

Does inflation share a relationship with default?

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Empirically, Inflation or 'Mehengai' is notoriously infamous for causing stirs and uproars in the public domain. Ask any businessman, large or small, organized or informal, about inflation, it is likely that a majority will grumble about rising input costs and its impact on their margins. On the basis of evidence, India is a country



where the cost of fuel, onions, tomatoes and of course, dal (pulses) and more often than not, has the power to unseat governments.

While there are a plethora of research findings and empirical evidence advocating a strong relationship between inflation and other macro-economic parameters, there is a low count of empirical relationships established between inflation and banking dynamics, especially default rates. When leaders deliberate at the Board level on macroeconomics, there is a quick consensus that business development is indeed a function of changing macroeconomic scenarios. After all, banking and credit creation are key drivers to the overall GDP rate. In a fast-paced growth environment, it is obvious that credit creation will increase manifold to meet the production demand. Likewise, an inflationary situation entails too much money chasing too few goods, which again, can lead to further credit creation to purchase the production inputs by that businessman, albeit grudgingly. However, when it comes to credit/loan default, they often struggle in establishing empirical relationships with rising inflation.

The prudential mind often concludes quickly that society's Economically Weaker Sections (EWS) are the most vulnerable to rising inflationary trends. The narrative that is often quoted to justify this is that inflation can eat into the earnings of a commoner and therefore their disposable income is now compromised which can lead to defaults. However, one sitting with a commoner who has availed for example, a microfinance loan, will believe that 'Mehangai' is an integral part of their daily lives with strong coping mechanisms in place. The commoner is well versed with credit bureau records and is aware that default on loans can deprive them of future credit funding. Therefore, they are more likely to change their consumption patterns of their



disposable income, instead of risking a credit default and being cut off from future funding channels.

To test the above feedback, a bivariate time series modelling technique was applied to establish default rate and inflation. The correlation value between industry-level PAR30+ rates (as sourced from [MFIN](#) database) with inflation (Consumer Price Index-CPI), during the period of January 2019 to March 2023, was 0.47 indicating a moderate relationship. The correlation values were also tested for causations.

Inferences drawn from Johansen-Cointegration (JC tests) and Granger-causality tests established a positive relationship between CPI and default rates, in that, default rates do increase in the event of rising CPI. However, given that the time chosen for this analysis includes the Pandemic era, the predictive power of the time-series model in establishing relationships between forecasted inflation data and default rates was found to be quite weak. While the model did provide a forecast on default rates based on historical trends, the model indicated a scope for a large margin of error. The confidence interval bands showed that predictive default rates can be as high as 3 times the forecasted rate. A key conclusion from this analysis was that there are many more factors other than inflation that can explain default behaviour. Also, the time series analysis, by virtue of its data time window (January 2019 to March 2023), failed to fully remove the adverse impact of the Pandemic on default rates, despite applying various data transformation techniques. With efflux in time, a better relationship can be established between inflation and default rates without any volatility caused by black swan events.

Coming back to the commoner, those availing a microfinance or a retail loan, are empirically known to default under adverse and acute stress events. Any adverse

event which can cause a sudden and a sharp drain on their disposable income (medical illness, death in the family etc.) is a better candidate to explain default behaviour, especially in microfinance loans. However, modelling an adverse and an acute event is a challenge by itself for which industry best practices, in a practical setup, is yet to be established.

To conclude, statistics ought to be taken with a pinch of salt. An increasing inflationary trend is more likely to disrupt patterns and increase default rates when the inflationary trend pushes the commoner to what may be called as a 'Point of Non-Viability', for e.g: a hyperinflation scenario inflicting severe disruption on their disposable income trends. Any seasonal variations to the inflation rates and a fair level of abrupt changes are likely to be absorbed by the commoner in a bid to keep their credit history clean.

(Disclaimer: This is an authored article written by Arunava Banerjee, Chief Risk Officer, Ujjivan Small Finance Bank. All views expressed are personal.)

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