

## Some properties of distortion risk measures

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**Abstract.** We give a simplified proof of the fact that law invariant convex risk measures automatically have Fatou property, which is first shown by Jouini et al. (Adv. Math. Econ. 9:49-71, 2006). After providing a streamlined proof of Kusuoka s representation theorem of law invariant and comonotonically additive coherent risk measures, we prove that a coherent

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