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IMPACT OF FII ON INDIAN STOCK MARKET

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ABSTRACT

The economic growth of any country is influenced by well organized financial markets. Indian capital market has seen remarkable volatility in the last few years. Indian stock market is considered to be back bone of an economy of a country. Domestic capital is not adequate to reach the requirement of economy. Foreign investments play a vital role. The foreign investment flows to Indian economy through two major routes, namely, the Foreign Direct Investment and the Foreign Institutional Investment. Since liberalization, the Foreign Institutional Investors (FIIs) have started investing in the Indian capital market. FIIs are considered as the biggest movements after the economic fundamentals and have become a significant driving force of the Indian stock market. The aim of this paper is to establish the relationship between equity investment in FII and variables such as Market capitalization, demat trading, trading value, average daily turnover and internet trading in National Stock Exchange of India during the period 2000-2018 and the study also examines the Impact of FII on NSE. The study is based on secondary source and statistical tools like correlation and regression analysis have been used for data analysis and interpretation to draw meaningful conclusion.

KEY WORDS: *Financial Markets, Domestic capital, Foreign Institutional Investments (FIIs), NSE.*

INTRODUCTION

The liberalization policies of the Government of India initiated in the 1990s enabled the flow of foreign investment into the country. The two major routes through which foreign investment flow into the Indian economy are Foreign Direct Investment (FDI) and Foreign Institutional Investment (FII). The foreign Institutional Investors (FIIs) have emerged as remarkable players in the Indian capital market and growing as a major feature of the development of the Indian capital market. FIIs can invest their own funds as well as invest on behalf of their overseas clients registered as such with SEBI. Mutual funds, investment trust, asset Management Company, bank, university funds, institutional portfolio manager, charitable societies and trusts are considered to be FIIs. Investments by FIIs into India depend on market performance and it was quite high in last few years, particularly since 2003-04. FIIs made a record investment in the Indian equity market 2009. In India, FIIs have a positive impact on the stock market, business transparency and government norms. Stock Exchanges are the exclusive place for trading activities of securities. Companies have to be listed through stock exchange in order provide an opportunity to investors to invest in securities of local companies. Bombay Stock Exchange and National Stock Exchange are two major exchanges in India. Trading activities are fully automated with computerized mode of trading. This helps in faster execution of trades in addition to ensuring greater transparency. The NSE is one of the major stock exchanges followed by various cities and towns across the country. It facilitates fully automated screen based trading system with national reach.NSE has the S&P NSE 50 index (Nifty) which consists of 50 stocks. NSE operates wholesale Debt Market segment, Capital market (Equities) segment and Derivatives segment. The present study aims at studying the relationship between FII and the capital market especially with reference to NSE. In order to understand the relationship between FII and the capital market variables such as Market capitalization, demat trading, trading value, average daily turnover and internet trading have been considered in the study.

REVIEW OF LITERATURE

This part of the paper deals with literature survey and the results of few studies reviewed for this study.

Sanjana Juneja (2013) conducted a study on "Understanding the Relation between FII and Stock market." The study is an attempt to explore the FIIs investment behaviour and its relationship with SENSEX and NIFTY movement. This study investigates the dynamics of the trading behaviour of FIIs and effect on the Indian equity market. This examines the result of significant positive correlation between FII activity and effects on Indian capital Market. It is also provides that the evidence of movements in the Indian Capital Market are fairly explained by the FII net flows.

Queensly Jeyanthi (2016) conducted a study on "Impact of FIIs on National Stock Exchange of India." The main objective of this study is, to study the growth trend of FIIs and to analyze the relation and impact of Foreign Institutional Investment (FII) on Indian stock market. This examines the result of significant positive correlation between FII activity and effects on Indian capital Market. It also reveals that the evidence of movements in Indian stock market are moderately explained by the FII net flows.

Siva Rama Prasad and Guntupalli Lakshmi Vishali (2017) conducted a study titled that "An empirical study on FII investment pattern in Indian capital market." The major objective of this study mainly focusing on the major contributions and role of FII investments in current scenario. For this reason economic variable like GDP was considered. This study makes an attempt to focus and study the nature and pattern of FII investments into Indian stock market. This study reveals the sector wise investments of FII into various investment segments of the capital market mainly focused on NSE

Naresh Kedia and Anil Vashisht (2017) conducted a study titled that "Impact of FII's on Indian Stock Market (Specific to SENSEX)." This study provides the role of FIIs and effect on the Indian market. The study was conducted using data from BSE Sensex and FII activity over a period spanning from Jan 2003 to Dec 2012. It establishes positive correlation between FII activity and effects on Indian capital Market.

Kafila and Vijaya Srinivasa (2018) conducted a study on "Impact of Foreign Institutional Investment's on sensex movements." This study makes an attempt to analyze the impact and extent of FIIs Indian capital market. FII invest in financial markets such as money markets, stock markets and foreign exchange markets. This study is an attempt to analyze the impact of foreign institutional investment on Indian capital market and to highlight the procedural aspect related to foreign institutional investment in India. The study also provides the trends of foreign institutional investment in India and with the help of the data an attempt was made to determine the factors determining the flow of FIIs in India.

Mallikarjuna Rao and Ranjeeta Rani (2013) conducted a study on "Impact of Foreign Institutional Investments on Indian Capital Market." The main intention of this study is to find out the relationship between the FIIs investment and Indian stock market and to analyze the sector wise investment pattern of FII during 2007-2012. This study makes an attempt to develop an understanding of dynamics of trading behavior of FIIs and effect on the Indian equity market especially in selected sectors, in addition to comparative analysis of preferred investment stock of FII.

Raja Mannar Budur (2017) conducted a study titled that "Effect of foreign Institutional investor on stock market: Bibliography of unclassified literature." The objectives of this study are to collect the literature on the effect of FII on stock market by referring to journals, newspapers, dissertations and identify and summarize the various aspects of research on this field. This study provides a broad accumulation of the available literature.

Mahammadrafique Usmangani Meman (2017) conducted a study titled that "Foreign Investments and Indian stock Market- Cause and Effect." This study analyzes the impact of foreign investments on Indian stock market. BSE Sensex and Foreign equity investments have considered as variables and data have collected during the year 2011 to 2016. Phillips-perron test, Granger Causality test, Johansen Co-integration test and vector error correction Model have used as statistical tools in order to analyze the impact of foreign investments on Indian stock market. The study reveals the result that foreign investments do not cause the movement of Indian capital market but Indian capital market causes foreign investments and also examines that there is no longrun causality from Indian stock market to foreign investments.

Jasneek Arora and Santhosh Kumar (2015) conducted a study on "Impact of Foreign Institutional Investments on Indian Capital Market." The major objective of this study is to establish the relationship between the foreign institutional investments and Indian capital market. This study provides the trading behavior of foreign institutional investors on the Indian stock market and reveals the result that there is no significant change in Indian capital market returns and volatility is significantly reduced after opening up of the market to foreign investors.

Suresh kumar Kashyap and sakshi thakur(2017) conducted a study on " Foreign Institutional Investment and its relationship with various economic indicators with special reference to inflation and GDP". The main objective of this study is to analyze the trends in FI, GDP and inflation since 2000. This study investigates the relationship between FII and various economic indicators i.e. inflation, GDP in India.

Bashir Ahmad Joo and Zahoor Ahmad Mir (2014) conducted a study titled that "Impact of FIIs Investment on Volatility of Indian Stock Market: An Empirical Investigation." The intention of this study is to check the non-stationarity of the time series the augmented Dickey-Fuller(ADF) unit root test is applied. The study is based on monthly series on NIFTY, SENSEX and FIIs. In order to examine the impact of FIIs on Indian stock market volatility, statistical tools such as mean, variance, standard deviation, skewness and correlation analysis are used. The study reveals result that there is significant relationship between FIIs capital flows and stock market volatility.

OBJECTIVES

- To establish relationship between FIIs and selected variables of NSE in India.
- To analyse and Model, the impact of FIIs on selected variables of NSE in India.

SCOPE OF THE STUDY

The purpose of this research is to study the impact of FII on various indicators of NSE in India. There are number of ways and Models to analyze the impact of FIIs with respect to selected NSE factors. The scope of the present study is limited to analysing and establishing the causal relationship between FIIs and selected variables of NSE. For

analysing the relationship between FIIs & selected indicators of NSE, the researchers have used correlation and to establish the impact and model the relationship between FIIs and selected indicators, OLS regression is used. Though the equity investments in FII flew to India since 1992-93, the scope of the present study is limited to a period of 18 years from 2000-01 to 2017-18.

METHODOLOGY

This study is analytical in nature and the data considered in this study was collected from secondary source. Data pertaining to various indicators of NSE were chosen from the NSE website and NSE fact book. Five variables of NSE were selected at random from NSE website and the sample indicators are market capitalization, demat trading, trading value, average daily turnover and internet trading and equity investments in FIIs. An equity investment in FIIs is considered as independent variable whereas other selected indicators of NSE are considered as dependent variables. The study is covered for the period of 18 years starting from 2000-01 to 2017-18 on yearly basis. The prices of indicators as considered for this period in order to analyze the impact of FIIs on various selected variables such as market capitalization, demat trading, trading value, average daily turnover and internet trading.

HYPOTHESIS

1. $H_{0:}$ There exists no relationship between FIIs and selected indicators on NSE (Market capitalization, demat trading, trading value, average daily turnover and internet trading).

   $H_{a:}$ There exists relationship between FIIs and selected indicators on NSE (Market capitalization, demat trading, trading value, average daily turnover and internet trading).

2. $H_{0:}$ The change in FIIs is not explained by the change in selected indicators on NSE. (Market capitalization, demat trading, trading value, average daily turnover and internet trading).

   $H_{a:}$ The change in FIIs is explained by the change in selected indicators on NSE. (Market capitalization, demat trading, trading value, average daily turnover and internet trading).

DATA ANALYSIS AND INTERPRETATION

This part of the study deals with data analysis and interpretation. The yearly flow of FII and selected variables of NSE for the study period have been considered for the study. To study the impact of FII on Indian Stock Market, the researchers have applied various statistical tools. The researchers have considered FII as independent variable and the other variables such as Market capitalization, demat trading, trading value, average daily turnover and internet trading as dependent variables. Regression analysis is used in estimating the relationships among variables.

Table 1: Business growth of Capital Market segment of NSE (2000 - 2018)

Year	Market Capitalization (in cr)	Trading Quantity (in cr)	Average Daily Trading Value (in cr)	Trading value (in cr)
2000-2001	6,57,847	329,536	5,337	13,39,510
2001-2002	6,36,861	278,408	2,078	5,13,167
2002-2003	5,37,133	364,066	2,462	6,17,989
2003-2004	11,20,976	713,301	4,329	10,99,534
2004-2005	15,85,585	797,685	4,506	11,40,072
2005-2006	28,13,201	844,486	6,253	15,69,558
2006-2007	33,67,350	855,456	7,812	19,45,287
2007-2008	48,58,122	1,498,469	14,148	35,51,038
2008-2009	28,96,194	1,426,355	11,325	27,52,023
2009-2010	60,09,173	2,215,530	16,959	41,38,023
2010-2011	67,02,616	1,824,515	14,029	35,77,410
2011-2012	60,96,518	1,616,978	11,289	28,10,893
2012-2013	62,39,035	1,659,160	10,833	27,08,279
2013-2014	72,77,720	1,533,716	11,189	28,08,488
2014-2015	99,30,122	2,361,799	17,818	43,29,655
2015-2016	93,10,470	2,201,771	17,154	42,36,983
2016-2017	119,78,421	2,624,534	20,387	50,55,913
2017-2018	140,44,152	3,771,836	29,410	72,34,826

Table 1 represents the data about the business growth of the capital market, in terms of trading quantity, average daily trading value and trading value segments of NSE from 2000 to 2018. It is observed from the table that market capitalization from 2002 -2003 to 2007 – 2008 shows an increasing trend inthe market. Again 2011 onwards it was steadily increasing. But, in the year 2008 – 2009 it was very low due to global financial crisis. Trading value, the Average trading value were very low in 2008-2009 because of global financial crisis and it was high in the year 2014-2015. Market capitalization has increased in the years from 2016-2017 and 2017- 2018.

Table 2: Year wise Internet and Demat Trading of NSE, and FIIs investment (2000 – 2018)

Year	FIIs investment in Equity(in cr)	Demat Trading Value (in cr)	Internet Trading (in cr)
2000-2001	10,207	12,64,337	7,287.81
2001-2002	8072	5,12,866	8,138.81
2002-2003	2527	6,17,984	15,360.76
2003-2004	39960	10,99,534	37,945.08
2004-2005	44123	11,40,072	81,033.81
2005-2006	48801	15,69,558	183428.52
2006-2007	25236	19,45,287	3,37,524.00
2007-2008	53404	35,51,038	6,68,399.00
2008-2009	-47706	27,52,023	6,92,789.00
2009-2010	110221	41,38,023	9,21,380.00
2010-2011	110121	35,77,410	7,65,271.00
2011-2012	43738	28,10,893	5,97,430.00
2012-2013	140033	27,08,279	5,83,073.00
2013-2014	79709	28,08,488	6,27,478.00
2014-2015	111333	43,29,655	10,05,984.00
2015-2016	-14172	42,36,983	10,25,706.00
2016-2017	55703	50,55,913	13,06,188.00
2017-2018	25635	72,34,826	21,125,258.00

Table 2 gives the details of Internet trading, demat trading and FIIs investment in equity. Internet trading has steadily increased from 2000 to 2010 and decreased from 2011 to 2013. On the other hand, it showed an increasing trend from 2014 to 2018. FIIs withdrawal was very high in the year 2008-2009 and 2015-2016. This has affected market capitalisation, trading value, demat trading adversely.

The relationship between FII and the other variables of business growth in NSE has been analysed using correlation analysis. The following table shows the coefficient of correlation between each of the 2 variables

Table 3 - Correlation Matrix (2000-01 to 2017-18)

	FIIs investment in Equity	Demat Trading Value (in cr)	Internet Trading (in cr)	Market Capitalization (in cr)	Trading value (in cr)	Average Daily Trading Value (in cr)
FIIs investment in Equity	1					
Demat Trading Value (in cr)	**0.237465**	1				
Internet Trading (in cr)	**0.167152**	0.988444	1			
Market Capitalization (in cr)	**0.318869**	0.947396	0.945284	1		
Trading value (in cr)	**0.236085**	0.999951	0.987901	0.946604	1	
Average Daily Trading Value (in cr)	**0.229484**	0.99968	0.988716	0.945044	0.99973	1

The researchers have considered the correlation coefficients between independent variable (FIIs) and dependent variables are (market capitalization, demat trading, trading value, average daily turnover and internet trading). It may be inferred from the correlation matrix presented in Table3 that FIIs is positively correlated with all the variables of NSE. Thus, the hypothesis that H_0 that " There exists no relationship between FIIs and selected indicators on NSE (Market capitalization, demat trading, trading value, average daily turnover and internet trading). *"is not accepted"* and the H_a that "There exists relationship between FIIs and selected indicators on NSE (Market capitalization, demat trading, trading value, average daily turnover and internet trading) *"is accepted.*

IMPACT OF FII ON DEMAT TRADING VALUE

The impact of FII on the selected variables has been made using regression analysis and the results are tabulated below:

Table 4– Summary Statistics for Regression between FII and Demat Trading Value

Regression Statistics	
Multiple R	0.237465
R Square	0.05639
Adjusted R Square	-0.00259
Standard Error	1756634
Observations	18

The above table shows the summary results of Regression analysis between FII and Demat Trading Value. The results reveal that R-Square at 0.056 (5.6%) indicating variance that has been explained in Demat Trading Value by FII is 5.6%.

Table 5 – Coefficients for Regression model between FII and Demat Trading Value

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	2451456	583116.3	4.20406	0.000673
FII	8.532978	8.72645	0.977829	0.342713

The results of regression coefficient exhibits that the impact of FII (the independent variable) on Demat trading value in the NSE is statistically significant at 5% level as the p-value is less than 5%. This implies that one unit of increase in FII, increases Demat Trading Value by 8.533. Hence, FII can be used for predicting Demat Trading Value in India as the same is statistically significant.

IMPACT OF FII ON INTERNET TRADING

Table 6– Summary Statistics for Regression between FII and Internet Trading

Regression Statistics	
Multiple R	0.167152
R Square	0.02794
Adjusted R Square	-0.03281
Standard Error	561265
Observations	18

The above table shows the summary results of Regression analysis between FII and Internet Trading. The results reveal that R-Square at 0.028 (2.8%) indicating variance that has been explained in Internet Trading by FII is 2.8%.

Table 7 – Coefficients for Regression model between FII and Internet Trading

	Coefficients	**Standard Error**	**t Stat**	**P-value**
Intercept	521569.9	186312.5	2.799436	0.012856
FII	1.890816	2.788202	0.678149	0.507367

The results of regression coefficient exhibits that the impact of FII on internet trading is statistically significant at 5% level as the p-value is less than 5%. This implies that one unit increase in FII, increases Internet Trading by 1.891. Hence, FII can be used for predicting Internet Trading in India as the same is statistically significant.

IMPACT OF FII ON MARKET CAPITALIZATION

Table 8 – Summary Statistics for Regression between FII and Market Capitalization

Regression Statistics	
Multiple R	0.318869
R Square	0.101678
Adjusted R Square	0.045533
Standard Error	3962024
Observations	18

The above table shows the summary results of Regression analysis between FII and Market Capitalization. The results reveal that R-Square at 0.102(10.2%) indicating variance that has been explained in Market Capitalization by FII is 10.2%.

Table 9 – Coefficients for Regression model between FII and Market Capitalization

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	4090478	1315198	3.110162	0.006735
FII	26.48684	19.68219	1.345726	0.197152

The results of regression coefficient exhibits that the impact of FII on market capitalization is statistically significant at 5% level as the p-value is less than 5%. This means that one unit increase in FII, increases Market Capitalization by 26.487. Hence, FII can be used for predicting Market Capitalization in India as the same is statistically significant.

IMPACT OF FII ON TRADING VALUE

Table 10 – Summary Statistics for Regression between FII and Trading value

Regression Statistics	
Multiple R	0.236085
R Square	0.055736
Adjusted R Square	-0.00328
Standard Error	1753292
Observations	18

The above table shows the summary results of Regression analysis between FII and Trading Value. The results reveal that R-Square at 0.056 (5.6%) indicating variance that has been explained in Trading Value by FII is 5.6%.

Table 11 – Coefficients for Regression model between FII and Trading value

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	2458879	582007.1	4.224827	0.000644
FII	8.46433	8.70985	0.971811	0.345608

The results of regression coefficient exhibits that the impact of FII on trading value at NSE is statistically significant at 5% level as the p-value is less than 5%. This implies that one unit increase in FII, increases Trading Value by 8.464. Hence, FII can be used for predicting Trading Value in India as the same is statistically significant.

IMPACT OF FII ON AVERAGE DAILY TRADING VALUE

Table 12– Summary Statistics for Regression between FII and Average Daily Trading Value

Regression Statistics	
Multiple R	0.229484
R Square	0.052663
Adjusted R Square	-0.00655
Standard Error	7158.005
Observations	18

The above table shows the summary results of Regression analysis between FII and Average Daily Trading Value. The results reveal that R-Square at 0.053 (5.3%) indicating variance that has been explained in Average Daily Trading Value by FII is 5.3%.

Table 13– Coefficients for Regression model between FII and Average Daily Trading value

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	2458879	582007.1	4.224827	0.000644
FII	8.46433	8.70985	0.971811	0.345608

The results of regression coefficient exhibits that the impact of FII on the average daily trading at NSE is statistically significant at 5% level as the p-value is less than 5%. Thus, one unit increase in FII had resulted in an increase in Average Daily Trading Value by 8.464. Hence, FII can be used for predicting Average Daily Trading Value in India as the same is statistically significant.

FINDINGS

- The market capitalization in NSE for the period 2000-2018 showed a fluctuating trend with a sharp decline in 2008-09 due to global financial crisis, but, started increasing since 2016-17.
- The FII investment in equity shows an increasing trend except for the period 2011-2013
- There exists relationship between FIIs and selected indicators in NSE (Market capitalization, demat trading, trading value, average daily turnover and internet trading) as revealed by the correlation coefficients. The relationship is positive in nature.
- The regression analysis proved that there is an impact of FII on the selected indicators in NSE ((Market capitalization, demat trading, trading value, average daily turnover and internet trading).

CONCLUSION

The inflow of FIIs into the Indian economy during the period 2000-2018 is related to Market capitalization, demat trading, trading value, average daily turnover and internet trading in the NSE. The relationship was found to be statistically significant. The results of the study also show that the FII is also found to have an impact on these selected indicators in the NSE. Therefore, it is concluded that the FII has a positive impact on the Indian capital market.

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