A Conceptual Foundation for the Theory of Risk Aversion

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Abstract
Classically, risk aversion is equated with concavity of the utility function. In this work we explore the conceptual foundations of this definition. In accordance with neo-classical economics, we seek an ordinal definition, based on the decision maker’s preference order, independent of numerical values. We present two such definitions, based on simple, conceptually appealing interpretations of the notion of risk-aversion. We then show that when cast in quantitative form these ordinal definitions coincide with the classical Arrow-Pratt definition once the latter is defined with respect to the appropriate units, thus providing a conceptual foundation for the classical definition. The implications of the theory are discussed, including, in particular, to risk aversion on non-liquid goods, disentangling risk aversion from decreasing marginal utility, and the understanding of insurance. The entire study is within the expected utility framework.

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