

Executive Summary of The Report of The Minor Research Project Submitted to the University Grants Commission, South West Regional Office, Bangalore by Dr. Philip Varughese(Porattoor), Associate Professor, Dept. of Commerce, St.Thomas College, Kozhencherry

WEAK FORM INFORMATIONAL EFFICIENCY OF THE INDIAN STOCK MARKET

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An efficient, articulate and developed financial system is indispensable for the rapid economic growth of any country or economy. The Indian capital market is looking very promising in the present times. The policies regarding the capital market have been revised and the factor of transparency and investor's security is considered as the most important aspect of the market. The previous decade saw access to global capital becoming easier for the Indian corporate sector and size multiplied through some of the largest global acquisitions by Indian conglomerates. The feasibility of stock market analysis primarily depends upon the extent of market efficiency. Therefore, the study attempts to test the behavior of movements in stock prices leading to the assessment of the market efficiency in the Indian stock market. It is done by testing the randomness of both monthly market return and monthly security return.

Monthly market return during the period of analysis. The empirical results disclose that:-

- One of the basic assumptions of random walk model is that the distribution of the return series should be normal. The descriptive statistics of the market return shows negative skewness and negative kurtosis, but both values are near to zero.
- To confirm the distribution pattern of the market return series is normal, Kolmogorov-Smirnov Goodness of Fit test is used; the result shows an insignificant one and indicates that the frequency distribution of the monthly market return of Indian stock market follows normal distribution
- A normal Q- Q plot of market return during the period is also used to check the normality condition and found that the observed values are falling around the expected values, it is confirmed.
- The results of Run test show that the successive price changes are independent and the series is random during the study period.

- The results of auto correlation tests of market return during the period disclose the presence of zero autocorrelation and indicate that the market return series follows a serial independence between the values. The Ljung- Box statistics tests the joint significance of auto correlations at different lags, which shows the autocorrelations are not jointly significant at any stage.
- The Auto Correlation Function during the period shows that auto correlations at all lags are within the two standard error limits.
- The results of the Auto-Regression tests shows that auto regression coefficient during the period of analysis is not significant.

Monthly Market Return during the Sub-Periods. The empirical analysis conducted during different sub-periods discloses that-

- The Auto Correlation Test of market return during the first sub period shows that auto-correlations at all lags except one lag are within the two standard error limits. The Ljung-Box statistics test also shows that the autocorrelations are not jointly significant at any stage.
- The Auto Correlation Function of market return during this sub-period shows that all lags except one lag are within the two standard error limits.
- The results of the Auto-Regression tests during this period shows that the AR1 are not significant.

During the second sub-period

- During the second sub- period the auto correlations are not significant at any lag and the Ljung- Box statistics test also shows that the autocorrelations are not jointly significant at any stage.
- The Auto Correlation Function of the market return during the period shows that auto correlations at all lags are within the two standard error limits.
- The results of the Auto-Regression tests during this period shows that the AR1 are not significant.

During the third sub-period

- During the third sub- period the auto correlations are not significant at any lag and the Ljung- Box statistics test also shows that the autocorrelations are not jointly significant at any stage.
- The Auto Correlation Function of the market return during the period shows that the auto correlations at all lags are within the two standard error limits.
- The results of the Auto-Regression tests during this period shows that the AR1 are not significant .

The application of parametric and non-parametric tests confirms that the monthly market return follows randomness during the whole and sub-periods of the analysis.

For a better clarity of the results obtained under the analysis of the monthly market return, the monthly security return of the sample companies are also analysed during the period of analysis disclose that-

- While applying the K-S Tests for each security, the results show that, 70% of securities follows normality in the market.
- Run Test reveals that only in three cases the Z value is significant at 5 per cent level of significance. In all other cases it falls below the limit and is insignificant. It shows the serial independence of security returns in Indian stock market.
- The auto correlation tests show that the coefficients are significant with a positive or negative sign only at a few lags in some companies. The results of L-B statistics reveal that the auto correlation coefficients of all the lags are jointly significant in two companies, and the continuous thirteen lags are jointly significant in one company. It is found that there is no serial correlation of monthly security returns in majority of the lags during the period of study.
- The Auto Correlation Function during the study period for each of the security is also worked out and it validates the randomness of security return.

The application of parametric and non-parametric tests confirms that the monthly security return follows randomness during the period of study.

Market efficiency is a concept that explains how accurately stock prices reflect the information available to the public. The results of the study over the period based on monthly market return and monthly security return to test the weak form market efficiency in India confirms that the returns show randomness and the market is in weak form efficient. This signifies that changes in stock prices show independent behavior and are dependent on new pieces of information that are received but within themselves are independent of each other. Each price change is independent of other prices changes because each change is caused by a new piece of information.

As an investor, before making any investment decision market efficiency can be considered for potential investment opportunities. A change occurs in the price of stock only because of certain changes in the economy, Industry or Company. Information about these changes alters the stock prices immediately and the stock moves to a new level depending on the type of information. This rapid shift to a new equilibrium level whenever new information is received is a recognition of the fact that all information which is known is fully reflected in the price of the stock.

