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The transmission of shocks across real estate investment trust (REIT) markets

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Abstract

This paper examines the transmission of shocks across equity, mortgage, and hybrid real estate investment trusts (REITs). Though the augmented Dickey–Fuller, Phillips–Perron, and Kwiatkowski–Phillips–Schmidt–Shin unit root tests reveal that the respective REITs are integrated of order one, Johansen–Juselius cointegration tests suggest that the three REIT markets are not cointegrated. The absence of cointegration supports the proposition of financial market efficiency proposed by Granger and by Richards. Granger-causality tests and Wald tests of long-run relations are presented to examine the short-run dynamics of the respective REIT markets; moreover, the generalized impulse response analysis reveals that shocks across the REIT markets are disseminated quickly.

Notes

Background information on REITs can be obtained from the National Association of Real Estate Investment Trusts (www.nareit.com).

For a discussion on the relationship between REITs and the stock and bond markets consult Liu et al. (1990), Liu and Mei (1992), Gyourko and Keim (1992), Ambrose et al. (1992), Myer and Webb (1993), Li and Wang (1995), Okunev and Wilson (1997), Peterson and Hsieh (1997), Chandrashekaran (1999), Quan and Titman (1999), Ling and Naranjo (1999), and Glascock et al. (2000). With respect to the integration of international real estate markets consult Asabere et al. (1991), Ziobrowski and Curcio (1991), Myer et al. (1997), Liu and Mei (1998), Eicholtz et al. (1998), and Kleiman et al. (2002).

Research by Gilberto (1990), Gyourko and Keim (1992), Myer and Webb (1993), Seck (1996), and Glascock et al. (2000) examine the relationship between REITs and unsecuritized real estate assets.

The studies by He (1998) and Glascock et al. (2000) test for cointegration in the bivariate system only and use a shorter time period in their analysis.

The use of return indices follows from Richards (1995).

See Investing in Real Estate Investment Trusts, NARIET Research published by the National Association of Real Estate Investment Trusts.

The multivariate Lagrange multiplier test was used to test the null hypothesis of no serial correlation in the residuals up to lag 12 (Johansen, 1995, p. 22). The test statistic, LM(12) = 11.43, yielded a probability value of. 2472.