THE BEHAVIOR OF SECTOR RETURN AND VOLATILITY AROUND BUDGET: EVIDENCE FROM COLOMBO STOCK MARKET

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Degree of Master of Science

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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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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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I endorse the declaration by the candidate,

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Abstract

The study examines the behavior of stock returns and volatility in Diversified Holdings (DIV) sector of CSE around three annual government budget announcements. The daily returns of the sector over a period of three years from 1st April 2015 to 29th March 2018 are tested using three types of conditional time varying models, namely GARCH, EGARCH and GJR-GARCH. Three cases are considered using the dummy variable for n=5, 10 and 15 with three scenarios, n number of days on pre- budget, pre and post budget, post- budget for each case. Seven models are fitted except pre-budget with n=10 and pre-budget with n=15. This study finds strong evidence for the presence of budget announcement effect in stock returns and volatility of the sector. Returns during all considered windows are significantly negative and it implies that significant reduction in return. This reduction is increasing when getting closer to the budget date. Due to this effect investors can earn an abnormal return by buying stocks before five days of the budget announcement or after five days of the budget announcement and selling stocks after 15 days from the budget date.

Key Words: Volatility, Stock Return, All share price index, GJR-GARCH, Budget, pre, post

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LIST OF ABBREVIATIONS

Abbreviation	Description
ADF	Augmented Dickey-Fuller
AR	Auto Regressive
ARCH	Auto Regressive Conditional Heteroscedasticity
ASPI	All Share Price Index
BSE	Bombay Stock Exchange
CAAR	Cumulative Average Abnormal Returns
CSBA	Colombo Share Brokers' Association
CSE	Colombo Stock Exchange
DF	Dickey-Fuller
DFE	Dynamic Fixed Effects
DIV	Diversified holdings
DNB	Department of National Budget
EGARCH	Exponential Generalized Auto Regressive Conditional Heteroscedasticity
ETF	Exchange Traded Funds
GARCH	Generalized Auto Regressive Conditional Heteroscedasticity
GJR GARCH	Glosten Jagannathan Runkle Generalized Auto Regressive Conditional Heteroscedasticity
MA	Moving Average
MVRM	Multi Variate Regression Model
NSE	New York Stock Exchange
OLS	Ordinary Least Square

SBA   Share Brokers' Association

TGARCH   Threshold Generalized Auto Regressive Conditional Heteroscedasticity

WTC   World Trade Centre