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Notice for the PhD Viva Voce Examination

Ms Shubhashree P K Acharya (Reg. No. 1610071), PhD scholar at the School of Commerce, Finance and Accountancy, CHRIST (Deemed to be University), will defend her PhD thesis at the public viva-voce examination on Tuesday, 20 September, 2022 at 11.00 am in the Syndicate Room (Room No. 802), Ground Floor, Auditorium Block, CHRIST (Deemed to be University), Bengaluru - 560029.

Title of the Thesis	:	**Algorithmic and Non Algorithmic Trading Activity in the BSE using Limit Order Book of Select Stocks**
Discipline	:	**Commerce**
External Examiner (Outside Karnataka)	:	**Dr Roji George** Professor and Dean Saintgits Institute of Management Pathamuttam, Kottayam Kerala - 686532
External Examiner (Within Karnataka)	:	**Dr V Rajesh Kumar** Professor Department of Commerce Vijaya College, 35/1, 11th Main Road Jayanagar IV Block, Bengaluru – 560011 Karnataka
Supervisor	:	**Dr Anuradha P S** Professor Department of Commerce School of Commerce, Finance and Accountancy CHRIST (Deemed to be University) Bengaluru - 560029 Karnataka

The members of the Research Advisory Committee of the Scholar, the faculty members of the Department and the School, interested experts and research scholars of all the branches of research are cordially invited to attend this open viva.

Registrar

Place: Bengaluru
Date: 14 September 2022

ABSTRACT

With the existence of a heterogeneous market compounded by asymmetric information, technology has become one of the major enablers in stock market development. Introduction of algorithms for trading gave a fillip to many stock market participants and allowed them to trade rapidly and profitably. In the present day in Indian stock market, we have two types of market players; algorithmic traders and non-algorithmic traders. The algorithmic traders are playing a dominant role in order placement, order modification and order execution while the non-algorithmic traders still continue to use their intuition. This study aims to understand the trading activity of both the market participants. The study uses the Limit Order Book data from Bombay Stock Exchange. The LOB data of selected nine stocks is considered for the study whose variables namely Order Added, Order Updated and Order Deleted data along with the Bid Ask Quotes are considered for measurement. Based on the Limit Orders it is observed that there is a statistically significant difference in the trading behavior of algorithmic and non-algorithmic traders based on stock market session timings and market capitalization. The market making ability of the algorithmic traders was examined using Order-to trade Ratio and it is observed that large number of orders are not executed indicating that there is no significant Market Making happening. The algorithmic traders possess an edge over the non-Algorithmic traders in Order Modification resulting in dominance in the Stock market.

The Mann Kendal Trend test indicates upward and downward trend in volume adjusted spread indicating that market making is happening especially in the stocks where algorithmic activity is high. This study enables regulatory authorities to monitor stock market activity especially during pre- open session. This study provides sufficient scope for further research on future of algorithmic trading activity and its ramifications on non-algorithmic trading activity in the future.

Keywords: *Algorithmic trading, Non-Algorithmic Trading, Market Session, Market Capitalization, Market Making*