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Monetary and fiscal policy dynamics in an asymmetric monetary union

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Abstract

This paper investigates the dynamic effects of monetary and fiscal policy in a monetary union, which is characterized by asymmetric interest rate transmission. This asymmetry gives rise to intertemporal reversals in the relative effectiveness of policy on member country outputs. The direction and the number of these reversals depend on whether policies are unanticipated or anticipated. We also study the coordination between monetary and fiscal policy in a monetary union. Monetary policy may completely stabilize European output after unanticipated fiscal policy shocks. With anticipated fiscal policy shocks, complete stabilization throughout the overall adjustment process requires monetary policy to be time-inconsistent.

JEL classification: E58; E63; F41

Keywords: European Monetary Union; Fiscal policy; Monetary policy; Policy coordination; Spillover effects; Time inconsistency

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1. Introduction

Prior to the establishment of European Monetary Union (EMU) in 1999, the policy discussion focused almost exclusively on asymmetric shocks as a source of differential macroeconomic developments and adjustment problems within EMU. This emphasis implicitly assumed the macroeconomic structures in the member countries to be symmetric. In the presence of macroeconomic asymmetries, however, even symmetric shocks may be responsible for adjustment problems within EMU.[2] This also raises the question whether the common monetary policy by the European Central Bank (ECB) affects the EMU member countries in a symmetric fashion. While the ECB focuses on euro wide macroeconomic variables and is unable to respond to differential output developments within the EMU, it is nevertheless important to know the extent of co-movement of macroeconomic variables such as output and inflation within the monetary union (ECB, 1999a, 1999b).

Differences in financial structure, in the degree of openness towards the rest of the world or in the nature of the supply side are potential sources of asymmetric monetary transmission in EMU.[3] To date, it is fair to conclude that most of the discussion has concentrated on asymmetries in financial structure and their implications for the impact of changes in interest rates on aggregate demand.[4]

This paper also focuses on asymmetries in interest rate transmission in EMU and investigates the implications of this asymmetry in a *dynamic* macroeconomic context. The theoretical approach analyzes over time the spillover effects within EMU as well as between EMU and the rest of the world arising from interest rate, real exchange rate and output developments.

Asymmetric interest rate transmission may originate from two sources: It may be rooted in a different pass-through behavior of banks in the transmission of policy impulses to the private sector. Asymmetries in the *strength* of pass-through behavior may stem from differences in legal structure of banking systems across the EMU member countries (Cecchetti, 1999). Asymmetries in the *speed* of pass-through behavior of banks also receive attention (Cottarelli and Kourelis, 1994; Mojon, 2000; Sander and Kleimeier, 2004). Assuming symmetric banking behavior, another source of asymmetric interest rate transmission may be different income and wealth effects of households and firms, which in turn originate in differences in financial structure across EMU member countries (Bank for International Settlements, 1994, 1995; ECB, 2000). In fact, empirical evidence supports the view that EMU member countries may respond differently to interest rate impulses of the ECB.[5]

[2] Clausen (2001) and De Grauwe (2000) contrast the monetary policy implications of asymmetric shocks and asymmetric macroeconomic structures.

[3] Clausen (2001) and Dornbusch et al. (1998) survey and evaluate various sources of asymmetric monetary transmission in Europe.

[4] Bank for International Settlements, 1994, 1995; Cecchetti, 1999; Kakes, 2000; De Bondt, 2000.

[5] See for example Ramaswamy and Sloek, 1998; Dornbusch et al., 1998 and Ehrmann, 2000. An extensive survey is provided by Guiso et al. (1999).