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# Investigating the Informational Efficiency of Exchange Traded Funds (ETFs) : Empirical evidence from Indian Equity ETFs

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### Abstract

The study examines the relationship between the equity exchange traded funds (ETFs) listed at National Stock Exchange (NSE) of India and their corresponding spot indices. Estimates obtained from vector error correction model (VECM), Gonzalo Granger component shares (CS) and Hasbrouck information shares (IS) demonstrate that ETFs and spot indices are cointegrated in the long run with the movements in spot prices leading those of the ETF prices. The study also provides a glimpse of threshold cointegration test i.e. Gregory-Hansen (1996) statistics that tests the null hypothesis of no cointegration after allowing for a one-time regime shift in the model. Analysis suggests that profitable opportunities can be derived by forming strategies for ETFs by using past values of spot prices. Illiquidity, unawareness among the general public and reluctance on part of financial managers to promote passively managed funds have been identified as the probable reasons for the inefficiency observed in ETF prices.

**JEL Code :** D53, D81, G12, G13, G14

Keywords: Equity, ETF, VECM, NSE, Co-integration, NSE, Stock, Capital Market, Granger, Grogory-Hnsen, Price Discovery, India

## I. Introduction

STRONGLY EFFICIENT FINANCIAL markets are characterized by the simultaneous incorporation of any new information into the market prices of identical securities traded across multiple exchanges without any delay (Booth, So and Tse, 1999). This multi-platform trading is likely to enhance either competition or fragmentation. While competition tends to favor investors in terms of reduced transaction cost, fragmentation tends to hinder the ability of investors in securing best executions (Tse, Bandopadhyay and Shen, 2006). Hence, when similar securities are traded across multiple

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#### Note

The estimates of ADF statistics for the respective series, trace and max-eigen value statistics and block exogeneity test are not made available here on account of space constraint but the same shall be available from authors upon request.

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208

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