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**Nicholas S Chaung\*** (nschaung7@gmail.com). *Effects of Non-Independent Behavior on a Macroeconomic Model.*

The standard macroeconomic models in use today are Dynamic Stochastic General Equilibrium (DSGE) models. DSGE models attempt to calculate macroeconomic variables based on microeconomic principles. These variables are determined at each time step (dynamically) by calculating the equilibrium solution to a system of equations, that represents the behaviors and expectations of the involved agents. By assumption, these agents behave independently and rationally to maximize a given function. Taking for example inflation, the DSGE model studied here predicts that changes in inflation over time converge to a normal distribution.

However in real economies, very large fluctuations occur much more frequently than a normal distribution would predict; i.e., frequency distributions of macroeconomic variables show 'fat tails'. An explanation for these fat tails is that agents do not always act independently and rationally, but can instead exhibit non-independent and sometimes perverse behavior. One such non-independent behavior agents have been known to exhibit is 'herding', where agents mimic the behavior of other agents. We will investigate the sensitivity of such DSGE models to herding behavior. (Received September 22, 2011)