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**Title:** Commodity Futures Market Efficiency in India and Macro Economic Impacts

### **ABSTRACT**

Financial globalization facilitates greater diversification of investment and reduces uncertainty through derivatives by transferring the risk across national financial systems. Financial and commodity derivatives play a vital role in stabilizing trade and economic situation in the country. The size of derivative market in terms of volume, trade values and variety of traded instruments has been shown exponential growth in the last few years. Commodity Futures reflect the role of the market forces in two important functions; price discovery and price risk management. This sector has enormous potential not only in terms of direct participation in the market but also in terms of opportunities for developing value added services in terms of better warehousing, modern technology based clearing and settlement, dissemination of price and trade information, setting up modern demutualised exchanges etc. The better understanding of the trends in commodity spot and futures would facilitate the proper allocation of financial resources to the most profitable investment opportunities.

An empirical investigation was conducted to answer the following research questions- (a) whether the spot and future market are cointegrated; (b) is there any causality between them; (c) what is the direction of causality (unidirectional or bi directional); (d) what is the magnitude of standard deviation innovations persisting in spot and future market; (e) which market is efficient; (f) how the volatility spillovers from one market to another and (g) What is the impact of commodity trading on inflation. The tools and techniques used in the research study are Descriptive Statistics, Graphs, ANOVA, and most up-to-date financial econometric

tests like Augmented Dickey Fuller (ADF), Phillip Perron (PP) test, Kwiatkowski Phillips Schmidt and Shin (KPSS), Johansen Cointegration Test, Vector Error Correction Model (VECM), VEC Granger causality Block Exogeneity Test, Variance Decomposition, Impulse Response Function (IRF), Pairwise granger causality, VAR Block Exogeneity Test and Exponential Generally Auto regressive Conditional Heteroscedasticity (EGARCH) models. SPSS, EViews 7.0 and MS-Excel were used for data analysis and presentation.

Even though the commodity Derivative Markets in India has shown a tremendous growth in terms of number of commodities traded, the volume, traded value, technology, transparency and trading activity, the real issues facing these markets have not been resolved. A number of factors, both from the supply side as well as the demand side contribute to the high volatility of international commodity prices. Due to operational issues and problems in commodity markets, a large number of people depending on this sector are highly vulnerable to exogenous shocks like international price hikes. Moreover, the difficulty of the existing safeguard mechanisms makes it difficult for developing countries to use them effectively. To further enhance future growth prospects, progressive steps are needed in the coming times to ensure the smooth functioning of commodity derivative markets and commodity exchanges in India. The study throw some light on the possibility of acting spot and future prices as an efficient price discovery mechanism and this will help the traders to hedge their market risk. The study has implications for arbitragers, investors and portfolio managers who are engaged in trading and hedging strategies in developing commodity markets in India. The finding of the study is useful to the regulators to formulate policy and implement control measures to enhance the integrity and stability of the commodity markets in India.