

Effect of High Frequency Trading on Retail Investors

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Abstract

Algorithmic trading is a unique trading method that incorporates daily principles from trading decisions to trading recommendations. As advances in innovation revolutionize the foreign exchange market, algorithmic exchanges have become increasingly popular. Algorithmic decision making is the use of functions and computers to create and execute planning with (large volume) electricity usage in the business unit. Requests come from banking experts, support and foreign exchange offices of major banks and intermediaries. Algorithmic trading, or PC coordinated exchanging, reduces transaction costs and creates the need for managers to control their own trading patterns. The main purpose of the algorithmic exchange is not to increase returns, but to control the payout and the market.

Keywords: algorithm trading, stock market, investors

Introduction

High frequency trading is one of the new research at home and abroad. To date, many research articles have been collected in this field. In fact, this topic is very old and many research projects have been carried out in this field, but this topic will remain evergreen and will not gain more importance. High-frequency trading is generally considered a special method of trading that relies on quickly received information, action and reaction. Investors may exhibit certain characteristics that distinguish them from other market participants: large investments in technology, the use of sophisticated automated processes, and many minding their own business. But the absence of a group of partners using different strategies is not characteristic of all top-tier businesses. Therefore, it is difficult to describe high-frequency products accurately and comprehensively. AT, along with HFT, has experienced strong and rapid growth over the past few years, raising concerns about future risks to the integrity and stability of the market. The question is whether participation in the financial market through business frequency is beneficial or harmful to other participants and the business itself. Their cooperation is very important. In fact, because algorithmic investors can interact with strategies with more interactive strategies than those used by traditional marketers, frequent trading can pose a serious risk to business

decisions and market integrity. Additionally, frequent trading can increase price volatility, thereby increasing economic growth and causing economic chaos when the economy is unstable.

Investors Behaviour on High Frequency Trading

The second part describes the behaviour of investors in the high market. The study took into account claims such as traders who trade frequently, wanting to get out of unprofitable trades, quitting when things go too far, and large pressure in the market will have an impact on traders who hold the stock for a long time. Assets such as mutual funds, pensions, and trading often have an impact on job stability. This trend will not be seen by small and medium-sized investors, investors in companies that use HFT technology and get good results from the stock market will not be affected by HFT product details, HFT strategies will be developed and optimized according to price patterns. The business market will appreciate More Security (STT), algorithmic bot operations will cause problems that will become an unknown security threat in countries, algorithms are constantly changing in the harsh and ready environment of the business world, business decisions are mobile. can impact millions of lives and more. T test was used to analyse the difference between trading frequencies among investors, and Wilks Lambda test supports discriminant analysis to monitor the difference

between investors' trading frequencies. Analysis becomes important for Labor Market Insights on High Frequency Trading. Business frequency in India is still in its infancy. The future technological adoption by the institutional firms in HFT will play vital role in the equity market. The present study has made an attempt to understand the high frequency trading role in market price quality, efficiency and volatility. The study has focused on qualitative and quantitative oriented with the help of five objectives. The study has considered the primary and secondary data and applied the statistical tools to derive the conclusion as per the research questions. The high frequency trading industry today finds itself at a crossroad. Despite the huge potential for growth, HFT is threatened by new regulations and greater competition as more market participants adopt this form of trading. However, the HFT market is still in its infancy and companies need to continue to focus on technology development to grow to realize the benefits of HFT. Businesses that often need to use products from specialist companies to help them manage different types of risk and compliance. Algorithm and code testing have become very important for many companies. High-frequency trading companies must ensure that their trading practices and strategies are appropriately tested. The company uses low-end, high-speed computers to create, execute and fulfil orders. Traders often use separate data from exchanges and shared servers to reduce network and other types of latency. It ensures that opening and closing times are short, resulting in many small positions in one or more financial instruments changing hands frequently and many orders being sent but cancelled soon after they are sent. The impact of high-frequency trading on trading examines volatility by taking into account one-minute historical data. This study uses an autoregressive conditional heteroscedasticity model divided into short time periods (e.g., one, five, fifteen, thirty, one hour, and one day) and shows that the effect of high-frequency trading is observed. The effect of high-frequency trading on volatility is very small within one minute, but the size of the effect increases in a short time. Therefore, the impact of HFT on stocks and indexes varies from time to time. The impact of HFT could have a negative

impact on price discovery if it prevents slow traders from preferring to operate in a dark pool in a transparent trading environment. High frequency trading is also relevant to the market. Although many studies show that frequent trading has a positive effect on business performance, empirical evidence shows that it has a negative effect, that is, makes the business unstable. In fact, HFT liquidity does not always depend on trading contracts.

Review Of Literature:

Federico Rampini, la Repubblica (2012): The study focused on the accidental casualty of the high recurrence, truth be told, that savers who depend in dealing with their cash in banks, common assets, insurance agencies and whose venture procedures are overpowered by HFT predators. The study has found that the risk occurring factors are deducted by the HFT predators.

Boyd Erman (2012) The study has examined from retail financial specialists remarking on The Globe and Mail's site to Tony Fell, who once ran the nation's greatest business, the message is the same: The business sectors are viewed as a gambling club where high recurrence brokers are winning over and over again for everything to be simply shot. It has been concluded that the brokers are also included in the High Frequency Trading to move according to the coding.

Floyd Norris, (2012) The study focused on a similar computerization and expanded rivalry that gave the advantages to additionally removed individuals who had the commitment to venture up in the midst of stress, and for all intents and purposes killed the capacity of individuals and organizations to moderate or stop markets when something turns out badly. It has resulted in that the risk incurred in the HFT is impacted more on the organizations.

Joe Nocera (2012) This study has been focused on the financial specialist who advise in investing through HFT. This week, yet another Wall Street firm the vast majority have never known about, depending on a mechanized exchanging program that they can't in any way, shape or form comprehend, shook financial specialists' confidence in the market. In this study it has been de-scribed that a right financial advisor will gain

the profits.

Tim Harford (2012) The study describe that the PCs move very rapidly for us to respond to all that they do - and at Knight Capital, the PC glitch implied the organization was making ex-changes it didn't plan to make. That is the means by which to lose a large portion of a billion dol-lars in a little finished 30 minutes. The study finally describes the loss incurred in trading through HFT.

Jim McTague, Barrons (2012) This paper examines that the markets have been jolted by fournoteworthy PC incidents this year, including the current one at Knight Capital. It's a great opportunity to get control over the Street's speed evil spirits: exchanging bots. The study indicated that high frequency trading is giving great opportunities for the traders.

Drew Sandholm (2012) In the present study the fast brokers are this current age's likeness to the

German assaultrifles that cut down British warriors by the thousands and the general population being demolished by the dealers. That is anyone, the normal financial specialist, simply endeavor-ing to utilizing stocks to spare some cash as ages have before him/her. The study has stated that High Frequency Trading is endeavoring to utilizing stocks to gain some cash.

Research Design

The present study has been emphasizing on the both Qualitative and Quantitative methodology has applied to know the market efficiency of the Indian Equity Marketing along with, scrutinizing the con- temporaneous, causality between Nifty with Future Indices and Intraday return, volume and volatility. The study has also considered the primary data. The scheduled questionnaire has been drafted by considering the investors attitude and behavior with the demographic factors.

HFT: Sample information with time periods

No.	Time Period	Type of Security	Security Name
1	One Minute	Index Spot & Futures	Nifty,BankNifty,NiftyFuture
		Stocks	SBI,ONGC,Reliance,TCS,Infosys.
2	Five Minutes	Index Spot & Futures	Nifty,BankNifty,NiftyFuture
		Stocks	SBI,ONGC,Reliance,TCS,Infosys.
3	Fifteen Minutes	IndexSpot&Futures	Nifty,BankNifty,NiftyFuture
		Stocks	SBI,ONGC,Reliance,TCS,Infosys.
4	ThirtyMinutes	IndexSpot&Futures	Nifty,BankNifty,NiftyFuture
		Stocks	SBI,ONGC,Reliance,TCS,Infosys.
5	One Hour	IndexSpot&Futures	Nifty,BankNifty,NiftyFuture
		Stocks	SBI,ONGC,Reliance,TCS,Infosys.
6	One Day	IndexSpot&Futures	Nifty,BankNifty,NiftyFuture
		Stocks	SBI,ONGC,Reliance,TCS,Infosys.

Scope of the Study

- Although the HFT method is valid in all financial markets such as stocks, commodities and foreign exchange, this study focuses on fair trade. A large

number of intermediate and retail traders interested in stock trading and speculation.

- This study deals only with stocks listed on one of India's popular stock exchanges i.e., National Stock Exchange (NSE).

Need of the Study

Considerable research has been conducted in the field of algorithmic trading. The results show that algorithmic trading improves trading efficiency. Market prices, sales and trade mismatches have improved. Some depth measurements have improved, but not all, and are race-specific. Two areas where the results provide new information are the speed of water throughout the day and the likelihood of price changes and reversals during short periods of the day (commonly referred to as flash crashes). Policymakers were very concerned that the liquidity provided by algorithmic trading could quickly deteriorate once the news broke. Their results show that the more algorithmic trading, the lower the liquidity risk. Similar concerns have often been expressed about the possibility of sudden failure.

Limitations of the study

1. This study should evaluate the impact of business frequency on operating costs and efficiency and effectiveness, regardless of the number of securities. Therefore, the results of the statistical analysis may differ from the actual results.
2. The current study does not consider the impact of marketing and behavioural information on the prices of selected stocks.
3. This study did not take into account the impact of regulatory changes on HFT activities during the study period.

Research Objectives

Based on the gaps in the existing literature, we identify the following objectives for our study:

- To examine the impact of AT on Liquidity
- To examine the impact of AT on Volatility
- To examine the impact of AT on Price Discovery

Average order to trade ratio

Financial year	Averageordertotraderatio
2019-20	10.86
2021-21	25.42
2021-22	13.58

Note: Algorithmic order is identified based on identification code as provided by the trading member.

UNIT ROOT TEST WITH AUGMENTED DICKEYFULLER

Security name	Level	1stdifference	2nddifference
Nifty	0.0023*	-	-
Bank nifty	0.0000*	-	-
Niftyfuture	0.0000*	-	-
SBI	0.0040*	-	-
ONGC	0.0000*	-	-
Reliance	0.0000*	-	-
TCS	0.0672	0.0000*	-
Infosys	0.0000*	-	-

*significant at 5% level

Summary Findings

Liquidity, volatility and price discovery are important elements of any business, and regulators and exchanges are trying to improve these features to keep the business moving efficiently. Businesses and partners are rapidly adopting technology to improve product quality, conversions and value discovery in the marketplace. Algorithmic trading is one of the tools that has been widely accepted by the market and participants in recent years. Existing AT data is limited as there is no data set that clearly defines AT. Most exchanges do not recognize AT, which leads to the use of multiple intermediaries (messages, cancel orders, etc.). Most authors agree that results obtained using these indices are poor or unreliable and recommend direct measurement of AT.

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