TOWARD A SOLUTION TO THE
UNCOVERED INTEREST RATE PARITY PUZZLE

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July 22, 2009

Abstract

The concept of Uncovered Interest Rate Parity (UIP) suggests that the relationship between the percentage change in the spot rate and a one period lagged value for the interest rate differential, denoted by beta, should be plus unity. For more than 25 years economists have been baffled by the fact that the estimates of beta are typically negative. Furthermore, more recent empirical evidence suggests that beta is often positive for high inflation countries. The objective of this paper is to make progress towards solving this puzzle. We develop and simulate a general UIP model wherein risk averse agents forecast interest rate differentials. We show that a constant risk premium leads to four regimes in which the fx market can operate, and each regime generates a different solution equation for the dynamics of the spot rate. The model implies that the beta coefficient will be biased downwards, perhaps significantly, below plus unity even though the risk premium is constant. The empirical section of the paper uses our theoretical model and actual interest rate differential data for the US versus four OECD countries to calculate a time series for the change in the exchange rate. Using the calculated changes in the spot rate and lagged actual values for the interest differentials, we estimate Fama type equations with results that are consistent with the empirical literature on this subject.

JEL #F31 & #F37

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