

THE MACROECONOMIC MODEL DATA BASE-VERSION 2.2^{1 2}

1 The Macro Model Data Base Version 2.2: What is New?

In comparison to version 2.1, MMB version 2.2 includes eleven new and distinct models (see Table 1), which comprise more detailed modeling of the financial sector, fiscal policy or labor market frictions. In addition, the MMB 2.2 includes Adaptive Learning (AL) models and several adaptive learning versions of respective rational expectations counterparts. Twelve models concern the US economy, three calibrated and nine estimated, whereas two models are calibrated and estimated for the Euro area. There are eleven models with AL. Additionally, model-specific policy rules are implemented for the following models: NK_AFL15, NK_NS14, US_CFOP14, US_CPS10, US_DNGS15, US_FGKR15, US_FMS134, US_JPT11, NK_BGG99AL, NK_LWW03AL, NK_CGG99AL, NK_CGG02AL, NK_IR04AL, US_SW07AL, US_MI07AL and US_YR13AL.

2 Installation

The complete Macro Model Data Base is contained in a zip file called *MMB_2_2.zip* which you may save to any place on your computer. In order to use the model data base, you have to extract the zip file to retrieve the folder called MMB. This folder contains the file *MMB.m*, and a set of subfolders relating to the models included in the data base and to MMB options and output. Each model's subfolder contains a single DYNARE mod-file in which the particular model is specified.

3 Software requirements

The program is written in MATLAB, so some version of it must be installed on your computer. MMB 2.2 is compatible with MATLAB versions from 2013a up to 2017a. For model solution the program utilizes DYNARE, which can be downloaded free of charge from the web.³ Double-clicking on the downloaded DYNARE exe-file opens a set of steps that guide you through the installation. After completion, one has to add the DYNARE path to MATLAB. In order to do so, open MATLAB and choose *Set path* from the *File* menu. Use the option *Add folder* and browse to the directory where you installed DYNARE. The DYNARE subfolder that has to be added is called *MATLAB*. The software is currently compatible with DYNARE 4.3, 4.4 and 4.5.⁴

4 Using the Macro Model Data Base - First Steps

MMB.m represents the main file which has to be run when using the model data base. In order to run *MMB.m*, you can either open the file in MATLAB and click the *Run* button, which automatically adjusts the current directory of MATLAB to the correct path, or you only open MATLAB and

¹Please let us know if you have any comments. E-mail: info@macromodelbase.com

²As sources please always cite: (i) Wieland, Volker, Tobias Cwik, Gernot J. M̈ajller, Sebastian Schmidt and Maik Wolters, (2012). 'A New Comparative Approach to Macroeconomic Modeling and Policy Analysis.' *Journal of Economic Behavior and Organization*. (ii) Wieland, V., Afanasyeva, E., Kuete, M., and Yoo, J., 'New Methods for Macro-Financial Model Comparison and Policy Analysis.' Forthcoming in *Handbook of Macroeconomics, Volume 2, Elsevier*.

³The URL of the DYNARE website is <http://www.dynare.org>.

⁴We have tested that the Modelbase software works well with Dynare 4.6 Unstable, the latest version until June 2017.

adjust the current directory to the path for the MMB folder manually. In the latter case you afterwards type *MMB* into the MATLAB command window and press the *Enter* button. In both cases a Modelbase interface shows up that will guide you through a menu of options from which you can choose. By default the output generated by the program will be stored in an excel sheet called *results.xls* in the subfolder of output. You can also name it in the menu. A list of the models included in the data base and its references is provided in the pdf file of *MMB_model_description.pdf*. A description of model comparison approach implemented in the Macro Model Data Base is given in Wieland, Cwik, Mueller, Schmidt, and Wolters (2012). A MMB user guide is provided in the *MMB_2_2.zip* package and explains how to use MMB 2.2 in greater detail. Furthermore, Wieland, V., Afanasyeva, E., Kuete, M., and Yoo, J., 'New Methods for Macro-Financial Model Comparison and Policy Analysis,' forthcoming in *Handbook of Macroeconomics, Volume 2, Elsevier*, reports on comparison examples with models featuring nominal and real rigidities, as well as models with more detailed financial sectors.

Table 1: NEW MODELS IN MMB 2.2

NK_AFL15	Angeloni et al. (2015)
NK_BGEU10 and NK_BGUS10	Blanchard and Gali (2010)
NK_NS14	Nakamura and Steinsson (2014)
RBC_DTT11	De Fiore et al. (2011)
US_CFOP14	Carlstrom et al. (2014)
US_CPS10	Cogley et al. (2010)
US_DNGS15	Del Negro et al. (2015)
US_FGKR15	Fernández-Villaverde et al. (2015)
US_FMS134	Fève et al. (2013)
US_JPT11	Justiniano et al. (2011)
EA_DKR11	Darracq Paries et al. (2011)
NK_BGG99AL	Adaptive learning version of Bernanke et al. (1999)
NK_CGG99AL	Adaptive learning version of Clarida et al. (1999)
NK_CGG02AL	Adaptive learning version of Clarida et al. (2002)
NK_IR04AL	Adaptive learning version of Ireland (2004)
NK_LWW03AL	Adaptive learning version of Levin et al. (2003)
NK_RW97AL	Adaptive learning version of Rotemberg and Woodford (1997)
NK_RW06AL	Adaptive learning version of Ravenna and Walsh (2006)
US_FM95AL	Adaptive learning version of Fuhrer and Moore (1995)
US_SW07AL	Slobodyan and Wouters (2012)
US_MI07AL	Milani (2007)
US_YR13AL	Rychalovska (2016)

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