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Robust utility maximization in a financial market with prices driven by Lévy processes: A dual approach

We deal with the dynamic maximization of a robust utility function which penalize the possible probabilistic models. The context will be of a market model with prices determined by an external factor which is driven by a Lévy stochastic integral. We characterize first the classes of measures (densities) related to such a market. Once it is established the relation of the penalty associated to the utility function with a convex risk measure, we are able to use duality theory recently developed for an optimal investment in an risk and ambiguity averse setting.