

MULTIVARIATE STATISTICAL ANALYSIS OF STOCK BEHAVIORS IN THE COLOMBO STOCK EXCHANGE, SRI LANKA

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The stock market is a place where financial assets are being traded. In this process, one of the important tasks of investors is to select particular assets in particular sectors based on the current and previous market performances. For this, they can consider different criteria to select the particular stocks such as long-term market movements, financial health and profit ratios of the company, and the volatility of stocks. This study attempts to analyze the behavior of stocks of a particular company by using macroeconomic variables such as unemployment rate, inflation rate, exchange rates, investment, and industrial production growth rate as well as company specific variables including share volume, turnover, listed and traded securities. Relevant data were obtained from Colombo Stock Exchange (CSE) and annual reports of Central Bank of Sri Lanka and Commercial Bank of Ceylon PLC (CBC) in Sri Lanka over the period from 2004 to 2011. Multivariate statistical techniques such as cluster analysis and principal component analysis were mainly used for the data analysis. Three homogeneous groups could be seen based on cluster analysis result and it reveals that the bank, finance and insurance sectors are significant among the twenty sectors in CSE. Moreover, the CBC is shown as the most significant company in the aforesaid sector. The Principal Component result shows that, inflation rate, industrial production growth rate, growth in income and growth in total assets are the dominating factors for the company's stock behaviors. Therefore, it can be concluded that all the selected macro and micro-economic variables are involved in affecting the behavior of the company's stocks.

Keywords: Cluster analysis, Principal component analysis, Stock trading