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Wei Cui* (wcui@crimson.ua.edu) and **Zhijian Wu** (zhijian.wu@unlv.edu). *Fractional Brownian Motion and Managing Risk in Long-Term Hedging with Short-term Futures Contracts.*

Under the constraint of terminal risk, we search for an optimal strategy to reduce the running risk in hedging a long-term commitment with short-term futures contracts. We will prove that the existence of the solution to this optimization problem if the market price of the underlying commodities follows a simple differential equation $dS_t = \mu dt + \sigma dB_t^H$, where B_t^H is a fractional Brownian motion with Hurst index $H \in (\frac{1}{2}, 1)$. (Received September 06, 2015)