# Universiti Teknologi MARA

## Measuring Performance of Conventional and Islamic Banks Using DEA Method: Evidence from Malaysian Banking System

Muhammad Alif Asyraf Bin Abu Bakar

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

**June 2019** 

## **STUDENT'S DECLARATION**

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

.....

MUHAMMAD ALIF ASYRAF BIN ABU BAKAR 2016317317

JUNE 21, 201

#### ABSTRACT

Malaysia is the first country in the world that has introduced dual-banking system namely conventional and Islamic banks. Banking industry in Malaysia started in 1867. As in 2017, Malaysia has a total number of 27 conventional banks and 16 Islamic banks. Measuring the performances of the banks is very important as it will lead to a good management. Efficiency and effectiveness are two main important indicators when measuring the performances of any institutions. The main objective of this study is to measure the overall performances of the banks as well as their efficiency and effectiveness score. This paper analyses the performances of conventional and Islamic banks in Malaysia which include five selected conventional banks namely CIMB Bank Bhd, Hong Leong Bank Bhd, Malayan Banking Bhd, Public Bank Bhd, and RHB Bank Bhd while another five selected Islamic banks which are Affin Islamic Bank Bhd, Bank Islam Malaysia Bhd, Bank Muamalat Malaysia Bhd, CIMB Islamic Bank Bhd, and Hong Leong Islamic Bank Bhd. This study covers years from 2014 to 2018. The researcher used a non-parametric method which is two-stage Data Envelopment Analysis (DEA) method in measuring the efficiency and effectiveness score of the banks. DEA method is a non-parametric method in operating research and economics and the best method in evaluating performances because of its characteristics as a central tendency approach. The results of this report state that conventional banks perform better than the Islamic banks. Besides, there is no bank that exhibits best practice in both stages. Finally, Public Bank Bhd and Bank Islam Malaysia Bhd are the best banks in terms of performance for conventional and Islamic banks respectively.

## **TABLE OF CONTENTS**

## CONTENTS

#### PAGE

SUPERVISOR'S APPROVAL	ii
SUI ERVISOR S'AI I ROVAL	11
STUDENT'S DECLARATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	V
TABLE OF CONTENTS	vi
LIST OF FIGURES	ix
LIST OF TABLES	vii

#### **CHAPTER ONE: INTRODUCTION**

1.1	Background of the Study	1
1.2	Problem Statement	2
1.3	Objective of the Study	4
1.4	Scope of the Study	4
1.5	Significance of the Study	5

#### **CHAPTER TWO: LITERATURE REVIEW**

2.1	Malaysian Banking System	7
2.2	Conventional Bank versus Islamic Bank	10
2.3	Data Envelopment Analysis (DEA) Method	11
2.4	Previous Studies	12

## CHAPTER THREE: RESEARCH METHODOLOGY

3.1	Research Framework	17
3.2	Method of Data Collection	17

3.3	Method of Data Analysis	17
	3.3.1 Data Envelopment Analysis	18
	3.3.2 Two-stage DEA Model	18
3.4	Proposal Model	21

## CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.1	Efficiency Score		23
	4.1.1	Efficiency Score for Conventional Banks	23
	4.1.2	Efficiency Score for Islamic Banks	27
4.2	.2 Effectiveness Score		30
	4.2.1	Effectiveness Score for Conventional Banks	30
	4.2.2	Effectiveness Score for Islamic Banks	34
4.3	Overa	11 Performances	37
	4.3.1	Overall Performances of Conventional Banks	37
	4.3.2	Overall Performances of Islamic Banks	38
4.4	Summ	hary	40

### CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1	Conclusions	42
5.2	Recommendations	48

#### REFERENCES

49