

Optimal investment under state-dependent constraints

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Abstract / Resumo:

An optimal strategy for a profit seeking investor with law-invariant preferences is necessarily cost-efficient (lowest cost strategy that achieves a given wealth distribution) and is unique. In the specific case of a Black and Scholes market the optimal strategy is always path-independent. Assuming now that investors still want to achieve a given distribution at a fixed horizon but have additional state-dependent constraints, we propose an explicit construction of an optimal strategy. In the case of a Black and Scholes market, we show that it may now be path-dependent and that it is not unique.

This is joint work with Phelim Boyle (Wilfrid Laurier University) and Steven Vanduffel (Vrije Universiteit Brussels).