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Title: "Application of Macroeconomic Framework in Simulating Economic Policy Scenarios."

Abstract

A macroeconomic framework is a set of integrated balance sheets representing the four main macroeconomic sectors in the national economy: the real, fiscal, monetary, and external sectors. A financial program is a comprehensive set of policy measures designed to achieve a given set of macroeconomic goals. Financial programming and policies (FPP) is a quantitative tool used by IMF to analyze macroeconomic developments of its member countries through the use of the macroeconomic framework developed for each individual country. IMF economists regularly use macroeconomic framework to conduct annual country surveillance and to provide their assessment and views on likely future directions of the economy, and each of the four sectors under the baseline and alternative policy scenarios during their annual Article IV Consultation discussions with member countries. It is therefore beneficial for the national government authorities to understand how the FPP framework operates for their own assessment of the economy. In fact, by understanding and adopting a sound macroeconomic framework, countries can strengthen their domestic and external macroeconomic stability, improve confidence in policy making, reduce uncertainty, and thus provide the necessary foundation for rapid economic development.

In order to construct the macroeconomic framework, the economists must have access to historical sectoral data – balance sheets – that are of sufficient quality. In addition, the economic team must understand the interrelationships between the four macroeconomic accounts. Once the macroeconomic framework has been developed, the economic team will conduct a financial programming exercise. This exercise typically starts with the development of the baseline scenario. The baseline scenario represents projections that are based on the assumption of the continuation of contemporaneous economic policies, and given the expected international environment. The development of the baseline scenario is used to develop good understanding of the relationships between the four sectors, to verify whether the available statistical data are of sufficient quality and detail, and to ensure the understanding of the internal relationships and consistency of the entire framework. A well-developed, based on sound economic statistics, and consistent macroeconomic framework can then be used to study the nature, sources and seriousness of any imbalances within the economy or between the national economy and the 'rest of the world' (ROW).

A coherent macroeconomic framework can help in the analysis of the economy's potential vulnerabilities to exogenous shocks and policies. Different scenarios can be simulated to study the impacts of shocks such as a decline in export prices for major export commodities (e.g. oil and gas) on each of the four sectors and the broader macroeconomic equilibrium. Also, the macroeconomic framework can be used

to develop a financial program to study how specific policy changes impact the balance sheets of the four sectors and the broader macroeconomic equilibrium.

Most countries can start developing their own macroeconomic frameworks by drawing on the IMF's existing frameworks. The financial programing exercise can be conducted with the use of the IMF macroeconomic framework typically represented by a set of four excel files that are integrated using either inter-file links, or an external databank that is built and accessed using, for example, the Data Management for Excel (DMX) software. After familiarizing themselves with the design of the IMF framework, the national economic team can introduce adjustments to improve the framework, simplify it, or make more detailed when and where necessary.

There are many aspects of the macroeconomic framework that can be studied. For the purpose of this conference, I will demonstrate how a simple application of monetary and financial statistics (MFS) compiled by my colleague in the Economics and Statistics Unit feeds into the macroeconomic framework and how even a relatively rudimentary framework can be used to assess economic vulnerabilities and study propagation of economic policies throughout the economy.

The MFS contain rich information and describe the financial system of an economy. They summarize and present in an economically useful analytical form the accounts of the depository corporations (central bank, commercial banks, credit unions, other deposit taking institutions and money market funds); and non-bank or other financial institutions (insurance companies, mutual funds, pension funds and other financial corporations). The financial system provides intermediation of financial flows between the economic sectors and with the ROW which elucidate the flows of real resources as well. By studying the growth of the monetary aggregates, one can form views about the GDP growth as well as developments in the fiscal and external sectors.