

ABSTRACT

The VaR measure of risk is used to estimate the risk of 15 indices from the Indian market (including 13 sectoral indices and 2 market indices) under seven methods, which includes Historical, Gaussian, Modified, two variations of Extreme value theory, two variations of GARCH and few expected shortfall techniques. The relative accuracy of the methods is arrived at by back-testing the VaR measures under all methods over a 250 period window. It is found that the simple methods tend to outperform other methods in terms of accuracy. However, they consistently over-estimate risk, while GARCH variations do not over-estimate but fails to capture the actual loss the maximum number of times as compared to the other methods. On the whole, extreme value methods were seen to perform the best both in the terms of accuracy as well as adequacy in covering actual loss. The VaR and CVaR measures were then used to analyze the relative performance of the various sectors of the Indian market as compared to the market index.