Nasir Ganikhodjaev
Farrukh Mukhamedov
Pah Chin Hee

VOLUME 1

$$x' = 2xy$$
$$y' = 2xz$$

INVESTIGATIONS ON PURE MATHEMATICS, FINANCE MATHEMATICS AND OPTICS

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$$\varphi_1(x, y, z) = z$$

$$z' = x^2 + y^2 + z^2 + 2yz$$

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Investigations on Pure Mathematics, Finance Mathematics and Optics

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ANALYSIS OF CRUDE PALM OIL FUTURES PRICES TRADED ON BURSA MALAYSIA

Norfaieqah Ahmad
Assist. Prof. Dr. Mohd Aminul Islam

Abstract. *In a perfect world, the value of futures markets arises from their ability to predict spot prices at a specified future date, thus providing market participants with a means of managing the risks associated with trading a commodity. It is therefore important for players to forecast the correct futures price at any given time, as any deviation will enable the players to either short or long their positions in such a way as to benefit from the mispricing of the commodity. This paper attempts to investigate the relationship between spot and futures prices for crude palm oil contracts traded in Bursa Malaysia. Using historical price of crude palm oil futures (FCPO), this study applied a simple regression model to test the future market efficiency. The test utilises data from January 2008 until December 2009. Regressions between the spot and futures price are done for each 5-month, 4-month, 3-month, 2-month and 1-month before the delivery month. This test shows that only one month contract (i.e. July CPO futures contract) appears to confirm the concept that as the delivery period for a futures contract is approached, the futures price converges to the spot price of the underlying asset. The other contracts appeared to be inefficient as there are possibilities of mispricing of the commodity leading to arbitrage opportunity.*

1 Introduction

A futures contract is an agreement to buy or sell a specific quantity of a commodity at a specific price in a future date. Introduced in Malaysia in October 1980, a commodity futures trading came with two major economic purposes. The first one is to provide an efficient price discovery mechanism for the palm oil industry and other agricultural commodities. The second purpose is to provide a hedging mechanism against the risk of price volatility.

In 2008, Malaysia produced 17.7 million tonnes of palm oil on 4.5 million hectares of land as shown in Table 1.1. While Malaysia's palm oil production is less than Indonesia, it is still the largest exporter of palm oil in the world. About 60% of palm oil shipments from Malaysia head to China, the European Union, pakistan, United States and India. They are mostly made into cooking oil, margarine, specialty fats and oleo chemicals. According to the World Bank and the Asian Development Bank, Malaysia is the world's second largest palm oil producer next to Indonesia. The report stated that the industry currently employed 570,000 people with the export earnings of more than RM68 billion in 2007.

1.1 Objective of the study

The objective of this study is to investigate the relationship between spot and futures prices of Crude Palm Oil Futures (FCPO) traded on Bursa Malaysia. Therefore, FCPO can be benefited in three ways. Firstly, plantation companies, refineries, exporters and millers can use the FCPO to manage risk and hedge against the risk of unfavourable movements in the price of FCPO in the physical market. Secondly, traders can use the FCPO to gain leveraged exposure to movements in CPO prices. Lastly, via FCPO, global fund managers and proprietary traders are able to be part of the active commodity market instantaneously.