

FINC 623/ECON623
Homework Assignment—Hedging Palm Oil
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Maximum team size: 3 persons

Assume today is December 31, 2005. Your assignment is to hedge a 10,000 metric ton long position in palm oil for the next four months until April 30, 2006 with a position that you establish on December 31, 2005. You are a dollar-based investor. At that time, there actually was a futures contract on palm oil that trades on the Malaysian exchange, but you have decided not to use that contract. Therefore, you will need to construct a cross hedge.

To accompany this assignment, there is a spreadsheet named Palm Oil Homework.xls available on the course web site. Use that data to create and estimate the best (requires judgment!) risk minimizing hedging position using at least two different futures contracts. Data in the spreadsheet are organized into different pages, and include data on the spot price of palm oil, the dollar/ringgit spot exchange rate, and a variety of futures contracts that you can use to create the hedge. Obviously, you need to consider the size of each futures contract and the method of pricing that each contract uses.

Recommendation: Build a multiple regression model to determine which set of futures contracts is most likely to create a risk-minimizing hedge. Consider how to deal with the currency differentials and whether to use price levels, price changes, or price changes for the regression analysis.

Deliverable:

Turn in a 1-2 page narrative in which you describe the method you employed to determine the hedging position that you establish. Show the exact futures contracts you trade to establish the position, i.e., the number of contracts of each type that you trade on December 31 to create the hedge. (No partial contracts). **After you determine your hedge:** Compute the dollar price change in the spot position from December 31 to April 30. Compute the effect of your futures positions for the same period. Show the total gain or loss on your combined futures plus spot position. Prepare a graph for the December 31—April 30, 2006 period showing the price change on the total spot position and on the combined spot/futures position.

Special Point: Be sure to use only information that was available on December 31, 2005 to create your hedge. Your grade is not a function of how well the hedge works, but how well you analyze the problem. So there is no point in gaming the exercise. That is, don't figure out what hedge will work best in the 2006 test period and then say that is the hedge you would establish. Just use data available on December 31, 2005 to determine the right hedge position, and then report how well (or poorly) it works.

Note: Futures and palm oil data for this assignment were provided by John Hill, Economist at CME group.