

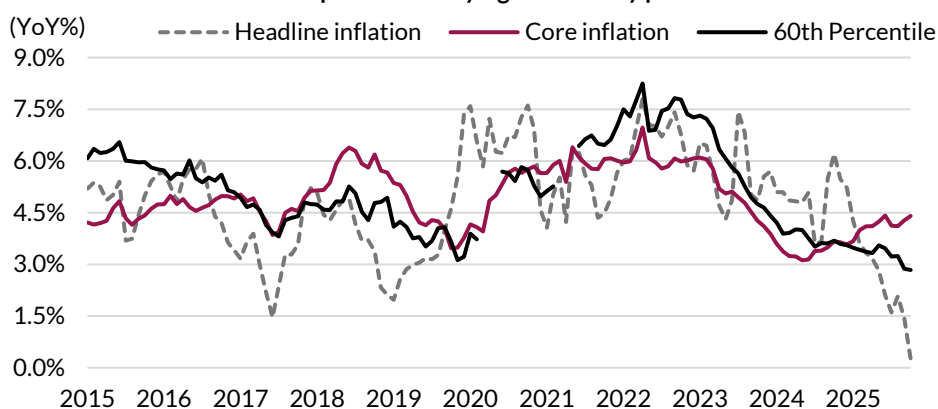
How strong is the disinflation? Is the expected rapid rebound likely?

Despite persistently weak inflation, which reflects economic slack, markets are pricing repo-rate hikes two years from now. Whereas item-specific exclusions (like food or gold), while used commonly, ignore the substitution effect, median inflation measures, endorsed by academic literature, are less volatile, correlate better with economic slack, and forecast 1Y-ahead inflation better. In India, they currently show very weak trends. And yet, the spike in the 5Y-2Y yield gap implies markets expect a rapid normalization of inflation and rate hikes in two years. Better communication (“lower for longer”), more money injection (M_3 and M_0 growth have slowed sharply), and lower duration of supply should help.

December 02, 2025

Economic growth

Exhibit 1 - Which measure captures underlying inflationary pressures well?



Source: RBI, Axis Bank Research

Measuring underlying inflationary pressures: median to the rescue?

Since Jan-2025 headline inflation has been falling sharply (Fig 1), and core inflation ex-gold/silver is now sub-3% with weak inflation in both goods and services (Fig 5, 6). That said, item-specific exclusions ignore the substitution effect, and food or gold prices are not the only items with high volatility. A better measure of underlying inflationary pressures in academic literature (references on page 5) is median inflation: it is less volatile, correlates better with economic slack (output gap) and forecasts 1Y-ahead inflation better (Fig 2-6); “asymmetric trimmed-mean” further improves on this (Fig 7); both suggest inflation is well below target.

Market pricing implies a quick return to 4% headline inflation; what about slack?

Despite monetary easing, the 5Y-2Y yield gap has widened (Fig 12), likely as markets expect a rapid return to 4% inflation, and thence normalization of policy, i.e., rate hikes in two years (Fig 13). This may be premature, in our view, as fiscal consolidation continues, and it is unclear how many years of above-trend growth may be necessary to absorb the economic slack visible in disinflationary pressures. MPC emphasizing downside-risks to future inflation projections thus may help in transmission. Excessively long duration of issuance and a fall in T-bill supply have also unduly steepened the yield curve ([link](#)): needs changes.

More monetary expansion essential at this stage: excess money drives inflation

In our view, a major driver of below-optimal inflation, which signals persistent slack, has been constrained monetary expansion – broad money (M_3) and base money (M_0) growth have slowed sharply. When record FX sales (in CY22, 2HCY24 and CY25, Fig 18) destroyed deposits and raised wholesale funding costs (Fig 14-17, [link](#)), these were not replenished via bond purchases by the RBI. This policy mix constrains monetary easing and adds growth risks. Recent INR moves show that RBI has started taking incremental steps to address the balance between monetary policy independence and currency stability, as the capital account stays open (Impossible Trinity: Fig 19).

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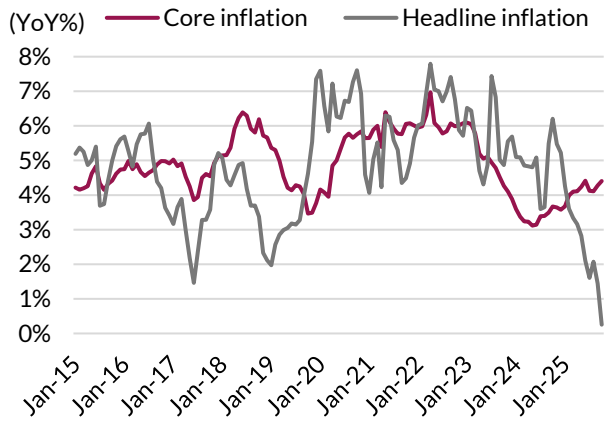
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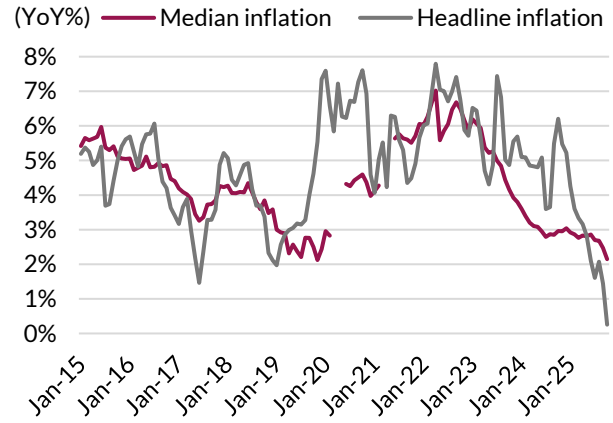
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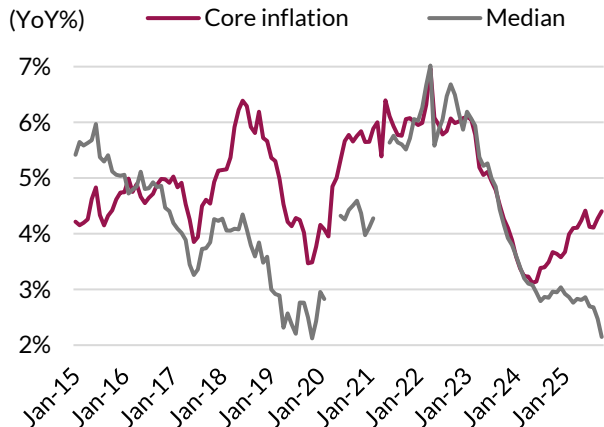
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Section 1 - Searching for better measures of current inflationary trends and leading indicators of future inflation
Exhibit 2 - Monthly inflation: standard 'core' less volatile than the headline and has been rising for last 1.5 years...


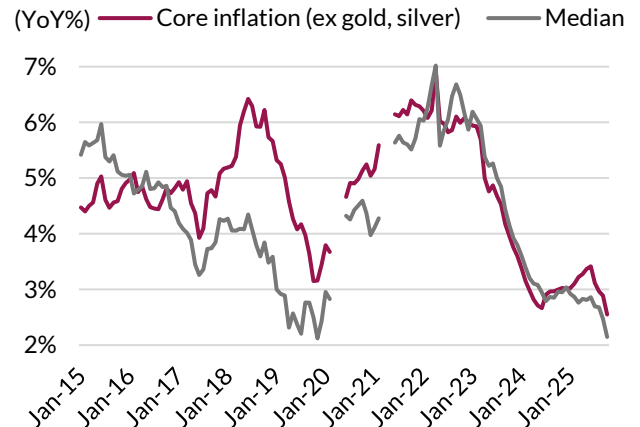
Source: CEIC, Axis Bank Research

Exhibit 3 - ... however, median inflation shows that price pressures remain stable and were at ~3% for the last 1.5Y


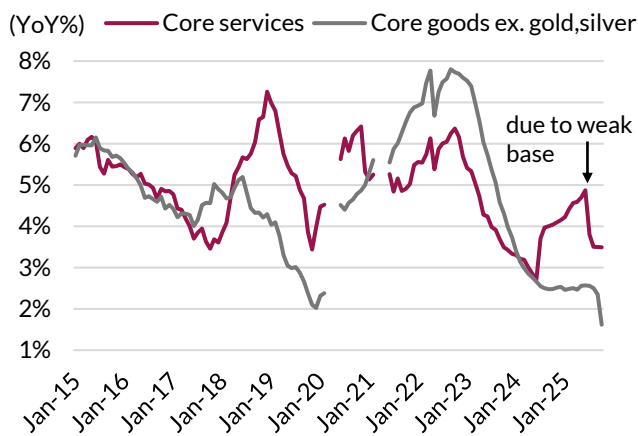
Source: CEIC, Axis Bank Research

Exhibit 4 - Divergence between core vs. the median started in May-24 and has sent opposite signals w.r.t. the outlook


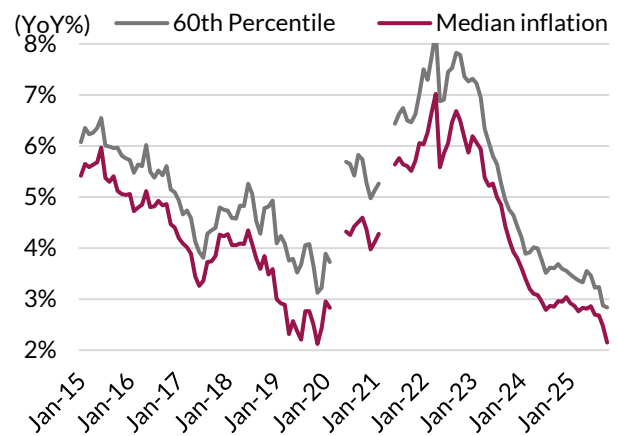
Source: CEIC, Axis Bank Research

Exhibit 5 - Core inflation ex-gold/silver tracks median inflation better


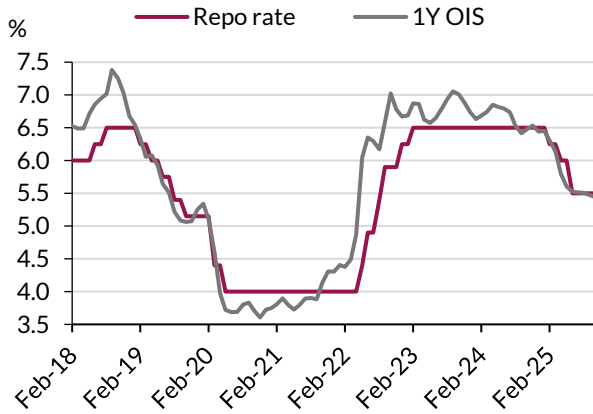
Source: CEIC, Axis Bank Research

Exhibit 6 - GST reforms → even weaker goods inflation, core services inflation has avg. ~3.8% for 2Y; imply weak demand


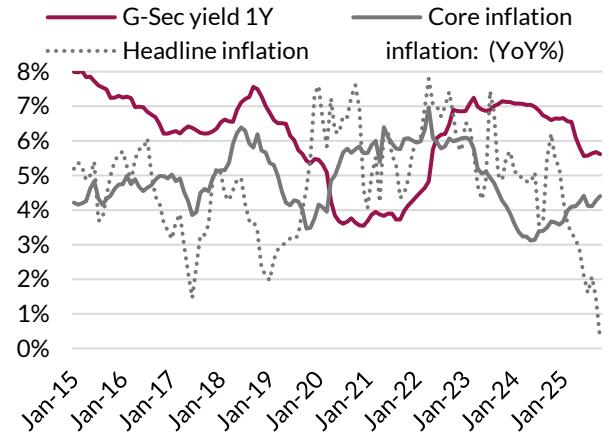
Source: CEIC, Axis Bank Research

Exhibit 7 - If asymmetric median is a better measure (adj. for '+' skew), inflation <4% for ~2 years now, and trending lower


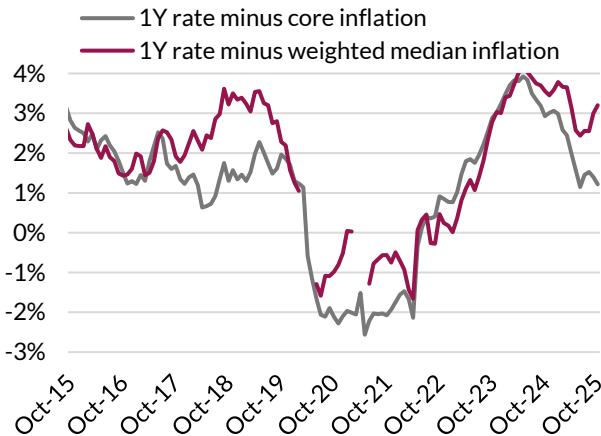
Source: CEIC, Axis Bank Research

Section 2 - Market-pricing implies rate hikes two years from now; will slack be absorbed by then?
Exhibit 8 - Rate cuts started 3-6 months after median like measures suggested growing economic slack


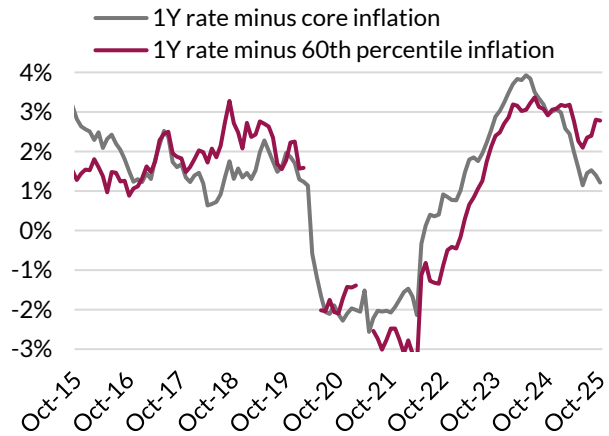
Source: Bloomberg, Axis Bank Research

Exhibit 9 - Focus on headline & core likely delayed rate cuts (hindsight bias? Fig21 explains why caution was warranted)


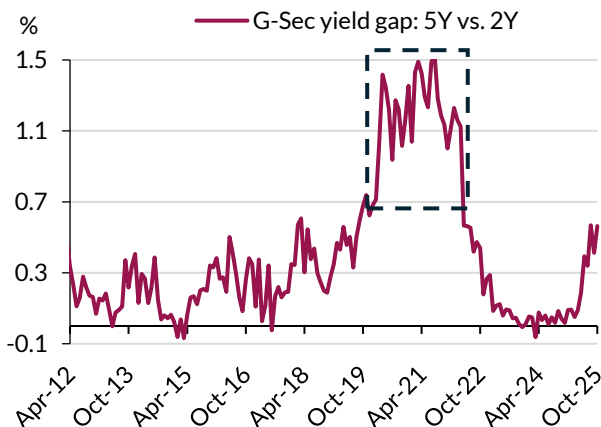
Source: Bloomberg, Axis Bank Research

Exhibit 10 - Two episodes where the divergence is striking (2018-19) and (2024-25) while calculating 'real rates'


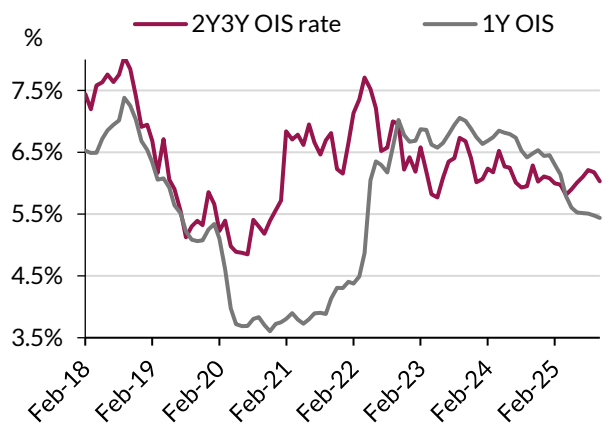
Source: CEIC, Axis Bank Research

Exhibit 11 - Use of 60th percentile inflation suggests smaller 'error' but still indicates that current 'real rates' > 2.5%


Source: CEIC, Axis Bank Research

Exhibit 12 - The 5Y-2Y spread primarily reflects uncertainty on the monetary policy path...


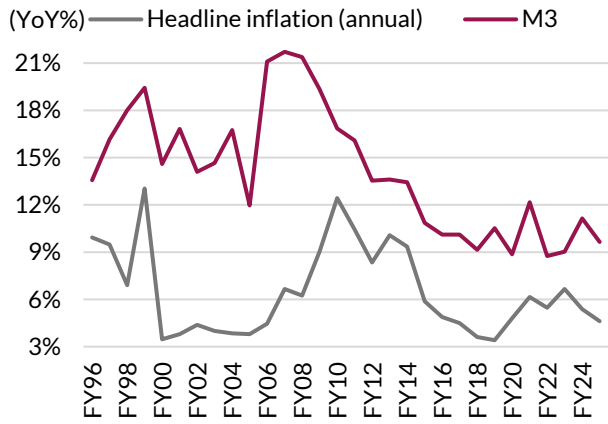
Source: Bloomberg, Axis Bank Research

Exhibit 13 - ...as market beliefs on future inflation has kept rates elevated (1pp rate cut and yet 2Y3Y rate is unchanged)


Source: Bloomberg, Axis Bank Research

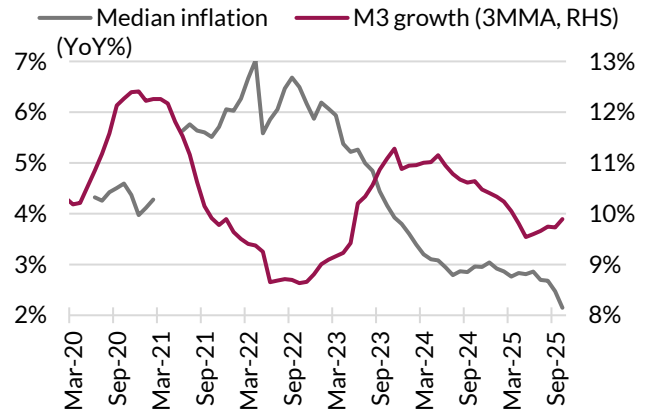
Section 3 - Other steps that are hurting monetary expansion and keeping inflation lower than optimal

Exhibit 14 - Invoking Milton Friedman: Inflation primarily as a monetary phenomenon



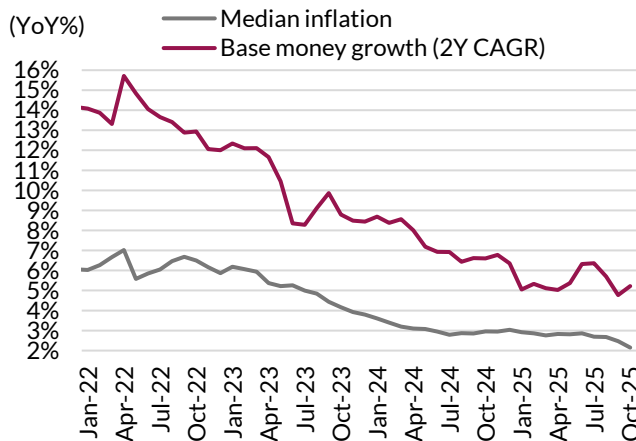
Source: CEIC, Axis Bank Research

Exhibit 15 - Slowing broad money supply growth as well as weak median inflation suggests that significant slack exists



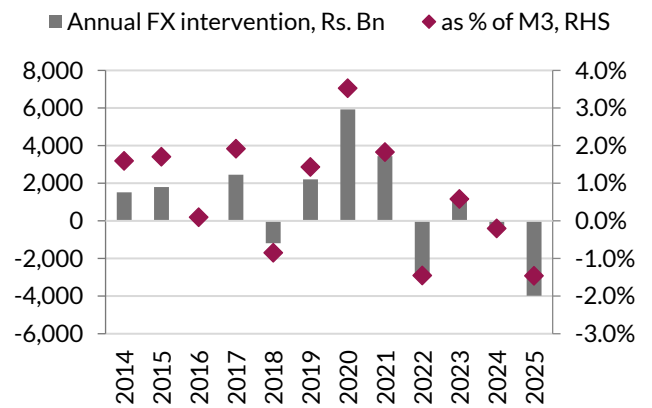
Source: CEIC, Axis Bank Research

Exhibit 16 - Spurious correlation (below) or is there any causal factor at play?



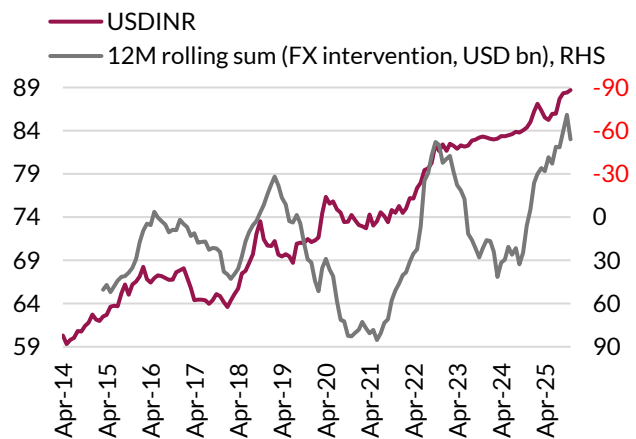
Source: CEIC, Axis Bank Research

Exhibit 17 - Heavy FX sales → deposit destruction and base money destruction → lowers agg. demand/inflation



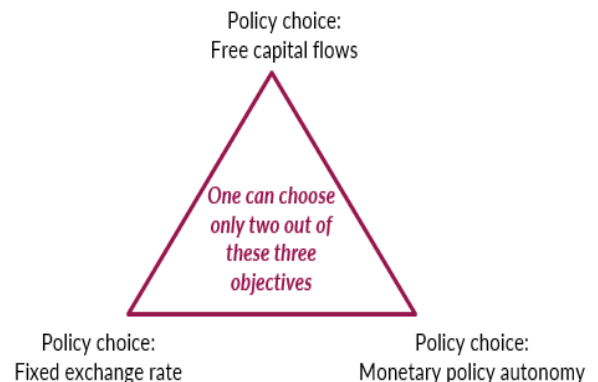
Source: CEIC, Axis Bank Research

Exhibit 18 - FX overshooting is normal, (CY22: INR ~10% weaker despite similar quantum of FX sales as in CY25)



Source: Bloomberg, Axis Bank Research

Exhibit 19 - The impossible trinity is a natural constraint: heavy FX intervention lowers monetary policy efficacy



Source: Mundell Fleming Model, Axis Bank Research

Appendix: Selective review of academic literature

Weighted Median Inflation Around the World: A Measure of Core Inflation (Laurence M. Ball et al., 2023)

- This is one of the most recent and comprehensive cross-country studies. The authors construct a weighted-median inflation measure using CPI (or equivalent) sub-components across 38 advanced and emerging economies from 1990–2021.
- **Their findings:** Weighted median inflation is less volatile than headline inflation or standard “core” inflation (ex-food & energy), and – importantly – correlates more strongly with economic slack (output gap) and better forecasts headline inflation one year ahead.
- In short: this study bolsters the case that median-type measures are a robust, internationally comparable gauge of underlying inflation pressure.

The Non-puzzling Behaviour of Median Inflation (Ball & Mazumder, 2019)

- This paper argues that median (and related) measures such as weighted-median CPI or weighted-median PCE deflator provide a much “cleaner” view of underlying inflation than the standard core (ex-food & energy) measure.
- They show that median inflation filters out transitory “noise” due to volatile components (not just in food and energy but across all sectors), resulting in a less volatile, more stable inflation series.
- **Their work also shows that, when using median inflation, the empirical relationship described by the Phillips Curve – linking inflation with real economic slack – becomes clearer, suggesting better signal-to-noise properties.**

A Review of Core Inflation and an Evaluation of Its Measures (New York Federal Reserve, Rich & Steindel, 2005)

- A classic and often-cited evaluation of different measures of core inflation – standard core (exclusions), median, trimmed-mean, and smoothed series.
- It outlines desirable properties for a “core inflation” measure: simplicity/transparency, stability (low volatility), ability to track underlying trend inflation, and predictive content for future aggregate inflation.
- Their empirical evaluation finds that “limited-influence” estimators (median, trimmed-mean) perform well across these criteria, often offering advantages over ex-food/energy core inflation.

The Use of Trimmed-Mean Measures of Inflation in Monetary Policy Making: Some Differences between Old and New World Central Banks (Rich, 2024)

- This recent paper reviews how central banks in different economies use trimmed-mean (and median-like) measures of inflation in real-time policy analysis.
- **It documents that monthly/quarterly trimmed-mean measures often have higher “information content” about near-term inflationary outcomes than headline CPI – i.e., they offer a better signal for imminent inflation changes.**
- The paper argues that, especially in “new-world” (emerging or small open) economies or in volatile global environments, relying on trimmed/median measures can improve monetary-policy decision making.

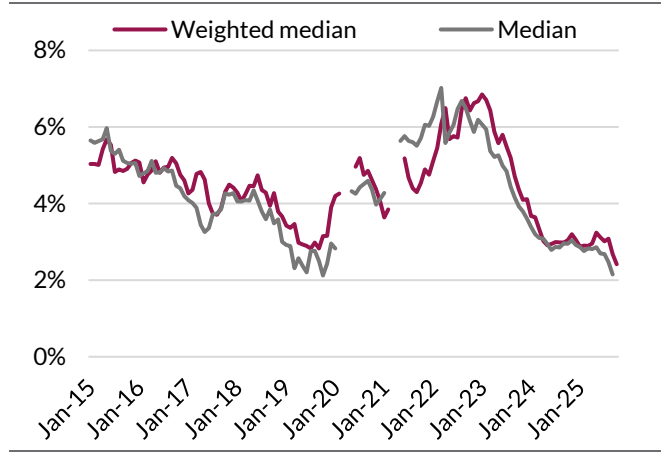
Measuring core inflation in India: An asymmetric trimmed-mean approach (Sharma, 2015)

- This is one of the more relevant studies: It tests “asymmetric trimmed-mean” measures – *i.e., rather than symmetrically trimming top and bottom tails, trimming based on an optimal rule to reflect skewed price changes.*
- The paper finds that such tailored trimmed-mean measures may better reflect “persistent” inflation in the Indian context, compared to standard core or headline CPI.

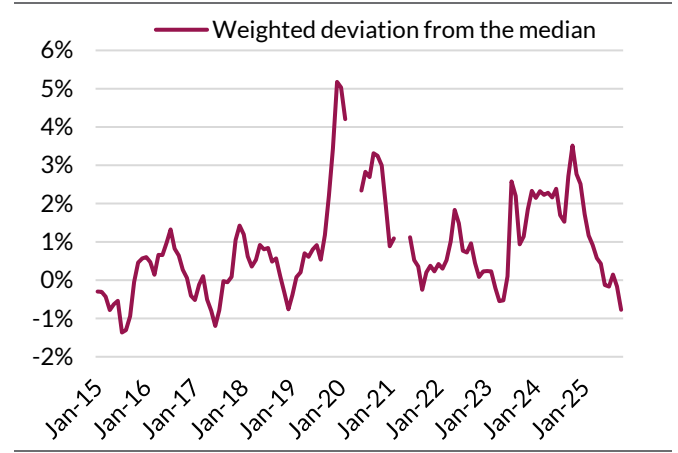
Measurement and Theory of Core Inflation (Martin Almuzara & Argia Sbordone, [NY Fed Staff Report No. 1115](#), 2024)

Core Inflation and Trend Inflation (James H. Stock & Mark W. Watson, [link](#), 2015)

- Introduces a dynamic factor model with time-varying coefficients and stochastic volatility; uses disaggregated sectoral inflation data to construct multivariate estimates of trend inflation; shows that multivariate models reduce uncertainty and improve medium-term inflation forecasts compared to headline or simple core measures.

Exhibit 20 - Median inflation a better leading indicator vs. weighted median as weights are fixed and likely outdated


Source: CEIC, Axis Bank Research

Exhibit 21 - Currently, the weighted sum of deviations from the median has turned negative → weak inflation a problem


Source: CEIC, Axis Bank Research

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