



Research Seminar Series

**Thursday, November 27 2008
Time: 16:00 - 18:00, Room 013**

Seminar Title

“Optimal Hedging With Higher Moments”

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Summary

This study proposes a utility-based framework for the determination of optimal hedge ratios that can allow for the impact of higher moments on the hedging decision. The approach is applied to a set of 20 commodities that are hedged with futures contracts. We examine the entire hyperbolic absolute risk aversion (HARA) family of utilities which include quadratic, logarithmic, power and exponential utility functions. We find that for small to moderate commodity exposure, the performance of hedges constructed allowing for non-zero higher moments is only very slightly better than the performance of the much simpler OLS hedge ratio. For very high commodity exposures, higher moments do matter and their relative weights in the utility function affect the optimal decision. As one would expect, the exponential utility hedge is also affected by the higher moments, but it tends to the minimax hedge ratio, that is the ratio which minimizes the largest loss of the hedged position. We support our empirical findings by theoretical analysis of optimal hedging portfolios.

Ales Cerny received his BSc and MSc in Mathematical Engineering from the Czech Technical University in Prague, and his PhD in Economics from the University of Warwick. He is currently a full professor of Finance at the Cass Business School, City University London. His research encompasses theoretical and computational aspects of incomplete market asset pricing, hedging and performance measurement.