

# A New Comparative Approach to Macroeconomic Modelling and Policy Analysis

Volker Wieland, Tobias Cwik, Gernot J. Müller,  
Sebastian Schmidt and Maik Wolters \*

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## Abstract

Model comparison projects used to be very infrequent and very costly initiatives that required the input of many researcher teams and multiple meetings to obtain, ultimately, a very limited set of comparative findings for particular policy scenarios. This paper presents a new comparative approach to model-based research and policy analysis that may be used and extended by individual researchers. A model archive is built that includes many well-known macroeconomic models that may be used for quantitative analysis of monetary and fiscal stabilization policies. A space of common variables, common parameters and common shocks is defined and the models are augmented accordingly. A computational platform is created that allows straightforward comparison of impulse response functions of common variables in response to common shocks, or of auto-correlation functions of common variables in response to model-specific shocks, and a systematic investigation of policy rules across models. Examples of comparative model-based policy analysis are presented in terms of monetary and fiscal policy shocks and inflation and output persistence. It is also shown how the extension of the model comparison may be automated.

*Keywords:* Macroeconomic Models, Model Uncertainty, Policy Rules, Robustness,  
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\*Volker Wieland: Mailing address: Grueneburgplatz 1, Goethe Universitaet, House of Finance, 60323 Frankfurt am Main, Germany; E-mail: wieland@wiwi.uni-frankfurt.de; Sebastian Schmidt: Mailing address: Grueneburgplatz 1, Center for Financial Studies, House of Finance, 60323 Frankfurt am Main, Germany; E-mail: wieland@wiwi.uni-frankfurt.de