1037-91-338 **Victoria R Steblovskaya*** (vsteblovskay@bentley.edu), 175 Forest Street, Waltham, MA 02452. *Optimal Non-self-financing Hedging in a Discrete Time Incomplete Market.*

Over the last decades, a variety of approaches to pricing and hedging financial derivatives in incomplete markets, both for discrete and continuous models, have appeared in the literature. A significant proportion of research constructs self-financing trading strategies that satisfy both a primary no-arbitrage condition and secondary conditions on portfolio risk and return. Less prevalent is the study of non-self-financing trading strategies in similar economic environments.

Within a discrete model that generalizes the Cox-Ross-Rubinstein binomial model, we build an algorithm that chooses an optimal non-self-financing trading strategy from the set of admissible (market calibrated) trading strategies based on risk minimization principles.

Along with theoretical description of our model and algorithm, encouraging numerical results will be presented. (Received February 05, 2008)