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Computing Equilibrium Bond Prices in the Vayanos-Vila Model

Fumio Hayashi

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Computing Equilibrium Bond Prices in the Vayanos-Vila Model

by

Fumio Hayashi
National Graduate Institute for Policy Studies
7-22-1 Roppongi, Minato-ku, Tokyo 106-0032, Japan

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Abstract

We develop tools for computing equilibrium bond prices for the discrete-time version of the Vayanos-Vila (2009) model. With the maturity structure included in pricing factors, factor loadings for equilibrium bond yields depends critically on parameters describing maturity structure dynamics and other model parameters. An illustrative example shows that the effect on the yield curve of a supply shock originating in a given maturity, although hump-shaped around the originating maturity, is to change yields broadly across all maturities.

Keywords: Vayanos-Vila model; computation; maturity structure; yield curve; risk premia.

JEL classification: E43, E58, G12.

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