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## Stock Returns and Volatility of Energy Sector of National Stock Exchange in India

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### **Abstract:**

The paper examines the relationship between stock market volatility and returns, volatility clustering, leverage effect and the persistence of volatility for the energy sector of National Stock Exchange (NSE) in India for the period 2005-06 to 2013-14. The study further investigates the impact of firm size and volatility on returns. The GARCH-M model is used to examine the volatility clustering and persistence of volatility and the relationship between returns and volatility. The EGARCH model is used to examine the asymmetric effect. A panel regression is estimated to show the relationship among firm size, volatility and returns. The study reveals that the volatility in all the energy sector firms exhibits the characteristics like volatility clustering, asymmetry effect and persistence of volatility in their daily returns. The study also finds the existence of leverage effect in CESC, JPV, KSK, NLC, and CNX Energy indicating that the negative shocks or bad news have more impact on volatility than that of positive shocks or good news. The relationship between returns and volatility is statistically significant for CESC, NPHC, NTPC, RIL and TPL. The study also finds significant small size firms effect on returns.

**Key Words:** Stock returns, Volatility clustering, Leverage Effect, Firm Size, GARCH-M and EGARCH model.

**JEL Classification:** G10, G11, G12, G20