SBI RESEARCH

ECOWRAP

Issue No. 57, FY23

Date: 15 Feb 2023

IDIOSYNCRATIC FOOD & STICKY CORE INFLATION CAN OBFUSCATE RBI POLICY CHOICES: AVERAGING OUT, CPI AT 6.52% LOOKS CORRECT FOR WRONG REASONS DATA NUMBERS, OUTDATED SAMPLE SIZE NEED SERIOUS INTROSPECTION

" *Mark Twain once wrote that history doesn't repeat itself, but it often rhymes". Yes indeed!*

The domestic CPI data released recently appears to have delivered a double whammy, with the seemingly abnormal jump in cereals prices lying somewhere between a statistical error and the offshoot of certain unintended policy alterations, aggravating policy makers' dilemma unfathomably. A close observation indicates that the main culprit of the CPI increase is decade high cereals inflation of 16.12%. While cereals inflation is exhibiting increasing trend for the past 2 years, the latest increase in perplexing. There are several reasons for this.

Firstly, this is the first time that difference between the weighted contribution of cereals CPI and calculated cereals CPI (sum of item-wise) is so large (19 bps). The average difference between Jan'15 to Dec'22 is merely 3 bps indicating that this month CPI data has an upward bias. This is an unexplained behaviour exhibited first time in cereals inflation but it has been a recurring feature of fuel and light inflation where the trend is opposite with the overall weighted contribution lower than the sum of its components, by around 18 bps beginning January 2022 and is still continuing. This indicates CPI numbers earlier reported could have a downward bias. These contrarian trends in CPI data by following a top down and bottom up approach is perplexing to say the least.

Secondly, since Jan'23, GoI merged the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) free food grains with Antodaya Anna Yojna (AAY) that has discontinued extra food grains supplied under PDS . **As a result, in Jan'23, the weighted contribution of rice/wheat other sources has also increased by 7 bps in CPI inflation. Interestingly, this has increased by 20 basis points since October 2022.** We believe a different methodology regarding the calculation of cereals inflation has made this jump feasible. **The quantity available from the Public Distribution System (PDS) is evaluated at the administered price in the National Account Statistics, while the cost actually paid by the households for the quantity obtained from the PDS are recorded in the Household Consumer Expenditure Survey (HCES) based on which the CPI is estimated**. **There has been no HCES since FY12**. **Given that households are now supposed to pay for food grains for additional 5 kg, the CSO has imparted a hypothetical cost of purchase to such. This has pushed up the cereal prices.**

Thirdly, it is perplexing to note that there is no linkage / data due diligence between vegetable prices tracked by Ministry of Consumer Affairs (Tomato, Potato & Onion/TOP) and CPI data. For example, in the current month even as vegetable prices tracked by Ministry has crashed by 10%, it shows a decline of 4% in CPI data. **This anomaly is making it a nightmare to predict vegetable prices data. For the record, the TOP on an average contributes around 45% to overall vegetable prices.**

Thus, there is an unexplained gap of around 19 basis points in 6.52% inflation number. If we add to this, the 7 basis points of the PDS gap, the total gap is around 26 basis points in 6.52% number. However, if we adjust for the downward bias in CPI fuel number of around 18 basis points, the headline CPI inflation for January is not much different from 6.52%

Additionally, the Core CPI also increased to 6.22% in Jan'23 as compared to 6.10% in Dec'22. **However, the core CPI data since June 2014 indicates that stickiness is the normal property of core inflation**. **In fact, since January 2012, the average core CPI is 5.8%. This has more to do with post pandemic expenditure shifts on health and education and purchase of gold.** Moreover, the distribution of core CPI indicates a nicely shaped Bell curve, with few outliers. **Data trends suggest that it is almost improbable to break down core CPI to below 5.5% in a meaningful manner.**

Our analysis using different scenarios of food and core inflation to predict some possible values of CPI inflation points out that only in one scenario (out of 15 realistic scenarios), CPI inflation comes below 6%. If CPI inflation needs to be below 6% then food inflation has to be below 5.5%. As core inflation is sticky in the range of 5.75%-6.25%, any meaningful decline in CPI is possible through food inflation only which is unpredictable given the reasons cited above.

All these reasons make us believe that RBI policy choices could get obfuscated and the repo rate stays higher for longer. Also, liquidity deficit in the system has imparted an additional 25 basis point hike in terms of rate premium. The problem is in the past also there have been several data issues, like the IIP sample failing to recognize that India is now home to second largest mobile phone manufacturer, the health spike in CPI are all examples of data goof ups. Time to rectify?

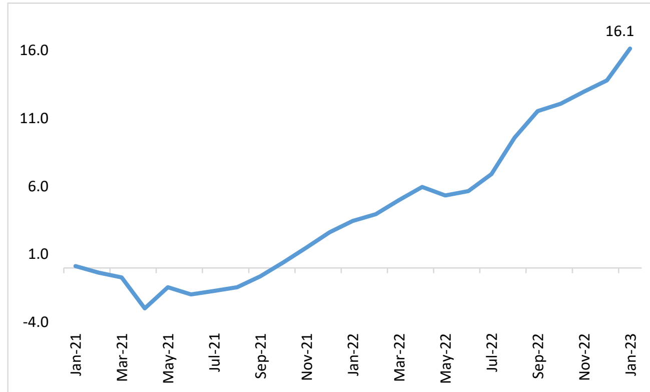
CPI ROSE TO 6.52% IN JANUARY 2023

- After moderating to a 12-month low of 5.72% in Dec’22, CPI inflation unexpectedly rose to 6.52% in Jan’23. The CPI print surprised everybody and it is pertinent to decipher the increase. Is it a statistical error or the result of some policy alterations?
- A close observation indicates that the main culprit of the CPI increase is a decade high cereals inflation of 16.12%. While cereals inflation is on increasing trend for the past 2 years, the recent increase in perplexing. Further this is the first time that difference between the weighted contribution of cereals CPI and calculated cereals CPI (sum of item-wise) is so large (19 bps). The average difference between Jan’15 to Dec’22 is merely 3 bps. This is an unexplained behaviour exhibited first time in cereals inflation, though a recurrent feature of fuel and light inflation where the overall weighted contribution has been lower than the sum of its components on an average by around 15 bps since Jan’22.
- Since Jan’23, Government merged the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) free food grains with Antodaya Anna Yojana (AAY). Though, this extra food grains supplied under PDS stopped. In Jan’23, the weighted contribution of PDS item has increased by 7 bps in CPI inflation.
- The quantity available from the Public Distribution System (PDS) is evaluated at the administered price in the National Account Statistics , while the cost actually paid by the households for the quantity obtained from the PDS are recorded in the Household Consumer Expenditure Survey (HCES) basis which the CPI is estimated. There has been no HCES since FY12. Given that households are now supposed to pay for food grains for additional 5 kg, the CSO has imparted a hypothetical cost of purchase to such . This has pushed up the cereal prices.

INFLATION TRAJECTORY: WPI INFLATION DECLINED TO 24-MONTH LOW OF 4.73% IN JANUARY

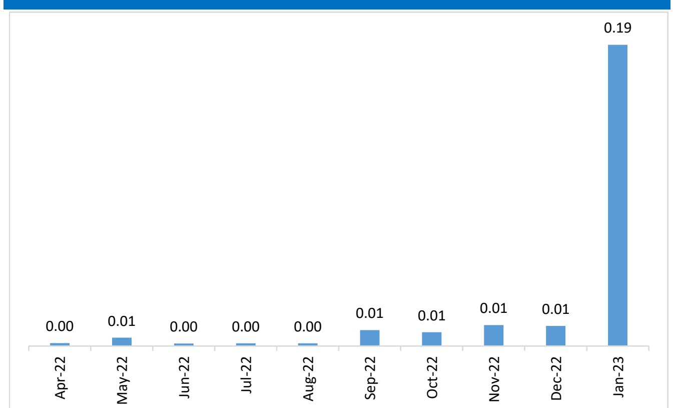
- WPI based inflation declined to a 24-month low of 4.73% in Jan’23. The decline in the rate of WPI inflation is mainly due to easing prices of manufactured items, fuel and power, among other items. Inflation in pulses came in at 2.41%.
- **After the higher than expected CPI inflation for Jan’23, we have revised our estimates for the remaining months of this fiscal. We believe CPI inflation will remain below 6% going forward (except Feb-23). Inflation will decline materially and coming down to ~5% by Apr’23. For Q1 FY24 we expect average CPI of 5.1%.**

Cereals and products Inflation (% YoY)



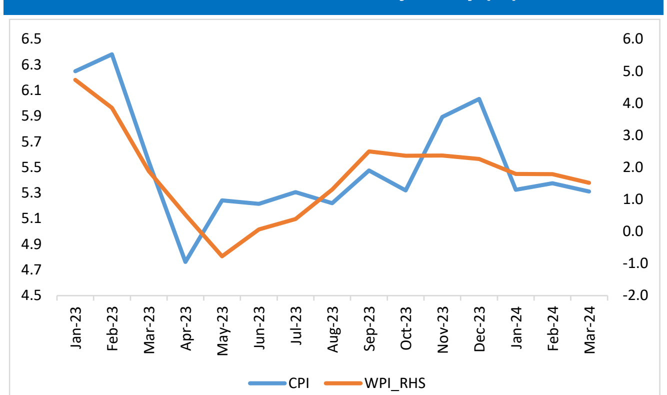
Source: SBI Research

Difference between the weighted contribution of cereals CPI and calculated cereals CPI (sum of item-wise) in %



Source: SBI Research

CPI & WPI Inflation Trajectory (%)



Source: SBI Research

FOOD INFLATION WILL DRIVE THE HEADLINE NUMBER AS CORE INFLATION IS STABLE

- RBI Governor in it's latest MPC meeting address said that "*Headline inflation has moderated with negative momentum….but the stickiness of core or underlying inflation is a matter of concern.*"
- The Core CPI also increased to 6.22% in Jan'23 as compared to 6.10% in Dec'22. However, the core CPI data since June 2014 indicates that stickiness is the normal property of core inflation. The average core CPI is 5.17% and the distribution indicates that the peak is hovering around 6-6.5%.
- When core CPI is above average (5.8%), health, education and personal care are the main culprit. **This has more to do with post pandemic expenditure shifts and purchase of gold.** The distribution of core CPI over the last 17-months indicates a nicely shaped Bell curve, with mean Core CPI at 6.08%. Interestingly, if we look at 95% confidence interval, except 1-month (Apr'22) all the Core CPI numbers are within that range, indicating that core CPI has nicely settled in the range of 5.5-6.5% range, with average at 5.99%.
- Historically during the period of rising or falling food inflation, the major change has been seen in potato, onion/tomato, milk, rice other sources and wheat other sources.

CPI INFLATION: SCENARIO ANALYSIS

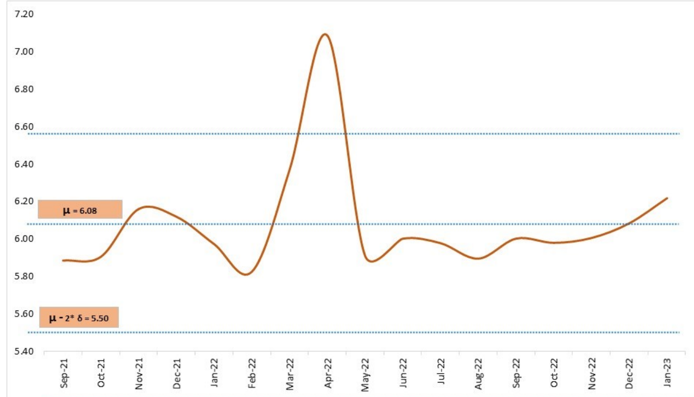
- **We prepared some possible values of CPI inflation using different scenarios of food and core inflation. Unfortunately, only in one scenario (out of 15 realistic scenarios) that CPI inflation is below 6%. If CPI inflation need to be below 6% then food inflation has to be below 5.5%. As core inflation is sticky in the range of 5.75%-6.25%, any meaningful decline in CPI is possible through food inflation only.**

CPI Inflation under various scenarios

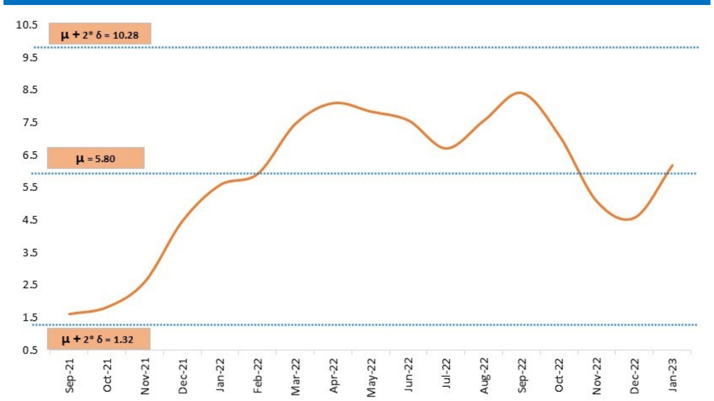
in %			Core Inflation		
			Realistic Scenario		
			5.75	6.00	6.25
Food Inflation	Realistic Scenario	5.5	5.9	6.0	6.3
		5.8	6.1	6.2	6.4
		6.0	6.2	6.3	6.4
		6.3	6.4	6.4	6.5
		6.5	6.4	6.6	6.7
	Extreme Scenario	4.0	5.4	5.5	5.6
		8.0	7.1	7.3	7.4
		10.0	8.0	8.1	8.2

Source: SBI Research

Distribution Curve of Core CPI



Distribution Curve of CPI Food



Source: SBI Research

Change in Weighted contribution in food inflation during rising and declining periods of food inflation (% yoy)

	Rising			Falling	
	Jan12-Nov13	Oct 18-Jan 20	Sep 21 to Sep 22	Nov 13 to Jun17	Jan 20 to Sep 21
Food and beverages	7.0	5.4	3.1	-8.3	-4.5
Cereals and products	0.8	0.3	1.1	-0.7	-0.6
Meat and fish	0.1	0.3	-0.2	-0.3	-0.1
Egg	0.0	0.0	0.0	0.0	0.0
Milk and products	-0.4	0.3	0.3	-0.3	-0.2
Oils and fats	-0.4	0.1	-1.1	0.0	0.9
Fruits	0.0	0.1	0.1	-0.2	-0.1
Vegetables	7.0	3.4	2.9	-5.6	-4.7
Pulses and products	-0.1	0.6	-0.1	-0.7	-0.1
Sugar and confectionery	-0.1	0.1	0.0	0.2	0.0
Spices	0.0	0.1	0.3	-0.2	-0.1
Non-alcoholic beverages	0.0	0.0	-0.1	-0.1	0.1
meals, snacks, sweets etc.	-0.1	-0.1	0.1	-0.3	0.2
All Groups	5.2	4.2	3.1	-10.0	-3.2

RATE CYCLES DICHOTOMY SEEMS A NATURAL NOW

Mark Twain once wrote that history doesn't repeat itself, but it often rhymes.

- A back of the hand analysis of the pre-pandemic action of the Fed would reveal that it cut interest rates by 25 bps each three times in 2019, from August to October, in what the Fed chair Powell called a "mid-cycle adjustment." Colloquially, the Fed was easing rates midway through the typical expansion-to-recession business cycle as the US was locked in a bitter battle with mainland China over terms of trade, apprehending the escalating deadlock in the heady days of Trump era could seriously threaten price stability and employment. The pandemic shortly upended these trepidations, to altogether novel terrain, with Fed cutting rates to near zero (déjà vu of 2008) in two unscheduled meets in just two weeks in March'20.
- The hurried slashing of rates came after 9 rate hikes of 25 bps each through Dec'15 to Dec'18, that took the FFR to 2.25-2.50% from near zero level continuing since end'2008, reached during the hurricanic days of GFC.
- Looking a little farther back before 2008 happened, Fed religiously hiked the rates 17 times between June'04-June'06, a quarter percentage points each time, believing the calibrated approach would give a strong signal to edgy markets, galloping from the rubbles of dot-com bust even as bubbles kept growing in size. As fault lines became glaringly visible, Fed cut rates seven times, totalling 325 bps between Sep'07-April'08. Post Lehman collapse, between Oct-Dec'08, three rate cuts of 200 bps took the effective rates to near zero. It continued through the taper tantrum when emerging economies currencies bled.
- The morale of the Fed rate actions through the last two decades is; rest of the world can not synchronise with the USA on rate decisions beyond a tolerance and have to carve out independent alternatives that promote growth, hinging on the core competency of a sovereign, capitalising on the socio-political stability it offers in rather stormy days. A corollary to this should be interpreted through the impact on local currency where the synchronised actions on rate front have meant that INR may remain cornered through the near foreseeable future, if the difference between FFR and Repo shrink further.
- The Fed would like to decisively keep the consumer prices gauge below the terminal rate but a resilient job market may not postulate it anytime soon, making the task of other central banks a nightmarish exercise. An interesting comparison in this regard could be with JPY, which has depreciated a little over 20% against the USD in the last five years (as on date) whereas the INR has depreciated close to 28% during the same period.

LIQUIDITY HAS GONE INTO A MODEST DEFICIT MODE

- RBI has actively managed liquidity in the system through various measures including SDF, change in CRR, VRRR, VRR, LTRO, TLTRO among others. All these measures have enabled the liquidity surplus, as given by LAF operations, to decline significantly from Rs 6.3 lakh crore at the beginning of this fiscal to a modest deficit of Rs 0.54 lakh crore as on 13 Feb'23.
- The tight liquidity situation is also revealed by weighted average TREP rate moving above the repo rate by 20-25 bps on many occasions.
- Meanwhile, Government surplus cash balances stand at Rs 2.7 lakh crore. Average core liquidity is Rs 2.3 lakh crore, which is almost neutral given that RBI considers liquidity amounting to 1.5% of NDTL (currently at Rs 2.8 lakh crore) as non-inflationary.
- Looking ahead, higher forex inflows and Government spending are likely to be counterbalanced by redemption of LTRO and TLTRO (~Rs 80,000 crore during Feb-Apr'23).

TREP Rate and Repo Rate

Policy Date	Repo Rate	TREP Rate:Time Frame Till Next Policy		
		Min	Max	# of Days above repo rate
04-05-2022	4.40	3.76	4.19	-
08-06-2022	4.90	4.52	5.15	7
05-08-2022	5.40	4.47	5.65	11
30-09-2022	5.90	5.23	6.15	21
07-12-2022	6.25	5.84	6.49	15
08-02-2023	6.50	6.40	6.71	2

Source: Bloomberg, CCIL, SBI Research

Contact Details:
Dr. Soumya Kanti Ghosh
Group Chief Economic Adviser
State Bank of India, Corporate Centre
M C Road, Nariman Point, Mumbai - 400021
Email: soumya.ghosh@sbi.co.in,
gcea.erd@sbi.co.in
Phone:022-22742440
: kantisoumya