

An Empirical Investigation of Foreign Institutional Investor's Influence In Indian Equity Market

Magdalene Peter

Assistant Professor, MBA, Department of Business Administration,
Bharath Institute of Science and Technology,
Selaiyur, Chennai, Tamil Nadu 600 073,
Bharath Institute of Higher Education and Research

ABSTRACT

In the year 1990-91, Indian government set out liberalization and economic reforms with a view of bringing about fast and significant economic growth and move towards globalization of the economy. This paper investigated the long-term relationship between three Foreign Institutional Investment variables namely Gross Purchase, Gross Sales, Net Investment and Indian Equity Market. The study used annual data from 1st April 2006 to 31st March 2016. Descriptive Statistics, Trend Analysis, Unit root test (ADF Model), Autocorrelation, Regression used for the study. The study made an attempt to analyze the influence of foreign institutional investors on Indian equity market.

KEYWORDS: Foreign Institutional Investors, Indian stock market, Indian economy.

INTRODUCTION:

In the year 1990-91, Indian government set out liberalization and economic reforms with a view of bringing about fast and significant economic growth and move towards globalization of the economy. The Government's New Industrial Policy refurbished its foreign investment policy recognizing the increasing importance of foreign direct investment as a tool of technology transfer, expansion of foreign exchange reserves and globalization of the Indian economy. Instantaneously, for the first time, the government, allowed portfolio investments by foreign institutional investors in the Indian capital market. The entry of FIIs appears to be a follow up of the endorsement of the Narsimhan Committee Report on Financial System. While recommending their entry, the committee, however did not intricate on the objectives of the recommended policy. The committee only proposed that the capital market should be slowly opened up to foreign portfolio investments.

From September 14, 1992 with proper restrictions, Foreign Institutional Investors are allowed to invest in all the securities traded on the primary and secondary markets, including shares, debentures and warrants issued by companies which were listed on the Stock Exchanges in India.

REVIEW OF LITERATURE

Saha, Malayendu. (2009) in this paper entitled “**Stock Market in India and Foreign Institutional Investments: An Appraisal**” studied the participation of foreign institutional investors and the other financial institutions in India and the performance of the Indian stock markets and she concluded that Indian stock market is observed at par with the developed markets. Moreover, it had a very unique economic model and is based on strong economic growth with huge liquidity and it is not depended on the US economy for its GDP growth.

Kaur, Manjinder and Dhillon, S. Sharanjit (2010) in their research on “**Determinants of Foreign Institutional Investor’s Investment in India**” focused on the determinants of Foreign Institutional investment in India. Market capitalization and stock market turnover of India have significant positive impact only in short-run but Stock market risk has negative influence on FIIs inflows to India. Among macroeconomic determinants, economic growth of India has positive impact on FIIs investment in both long run and short run but all other macroeconomic factors have significant influence only in long run like inflation. They concluded that host country stock market returns (returns on Sensex) have positive and significant impact whereas home country returns (returns on S&P 500 Index) have negative but insignificant influence on FIIs investment inflows in long-run as well as in short-run.

Shukla, K. Rajeev et al (2011) in their paper entitled “**FII Equity Investment and Indian Capital Market: - An Empirical Investigation**” studied the impact of foreign institutional investors on Indian stock indices. He revealed that India, after United States hosts the largest number of listed companies and Global investors now actively seek India as their preferred destination for investment. Many Indians working in foreign countries now divert their savings to stocks. They concluded that FIIs have significant impact on the share prices of the Midcap & Small-cap companies but small and a periodic shift in their behavior leads to market volatility.

S Kumar, T Tavishi, A Khatua (2012) in their paper entitled “**Behavioral Modeling of Foreign Institutional Investor’s in Indian Equity Market**” increases the issue of behavioral modeling of FII flows with respect to local and global stress in the market. The present study empirically documents static and dynamic interaction between FII flows and stock market returns using daily data from 2000 to 2009 using ordinary least squares regression and vector auto regression along with an urge response function. The regression results show strong evidence of positive feedback trading of FIIs with an adjusted R square of eleven percent. Further a Granger Causality test leads to rejection of both of the null hypotheses lending strong support to a bidirectional relation between FII flows and equity market returns in Indian.

Mamta Jain, Priyanka Lakshmi Meena, T N Mathur (2013), in their research on “**Role of Foreign Direct Investment and Foreign Institutional Investment in Indian Economy**” studied about the correlation between foreign institutional investments or foreign direct investment and the real economic growth in India over a period 2000-01 to 2009-10. GDP at factor cost has been taken as the proxy variable for real economic growth. They have concluded saying that the FII and FDI are influencing the economic development to a greater extent. FDI is preferred over FII investments since it is considered to be the most beneficial form of foreign investment for the economy as a whole.

HemkantKulshrestha (2014) in his paper entitled “**Impact of Foreign Institutional Investors (FIIs) on Indian Capital Market**” examines whether market movement can be explained by these investors and their impact on the capital markets. FIIs, because of their short-term nature, can have bidirectional causation with the returns of other domestic financial markets such as money markets, stock markets, and foreign exchange markets. Hence, the kind of determinants of FII is very important for any emerging economy as FII exerts a larger impact on the domestic financial markets in the short run and a real impact in the long run.

T Mohanasundaram, P Karthikeyan, V Krishnamoorthy (2015), in their work on **“Macroeconomic Dynamics of Foreign Institutional Investments in India”,** study the

determinants of Foreign Institutional Investments (FII) in India using monthly time series data for the period from April 2001 to March 2014. The secondary data have been collected from officially published websites. Correlation and Autoregressive Distributed lag (ARDL) bounds testing approach have been used. The authors have found that FII flows are having positive relationship with Exchange Rate, Producer Price Index of USA, Return on S&P 500, Return on Nifty, and Market Capitalization of NSE and having negative relationship with Wholesale Price Index of India. The result of ARDL model shows that the US 3-month T-bill rate (USTBR) representing foreign interest rate has significant and negative impact on FIIs investment in host (Indian) stock market and Producer Price Index (PPI) of USA has significant and positive influence on FIIs flows in the Indian stock market at long run. It is concluded that FII inflows to India are primarily determined by macroeconomic factors.

The review of the previous studies by various researchers related to different dimensions of FII ranging from pattern, investment preferences, determinants, relationship with macroeconomic fundamentals and Indian stock market at different time periods. The present study aims to bridge the research gap of FII by considering FII Purchases, FII Sales, Net FII Purchases and their influence on Indian stock market.

STATEMENT OF THE PROBLEM

The BSE Sensex has touched new heights. That is mainly due to foreign institutional investment. The present study is an attempt to find out the impact of foreign institutional investment on Indian stock market and to highlight the procedural and legal aspect related to foreign institutional investment in India. The study also contain the trends of foreign institutional investment in India and with the help of the data an attempt was made to identify the factors determining the flow of FIIs in India.

NEED FOR THE STUDY

The study pertains to India, which is one of the fast-growing markets in the world. India is an appropriate case for conducting such a study, as portfolio investment has become the dominant path of foreign investment in the Indian economy. India liberalized its financial market and allowed FIIs to participate in their domestic markets in 1992. The opening up of the market resulted in a number of positive effects. First, the stock exchanges had to improve the quality of their trading and settlement procedures in line with the best practices of the world. Second, the transparency and information flows improved on account of the entry of FIIs in India. However, people are also sensing negative effects in the form of potential destabilization because of the bulk buying and selling activity of FIIs.

OBJECTIVES OF THE STUDY

1. To determine the behavior and trend of FII's and Indian stock market.
2. To analyses the stationarity of Foreign Institutional Investment and Indian stock market.
3. To examine whether arrival of FIIs have affected stock market returns, trading volume of Indian stock market;

4. To summarize the findings, suggestions and conclusion.

HYPOTHESIS OF THE STUDY

- Ho1:** There is no stationarity in the select variables.
Ho2: There is no significant trend in the select variables.
Ho3: There is no significant S&P BSE Sensex Index Returns.

METHODOLOGY

PERIOD OF THE STUDY: The study considered a period of Ten years from 1st April 2006 to 31st March 2016.

SAMPLE SELECTION: The study tested the impact of Foreign Institutional Investors on the Indian equity market. The Foreign Institutional Investment variables considered for the study are Gross Purchase, Gross Sales and Net Investment. The equity market variables are S & P BSE SENSEX returns and trading volume.

SOURCES OF DATA: The study mainly depended on secondary data. The required data regarding data daily Sensex return and Foreign Institutional Investment were collected from Money Control, Website. The other required data were collected from various Journals and Magazines.

TOOLS USED FOR THE STUDY: To analyses the influence of Foreign Institutional Investors on Indian equity market the following tools were used.

1. Descriptive Statistics
2. Trend Analysis
3. Unit root test (ADF Model)
4. Autocorrelation
5. Regression.

ANALYSIS AND INTERPRETATION

TABLE 1
RESULTS OF SUMMARY STATISTICS FROM 01.04.2006 TO 31.03.2016

VARIABLE	OBSERVATION	MEAN	MEDIAN	STD. DEV.	SKEWNESS	KURTOSIS	JARQUE BERA
Foreign Institutional Investors Purchase	120	64381.86	61127.80	22409.14	0.606898	3.203026	7.572598
Foreign Institutional Investors Sales	120	59329.47	56262.70	21662.92	0.790199	3.366977	13.16166

Foreign Institutional Investors Net Purchase	120	5104.109	4835.350	9843.142	0.192925	2.595609	1.562065
S&P BSE SENSEX Index Value	120	0.000264	0.006367	0.115147	-5.451496	48.98088	11165.58
S&P BSE SENSEX Trading Volume	120	362817.5	309000.0	201478.5	1.905976	6.601011	137.4913

Sources: www.moneycontrol.com and computed using E-views.

Table 1 shows the result of Summary Statistics for Foreign Institutional Investors Purchase during the study period is presented in the **Table-1**. It is to be noted from that the FII Purchases recorded Positive returns during study period. The standard deviation which measures volatility was found to be high. Hence, wide fluctuation in the FII Purchases during long period was noticed. The skewness was both positive and kurtosis value is positive. Hence, Leptokurtic distribution was noticed in the data set. The Jarque –Bera value was not-normal in FII Purchases during the study period.

TABLE 2
ANALYSIS OF AUGMENTED DICKEY FULLER TEST FROM 01.04.2006 TO 31.03.2016

VARIABLE	Level Difference		First Level Difference	
	t-statistic	Prob.*	t-statistic	Prob.*
Foreign Institutional Investors Purchase	-3.026432	0.0353	-14.87956	0.0000
Foreign Institutional Investors Sales	-2.902760	0.0480	-11.30425	0.0000
Foreign Institutional Investors Net Purchase	-7.335205	0.0000		
S&P BSE SENSEX Index Value	-6.972592	0.000		
S&P BSE SENSEX Trading Volume	-2.244584	0.1919	-14.40615	0.0000

Source: Collected from www.moneycontrol.com and computed by using E-views 7.0

Table –2 shows the results of Augmented Dickey Fuller for identifying the stationarity of Foreign Institutional Investors Purchase during the study period April 2006 to March 2016 is presented Table –2. In the table, the t-statistic value for ADF test at level difference was and the test produced insignificant results. Hence it is tested with first level difference and attained stationarity at 1%, 5% and 10% levels. It is to be noted that the ADF test provided evidence that the series of stationary. Hence it confirms the rejection of Null Hypothesis NH01 “There is no stationarity in the select variables.”

TABLE3
ANALYSIS OF AUTOCORRELATION FROM 01.04.2006 TO 31.03.2016

Model	Lag	1	2	3	4	5	6	7	8	9	10
-------	-----	---	---	---	---	---	---	---	---	---	----

Foreign Institutional Investor Purchase	Autocorrelation	0.725	0.63	0.547	0.459	0.335	0.317	0.258	0.264	0.169	0.18
	Std. Error	0.09	0.09	0.089	0.089	0.089	0.088	0.088	0.087	0.087	0.087
Foreign Institutional Investor Sales	Autocorrelation	0.743	0.659	0.625	0.519	0.424	0.378	0.329	0.319	0.27	0.24
	Std. Error	0.09	0.09	0.089	0.089	0.089	0.088	0.088	0.087	0.087	0.087
Foreign Institutional Investor Net Purchase	Autocorrelation	0.345	0.227	0.197	0.039	0.165	0.025	0.022	0.078	-0.058	0.024
	Std. Error	0.09	0.09	0.089	0.089	0.089	0.088	0.088	0.087	0.087	0.087
S&P BSE SENSEX Index Value	Autocorrelation	-0.023	0.046	0.064	0.048	0.019	-0.059	-0.02	0.017	-0.003	0.002
	Std. Error	0.09	0.09	0.089	0.089	0.089	0.088	0.088	0.087	0.087	0.087
S&P BSE SENSEX Trading Volume	Autocorrelation	0.685	0.622	0.58	0.618	0.599	0.593	0.583	0.569	0.574	0.57
	Std. Error	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

Sources: collected from www.moneycontrol.com and computed by SPSS 20

Table 3 shows that the results of autocorrelation of monthly data of Foreign Institutional Investor Sales for the lag period of 10 years during the study period from 01.04.2006 to 31.03.2016. It is clear from table, first lags start with positive value with the significant level. The overall analysis shows that most of the lags come under either positive significant of 0.05. But there was no continues lower and upper movement in Foreign Institutional Investors Sales. The indicates the acceptance of null hypothesis NH02 “There is no significant trend in the select variables” except for the variable trading volume.

TABLE4
RESULTS OF MODEL SUMMARY FOR FII PURCHASE, FII SALES AND S&P BSE DURING STUDY PERIOD 01.04.2006 TO 31.03.2016

MODE L	R	R SQUAR E	ADJUSTED R SQUARE	STD. ERROR OF THE ESTIMATE	DURBIN-WATSON
---------------	----------	------------------	--------------------------	-----------------------------------	----------------------

1	.595 ^a	.354	.343	.0562860	1.729
2	.286 ^a	.082	.066	194679.865	.458

a. Predictors: (Constant), FII Sales, FII Purchase

b. Dependent Variable: S&P BSE Sensex Returns

Source: Data collected from www.bseindia.com computed from SPSS

Table 4 shows the results of model Summary for S&P BSE Trading as dependent and FII Sales, FII Purchase as independent variables. It is to be noted from the above table relationship was noticed between FII sales, FII Purchase and S&P BSE. Further, variation in FII sales, FII purchase was explained jointly by the S&P BSE. However, the Durbin-Watson statistic was greater than R Square which indicates the model is good.

TABLE5
RESULTS OF ANOVA FOR FII PURCHASE, FII SALES AND S&P BSE DURING FOR
STUDY PERIOD 01.04.2006 TO 31.03.2016

MODEL	SUM OF SQUARES	DF	MEAN SQUARE	F	SIG.
Regression	.201	2	.101	31.781	.000
Regression	396308941098.727	2	198154470549.363	5.228	.007

a. Dependent Variable: S&P BSE Sensex Returns

b. Predictors: (Constant), FII Sales, FII Purchase

Source: Data collected from www.bseindia.com computed from SPSS

Table 5 depicts the result of analysis of variance for S&P BSE as dependent and FII sales, FII purchase as independent variable is presented in **Table 5**. The F-statistics value at was found. The p-value was less than 0.05 at 5% level. Hence the Ho3: “**There is no significant S&P BSE SENSEX**” is rejected.

TABLE 6
RESULTS OF CO EFFICIENT FOR FII PURCHASE, FII SALES AND S&P BSE
DURING THE STUDY PERIOD 01.04.2006 TO 31.03.2016

MODEL	UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENTS	T	SIG.
	B	Std. Error	Beta		
1	.009	.016		.576	.566
2	.009	.016		.576	.566

a. Dependent Variable: S&P BSE Sensex Returns

Source: Data collected from www.bseindia.com computed from SPSS

Table 6 explains the coefficient of FII Purchase and FII sales during the study period April 2006 to March 2016. It is to be noted from the results that p-value of the entire selected variable was less than 0.05 and greater than 0.05. Hence it is clear that the selected variable FII Purchase; FII Sales had no impact and impact on S&P BSE SENSEX Index Returns during study period.

FINDINGS

1. The mean returns of the FII Purchase were high during the study period.
2. FII Net purchases in the least mean returns for the investors.
3. Skewness was positive for daily FII Purchase, FII Sales, and FII net purchases.
4. The daily FIIP, FIIS, NFIIP of all sample variables are recorded Leptokurtic distribution.
5. The results of ADF test revealed that all FII's attained stationary at level difference.
6. The results of Autocorrelation test revealed that all FII's variables are significant.
7. The model is good for all the FII's during the study period.
8. The p-value was less than 0.05 at 5% level. Hence it is clear that the selected variables FII Purchase, FII Sales had impact on S&P BSE SENSEX Index Returns during the study period.

SUGGESTIONS

1. Foreign Institutional Investors help in improving the economic condition of the country. It helps in decreasing the fiscal deficit and increases the cash flow.
2. It increases the domestic savings and the availability of capital reserve. It also helps in keeping the foreign exchange in control.
3. The consequences of FII are that it leads to increase of liquidity as a result of release of rupee in the market, thus increasing the inflation.
4. It has been observed that the share indices on various Indian stock markets are highly dependent on the net inflow from Foreign Institutional Investors.

CONCLUSION

The study made an attempt to analyze the influence of foreign institutional investors on Indian equity market. The daily data collected from www.moneycontrol.com. Selected variable used in this study namely FII Purchases, FII Sales, FII Net Purchases are analyzed using tools such as trend analysis, descriptive statistics, ADF-Test, Auto correlation, and regression. They ADF Test revealed that all the variables attained stationarity in the level.

REFERENCES

ARTICLES

1. Ananthanarayanan, Sandhya, Chandrasekhar Krishnamurti, and Nilanjan Sen. **"Foreign institutional investors and security returns: Evidence from Indian stock exchanges."** *CAF Hosts Annual Winter Research Conference in France*. 2005.
2. Batra, Amita. **"The dynamics of foreign portfolio inflows and equity returns in India."** *Indian Council For Research On International Economic Relations, Working Paper* 109 (2003).
3. Bose, Suchismita, and DipankorCoondoo. **"The impact of FII regulations in India: a time-series intervention analysis of equity flows."** (2004).
4. .Chakrabarti, Rajesh. **"FII flows to India: Nature and causes."** (2001).

5. Jain, D., Priyanka Lakshmi Meena, and T. N. Mathur. "**Role of foreign direct investment and foreign institutional investment in Indian economy.**" *Asian Journal of Multidimensional Research* 2.3 (2013): 6-22
6. Kaur, Manjinder, and Sharanjit S. Dhillon. "**Determinants of Foreign Institutional Investors Investment in India.**" *Eurasian Journal of Business and Economics* 3.6 (2010): 57-70.
7. Kulshrestha, Hemkant. "**Impact of Foreign Institutional Investors (FIIs) on Indian Capital Market.**" *International Journal of Research in Business Management* 2.3 (2014): 35-52.
8. Kumar, Santosh, TavuTavishi, and Ashish Khatua. "**Behavioral Modeling of Foreign Institutional Investor's in Indian Equity Market.**" (2012).
9. Mohanasundaram, T., P. Karthikeyan, and V. Krishnamoorthy. "**Macroeconomic Dynamics of Foreign Institutional Investments in India.**" *International Journal of Management Research and Reviews* 5.1 (2015): 39
10. Mukherjee, Paramita, Suchismita Bose, and DipankorCoondoo. "**Foreign institutional investment in the Indian equity market: An analysis of daily flows during January 1999-May 2002.**" (2002).
11. Prasanna, P. Krishna. "**Foreign institutional investors: Investment preferences in India.**" *Journal of Administration and Governance* 3.2 (2008): 40-51.
12. Saha, Malayendu. "**Stock market in India and foreign institutional investments: An appraisal.**" *Journal of business and economic issues* 1.1 (2009): 1-15.
13. Sethi, Narayan. "**Economic Reform.**" *Capital Flows and Macroeconomic Impact on India, IGIDR Money and Finance* (2008).
14. Shukla, Rajeev K., AjitUpadhyaya, and Samiksha Jain. "**FII equity investment and Indian capital market: An empirical investigation.**" *Pacific Business Review International* 4.1 (2011): 62-69.

WEBSITES

- www.google.com
- www.google.com
- www.google.com
- www.google.com
- www.google.com