

## Statistical Analysis of the Malaysian Stock Exchange Index

*Boon Leong Lan and Ying Oon Tan*  
*Monash University*  
*School of Engineering and Science*  
*2 Jalan Kolej*  
*46150 PJ, Selangor*  
*Malaysia*

### Abstract

Daily changes in the logarithm of the Kuala Lumpur Composite Index (KLCI) were analyzed on an annual basis from 1988 to 2002. For each year, we found that the distribution of the changes is well fitted by a non-Gaussian stable distribution. The four parameters of the fitted stable distribution are year-dependent. The annual mean value and autocorrelation function are also year-dependent. Each autocorrelation function is a rapidly decaying function of the time delay with a correlation time of at most 5 days. These year-dependent results show that the underlying stochastic process of the daily change in the logarithm of the index is a nonstationary process. We have also calculated the power spectrum of the logarithm of the daily index and found that it is  $1/f^2$  for each year.