



**PREDICTING MALAYSIAN STOCK MARKET RETURN VOLATILITY USING
EWMA MODEL AND GARCH MODEL**

NUR UMARA BINTI YUSSOF

2013167651

**BACHELOR OF BUSINESS ADMINISTRATION
WITH HONOURS (FINANCE)
FACULTY OF BUSINESS MANAGEMENT
UNIVERSITI TEKNOLOGI MARA SABAH**

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TABLE OF CONTENT

	PAGE
TITLE PAGE	i
DECLARATION OF ORIGINAL WORK	ii
LETTERS OF SUBMISSION	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENT	v
LIST OF FIGURES	viii
LIST OF TABLES	ix
LIST OF ABBREVIATIONS	x
ABSTRACT	xi
CHAPTER 1	INTRODUCTION
1.1 INTRODUCTION	1
1.2 BACKGROUND OF STUDY	1-3
1.3 PROBLEM STATEMENT	4-5
1.4 RESEARCH OBJECTIVES	5
1.5 SIGNIFICANCE OF STUDY	6
1.6 SCOPE AND LIMITATION OF STUDY	
1.6.1 SCOPE OF STUDY	7
1.6.2 LIMITATION OF STUDY	7
1.7 SUMMARY OF CHAPTER	8
CHAPTER 2	THEORY AND LITERATURE REVIEW
2.1 INTRODUCTION	9
2.2 THEORY USED IN THE STUDY	9-10
2.3 LITERATURE REVIEW	11-14
2.4 THEORETICAL FRAMEWORK	15
2.5 SUMMARY OF CHAPTER	15

CHAPTER 3	DATA AND METHODOLOGY	
	3.1 INTRODUCTION	16
	3.2 DATA COLLECTION	
	3.2.1 DATA SAMPLING	16
	3.2.2 DATA PROCESSING	17
	3.3 EMPIRICAL FORMULA	
	3.3.1 TWO-VARIABLE REGRESSION ANALYSIS	18
	3.4 MEASUREMENT OF VARIABLE	
	3.4.1 DEPENDENT VARIABLE	19
	3.4.2 INDEPENDENT VARIABLE	20-22
	3.4.3 SYMMETRIC ERROR STATISTIC	23-24
	3.5 DATA ESTIMATION PROCEDURES	
	3.5.1 TIME SERIES ANALYSIS	25-26
	3.6 HYPOTHESIS DEVELOPMENT	27
	3.7 SUMMARY OF CHAPTER	28
CHAPTER 4	RESULTS AND ANALYSIS	
	4.1 INTRODUCTION	29-31
	4.2 RESULTS AND FINDINGS	
	4.2.1 GARCH MODEL	32-51
	4.2.2 EWMA MODEL	52-61
	4.3 SUMMARY OF CHAPTER	62

ABSTRACT

Quite a number of literatures exist on forecasting stock market returns and forecasting models. However, a number of authors question the level of superiority of these models in predicting the volatility of stock market returns. Hence, the current study aims to compare two forecasting models from the historical volatility category and autoregressive and heteroskedastic category respectively. In particular, the two models focused in the current work are Exponentially Weighted Moving Average (EWMA) model and Generalized Autoregressive Conditional Heteroscedascity (GARCH). The comparison between these two models takes into account the Malaysian stock market returns and its volatility. The main objectives of the current study are (1) to evaluate and make comparison between EWMA and GARCH model in testing the volatility of stock market returns and (2) to forecast the stock market return volatility. In order to assess the objectives drawn, single linear regression is carried out by fitting the suitable linear equation as the means to model the relationship between the variables. In addition, to define the superiority between the two models, the least square method (RMSE and MAE) was carried out. Data was collected from 8 different industries from Bursa Malaysia. Findings from the current work suggest that the EWMA model performs better as a forecasting model for stock market returns particularly in measuring risk management.