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II

The Mark III
International
Transmission
Model

Whenever we know enough, the preferred procedure for answering one or more empirical questions is to specify an econometric model with as much structure as our knowledge and data permit and then estimate the model—and simulate it, if necessary—to answer these questions. Our efforts to follow this methodology are reported in the five chapters which make up this part. It is always possible to criticize such an effort on the grounds that we do not really know the appropriate structure. While we try to test for indications of specification error here, we must ultimately appeal to conformity of the results reported in this part with the relatively model-free results of parts III and IV which follow.

Darby and Stockman in chapters 5 and 6 specify and estimate pegged and floating exchange-rate versions of the Mark III International Transmission Model. This is a medium-scale structural model designed to test the existence and estimate the strength of various channels for international transmission. The estimates of the model indicate that linkages among countries joined by pegged exchange rates appear to be much looser or more elusive than has been assumed in many previous studies. The universal practice of sterilization by nonreserve central banks increased their control over their domestic money supplies—a control made possible by the imperfect substitutability of goods and assets. Nor are

other international linkages found to be very strong. The dual of these findings for floating exchange-rate systems is that sterilized intervention in the foreign exchange market can move the exchange rate.

In chapter 7 Darby uses a simplified Mark IV International Simulation Model to illustrate the implications of the structural model for the efficacy of monetary and fiscal policy. Under pegged exchange rates, the simulated results depend on the particular country, with Germany most closely approaching the openness idealized by the monetary approach and Canada and the United Kingdom very nearly closed aside from the Keynesian absorption channel. The flexible version of the Mark IV Model is less successful but does illustrate a potentially perverse short-run effect by which unexpected money-supply increases may temporarily appreciate the currency.

In chapter 8 Darby presents a general framework to discuss the effect of the 1973–74 real oil price increase on the price level. When this analysis is applied within the structure of the Mark III and Mark IV models, the estimated and simulated effects on the price *level* range from 0 to 5 percentage points. This ambiguity results from the coincidental removal of general price controls in 1973–74 in a number of our countries since a significant effect is found only in those countries. The difficulty arises because of potential biases in reported price levels and hence real output as a side effect of evasions of the general price controls.

This part is closed with an analysis of the Lucas-Barro real income equation included in the Mark III Model. Although the distinction between unanticipated and actual changes in aggregate demand variables is fruitful for the United States, it adds little if anything in the case of the nonreserve countries.

These five chapters provide a structural assessment of the international linkages among our eight industrialized countries. While linkages are indeed found, they are not nearly so strong as suggested by much of the recent international literature.