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## **FII and DII in Indian Stock Market: A Behavioural Study**

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### **ABSTRACT**

Economies like India, which offer relatively higher growth than the developed economies, have gained favour among investors as attractive investment destinations for foreign institutional investors (FIIs). Investors are optimistic on India and sentiments are favourable following government's announcement of a series of reform measures in recent months which changed its face on the event of demonetisation. It has been seen that FII took the money out under the conditions of volatility in the Indian stock market whereas on the other hand it impacts the behaviour of the DII in India. So this paper focusses on the behavioural aspects of FIIs and DIIs in order to study the relationship between the two.

**Key words:** FII, DII, Stock market, correlation

### **Introduction**

Institutional Investor is any investor or investment fund that is from or registered in a country outside of the one in which it is currently investing. Institutional investors include hedge funds, insurance companies, pension funds and mutual funds. The growing Indian market had attracted the foreign investors, which are called Foreign Institutional Investors (FII) to Indian equity market. Role of FII has increased and changed the face of Indian Stock Market. It has brought both qualitative and quantitative change. It had also increased the breadth and depth of market.

Economies like India, which offer relatively higher growth than the developed economies, have gained favour among investors as attractive investment destinations for foreign institutional investors (FIIs). Investors are optimistic on India and sentiments are favourable following government's announcement of a series of reform measures in recent months.

According to Ernst & Young's (EYs) Global Capital Confidence Barometer (CCB) - Technology report, India ranks third among the most attractive investment destinations for technology

transactions in the world. India is the third largest start-up base in the world with more than 4,750 technology start-ups, and about 1,400 new start-ups being founded in 2016, according to a report by Nasscom.

FII's net investments in Indian equities and debt have touched record highs in the past financial year, backed by expectations of an economic recovery, falling interest rates and improving earnings outlook. FIIs net investments in Indian equities and debt stood at US\$ 7.46 billion in 2016-17 (upto April 14, 2017).

Although the Foreign institutional investors (FIIs), whose investments are often called 'hot money' because they can be pulled out at any time, have been blamed for large and concerted withdrawals of capital from the country at the time of recent financial crisis, they have emerged as important players in the Indian capital market. But Indian capital markets seem to be losing their 'safe haven' status among foreign portfolio investors as they appear headed for nearly USD 2-billion pullout of the so-called 'hot money' 2016, making it the worst period in last eight years in terms of foreign investments and it is believed that any respite from such a sell-off is likely only in the second half of the 2017. The overall net outflow has made 2016 the worst year for Indian capital markets in terms of overseas investment since 2008, when FPIs had pulled out a massive Rs 41,215 crore in the wake of the global financial crisis.

"Massive pullout of FPI investment, particularly in debt, happened during the last two months, particularly after the (Donald) Trump victory and Indian government's announcement of demonetisation. Foreign portfolio investors have already pulled out Rs 28,919 crore from India in November with debt outflow accounting for Rs 15,194 cr. But one more thing to be taken into consideration during this period (or rather all the times) is that when FPI was taking the funds out of India there was a huge flow of funds in India through DII sources. It pumped in the net investment of Rs. 27,426.12 cr in India during Oct. to Dec. 2016.

Institutional investment is defined to be the investment done by institutions or organizations such as banks, insurance companies, mutual fund houses, etc in the financial or real assets of a country. Simply stated, domestic institutional investors use pooled funds to trade in securities and assets of their country. These investment decisions are influenced by various domestic economic as well as political trends. In addition to the foreign institutional investors, the domestic institutional investors also affect the net investment flows into the economy.

So focusing on the behavioural aspects of FIIs and DIIs, this paper tries to find out that is there any behavioural dependency exist between FII and DII in the stock market and if there is how the behaviour of FII affects DII.

## **Literature Review**

**V. Ravi Anshuman (2008)** in the study found that foreign institutional investors (FIIs) adversely affects volatility in the Indian stock markets'. Aggregating trading activity of FIIs dampens market volatility whereas aggregate trading activity of domestic investor exacerbates market volatility. Positive shocks in aggregate trading activity have a greater impact than negative shocks; this asymmetry is stronger for aggregate domestic trades. FIIs does not increase stock volatility, but when FIIs sell to domestic clients or when domestic clients trade amongst themselves, volatility increases.

**Ajay Shah (2008)** analysed the preferences of FIIs and DIIs in Indian stock market. FII and DII both prefer larger, widely dispersed firm and do not chase returns. However, the author found evidence of strong difference in behaviour of FII and DII. The empirical literature on this topic is still evolving, with both country specific, and multi-country studies contributing to the evidence. This paper contributes to the literature by examine evidence from shareholding patterns of FII and DII in an emerging market economy like India.

**Md. Aamir Khan, et al. (2010)** has outlined the causal relationship between Nifty and FIIs' net investment for the period January 1999 to February 2009 using daily data. The author has also highlighted unidirectional relationship of Nifty over FIIs during each phase in the long run. The paper have analysed the data using Normality test, Unit root test, ADF test and PP test. From their analysis they concluded that Correlation between time series is higher in bear phase as compared to bull phase as in bull phase other market participants raise their involvement reducing the influence of FIIs.

**Bok Baik & Joonhe Lee (2012)** examined that whereas the level of domestic institutional ownership is positively related to future returns, that of foreign institutional ownership has little relation to returns. The negative relation between the change in foreign institutional ownership and future returns is particularly pronounced for stocks with greater information asymmetries. The negative relation is also more evident when FIIs are from countries with higher information disadvantages. Finally, the author found the ability of foreign institutional investor to predict returns is particularly weak when they are non-hedge fund.

**Rajnarayan Gupta (2010)** has examined the factors that are responsible for the movement of Sensex. The researcher has analysed the data using Empirical estimation model and unit root test. From the analysis of the data the author has concluded that the stock market's movement depends only partially on the foreign capital and its performance is also guided by Country's own economy.

**Paramita and Suchismita Bose (2002)** explored the relationship of foreign institutional investment (FII) flows to the Indian equity market with its possible covariates based on a time series of daily data for the period between January 1999 to May 2002.

**Raju M.T, Ghosh Anirban (2004)** studied the impact of volatility in the stock market on the pricing of the stock and they studied various developed and emerging markets of Asia in order to

compare their returns. From the analysis the author analyse that the Indian market show less of skewness and Kurtosis. Indian markets have started becoming informational more efficient as compared to many developed markets.

**Oguzhan Aydmir (2009)** determined the effect of macroeconomic variable on stock prices and investment decisions has preoccupied the minds of economists. There are many empirical studies to disclose the relationship between macroeconomic variables such as interest rate, inflation, exchange rates, money supply etc. and stock prices. However, the direction of casualty still remains unresolved in both theory and empirics. The results of empirical study indicate that there is bidirectional causal relationship between exchange rate and all stock market indices. While the negative causality exists from national 100, services financial and industrial indices to exchange rate , there is a positive causal relationship from technology indices to exchange rate.

**Eugene F. Fama (2008)** discussed the theory underlying the random-walk model and then to test the model's empirical validity. The main conclusion is that the data seem to present consistent and strong support from the model. This implies, of course that chart reading through perhaps an interesting pastime is of no real value to the stock market investor. This is an extreme statement and the reader is certainly free to take exception. Since the empirical evidence produced by this and the other studies in support of the random-walk is voluminous, the counterarguments of the chart will be completely lacking in force if they are not equally well supported by empirical work.

**Gordon and Gupta, (2003)** found causation running from FII inflows to return in BSE. They observed that FIIs act as market makers and book profits by investing when prices are low and selling when they are high. Hence, there are contradictory findings by various researchers regarding the causal relationship between FII net inflows and stock market capitalization and returns of BSE/ NSE. Therefore, there is a need to investigate whether FIIs are the cause or effect of stock market fluctuations in India.

**Jatinder Loomba (2012)** This paper tries to develop an understanding of the dynamics of the trading behaviour of FIIs and effect on the Indian equity market. The study is conducted using daily data on BSE Sensex and FII activity over a period of 10 years spanning from 01st Jan 2001 to 31st Dec 2011. It provides the evidence of significant positive correlation between FII activity and effects on Indian Capital Market. The analysis also finds that the movements in the Indian Capital Market are fairly explained by the FII net inflows.

**A K otishwa r (2 012)** this paper revealed that regulatory framework policies have had the desire expansionary effect have either increased the mean level of FII inflows and/or the sensitivity of these flows to a change in BSE returns in inertia of these flows.

**Suchismita Bose (2012)** the analysis suggests that the eff e c t o f s t o c k market returns ca n be overshadowed by the effect of FII investments, in determining mutual fund flows. The study also finds evidence of net investments by FIIs having a causal influence on stock market returns even as it fails to identify any causal relation between domestic mutual funds' net investments and domestic stock returns.

**Bikramaditya Ghosh & Padma Srinivasan (2014)** this study is carried out to measure their impact in a mathematical way, and to figure out whether they are the true market movers or not. This is a comparative study to measure the impact of the two most important cash flow generators in Indian stock market. The study period is carefully chosen in order to avoid unnecessary sentiment based or event driven periods apart from the global credit crisis in 2008.

**Pramod Kumar Naik & Puja Padhi (2014)** This study examines the dynamic interaction among institutional investment (FII and Mutual Funds) and the stock market returns for India in a three factor vector auto regression (VAR) framework. they find that both mutual fund flows and the FII's fund flows are significantly influences Indian stock market.

### **Objectives of the Study**

1. To study whether there is any behavioural relationship between FII and DII.
2. To study the effect of increase or decrease of FII on DII.

### **Need of the Study**

The Indian stock market is highly volatile and the FII and DII's have an important role in the upward and the downward movement of the Stock market. FII's and DII's tend to buy and sell stocks in bulk, tend to create major withdrawal effects when they leave. So this study will focus on to know the pattern about how the activities of the institutions influence the buying and selling behaviour in the Stock market.

### **Scope of the study**

The proposed study is covering the comparative analysis of the Indian Stock market and to know the behaviour pattern of their Investment portfolio and to know that whether there is any sequence that they follow for their investment. This study will highlight these facts.

### **Hypothesi:**

H<sub>0</sub>: There is no relation between FII and DII.

H<sub>1</sub>: FII movement effects the movement of DII.

### **Research Methodology**

The research is based on secondary data of FII and DII of previous five years. The monthly figures were taken from January 2012 and till March 2017. The monthly figures have been summed up to quarterly data to shorten the data. First the correlation has been applied in order to assess that whether any relation exist between the two series of data of FII and DII. In such test the result value can range between +1 to -1 depending upon the positive or the negative relation between the two series. Also One Way ANOVA has been applied to test the hypothesis.

**DATA Analysis**

For the study the monthly figures of FII and DII are being taken. These monthly figures are being added up to convert it into quarterly figures. As is given in the table these figures are the net investments after considering purchases and sales both. The data considered are for five years from Jan. 2012 to March 2017. Firstly the series have been tested for correlation and later One way ANOVA is being applied.

**Table 1**

		(Rs. Crore)
Period	FII Net Purchase/Sales	DII Net Purchase/Sales
Jan.-Mar., 2017	33276.31	1043.59
Oct.-Dec., 2016	-37077.84	27426.12
Jul.-Sep., 2016	22230.58	-8461.69
Apr.-Jun.,2016	6932.62	2030.17
Jan.-Mar., 2016	-2667.62	6474.61
Oct.-Dec., 2014	-8363.17	13308.76
Jul.-Sep., 2015	-28753.34	26782.9
Apr.-Jun.,2015	-12958.17	32120.27
Jan.-Mar., 2015	21867.63	-4625.11
Oct.-Dec., 2014	5325.9	2787.32
Jul.-Sep., 2014	11149.14	-2018.04
Apr.-Jun., 2014	25417.89	-15407.76
Jan.-Mar., 2014	25530.47	-13918.55
Oct.-Dec., 2013	37977.92	-29143.94
Jul.-Sep., 2013	3291.1	-4386.2
Apr.-Jun., 2013	7682.06	-6623.28
Jan.-Mar., 2013	38153.98	-32898.27
Oct.-Dec., 2012	29100.93	-17799.64
Jul.-Sep., 2012	34457.87	-18831.5
Apr.-Jun., 2012	-1624.94	2592.98
Jan.-Mar., 2012	39232.25	-14962.11

Source: nseindia.com

**Correlation:**

	<i>FII Net Purchase/Sales</i>	<i>DII Net Purchase/Sales</i>
FII Net Purchase/Sales	1	
DII Net Purchase/Sales	-0.903563379	1

**One Way ANOVA**

SUMMARY				
Groups	Count	Sum	Average	Variance
33276.31	20	216905.26	10845.263	479421456.1
1043.59	20	-55552.96	-2777.648	315939876.8

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1855837041	1	1855837041	4.666651406	0.037125957	4.098171731
Within Groups	15111865324	38	397680666.4			
Total	16967702366	39				

**Findings:**

1. The two series have been first tested for correlation and the outcome was -0.903563379, which clearly depicts that there is a strong negative correlation which signify that both the series moves together in the opposite direction.
2. It shows that when FII moves up, DII goes down and when FII goes down, DII goes up.
3. The two series has been applied for ANOVA in which the f value is beyond 4 and p value thus the Null hypothesis is rejected, and therefore Alternate hypothesis is accepted.
4. So, in this paper the null hypothesis has been rejected and the alternate hypothesis has been accepted.
5. So it can be said that the FII movements has a impact on the movement of DII and since the correlation is negative which clearly depicts that if FII decreases the DII increases and vice-versa. Therefore, if the data taken for FII and DII is being considered it can be clearly seen that mostly in all the positive FII values there is negative corresponding values of DII and vice versa e.g. Oct. to Dec. 2016 which was the phase of demonetisation in the economy the net investment done by FII was -37077.84 cr which means FII has sold more during this phase than purchases by the amount of mentioned figure whereas DII figure shows positive net investment of 27426.12 cr. Which shows more purchases than sales by the figure mentioned?

**Concluding Remarks**

India is being viewed as a potential opportunity by investors, with the economy having the capacity to grow tremendously. Buoyed by strong support from the government, FII investments have been strong and are expected to continue to improve going forward.



Mr Mark Machin, Chief Executive Officer, Canada Pension Plan Investment Board (CPPIB), has expressed confidence in the Indian equity market and stated that the country is one of the best investment destination based on its demographic growth, increased productivity, and long-term economic growth potential.

"The FII participation has been very consistent as far as India is concerned and we see the trend continuing. We have been overweight India in the context of Asia and emerging markets since November 2013 and that stance very much continues," said Mr Bharat Iyer, MD, Global Research, JP Morgan India.

Impact investments in India are expected to grow at a compound annual growth rate (CAGR) of 20-24 per cent to touch US\$ 6-8 billion by 2025, from US\$ 1 billion in 2015, according to McKinsey & Co.

A PricewaterhouseCoopers India report based on a survey of 40 PE firm partners has projected that the country has the potential to get PE funding of US\$ 40 billion by 2025. Future PE investments would be driven by India's consumption story, realistic valuations, competitive businesses, growing private entrepreneurship, among other factors, as per the report.

Thus India has the potential of attracting more funds into the economy but the internal and external turmoil's affect it and thus leads to major effects on the movement of FII and DII. Because it has been proved that the FII movement affects stock market indices thus affecting the DII movement also.

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