DETERMINANTS OF RETURN VOLATILITY: EVIDENCE FROM INDIAN COMMODITY FUTURES MARKET

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ABSTRACT

We estimate realized volatility using intraday interval data on two precious metals: gold and silver, two basic metals: copper and zinc, one energy: crude oil and two agricultural: mentha oil and cardamom futures trading at MCX, a leading commodities exchange in India for more than five years from year 2005 to 2010. Our volatility measure is sum of squared realized returns. We investigate determinants of realized volatility for those futures contracts after controlling for appropriate seasonality effects. Our findings from OLS model strongly support an extended state variable hypothesis that postulates a relation between futures and spot volatility. Other determinants of volatility include appropriate seasonality, time to maturity, net order flow, trading volume, spread. Net order flows, and spread indicate market microstructure effects on realized volatility in futures market.

Keywords: *Intraday, Maturity Hypothesis, State Variable Hypothesis, Commodity Futures*