

The Dynamic Relationship Between Market Efficiency and Trading Volume in the Japanese Stock Markets*

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Abstract

This paper investigates the dynamic relationship between market efficiency and trading volume in the Japanese stock markets: Tokyo Stock Exchange 1st and 2nd Sections (TSE1 and TSE2). We develop a new method, a Non-Bayesian time-varying autoregressive Exogenous (TV-ARX) model, and apply it to examine the relationship.

We find that: (1) they have distinct dynamics of market efficiency: the lower degree of market efficiency of TSE2 than TSE1, (2) the degrees of market efficiency of the TOPIX evolve over time since the burst of the bubble economy, but the TSE2 one does not, and (3) the market efficiency dynamics crucially depend on each variations of trading volume.

JEL classification numbers: C22; G14

Keywords: Non-Bayesian Time-Varying Autoregressive Exogenous Model; Market Efficiency; Long-Run Multipliers; Kalman Smoothing

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