Financial market integration, labor markets, and macroeconomic policies

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Abstract

We used a dynamic two-country optimizing model featuring a labor–market friction to analyze the implications of financial market integration for the propagation of macroeconomic policies in an open economy. Our main result is that the labor–market friction we analyzed substantially reduces the magnitude of the effect of financial market integration on the propagation of macroeconomic policies.
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1. Introduction

An important research question in international macroeconomics is how and to which extent financial market integration affects the propagation of macroeconomic policies in an open economy. For example, a core result derived from the classic models of Fleming (1962) and Mundell (1963) has been that, in a flexible exchange rate regime, the effect of monetary policy on output is an increasing function of financial market integration. In contrast, the effect of fiscal policy on output is a decreasing function of financial market integration. Conventional wisdom based on the Mundell–Fleming model, therefore, suggests that the degree of financial market integration should play an important role for the propagation of macroeconomic policies in an open economy.

In recent years, the so-called New-Open-Economy Macroeconomic (NOEM) models of the type developed by Obstfeld and Rogoff (1995) have largely replaced the Mundell–Fleming model as the major platform for the analysis of macroeconomic policies in an open economy. A major advantage of using a NOEM model to reassess the propagation of macroeconomic policies is that NOEM models are full-fledged micro-founded general equilibrium models. NOEM models, therefore, allow the intertemporal budget constraints and the dynamic optimization of the private sector to be taken into account when analyzing the effects of macroeconomic policies in an open economy.

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Sutherland (1996) has shown how the prototype NOEM model developed by Obstfeld and Rogoff can be extended to analyze in detail the implications of financial market integration for the propagation of macroeconomic policies. Sutherland has used his NOEM model to demonstrate that, as in the Mundell–Fleming model, financial market integration should increase (decrease) the short-run effect of monetary (fiscal) policy on output. In addition, he has used the microeconomic foundation of his NOEM model to study how financial market integration changes the way monetary policy and fiscal policy affect the intertemporal consumption decisions of households, their bond holdings and their labor supply decisions, and exchange rates and interest rates. Extensions of Sutherland's model have been analyzed, for example, by Senay (1998) and Pierdzioch (2005).

Our research is motivated by the observation that a key feature of the classic Mundell–Fleming model is the underutilization of resources and, therefore, the existence of labor–market frictions that give rise to equilibrium unemployment. In contrast, the NOEM models that have been recently used to reassess the link between financial market integration and the propagation of macroeconomic policies do not feature labor–market frictions. We, therefore, analyze how Sutherland's results change when his model is extended to incorporate a labor–market friction. Recent research has shown that labor–market frictions tend to have important implications for the propagation of macroeconomic policies in micro-founded dynamic general equilibrium models (Walsh, 2005).

The specific labor–market friction that we analyzed is built on the assumption that households incur costs when going to work. The analysis of the implications of such costs for households' labor supply decisions has a long tradition in labor economics (Cogan, 1981). Costs of going to work capture the fact that households, for example, must organize child care and incur transportation and commuting costs when going to work. When households incur such costs, households adjust their labor supply along both the intensive margin (units of labor supplied) and the extensive margin (labor-force participation). In the NOEM models of Sutherland (1996) and his successors, macroeconomic policies only trigger adjustments along the intensive margin.

In qualitative terms, our results corroborate the results documented by Sutherland (1996). For example, our model implies that the effect on output of monetary (fiscal) policy is an increasing (decreasing) function of financial market integration. In quantitative terms, however, our results suggest that, when households' costs of going to work increase, the effects of financial market integration on the propagation of macroeconomic policies in an open economy become substantially smaller. Thus, our results suggest that modeling the interaction of labor–market frictions and financial market integration should be important for assessing the magnitude of changes in the propagation of macroeconomic policies that take place when the world's financial markets become increasingly more integrated.

We organize the remainder of this paper as follows. In Section 2, we lay out the NOEM model we used to derive our results. The basic structure of our NOEM model resembles the structure of Sutherland's (1996) model. In Section 3, we report results of numerical simulations of the model. In Section 4, we offer some concluding remarks.

2. The Model

The world is made up of two countries of equal size. Each country is populated by a continuum of infinitely lived utility-maximizing households. Households form rational expectations. Firms produce differentiated traded goods that are sold in a monopolistically competitive goods market. The only production factor is labor.

2.1. Households' preferences

Households are large in the sense that they consist of a large number of members. The proportion e_t of members participates in the work force, and the proportion $1 - e_t$ does not participate (Dotsey & King, 2006). Some members do not participate in the work force because households incur costs when going to work. The convex cost function is of the format $\varphi(e) = \alpha e^{\omega} / \omega$, where $\alpha > 0$ and $\omega > 1$. The costs are denominated in terms of consumption. Households maximize

$$U_t = E_t \sum_{s=t}^{\infty} \beta^{s-t} \left[e_s u(C_s^e, N_s) + (1 - e_s) u(C_s^o, 0) + v(M_s / P_s) \right], \qquad (1)$$