



Q

Home ► All Journals ► Economics, Finance & Business ► Applied Financial Economics ► List of Issues ► Volume 9, Issue 1 ► Pricing and quality option in Japanese g

Applied Financial Economics > Volume 9, 1999 - Issue 1

89 6 0 Views CrossRef citations to date Altmetric

Original Articles

Pricing and quality option in Japanese government bond futures

BING-HUEI LIN, REN-RAW CHEN & JIAN-HSIN CHOU

Pages 51-65 | Published online: 07 Oct 2010

Solution Cite this article Attps://doi.org/10.1080/096031099332528



Abstract

An empirical study of the Hull - White model for pricing Treasury bond futures contracts with quality option is presented. Japanese long-term Government Bond (JGB) futures contracts are chosen, because unlike US Treasury bond futures contracts, which embed both the quality and timing options, the JGB contracts contain only the quality option. Interest rate model parameters are estimated using a simple regression technique and the yield curve is smoothed by B-spline functions with a correction for heteroscedasticity. By applying a discrete trinomial tree approach proposed by Hull and White, the quality option embedded in the JGB futures is then determined by the difference between the theoretical futures prices for contracts with and without allowing multiple deliverable grades. Without the addition of other timing options, the value of the pure quality option is less significant compared to those of other empirical studies. It is approximately 0.02 percentage points of par three months prior to delivery. In this study, it is demonstrated that the Hull - White model is simple and computationally efficient.



| Information for | Open access |
|----------------------------|----------------------|
| Authors | Overview |
| R&D professionals | Open journals |
| Editors | Open Select |
| Librarians | Dove Medical Press |
| Societies | F1000Research |
| Opportunities | Help and information |
| Reprints and e-prints | Help and contact |
| Advertising solutions | Newsroom |
| Accelerated publication | All journals |
| Corporate access solutions | Books |

Keep up to date

Register to receive personalised research and resources by email





Copyright © 2025 Informa UK Limited Privacy policy Cookies Terms & conditions

Taylor & Francis Group an informa business



Registered in England & Wales No. 01072954 5 Howick Place | London | SW1P 1WG