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CCAMTAC Regional Webinar

"DIGNAR-19: A Toolkit for Macro Policy Assessments of the COVID-19 Pandemic in Emerging and Developing Countries"

Tuesday, November 23, 2021

Introduction and Moderator:

Norbert Funke, Director, CCAMTAC

Presenters:

Luis-Felipe Zanna, Senior Economist at Institute for Capacity Development, IMF

Zamid Aligishiev, Economist at Research Department, IMF

Following a short introduction, Luis-Felipe Zanna started his presentation by providing a background of the DIGNAR-19 model, which is an extended version of the DIG and DIGNAR models. Over the past seven years, the DIG and DIGNAR models have complemented the IMF and World Bank debt sustainability framework (DSF) analysis, over 65 country applications. Some policy lessons from country applications of the DIG and DIGNAR models can be found here. They have provided useful insights in the context of program and surveillance work, based on qualitative and quantitative analysis of the macroeconomic effects of public investment scaling-ups, the collapse of commodity prices, and fiscal consolidations, among others.

DIGNAR-19 is a Dynamic General Equilibrium (DGE) model of a real small open economy developed at the IMF to strengthen quantitative macroeconomic assessments and policy scenario analysis in Low-Income Developing Countries (LIDCs) and Emerging Markets (EMs) during the COVID-19 pandemic, which were already struggling with high debt levels and a low growth environment. DIGNAR-19 incorporates shocks associated with the pandemic and helps produce macroeconomic scenarios (with an emphasis on GDP growth and government debt), conditional on domestic and international policy responses while benefiting from an internally consistent framework based on a general equilibrium approach. It comes with an Excel-based interface which facilitates the use of this model. The toolkit, which also has a manual, allows running scenarios to assess the macroeconomic impact of the Covid-19 pandemic on public debt and growth. It can help country teams refine their macro-framework assumptions and allows evaluating the contribution of each shock associated with the pandemic to the dynamic paths of real GDP and public debt. Thus, policymakers can produce internally consistent scenario comparisons to analyze risks, which in turn facilitates the design of policy adjustments.

Zamid Aligishiev presented the technical aspects Excel-based interface. He gave an overview of three tools—the simulation tool, the graphing tool, and the realism tool—that translate the contents of an Excel input file into instructions for Matlab/Dynare programs. The programs are executed behind the scenes and require little to no knowledge of coding. Outputs are saved in a separate Excel file and can also be visualized in customizable charts. As a result, the design of the DIGNAR model toolkit makes it user-friendly for policymakers. The presenters concluded by mentioning an introductory IMF online course for the DIG and DIGNAR models, which can be also useful to learn more about DIGNAR-19.

During the general discussion the questions to the presenters covered (i) ways of obtaining unobserved data and its calibration; (ii) treatment of the exchange rate depreciation in the model; (iii) fiscal policy recommendations, and (iv) software and skills, required to run the model effectively.

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