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THE FRICTIONAL COINTEGRATED VECTOR AUTOREGRESSIVE MODEL

Abstract

This paper proposes the fractional cointegrated vector autoregressive model, which is an extension of the tobit cointegrated vector autoregressive model. The extension is based on the use of frictional variable instead of censored one. Modified trace test statistic is proposed and its asymptotic distribution is derived. Moreover, critical values are tabulated for different variants of data generating processes. Application of the fractional cointegrated vector autoregressive model is discussed in the context of modelling foreign exchange interventions, as well as instability in the currency market. When in a currency market appreciation pressure, as well as depreciation pressure occurs, the fractional cointegrated vector autoregressive model outperforms the tobit cointegrated vector autoregressive model.

JEL Classifications: C32, C35

Keywords: cointegration, modelling exchange rate, frictional variables

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