Dear Dr. Nakamura and Dr. Steinsson,

Hello and happy holidays. My colleague, Bob Tetlow, and I are working on a project and could use some guidance interpreting a model you used in your paper *Fiscal Stimulus in a Monetary Union: Evidence from US Regions* published in 2014.

For our project, we are comparing at the effects of a monetary policy shock on macroeconomic variables across a range of macroeconomic models. We are using the models collected in the [Macroeconomic Model Data Base (MMB)](https://www.macromodelbase.com/) collected by Volker Weiland and his colleagues. Our idea is to apply the same monetary policy shock to the large collection of models in the MMB and look at the outcomes for the policy rate, output, and inflation. We are interested in what the range of outcomes is – that is, do the models generally agree on the size and timing of the effects or are there significant differences. Then we want to look at the cross section of results to see what model attributes (e.g., vintage) can help explain the range of outcomes we see. Your model is included in our current analysis but is an outlier, and so we are reaching out to confirm that your model is correctly reflected in the MMB IRFs.

In doing this exercise we checked our results, where possible, against the original papers to see if the model in the MMB was delivering the same results of a monetary policy shock as in the paper. In some cases, it turned out that there were disagreements having to do with the way the models were implemented in the MMB. (For example, in the way the model results were annualized.) In those cases, the MMB folks have made corrections to the models in the database.

However, for models like yours, where there is no equivalent experiment in the paper, we are looking for outliers to see if the results are correct, given the model, or reflect problems with the code in the MMB. Your model is one of our outliers. The attached figures are the IRFs generated by the version of your model in the MMB from a 100-basis point monetary policy shock. We would like to know if these IRFs match what you would expect from your model. Also attached is picture showing the coefficients we used for non-model-specific monetary policy rules that we used in our simulations.

Best,

Bill English & Bob Tetlow