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Behind the 'Down Beta' of Indian markets

In November, I had authored an article in *Business Standard* regarding the reduced 'Down Beta' of Indian markets post demonetisation. This article was based on 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, ISB, Hyderabad. To recap, the 'Beta' of any asset is a term used to quantify the movement of the asset's price with respect to the market. Researchers further classify this Beta into two categories — up market Beta and down market Beta. Here, up Beta measures the Beta of the financial asset on days when the market is up and down Beta measures the Beta of the asset when the market is down. In a nutshell, the authors basically find the following: Post demonetisation, Indian markets don't fall as much as they used to in response to a fall in the global markets. In summary, the argument is that Indian markets have now become relatively less sensitive to global negative shocks while retaining their sensitivity to positive shocks. As is apparent, this is very different from the famous decoupling argument where a market becomes less sensitive to global shocks in general, both positive and negative.

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For any form of business research, a real assessment of the reliability of findings is assessed through an out-of-sample test. This test basically involves studying the data in a time frame not used in the original research and examining if the conclusions hold true there as well. Such a test is considered to be a rigorous one as researchers cannot influence the data unlike an in- sample forecast. In an in-sample test, a researcher can drop outliers in the data or change parameters in order to draw results that can support a pre-determined conclusion. For example, if the researcher is examining data from January to December but finds that the results hold only from February to November, then he/she can conveniently drop the first and the last month before reporting the findings. However, such possibilities are low in out-of -sample forecast.

The authors of the paper examine data from January 1, 2000 to July 31, 2018, in order to draw their conclusions. Hence, the out-of-sample time period that they examine to study whether their conclusion of a reduction in 'Down Beta' of Indian markets holds true is August 1, 2018 to December 31, 2018. In this period, the Dow has fallen from 25,333.82 to 23,327.46 (fall of 7.92 per cent), MSCI World Index has fallen from 2,146.1 to 1,883.90 (fall of 12.2 per cent) whereas the NIFTY50 Index has fallen from 11,346.2 to 10,862.55 (fall of 4.3 per cent). This implies that the NIFTY50 Index has been a rank outperformer in this period of downturn in global markets. Additionally, this has happened in spite of an idiosyncratic shock— that is, the NBFC crisis occurring in the Indian markets. This clearly validates that the observations of the authors hold to a very significant extent.

The authors further look at trading volumes to see the reasons behind why this has happened. Since a large portion of the trading volume in Indian markets occur in the derivatives segment, the authors examine participant-wise volumes here. They observe that there has been a systematic increase in the participation of DII (Domestic Institutional Investors) in the derivatives market in comparison to other types of market participants. The other types of investors in the markets are FII (Foreign Institutional Investors), Proprietary Traders (brokers who trade on their own account) and Clients (brokers who trade via a client's account). By observing a time frame of one year around demonetisation, the authors find that the volume traded by DIIs (as a proportion of total volume traded) increases significantly. This implies that there has been an increase in inflow of capital by DIIs into the market in the time period after demonetisation. On an average, DIIs are less susceptible to global shocks when compared to FIIs. As a result of this, their increased presence in the market in terms of volume could possibly be the reason behind a reduction in the 'Down Beta' of Indian markets.

This increase in volume of DII trading could also be attributed to the increased allocation of funds by retail investors to mutual funds over the past two years. According to data provided by AMFI (Association of Mutual Funds in India), in the two financial years preceding demonetisation, the total fund inflow via mutual funds into the equity market stood at ₹1.20 trillion. In the two years post demonetisation, the same statistic stood at approximately ₹2.15 trillion. This has largely been driven by investing through the SIP route —an average of ₹6,300 crore per month is invested into the market by retail investors post demonetisation. This is almost double in comparison to the average of ₹3,600 crore per month prior to demonetisation. Therefore, it is reasonable to hypothesise that domestic funds have contributed significantly to the phenomenon highlighted in this article.

It is too early to declare with confidence that Indian market's down beta has come down significantly from a long-term standpoint without incremental tests being conducted over time. In case the phenomenon holds, then it is likely to result in lower cost of capital for Indian firms, leading to increased valuations. One has to see when markets will take cognizance of this phenomenon.

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