

Are Central Bankers opportunistic? A threshold cointegration investigation.

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Abstract

This paper examines the long-run relationship between short term nominal interest rates and inflation using American data. As the real interest rate is supposed to be either $I(0)$ or $I(1)$ without a real consensus in empirical studies, we test for a unit root in the framework of a complete cointegration analysis and ECM methods with switching regimes. As a first step, we conduct cointegration tests, while innovating by allowing a break in the cointegrating vector as well as a mean shift for the constant in the long-run equation following Gregory & Hansen (1996) methodology. This will help us to specify correctly any sudden and exogenous change in the process. As a second step, we undertake Threshold AutoRegressive (TAR) tests for the residuals of the cointegration relationship as well as a test of non-linearity allowing a smooth transition from one regime to another. The null hypothesis of a unit root is also tested while the alternative is the stationary Logistic Smooth Transition Autoregressive (LSTAR) model. An application to the US data shows strong evidence for a threshold behavior in the long run relationship. Asymmetries in interest rates changes to inflation shocks in Central Bank reaction function imply that monetary authorities are trying to run a credible anti-inflationary policy, reacting differently to positive and to negative inflation surprises.

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