Research Paper Management

Impact of Increase in Trading Hours on Indian Stock Market

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ABSTRACT

This paper aims to measure the impact of increase in trading hour on Indian Stock Exchange. For this study primary data are collected through structured questionnaire from Bardoli region and for this purpose three different questionnaires were prepared that is for branch manager, relationship manager and customers. To measure the reliability of the survey reliability test is used. To know the impact of increase market hour frequency analysis is used and it is found that from the seven factors there is a impact of increase in trading hour on factors like stock volatility, index volatility, intraday trading frequency and intraday trading volume and factors remain same which are delivery trading frequency, delivery trading volume and F & O trading. Kruskal Wallis Test is used to know is there any significant difference in the view of customers, relationship manager and branch manager about various factors and we found that the view of branch manager, relationship manager and customers are same regarding factors like index volatility, intraday volume, delivery volume and increase in trading hour is beneficial to stock exchange, market, customers and employee and there is a difference in the view of branch manager, relationship manger and customer regarding factors like stock volatility and increase in trading hour is beneficial to broking company and listed company.

Keywords : Reliability test, Kruskal Wallis test and Volatility

Introduction:

India is always a good choice for the foreign investors to invest their money. India has a growing economy and it is called as a safe haven for investors. Security and Exchange Board of India (SEBI) has announced new trading timings for Indian Stock markets.

The major reasons for the increase the trading hours are align the Indian stock markets with other Asian markets, to improve the quality of decision making of investors by providing them proper information and to reduce the market volatility and improve market efficiency.

Indian stock markets start at 9:55 am and work on till 3.30 pm, it works on for around five and half hours. According to the new time table the markets will start trading from 9.00 am and it will continue till 5 pm. SEBI put two conditions before stock exchanges for increase the efficiency of the decision and these conditions are efficient risk management system and good infrastructure.

Stock markets should have efficient risk management system and infrastructure commensurate. Risk management system is an integral part for carrying out efficient clearing and settlement system. It contains some of the risk containment measures like capital adequacy requirements of members, monitoring of member performance and track record, stringent margin requirements, position limits based on capital, online monitoring of member positions and automatic disablement from trading when limits are breached etc. In India NSE was the first one to adapt this system). With the increase in trading hours trading activities will increase and it means the banks and financial institutions have to increase their working hours. The infrastructure that we have now has to be improved.

The present study aims to analyze the impact of increase in trading hour on Indian stock Market and to compare the view of branch manager, relationship manager and customers about this new initiative of the SEBI.

Literature Review:

Very limited literatures are available till the day for this topic. Khagesh Agrawal and Prof. Ajay Kr. Chauhan conducted a research in 2010 on the topic "Increased Trading Hours and its Post-Impact on Market Efficiency: Empirical Evidence from the Indian Stock Market". The main objective of the study is to analyze the impact of the change in market timing on the volatility and volume of trade in the Indian stock market, its dependence on Singapore stock exchange and investment behavior of the Foreign institutional investors (FIIs) and Domestic institutional investors (DIIs). They found that because of the change in the stock market timing the volatility has reduced while the volume of trade has increased. Another finding of the study is that the net investment by FIIs increased while DIIs has decreased.

One discussion paper released by SEBI (2009) suggest that the major reason to increase the market hour is to align the Indian economy with the Global economy and another reason is to make Indian stock market more efficient and to attract global investors. It is also mention that extending time is beneficial to investor to take position for a longer period of time.

Research done by Ashish Gupata in 2009 on the topic "Impact of extended trading hours." He conclude that it will help in hedging the risk as it is enable to expose more global information. Due to extension of the time intermediaries like financial institutions and banks have to increase their working hour also and which resulted in increasing operating cost. He also suggests that because of this step of SEBI there is pressure on exchanges and market intermediaries to improve their infrastructure.

Mr. Khagesh Agarwal and Mr. Pulkit Ahuja done a research on "Modeling of Seasonal Volatality – Empirical Analysis of Impact of Increased Market Timings". The objective behind the research is to find out pattern of volatility in the Indian stock Markets in terms of its time varying nature and presence of certain characteristics such as day of the week effect and calendar month effect. They found that Monday was maximum

volatile day and may was the maximum volatile month across the whole year.

Michael J. Barclay, Robert H. Litzenberger and Jerold B. Warner(1988) done a study on "Private information, Trading Volume and Stock return Variances" and they suggest that there is no causal relationship between trading hours and stock return variance.

RESEARCH METHODOLOGY

Problem Statement:
Is there any impact of increase market hour on Indian stock exchange?

Objectives:
- To know the impact of increase market hour on Indian stock exchange.
- To compare the view of Branch manager, Relationship manager and customer about the increase in trading hour.

Research Design:
Descriptive research design is used to know the impact of increase market hour in Indian stock exchanges.

Data collection method:
- Primary data collection through structure questionnaire by doing survey.

Research instrument:
- Structured questionnaire is used for collection of primary data.
- Get necessary information from Internet for secondary data.

Sampling:
(A). sampling frame: Samples are collected from the Bardoli town.

(B). Sampling technique: Non probability sampling in which convenience sampling is use.

(C). Sample size:

Total sample size is 80.

10 sample of Branch manager

20 sample of Relationship manager

50 sample of Customer

Analysis tools and techniques:
We have used SPSS(Statically Package for Social Science) software for analysis purpose and in that we have used Kruskal Wallis Test and frequency because distribution of data is not normal. We have done reliability test and normality test also.

DATA ANALYSIS AND INTERPRETATION

Reliability test: (TABLE 1)

Customer		Relationship Manager		Branch Manager	
Cronbach's Alphas	No. of Items	Cronbach's Alpha	No. of Items	Cronbach's Alpha	No. of Items
0.788	24	0.663	25	0.741	24

From the value of Cronbach's Alpha we observe that our survey instrument questionnaire for customer is 79% reliable, in the same way for relationship manager is 66.3% reliable and for branch manager is 74.1% reliable. It suggests that if we collect data again by using this instrument result is same.

View of customers to measure the impact of increase in trading hour on various factors:
(TABLE 2) (In percentage)

	Stock volatility	Index volatility	Intraday Trading Frequency	Intraday Trading Volume	Delivery trading Frequency	Delivery trading Volume	F&O Trading
Increased very much	2	0	8	6	0	0	4
Increased some what	52	54	56	58	38	38	20
Remained same	42	44	34	28	58	56	76
Decreased somewhat	0	2	2	6	4	6	0
Decreased very much	4	0	0	2	0	0	0

From the above table we interpret that there is a impact of increase in trading hour on the factors like stock volatility, index volatility, intraday trading frequency and intraday trading volume because more than 50% respondents said that it is increased after change in the timing of stock exchange. Another finding is that there is no impact of increase in trading hour on factors like delivery trading frequency, delivery trading volume and f & o trading because more than 50% respondents said that these factors remain same after change in timing of stock exchanges.

Kruskal Wallis test

H_0: There is no difference in response of customer, relationship manager and branch manager about stock volatility.

H_1: There is difference in response of customer, relationship manager and branch manager about stock volatility.

(TABLE 3)

Test Statistics[a,b]	
	Stock volatility
Chi-Square	9.981
Df	2
Asymp. Sig.	.007
a. Kruskal Wallis Test	
b. Grouping Variable: Respondent	

The associated significance is 0.007 which is less than 0.05. The null hypothesis is thus rejected and we may say that the difference in response of customer, relationship manager and branch manager on issue like stock volatility is not by chance. There is significant difference in response of customer, relationship manager and branch manager on issue like stock volatility.

H_0: There is no difference in response of customer, relationship manager and branch manager about index volatility.

H_1: There is difference in response of customer, relationship manager and branch manager about index volatility.

(TABLE 4)

Test Statistics [a,b]	
	Index volatility
Chi-Square	4.666
Df	2
Asymp. Sig.	.097
a. Kruskal Wallis Test	
b. Grouping Variable: Respondent	

The associated significance is 0.097 which is higher than 0.05. The null hypothesis is thus not rejected and we may say that the difference in response of customer, relationship manager and branch manager on issue like index volatility is by chance. There is no significant difference in response of customer, relationship manager and branch manager on issue like stock volatility.

H_0: There is no difference in response of customer, relationship manager and branch manager about intraday volume.

H_1: There is difference in response of customer, relationship manager and branch manager about intraday volume.

(TABLE 5)

Test Statistics [a,b]	
	Intraday volume
Chi-Square	.121
Df	2
Asymp. Sig.	.941
a. Kruskal Wallis Test	
b. Grouping Variable: Respondent	

The associated significance is 0.941 which is higher than 0.05. The null hypothesis is thus not rejected and we may say that the difference in response of customer, relationship manager and branch manager on issue like intraday volume is by chance. There is no significant difference in response of customer, relationship manager and branch manager on issue like intraday volume.

H_0: There is no difference in response of customer, relationship manager and branch manager about Delivery volume.

H_1: There is difference in response of customer, relationship manager and branch manager about Delivery volume.

(TABLE 6)

Test Statistics [a,b]	
	Delivery volume
Chi-Square	.204
Df	2
Asymp. Sig.	.903
a. Kruskal Wallis Test	
b.GroupingVariable:Respondent	

The associated significance is 0.903 which is higher than 0.05 The null hypothesis is thus not rejected and we may say that the difference in response of customer, relationship manager and branch manager on issue like delivery volume is by chance. There is no significant difference in response of customer, relationship manager and branch manager on issue like delivery volume.

H_0: There is no difference in response of customer, relationship manager and branch manager on issue like increase in trading hour is beneficial to Exchange.

H_1: There is difference in response of customer, relationship manager and branch manager on issue like increase in trading hour is beneficial to Exchange.

(TABLE 7)

Test Statistics [a,b]	
	Increase in trading hour is beneficial to Exchange
Chi-Square	1.840
Df	2
Asymp. Sig.	.398
a. Kruskal Wallis Test	
b. Grouping Variable: Respondent	

The associated significance is 0.398 which is higher than 0.05 The null hypothesis is thus not rejected and we may say that the difference in response of customer, relationship manager and branch manager on issue like Increase in trading hour is beneficial to exchange is by chance. There is no significant difference in response of customer, relationship manager and branch manager on issue like Increase in trading hour is beneficial to exchange

H_0: There is no difference in response of customer, relationship manager and branch manager on the issue like increase in trading hour is beneficial to Market.

H_1: There is difference in response of customer, relationship manager and branch manager on the issue like increase in trading hour is beneficial to Market.

(TABLE 8)

Test Statistics [a,b]	
	Increase in trading hour is beneficial to market
Chi-Square	2.381
Df	2
Asymp. Sig.	.304
a. Kruskal Wallis Test	
b. Grouping Variable: Respondent	

The associated significance is 0.304 which is higher than 0.05 The null hypothesis is thus not rejected and we may say that the difference in response of customer, relationship manager and branch manager on issue like Increase in trading hour is beneficial to market is by chance. There is no significant difference in response of customer, relationship manager and branch manager on issue like Increase in trading hour is beneficial to market.

H_0: There is no difference in response of customer, relationship manager and branch manager on the issue like increase in trading hour is beneficial to Broking Company.

H_1: There is difference in response of customer, relationship manager and branch manager on the issue like increase in trading hour is beneficial to Broking Company.

(TABLE 9)

Test Statistics [a,b]	
	Increase in trading hour is beneficial to Broking company
Chi-Square	17.098
Df	2
Asymp. Sig.	.000
a. Kruskal Wallis Test	
b. Grouping Variable: Respondent	

The associated significance is 0.000 which is less than 0.05 The null hypothesis is thus rejected and we may say that the difference in response of customer, relationship manager and branch manager on issue like Increase in trading hour is beneficial to broking company is not by chance. There is significant difference in response of customer, relationship manager and branch manager on issue like Increase in trading hour is beneficial to Broking Company.

H_0: There is no difference in response of customer, relationship manager and branch manager on the issue like increase in trading hour is beneficial to Listed Company.

H_1: There is difference in response of customer, relationship manager and branch manager on the issue like increase in trading hour is beneficial to Listed Company.

(TABLE 10)

Test Statistics [a,b]	
	Increase in trading hour is beneficial to Listed company
Chi-Square	10.271
Df	2
Asymp. Sig.	.006
Kruskal Wallis Test	
b. Grouping Variable: Respondent	

The associated significance is 0.006 which is less than 0.05 The null hypothesis is thus rejected and we may say that the difference in response of customer, relationship manager and branch manager on issue like Increase in trading hour is beneficial to listed company is not by chance. There is significant difference in response of customer, relationship manager and branch manager on issue like Increase in trading hour is beneficial to listed Company.

H_0: There is no difference in response of customer, relationship manager and branch manager on the issue like increase in trading hour is beneficial to Customer.

H_1: There is difference in response of customer, relationship manager and branch manager on the issue like increase in trading hour is beneficial to Customer.

(TABLE 11)

Test Statistics [a,b]	
	Increase in trading hour is beneficial to Customer
Chi-Square	5.280
Df	2
Asymp. Sig.	.071
a. Kruskal Wallis Test	
b. Grouping Variable: Respondent	

The associated significance is 0.071 which is higher than 0.05 The null hypothesis is thus not rejected and we may say that the difference in response of customer, relationship manager and branch manager on issue like Increase in trading hour is beneficial to customer is by chance. There is no significant difference in response of customer, relationship manager and branch manager on issue like Increase in trading hour is beneficial to customer.

H_0: There is no difference in response of customer, relationship manager and branch manager on the issue like increase in trading hour is beneficial to Employee.

H_1: There is difference in response of customer, relationship manager and branch manager on the issue like increase in trading hour is beneficial to Employee.

(TABLE 12)

Test Statistics [a,b]	
	Increase in trading hour is beneficial to Employee
Chi-Square	1.581
Df	2
Asymp. Sig.	.454
a. Kruskal Wallis Test	
b. Grouping Variable: Respondent	

The associated significance is 0.454 which is higher than 0.05 The null hypothesis is thus not rejected and we may say that the difference in response of customer, relationship manager and branch manager on issue like Increase in trading hour is beneficial to employee is by chance. There is no significant difference in response of customer, relationship manager and branch manager on issue like Increase in trading hour is beneficial to employee.

Conclusion:

From the table 2 we conclude that from the seven factors there is an impact of increase in trading hour on four factors and three factors remain same. According to Kruskal Wallis test the view of branch manager, relationship manager and customers are same regarding factors like index volatility, intraday volume, delivery volume and increase in trading hour is beneficial to stock exchange, market, customers and employee and there is a difference in the view of branch manager, relationship manger and customer regarding factors like stock volatility and increase in trading hour is beneficial to broking company and listed company.

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