

On the Random Walk Characteristics of Stock Returns in India

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An attempt is made in this paper to examine whether stock returns in two premier stock exchanges in India namely, Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) follow a random walk. Towards this end, data on major indices during the period 1997 to 2009 are analyzed by using non-parametric Runs and BDS tests. The findings of the study reveal that the stock returns do not follow a random walk during the sample period.

I Introduction

The behaviour of stock returns has been well-debated and researched in financial economics over the years. Prominently, two extreme views are popular in this context. One view has been that stock returns are generated by a random process and, therefore, it is not possible to predict their future movements based on past information. This is formally stated as the Random Walk Hypothesis (RWH). Validation of this hypothesis implies that the market is informationally efficient (Fama 1991).¹ The other view is the mean-reversion view, according to which the stock returns are mean-reverting and are generated out of a stationary stochastic process. In this study, an attempt is made to investigate empirically the behaviour of stock returns in the context of two premier Indian stock markets namely, Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). The specific focus of the study is to check whether stock returns follow a random walk or not.

Though there are a few studies on Indian stock markets (Sharma and Kennedy 1977, Poshakwale 2002, Chaudhuri and Wu 2003, 2004), this study is justified on the following grounds. First, the available studies refer to 1980's and

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¹ Fama (1970) has done extensive survey of market efficiency. Also see Lo and Mac Kinlay (1988).