

Macroeconomic Volatility Transmission and Shock Responses in the Nepalese Stock Market

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Abstract

This study examines the volatility properties of the Nepal Stock Exchange Index (NEPSE) using 223 monthly observations from July 2006 to January 2025. Based on EGARCH estimation, the Nepalese stock market demonstrates asymmetric, persistent, mean-reverting, and highly clustered volatility, with negative shocks causing larger movements than positive shocks of the same magnitude. Among the macroeconomic variables, only the Treasury bill rate has a significant impact on stock returns, confirming that rising short-term interest rates reduce market performance. Variance decomposition establishes that NEPSE is largely self-driven in the short run, with its own innovations, accounting for approximately 95% of forecast error variance. Money supply exerts a small positive effect, and inflation has a minimal negative impact, while the contribution of TBR increases steadily over the medium and long term. IRF results suggest that NEPSE strongly responds to its own shocks in the initial periods, which gradually diminish over time as external macroeconomic variables influence the market. Findings reveal that internal market dynamics mainly drive short-term fluctuations, while the influence of rising interest rates strongly influence medium- and long-term behaviour. The NEPSE remains largely self-correcting in the short term, emphasizing the importance of stable monetary policy and effective macroeconomic management for market stability, growth, and development.

Index Terms

NEPSE, EGARCH Model, Volatility Dynamics, VDC, IRF