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A Study on Impact of FII on BSE and NSE

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Abstract – With the help of this research, the researcher tried to analyze the impact of Foreign Institutional Investment on indexes (Sensex and Nifty). We have tried to understand the pattern and fluctuations of FII during 2019 and analyze the changes in BSE Sensex and NSE Nifty due to Foreign Institutional Investment. This study, there is no impact of foreign institutional investor's arrival on Indian stock market and on its behavior. So, it is suggested to establish flexible or temporary capital controls through either quantitative restrictions or price-based restriction so that impact of the external shocks such as financial crisis in some other country or great turbulence in international interest rate can be restricted.

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INTRODUCTION

Foreign Institutional Investors (FII) plays a crucial role in any country's development. The 21st century has shown immense volatilities of the securities exchange and the different indicators (Sensex and Nifty) as far as its highest and lowest points are concerned. They play a vital role for Indian markets growth, particularly when there is hardly any growth in the market of equity assets, especially under the mutual fund industry and when premium collection is not growing in the insurance sector for a long period of time. With the help of this research, have tried to analyze the impact of Foreign Institutional Investment on indexes (Sensex and Nifty). We have tried to understand the pattern and fluctuations of FII during 2019 and analyse the changes in BSE Sensex and NSE Nifty due to Foreign Institutional Investment.

SIGNIFICANT OF THE STUDY

It was found that Foreign Institutional Investments were comparatively higher in the developing economies, which provide investors with the opportunity of higher growth potential than mature economies provide. This is one of the primary reasons why foreign investors are attracted to invest in India, which has a high rate of growth in their economy and financially beneficial opportunities to invest in. FIIs can be an important source of capital for the nations especially developing nations, yet many developing nations, such as India, have placed limits on the total amount of assets that foreign investors can buy in the country and the number of equities shares they can buy, in a single company. This study is often fascinated by how Foreign Institutional Investors play a vital role in shaping up the Indian economy and wanted to have an in-depth analysis on what level do these investments have an impact on the Indian Stock Market even after so many prevalent restrictions such as ceiling limit on their investment.

RESEARCH OBJECTIVES

The Primary objectives of our project are the following:

- To analyze the effect of Foreign Institutional Investment on Nifty and Sensex.
- To analyze the changes being occurred in Indian stock market due to Foreign Institutional Investment.
- To study the behavioral pattern of Foreign Institutional Investment on Indian market for the year 2019.

RESEARCH METHODOLOGY

The research comprises information derived from the secondary data i.e., from Sensex, Nifty and FII investment. This was a natural choice for inclusion in the study, as it is the most popular market share and widely used by market participants for norms. This study covered the 2019 period data. The major source of our DATA was Secondary Data. The source of our data collection was Daily Net FII and the Daily SENSEX and NIFTY website.

The project is limited to equities and debt only and does not consider areas, GDR, and corporate debt offering. All the important findings are included in our report which transmits the important points, which were gathered during the study. We have used Regression and Correlation Techniques for the purpose of analyzing the data.

Sampling Frame

It is basically a data base from which sample can be drawn to study the research objectives. In the present research National Stock Exchange and

Bombay Stock Exchange are taken up as sampling frame.

Sampling Units

This study focuses only on Foreign institutional investment and Indian stock market so, the sampling units are drawn from FII and Indian stock market. The indices of **FIIs investments, BSE SENSEX, NIFTY 50** have been used as sample for this study.

Data Collection

The secondary data is mandatory for the study and it collected from the NSE, BSE, FII and Money Control Websites.

Limitations of The Study

In the project all possible efforts have been made to reduce the limitations yet there are certain limitations which could not be controlled. The study is having few limitations listed below:

i. The time duration for the study is very less due to which some aspects are remaining unexplored.

ii. The study only includes the equity and debts only.

iii. The study is based on secondary data, which is collected from websites, magazines, newspapers etc.

DATA ANALYSIS AND DISCUSSION

In the present study Regression and Correlation have been used to analysis the data.

Regression Analysis

Regression analysis is statistical analysis tool which is used to examine the relationship, between two or more dependent and independent variables. In the present project regression model has been used to examine the cause-and-effect relationship between Foreign Institutional Investments and Indian stock indices.

Regression line: $\hat{y} = \alpha + \beta x$

For specific dependent variable: $Yi = \alpha + \beta Xi + €i$

The columns include:

i. Coefficient- For least squares estimates.

ii. Standard error- The least squares estimate of the std. error.

iii. T statistic- for null hypothesis vs. alternative hypothesis.

iv. P value- for the hypothesis test to know its significance.

v. Lower 95%- the lower boundary value for Confidence interval

vi. Upper 95%- the upper boundary value for Confidence value

Karl Pearson's Correlation

Karl Pearson 's correlation examines the relationship between the FIIs equity investment pattern and Indian stock indices. It calculates the degree of relationship between FII investments and BSE & NSE indices to know whether there is positive or negative relationship between them. Formula for the same is:

$$R = \frac{N.\sum xy - (\sum x).(\sum y)}{\sqrt{N.\sum x^2 - (\sum x)^2} - \sqrt{N.\sum y^2 - (\sum y)^2}}$$

Correlation	Interpretation
+1	Perfect positive relationship.
0.6 to 0.99	Positive relationship.
0.1 to 0.599	Moderate positive relationship
0	No relationship.
-0.1 to -0.599	Moderate negative relationship.
-0.6 to -0.99	Negative relationship
-1	Perfect negative relationship

Standard Deviation

The Standard Deviation is the measure of spread of the data or the degree to which observations are deviated from the mean.

$$SD = \sqrt{\sum (X - \bar{X})/n}$$

Coefficient of Variance

It refers to as degree of unpredictable change in variable over a period.

*Coefficient of Variation = (Standard Deviation / Mean) * 100.*

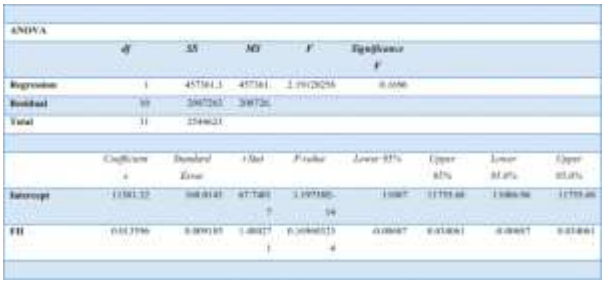
Mean

Mean obtained by calculating the sum of all observations in the data set and divide them with total number of observations.

Data:

2019- Months	FII	NSE	BSE
January	-5556	36256.69	10830.95
February	12053	35867.44	10792.5
March	48751	38672.91	11623.9
April	16728	39031.55	11748.15
May	11370	39714.2	11922.8
June	13111	39394.64	11788.85
July	-3003	37481.12	11118
August	-5871	37332.79	11023.25
September	6582	38667.33	11474.45
October	16069	40129.05	11877.45
November	22999	40793.81	12056.05
December	2762	41253.74	12168.45

ANALYSIS	
Standard Deviation	
SD of FII	14359.05617
SD of NSE	1630.837699
SD OF BSE	460.4909427
Correlation	
FII and BSE	0.423953272
FII and NSE	0.326432989

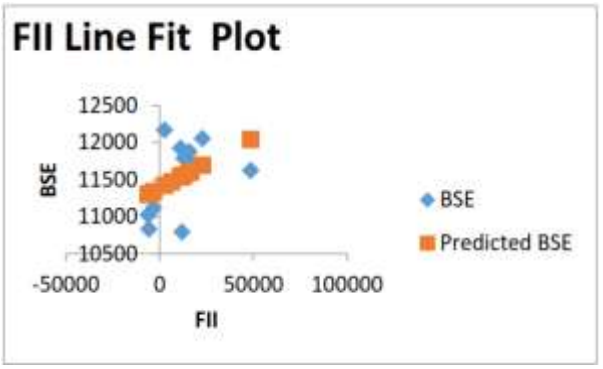


Regression Statistics	
Multiple R	0.326433
R Square	0.106558
Adjusted R Square	0.017214
Standard Error	1688.63
Observations	12

Regression Analysis for BSE and FII

Y= a + bx

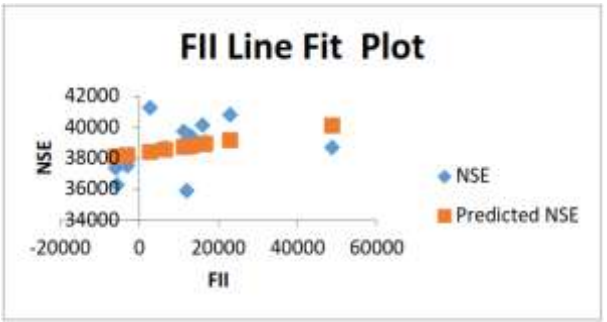
= 11381.32 + 0.013596 (X)



Regression Analysis for NSE and FII:

Y= a + bx

= 38296.11 + 0.037075 (X)



ANOVA								
	df	*SS*	*MS*	*F*	*Significance F*			
Regression	1	3400876	3400876	1.192675	0.300402			
Residual	10	28514703	2851470					
Total	11	31915579						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	38296.11	621.0009	61.66836	3.06E-14	36912.43	39679.78	36912.43	39679.78
FII	0.037075	0.033948	1.092090	0.300402	-0.03857	0.112716	-0.03857	0.112716

T Test Analysis:

t-Test : Paired Two Sample for Means for BSE and FII

H0: μ1 - μ2 = 0

H1: μ1 - μ2 ≠ 0

t-Test : Paired Two Sample for Means for NSE AND FII

H0: μ1 - μ2 = 0

H1: μ1 - μ2 ≠ 0

	Variable 1	*Variable 2*
Mean	11332.92	11535.4
Variance	2.25E+08	231329.3545
Observations	12	12
Pearson Correlation	0.423953	
Hypothesized Mean Difference	0	
Df	11	
t Stat	-0.04739	
P(T<=t) one-tail	0.481525	
t Critical one-tail	1.795885	
P(T<=t) two-tail	0.963049	
t Critical two-tail	2.200985	

	Variable 1	*Variable 2*
Mean	11332.92	38716.27
Variance	2.25E+08	2901416
Observations	12	12
Pearson Correlation	0.326433	
Hypothesized Mean Difference	0	
Df	11	
t Stat	-6.52803	
P(T<=t) one-tail	2.13E-05	
t Critical one-tail	1.795885	
P(T<=t) two-tail	4.26E-05	
t Critical two-tail	2.200985	

- Correlation of FII and BSE is 0.423953272 and for FII and NSE is 0.326432989. This means that there is weak positive relationship between FII with FII with NSE and BSE. Hence there might be other factors available like inflation, government policies, investor's interests in Indian subsidiaries, etc. which might have more significant effect on the price fluctuations of NSE and BSE.

- The standard deviation of BSE is the least. This means the fluctuations in the value of BSE was minimal when compared to other data. This gives us a clear picture of the volatility in the rice values of NSE, BSE and FII.

- Also, it can be seen the standard deviation of FII is the highest. This is a clear indication that there were huge fluctuations in the value of Foreign Institutional Investment.

- The regression line is hen found out which portrayed a linear trend with fluctuations.

- A t-test is a type of inferential statistic used to determine if there is a significant difference between the means of two groups, which may be related in certain features.

- The t-test here showed us that the data are having less relation within them.

CONCLUSION

The research has offered numerous useful points based on which we were able to find ways to strengthen the Indian Capital Market especially regarding the stock market. We have made some suggestions based on the findings on this study in this regard. Indian equity market return is the prime source of the FII net flows into India. The rate of FII flows into the country is governed by the performance of the domestic equity market and/ or foreign investors' expectations about this performance. A drop of return in the Indian equity market may result in a massive withdrawal of FII, which may result in quite disturbing consequences on the country's economy. Similarly, the rise in return would attract a lot of foreign capital to India. The behaviour of FIIs would cause variation in the country's foreign exchange reserve, and they may be outside the monetary authority's control. India should be accompanied by the improvements in the regulatory system of the financial sector to move towards liberalization and improve the economic conditions of the country. There is a need to work on stabilizing ups and downs in the domestic stock market. This market has undergone peaks and troughs since the starting of economic reforms, many a time because of non-fundamental factors such as speculation, sentiments, and manipulation of

the institutions for example the 2008 Economic crisis which affected the worldwide market. More focus should be on regaining investor's confidence in the equity market to strengthen the domestic investor's base of the market. A survey by the - 185 - SEBI and NCAER showed that alleged malpractices like insider trading, low confidence in brokers and sub-brokers and company management/ auditors were the main causes behind lack of domestic saver's confidence in the equity market. The participation of domestic institutional investors specially pension funds should be ensured to strengthen the base of the domestic stock market and would also end the anomaly of the existing situation where foreign pension funds are major users of the Indian equity market on the other hand domestic pension funds are not. Government with their recent policies is trying to promote investment from within the country by citizens changing their approach from conservative to open approach this which increase domestic investment for the country. The stability of foreign institutional investment in India can be enhanced if FIIs are provided with the free passage to switch between equity and debt investments in India, depending on their view towards future equity returns. If greater flexibility is provided to FIIs to participate in the bond market, it will promote more balanced strategies and equity and debt mix. This will result into an increase in the foreign and domestic investment in the country. The FIIs impact the volatility of stock market return, as there prevails an opinion that FII destabilize the country's market. But our study provides vice-versa findings. It shows that FIIs are not "villains" as the study suggested, as there is no impact of foreign institutional investor's arrival on Indian stock market and on its behaviour. So, it is suggested to establish flexible or temporary capital controls through either quantitative restrictions or price-based restriction so that impact of the external shocks such as financial crisis in some other country or great turbulence in international interest rate can be restricted. It is further suggested to move from quantitative restriction-based control to price –based contingent restriction. So, proper implementation of policies in the country can be ensured. Lastly, the regulatory authority must investigate professed restrictive practices by FIIs like price rigging. Once it is achieved, a built-in cushion against any possible destabilizing effects of sudden reversal of foreign inflows will decrease. Only then it would be possible to reap full benefits of capital market integration.

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