READ ME FILE FOR THE FORECASTING ROUTINE

This read me file is an explanation of the MATLAB routine that generates forecasts.

1   Data Files

In the .zip file there are data files numbered according to the date of the FOMC meetings. For example, *bcdatafile1.mat* refers to January 97 Blue Chip data. There are 153 data files, which covers 1997-2009 period. On the other hand, there are 60 data files for 1992-1996 coverage that are numbered starting from *extbcdatafile1.mat* and on. Here *extbcdatafile1.mat* refers to January 1992 Blue Chip data. One should follow the annotation given in the main code for the usage of the data files. Excel files are also available in the .zip file for 1992-2009 coverage of Blue Chip data. There are seven observed variables that are used for estimation and forecasting. Thus there are seven columns in the data files: Consumption growth, investment growth, GDP growth, hours, inflation, real wage and interest rates, respectively. The abbreviation of the data follows Smets-Wouters (2007).

2   Estimation and Forecasting

For the model estimation and forecasting we have used DYNARE. The main forecasting routine is called by *forecast_loop.m* file, which calls other subroutines such as dynare (the relevant .mod file is *usmodel_v4.mod*) and *bvar_ml_forecast.m*. *bvar_ml_forecast.m* is the BVAR estimation and forecasting routine. It uses the subroutines *mgnldnsty.m* and *mgnldnsty_fcast.m*[1]. Model uses seven observed variables to estimate 14 model variables and 36 parameters. We are interested in three of the variables for the forecasting exercise: GDP growth, inflation and interest rates. The DSGE estimation results and forecasts are saved to the file *forecasts.mat* and BVAR forecasts are saved to the file *bvar_forecast.mat.* To see the forecasts, one should look at median of the point forecasts saved in forecast.mat file. Notice that DYNARE starts forecasting from the last observation of the data, thus produces 9x1 vector. The relevant forecasts are the ones starting from second row. Since we are interested in GDP growth, inflation and interest rates, the associated columns in the point forecast file are third, fifth and seventh columns respectively. This convention is also valid for BVAR forecasts. One exercise done in the paper is to compare the total GDP growth forecasts of DSGE, BVAR and Blue Chip. The methodology followed in the paper is to multiply the relevant population growth numbers with the DSGE and BVAR forecasts. In particular we have used the population growth series that is given in the *First_ Finals_1992_2010.xlsx* file, under column I and

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[1]These subroutines can be found at Christopher Sims' page: http://sims.princeton.edu/yftp/VARtools/matlab/.

multiply the relevant population growth number using the following formula: $(1 + gdpfcast)(1 + pop)$. For instance, to get the aggregate GDP growth forecast for 1997 Q1, we substituted the 1997 Q1 per capita GDP growth rate (coming from the DSGE model and BVAR) and 1997 Q1 population growth number into the formula given. The Excel files *BC_model_forecasts_92_96.xlsx* and *BC_model_forecasts_97_09.xlsx* are the files that the forecasts are shown. The first eight columns are the DSGE model forecasts starting from 1 quarter ahead to 8 quarters ahead. Similarly the following columns are untrained BVAR forecasts followed by trained BVAR forecasts.

Finally there are two first final files: *First_finals_1992_2010.xlsx* and *Interest_rates_first_final_1992_2010.xlsx*. The former has first final values for aggregate GDP growth (column H), population growth (column I), per capita GDP growth (column J), inflation (column K) and wage growth (column L). And the latter file has the interest rate first final data.

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