

Investment Benefits of Crude Palm Oil Futures Trading On The Malaysia Derivatives Exchange

### Shahrul Annuar bin Musa

Bachelor of Arts in Economics
University of Missouri Kansas City
Kansas City, Missouri
United States of America
1997

Submitted to the Faculty of Business and Accountancy,
University of Malaya, in partial fulfillment
of the requirements for the Degree of
Master of Business Administration

October 2003



# CONTENTS

		Page
Acknowled	lgement	
Abstract		
List of Tab	les and Charts	
-W		<del></del>
CHAPTER	R 1: INTRODUCTION	
4.4	Commodity Euturon	1
1.1	Commodity Futures  Overview of Crude Palm Oil Futures on the Malaysia	a a
1.2	·	2
4.0	Derivatives Exchange	
	Objective of the Study	3
1.4	Significance of the Study	4
1.5	Scope and Limitation of the Study	4
1.6	Organisation of the Study	5
CHAPTE	R 2: LITERATURE REVIEW	
2.1	Modern Portfolio Theory	6
2.2	Benefits of Commodity Futures Investment	8
	2.2.1 Sources of Return to Commodity	
	Futures Investment	11
2.3	The Study of CPO Futures in Malaysia	12

# **CHAPTER 3: DATA AND METHODOLOGY**

3.1	Data		14		
	3.1.1	Selection of Data	14		
	3.1.2	Sources of Data	15		
3.2	Compu	utation of Retums, Risk and Correlation	15		
3.3	Portfoli	17			
	3.3.1	Optimal Portfolio Construction	18		
3.4	3.4 Portfolio Measures				
3.5	Pre- ar	21			
	4	NDIOAL DEGLE TO			
CHAPTER	4: EM	PIRICAL RESULTS			
4.1	Sampl	e Data	22		
4.2	Risk and Return Analysis of Assets				
4.3	Correl	25			
4.4	Portfo	26			
	4.4.1	Optimal Weights of Assets	26		
	4.4.2	Risk and Return Analysis of the Portfolios	27		
	4.4.3	CPO Futures Analysis	29		
	4.4.4	Portfolio Performance	31		
	4.4.5	Pre- and Post-Crisis Return Performance	33		
•					
CHAPTER	R 5: SUI	MMARY AND RECOMMENDATIONS			
5.1	Overa	all View	35		
5.2	Risk a	and Return Characteristics of Assets	35		
5.3	Portfo	olio Analysis	36		

5.4	Conclusion	37
5.5	Recommendations	38

### **APPENDICES**

## REFERENCES

#### **ACKNOWLEDGEMENT**

First and foremost, I would like to express my deepest and sincerest thanks to ALLAH, without his permission and guidance, this research project will not be duly completed. The next in the line, I would surely express my sincerest thanks and appreciation to my supervisor, Pn. Izlin Ismail, for her undivided attention and patience during the course of this project. Her continuing help, advice and guidance were crucial and of the utmost assistance that any supervisor can provide.

This project would not be completed without the assistance of these respected people. First, I would like to convey my deepest thanks to the Staff of IT Centre of University of Malaya for assisting me in acquiring the right computer software to be used in analyzing the data. Apart from that, my esteemed appreciation to Mr. Ikmal, a Librarian at Rating Agency Malaysia Bhd, for letting me use the RAM's library. In addition, I would like to express my appreciation to the KLSE Library staff, whose warmth and friendly gestures had made the process of gathering data less burdensome.

Last but certainly not least, I would like to acknowledge the important people in my life who support, motivate, inspire me not only during the course of doing this project, but also most importantly in my life. My utmost thanks is dedicated to my beloved father and mother, Musa bin Ahmad and Hasnah binti Johar, whose leadership, wisdom and guidance made me what I am today. As for my beloved wife, Zalela binti Jaafar, I would like to express my deepest and sincerest appreciation for supporting and sticking with me through thick and thin during the whole course of my masters programme. Her understanding, love and caring gestures towards me certainly helped me to overcome all the obstacles that I faced during this project. To my parents, wife and the rest of my family, may ALLAH bless all of you. Finally, I would like to say thanks to my friends and

colleagues, in some ways or another, had helped me during this project. I am certainly very blessed to have all of you as my friends and colleagues.

#### **ABSTRACT**

This research project is aimed at analysing the potential benefits of considering Crude Palm Oil Futures as an alternative investment. The commodity-based had been found to provide diversification benefits if being considered as a part of well-diversified portfolios. However, all the studies were done on the capital market of developed countries. Hence, this study attempts to carefully analyse the risk and return characteristics as well as its correlation of returns with stocks and bonds. Furthermore, the effectiveness of CPO futures as a stand-alone or part of a portfolio is determined. In doing this, this study selected Kuala Lumpur Composite Index and RAM Quantshop Malaysia Government Securities All Bond Index to represent the well-diversified portfolio of stocks and bonds respectively. Then, 4 efficient portfolios were formed and their performance was analysed. This study utilizes the monthly data and computes the monthly mean returns for all assets. The findings of the study show that CPO futures does have weak correlation of returns with both stocks and bonds. It also reduces the risk of portfolio consisting of stocks and bonds. However, due to a rise in the 3-month Malaysian Government Treasury Bills, which is a proxy of risk-free rate, the results for the portfolio measures are mixed. Nevertheless, a portfolio with CPO futures in it does show some strong performance in all measurement indices during all time periods. Finally, this study finds that there are no significant differences of monthly mean returns of each portfolio during pre- and post crisis period.

## **LIST OF TABLES AND CHARTS**

TABLES				
1.	Table 1: Descriptive Statistics for Monthly Returns of Assets	24		
2.	Table 2: Correlation Between Assets	26		
3.	Table 3: Optimal Weights of Assets in the Portfolios	27		
4.	Table 4: Descriptive Statistics for All the Portfolios	28		
5.	Table 5: Risk and Return of the Portfolios (II, III and IV) and CPO			
	futures	30		
6.	Table 6: Systematic Risk (Beta) of Portfolios	31		
7.	Table 7: Performance Measures of the Portfolios and CPO futures	33		
8.	Table 8: Standard two-sample t-Test for Pre- and Post-Crisis			
	Return Performance of the Portfolios	34		
*				
CHARTS				
1.	Chart 1: Returns Performance of Assets	25		
2.	Chart 2: Portfolio Returns Performance	29		