An Empirical Analysis of Yield Curves across Euro and Non-Euro Countries Using Interbank Interest Rates

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Abstract

This paper studies the interrelations among yield curve factors, market expectations and monetary policy rates using interbank interest rates across Euro- and non-Euro countries. The interbank yield curve can be summarized by the level and slope factor, whereas curvature is not a common feature of interbank rates. Interbank rates are first modelled in an equilibrium framework using a two-factor CIR (1985) model, and Kalman filter is used to extract the two factors under the no–arbitrage restriction. Impulse response analysis shows that German factors and forecast errors have the biggest influence on those factors from other markets, and that yield slope is a useful variable for capturing market expectations. Based on the estimated factors, theoretcial yields implied by the Expectations Hypothesis match remarkably well the movements of monetary policy rates, building a consistent link between yield curve factors and macroeconomic variables and providing a consistency between the no–arbitrage yield curve modelling approach and the Expectations Hypothesis approach.

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Keywords: term structure; CIR; Kalman filter; impulse response; yield curve; yield slope; Expectations Hypothesis

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