Impact of FII on the share price of selected companies in NSE in India

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Abstract - The Foreign Institutional Investors (FIIs) have emerged as important players in the Indian equity market in the recent past. FIIs acquisition of shares through stock market has much implication in stock markets especially in the market return, volatility and overall development of the markets. FIIs have strengthened the market, reduced the risk and increased return through wider diversification. The objective of the present study is to analyse the impact of FII on share price of selected companies in NSE in India. The period of the study is from 2009-2010 to 2018-2019. Secondary data is used for the study. The data analysis was done using descriptive statistics and statistical tools like range, mean, standard deviation, coefficient of variation, compound annual growth rate and paired sample t test. The findings of the study are that there has been growing presence of the FII inflows in the Indian stock markets which is evident through the net cumulative investments.

I. INTRODUCTION

The stock market/capital market is a vital of the financial system. It provides the support of capitalism to the country. The wave of economic reforms initiated by the government has influenced the functioning and governance of the market. The Indian capital market is also undergoing structural transformation since liberalization. The chief aim of the reforms exercise is to improve market efficiency, make stock market transactions more transparent, curb unfair trade practices and to bring our financial markets up to international standards. Further, the consistent reforms in Indian capital market, especially in the secondary market resulting in modern technology and online trading have revolutionized the stock exchange.

Investment is the most important pre-requisite for the economic development of a nation. However, many of the developing countries, including India are capital scarce. Hence, these countries rely on funds from other economies to meet their capital requirements. Based on the risk involved, the funds from outside the nation can be basically classified into two: debt creating funds and non-debt creating funds. The debt creating funds are borrowed funds and it should be repaid with interest. The non-debt creating funds are the acquisition of ownership in the productive assets in a country by the foreigners. The important non-debt creating sources of foreign capital are Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI). Foreign

Direct Investment is the investment made by an entity based in one country in the business of another country with the objective to obtain control in the business. On the other hand, Foreign Portfolio Investment is the mechanism in which a foreign entity acquires the stocks, bonds and financial assets in another country through stock exchanges, without the objective to obtain control in the business. Hence, such investment is generally short term and volatile in nature. In India, foreign portfolio investment is mainly made by the foreign entities registered with SEBI and they are known as Foreign Institutional Investors (FIIs).

II. REVIEW OF LITERATURE

Bhatia & Kishor (2013) in their paper investigated the nature of the relationship between net FII flows, the stock price movements, and the foreign exchange reserves. Before applying Granger casuality test, the stationarity of the series was tested through unit root test. Results of the study show that there are two-way relationships between returns on sensex and FII flows. Thus, FII flows are Granger caused by sensex and vice-versa.

Hong and Lee (2011) made an attempt to examine the relationship between market return and individual, institutional, and foreign flow of capital to Korean market. The study was based on the daily data from January1998 to February 2006. The foreign and institutional investors tend to drive the Korean equity market, and their trade seems to be information-driven, whereas individual investors had no

significant impact on the Korean equity market and their trade was not information driven. The study also found that compared to individual investors both foreign and institutional investors performed well. It was also observed that FII flow strengthened the market liquidity.

Sham et al. (2010) employed Augmented Dickey Fuller and Philips- Pearson tests to examine the stationary of both the net FIIs and NSE market return series. Instantaneous Granger-Causality test were also employed to examine the contemporaneous relationship between net FII flows and equity market returns in India for the pre-global financial crisis and during the crisis period. By and large, the analyses revealed that there was an evidence of negative feedback trading hypotheses and positive feedback trading hypothesis by foreign investors before the global financial crisis period and during the crisis period respectively. This implies that FII acts as a smoothening effect and destabilizes forces before and during the crisis period respectively. However, such positive feedback trading strategies from FIIs seems to be the rationale during the period of global financial crisis.

Hasan and Nasir (2008) investigated the relationship between stock price movements and macroeconomic variables such as inflation, industrial production, oil price, short term interest rate, exchange rate, foreign portfolio investment and money supply. The relationship was analysed using ARDL model based on the monthly data from June 1998 to June 2008. The results reveal that among the seven variables considered, interest rates, exchange rates and money supply have significant long run and short run effect on equity prices. The study suggests that the foreign portfolio investment has only short-term effect in market return.

Badhani (2005) applied Granger Causality Test on the monthly data from April 1993 to March 2004 and observed in the contemporary Indian scenario (i) bidirectional long-term causality between FII investment flows and stock prices, but no short-term causality could be traced between the variables; (ii) no long-term relationship between exchange rate and stock prices, but short-term causality runs from change in exchange rate to stock returns, and (iii) exchange rate long term Granger causes FII investment flow, not vice versa.

Mukherjee, et al. (2002) examined the relationship between foreign institutional investment flows and Indian equity market return based on the daily data from January 1999 to May 2002. The result of the study showed that it was a market return that led to the FII flow. FII's sale has a significant impact on the Indian equity market while FII's purchase had no such influence. The study also indicates that FIIs were not interested to invest in the Indian equity market for the purpose of their investment diversification.

Badrinath and Wahal (2002) used the quarterly data from 1987 to 1995 to examine the trading behavior of 1200 selected institutional investors. The study shows that

institutions act as momentum traders when they enter stocks but they act as contrarian traders when they exit. The study also found the difference in the trading strategy of different institutional investors but expected return from the market was the major driving force behind the flow of fund.

Kumar S (2002) evaluated whether institutional activities have any influence on the Indian market. The study found that the total asset under the management of FIIs was almost 18 percent of the entire market capitalization. By using regression analysis based on the advanced decline ratio of the market and the institutional purchases to sales ratio, the study found that the institutional activities had an influence on the stock market. Both mutual funds and FII's played a significant role in determining the market's direction. The authors pointed out that institutional activities were helpful in identifying the market direction.

III.   STATEMENT OF THE PROBLEM

The Foreign Institutional Investors (FIIs) have emerged as important players in the Indian equity market in the recent past. The behaviour of stock market is affected by the globalization of the world economy. The Foreign Investors are attracted by the Asian markets specially India due to many obvious reasons. First of all, growth potential in Asian Markets is higher, secondly its cheaper in countries like India to invest as the costs are low, thirdly there is a higher investor base and fourthly mostly the Asian economies are developing and hence, the Governments are welcoming to foreign investors as they play a major role in boosting the growth of the country. The last two decades has led to growing participation of Institutional Investors which includes not only the foreign Institutional investments but also investments by domestic institutional investors. The increasing role of Institutional investors led to both qualitative and quantitative developments in Indian Stock Markets. Portfolio investments brought in by FIIs have been the most dynamic source of capital since 1990s. At the same time, there is unrest over the volatility in foreign institutional investment flows and its impact on the stock market and the Indian economy. Apart from the impact they create on the market, their holdings will influence individual firm's performance. Hence, the researcher wants to know the answers for the following research questions.

- What is the composition and growth of FII in India?
- What is the impact of FII on share price of selected companies in NSE?

IV.   OBJECTIVES OF THE STUDY

- To examine the impact of FII on share price of selected companies in NSE.

- To offer findings, suggestions and conclusion of this study.

V. HYPOTHESES OF THE STUDY

The following hypotheses have been framed in consonance with the objective of the study.

H_{01}: There exists no significant impact of FII on NIFTY

H_{02}: There exists no significant impact of FII on BSE SENSEX

H_{03}: There exists no significant impact of FII on Stock Exchange Return

H_{04}: There exists no significant impact of FII on Market Capitalization

H_{05}: There exists no significant impact of FII on Market Turnover

H_{06}: There is no unit root in the data series.

VI. RESEARCH METHODOLOGY

Sources of data

The study is analytical and is based on secondary data. The secondary data constitutes FII flows data which is collected from the websites of Securities Exchange Board of India and Reserve bank of India. Owing to data availability the study period for the gross purchase and sales of both equity and debt form of FIIs has been restricted to 10 years from 2010 to 2019.

Period of the Study

The study covers a period of 10 years from the financial year 2010 to 2019.

Tools Used for the study

The statistical tools used in the study are;

- Descriptive statistics and
- Paired Sample t test

VII. FRAMEWORK OF ANALYSIS

This study assesses the impact of FIIs on share price of selected companies in NSE. This part of study mainly analyses the impact of Foreign Institutional Investments on the market return and further identify the contributions of FIIs in Indian Capital Market. The study uses the ADF and Granger Causality Test on the selected sectors in NSE. Further the causal relationship between the FII inflows (FIIP) and stock price return of different sectors during the period ranging from 2010 -2011 to 2018- 2019 has also been analysed in the study.

Table 1.1 FII flows and Indian Stock Market (INR Cr)

Year	Equity	Debt	Total	BSE SENSEX	CNX NIFTY
2010	133,266.30	46,408.30	179,674.60	20,509.09	6,134.50
2011	-2,714.20	42,067.00	39,352.80	15,454.92	4,624.30
2012	128,360.50	34,989.40	163,350.10	19,426.71	5,905.10
2013	113,136.00	-50,848.00	62,288.00	21,170.68	6,304.00
2014	97,054.00	159,156.00	256,213.00	27,499.42	8,282.70
2015	17,808.00	45,857.00	63,663.00	26,117.54	7,946.35
2016	20,568.00	-43,647.00	-23,079.00	26,626.46	8,185.80
2017	51,252.00	148,808.00	200,048.00	34,056.83	10,530.70
2018	-33,014.00	-47,795.00	-80,919.00	36,068.33	10,862.55
2019	101,122.00	25,882.00	135,995.00	41,253.74	12,168.45

Source: *Compiled and calculated using the published data from SEBI*

The above table 1.1 presents the foreign institutional investment flows and the SENSEX and NIFTY trade details. The volatility in the FII flows is great and the SENSEX and NIFTY have been kept increasing during the study period. Both the SENSEX and NIFTY have appeared to be doubled in their trade dealings during the study period respectively, BSE SENSEX was INR 20.509.09 crores in 2010 raised to INR 41,253.74 crores in 2019 whereas NIFTY was INR 6,134.50 crores in 2010 which is raised to INR 12,168.45 crores in 2019.

1.2 Volatility in Stock Market

The companies that have better capitalization in BSE SENSEX are studied to understand the volatility in the stock market, which is presented below.

Table 1.2

Change in Market Capitalization of select companies

Company	Long term Price - High	Long term Price - Low	Change in Market Capitalization (%)
Tata Consultancy Services Ltd.	2296.00	346.00	475.81
Reliance Industries Ltd.	1602.55	333.58	176.8
Bharti Airtel	503.52	218.94	50.46
HDFC Bank Ltd.	1304.10	155.00	652.41
Hindustan Unilever Ltd.	2187.00	218.10	623.16
Housing Development Finance Corporation Ltd.	2459.00	460.00	350.10
Infosys Ltd.	847.40	262.71	124.64
ITC Ltd.	353.20	76.33	184.07
State Bank of India	373.70	145.29	47.33
ICICI Bank Ltd	552.40	116.55	233.69 %

Source: *Compiled and calculated using the published data from SEBI*

Table 1.2 presents the long-term prices and the changes in market capitalization for the companies listed in NSE NIFTY. It is clear from the table HDFC Bank limited has the

highest change in Market capitalization during the study period followed by Hindustan Unilever and Tata consultancy Service Limited.

1.3 Impact of FII on Indian Stock Market

Impact of FII on NIFTY

H_{03}: There exists no significant impact of FII on NIFTY

Table 1.3 Correlation between FII and NIFTY

Variables		FII	NIFTY
FII	Pearson Correlation	1	0.621*
	Sig. (2-tailed)		0.000
	N	144	144
NIFTY	Pearson Correlation	0.621*	1
	Sig. (2-tailed)	0.000	
	N	144	144

* Correlation is significant at the 0.01 level (2-tailed)

Table 1.3 presents the correlation analysis between the FII as independent factor and NIFTY as dependent factor. The effect of FII on nifty is positive and co-efficient of correlation is .621; this shows that it has moderate degree of positive correlation.

Table 1.4 Regression Model Summary of FII and NIFTY

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	e
1	0.621	0.287	0.278	6.39	0.021*

a Predictors: (Constant), FII

Table 1.4 denotes R square value is 0.287 which explains that FII influences around 29 percent movements in NIFTY. Hence the hypothesis is rejected at 5 per cent and concluded that there is a significant impact of FII on NIFTY.

Impact of FII on BSE SENSEX

H_{04}: There exists no significant impact of FII on BSE SENSEX

Table 1.5 Correlation between FII and BSE Sensex

Variables		FII	BSE SENSEX
FII	Pearson Correlation	1	0.609*
	Sig. (2- tailed)		0.000
	N	144	144
BSE SENSEX	Pearson Correlation	0.609*	1
	Sig. (2-tailed)	0.000	
	N	144	144

*Correlation is significant at 0.01 level (2-tailed)

Table 1.5 presents the correlation analysis between the FII as independent factor and BSE SENSEX as dependent factor. The effect of FII on SENSEX is positive and co-efficient of correlation is .609; this shows that it has

moderate degree of positive correlation.

Table 1.6 Regression Model Summary of FII and BSE SENSEX

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	P value
1	0.609	0.272	0.260	6.94	0.012*

a Predictors: (Constant), FII

The above table 1.6 denotes R square value is 0.272 which explains that FII influences around 27 per cent movements in SENSEX. Hence the hypothesis is rejected at 5 per cent and concluded that there is a significant impact of FII on BSE SENSEX.

Impact of FII on Select Stock Market Indicators

Impact of FII on Stock Exchange Return

H_{05}: There exists no significant impact of FII on Stock Exchange Return

Table 1.7 Correlations between FII Flows and Stock Exchange Return

Variables		FII	Stock Exchange Return
FII	Pearson Correlation	1	0.622*
	Sig. (2-tailed)		0.000
	N	120	120
Stock Exchange Return	Pearson Correlation	0.622*	1
	Sig. (2-tailed)	0.000	
	N	120	120

* Correlation is significant at the 0.01 level (2-tailed)

Table 1.7 presents the correlation analysis between the FII as independent factor and Stock Exchange Return as dependent factor. The effect of FII on Stock Exchange Return is positive and co-efficient of correlation is .622; this shows that it has moderate degree of positive correlation.

Table 1.8 Regression Model Summary of FII and Stock Exchange Return

Model	R	R Square	Adjusted R Square	Error of the Estimate	e
1	0.622	0.213	0.221	5.21	0.042*

a Predictors: (Constant), FII

Table 1.8 denotes R square value is 0.213 which explains that FII influences around 21 percent movements in Stock Exchange Return. Hence the hypothesis is rejected at 5 per cent and concluded that there is a significant impact of FII on Stock Exchange Return.

FII and Market Capitalization

H_{06}: There exists no significant impact of FII on Market Capitalization

Table 1.9

Correlation between Net FIIs Investment and Market Capitalization

Variables		FII	Market Capitalization
FII	Pearson Correlation	1	0.615*
	Sig. (2-tailed)		0.000
	N	120	120
Market Capitalization	Pearson Correlation	0.615*	1
	Sig. (2-tailed)	0.000	
	N	120	120

*Correlation is significant at the 0.01 level (2-tailed)

Table 1.9 presents the correlation analysis between the FII as independent factor and Market capitalization as dependent factor. The effect of FII on Market capitalization is positive and co-efficient of correlation is .615; this shows that it has moderate degree of positive correlation.

Table 1.10 Regression Model Summary of FII and Market capitalization

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	P value
1	0.615	0.239	0.236	4.82	0.002**

a Predictors: (Constant), FII

Table 1.10 denotes R square value is 0.239 which explains that FII influences around 24 per cent movements in Market capitalization. Hence the hypothesis is rejected at 1 per cent and concluded that there is a significant impact of FII on Market capitalization.

FII and Market Turnover

H_{07}: There exists no significant impact of FII on Market Turnover

Table 1.11 Correlation between Net FIIs Investment and Market Turnover

Variables		FII	Market Turnover
FII	Pearson Correlation	1	0.366*
	Sig. (2-tailed)		0.000
	N	120	120
Market Turnover	Pearson Correlation	0.366*	1
	Sig. (2-tailed)	0.000	
	N	120	120

*Correlation is significant at the 0.01 level (2-tailed)

Table 5.11 presents the correlation analysis between the FII as independent factor and Market Turnover as dependent factor. The effect of FII on Market Turnover is positive and co-efficient of correlation is .366. This shows that it has moderate degree of positive correlation.

Table 1.12 Regression Model Summary of FII and Market capitalization

Model	R	R Square	Adjusted R Square	P value	Std. Error of the Estimate
1	0.366	0.204	0.212	0.044**	8.21

a Predictors: (Constant), FII

Table 1.12 denotes R square value is 0.204 which explains that FII influences around 20 percent movements in Market Turnover. Hence the hypothesis is rejected at 1 per cent and concluded that there is a significant impact of FII on Market Turnover.

1.3.1 ADF and Causality Test

The data considered for the study are BSE index (SENSEX) returns and Net FII. Difference between the log values of closing index at time t and t-1 is considered as the index returns. Net FII is the difference between net purchases and net sales of foreign investors. The analysis is carried out using the daily data from January 1st, 2010 to Dec 31st, 2019. Daily data is considered appropriate for examining the nature of causality, and the same is considered for the analysis.

H_0: There is no unit root in the data series

Table 1.13 ADF Results of Stationarity

Variable	Test Statistic	P Value
FII	-26.38	0.0000
BSE SENSEX	-48.11	0.0000

Table 1.13 reveals the significant at one percent level as the p-value is less than 0.01. This concludes the rejection of null hypotheses. Hence the data series are stationary.

Table 1.14 Granger Causality Test Results

Null Hypothesis	F Statistic	Probability
BSE SENSEX does not Granger cause FII	16.38	0.01
FII does not Granger cause BSE SENSEX	21.84	0.05

Table 1.14 shows the causal relationship between the variables, Granger causality test is performed. The results show that there is there exists a bidirectional relationship between the FII and BSE SENSEX, since the probability values are significant at 5 per cent and 1 per cent respectively. This indicates that each one is causing each

other. Foreign institutional investments can influence the stock market prices and at the same time stock market prices influence the foreign investors buying or selling decisions. This study proves that there exists bidirectional relationship between FIIs and stock market returns. As there is bidirectional relationship, the country should be very much sensitive to dealing with the flow of FIIs and returns in the stock market.

1.3.2 FII and BSE SENSEX Movements using Vector Auto Regression Model (VAR)

The relationship between FII activity and movement of SENSEX is studied with Vector Auto Regression Model (VAR) using daily data for the mid period of the study period. The Stationarity condition has been tested using Augmented Dickey Fuller (ADF).

Table 1.15 ADF Unit Root Test for FIIs Investment

Variables	t-statistic	p-value
FII	-11.94	0.00
Test Critical Values	1 %	-2.65
	5 %	-2.34
	10 %	-2.08

Table 1.15 explains that t-statistic is significant at 1 per cent level and ensures stationarity of the data. Stationarity condition is also tested for movement of Sensex using Augmented Dickey Fuller (ADF). The unit root test result on the individual data series for Sensex movements is shown in table 38.

Table 1.16 ADF Unit Root Test for SENSEX Movement

Variables	t-statistic	p-value
Sensex	-5.60	0.00
Test Critical Values	1 %	-3.40
	5 %	-2.39
	10 %	-2.73

Table 1.16 interprets the estimated values of both FII and movement of SENSEX, reported by the ADF test statistic at the first difference are -11.94 and -5.60 respectively. The critical values at 1per cent, 5 per cent and 10 per cent significance level are also given and the test statistic exceeds the critical value and hence the null hypothesis is rejected. Therefore, the two variables, Net FII and movement of SENSEX are said to be stationary and ready for testing the Granger Causality.

In order to examine the relationship between variables; the Vector Autoregressive Model (VAR) has been used. The VAR model includes all variables and tries to determine its variation due to its past values as well as lagged values of other variables. Numbers of variables included in the system depend upon theoretical considerations and decision about lag length is based upon statistical tests. For an unrestricted VAR it is necessary that the same numbers of lags of all of

the variables are used in all equations. The optimal lag length is for minimum value of multivariate information criteria based on AIC, SC and HQ. It is essential that all variables included in the VAR should be stationary so as to conduct joint significance test on the lags of identified variables. The significance of all lags of each variable within the VAR framework is examined jointly by F tests which will establish the joint significance of all lags of the individual variables. The results for VAR lag order selection are as follows:

Table 1.17 VAR Lag Order Selection Criteria

Lag	AIC	SC	HQ
0	29.85	29.09	29.89
1	29.82	29.72*	29.66
2	29.68	29.86	29.15
3	29.56	29.86	29.67*
4	29.55*	29.39	29.69
5	29.91	29.88	29.78
6	29.58	29.93	29.79
7	29.55	30.02	29.78
8	29.67	30.10	29.81

* Indicates lag order selected by the criterion

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

From the table 1.17, it is inferred that the lag length 1 is found to be significant under Schwarz information criterion and the lag length 3 is found to be significant under Hannan-Quinn information criteria. The lag length of 4 is found to be satisfied under Akaike information criteria. The lag length of 2 is chosen for testing the pair-wise causality in terms of AIC for the full sample period.

Ordering the Variable

The ordering of the variable is another crucial aspect in VAR estimation. The casual link among the variables needs to be explored. The empirical analysis of the study begins with testing of causality between the FIIs investment and movement of SENSEX for the daily data of the study period.

Table 1.18

Pair-wise Granger Causality Tests for FII and Movement of SENSEX

Null Hypothesis	F Statistic	Probability
FII does not Granger Cause Movement of SENSEX	5.94	0.00
Movement of SENSEX does not Granger Cause FII	4.89	0.00

Table 1.18 shows the ordering of the variables can be selected using pair-wise granger causality test and the

results are given in table above. The reported F-value and P-value suggest that there is a bidirectional causality using 4 period lag between the movement of SENSEX and the net FII and this would imply that movement of SENSEX "Granger cause" net FII and vice versa or improve the prediction. Since bidirectional causality exists between FIIs and movement of SENSEX.

1.3.3 FII Purchases (FIIP) and Stock Price Return in Different Sectors: Results of Pairwise Granger Causality Test

This section presents the causal relationship between the FII inflows (FIIP) and stock price return of different sectors during the period ranging from 2010 to 2019. Granger Causality Test has been applied using the following null hypotheses:

Table 1.19 FIIP and Return of Sectors: Results of Granger Causality Test

Sectors	Stock Price Return does not Granger cause FIIP	FIIP does not Granger cause Stock Price Return	Relationship
Automobile	Insignificant	Insignificant	No Relationship
Banking& Finance	Insignificant	Insignificant	No Relationship
Cement	Insignificant	**Significant**	Unidirectional
Computer & IT	Insignificant	Insignificant	No Relationship
Engineering	Insignificant	Insignificant	No Relationship
Fertilizer	Insignificant	**Significant**	Unidirectional
Infrastructure	**Significant**	Insignificant	Unidirectional
Media& Entertainment	Insignificant	**Significant**	Unidirectional
Oil & Gas	**Significant**	Insignificant	Unidirectional
Pharmaceuticals	**Significant**	Insignificant	Unidirectional
Power	Insignificant	Insignificant	No Relationship
Telecommunication	**Significant**	Insignificant	Unidirectional

Significant at 5 per cent Level

Table 1.19 indicates that FII purchase (FIIP) in automobile, banking & finance, computer & IT, engineering and power sector have no relationship with stock price return of these sectors. While for the remaining sectors FIIP is found to have unidirectional relationship with return of these sectors. For the sectors i.e., infrastructure,oil & gas, pharmaceuticals and telecommunication stock price return is found to granger cause FIIs Purchase of these sectors. While in case cement, fertilizer and media & entertainment sectors FII inflows are found to cause stock price return of these sectors. Thus, the Granger Causality Test has revealed mixed results in some sectors FII inflows proved to be the causing factor, while in some others stock price returns have impacted the FII

inflows during the study period.

1.3.4 FII Sales (FIIS) and Stock Price Return in Different Sectors: Results ofPairwise Granger Causality Test

Table 1.20 FIIS and Return of Sectors: Results of Granger Causality Test

Sectors	Stock Price Return doesn't Granger cause FIIS	FIIS doesn't Granger cause Stock Price Return	Relationship
Automobile	**Significant**	Insignificant	Unidirectional
Banking & Finance	**Significant**	Insignificant	Unidirectional
Cement	**Significant**	**Significant**	Bi-Directional
Computer & IT	Insignificant	Insignificant	No Relationship
Engineering	Insignificant	Insignificant	No Relationship
Fertilizer	**Significant**	**Significant**	Bi-Directional
Infrastructure	**Significant**	**Significant**	Bi-Directional
Media& Entertainment	Insignificant	**Significant**	Unidirectional
Oil & Gas	**Significant**	Insignificant	Unidirectional
Pharmaceuticals	**Significant**	Insignificant	Unidirectional
Power	**Significant**	Insignificant	Unidirectional
Telecommunication	**Significant**	Insignificant	Unidirectional

Significant at 5 per cent Level

Table 1.20 reveals that FII sales or outflow (FIIS) in computer & IT andengineering sectors do not have any relationship with stock price return of these sectors.Bi-directional relationship found between the FIIs Sales and return of cement, fertilizer, and infrastructure sectors. In the case of these three sectors, FIIs Sales causes the stock price return and vice-versa. While in the case of rest of the sectors FIIs Sales and stock price return have a unidirectional relationship. Stock Price return is causing the FIIsSales in case of automobile, banking & finance, oil & gas, pharmaceutical, power and telecommunication sector. On the other hand, FIIs Sales have an impact on the return of media & entertainment sector.

1.3.5 Net FII Investment (NFII) and Stock Price Return in Different Sectors: Results of Pairwise Granger Causality Test

Table 1.21 NFII and Return of Sectors: Results of Granger Causality Test

Sectors	Stock Price Return doesn't Granger cause NFII	NFII doesn't Granger cause Stock Price Return	Relationship
Automobile	Insignificant	Insignificant	No relationship
Banking & Finance	Insignificant	**Significant**	Unidirectional
Cement	Insignificant	Insignificant	No Relationship
Computer & IT	Insignificant	Insignificant	No

			Relationship
Engineering	Insignificant	Insignificant	No Relationship
Fertilizer	Insignificant	Insignificant	No Relationship
Infrastructure	Insignificant	**Significant**	Unidirectional
Media& Entertainment	Insignificant	Insignificant	No Relationship
Oil & Gas	**Significant**	Insignificant	Unidirectional
Pharmaceuticals	Insignificant	Insignificant	No Relationship
Power	Insignificant	Insignificant	No Relationship
Telecommunication	Insignificant	Insignificant	No Relationship

Significant at 5 percent Level

Table 1.21 shows based on the results it can be concluded that the Net FIIflows in most of the sectors do not have any relationship with stock price return. Neither the NFII is affecting the stock price return, nor is the return affecting the NFII for most of the sectors except banking & finance, infrastructure, and oil & gas sector. A unidirectional relationship exists between NFII and returns of banking & finance and infrastructure sectors as the p-value is less than 5 percent rejecting the null hypothesis that NFII does not Granger causes stock price return meaning thereby NFII Granger causes stock price return in these sectors. On the other side, stock price return is affecting the NFII in the case of the oil & gas sector.

VIII. FINDINGS

- The volatility in the FII flows is great and the SENSEX and NIFTY have been kept increasing during the study period. Both the SENSEX and NIFTY have appeared to be doubled in their trade dealings during the study period respectively, BSE SENSEX was INR 20.509.09 crores in 2010 raised to INR 41,253.74 crores in 2019 whereas NIFTY was INR 6,134.50crores in 2010 which is raised to INR 12,168.45 crores in 2019.

- HDFC Bank limited has the highest change in Market capitalization during the study period followed by Hindustan Unilever and Tata consultancy Service Limited.

- The effect of FII on nifty is positive and co-efficient of correlation is .621; this shows that it has moderate degree of positive correlation.

- R square value is 0.287 which explains that FII influences around 29 percent movements in NIFTY. Hence the hypothesis is rejected at 5 per cent and concluded that there is a significant impact of FII on NIFTY.

- The effect of FII on SENSEX is positive and co-efficient of correlation is .609; this shows that it has moderate degree of positive correlation.

- R square value is 0.272 which explains that FII influences around 27 percent movements in SENSEX.

Hence the hypothesis is rejected at 5 per cent and concluded that there is a significant impact of FII on BSE SENSEX.

- The effect of FII on Stock Exchange Return is positive and co-efficient of correlation is .622; this shows that it has moderate degree of positive correlation.

- R square value is 0.213 which explains that FII influences around 21 percent movements in Stock Exchange Return. Hence the hypothesis is rejected at 5 per cent and concluded that there is a significant impact of FII on Stock Exchange Return.

- The effect of FII on Market capitalization is positive and co-efficient of correlation is .615; this shows that it has moderate degree of positive correlation.

- R square value is 0.239 which explains that FII influences around 24 percent movements in Market capitalization. Hence the hypothesis is rejected at 1 per cent and concluded that there is a significant impact of FII on Market capitalization.

- The effect of FII on Market Turnover is positive and co-efficient of correlation is .366. This shows that it has moderate degree of positive correlation.

- R square value is 0.204 which explains that FII influences around 20 percent movements in Market Turnover. Hence the hypothesis is rejected at 1 per cent and concluded that there is a significant impact of FII on Market Turnover.

- There exists a bidirectional relationship between the FII and BSE SENSEX, since the probability values are significant at 5 per cent and 1 per cent respectively.

- Bidirectional causality exists between FIIs and movement of SENSEX.

IX. SUGGESTIONS

- Government should set a minimum limit as well as maximum limit, within which FIIs invest in India, in order to avoid volatility in Indian stock market

- From an investor's point of view, there is no incentive to stay long term. This would encourage investors to go for more short-term investments. Effective incentives for long term investments can be proposed.

- Banks should be efficient in supporting FIIs, as they are the vehicle in promoting long term financial investments from FIIs.

X. CONCLUSION

This chapter noted that FII are one of the reasons for many other stock market crashes in the developing countries like India. The selected sectors have significant relationship with the investment hikes in FII during the study period. The Foreign Institutional Investors, the most dominant investor

group invest substantial fund in the Indian stock market. Hence, the market may move in tandem with the activities of FII. It is also found that the behaviour and strategies of FII may change in relation to the phases of market movements. The role of investment in promoting economic growth has conventional considerable concentration in India since independence. But the role of foreign institutional investment in the economic development of India is a recent topic of discussion among economists and development planners. Since the implementation of the new economic policies in early 1990s, India emerged as an important destination of global investors' investment. It is from September 14, 1992; FII have been investing on financial instruments in India and providing incentives for financial innovations in the country. Recently, FII have become the movers and shakers of the market. Given this growing importance of FII for the Indian economy, it is necessary that the energetic of such cross-border portfolio investment in the context of economic growth of the country. FII is a vital component which helps in the development of financial market and the overall financial development thereby allowing the capital flows available in a country to pursue its trajectory of economic growth. From all the above discussions and data analysis of the study it is inferred that there has been growing presence of the FII inflows in the Indian stock markets which is evident through the net cumulative investments.

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