THE EXACT SOLUTION OF THE FUND-MANAGER'S PROBLEM WITH UNCERTAINTY

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Abstract

We consider an infinite-horizon model of a risk-neutral fund-manager who contemplates in each period whether or not to make an irreversible investment which, if made, generates some return under a stochastic environment. Here, the fund-manager evaluates uncertainty by the Choquet expected utility with respect to a convex capacitary kernel and hence she exhibits uncertainty aversion. We provide the exact solution to this problem and show that it takes the form of a reservation strategy: There exists the reservation function such that if the current return exceeds the value of this function, the fund-manager should invest all the money subject to a cash-in-advance constraint; if it does not, she should not make any investment. We also conduct some sensitivity analyses to show that if risk increases in the sense of mean-preserving spread, then the reservation function is raised and that if uncertianty increases in the sense that the set of priors expands, then the reservation function is lowered.