

'Be the Bank of Choice for a Transforming India'

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## RECENT TRENDS IN RURAL CORE - A ONCE IN 27.7 YEARS EVENT !

Even as headline inflation slumped to 2.2% in Dec, there is a clear break in the data series which begs a serious introspection. Rural headline inflation has slumped to 1.65% in Dec'18, but core rural CPI has jumped to 6.34% (***stripping aside such statistical artefact, rural inflation would have been at 1.25% in Dec'18 and headline CPI at less than 2%, implying significant de-growth of rural demand, as shown by two-wheeler vehicle registrations' growth on a sequential basis at negative 24%!.*** Strangely, urban core CPI has declined to 5.26% during Dec'18. Such contrarian movement in urban core and rural core is bemusing as over a 7-year period, correlation between the rural and urban core was at 0.85.

We need to observe this trend in rural core. In the past Rural and Urban Core have moved in opposite directions on only two occasions and such period of recurrence was 4-5 months. By this logic, any upward movement in rural core CPI beyond Jan'19 would mean a decisive structural break / data issues?

We understand from informed sources that there has been an increase in the prices of medicines. But to us, a more compelling reason is change in methodology from Sep'18 in terms of data collection in rural areas where, as against the earlier practice of collecting data through Post Offices, the NSSO is now collecting data itself. There are about 100 Regional Offices of NSSO, which are now collecting the data. We believe, this additional work with the same set-up would take some time to stabilize and this may be one of the reasons for the observed aberrations in the data. Also the earlier rural data collected by post offices used to be validated. Now because NSSO is collecting data itself, it is possible that there may be absence of self validation, thereby leading to data discrepancies.

There may also be changes in the specifications of a product, which might be causing changes in numbers.

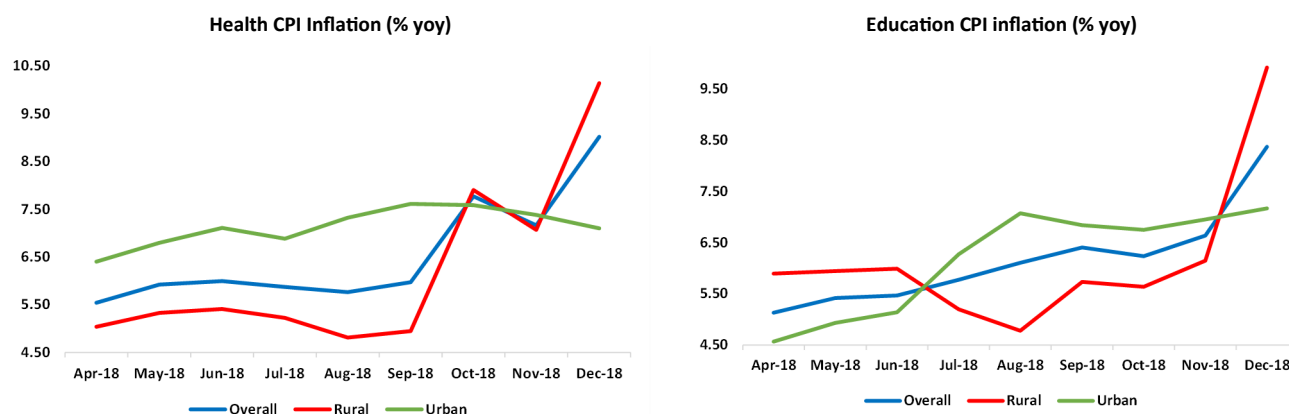
However, to be fair to CSO, the new data collection methodology might also be resulting in better price discovery that was hitherto absent. A clear example is capture of private tuition fees in states like West Bengal that could also be used as a policy input.

We are now concerned that this data aberration could obfuscate policy choices. In fact, except for this rural core is displaying the same trend as rural non-core. This is more so because services inflation barely displays idiosyncratic behaviour as that of rainfed seasonal agricultural crops. Policy choices, both fiscal and monetary, therefore must be informed by methodologically consistent inflation data. For the record, we expect a stance change in February policy, but a rate cut in April if the RBI decides to look through the data!



## THE CURIOUS CASE OF GALLOPING RURAL CORE INFLATION

- ◆ Even as headline inflation has slumped to 2.2% in Dec, there is a clear structural break in the data series that seems to have emerged and which begs a serious introspection. Rural headline inflation has slumped to 1.65% in Dec'18, but core rural CPI has jumped to 6.34% (education and health contributing cumulatively to 50 bps increase in weighted contribution: **stripping aside such statistical artefact, headline inflation would have been at 1.99% in Dec'18**). Strangely, urban core CPI has declined to 5.26% during the same month. Such contrarian movements in urban core and rural core is bemusing as over a 7-year period, there has been a positive correlation between rural and urban core (0.85).
- ◆ Rural health inflation clocked a whopping 10.14% in Dec'18 vis-à-vis 4.93% in Dec'17. The urban areas however witnessed a decline in health inflation. The components that pushed up overall health inflation are hospital & nursing home charges and medicine (non-institutional). There could be 2 reasons for such. First, medicine prices have increased since Oct'18. With better facilities available post implementation of "Ayushman", there is a possibility that the generic medicines have been replaced by another ones with a relatively higher price tag. We understand from informed sources that there has been a normal increase in the prices of medicines (Allopathic, Homeopathic as well as Ayurvedic), which has also contributed to the increase and the same has been corroborated by the data collecting agencies by virtue of the quotations received by them for working out the inflation numbers. This is looking more pronounced because of the increase in prices due to supply constraint and API price increase. However, there are states where health prices have declined in recent months. Hence this argument is still not sufficient!



Source: SBI Research

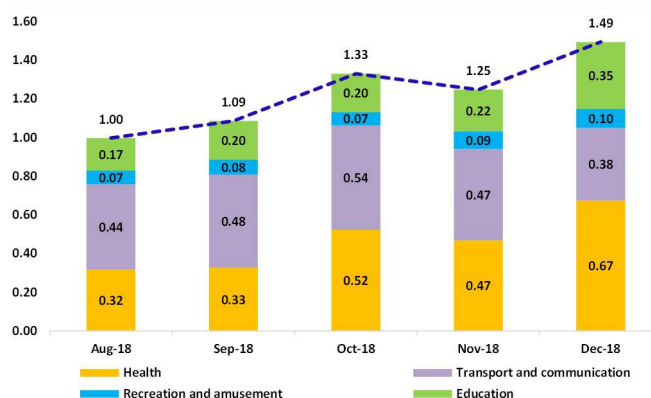
- ◆ However, education is seeing an increase on the back of higher private tutor/ coaching centre fees and prices of first hand books, journals. Thus, there might be other extraneous reasons for the rapid increase in health and education sub components, particularly in rural areas.

Component-wise All-India CPI inflation					
Health					
	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Hospital & nursing home charges	8.67	8.23	9.94	8.50	11.27
Medicine (non-institutional)	5.29	5.19	7.63	7.58	9.99
Family planning devices	3.76	3.91	4.04	3.89	3.59
Spectacles	3.94	3.49	5.15	4.42	5.26
Other medical expenses (non-institutional)	0.75	-0.08	6.25	5.79	7.54
Doctor's/ surgeon's fee-first consultation (non-institutional)	7.97	9.27	8.72	6.07	5.55
X-ray, ECG, pathological test, etc. (non-institutional)	3.63	4.17	6.45	5.36	6.57
Education					
Books, journals: first hand	4.39	4.46	5.23	6.70	9.65
Stationery, photocopying charges	3.56	3.48	2.87	1.20	1.42
Tuition and other fees (school, college, etc.)	7.20	7.04	6.95	7.13	8.12
Private tutor/ coaching centre	4.28	6.88	6.87	8.03	12.85
Other educational expenses (incl. fees for enrollment in web-based training)	0.23	-0.31	-1.31	1.47	0.92

Source: SBI Research

- ◆ The graph here clearly outlines the increase in the weighted contribution of Health and Education in rural inflation. The total increase in weighted contribution of health and education inflation since Sep'18 has been a sharp 49 basis points (Health:34 basis points and Education 15 basis points).

Weighted Contribution of Components of Service Inflation in Rural India



Source: SBI Research

### IN STATISTICAL PARLANCE TRENDS IN RURAL CORE - A ONCE IN 333 MONTHS EVENT

- ◆ We believe that there is a clear-cut case of data aberration in CPI-Rural (Health and Education Category) in the Dec'18 month data release. The CPI Rural Health (m-o-m change) which had never breached its maximum mark of 1.37% in past 90 months (Apr'11 to Sep'18) and a sequential average of 0.5%, suddenly jumped to 3.43% in Oct'18 and 3.09% in Dec'18. Even the Oct and Dec numbers were way above the average + 3\*standard deviation, indicating an occurrence probability of once in 333 months (27.7 years)!
- ◆ Similarly, Rural CPI Education, which grew by 3.26% in Dec'18, was also much more than the average + 3\*standard deviation of past 90 months.
- ◆ If we analyse the Urban CPI (m-o-m change) for same category for the same period there was no such anomaly. The data for Oct and Dec were perfectly in consonance with the trend.
- ◆ Our reason for calling the CPI Rural Health data as aberration is the fact that sudden jump in prices of medicine, hospital & nursing home charges, other medical expenses, in one month (Oct'18), then declining to trend growth in next month (Nov'18) and again jumping in the next month (Dec'18) seems bizarre.
- ◆ We need to observe this trend as Rural Core. In the past, Rural and Urban Core have moved in opposite directions on only two occasions and such period of recurrence was 4-5 months. By this logic, any upward movement in core rural CPI beyond January'19 would mean a decisive structural break / data issues?

M-o-M Change in Health and Education Inflation (%)							
	Apr-11 to Sep-18 (90 months)				Oct-18	Nov-18	Dec-18
	Max	Min	Average	Standard Deviation			
Rural CPI Health	1.37	-0.31	0.49	0.27	3.43	0.41	3.09
Rural CPI Education	2.55	-1.36	0.58	0.49	0.27	1.49	3.26
<i>Memo:</i>							
Urban CPI Health	1.57	0.09	0.46	0.24	0.37	0.44	0.37
Urban CPI Education	2.35	-0.33	0.56	0.62	0.21	0.41	0.27

Source: SBI Research

### INCREASE IN RURAL CORE : DATA COLLECTION CHANGES THE PRIMARY REASON?

- ◆ We understand there is a change in methodology in terms of data collection in rural areas where, as against the earlier practice of collecting data through Post Offices, the NSSO is now collecting data itself. There are about 100 Regional Offices of NSSO, which collect the data. The data collection process, hitherto, restricted to urban centres has now been extended w.e.f Sep' 18 to the rural centres also. We believe, this additional work with the same set-up would take some time to stabilize and this may be one of the reasons for the observed aberrations in the data. Also the earlier rural data collected by post offices used to be validated. Now because NSSO is collecting data itself, it is possible that there may be absence of self validation, thereby leading to data discrepancies.

- ◆ There may also be changes in the specifications of a product, which might be causing changes in numbers. For instance, over a period, revised version of the same product is launched in the market with a higher price tag. In the absence of any change in specification the new product will be compared with the earlier one resulting in an increase in price of the same product. This possibility cannot be ignored.

### IS AYUSHMAN BHARAT A POSSIBLE REASON FOR HIGHER MEDICINE PRICES?

- ◆ Centrally Sponsored Ayushman Bharat anchored in the MoHFW, was launched in Sep'18. When we compare CPI data for Sep'18 and Dec'18, we see that there is a steep increase in Rural Health Inflation in states where the scheme has been implemented with Government support. The increase is quite evident in case of states such as Bihar, Haryana, Madhya Pradesh and Uttar Pradesh etc.
- ◆ However, there is no clear trend for other components. In case of rural education inflation, few states including West Bengal, Himachal Pradesh and Kerala, have seen drastic increase.
- ◆ It may be noted that states where education is witnessing an increase as per NSSO survey (71st Round) at all-India level, more number of students were taking private coaching with concentration in eastern states like West Bengal.
- ◆ This implies that the new data collection methodology might also be resulting in better price discovery that was hitherto absent.

States	Change in Rural CPI Inflation (Dec'18 over Sep'18)				PMJAY Status as on 04.12.2018	
	Clothing and Footwear	Recreation and amusement	Education	Health	Amount Authorized for Admissions (in lakhs)	Beneficiary families covered (in lakhs)
Andhra Pradesh	-7.39	-1.16	2.92	1.41	-	-
Assam	-6.54	-1.04	-1.10	3.43	480	27
Bihar	1.29	13.24	5.99	9.24	192	109
Chhattisgarh	-6.99	-2.76	0.10	-0.29	4646	41
Delhi	13.13	7.87	-1.85	9.88	-	-
Gujarat	-1.65	-4.67	6.32	1.97	12634	45
Haryana	-1.63	-3.96	1.68	9.11	244	16
Himachal Pradesh	-6.73	6.93	13.49	-0.39	146	5
Jammu and Kashmir	11.08	1.24	5.76	1.72	0	6
Jharkhand	-2.15	6.86	-2.11	3.30	1318	57
Karnataka	-0.82	-1.22	5.74	6.16	7712	103
Kerala	-0.81	2.38	9.84	9.39	4287	35
Madhya Pradesh	-3.28	-6.03	5.00	6.37	809	118
Maharashtra	0.74	1.86	0.70	3.32	7869	84
Odisha	-5.97	-6.49	3.69	4.69	-	-
Punjab	-3.90	3.92	-6.61	9.21	0	42
Rajasthan	4.75	7.68	7.66	8.77	-	-
Tamil Nadu	-1.93	0.05	1.48	5.43	15098	157
Telangana	-7.15	-1.88	-2.26	3.15	-	-
Uttar Pradesh	-1.83	10.62	5.49	6.21	710	118
Uttarakhand	3.22	0.96	-13.48	3.86	37	20
West Bengal	-2.61	-0.33	17.61	-0.96	1092	112
<b>Memo:</b>						
Wt cont. in Rural Inflation (Dec'18 over Sep'18)	-0.13	0.02	0.15	0.35		
Wt. cont in Urban Inflation (Dec'18 over Sep'18)	-0.02	0.00	0.02	-0.02		
Wt cont. in Rural Inflation (Sep'18 over Jul'17)	-0.06	0.02	0.00	0.05		
Wt. cont in Urban Inflation (Sep'18 over Jul'17)	0.15	0.04	0.19	0.20		
% Change in Wt cont of food & beverages in Rural CPI (Dec'18 over Dec'17)				-3.82		

Source: SBI Research, States in yellow did not join the scheme

### THE STORY OF DECLINE IN RURAL SALES BUT RISE IN RURAL CORE IS QUITE PUZZLING

- ◆ Automobile sales growth has been continuously slowing down over the past three months which has declined to 19.9 lakh in Dec'18 from 29.9 lakh in Sep'18, despite attractive discounts offered by Auto-companies during the festive season. If we look at the m-o-m growth, we can see that there is 16% decline in total vehicle sales in Dec'18 over previous month. The same has been reflected in the vehicle registration data which has come down to 14.7 lakh in Dec'18 from previous month of 18.8 lakh.

- ◆ The slowdown is broad-based with sub-components like passenger and medium and heavy commercial vehicles in fact registering de-growth in December over previous month. On Y-o-Y basis, the total sales of vehicle has declined by 2%.
- ◆ Among the sub-components, there is a significant decline in sales and registration of two-wheelers which further suggests rural sentiments are quite low in the past several months due to falling rural demand led by low farm income. However, on Y-o-Y basis the sales of two wheelers growth is showing a marginal improvement while all other components shows a declining trend.
- ◆ Declining sales of two wheeler despite attractive discount in one hand and rising expenditure on health and education on the other, makes it even difficult to reconcile the significant jump in rural core inflation!

Sales & Registration of Vehicles in India (in Lakh)							
Vehicle Segments	Sales				Registration		
	Nov'18	Dec'18	M-o-M change (in %)	Y-o-Y change (in %)	Nov'18	Dec'18	M-o-M change (in %)
Light motor Vehicles (PVs)	3.1	3.0	-5.1	-6.1	2.4	2.0	-16.8
Two-wheelers	18.9	15.3	-19.1	0.1	14.9	11.4	-23.6
Heavy goods Vehicles	0.3	0.3	19.2	-21.4	0.2	0.2	-19.0
Light goods vehicles	0.5	0.4	-8.3	-1.3	0.5	0.5	-
<b>Total vehicle</b>	<b>23.9</b>	<b>19.9</b>	<b>-16.5</b>	<b>-2.0</b>	<b>18.8</b>	<b>14.7</b>	<b>-21.8</b>

Source: SBI Research

## ABOUT US

The Economic Research Department (ERD) in SBI Corporate Centre is the successor to the Economic and Statistical Research Department (E&SRD). The latter came into being in 1956, immediately after the State Bank of India was formed, with the objective of “tendering technical advice to the management on economic and financial problems in which the Bank has interest and which required expert analysis”.

After the first reorganization of the Bank, when specialized departments like Management Science, Management Information Systems, Planning and Market Segment Departments took over the statistical work of E&SRD, the Department was renamed as ERD.

However, with the ERD team now taking on multidimensional functionalities in the area of risk management , corporate analytics, strategy and so on, who knows, the time may have come to rename it again!

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