Draft Title: Optimal consumer behavior in a Levy process environment

Abstract:

A continuous time model for optimal consumption, portfolio and life insurance rules, for an investor with an arbitrary but known distribution of lifetime was derived by Richard (1975) as a generalization of the Merton (1971) model. This paper proposes to extend this life cycle model to allow for consideration of inflation and bequest, and in addition, a Levy process environment, namely, a jump process in the investment portfolio. This will be done using more involved utility functions, e.g. Epstein-Zin utility. The model here will be solved using numerical methods (Kushner 1977) as close-form solution is unattainable, and the impact of the introduction of the Levy process will be examined.