Seminário de Mathematical Methods in Finances

Título   An Orlicz space formulation for the optimal hedging problem in general semimartingale markets

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Resumo

Starting with markets where the underlying assets are locally bounded semimartingales, we survey recent developments on the use of convex duality in the solution of the optimal investment problem (maximal expected utility of terminal wealth) and the optimal hedging problem (maximal expected utility of terminal wealth plus a random endowment). We then review the work of Biagini and Frittelli showing how the absence of the local boundedness assumption can lead to a singular measure in the solution of the dual problem. This result makes use of the classical duality between bounded random variables and finitely additive measures, and we show how it can be generalize in the setting of duality for convex functionals in Orlicz spaces. We then conclude with some Levy markets examples.