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ERM effects on currency spot and futures markets ☆

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Abstract

The effects of the Exchange Rate Mechanism (ERM) of 1991–1993 on currency markets are examined. It is shown that the mechanism has led to a regime shift going from the 1980s to the 1990s. The floating exchange rates of the 1980s are associated with the forward premium puzzle (FPP) in spot markets. Furthermore, the futures–spot basis does have explanatory power on futures returns, which violates the expectations hypothesis. In the 1990s the FPP is diminished and uncovered interest parity holds in spot markets and futures returns cannot be explained by the basis. Therefore, the main contribution of this article is that the ERM has reduced currency risk premium volatility and thus validated the expectations hypothesis in both spot *and* futures markets.

JEL classification: F31; E42; G13
Keywords: Exchange rates; Currency futures; Exchange Rate Mechanism

1. Introduction

There has been much debate over the last quarter of a century on the choice of an exchange rate policy. A floating exchange rate that is independent of government influence and determined by market participants is the choice advocated in finance academia. The alternative is the intervention by a central monetary authority to maintain the currency within a band with respect to a benchmark currency. The monetary policy decisions implemented in Europe, especially in 1990s, were based on this latter alternative. According to the advocates of this

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system, an unconditional peg is not the right choice. It would lower inflation expectations but also force the government to a painful defense of the parity in the presence of sizable macroeconomic disturbances. On the other hand, a float may not be appropriate either; it would not provide any monetary or fiscal discipline. The middle approach — realignment rules in a fixed exchange rate regime — provides the logical foundation of an Exchange Rate Mechanism (ERM). A fixed exchange rate regime with implicit escape clauses which allow for the possibility of realignments in the presence of large, observable, and verifiable shocks is supposed to work best.

The political goal of exchange rate stability in Europe has been reinforced by two perceptions about the economy. First, if the movement to a common market with the abolition of tariffs, subsidies, and other barriers to trade is not complemented with an orderly development of a joint monetary system, some national policy makers may be tempted to use exchange rate policy in order to gain a competitive advantage. This form of competition has been regarded as inconsistent with free and fair trade. Second, there is the general skepticism about unregulated financial markets. A regime of flexible exchange rates is subject to severe and persistent misalignments of international relative prices and excess volatility of exchange rates. Speculative bubbles may arise while trade and investment may be deterred.

This paper does not aim to answer whether a flexible or a fixed exchange rate regime is superior. The optimal currency regime depends on many factors (Holmes, 2002, and Miller & Zhang, 1996). The goal in this research is to examine the effects of European exchange rate policies on financial markets, specifically, the currency and the currency futures markets. Previous studies by Ayuso and Restoy (1996), Ayuso and Perez-Jurado (1997), Perasan and Robinson (1992), and Sercu, Vandebroek, and Wu (2003) focus on the ERM period of the early 1990s. This study provides comparative analyses between the 1980s and the 1990s, including and excluding the ERM period. The study also examines exchange rate policies and their effectiveness throughout the 1990s, beyond the specific ERM period along the lines of Bartolini and Prati (1999). Finally, while Campa and Chang (1996, 1998) look at options markets, this paper focuses on futures markets. Therefore, currency futures markets *as well as* spot markets are investigated. European spot returns are examined using the futures–spot basis in different time periods. Futures returns are examined in a similar fashion. The robustness of European currency spot and futures results is determined with the Japanese yen and the Canadian dollar serving as non-European currencies. This paper, therefore, concentrates on the implications of the exchange rate regime on markets, not on the reverse direction of causation. Exchange rates have been freely floating since 1973. Previous research has documented that the expectations hypothesis or uncovered interest parity does not hold in spot markets. Moreover, returns in currency futures should not be explained by the futures spot rate difference, but they are. These stylized facts on currency dynamics should be similar in both the 1980s and the 1990s. However, the study finds this is not the case for European currencies. We do see differences in the 1990s. During this latter decade, the move towards the European Union was in full swing. Potential members were joining monetary unions and participating in the ERM. Exchange rates were heavily influenced by governments' efforts to comply with the requirements of joining the union. We see the implications of such policies on currency dynamics and currency markets in the 1990s. The expectations hypothesis is validated and anomalies disappear both in spot and futures markets. This is mainly due to the tight ERM period of 1991 through 1993. Although there are many papers on the expectations hypothesis, and a number of them look at the ERM from different perspectives (focusing only on the ERM period, or exploring cross-currency dynamics among European currencies), the main contribution of this study is the finding that the