Headline: Good news: Down beta is down

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A significant reduction in down beta could lead to sustained reduction in the cost of capital for Indian companies and help foster investments

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People who track markets around the world would have noticed a reduction in the sensitivity of the Indian market to the movement of global markets, especially when the latter move in the negative direction. In the recent past, Indian markets have developed a capacity to remain insulated from adverse global shocks like Brexit, the Chinese market crash, the increase in crude oil prices and the trade wars. This phenomenon is examined in a research paper titled *Reduction in Cost of Capital in Indian Markets*, co-authored by Gautham Kanthasamy and Prasanna Tantri of the NSE-ISB Trading Laboratory. The authors observe that there has been a significant decrease in the volatility in Indian markets, especially on the downside, in the time period after demonetisation.

In finance, the "beta" of any asset is a term used to quantify the movement of the asset's price with respect to the market. For example, if the stock of a particular company has a beta of 1.5, it implies that when the market goes up by 1 per cent, this stock tends to go up by 1.5 per cent and vice-versa. Researchers further classify this "beta" into two categories — up market beta and down market beta, according to the dual-beta model that was proposed by Henriksson and Merton in 1981. As the names suggest, up beta measures the beta of the financial asset on days when the market is up and the down beta measures the beta of the asset when the market is down. In their paper, the authors find that the down beta of the Indian market has significantly decreased in the recent past implying that the Indian market does not fall as much as other global markets would.

The authors examine data from January 1, 2000, onwards and use January 1, 2017, as a point of division. They choose this particular date to classify the time period into the pre-demonetisation era and the post-demonetisation era respectively. Although demonetisation occurred on November 8, 2016, they provide some buffer time to ensure that short-term market reactions to the event do not cloud their analysis. Using these time frames, the authors conduct a comparative analysis between the NIFTY50 index and other global indices. With respect to the MSCI World Index, the authors find that the up beta of the Indian market has increased by 0.02 while the down beta has decreased by 0.25 in the post-demonetisation period. This implies that when the MSCI World Index falls by 1 per cent, the NIFTY50 would fall by 0.25 per cent less now than it would have prior to January 1, 2017.

The authors also contrast the NIFTY50 with two other indices — namely, the MSCI Emerging Market Index and the Dow Jones Index (DJI). Here too, the results hold as the authors find that India's down beta has decreased significantly in the post demonetisation period. In the case of MSCI Emerging Markets Index, India's up beta decreases significantly by 0.45 while the down beta decreases significantly by 0.30. In the case of the DJI, India's up beta increases by 0.03 while the down beta decreases by 0.06.

To explain this phenomenon anecdotally, the authors compare the movement of the DJI and the NIFTY50 in the recent past. Both the DJI and NIFTY50 indices hit their short-term peaks in the last week of January 2018. However, as on date, the NIFTY50 has broken out above its January peak and continues to hover around its all-time high but the DJI has not yet moved above its January peak. In this period between January and mid-August, the maximum drawdown for the DJI from its peak was 12 per cent whereas it was only 10 per cent on the NIFTY50.

To exemplify further, the DJI was down by more than 0.5 per cent on 15 trading days of the 74 trading days from the start of May 2018 till the middle of August 2018. Of these 15 occasions, the NIFTY50 fell by greater than 0.5 per cent only on four occasions in the corresponding subsequent trading session. An instance where the reduction in down beta can be seen starkly is on June 1, 2018. The DJI had closed down by 1.02 per cent on the previous day but the NIFTY50 closed down by 0.37 per cent only in the subsequent trading session. In fact, there have been days where the DJI has fallen by more than 1 per cent but the NIFTY50 managed to close in the green. For example, on June 19, 2018, the DJI had closed down by 1.15 per cent but the NIFTY50 shot up by 0.58 per cent as on the following day's close.

The authors do not get into the reasons for a decline in India's down beta. The recent structural changes in the economy and consequent increase in the flow of domestic funds might explain the phenomenon. However, a reduction of the down beta could have significant real effects. As alluded to by the authors, a significant reduction in down beta could lead to sustained reduction in the cost of capital for Indian companies and help foster investments. In other words, many more projects are likely to become viable due to a reduction in the cost of capital. This could explain, at least partly, the sustained increase in the valuation of Indian companies as the cost of capital and the P/E ratio are inversely related. A lot will depend on whether the phenomenon sustains in the medium and long term.

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