

UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

**PREDICTING THE MOVEMENT OF THE STOCK MARKET
PRICE USING ELLIOTT WAVE PRINCIPLE**

(P29M22)

**NURAFIQAH DAYANA BINTI MARLI SAFRI NIZAM
(2019295306)**

NUR ADRIANA BINTI KHALID (2019416222)

FARAH SYAKIRAH BINTI FARIZAR (2019406396)

**Report submitted in partial fulfillment of the requirement
for the degree of
Bachelor of Science (Hons.) (Management Mathematics)
Faculty of Computer and Mathematical Sciences**

MARCH 2022

ACKNOWLEDGEMENTS

The completion of this undertaking could not have been possible without the participant and assistance of so many people whose names may not all be enumerated. Their contributions are sincerely appreciated and gratefully acknowledged. However, we would like to express their deep appreciation and indebtedness particularly to the following:

The Great Almighty ALLAH SWT, the author of knowledge and wisdom, for His countless love.

Our parents for the endless encouragement, enthusiasm, and invaluable assistance to us and always put trust in us.

Dr Rossidah binti Wan Abdul Aziz, our supervisor for her kindness and understanding spirit and guide us in doing this final year project.

All fellow N4CS2486A students, other friends, and lecturers who in one way or another shared their support and ideas, thank you.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	i
LIST OF FIGURES	iv
LIST OF TABLES	iv
ABSTRACT	v
CHAPTER 1 INTRODUCTION.....	1
1.1 Introduction.....	1
1.2 Problem Statement.....	2
1.3 Objectives.....	3
1.4 Significant and Benefit of Study	3
1.5 Scope and Limitation of Study.....	4
1.6 Definition of Terms	4
CHAPTER 2 BACKGROUND THEORY AND LITERATURE REVIEW	6
2.1 Introduction.....	6
2.2 Background Theory	6
2.3 Literature Review	7
2.3.1 The movement of the stock market price.....	7
2.3.2 Elliott Wave Principle (EWP)	8
2.3.3 Fibonacci Analysis (FA).....	11
2.3.4 Accurate prediction of the stock price movement.....	12
2.3.5 Analysing the trend of stock movement	12
2.4 Summary.....	13
CHAPTER 3 METHODOLOGY AND IMPLEMENTATION	14
3.1 Introduction.....	14
3.2 Research Methodology	14
3.2.1 Setting up phase	16
3.2.2 Data collection	16
3.2.3 Model formulation	17
3.3 Formulation of Model.....	18
3.3.1 Formulation of EWP.....	18
3.3.2 Formulation of FR	19
3.3.3 Constraints of EWP Model	21
3.4 Implementations.....	22
3.5 Steps in Predicting Stock Market Price	24
3.6 Summary.....	25
CHAPTER 4 RESULTS AND DISCUSSION.....	26

4.1	Introduction	26
4.2	Analysis and Discussion	26
4.2.1	Trend Analysis of Stock Market Price	26
4.2.2	Technical Analysis using EWP	28
4.2.3	Validation on Graph Analysis based on EWP formulation	35
4.3	Predicting The Stock Market Price	36
4.4	Summary	40
CHAPTER 5 CONCLUSION AND RECOMMENDATIONS		41
REFERENCES		44
APPENDICES		47

ABSTRACT

A wave principle that known as Elliot Wave Principle (EWP) is a wave theory commonly used on technical analysis in analysing the trend of the price of the stock market developed by Ralph Nelson Elliott, who studied stock market data in the 1930s. The objective of traders and investors in market is to forecast the stock market price in order for them to have a low risk and a high return of profit earnings. However, CoronaVirus Disease, 2019 (COVID-19) has caused an unexpected economic disruption and unprecedented drop in the stock market. Thus, most investors find it hard to predict and analyse stock movements during the pandemic. The purpose of this paper is to analyse the movement of the stock market price using the EWP method. After analysing the stock movement and succeed on validation of the EWP, this paper focused on to forecast the trend movement of the stock market price in the future. To prove the applicability of the EWP to stock markets, a model formulation was conducted and implemented on three different companies in Malaysia named, Dagang NeXchange Berhad (DNEX) (4456) from the technology sector, Westports Holdings Berhad (WPRTS) (5246) from the transportation and logistics sector, and Sime Darby Berhad (SIME) (4197) from the consumer products and services sector, and consisting of 157 weeks of stock price data. The three companies were chosen due to their relatively significant market capitalization. After stock price data of the three companies collected, formulation was developed based for the wave equations based on EWP then, technical analysis was conducted. Furthermore, validation on each wave also carried out by using IF statement in Excel and the result be presented in truth table. As the result showed that the waves formed using EWP are valid and can be applied in analysing the closing price, then, an analysis for predicting the stock market price on DNEX was performed. To conclude, the two objectives of this research are achieved. The results illustrate that the Elliott model has been a valuable tool for forecasting the currency market, as the actual pattern fully confirmed the expected pattern. Accurately identifying the actual wave can be regarded as the optimal method for forecasting future price movements and determining profit targets. In a nutshell, other indicator tools such as the Moving Average Convergence Divergence (MACD) oscillator, the Elliott Wave Oscillator, and the Relative Strength Index (RSI) oscillator also could be used for further research.