

## A multi-pronged approach to assess informational efficiency of the Colombo Stock Exchange

P. G. S. Upeksha\* and Suren Peter

*Department of Industrial Management, Faculty of Science,  
University of Kelaniya, Sri Lanka  
\*Email: pgsupeksha@gmail.com*

With the dynamic nature of the capital market environment, understanding informational efficiency of financial markets has become crucial. Efficient market is one in which prices fully reflect the available information. An implication of an efficient market is that no excess returns can be made from the available information, since it has already been reflected on the current prices. Efficient markets where information can be trusted, channeled to market participants, absorbed and reflected in the stock prices, are important characteristics that global investors look for when deciding to invest, especially in the emerging markets. The objective of this study is to assess the market efficiency of the Colombo Stock Exchange (CSE), Sri Lanka, which is one of the emerging markets in the world. In the post millennium period, a number of studies that have assessed market efficiency at the CSE. However, after the end of the Sri Lankan civil war, the economy underwent dramatic change with the indices showing rapid growth and achieving new heights. Therefore, due to the difference in the sentiment and behavior of the market and investors post conflict, it would be prudent to review whether the results seen previously for weak form and semi-strong form of efficiency still holds.

In order to test for weak form efficiency, existence of any correlations of share returns are evaluated. This is done by testing the autocorrelation nature of the selected time series. In order to assess semi-strong efficiency, 'Event study' methodology is applied. In event study, the following approaches have been used to derive the abnormal returns. *Arbitrage Pricing Theory (APT) Model* is a multifactor model. It permits the researchers to choose the best factors. However, it cannot explain variation in asset return in terms of a limited number of easily identifiable factors. *Capital Asset Pricing Model (CAPM)* accounts for systematic risk. However, it imposes an additional restriction (the intercept equals the risk-free rate) that the variance of the error will be larger than in the market model. *Market Model* is the vastly used and widely accepted method in short return windows in the event studies. Market Model usually outperforms CAPM. *GARCH Model* estimates volatility. It is a preferred method because, with asset returns volatility seems to vary during certain periods of time. It further aims to minimize errors in forecasting by accounting for errors in prior forecasting, enhancing the accuracy of ongoing predictions.

Taking into consideration the context of the local stock exchange, market participation, and institutional activity, two alternative methods were identified to derive the abnormal returns, i.e. *Market Model* and *GARCH Model*. The study expects to use dividend announcements as the primary informational source, and it is expected to identify whether evidence of abnormal returns is shown after the announcement, in order to determine whether CSE is semi-strong efficient.

**Keywords:** *Colombo Stock Exchange, Event study, GARCH, Market efficiency, Market mode*