

# No-arbitrage determinants of Japanese government bond yield and credit spread curves

Tatsuyoshi Okimoto\* and Sumiko Takaoka†

April 14, 2017

## Abstract

We introduce an affine term structure model with observed macroeconomic factors for the government bond yield and credit spread curves. Empirical results based on the model selection using Japanese data demonstrate that the government bond yield and credit spread curves are dominated by the monetary policy and suggest that the flight-to-quality behavior considerably affects the government bond yield. In addition, our results indicate that global economic forces, such as the U.S. Treasury yield and Baa-Aaa credit spread, play a major role in the joint dynamics of government yield and credit spread curves, complementing a growing body of literature explaining what drives the yield and credit spread curves. Our contemporaneous response and historical decomposition analyses find that monetary policy and global economic and financial forces have large impacts on at all maturities and curves.

*JEL classification:* E32, E43, E44, G12

*Keywords:* Affine term structure, Credit spreads, Flight-to-quality, Japanese government bonds, Government bond yields, Monetary policy

---

\* Associate Professor, Crawford School of Public Policy, Australian National University and Visiting Fellow, Research Institute of Economy, Trade and Industry (RIETI), 132 Lennox Crossing, ANU, Acton, ACT 2601, Australia. E-mail: tatsuyoshi.okimoto@anu.edu.au

† Professor, Faculty of Economics, Seikei University, 3-3-1, Kichijoji Kitamachi, Musashino, Tokyo 180-8633, Japan. E-mail: takaoka@econ.seikei.ac.jp