An analytical study on impact of FIIs Investment on trade volumes of Indian stock market

Sameer Padole
Dr. Ambedkar Institute of Management Studies & Research, Nagpur
Research Scholar

Abstract: Volatility is defined as the degree of price variation between the share prices during a particular period and is a symptom of a high liquid market. Though some quantum of volatility is desirable because it highlights the changing values across economic activities and it facilitates resource allocation yet volatility created by the flow of funds by FIIs is detrimental for stock markets and investors. Volatility characterizes the stability or instability of any random variable. It is a common statistical measure of depression around the average of any random variable such as earnings, market-to-market values, market value, losses due to default etc. Hence the objective of this study is to find the impact of FII on Indian capital market and economy. The results show that there is significant positive relationship between FIIs investment and trade volume in Indian stock market.
Keywords: Volatility, Stock Market, FIIs, etc.

1.1 Introduction: The investment of capital that flows from one country to another country is known as foreign investment. Inflow of foreign investment is normally encouraged in the capital scarce economies because it complements and stimulates domestic investment. In India, foreign investment was allowed in 1991 either through stock market investment in listed companies referred to as Foreign Institutional Investors (FIIs) investment or directly in listed and unlisted companies referred to as Foreign Direct Investment (FDI). Among two former plays a dynamic role in shaping the stock market indices and stock prices of various companies in the host country. FDI is considered as a developmental tool and helps in achieving the self-reliance in various sectors, thereby leads to overall development of economy.

However, FDI affects the growth directly through capital formation, strengthening infrastructure, increasing productivity and generating employment opportunities while as FIIs investment affects the growth indirectly by improving equity market performance of the host country and also tells upon on their corporate governance issues. FIIs capital flows are often viewed as double edged sword. On one hand, in emerging economies that undergoing through phase of liberalization FIIs investment improves market efficiency and leads to decline in the cost of capital. On the other hand, it is argued by the policy makers and researchers, that FII's trades exacerbate volatility in the stock markets of the host country.

The capital investment by FIIs is motivated not only by the domestic and external economic conditions but also by short run expectations, primarily developed by what is known as 'market sentiment'. These short run expectations in return develop an element of speculation and high mobility in FII's capital flows and as such give rise to volatility in stock market of host country. The common belief about equity market is that price or return indices in stock markets are frequently subject to extended deviation from fundamental values with subsequent reversals and that these savings are largely influenced or created by the mobility of foreign capital flows. In such a situation small investor have serious concern that whether prices accurately reflect their expectations about the present value of future cash flows. This hypothesis is referred to as market rationality to be distinguished from informational efficiency. The persistent anomaly calls into question market rationality and is evidenced by stock market volatility, stock market crashes and market overreactions. Volatility is defined as the degree of price variation between the share prices during a particular period and is a symptom of a high liquid market. Though some quantum of volatility is desirable because it highlights the changing values across economic activities and it facilitates resource allocation yet volatility created by the flow of funds by FIIs is detrimental for stock markets and investors. Volatility characterizes the stability or instability of any random variable. It is a common statistical measure of depression around the average of any random variable such as earnings, market-to-market values, market value, losses due to default etc.

1.2 Importance of Study
Global fund managers have put their bet on India and advising a lot of Foreign Institutional Investors (FII) to believe in the Indian growth story mainly due to following reasons:

- **Fast Advancing Economy:** If we consider the purchasing power parity to gauge the size of economy, India has one of the largest global economics and since last few years, it has been one of the fastest growing economics of the world.

- **Robust Foreign Exchange Reserves:** The foreign Exchange (Forex) situation had never been stronger. Investors across continents are very much interested in knowing the dollar reserve situation of a country to evaluate a market and hefty reserves make a case for India. The strong local currency is very critical for FIIs as it can tear into their returns significantly. There are good chances that his situation will only improve significantly in the coming years with increasing dollar revenues from technology sector.
- **The State and Pace of Economic & Labor reforms:** The pace of reforms has been slow; there seems to be an understanding among major political parties that reforms should take place and the partial stake divestments of major oil and gas companies, public sector banks and other Government companies holding national assets.
- **Corporate Earnings and Restructuring:** In spite of tough times during past two/three years, corporate have been able to restricting themselves effectively. The earnings of the major corporate have been showing a slow but steady growth. Indian manufactures like Tata Steel Ltd and Nalco are among the lowest cost producers of steel and aluminum in the world. With chances of improved business sentiments along with the removal of the infrastructure bottlenecks in the country will lead to better performance in most sectors. With increasing consumption & spending in Rural India, many corporates are foraying into rural markets to keep constant pace on growth trajectory.

Currently, there is every day buzz about the Indian stock markets and its levels in the recent times. It is imperative for domestic investors to know about the tentative levels of entry & exit and the kind of stocks that will give good returns over a period of time. This study is expected to bring out the degree of association between the FII cash-inflows and the Indian stock markets (BSE and NSE). The study will be helpful to the Indian retail investors so that it can help them the markets and identify right picks so that they can create wealth based on the actions and decision taken by the Foreign Institutional Investors. The retail investor is expected to get clues about taking short term and long-term positions in the Bombay Stock Exchange and the National Stock Exchange.

2. Literature Review:

Srinivas (2013) studied the importance of FII money for Indian stock market in view of the global integration of economies and its effects on the Indian economy and stock market. The study covers statistical analysis of FII flows and its impact on the index from 2008 to 2013, where the focus is Global financial crisis of 2008 and Euro zone crisis of 2011. The data showed that there is a significant positive correlation (r2 = is 0.41) between the FII flows and the index and confirms that FII is the dominant player in the Indian stock market.

Gurloveleen and Bhatia (2016) investigated the impact of macroeconomic variables on the functioning of Indian Stock Market. The monthly data of ten macroeconomic variables, namely Broad Money, Call Money Rate, Crude Oil Price, Exchange Rate, Foreign Exchange Reserve, FIIs, Gross Fiscal Deficit, Index of Industrial Production, Inflation Rate and Trade Balance and one stock market index i.e. BSE 500 have been used to attain the objectives of the research. The Augmented Dickey Fuller (ADF) Test, Multiple Regression and Granger Causality Tests were employed to find out the results. It was found that Foreign Institutional Investors became stationary at level, Call Money Rate, Crude Oil Price, Exchange Rate, Foreign Exchange Reserve, Gross Fiscal Deficit, Inflation Rate and Trade Balance at Ist difference and Broad Money and Index of Industrial Production at IInd difference. This stationary data has been applied to find out the significant macroeconomic variables through multiple regression technique. The two macroeconomic variables Foreign Institutional Investors and Exchange Rate were found significant. Granger causality test was used to check the causality relationship between these two significant variables and average closing prices of manufacturing firms of BSE 500. It has been observed that these variables have no relationship with closing prices of BSE 500 manufacturing firms. The study also revealed that the Indian Stock Market was a weak form efficient because no relationship was found amongst the variables during the study period.

Agrawal and Sangeetha (2019) studied trend in Indian Stock Market to analyse the impact of different macroeconomic variables. The study takes ten variables into consideration, i.e., gold prices, silver prices, oil prices, interest rates, industrial production, exchange rate, inflation, money supply, forex reserve and trade balance. The study investigates effect of macroeconomic factors on the performance of the Indian Stock Market using monthly data over the period April 2008 to March 2018 for ten variables taken into study, and one stock market index namely CNX Nifty. Various statistical techniques are used in the study to analyse the input data like the ADF unit root test, Co-relation analysis, Multivariate Regression analysis, and Granger Causality test. All the independent variables used in the study were stationary at first level difference; and only Forex Reserve and Exchange Rate were found to have a significant relationship with the Nifty Index. On analysing, there was significant relationship found between the independent variables used in the study. There was a causality found from Gold to Nifty 50, Silver to Nifty 50, Inflation to Interest rate, Interest rate to

Money Supply, Gold to Forex Reserve, Gold to Trade Balance, Gold to Exchange rate, Silver to Exchange rate, Exchange rate to Trade Balance.

Gahlot (2019) examined the effect of FIIs and DIIs activities on volatility of Indian stock market. This study also examined the causal relationship between FIIs and DIIs. This study uses Nifty, Nifty Next 50, BSE Sensex, and BSE 100 to represent Indian stock market. Ganger Causality test is used to see causal relationship between FIIs and DIIs. TGARCH model is used to check volatility of Indian stock market. This will also help investors to make investment decisions, especially investing in these indices as they will be able to forecast effect of recent news and historical volatility of returns. This study is useful to investors investing in these four major indices.

3. Research Methodology:
3.1 Research Design:
The present research is descriptive and exploratory in nature, since its attempts to describe the impact of FIIs investment on the return of Indian Stock Market.

3.2 Data Collection:
The present study is based on secondary data analysis where data of FIIs investment and yearly closing stock market indices of BSE and NSE from 2005 to 2015 are analyzed.

3.3 Objective of the study:
1. To examine whether arrival of FIIs have affected trading volume and market capitulation of Indian stock markets as a whole.
2. To identify the determinants (factors affecting) of FIIs investment and assess their impact on FII flows;

3.4 Hypothesis of the study:
- There is no relation between the FIIs investment and trade volumes in Indian stock market.

4. FIIs Investment in Equity
The impact of FII is so high on Indian stock market, that whenever FIIs tend to withdraw the money from market, the domestic investors also withdraw from market.

Table 1.1: FIIs Investment in Equity

Period	Equity (Rs. mn.)	Net Investment (Rs. mn.)
2005-2006	488,010	4,14,670
2006-2007	2,52,370	3,08,440
2007-2008	5,34,038	6,61,791
2008-2009	- 477,070	- 4,58,120
2009-2010	1,102,200	14,26,580
2010-2011	11,01,207	14,64,397
2011-2012	4,37,380	9,37,260
2012-2013	1,40,033	1,68,367
2013-2014	79,709	51,649
2014-2015	9,602	418

Source: SEBI (BSE and NSE)

Above table shows information pertaining to FIIs investment in equity. It is observed that there is small decrease in the equity investments in the years 2006-2007, 2008-2009, 2010-11, 2011-12, 2012-13 and 2014-15. While increase in the equity investments were observed in the period 2007-08, 2009-10 and 2013-14 respectively.

From the study results, it is evident that highest equity investment of Rs. 11, 01,207 million was observed in the year 2010-11.
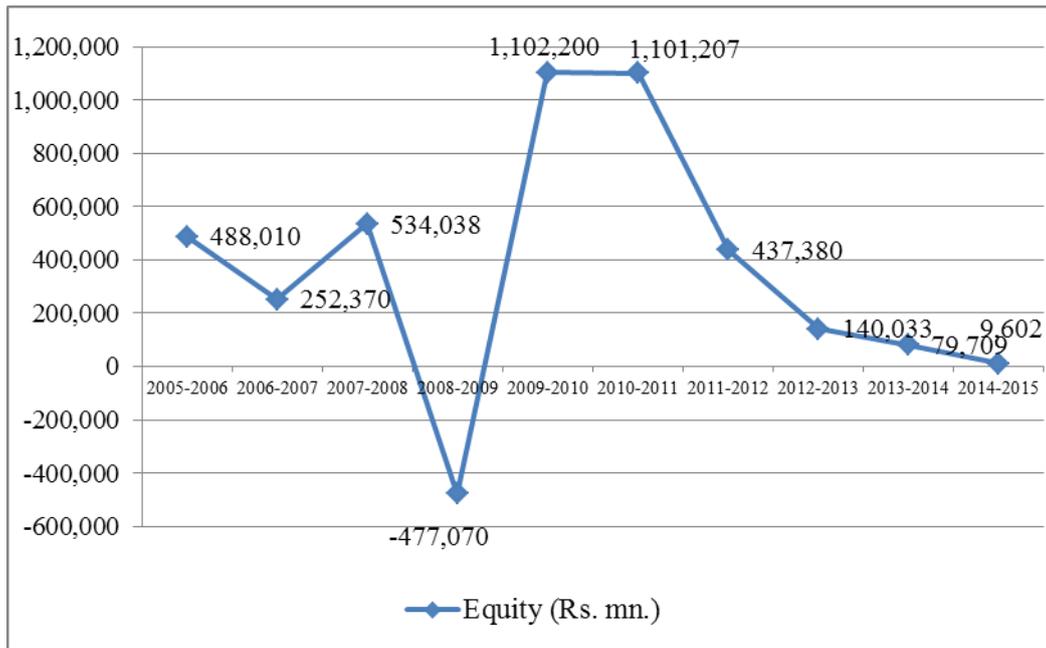
Fig 1: FIIs Investment in Equity

4.2 Impact of FII Flows on Economic Factors

Net FII flows is studied by taking monthly data from 2005 to 2015 to understand its relationship with respect to other macro-economic factors like BSE Sensex and the indicators like Industrial production, Money supply, Exchange rate, Foreign exchange reserves, Wholesale price index and interest rates. Initially, correlation coefficients are computed to understand the relationship between net FII flows and the economic factors. The correlation matrix is presented in Table 4.15.

Table 1.2: Correlation Co-efficient between FII flows and various economic factors

Variables	DBSE	DIIP	DMS	DFR	DWPI	FII
DBSE	1.000					
DIIP	0.089	1.000				
DMS	0.201^{*}	0.421^{**}	1.000			
DFR	0.628^{**}	0.095	0.164^{*}	1.000		
DWPI	-0.035	-0.308^{*}	-0.095	0.084	1.000	
FII	0.769^{**}	0.086	0.067	0.403^{**}	0.063	1.000

* : Significant at $p < 0.05$
** : Significant at $p < 0.01$

Notes: D refers to 'differenced variable' to address 'Stationarity' issue in the time series data. DBSE: BSE Sensex; DIIP: Index of Industrial Production; DMS: Money supply (MS); DFR: Foreign exchange reserves; DWPI: Wholesale price index; FII: Foreign institutional investors' flows into India.

The relationship between FII flows and various economic factors is shown in **Table 1.2**.

- **DIIP**: The data showed that there is positive relationship between DIIP and DBSE ($r^2 = 0.089$ p=Not significant).
- **DMS**: The analysis showed that there is positive significant relationship between DMS and DBSE ($r^2 = 0.201$, $p < 0.05$).
- **DFR**: The data showed that there is positive significant relationship between DFR and DBSE ($r^2 = 0.628$, $p < 0.01$).
- **DWPI**: The data showed that there is negative relationship between DWPI and DBSE ($r^2 = -0.035$ p=Not significant).
- **FII**: The data showed that there is positive significant relationship between FII and DBSE (r2= 0.769, $p < 0.01$).

5. Conclusions:

It is found during the research that FII flows and the BSE Sensex showed a significant positive correlation. It is further observed that there is good co-movement between FII flows and BSE Sensex. Further, there is positive relationship between the BSE Sensex and foreign exchange reserves, which supports the underlying theory that

as more and more foreign exchange is added to the reserves; the same will be reflected in the growth of the stock market.

The data pertaining to the trade volumes vis-à-vis FII investment shows that there is significant positive relationship between them. Hence, the hypothesis, which states that *"There is no relation between the FIIs investment and trade volumes in Indian stock market"* is **rejected**.

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