Testing Semi-Strong Form Efficiency of the Prewar Japanese Stock Market

Kenichi Hirayama

Tokio Marine Asset Management Co., Ltd

Akihiko Noda

Kyoto Sangyo University and Keio University

Abstract

This paper examines Fama's (1970) semi-strong form efficient market hypothesis (EMH) in the prewar Japanese stock market using a new dataset. In particular, we focus on the relationship between the prewar Japanese stock market and several government policy interventions to explore whether the semi-strong form stock market efficiency evolves over time. In order to capture the long-run impact on government policy interventions against stock markets, we measure the time-varying joint degree of market efficiency and the time-varying impulse responses based on Ito et al.'s (2014; 2017) generalized least squares-based time-varying vector autoregressive model. The empirical results show that (1) the joint degree of market efficiency in the prewar Japanese stock market fluctuated over time by external events such as policy changes and wars, (2) the semi-strong form EMH is almost supported in the prewar Japanese stock market, and (3) the markets rapidly reflect the information of the external events through time. Therefore, we conclude that Lo's (2004) adaptive market hypothesis is also supported in the prewar Japanese stock market even if we take into account that the public information affects the stock market.

Keywords: Efficient Market Hypothesis; Adaptive Market Hypothesis; GLS-Based Time-Varying Model Approach; Degree of Market Efficiency; Semi-Strong Market Efficiency.
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