NON-LINEARITES IN EMERGING FINANCIAL MARKETS: EVIDENCE FROM INDIA

Ayan Bhattacharya[1]
Rudra Sensarma[2]

Efficiency and predictability of financial markets are inherently linked to the statistical properties of market indicators. While many papers have researched non-linearities in developed financial markets, this paper examines chaotic dynamics in daily data taken from four financial markets in India, an emerging economy. The financial markets considered are the stock market, the foreign exchange market, the money market and the bond market. We employ four tests for detecting non-linearities, viz. the BDS test on raw data, the BDS test on pre-whitened data, Correlation Dimension test and Brock's Residual test. We find that the market indicators are not characterized by white noise or GARCH processes. Our results do not provide evidence for chaos but indicate the presence of other non-linear deterministic processes. These findings have important implications for investments in these markets.

---

[1] Cornell University
[2] Associate Professor, Indian Institute of Management Kozhikode, IIMK Campus PO, Kozhikode–673570, email: rsensarma@iimk.ac.in