

**IMPACT OF MACRO-ECONOMIC VARIABLES ON
STOCK MARKET RETURNS AND SECTOR RETURNS
USING MULTIVARIATE TIME SERIES APPROACH**

Munagama Alias Hettiarachchige Thushara Sanjeewani

(168842C)

Degree of Master of Science in Business Statistics

Department of Mathematics

University of Moratuwa

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Dissertation submitted in partial fulfillment of the requirements for the
degree the Master of Science in Business Statistics

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DECLARATION OF THE CANDIDATE AND SUPERVISOR

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Name: M. H. T. Sanjeevani

The above candidate has carried out research for the Masters Dissertation under my supervision.

Name of the supervisor: Senior Professor T S G Peiris

.....
Senior Professor in Applied Statistics
Department of Mathematics
Faculty of Engineering
University of Moratuwa

ABSTRACT

This study investigates the effects of selected six macroeconomics variables: inflation rate, economic growth, exchange rate, interest rate, money supply and international crude oil prices on stock market and sector returns in the Colombo Stock Exchange using quarterly data from 1st quarter of 1996 to 4th quarter of 2018. All series were converted to logarithm form to reduce heteroscedasticity. Augmented Dickey Fuller and Phillip-Perron tests confirmed that all variables have unit root and integrated at first order. It was found that there is a long term relationship between macroeconomic variables and stock market and sector returns, separately and also have equilibrium long term relationship. Furthermore, short term dynamics between macroeconomic variables and stock market and sector returns were also identified using VECM. Economic growth and interest rate are significant and inflation, exchange rate, money supply and international crude oil price are not significant in explaining stock market returns in the long term. However, no macroeconomic variable is significant in explaining stock market returns in the short term. Laws and regulations governing the operations of the stock exchange should be strengthened to protect the interest of buyers and sellers on the stock market. This will increase the confidence of investors as well as boost domestic investor participation and enlarge stock ownership base in the economy.

Key words: cointegration, macroeconomic variables, stock market return, sector returns, VECM

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TABLE OF CONTENTS

	Page
Declaration of the candidate and Supervisor	ii
Abstract	iii
Acknowledgement	iv
Table of Contents	v
List of Figures	x
List of Tables	xi
List of Abbreviations	xv
List of Appendices	xvi
1 Introduction	1
1.1 Background of the Study	1
1.2 Stock Market Return	2
1.3 Sector Returns	2
1.4 Macroeconomic Variables	3
1.5 Significance of the Dissertation	3
1.6 Problem Statement	4
1.7 Objectives of the Dissertation	4
1.8 Outline of the Dissertation	4
2 Literature Review	5
2.1 The Impact of Macroeconomic Variables on Stock Market Returns and Sector Returns	5
2.2 Empirical Evidence from Developed Economies	5
2.3 Empirical Evidence from Developing Countries in Asia - South Asian Countries	6
2.4 Empirical Evidence from Developed Countries in Asia – Southeast Asian Countries	8
2.5 Empirical Evidence from Developed Countries in Asia - Middle East Countries	10
2.6 Empirical Evidence from Sri Lanka	11
2.7 Summary of Chapter 2	11
3 Materials and Methods	13
3.1 Secondary Data	13
3.2 Sources of data	14
3.3 Log Transformation	14
3.4 Model Specification	15

3.5	Stationary	15
3.5.1	Augmented Dickey-Fuller Test	16
3.5.2	Phillips-Perron Test	16
3.6	Cointegration Technique	17
3.7	Error Correction Method	18
3.8	Stock Market Indices and Research Methodologies	19
4	Exploratory Data Analysis	20
4.1	Introduction	20
4.2	Temporal variability of Defined Variables	20
4.3	Proportion of Percentage Variance	24
4.4	Temporal Variability of Variables after adjusting Logarithm	25
4.4.1	Temporal variability of Dependent Variables after adjusting Logarithm	25
4.4.2	Temporal Variability of Independent variables after adjusting Logarithms	28
4.5	Descriptive Statistics of Log Transformed Data	30
4.6	Proportion of Variance after Applying Logarithm	31
4.7	Test for Stationary	32
4.7.1	Correlograms	32
4.7.2	Results of Unit Root Tests	33
4.8	Summary of Chapter 4	35
5	Impact of Macroeconomic Variables on Stock Market Returns and Sector Returns	36
5.1	The Relationship between Macroeconomic Variables and ASPI	36
5.1.1	Cointegration between Macroeconomic Variables and ASPI	36
5.1.2	Long Term Relationship between Macroeconomic variables and ASPI	38
5.1.3	The Results of VECM on Macroeconomic Variables and ASPI	38
5.1.4	Short Term Relationship between Macroeconomic Variables and ASPI	40
5.2	The Relationship between Macroeconomic Variables and BFI	40
5.2.1	Cointegration between Macroeconomic Variables and BFI	40
5.2.2	Long term Relationship between Macroeconomic Variables and BFI	41
5.2.3	The Results of VECM on Macroeconomic Variables and BFI	42
5.2.4	Short Term Relationship between Macroeconomic Variables and BFI	44
5.3	The Relationship between Macroeconomic Variables and BFT	44
5.3.1	Cointegration between Macroeconomic Variables and BFT	44
5.3.2	Long Term Relationship between Macroeconomic Variables and BFT	45
5.3.3	The results of VECM on Macroeconomic Variables and BFT	46

5.3.4	Short Term Relationship between Macroeconomic Variables and BFT	47
5.4	The Relationship between Macroeconomic Variables and C&E	48
5.4.1	Cointegration between Macroeconomic Variables and C&E	48
5.4.2	Long Term Relationship between Macroeconomic Variables and C&E	49
5.4.3	The Results of VECM on Macroeconomic Variables and C&E	49
5.4.4	Short Term Relationship between Macroeconomic Variables and C&E	51
5.5	The Relationship between Macroeconomic Variables and C&P	51
5.5.1	Cointegration between Macroeconomic Variables and C&P	51
5.5.2	Long Term Relationship between Macroeconomic Variables and C&P	52
5.5.3	The Results of VECM on Macroeconomic Variables and C&P	53
5.5.4	Short Term Relationship between Macroeconomic Variables and C&P	54
5.6	The Relationship between Macroeconomic Variables and DIV	55
5.6.1	Cointegration between Macroeconomic Variables and DIV	55
5.6.2	Long Term Relationship between Macroeconomic Variables and DIV	56
5.6.3	The Results of VECM on Macroeconomic Variables and DIV	56
5.6.4	Short Term Relationship between Macroeconomic Variables and DIV	58
5.7	The Relationship between Macroeconomic Variables and F&T	58
5.7.1	Cointegration between Macroeconomic Variables and F&T	58
5.7.2	Long Term Relationship between Macroeconomic Variables and F&T	59
5.7.3	The Results of VECM on Macroeconomic Variables and F&T	60
5.7.4	Short Term Relationship between Macroeconomic Variables and F&T	61
5.8	The Relationship between Macroeconomic Variables and H&T	62
5.8.1	Cointegration between Macroeconomic Variables and H&T	62
5.8.2	Long Term Relationship between Macroeconomic Variables and H&T	63
5.8.3	The Results of VECM on Macroeconomic Variables and H&T	64
5.8.4	Short Term Relationship between Macroeconomic Variables and H&T	65
5.9	The Relationship between Macroeconomic Variables and INV	65
5.9.1	Cointegration between Macroeconomic Variables and INV	66
5.9.2	Long Term Relationship between Macroeconomic Variables and INV	66
5.9.3	The Results of VECM Results on Macroeconomic Variables and INV	67
5.9.4	Short Term Relationship between Macroeconomic Variables and INV	68
5.10	The Relationship between Macroeconomic Variables and L&P	69
5.10.1	Cointegration between Macroeconomic Variables and L&P	69
5.10.2	Long Term Relationship between Macroeconomic Variables and L&P	70

5.10.3	The Results of VECM on Macroeconomic Variables and L&P	70
5.10.4	Short Term Relationship between Macroeconomic Variables and L&P	72
5.11	The Relationship between Macroeconomic Variables and MFG	72
5.11.1	Cointegration between Macroeconomic Variables and MFG	72
5.11.2	Long Term Relationship between Macroeconomic Variables and MFG	73
5.11.3	The Results of VECM on Macroeconomic Variables and MFG	74
5.11.4	Short Term Relationship between Macroeconomic Variables and MFG	75
5.12	The Relationship between Macroeconomic Variables and MTR	75
5.12.1	Cointegration between Macroeconomic Variables and MTR	76
5.12.2	Long Term Relationship between Macroeconomic Variables and MTR	77
5.12.3	The Results of VECM on Macroeconomic Variables and MTR	77
5.12.4	Short Term Relationship between Macroeconomic Variables and MTR	79
5.13	The Relationship between Macroeconomic Variables and OIL	79
5.13.1	Cointegration between Macroeconomic Variables and OIL	79
5.13.2	Long Term Relationship between Macroeconomic Variables and OIL	80
5.13.3	The Results of VECM on Macroeconomic Variables and OIL	81
5.13.4	Short Term Relationship between Macroeconomic Variables and OIL	82
5.14	The Relationship between Macroeconomic Variables and PLT	83
5.14.1	Cointegration between Macroeconomic Variables and PLT	83
5.14.2	Long Term Relationship between Macroeconomic Variables and PLT	84
5.14.3	The Results of VECM Results on Macroeconomic Variables and PLT	84
5.14.4	Short Term Relationship between Macroeconomic Variables and PLT	86
5.15	The Relationship between Macroeconomic Variables and S&S	86
5.15.1	Cointegration between Macroeconomic Variables and S&S	86
5.15.2	Long Term Relationship between Macroeconomic Variables and S&S	87
5.15.3	The Results of VECM on Macroeconomic Variables and S&S	88
5.15.4	Short Term Relationship between Macroeconomic Variables and S&S	89
5.16	The Relationship between Macroeconomic Variables and SRV	89
5.16.1	Cointegration between Macroeconomic Variables and SRV	90
5.16.2	Long Term Relationship between Macroeconomic Variables and SRV	91
5.16.3	The Results of VECM on Macroeconomic Variables and SRV	91
5.16.4	Short Term Relationship between Macroeconomic Variables and SRV	93
5.17	The Relationship between Macroeconomic Variables and TRD	93
5.17.1	Cointegration between Macroeconomic Variables and TRD	93

5.17.2	Long Term Relationship between Macroeconomic Variables and TRD	94
5.17.3	The Results of VECM on Macroeconomic Variables and TRD	95
5.17.4	Short Term Relationship between Macroeconomic Variables and TRD	96
5.18	Summary Results of the Cointegration Tests and the Results of VECM	97
6	Conclusions and Recommendations	100
6.1	Conclusions	100
6.2	Recommendations	101
	References	102
	Appendix I: Correlogram of Variables	104

LIST OF FIGURES

	Page
<i>Figure 4.1:</i> Plot of Time-Series data of Dependent Variables	23
<i>Figure 4.2:</i> Plot of Time-Series data of the Independent Variables	23
<i>Figure 4.3:</i> Plot of Time-Series data of the independent variables after adjusting Logarithms	27
<i>Figure 4.4:</i> Plot of Time-Series data of dependent variables after adjusting Logarithms	29

LIST OF TABLES

	Page
Table 1.1: Sector Indices and Codes	3
Table 3.1 Description of Selected Variables.....	13
Table 3.2: Sources of Data	14
Table 3.3: Arrangement of data	14
Table 4.1 Proportion of variance in each variable	24
Table 4.2: Proportion of variance in independent variables	24
Table 4.3: Proportion of variance in each variable	30
Table 4.4: Descriptive statistics for the dependent variables.....	31
Table 4.5: Proportion of variance after applying Log transformation to dependent variables	31
Table 4.6: Proportion of variance after applying Log transformation to the independent variables	32
Table 4.7: The Results of Unit Root Tests using Augmented Dickey-Fuller Test	33
Table 4.8: The Results of Unit Root Tests using Phillips-Perron Test	34
Table 5.1: The Maximum Lag Length of Macroeconomic Variables and ASPI.....	36
Table 5.2: The Results Johansen Cointegration Test on Macroeconomic Variables and ASPI.....	37
Table 5.3: Cointegration Equation on Macroeconomic Variables and ASPI	38
Table 5.4: The Results of VECM on Macroeconomic Variables and ASPI.....	38
Table 5.5: The Results of Wald Test on Macroeconomic Variables and ASPI.....	40
Table 5.6: The Maximum Lag Length of Macroeconomic Variables and BFI	40
Table 5.7: The Results of Johansen Cointegration Test on Macroeconomic Variables and BFI.....	41
Table 5.8: Cointegration Equation on Macroeconomic Variables and BFI.....	42
Table 5.9: The results of VECM on Macroeconomic Variables and BFI.....	42
Table 5.10: The Results of Wald Test on Macroeconomic Variables and BFI	44
Table 5.11: The Maximum Lag Length of Macroeconomic Variables and BFT	44
Table 5.12: The Results of Johansen Cointegration Test on Macroeconomic Variables and BFT	45
Table 5.13: Cointegration Equation on Macroeconomic Variables and BFT.....	45
Table 5.14: The results of VECM on Macroeconomic Variables and BFT.....	46
Table 5.15: The Results of Wald Test on Macroeconomic Variables and BFT	47

Table 5.16: The Maximum Lag Length of Macroeconomic Variables and C&E	48
Table 5.17: The Results of Johansen Cointegration Test on Macroeconomic Variables and C&E.....	48
Table 5.18: Cointegration Equation on Macroeconomic Variables and C&E.....	49
Table 5.19: The Results on Macroeconomic Variables and C&E	49
Table 5.20: The Results of Wald Test on Macroeconomic Variables and C&E	51
Table 5.21: The Maximum Lag Length of Macroeconomic Variables and C&P.....	51
Table 5.22: The Results of Johansen cointegration Test on Macroeconomic Variables and C&P.....	52
Table 5.23: Cointegration Equation on Macroeconomic Variables and C&P	52
Table 5.24: VECM results on Macroeconomic Variables and C&P	53
Table 5.25: Wald Test results on Macroeconomic Variables and C&P	54
Table 5.26: The Maximum Lag Length of Macroeconomic Variables and DIV.....	55
Table 5.27: The Results of Johansen Cointegration Test on Macroeconomic Variables and DIV.....	55
Table 5.28: Cointegration Equation on Macroeconomic Variables and DIV	56
Table 5.29: The Results of VECM on Macroeconomic Variables and DIV	57
Table 5.30: Wald Test results on Macroeconomic Variables and DIV	58
Table 5.31: The Maximum Lag Length of Macroeconomic Variables and F&T	58
Table 5.32: The Results of Johansen Cointegration Test on Macroeconomic Variables and F&T	59
Table 5.33: Cointegration Equation on Macroeconomic Variables and F&T	59
Table 5.34: The Results of VECM on Macroeconomic Variables and F&T.....	60
Table 5.35: Wald Test results on Macroeconomic Variables and F&T.....	61
Table 5.36: The Maximum Lag Length of Macroeconomic Variables and H&T	62
Table 5.37: The Results of Johansen Cointegration Test on Macroeconomic Variables and H&T	62
Table 5.38: Cointegration Equation on Macroeconomic Variables and H&T.....	63
Table 5.39: The Results of VECM on Macroeconomic Variables and H&T	64
Table 5.40: Wald Test results on Macroeconomic Variables and H&T	65
Table 5.41: The Maximum Lag Length of Macroeconomic Variables and INV.....	65
Table 5.42: The Results of Johansen Cointegration Test on Macroeconomic Variables and INV.....	66
Table 5.43: Cointegration Equation on Macroeconomic Variables and INV	67

Table 5.44: The Results of VECM results on Macroeconomic Variables and INV	67
Table 5.45: Wald Test results on Macroeconomic Variables and INV	68
Table 5.46: The Maximum Lag Length of Macroeconomic Variables and L&P	69
Table 5.47: The Results of Johansen Cointegration Test on Macroeconomic Variables and L&P	69
Table 5.48: Cointegration Equation on Macroeconomic Variables and L&P	70
Table 5.49: The Results of VECM on Macroeconomic Variables and L&P	70
Table 5.50: Wald Test results on Macroeconomic Variables and L&P	72
Table 5.51: The maximum Lag Length of Macroeconomic Variables and MFG	72
Table 5.52: The results of Johansen Cointegration Test on Macroeconomic Variables and MFG	73
Table 5.53: Cointegration Equation on Macroeconomic Variables and MFG	73
Table 5.54: The Results of VECM on Macroeconomic Variables and MFG	74
Table 5.55: Wald Test results on Macroeconomic Variables and MFG	75
Table 5.56: The Maximum Lag Length of Macroeconomic Variables and MTR	76
Table 5.57: The Results of Johansen Cointegration Test on Macroeconomic Variables and MTR	76
Table 5.58: Cointegration Equation on Macroeconomic Variables and MTR	77
Table 5.59: The Results of VECM on Macroeconomic Variables and MTR	77
Table 5.60: Wald Test results on Macroeconomic Variables and MTR	79
Table 5.61: The Maximum Lag Length of Macroeconomic Variables and OIL	79
Table 5.62: The Results of Johansen Cointegration Test on Macroeconomic Variables and OIL	80
Table 5.63: Cointegration Equation on Macroeconomic Variables and OIL	81
Table 5.64: The results of VECM on Macroeconomic Variables and OIL	81
Table 5.65: Wald Test results on Macroeconomic Variables and OIL	82
Table 5.66: The Maximum Lag Length of Macroeconomic Variables and PLT	83
Table 5.67: The Results of Johansen cointegration test on macroeconomic variables and PLT	83
Table 5.68: Cointegration Equation on Macroeconomic Variables and PLT	84
Table 5.69: The Results of VECM on Macroeconomic Variables and PLT	85
Table 5.70: Wald Test results on Macroeconomic Variables and PLT	86
Table 5.71: The Maximum Lag Length of Macroeconomic Variables and S&S	86

Table 5.72: The Results Johansen Cointegration Test on Macroeconomic Variables and S&S	87
Table 5.73: Cointegration Equation on Macroeconomic Variables and S&S	87
Table 5.74: The Results of VECM on Macroeconomic Variables and S&S	88
Table 5.75: The Results of Wald Test on Macroeconomic Variables and S&S	89
Table 5.76: The Maximum Lag Length of Macroeconomic Variables and SRV	90
Table 5.77: The Results Johansen Cointegration Test on Macroeconomic Variables and SRV	90
Table 5.78: Cointegration Equation on Macroeconomic Variables and SRV	91
Table 5.79: The Results of VECM on Macroeconomic Variables and SRV	91
Table 5.80: Wald Test results on Macroeconomic Variables and SRV	93
Table 5.81: The Maximum Lag Length of Macroeconomic Variables and TRD	93
Table 5.82: The Results of Johansen Cointegration Test on Macroeconomic Variables and TRD	94
Table 5.83: Cointegration Equation on Macroeconomic Variables and TRD	94
Table 5.84: The Results of VECM on Macroeconomic Variables and TRD	95
Table 5.85: The Results of Wald Test on Macroeconomic Variables and TRD	96
Table 5.86: Summary of Results	97

LIST OF ABBREVIATIONS

ADF	Augmented Dickey-Fuller
ASPI	All Share Price Index
BFI	Bank Finance and Insurance
BFT	Beverage Food and Tobacco
C&E	Construction and Engineering
C&P	Chemicals and Pharmaceuticals
CBSL	Central Bank of Sri Lanka
CCPI	Colombo Consumer Price Index
CPI	Consumer Price Index
DCS	Department of Census and Statistics
DIV	Diversified Holdings
ECM	Error Correction Model
ECT	Error Correction Term
F&T	Footwear and Textile
GDP	Gross Domestic Product
H&T	Hotels and Travels
HLT	Health Care
IT	Information Technology
INV	Investment Trusts
L&P	Land and Property
LASPI	Log All Share Price Index
LCCPI	Log Consumer Price Index
LEXR	Log Exchange Rate
LGDP	Log of GDP
LIR	Log Interest Rate
LMS	Log of Money Supply
MFG	Manufacturing
MTR	Motors
OIL	Oil Palms
OLS	Ordinary Least Square
P&E	Power & Energy
PLT	Plantations
PP	Phillips-Perron
SRV	Services
S&S	Stores Supplies
TLE	Telecommunications
TRD	Trading
USD	United States Dollar
VAR	Vector Autoregression
VECM	Vector Error Correction Method