Convex risk measures for càdlàg processes on Orlicz hearts

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Abstract

Our purpose is to study properties and representations of convex risk measures for possibly unbounded càdlàg processes. As the underlying space on which we define convex risk measures, we consider spaces of càdlàg processes whose supremum belongs to an Orlicz heart. In order to obtain concrete representations for such convex risk measures, we shall investigate representations of continuous linear functionals on the underlying space. Moreover, many examples of risk measures are introduced. In particular, we deal with risk measures associated with hedging and pricing problems for American claims. Among others, we look into shortfall risk measure in detail.

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