Identifying Distributions of Selected Stock Returns

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ABSTRACT

Return distribution of stock markets has an immense interest in current financial world. Many approaches have proposed to model the return distribution of stock market index. In this study return distributions of three different stock markets, a highly volatile market (USA market), a stable market (Australian market) and an emerging market (Colombo Stock Exchange) were considered. The study period consist of 5 years daily data from 1st August 2007 to 31st July 2012 of three stock merket indices, namely GSPC, AORD and ASPI. The results obtained show that the Scaled t distribution is the most suitable distribution to model the returns of all considered stock markets; while the Normal/Gaussian distribution, Student's t distribution are not suitable for this purposes.

Key Words: Return Distribution, Gaussian Distribution, Scaled t Distribution

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Journal of Economic Literature (JEL) Classification Number: G1, G00

1. Introduction

Predictability of financial markets depicts crucial importance in recent world. Among all financial markets, stock market exhibits great interest due to profitability and development of many techniques and development of all most all the countries. Currently the predictability of stock market index is one of the major interests of many researchers.(for instance, Alencar and Safadi (2012); Pan et al. (2003); Tilakaratne (2008); Tilakaratne et al. (2008b); Tilakaratne et al. (2010)). Finding distribution of stock returns will be useful in building prediction models for stock indices. Therefore, identifying an appropriate distribution to model the return distribution of stock index becomes a vital important factor nowadays.

Over the last few decades many researchers have attempted to find a suitable distribution to model

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