

Exchange rate dynamics under a currency board when policy rates are zero

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Summary

In a target-zone exchange rate system, both fundamentals and exchange rate expectations, reflected in interest rate differentials between domestic and anchor currencies, determine the exchange rate. However, scope for exchange rate expectation is limited when policy rates are close to the zero lower bound, in particular in a narrow-band target zone or currency board. Cook and Yetman (2014) introduce a new mechanism, based on a central bank's balance sheet, which works to bring about equilibrium in currency markets even when interest rates are zero. To investigate how interest rate differentials and a central bank's balance sheet (monetary base) affect exchange rate dynamics, this paper uses a target-zone model with an asymmetric mean-reverting fundamental dynamics. This model is tested on data for the Hong Kong dollar (HKD), which is pegged with the US dollar (USD), under a zero-interest rate environment. The empirical results suggest that the restoring force and long-term mean of the exchange rate dynamics are cointegrated with the monetary base, as well as HKD-USD interest rate differentials. Appreciation expectations of the HKD are reflected in the dynamics and are found to be positively (negatively) related to capital inflows (interest rate differentials).