ABSTRACT

A market that instantly reflects all relevant information is the epitome of market efficiency. Market efficiency has great ramifications for capital allocation, equally important for both corporate managers and investors. No wonder this topic has drawn the interest of scholars from diverse domains over the past century. Lately, its assessment at high-frequency has gained prominence due to increased tick data accessibility and improved computing power. The research is relevant more so because of the rising participation of millennials, who engage in short term trading.

Many approaches have been developed to assess market efficiency. This work has adopted the speed of price adjustment to the information approach, using the Theobald and Yallup (2004) ARMA estimator. This estimator can assess the efficiency as well as the price patterns of underreaction and overreaction. They posit that higher MA orders of this estimator will mitigate the adverse effects of thin trading on the estimation of the speed of price adjustment. Since smaller stocks are prone to thin trading, they have used size as an instrumental variable for thin trading this study assesses the argument and finds support for it by assessing non-trading time, which is a measure of thin trading.

The Indian market efficiency has been studied extensively. Yet, there is a dearth of studies focusing on assessing efficiency at high frequency. This work has assessed the speed of price adjustment at a 5-minute return interval for the Nifty 500 index, whose constituents belong to varied classes of market capitalisation and industries. The Indian stocks are prone to underreaction. Larger stocks assimilate information faster than their smaller counterparts. However, no such difference is found for industries.

This work also includes preliminary results on the developing topic of co-movement in efficiency in the same vein of commonality in liquidity. The findings are modest and warrant a longer study period and comparative analysis with other high-frequency efficiency estimators. The determinants of efficiency, in the context of price patterns, have also been ascertained. Generally speaking, high illiquidity is likely to make prices efficient at the intraday level. Informed trading and algorithmic trading strongly impact underreaction but not overreaction. Interestingly, large stocks are more prone to overreaction than small stocks.

The asset pricing tests find modest improvement when the speed of price adjustment is added as a sixth factor in addition to the market, size, value, momentum, and liquidity factors. Furthermore, overreaction is more profitable than underreaction. The analyses of long-only investment strategies show that overreaction is a strongly promising candidate for investment products like exchange-traded funds. **Keywords:** Speed of price adjustment; Underreaction; Overreaction; Intraday; Commonality; Thin trading; Asset pricing; Indian stock market; NSE; ETF.