Structural change, information asymmetry and volatility in Indian stock market: evidence from pre-and-post-COVID-19 outbreak

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Abstract

This paper examines the Indian stock market's interconnection with the stock markets of the top four economies before and after the COVID-19 outbreak. The log-returns of daily data for Sensex, S&P 500, SSE Composite, Nikkei 225 and DAX were used in the study. The log-return series of all stock indices were found to be stationary. The exponential-GARCH model is applied to assess the information asymmetry and to model the volatility spillover on the Indian stock market. The ARCH and GARCH terms were positive and significant during both the pre-COVID and post-COVID outbreak periods representing that market news and previous period variances were significantly increasing the volatility in the market. The ensemble of events during the pre-COVID period confirms the negative significant volatility spillover of bourses on the Indian markets, and continues to be so in the post-COVID period, except in case of the US market where there is a positive significant return and volatility spillover. The portfolio managers, regulators, policymakers and other market participants may consider the change in information transmission during the pre-COVID and post-COVID-19 outbreak phases from these foreign markets to India while making investment-related decisions.

Keywords