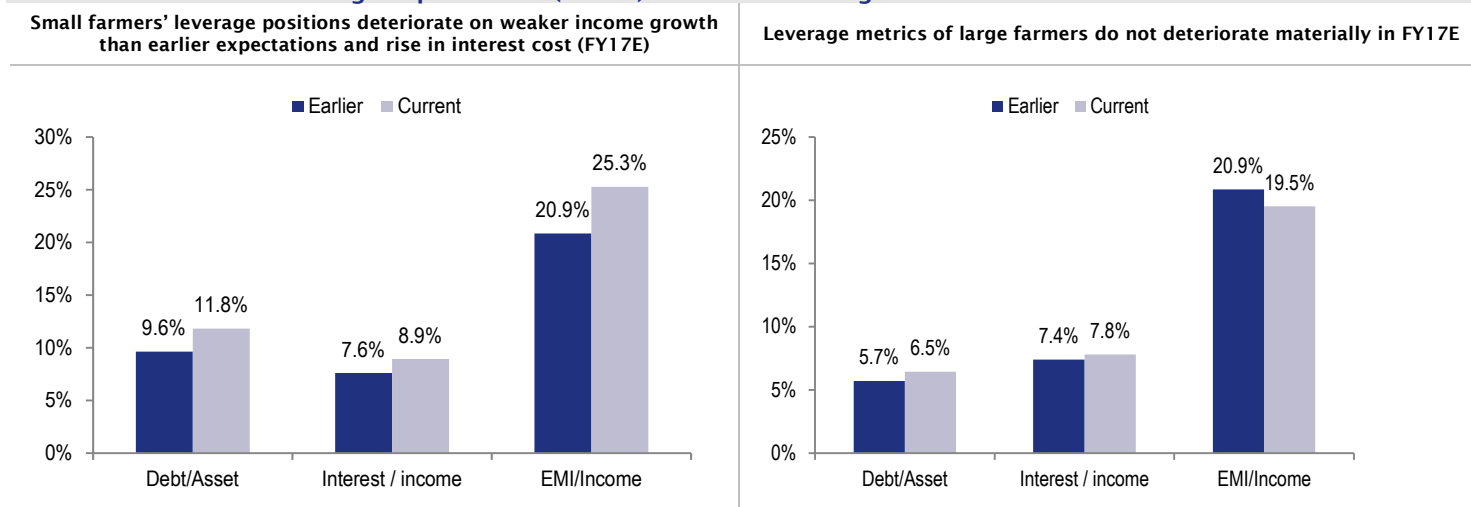
To summarise this, even after a decrease in income from earlier expectations, overall farmer income would still increase at the highest pace during FY17 over the past three years due to healthy crop output driven by good monsoons.

Exhibit 15. How have growth estimates been revised due to liquidity constraints?



Source: JM Financial

Exhibit 16. How have leverage expectations (FY17E) for small and large farmers been?



Source: JM Financial

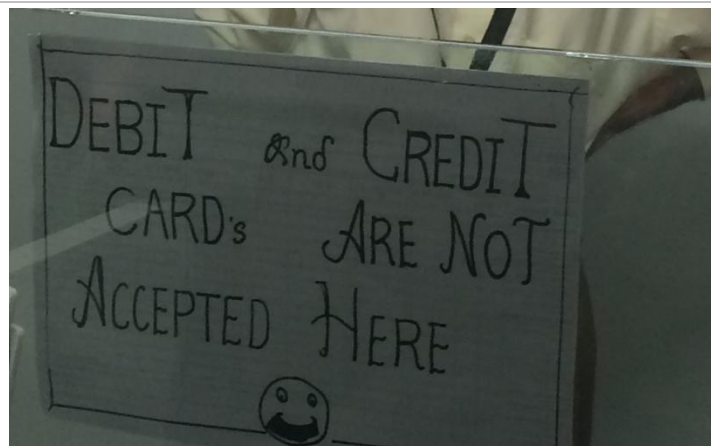
Improvement in financial inclusion....

We were also enthused to see efforts around financial inclusion that has likely accelerated after the demonetisation announcement. During our journey, we could see the use of: **(a)** debit/credit swipe machines (at mid-level retail shops at Hissar, Varanasi, small *dhabas* across Delhi-Haryana highway and others), **(b)** increased awareness and popularity of mobile wallets such as “Paytm” at Sehore (MP), Chandauli (UP), Kodad (Telangana) (overall across the way including at toll booths). However, the challenge in quick adoption of digital payment becomes evident, as we still find places in metro cities preferring to transact in cash.

Exhibit 17. Encouraging to witness increased use of Paytm, credit/debit swipe cards at small towns

Encouraging to see use of digital technologies; toll booth on Indore-Bhopal highway in MP

....but the pre-paid taxi counter at Mumbai Airport had this message on use of cards



Source: JM Financial

Box 2: Huge opportunity as financial inclusion accelerates...

Even in urban areas, there is a significant population, which do not actively use banking channels and thereby represents a huge opportunity for financial services players. The opportunity became evident, as we visited the Vakrangee (NR) Outlet at Kirari, around the outskirts of Delhi (Exhibit 18). This locality of 0.5mn people is pre-dominantly occupied with the working class population (tailors, carpenters, rickshaw drivers, factory workers and others) and it is estimated that c.25-30% of households are still out of banking channels.

The Vakrangee centre works as a correspondent bank for Union bank of India, and one can undertake basic banking (excl. loans), sell insurance products/online products at Amazon, recharge mobile and TV, make Aadhaar cards, and more. As per our interaction, **after demonetisation, there has been a surge in requests to open bank accounts.** The working population in this area can potentially enhance the addressable market for financial services (loans/insurance and others).

The demand for bank account opening is very high across regions. To illustrate this, even in Delhi itself, Vakrangee added c.0.12mn bank accounts during the past one year, and in just the past 15 days, they received more than 0.1mn requests to open bank accounts. The requests originate from small companies, manpower allocation firms and others, who earlier used to pay their staff in cash. The process of opening a bank account has also become simplified and efficient with the use of Aadhaar cards and through e-KYC.

Similarly, we met users (daily wage labourers) in the banking correspondent centres at Varanasi, who have recently opened/activated their bank accounts. We reckon, demonetisation has led to a strong push for financial inclusion and expansion of the banking correspondent channel would be critical for improving financial inclusion and the reach in rural and semi-urban areas.

Exhibit 18. Enabling financial access to urban poor/rural population; banking correspondents (BCs) would be critical for improving financial inclusion

Queue in front of Vakrangee (BC) in a low-income group area at the outskirts of Delhi



Queue in front of Vakrangee (BC) in a low-income group area at the outskirts of Delhi

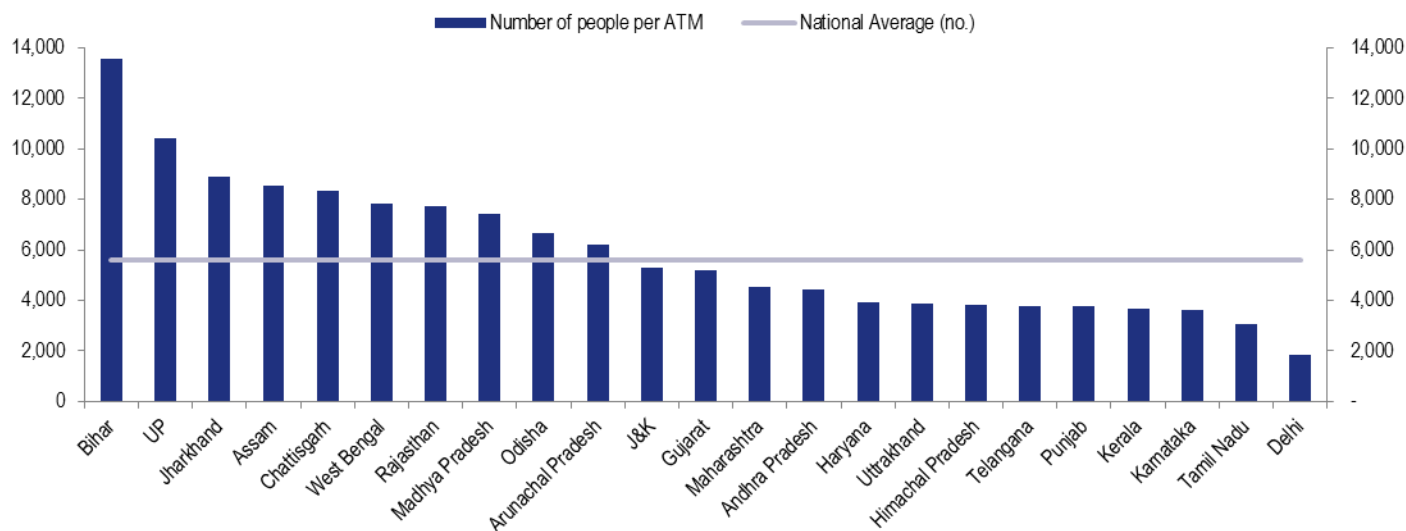


Source: JM Financial

Wide variation across country in financial infrastructure:

We also note the impact from demonetisation would vary partly with the difference in financial infrastructure across states. Eastern and northern Indian states have relatively less developed financial infrastructure as compared to southern and western states. For example, Bihar/UP has one ATM per 13.5K/10.5K people, while Tamil Nadu has an ATM per 3K people. This difference is also reflected in the earlier revival of economic activity in South India vs. North and East India, as more businesses migrate to banking channels from cash-based transactions.

Exhibit 19. High variance of financial infrastructure across states



Source: RBI, Jun '16

APPENDIX I

JM Financial Institutional Securities Limited

Corporate Identity Number: U65192MH1995PLC092522

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

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