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## CCAMTAC- Regional Research/Analytical Economic Policy Seminars

### “Ararat Fiscal Strategy Model of the Ministry of Finance of Armenia and COVID-19 scenario”

Thursday, November 4, 2021

#### Introduction and Moderator:

**Norbert Funke**, Director, CCAMTAC

**Martin Fukac**, Resident Advisor on Macroeconomic Frameworks, CCAMTAC

#### Presenters:

**Eduard Hakobyan**, Head of Macroeconomic Policy Department, Ministry of Finance of Armenia

**Garik Petrosyan**, Head of Fiscal and Monetary Policies Coordination Division at Macroeconomic Policy Department, Ministry of Finance of Armenia

#### Discussant:

**Klakow Akepanidaworn**, Economist at ICD, IMF

Following a brief introduction by Norbert Funke, Martin Fukac, the moderator of the seminar, began by giving a review of the Ministry of Finance of Armenia’s (MoF) path to building a solid analytical capacity in dynamic stochastic general equilibrium (DSGE) modeling. He emphasized that results achieved by the Armenian team required strong commitment from the authorities, adequate resources, and continuous eagerness to train and develop the model on their own in parallel to the technical assistance (TA) from the IMF Institute for Capacity Development.

Eduard Hakobyan started the presentation by explaining that the motivation of the Ministry to develop their new Ararat Fiscal Strategy Model (AFSM) was to be able to construct policy scenarios and primarily analyze the structural implications of key fiscal policies, including changes to the tax system, expenditure policies, debt and financing strategies. The model itself is designed to match the Armenian economy in terms of size, structure, characteristics of the markets, behavior of low and middle/high-income households, traded and non-traded sector producers, fiscal and monetary policy instruments, etc. As a result, the Armenian team constructed a micro-founded small open economy model with New Keynesian features.



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According to Eduard, the AFSM model incorporates the country's existing rule-based fiscal framework and fiscal anchors, and, therefore, is expected to help to achieve fiscal sustainability and macroeconomic stability. The model is also used to analyze various exogenous shocks and other policies such as structural, income redistribution, monetary and exchange rate policies, etc. As a part of the Forecasting and Policy Analysis System at the MoF, the AFSM model is used for evidence-based fiscal policymaking, constructing policy scenarios and macro-fiscal frameworks for Budget and Medium-Term Expenditure Frameworks.

The second part of the presentation, introduced by Garik Petrosyan, covered the impact of the 1<sup>st</sup> wave of Covid-19 on the Armenian economy, with a particular focus on the macro-fiscal effects of domestic and external shocks associated with the pandemic and national lockdowns, as well as the efficiency of considered fiscal policy measures. In this case, the AFSM allowed researchers to understand the transmission mechanism of the shocks and explain AFSM's quantitative predictions with a consistent economic explanation. Among other findings, the model provided insights into the GDP contraction, which was explained primarily by the collapse in foreign demand, followed by restrictions to households' marginal propensity to consume, and increased economic uncertainty resulting in negative shocks to investment. In addition, fiscal policy measures were estimated to mitigate the decline of GDP while increasing the public debt burden. The results of the Covid-19 scenario and its further revisions led to policy discussions and the construction of macro-fiscal frameworks in practice.

Following the presentation, Klakow Akepanidaworn briefly summarized the key aspects of Armenia's MoF integrated model and reminded that the DSGE model cannot answer all the policy questions, while its output is as good as its calibration/set-up. His comments and suggestions focused on the calibration of the foreign demand shock, drivers of inflation in 2021, and further development of the model.

During the general discussion the presenters (i) clarified some technical aspects, including model calibration plans; (ii) shared recommendations with other countries that consider developing a similar model at some stage; (iii) elaborated on the skills acquired during the IMF TA missions.

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