

Structural estimation of sovereign default model¹

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Abstract

Current RBC studies on emerging economies tend to emphasize the importance of stationary financial frictions rather than nonstationary productivity shock. However, the source of financial frictions are productivity shocks which may be stationary or nonstationary or both, in the literature of sovereign default model. Therefore, the possibility remains that nonstationary productivity shock is indirectly important as the source of stationary financial frictions. Thus, we quantitatively evaluate sovereign default model as a DSGE model with microfounded financial imperfection, applying simulated tempering sequential Monte Carlo. Our main result exhibits that nonstationary productivity shock is as important as stationary productivity shock in terms of random-walk component. Our conclusion supports both importance of stationary financial frictions and that of nonstationary productivity shock.

Keywords: Sovereign Default, Business Cycle, Financial imperfection, Particle Filter, Sequential Monte Carlo, Full-nonlinear DSGE

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