

RELATIONSHIP BETWEEN FUTURES PRICES AND SPOT RPICES OF STOCK INDICES AT NSE

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Year of Submission : 2009
Name of Thesis : RELATIONSHIP BETWEEN FUTURES PRICES AND SPOT RPICES OF STOCK INDICES AT NSE

Abstract

The finding that many time series may contain a unit root spurred the development of the theory of non-stationary time series analysis. Engle and Granger (1987) pointed out that a linear combination of two or more non-stationary series may be stationary. If such a stationary, linear combination exists, then the non-stationary time series are said to be cointegrated. The stationary linear combination is called the cointegrating equation and may be interpreted as a long-run equilibrium relationship between the variables. Although the two series may be non-stationary, they may move closely together in the long run so that the difference between them is stationary.

The present study examines the robustness of the previous findings about the contribution of derivatives, to the price discovery process, using index and index securities. It investigates the lead lag relationship between Nifty futures index and Nifty spot index by using daily prices data for the period June 2000 to December 2007. Engle and Granger's Co-integration Analysis, Error Correction Model and Vector Autoregression are applied to study the interrelationship between the two markets.

It is observed that in terms of the relationship between returns at the index level, it is the spot index, which is causing the futures index, a uni-directional relationship that is running from spot market to futures market.

At the individual stock level, most of the stocks do not confirm the result observed at the index level. Seven out of ten stocks (most traded) do not have any stable long-run relationship between them (no feedback mechanism), while two stocks confirm the result that is observed at the index level. One stock per se is an exception in the sense that Cointegration model cannot be run on it.

When the same study was conducted in terms of volatility transmission between the futures market and spot market at the index level, the findings were opposite to that observed in terms of returns at the index level. Here the futures market plays a dominant role and is causing the spot market. Although there is a bi-directional relationship between the two markets, yet futures market take a leading role of explaining the variance movement of the spot market as is confirmed by the results of the variance decomposition.