EFFECTIVENESS OF ADDITIONAL SURVEILLANCE MEASURES –EMPIRICAL STUDY USING INDIAN MARKET DATA[1]

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Background and Research Rationale

Protecting market integrity, preventing market abuse, preserving investors trust and confidence is essential for the growth and orderly development of capital markets. Market surveillance is a mechanism used by the market regulators and exchanges to monitor, detect, prevent market abuse and market manipulation. Regulators across different countries have implemented different restrictive trading practices like position limits, imposition of additional margins, price bands that cap the single-day price movements, circuit breakers and periodic call auction, rumour verification mechanism, and dissemination of information to prevent market manipulation. Despite these measures, various instances like the Game stock episode provide evidence of the fact that investor groups can collude and manipulate stock prices, which can be detrimental to market efficiency. Globally under the current regulatory framework there seems to be little room for regulators to take action against such investors. These episodes have sparked different discussions in the Indian media about the safety of investors in Capital markets. In Indian capital markets, the regulators in addition to the above restrictive trading practices have implemented an enhanced surveillance mechanism known as the Additional surveillance measure (ASM). Trade data is monitored in real-time, and securities that exhibit abnormal price

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variations concentration of trading among a few clients are shortlisted under the STASM category. When the close to close price variations of the stock is 25% more than the variations in the NIFTY 50 index for a period of 5 days on either side, and is accompanied by presence of dominating investor measured as 25 clients contributing to more than 30% of the trading volumes, the stock is classified as STASM category. Surveillance action on such stocks is that, they are subject to overall additional margins of 40% and specific additional margin of 100% to the top 10 dominating investors. The rationale for use of such trade based data as surveillance triggers, is based on widely published cases and literature related to stock price manipulations. Key characteristics of manipulated stocks documented in studies by Baoling (2021), Huang CY et. al (2005) are large spike in stock prices, high volatility, upward spike in trading volumes, short term price continuation and long term price reversals. Manipulated stocks are also generally mid or small cap stocks with low liquidity and in most cases concentration of trades among few clients is observed.

STASM surveillance action is unique in the sense that it is a pre-emptive, targeted surveillance action that is based on suspicious trade data and price patterns that are different from the recent past, where price deviations not supported by fundamental reasons. Further, the surveillance actions are specifically aimed at deterring the dominating investors. It is expected that the action will deter manipulation by increasing capital costs on the one hand and also serve as a warning to prospective investors, about the presence of abnormal trading activity in the stock which is not supported by any disclosed or known fundamental reasons.

As the surveillance intervention is unique, it is essential to understand the implications of the surveillance action on stock prices and trading activity.

Research objectives

This study aims at ascertaining the impact of inclusion of stock into STASM category on the prices and volumes traded and liquidity. Further, the study also looks at the sustenance of such impact post exclusion of the stock from the STASM category to understand the effectiveness of the mechanism. Event study methodology is used to study the above impact. Additionally, stocks whose prices move up by more than 25% as compared to NIFTY 50 index and those that fall by 25% are both subject to the same surveillance measure. The study classifies the stock price patterns as upward, downward, continuing and reversal patterns in the pre and post inclusion periods and attempts to understand if there is any heterogeneity in impact on liquidity across different price patterns exhibited by different stocks using a Dummy variable regression framework.

Sample and methodology

STASM has been implemented by the exchanges in November 2018. NSE's surveillance department issued its first circular categorizing companies into STASM on 21st November, 2018, effective from 22 November, 2018. For the purpose of this study, the data of companies included or excluded from STASM along with the date of inclusion and exclusion is provided by the surveillance department of NSE. A sample set of 245 events of inclusion announcement and exclusion announcements made in the first 3 months of implementation, i.e., from 21 November, 2018 to 28th February, 2019 is used for the study. From the sample size of 245 events, companies that have carried out mergers or acquisitions in the pre-event estimation window of 120 days before the event, are excluded. Finally, we have a sample of 218 events and 188 unique companies.

The study uses the market model specified by Fama et.al. (1969) and Brown and Warner (1985) to estimate the abnormal returns in the pre and post inclusion and exclusion periods. While estimating the returns for the market model, the estimation window is considered as 120 days. The buffer period of 30 trading days was kept between the estimation window and inclusion event window. Event window was set for 5 days and 10 days before and after the events with respective stock price inclusion or exclusion from the STASM mechanism. Impact of the event on both prices and volumes is evaluated using the above model.

Liquidity is measured using turnover ratio, trade size after controlling for the size of the firm measured as log of the market capitalisation of firm. The impact of inclusion on liquidity and differential impact based on price patterns before and after inclusion is measured using a dummy variable regression framework.

The study also uses percentage shares delivered as a measure of speculative activity surrounding the event period. Higher percentage of shares delivered implies less speculation and vice versa.

Results

Inclusion of a stock into STASM category implies the existence of price volatility and volume spikes. Event study analysis of the post inclusion price impact shows that Cumulative Abnormal returns (CAR) on the stocks fall after inclusion into STASM. Such fall in abnormal returns is sustained post exclusion also. The volume study results show that the abnormal traded volume on stocks falls in the post inclusion period and such fall is sustained in the period following the exclusion of stock from STASM category.

 The key results emerging from the regression analysis are CAR increases are accompanied by increase in cumulative abnormal volumes and increase in trade size. Stocks that are included into STASM with positive CAR have better liquidity while those with negative CAR experience less liquidity in the post inclusion period. With respect to extent of speculative activity, the percentage shares delivered is less for companies with positive CAR in the pre inclusion period and the delivery trades are more for companies with positive CAR and with a continuation pattern in the post inclusion period. However, for companies with positive CAR and reversal pattern in the post inclusion period the delivery trades are lower.

Conclusions

The price and volume event study results show that the STASM surveillance action helps in controlling the abnormal price movements and it is accompanied by fall in traded volumes on inclusion. There is no evidence of abnormal price movements or volume spikes in the post exclusion period. This implies that inclusion of stock in STASM helps controlling price volatility. Excess liquidity in the counters is also controlled by the surveillance actions, which is sustained in the post exclusion period. Based on the results of the study, it may be said that stocks that are included in STASM have characteristics similar to stocks whose prices are manipulated. STASM may have helped in curtailing abnormal price movements that are not supported by fundamentals. However, the restrictions imposed may have resulted in fall in liquidity. It is felt that, in an emerging market like India, restrictions imposed by surveillance initiative like STASM are important and may serve as warning bells to uninformed investors by highlighting trading actions that are suspicious, thereby contribute towards investor protection.

Reference

Baoling, S. U. N. (2021). An Empirical Analysis of Regulation on Open-Market Manipulation in China: An Effect-Based Approach. US-China Law Review, 18(3), 109-121.

Fama, E. F., Fisher, L., Jensen, M. C., & Roll, R.,1969, The adjustment of stock prices to new information. International economic review, 10(1), 1-21.

Huang, Y. C., & Cheng, Y. J. (2015). Stock manipulation and its effects: pump and dump versus stabilization. Review of Quantitative Finance and Accounting, 44(4), 791-815

Warner Brown, J., 1985, Using daily stock returns, the case of event studies. Journal of Financial Economics, 14, 3–31.