

SWITCH-WHEN-SAFE CONE-CONSTRAINED MEAN-VARIANCE STRATEGIES

C. Labbé, HEC-Montreal, Montreal, Canada, chantal.labbe@hec.ca

F. Watier, Université du Québec à Montreal, Montreal, Canada, watier.francois@uqam.ca

Li and Zhou (2006) devised a *switch-when-safe* (SWS) financial strategy in which an investor follows an optimal mean-variance strategy up to a possible random time where the accumulated wealth is large enough so he can, at this point, safely reinvest all of this amount of money in a risk-free bank account in order to achieve his financial target at the end of the investment horizon. They established, for an unconstrained mean-variance portfolio in a continuous-time Black-Scholes market model, that there is at least an 80% probability that the investor will meet his goal with a SWS strategy. Surprisingly, we will show that for cone-constrained mean-variance strategies (which includes no-short selling restrictions) the 80% lower bound probability still holds. Furthermore, we will give an expression for the probability that the investor reaches his target before bankruptcy in terms of a “greediness” parameter.