Does Arbitrage-Free Theory Hold

For Japanese Government Bond Market?

January, 19, 2017

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Abstract

In this paper, we examine and compare the forecast performances of Dynamic Nelson-Siegel model (DNS), Dynamic Nelson-Siegel-Svensson model (DNSS), and Arbitrage free Nelson-Siegel model (AFNS) after the financial crisis periods. The best model for the forecast performance is DNSS. AFNS is inferior to DNS and DNSS. In Christensen et al. (2011), they show that AFNS is superior to DNS in U.S. data. However, in Japanese data, there is no evidence that AFNS is superior to DNS. The result suggests that Japanese Government Bond market is more inefficient than U.S. market.