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James M Haley* (kapucensko51@comcast.net), 259 Maple Avenue, Pittsburgh, PA 15218. *The Simplest Continuous Model of Financial Chaos and Noise.*

This paper identifies the necessary policy conditions to prove the existence of a strange attractor in a three dimensional model of financial markets that is consistent with a Keynesian framework. Specifically, a Sprott's nonlinear model perturbed by noise behaves chaotically for stock returns, interest rates, and inflation, if the Federal Reserve, the US central bank, implements a Taylor-like monetary policy. In this regime the Fed targets the federal funds rate, which controls interest rates, to vary directly with inflation expectations and real output. Often the Fed overreacts by setting interest rates either too high or too low, causing chaos to emerge in the financial markets. Instead, if the Fed targets zero inflation expectations and pegs the federal funds rate to equal its real expectation, the stock market will behave like a Langevin equation. In this case stock returns mean-revert. Then everyone, including central banks, can make more reliable financial forecasts. (Received September 01, 2009)