

1127-60-395

Scott P Robertson* (scottrob@bu.edu), Questrom School of Business, Boston University, Boston, MA 02215. *Optimal Investment, Indifference Pricing, and Dynamic Default Insurance for Defaultable Assets*. Preliminary report.

We consider the optimal investment problem when the traded asset may default. For an exponential investor, our goal is to explicitly compute both the indifference price for a defaultable bond, and a fair price for dynamic protection against default. For the latter problem, our work complements Sicar and Zariphopoulou (2007). We consider a factor model where asset returns, variances, correlations and default intensities are driven by a time-homogenous diffusion X . In addition to trading in the defaultable asset, the investor owns a non-traded asset whose terminal payoff depends upon the survival of the stock. We identify the certainty equivalent with a semi-linear degenerate elliptic partial differential equation, and under a mild integrability assumption on the market price of risk, we show the certainty equivalent is a classical solution. We also derive the indifference price for a defaultable bond, as well as a fair price for dynamic protection against default. Numerical examples highlight the relationship between the factor process, and both the indifference price and default insurance. In fact, we show the insurance protection does not coincide with the default intensity under the dual optimal measure. This is joint work with Tetsuya Ishikawa of Morgan Stanley. (Received February 07, 2017)