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Real Interest Rate Parity for East Asian Countries Based on China with Two Structural Breaks

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ABSTRACT

This study applies Narayan and Popp's (2010) unit-root test with two endogenous breaks, which has been proven to be more powerful than the other unit root tests with two breaks (Narayan and Popp, 2013) to test the validity of long-run real interest rate parity (RIRP) to assess the non-stationary properties of the real interest rate convergence relative to China for ten East Asian countries. We examine the validity of RIRP from the perspective of the unit root with two breaks and provide robust evidence, which clearly indicate that RIRP holds true for six countries. Our findings point out their real interest rate convergence is mean reversion towards RIRP equilibrium values with two structural breaks. It implies that the choices and effectiveness of the monetary and fiscal policies in the East Asian economies will be highly influenced by external factors originating from China. Our results have important policy implications for these East Asian countries under study.

Keywords: Unit Root Test with Two Endogenous Breaks, Real Interest Rate Parity

JEL: C22, F36

1. Introduction

The extent to which rates of real interest are connected across countries, and how these linkages have progressed over time, have gained considerable attention in previous studies (Fraser and Taylor, 1990; Anoruo *et al.*, 2002; Holmes, 2002; Pipatchaipoom and Norrbin, 2008). In an open economy, real interest rate parity (RIRP) provides an indication of whether countries are economically and financially integrated or autonomous. When RIRP holds, it implies that assets with identical risk, liquidity and maturity have the same expected return across different countries. The RIRP states that, if agents make their forecasts using rational expectations and arbitrage forces are free to act in the goods and assets markets, then real interest rates between countries will equalize (Peel and Venetis, 2005). RIRP requires good and financial market arbitrage, and its confirmation is viewed as an indication of macroeconomic convergence (Frankel, 1991). In theory, in a one-world market, investors should be able to allocate their capital freely, thereby reducing arbitrage opportunities across countries. In such an environment of growing interdependence among markets, country-specific interest rates should exhibit a long-run convergence. Importantly, verification of real interest rate equalization across countries implies evidence of capital mobility and financial integration. As globalization and integration of international goods markets advance with lessening of tariffs and other constraints, there will be further impetus to the changes in the financial market. Market integration has far reaching implications for cross-border capita; flows, arbitrage, financial management, and monetary policy autonomy. Another important implication is the loss of independence in the individual monetary authorities in controlling the internal real interest rates. If RIRP holds, that means one individual country could not pursue an independent monetary policy; thus, the country may lose the power to influence the real economy. In an open and effective financial market, the interest rate differentials between two countries may cause international capital flows, and then may induce the change of exchange rate. The arbitrage space will decrease due to the change of the exchange rate, until the financial market returns to the equilibrium status (Obstfeld and Rogoff, 1995; Merlevede *et al.*, 2003).