

A Summary of
New Approaches to Macroeconomic Modeling
by Professor Masanao Aoki (University of California at LA)
delivered on December 17, 1997

The Book (entitled *New Approaches to Macroeconomic Modeling: Evolutionary Stochastic Dynamics, Multiple Equilibria, and Externalities as Field Effects*, Masanao Aoki, Cambridge University Press, New York, 1996) analyzes a share market in which a large number of participants employ one of two types of strategies, and in which participants are subject to social influences or they exhibit herd-like behavior.

The number of agents of each type evolve with time. Prices and volumes to clear the market also change with time. These dynamics are caused in part by agents changing their strategies in response to past performances and to the fractions of agents of each time. These changes are modeled by jump Markov processes. In a simple case, the number of agents are independent Poisson random variables. In a slightly more interesting case the number of one type of agents are Poisson random variables, and the other is conditionally Poisson, given the number of the one type of agents.

Key Words Equilibrium Distribution, Transition Rates, Jump Markov Processes.

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