

Lifetime Investment and Consumption with Recursive Preferences and Small Transaction Costs

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We study the effects of small proportional transaction costs on lifetime consumption and portfolio decisions with Epstein-Zin recursive utility. The existing literature has focused on investors with additive (expected discounted utility) preferences.

Mathematically, we consider a singular, infinite-horizon stochastic control problem. Our approach is based on the associated system of variational inequalities (VIs); we demonstrate that, for sufficiently small cost parameters, these VIs admit a classical smooth solution. Second, we establish the first rigorous verification theorems for infinite-horizon Epstein-Zin recursive utility, including existence and uniqueness of the corresponding utility processes. Third, we show that, despite the additional nonlinearities introduced into the dynamic programming equation by the recursive preferences, the solution can still be expanded analytically in the small-cost limit, and we provide rigorous asymptotics of the investor's optimal strategies.