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Tim Leung* (t12497@columbia.edu) and **Xin Li** (x12206@columbia.edu). *An Optimal Timing Approach to Mean-Reversion Trading.*

This paper studies the optimal entry and exit timing for trading under mean reversion. This leads to the formulation and analysis of a number of double optimal stopping problems with constraints under time-homogeneous diffusions, including Ornstein-Uhlenbeck, exponential Ornstein-Uhlenbeck, and Cox-Ingersoll-Ross price processes. We rigorously derive the optimal price levels for entry and exit respectively, and examine their dependence on various model parameters such as mean-reversion level and transaction cost. We further analyze the trading problem under a minimal holding period, as well as stop-loss and risk penalty. Numerical results are provided to illustrate the optimal strategies. (Received September 24, 2012)