STEVENS

Institute of Technology

Topics in Financial Mathematics

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Stochastic Dominance and Mean–Semideviation Models

Thursday, September 28, 2000
3:30 pm
Pierce 218

Abstract: We analyze relations between two methods frequently used for modeling the choice among uncertain outcomes: stochastic dominance and mean–risk approaches. New necessary conditions for stochastic dominance are developed. These conditions compare values of a certain functional, which contains two components: the expected value of a random outcome and a risk term represented by the central semideviation of the corresponding degree. If the weight of the semideviation in the composite objective does not exceed the weight of the expected value, maximization of such a functional yields solutions which are efficient in terms of stochastic dominance. The results are illustrated graphically.

Refreshments will be served at 3:00pm in the Department of Mathematical Sciences (Kidde-100).

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