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Calibration of Wishart Stochastic Correlation Model for Sovereign Default Risk

In the context of structural credit risk modeling, we consider a stochastic correlation model with Wishart process for sovereign credit risk. Different from corporate counterparties, there is no reliable proxy for the market value of a sovereign credit asset, which makes the model estimation problem challenging. We apply the extended Kalman Filter to calibrate the model, based on the term structure of survival probabilities which are implied by the market values of sovereign credit default swaps.