

1116-60-1942

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Asymptotic Methods for Portfolio Optimization Problems with Stochastic Volatility.

We revisit the portfolio optimization problems with slowly varying stochastic volatility, and using asymptotic methods with respect to volatility time scales. In the case of one factor and power utility, the problem is linearized and well-understood. However, the problem with general utility is still open. Here we address the case of general utility and prove asymptotically the optimality of the zeroth order strategy within a class of Markovian feedback control. (Received September 21, 2015)