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Tankut Dogrul*, 415 EMCS Building, Department 6956, 615 McCallie Ave, Chattanooga, TN 37403. *A Nash Equilibrium with several large traders*. Preliminary report.

Motivated by the problem of pricing financial assets in incomplete markets due to the presence of price impact, an equilibrium model with a representative market maker and a finite number of large traders is considered. Prices for (illiquid) European contingent claims with payoffs at maturity as well as optimal trading strategies for the large traders are characterized as a result of various equilibrium concepts such as Nash, subgame perfect Nash and Arrow-Debreu. Using techniques from optimal control theory, equilibrium final wealth allocations are characterized by a finite set of non-linear equations. Dynamic trading strategies in continuous time trading are then obtained by martingale representation results. (Received September 10, 2010)