

# Nonlinear Mean-Reversion in Real Exchange Rates: Toward a Solution To the Purchasing Power Parity Puzzles

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## Abstract

We fit nonlinearly mean-reverting models to real dollar exchange rates over the post-Bretton Woods period, consistent with a theoretical literature on transactions costs in international arbitrage. The half lives of real exchange rate shocks, calculated through Monte Carlo integration, imply faster adjustment speeds than hitherto recorded. Monte Carlo simulations reconcile our results with the large empirical literature on unit roots in real exchange rates by showing that when the real exchange rate is nonlinearly mean reverting, standard univariate unit root tests have low power, while multivariate tests have much higher power to reject a false null hypothesis.

## Citing Literature



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