

Relative and Informational Efficiency, Maturity Effect and Market Integration: An Empirical Study on Select Indian Commodity Futures

Abstract

In this study, an empirical analysis has been done on selected commodity futures to examine relative and informational efficiency, maturity effect and market integration. Though there have been several studies related to commodity futures in international context, however, research works on Indian commodity futures market have been restricted to efficiency test and relationship between price and volume for few commodities.

In this work, different aspects of Indian commodity futures market have been examined in detail. The aspect studied are a) Study of efficiency/relative efficiency of Indian commodity futures, b) study of informational efficiency through price volume relationship, c) test of maturity effect which has implication on risk management/hedging strategy and d) presence of inter exchange market integration and integration with London Metal Exchange (LME).

The efficiency test results imply, though there exist co-integration between spot price and futures price (except Chana), the results of relative efficiency measures indicate futures price perform very poorly in predicting future spot price. This implies low efficiency of futures price to discover the spot price. Further price volume relationship study reveal that bi-directional causality exist between traded volume and absolute price change which leaves scope for technical analyst to earn extra profit. This has implication on efficiency of information dissemination in the market and suggests poor informational efficiency. Study on maturity effect show that maturity effect is present only in a small percentage of contracts under this study. Therefore based on the result it cannot be concluded that maturity effect is supported. Lastly the test of market integration shows that law of one price applies to the three national level exchanges MCX, NCDEX and NMCE. The market integration test also confirms that Indian market is integrated with LME for commodities studied in this research.

Major constraint faced is the study has been conducted with limited data (only 5 years data) only which in turn has restricted the selection of methodology. For testing market integration the data length was even less than 5 years.

Key words: Commodity futures, co integration, relative efficiency, causality, market integration, maturity effect.