My proposal is to test the microfoundations or intermediate results of a small-scale DSGE model. As Noah Smith pointed out in a 2014 blog post[[1]](#footnote-1), “macro theorists tend to make a bunch of assumptions, throw a bunch of equations into a model, see what comes out at the end, and then (loosely) compare those final results to the data” without directly testing the intermediate results along the way. Smith refers to one particular microfoundation, the consumption Euler equation, which appears to have little actual empirical support despite being a critical assumption of every DSGE model. Inspired by one of his referenced papers by Canzoneri et al[[2]](#footnote-2), I plan to test the equilibrium equations of a version of An and Schorfheide (2007)’s stylized New Keynesian DSGE model by comparing, for example, the observed historical interest rate to the interest rate implied by the consumption Euler equation. Rather than modeling the macroeconomic dynamics by a VAR, as Canzoneri et al do, I will use the analytical solution of the An and Schorfheide (2007) state space representation derived by Stephen Morris (2012)[[3]](#footnote-3). I plan to get the macroeconomic time series from FRED and other sources.

1. Smith, Noah (2014): “The equation at the core of modern macro,” *Noahpinion*. <http://noahpinionblog.blogspot.com/2014/01/the-equation-at-core-of-modern-macro.html> [↑](#footnote-ref-1)
2. Canzeroni, Matthew, Robert Cumby, & Behzad Diba (2006): “Euler Equations and Money Market Interest Rates: A Challenge for Monetary Policy Models,” *Journal of Monetary Economics*. <http://faculty.georgetown.edu/canzonem/Spreads-Habits.pdf> [↑](#footnote-ref-2)
3. Morris, Stephen (2012): “Analytical Solutions of DSGE Models and Instrumental Variables.” <http://econweb.ucsd.edu/~jhamilton/macro_morris_instr.pdf> [↑](#footnote-ref-3)