



The University of Chicago  
Department of Statistics

MASTER'S THESIS PRESENTATION

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**LI HOU**

Department of Statistics  
The University of Chicago

**Market Efficiency of Crude Oil Futures;  
A Multivariate Approach**

**THURSDAY, May 12, 2011, at 4:00 PM**  
110 Eckhart Hall, 5734 S. University Avenue

**ABSTRACT**

Crude oil futures contracts of different maturities represent different return generating processes of the same underlying commodity, and thus constitute a multivariate framework for describing the cointegrating relationship among these futures contract price series. This paper investigates the level of market efficiency of such a system in terms of fairly pricing these futures under a structural vector error correction model using impulse response analysis, and finds evidences in support of the inefficient market hypothesis. Empirical evidences also suggest that the level of market efficiency of crude oil futures is negatively correlated with the volatility of returns, and positively correlated with the level of market liquidity.