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Equilibrium pricing in incomplete markets under translation invariant preferences.

Conditions are given for the existence and uniqueness of equilibria in incomplete dynamic market models when agents have translation invariant preferences. This includes mean-variance type preferences and expected exponential utility. General results are provided in discrete time. Then a special case is discussed where equilibrium prices can be calculated as solutions to a system of backward stochastic difference equations. In the continuous-time limit, a system of coupled backward stochastic differential equations with drivers of quadratic growth appears. (Received February 21, 2010)