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APPLICATION OF GARCH MODELS FOR VOLATILITY MODELLING OF STOCK MARKET RETURNS: EVIDENCES FROM BSE INDIA

Abstract:

The National Stock Exchange and Bombay Stock Exchange are the two major stock exchanges in India. The Bombay Stock Exchange is the first stock exchange of Asia and 10th largest stock exchange in the world in the terms of market capitalisation. Stock markets significantly contributes in the economic development of India. The stock markets have volatile character which results into the uncertainty of the returns, volatility is caused by the variability in speculative market prices and the instability of business performance. Volatility plays a significant role in financial decisions of the investors, managers, policy makers and the researchers as it can assess the risk exposures in their investments and the uncertainty in stocks returns. The risk averse investor avoid investment in highly volatile market. The stock return forecasting leads to volatility forecasting.

This paper has made an attempt to analyse the volatility with reference to Bombay Stock Exchange. The daily data of S&P Sensex 30 has been collected and used to calculate the volatility of stock market in India for last 3 years (April 2016 to March 2019). The preliminary analysis is done on the basis of descriptive statistics Stationery test, Normality test and serial correlation test. Volatility modelling is done by the ARCH and GARCH family models.

The findings of the study will help investors in taking good investment decisions in Indian stock market in the presence of its volatile character.

Keywords:

ARCH Model, Custer Analysis Diversification, Expansion, Generalized ARCH Model (GARCH Model), Growth, Return, Risk

JEL Classification: C55, C19