

from the official website of Bombay Stock Exchange i.e. www.bseindia.com. With this data set, we computed the daily returns as follows: $(\frac{P_t - P_{t-1}}{P_{t-1}}) * 100$. The results of Runs Test for returns series of SENSEX of Bombay Stock Exchange for the entire are presented in Table 4. Table 4: Runs Test of Daily Returns of SENSEX (January 2003 to December 2012). Variables. Weak form efficiency is one of the degrees of efficient market hypothesis that claims all past prices of a stock are reflected in today's stock price. Similarly, let's assume Apple Inc. (APPL) has beaten analysts' earnings expectation in the third quarter consecutively for the last five years. Jenny, a buy-and-hold investor, notices this pattern and purchases the stock a week before it reports this year's third quarter earnings in anticipation of Apple's share price rising after the release. Unfortunately for Jenny, the company's earnings fall short of analysts' expectations. The theory states that the market is weakly efficient because it doesn't allow Jenny to earn an excess return by selecting the stock based on historical earnings data. This paper investigates the use of feed forward neural networks for testing the weak form market efficiency. In contrast to approaches that compare out-of-sample predictions of non-linear models to... The procedure is used to test for predictive power in FTSE-MIB index of the Italian stock market. Keywords. Random walk Market efficiency Multiple testing scheme Resampling methods. This is a preview of subscription content, log in to check access. Preview. Unable to display preview.

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SASTech - Technical Journal of RUAS
Year : 2014, Volume : 13, Issue : 1
First page : (104) Last page : (108)
Print ISSN : 2249-5924. Online ISSN : 2582-2403.

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Testing for the weak form of market efficiency in bombay stock exchange

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Online published on 18 February, 2020.

Abstract

Stock market behaviour has been an important topic of interest and study over the last many years. The efficient market hypothesis (EMH) and theories around randomness of stock prices as well as alternatives to randomness have been researched and documented. If a market is efficient then information is quickly absorbed into the current price and there is no more gain to be made from the security concerned. In an informationally inefficient market, the same is not true and abnormal returns can be made by investors who do indeed have an advantage of information. Initial studies on stock market efficiency suggested markets were efficient and the Random walk theory held true. Further research has shown exceptions to Random Walk Hypothesis (RWH) do exist as shown by empirical research. Another prominent work on efficient markets is the book "Random walk down Wall Street". On the contrary there is evidence from the action of investment leaders such as Warren Buffet who have had consistent gains on the stock market much beyond the normal stock market returns.

There is a curiosity on part of the researcher to investigate whether the Indian stock market follows a random behaviour or not. For the purpose of analysis, three indices from the BSE have been selected. The time period for analysis is Sept 2010-Sept 2013. Two parametric tests and one non-parametric test have been used for determining the nature of the market, observations are tabulated and conclusions are arrived at. The parametric tests include the L-Jung Box Test and the Lo-Mackinlay Variance Ratio Test. The Ljung Box test is a type of statistical test of whether autocorrelations of a group of lags are tested rather than a test at each distinct lag of a time series of data. The second parametric test used is the Lo-McKinlay Variance ratio test which computes the variance ratios for the selected three indices and compares with the critical values for obtained Z scores to either accept or reject the randomness hypothesis. Finally the single non parametric test called the Run Test uses the number of actual versus estimated or expected runs to arrive at a Z score.

The results clearly show that for the time period selected, the three indices do not exhibit random walk behaviour. In the absence of random walk behaviour, therefore there are undervalued securities which the investors can buy and overvalued securities which the investors can sell, if they are able to predict the movement of stock market prices. This paper confines the scope of the research into formulating hypotheses regarding randomness in the values of the indices selected, for the said time period. Further, the paper does not try to guess what might be the cause or reason for any nonrandomness.

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Keywords

Efficient Market Hypothesis, Random Walk, Parametric Test, Non-Parametric Test.

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To analyze the Weak form efficiency of Indian Stock market by taking sample of SENSEX of Bombay Stock Exchange. The data used in this study consisted of the daily closing points of SENSEX for the period of ten years from January 2003 to December 2012 compiled from the official website of Bombay Stock Exchange i.e. www.bseindia.com. With this data set, we computed the daily returns as follows: $(\frac{P_t - P_{t-1}}{P_{t-1}}) * 100$. The results of Runs Test for returns series of SENSEX of Bombay Stock Exchange for the entire are presented in Table 4. Table 4: Runs Test of Daily Returns of SENSEX (January 2003 to December 2012). Variables. Weak form efficiency is one of the degrees of efficient market hypothesis that claims all past prices of a stock are reflected in today's stock price. Similarly, let's assume Apple Inc. (APPL) has beaten analysts' earnings expectation in the third quarter consecutively for the last five years. Jenny, a buy-and-hold investor, notices this pattern and purchases the stock a week before it reports this year's third quarter earnings in anticipation of Apple's share price rising after the release. Unfortunately for Jenny, the company's earnings fall short of analysts' expectations. The theory states that the market is weakly efficient because it doesn't allow Jenny to earn an excess return by selecting the stock based on historical earnings data. This paper investigates the use of feed forward neural networks for testing the weak form market efficiency. In contrast to approaches that compare out-of-sample predictions of non-linear models to... The procedure is used to test for predictive power in FTSE-MIB index of the Italian stock market. Keywords. Random walk Market efficiency Multiple testing scheme Resampling methods. This is a preview of subscription content, log in to check access. Preview. Unable to display preview.