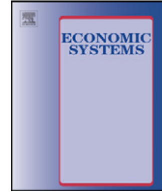
Economic Systems 32 (2008) 253–273

Contents lists available at ScienceDirect

Economic Systems

journal homepage: www.elsevier.com/locate/ecosys



# Measuring and modeling the effects of G-3 exchange rate fluctuations on small open economies: A natural experiment

Slavi T. Slavov *

*Department of Economics, Pomona College, 425 North College Avenue, Claremont, CA 91711, USA*

ARTICLE INFO

*Article history:*
Received 11 April 2007
Received in revised form 2 October 2007
Accepted 20 February 2008

*Keywords:*
Exchange rate regimes
Basket pegs
Baltic countries

*JEL classification:*
F3
F4

ABSTRACT

I present evidence that exchange rate fluctuations among the world's major currencies significantly affect the business cycles of small open economies. The impact of those fluctuations on any given country depends crucially on its exchange rate regime. The three Baltic countries in Central Europe constitute an interesting natural experiment in that regard. I estimate a structural vector autoregression (VAR) model to show the differential impact of euro–dollar exchange rate fluctuations on the business cycles of these three countries. Next, I build a dynamic sticky-price model and I calibrate it to the Baltic States in order to match and explain the empirical evidence.

© 2008 Elsevier B.V. All rights reserved.

## 1. Introduction

The Bretton Woods system of fixed exchange rates ended in the early 1970s. In the past three decades, the world's major currencies have fluctuated widely against one another. Fig. 1 plots the relative values of the world's three major currencies—the US dollar, the euro, and the Japanese yen.[1] These are collectively known as the Group of Three (or G-3) currencies.

Given that the US, the Euro Area, and Japan are large and closed economies, they are fairly immune to sharp fluctuations in the external values of their monies. In contrast, in smaller countries the exchange rate is probably the single most important price in the entire economy. Many small open economies have chosen to peg their exchange rates to one of the major currencies, usually the one which dominates their trade and financial flows. By pegging to a single currency, small economies

* Tel.: +1 909 607 8843; fax: +1 909 621 8576.
*E-mail address:* slavi@pomona.edu.

[1] Before 1999, the euro–dollar exchange rate was spliced with the Deutsche mark-dollar rate.

0939-3625/$ – see front matter © 2008 Elsevier B.V. All rights reserved.
doi:10.1016/j.ecosys.2008.02.002

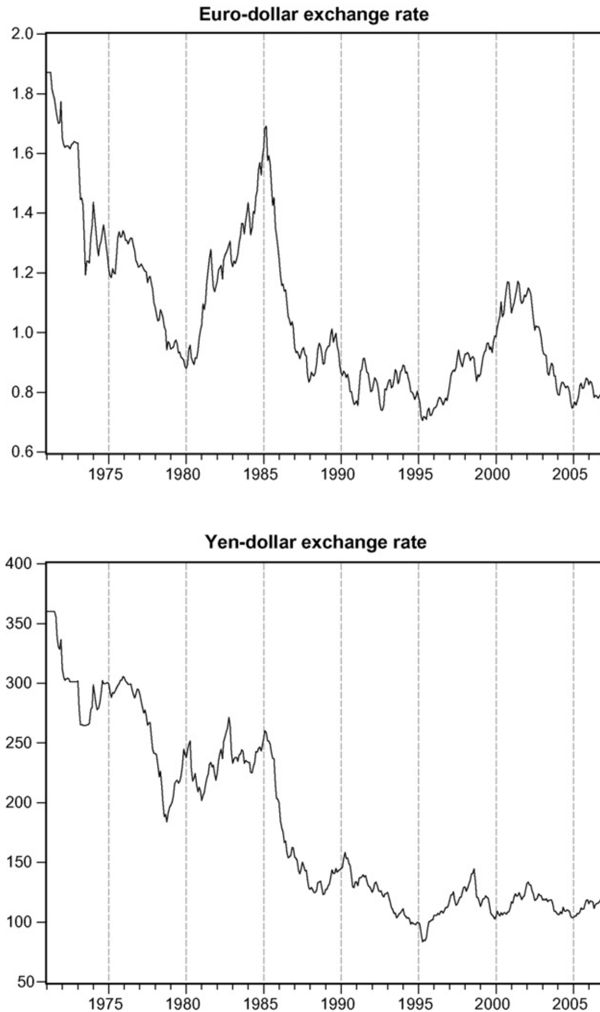



**Fig. 1.** Euro–dollar and yen–dollar exchange rate, January 1971–February 2007. *Source*: IMF, International Financial Statistics. *Note*: Before 1999, the euro–dollar exchange rate was spliced with the Deutsche mark-dollar rate.

with a diversified pattern of trade expose themselves to fluctuations against the other major currencies. If you peg to the dollar, for example, you are floating freely against the yen and the euro. One could think of this as a negative externality problem—the volatility of exchange rates among the major currencies affects small open economies similarly to the way the smoke-spewing factory chimney affects nearby farmers in the classical textbook example.

In theory, how do G-3 exchange rate fluctuations generate macroeconomic instability in a small open economy, whose currency is pegged to one of the three major currencies? First, there is the "trade competitiveness" channel: if you peg to a weakening currency, this will lower the relative price of your exports to third countries, and you might be able to export more. Second, there is the "cost of inputs" channel: if you peg to a weakening currency, this translates into higher prices for imported intermediate goods from third countries, and thus into lower profits for domestic producers. Note that the two channels pull in opposite directions: the first channel would make pegging to a weakening currency expansionary, while the second channel would make it contractionary. The net effect appears to be ambiguous. However, both the empirical and the theoretical evidence presented in this

دریافت فوری ← متن کامل مقاله

ISIArticles
مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات