

ECON 7050
HW#3 Due Wed, Oct 22.

Problem 1 *Prove that for any two distributions F, G such that G is a mean-preserving spread of F , any risk averse individual (whose preferences over lotteries are represented by vNM utility) prefers F to G .*

Problem 2 *Prove that for any two distributions F, G such that*

$$\int_{\underline{z}}^z G(t) dt \geq \int_{\underline{z}}^z F(t) dt, \quad z \geq \underline{z}.$$

any risk averse individual (whose preferences over lotteries are represented by vNM utility) prefers F to G .

Problem 3 *Show that preferences of an individual with decreasing relative risk aversion exhibit decreasing absolute risk aversion, but the converse is not necessarily true.*

Problem 4 *True or false? If preferences of an individual exhibit decreasing relative risk aversion, his certainty equivalent associated with a given lottery increases with wealth. Prove your answer.*