Monetary Cooperation in East Asia and Across the Pacific

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I. INTRODUCTION

- A multi-country macro-econometric model is constructed to describe production-trade network in the Asia-Pacific region.
  - — Ten countries are included: Japan, the United States, Indonesia, Singapore, Thailand, the Philippines, Malaysia, South Korea, Hong Kong, and China.
  - — Policy rules are specified for individual countries to reflect a variety of actual monetary policy stances: (i) interest rate rule (the Taylor rule), (ii) exchange rate rule, and (iii) capital controls.
- The purposes of the model are two-fold:

  a) The model quantifies the economic consequence of deepening interdependence among the Asia-Pacific countries, and

  b) The model discusses a preferable policy regime by evaluating the effects of regime shift on all the regional neighbors.

II. TWO MODELS: *ASIAN TRADE MODEL* AND *ASIAN ECONOMY MODEL*

- Two alternative models are prepared to deal with various economic issues. The structural parameters are estimated from actual data on the Asia-Pacific countries. See Kamada and Takagawa (2002)[1] for detail.
- ***The Asian Trade Model*** assumes that domestic demand and the real effective exchange rates are exogenous. The model is designed to focus on the transmission of economic shocks over the Asia-Pacific countries through trading linkages.
- ***The Asian Economy Model*** determines domestic demand and the real effective

[1] Kamada and Takagawa (2002), "Deepening Interdependence in the Asia-Pacific Region: An Empirical Study Using a Macro-Econometric Model," Bank of Japan Research and Statistics Department Working Paper Series, No. 02-9.

exchange rates endogenously. The model shows us the effects of external shocks on the domestic economies and their propagation effects over the regional neighbors.

III. SIMULATION ANALYSIS

- Four external shocks are considered to show the quantitative properties of each model by shock simulations (see Chs.11-14 and Annex attached on the end of Kamada and Takagawa [2002]).

(i) The growth rate of Japan's domestic demand decreases by 1 percent.

(ii) The yen depreciates by 10 percent against the US dollar.

(iii) The growth rate of US domestic demand decreases by 1 percent.

(iv) The growth rate of East Asia's domestic demand decreases by 1 percent (excluding Japan).

IV. POLICY ANALYSIS

- Based on the Asian Economy Model, we quantify the effects of policy regime shifts over the countries in the Asia-Pacific region.
  - Two alternative policy regimes are considered: (i) a **US dollar peg regime** and (ii) a **currency basket regime**. We simulate scenarios in which all the East Asian countries switch from the current policy regime either to a US dollar peg policy or to a currency basket policy (Japan and the US continue to follow the Taylor rule).
  - With the output gap fluctuations as a criterion, we investigate a preferable policy regime for the East Asian countries. The model shows that the currency basket regime tames international capital flows effectively and thus is preferable to the current policy from the viewpoint of stabilizing business cycle.

II. FURTHER RESEARCH

(1) The implication of the zero bound of nominal interest rates, faced with the Japanese monetary policy.

(2) The impact of China's shifting toward the flexible exchange rate system on the neighboring countries in the Asia-Pacific region.