An Empirical Linkage between Monetary Base and Broad Money: I(2) and I(1) Cointegration Analysis of Monetary Aggregates

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Abstract

The objective of this paper is to consider methodology for modelling time series data of money supply measures such as monetary base and broad money. A brief review is made with regard to the likelihood-based cointegration analysis of I(2) (integrated of order 2) data and I(2)-to-I(1) transformations. The paper then investigates procedures for econometric modelling of monetary aggregates, which are in general deemed to be I(2) variables analogous to price indices. It is shown that I(2)-to-I(1) transformations centering on a money multiplier play an important role in the modelling procedures. Finally, the study presents an empirical illustration of the proposed methodology using monetary aggregate data from Japan.