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Tobit Cointegrated VAR Model. An Application to the Currency Market

Abstract

The Tobit cointegrated VAR model (Tobit-CVAR) proposed in this study extends the existing Qual-VAR by allowing the censored variables to be nonstationary. This approach has two consequences. The asymptotic distribution of the TRACE statistic necessary to infer on the cointegration rank differs from the standard one and the critical values have to be simulated.

The Tobit-CVAR is applied empirically to the currency market. The results confirm the exchange rate to be driven by four main forces: inflation, interest rates, the risk attributed to the specific country (vis-à-vis the reference countries), and the state of the currency market. Temporary disequilibria in the currency market are caused not only by "fundamental" factors such as the net foreign assets, but also by a contagion effect resulting from the investors' inclination to perceive that country and its neighbors as one group.

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Keywords: cointegration, contagion effect, exchange rate models, censored variables

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