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**DAY EFFECT IN RETURN AND VOLATILITY OF THE
SELECTED SECTOR INDICES IN COLOMBO STOCK
EXCHANGE**

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Thesis Submitted in partial fulfillment of the requirements for the degree Master of
Science in Financial Mathematics

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Department of Mathematics

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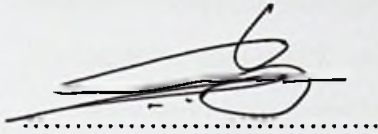
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Declaration of the Candidate and Supervisor

The work submitted in this thesis is the results of my own investigation, except where otherwise stated.

It has not already been accepted for any degree, and is also not been concurrently submitted for any other degree.



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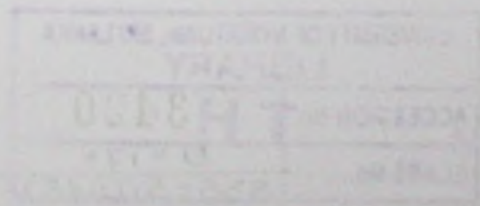
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Abstract

One of the significant anomalies of Efficient Market Hypothesis (EMH) is the seasonal effect. The existence of the seasonal effect implies market inefficiency. Most of the investors, especially international investors are more concerned with the market efficiency. The most common seasonal anomalies are *the Day of the week effect*, *Day of the month effect*, *week of the month* and *the month of the year effect*. According to past empirical studies Day of the week is the most talked anomaly among those. When the day of the week effect exists, investors can earn abnormal profit by buying the stock in low return day of the week and selling them at a higher return day of the week.

In Sri Lankan context, all the studies on finding the existence of day of the week effects in stock return and volatility in Colombo Stock Exchange (CSE) are conducted for the whole market using All Share Price Index (ASPI). As all those studies mainly focused on ASPI and no studies focused on sector wise, this study examines the same problem focusing two sectors: Hotels and Travels (H&T), Investment Trusts (INV) in CSE. The daily returns for each sector over a period of two years from 2014 to 2016 are tested using three types of conditional time varying models, namely GARCH, EGARCH, and GJR-GARCH. The study finds strong evidence for the presence of day of the week effect in stock returns and in volatility of the two sectors. Among the five days of the week Thursday returns are negative in H&T and it is significantly higher than that of other days of the week. Only Monday returns are significant in INV and it is negative. While Monday volatility is significantly positive and higher than that of other days of the week in H&T, Thursdays and Fridays volatility are significantly different from zero and negative in INV.

Key Words: Volatility, Stock Return, All share price index, GARCH, EGARCH, Colombo Stock Exchange, Day of the week effect.

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LIST OF ABBREVIATIONS

Abbreviation	Description
ASPI	All Share Price Index
CSE	Colombo Stock Exchange
EMH	Efficient Market Hypothesis
NYSE	New York Stock Exchange
BSE	Bombay Stock Exchange
SAARC	South Asian Association for Regional Cooperation
BET-C	Bucharest Exchange Trading -Composite Index
DWG	Dow Jones Global Total Stock Market Index
OLS	Ordinary Least Square
GARCH	Generalized Auto Regressive Conditional Heteroscedasticity
ARCH	Auto Regressive Conditional Heteroscedasticity
QMLE	Quasi Maximum Likelihood Estimation
KLCI	Kuala Lumpur Composite Index
EGARCH	Exponential Generalized Auto Regressive Conditional Heteroscedasticity
TGARCH	Threshold Generalized Auto Regressive Conditional Heteroscedasticity
DF	Dickey-Fuller
ADF	Augmented Dickey-Fuller
AIC	Akaike's Information Criterion
BIC	Bayesian Information Criterion
GJR GARCH	Glosten Jagannathan Runkle Generalized Auto Regressive Conditional Heteroscedasticity

H&T	Hotels and Travels
INV	Investment Trusts
SBA	Share Brokers' Association
CSBA	Colombo Share Brokers' Association
WTC	World Trade Centre