

1035-60-1161

Antoine Toussaint* (atoussai@math.stanford.edu), Mathematics Department - Building 380, Stanford University, Stanford, CA 94305. *Indifference Pricing with L^2 convex risk measures: a first step towards risk calibration.*

In most common financial markets, both financial claims and investment strategies are unbounded where the classical theory of convex risk measure on bounded random variables can't be applied. We characterize the risk of such financial positions with convex risk measures defined on the larger set of square integrable random variables. In an incomplete market, we use a particular form of real-valued convex risk measures associated with a Backward Stochastic Differential Equation characterized by its driver and characterize numerically an associated indifference pricing rule. As a first step towards risk calibration we quantify the influence of different properties of the driver, such as local growth, on the indifference prices and implied volatilities. (Received September 18, 2007)