

# A Global Model of International Yield Curves: Regime-Switching Dynamic Nelson Siegel Modeling Approach

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## Abstract

The importance of examining yields at a multi-country level has been highlighted by the most financial crisis, which has shown that financial markets are globally interconnected. We have extended Diebold, Li and Yue (2008) which modeled a potentially large set of country yield curves to a regime switching setting, proposing a global factor model in which country yield-level, slope and curvature factors may depend on global-level, slope and curvature factors as well as local factors. Using a monthly dataset of government bond yields for Germany, Japan, the US, and the UK from January 1995 to June 2019, we extracted global and local factors for both the full sample. The results indicate strongly that global yield-level, slope, and curvature factors do indeed exist and are economically important, accounting for a significant fraction of variation in country bond yields with interesting differences across countries. Moreover, the global yield factors appear linked to global macroeconomic fundamentals. We also discuss interpretation of regime probabilities and economic variables and how the yield curve moves between two regimes. We find that the proposed model fits the yield curve remarkably well. The results also suggest that regimes are related to business cycles.

**JELCodes:** C13, C32, E43

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