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## CCAMTAC- Regional Research/Analytical Economic Policy Seminar Series

### “Fiscal Rules in a DSGE model for Kazakhstan”

July 27, 2023

#### Introduction:

**Mr. Norbert Funke**, Director, CCAMTAC

#### Moderator:

**Mr. Martin Fukac**, Resident Advisor, CCAMTAC

#### Presenter:

**Mr. Sjamsu Rahardja**, Senior Economist, World Bank

**Mr. Nurdaulet Abilov**, Economic Analyst, CCAMTAC

#### Country Interventions:

**Mr. Konstantin Orlov**, Deputy Head of Macroeconomic Research and Forecasting Division, National Bank of Kazakhstan

The research seminar addressed the relevance of fiscal rules as a stabilization tool for a commodity-exporting economy. The main purpose of the research was to analyze the cyclicity of fiscal policy under different fiscal rules and their effect on welfare and macroeconomic stability in a dynamic stochastic general equilibrium (DSGE) model for Kazakhstan.

In times of increased uncertainty, the role allocated to fiscal policymakers in resource-rich economies rises in importance as increased volatility in commodity markets translates into sluggish economic activity. To avoid any swings resulting from exogenous shocks, the government needs to have a well-designed set of rules to stabilize the economy. Mr. Rahardja presented the fiscal framework in Kazakhstan and outlined the importance of National Fund assets in the government’s budget. He also presented findings from the literature that countercyclical fiscal policy leads to a more stable macroeconomic environment and improved household welfare. In addition, Mr. Rahardja presented the results of 2SLS regression which show that the fiscal policy was countercyclical only in times of extreme downturns but was acyclical in times of moderate recessions and expansions.

Mr. Abilov presented the structure of the DSGE model they used for analyzing the performance of various fiscal rules for Kazakhstan. The novel feature of the model was the



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the incorporation of public capital, public consumption and investment into the standard medium-scale New Keynesian model. The model also distinguishes between oil-producing and non-oil firms, and they also assume that there is some inefficiency in public investment. One of the important features of the model is that public infrastructure, i.e. public capital, affects the productivity of firms and the utility of households derived from consumption. The authors of the research analyze three types of fiscal rules in the model: the expenditure growth rule, the transfers rule and the net public assets rule. According to Mr. Abilov, the findings of the research indicate that the new fiscal rules of the government (expenditure growth and transfers rules) in Kazakhstan indeed make fiscal policy countercyclical as opposed to the old acyclical fiscal policy. In addition, they found that the combination of expenditure growth and net public assets rule performs better if the government defines macroeconomic stability in terms of output and inflation volatility. However, if macroeconomic stability is defined in terms of output and the real exchange rate, then the new fiscal rules of the government indeed result in improved household welfare and a stable macroeconomic environment.

The intervention was done by Konstantin Orlov, Deputy Head of Macroeconomic Research and Forecasting Division of the National Bank of Kazakhstan. He highlighted that assuming the same trend growth for all real variables in the model could be a weak assumption. Mr. Orlov also raised the issue of incorporating financial frictions in the model which could affect the findings of the model. In addition, he outlined the importance of the finding of the research that alternative fiscal rules could be better than the existing fiscal rules of the government, meaning that it could set the ground for future revision of the fiscal framework in Kazakhstan. He also stated that they had found that fiscal policy in Kazakhstan was to some extent acyclical and even procyclical at times.