Impact of Foreign Institutional Investors on Indian Capital Market

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Abstract

The foreign institutional investors (FII) have become a significant driving force of the Indian capital market and their growing presence marks the development of the capital market of India. To facilitate foreign capital flows developing countries seek to strengthen their capital markets. As a result of which Indian capital markets have achieved new heights and have become more volatile opening the dimensions of new research in the arena of Foreign Institutional Investments and Indian capital market. This paper makes an attempt to study the effects of trading behaviour of foreign institutional investors on the Indian capital market. We found out that there are no significant changes in the Indian capital market returns and volatility is significantly reduced after opening up of the market to foreign investors.

Keywords: Foreign institutional investors, Liberalisation, Net investments, Returns, Volatility, NIFTY, Foreign Capital

Introduction

flows or international flows of financial assets which has outpaced the expansion of global financial operations. Emerging markets have therefore become more accessible and have begun to offer attractive investment opportunities to investors around the globe. The environment thus has undoubtedly become more conducive to Foreign Institutional Investors (FIIs). Foreign investments in the country can take the form of investments in listed companies such as Foreign Institutional Investments; investments in listed/unlisted companies other than stock exchanges such as Foreign Direct Investment, Private Equity; investments through American Depository Receipts and Global Depository Receipts and investments by Non Resident Indians (NRIs).

Institutional investors are organisations which pool in large sums of money and invest in securities, property and other investment assets. These include mutual funds, hedge funds, insurance companies, pension funds, banks. Their most prominent role in the economy is to act as highly specialised investor on other's behalf. Institutional investors exert significant influence in the management of corporations by exercising their voting rights and actively engage in

corporate governance. Institutional investors have a critical role in functioning of the financial markets of an economy.

Foreign Institutional Investments in India

Foreign institutional investments are the most crucial to a developing nation like India as they contribute to inflow of capital flows as the funds from multilateral financial institutions are insufficient. Until 1980's, India's development strategy focussed on self reliance and import substitution. Current account deficits were largely financed through debt flows and official development assistance. There was a general inclination towards foreign investment and private commercial flows. Since the initiation of reforms process in the early 1980's India's policy stance has changed substantially. The liberalisation and reform in rapid speed in India during 1991-1996 have drawn attention of foreign investors which led to rise in Foreign Institutional Investments in India.

Foreign Institutional Investor (FII) means an institution established outside India which purposes to make investment in securities in India. They are registered as FIIs in accordance with Section 2(f) of the SEBI Regulations 1995. The number of registered FII registered with SEBI from only 10 in January 1930 to 350 by the end of January 1996. Net investment by FIIs which was only US $4.3 million in 1992-93 suddenly increased to $1634.1 million in 1993-94 and further to 20356.6 million in 1995-56 (SEBI).FIIs registered a spectacular growth especially in the middle of 2003 due to high growth rate in Indian GDP, robust corporate performance and investment. Foreign institutional investments however turned negative during 2008-2009 mainly due to global financial meltdown.

During the financial year 2014, foreigninstitutional investors invested a net amount of nearly Rs. 80,000 crore into India's equity market as per the data by SEBI. Net investments by FIIs reached the $30 billion level by August end 2014, while their cumulative total inflows into India crossed the $200 billion mark (India Brand Equity Foundation). The total number of FIIs registered in 2014 in India reached to an aspiring new high of 1,710.

Indian Capital Market

The term capital market means institutional arrangements for facilitating the borrowing and lending of long term funds. The capital market is an important part of financial system. It is defined as a market for long term funds both equity and debt and funds raised within as well as outside the country. In a broader sense, capital market comprises of all operations in the stock market and new issues. New issues are made by companies which constitute the primary market whereas trading in securities comprises secondary market.

The capital market aids economics growth by mobilising the savings of economic sectors and directing them towards channels of productive use. This is facilitated through

a) issue of primary securities in the primary market such as directing the cash flow to government and the corporate sectors from the surplus sectors;

b) issue of secondary securities in the primary market i.e.; directing of cash flows from the surplus sector to financial intermediaries;

c) Secondary market operation is outstanding securities.

The capital market further monitors the performance of the enterprise through movement of share prices and threats associated with takeovers. This increases the returns from investment and improves efficiency of resource allocation.

Hence development of an efficient capital market is crucial for creating an environment conducive for investment and economic growth and development.

Review of Literature

(Bhanumurthy, Rai; 2004) examined the role of return, inflation and risk as determinants of foreign institutional investors in Indian context. The found that FII inflows depends on stock market returns, inflation rates and ex ante risk. In terms of magnitude, the impact of stock market returns and the ex-ante risk turned out to be the major determinants of FII inflow. They suggested that stabilizing stock market volatility and minimising the ex ante risk would help to attract more FII. (Inoue; 2009) studies the causalities in mean and variance between stock returns and foreign institutional investment in India during the time period January 1998 to March 2008. Results after March 2003 show that there is uni-directional causalities in mean and variance from stock returns to FII flows and impact of FII on the movement of Indian stock prices are more during recent periods. (Devi, Deo; 2010) studies the relationship between net FII, stock market and market capitalisation between 2005-2009. By using Granger Causality Test they found there is bi-directional causality between FII and market capitalization and there is uni-directional causality between FII and return and also between return and market capitalisation. (Shrikanth and Kishore, 2011) developed a holistic approach to the study of impact of FII flows on different market segments of the Indian financial market, namely, the capital market, the foreign exchange market, the money market and other macroeconomic variables such as inflation, index of industrial production etc. It was further revealed by incorporating Augmented Dickey Fuller test and The Granger Causality test that there is a bi directional causality between FII inflows and BSE Sensex. (Loomba, 2012) analyses the trading behaviour of FII and effects on Indian equity market from 2001-2011. Using Pearson

correlation method he found that there is positive correlation between BSE SENSEX percentage change and FII activity in the Indian capital market. The study also concludes that FII are strong forces driving Indian Stock Market which was evident from the top twenty five crashes at BSE SENSEX as FIIs were net sellers in all the leading market crashes.(Rao 2013); examined the trading behaviour of FIIs and effect on Indian equity market. He inferred that there is growing presence of FII inflows in the Indian stock market by looking into the cumulative investments. He further concluded that there was decline in FII in IT and FMCG sector during global recession 2008. (Kulshrestha 2014); With the use of regression and correlation techniques he observed that investments by FIIs and the movements of BSE Sensex and CNX NIFTY are closely related. He further concluded that market rise with increase in FIIs and collapse when FIIs are withdrawn from the market and in the absence of any form of capital inflows ill effects of FIIs in a country like India can be severe. (Wang, 2014) FII flows have strong impact on future equity returns because of informational advantage. (Shrivastav, 2013) FII impact on stock prices varies from sector to sector which is further influenced by the industry to which it belongs to and the sectoral performance. FIIs becoming more important at the margin as increase in higher share of stock market turnover are accounted for by FII trading. (Halale; 2014) observed that the market indicators such as price earnings multiple, book value and dividend yield of NIFTY shows the indirect and lagging effect of FII. Unlike NIFTY Index these indicators reflect FII activity over a longer period as these absorb the information.

Need for the Study

Since the beginning of liberalization FII flows to India have grown in importance. Foreign capital have come to be acknowledged as one of the most important sources of funds for economies that would like to grow at a higher rate that what their domestic savings can support. This has resulted into global integration. As a result capital started moving freely across borders. India is considered as a good investment option by world investors in spite of political differences and lack of infrastructure facility etc. Indian stock market shows a development phase over the past 15 years due to growing participation of FIIs. FIIs are significant investor segment of the Indian capital market accounting for an average of 20% turnover in both the equity and debt markets. This paper attempts to study the impact of foreign institutional investments on Indian capital market and in various sectors of the Indian capital market.

Objectives of the Study

- To study the relationship between the foreign institutional investments and Indian capital market

Data

The data for the study consists of monthly data on FII's net investments and returns of India Stock Market (NSE). The study contains the observation of the time span January 2012 to November 2014. All the required data information has been retrieved from NSE, SEBI websites, journals and literatures.

Table 1: Monthly net investment by Foreign institutional investors and returns

Months	Net Investments	Returns	Months	Net Investments	Returns
January -12	26328.7	5199.25	July-13	-18124	5742
February-12	35227.7	5385.2	August-13	-15695	5471.8
March-12	1792.5	5295.55	September-13	7379	5735.3
April-12	-4888.7	5248.15	October-13	2128	6299.15
May 12	3221.9	4924.25	November 13	2133	6176.1
June-12	1180.5	5278.9	December-13	21376	6304
July 12	13664.2	5229	January 14	13323	6089.5
August-12	11068.7	5258.5	February-14	12741	6276.95

September-12	19883.8	5703.3	March-14	31663	6704.2
October-12	19215.5	5619.7	April-14	418	6696.4
November-12	9869.2	5879.85	May-14	33778	7229.95
December-12	26791.9	5905.1	June-14	30705	7611.35
January-13	25006	6034.75	July-14	36046	7721.3
February-13	28440	5693.05	August-14	22134	7954.35
March-13	14919	5682.55	September-14	20972	7964.8
April-13	10748	5930.2	October-14	16732	8322.2
May-13	28138	5985.95	November-14	25476	8588.25
June-13	-44182	5842.2			

Methodology

Usually time series analysis considers stationary time series in empirical studies. If the time series is non-stationary, the relationship between the independent and dependent variables may exhibit misleading inferences. A series is said to be stationary if the mean and auto covariance of the series is integrated and has a unit root, the study has considered the widely used popular unit root test- Augmented Dickey-Fuller test. This test uses the null hypothesis that the series does contain a unit root (non-stationary variable) against a stationary variable in the alternative hypothesis. If the calculated test statistic is higher than the critical value then one does not reject the null hypothesis and the concerned variable is non-stationary, if not that is stationary.

The equation of unit root test is expressed as:

$$\Delta R_t = a_o + a_2 t + \sum_i^k \beta_l + \varepsilon_t$$

MacKinnon's critical values are used in order to determine the significance of the test statistic associated with the coefficient to be estimated. the unit root test tests the null hypothesis H_o: $\beta_i= 1$ against the one-sided alternative H_1: $\beta_i<1$. The null hypothesis of a unit root is rejected in favour of the stationary alternative in each case if the test statistic is more negative than the critical value

In principle, one should adopt a Generalized Autoregressive Conditional Heteroscadasticity (GARCH) type of volatility estimator. Hence, we use GARCH model to analyze the data set. The GARCH model can be specified with GARCH (p, q) where p is the order of the GARCH terms of δ^2 and q is the order of the ARCH terms of ϵ^2. The model can be given as:

$$\delta_t^2 = \alpha_0 + \alpha_1 \epsilon_{t-1}^2 + \cdots + \alpha_q \epsilon_{t-q}^2 + \beta_1 \delta_{t-1}^2 + \cdots + \beta_p \delta_{t-p}^2$$

$$= \alpha_0 + \sum_{i-1}^q \alpha i \, \epsilon_{t-i}^2 + \sum_{i-0}^p \beta i \, \delta_{t-i}^2$$

We start to model the conditional volatility as being a GARCH (1, 1). A GARCH (1, 1) specification should be enough to interpret the conditional variance that fits the highfrequency time series data.

In the model, α_0 measures the coefficient of the constant variable or the random variations, α_1 is the coefficient of the square of the residuals or the error coefficients and β_1 is the coefficient of the GARCH lag. The sizes of α_1 and β_1 determine the dynamics of the volatility in the stock prices. If the GARCH (α_1) error coefficient is high then it means that there exist intensive reactions of the volatility in the market, if the GARCH lag (β_1) coefficients are high then it meansthat

there is slowreaction of volatility in the market or $_{it}$ takes long time to react in the market. If the GARCH error coefficients (α_1) are high and the GARCH lag (β_1) coefficients are low then it means that the volatility tend to be spikier

Data Analysis and Interpretation

The results of Augmented Dickey Fuller tests were presented in the Table 2. The ADF test reveals that the null hypothesis of unit root of the net investments of FII's of the Indian Stock market is convincingly rejected that is the data is stationary.

Table 2

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.851456	0.0058
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

The results of Augmented Dickey Fuller tests were presented in the Table3. The ADF test reveals that the null hypothesis of unit root of Returns of FII's of the Indian Stock market is convincingly rejected that is the data is stationary.

Table 3

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.831765	0.0000
Test critical values:	1% level	-3.646342	
	5% level	-2.954021	
	10% level	-2.615817	

The results of Generalised Autoregressive Conditional Heteroscadasticity for market return were presented in Table 4. The GARCH model reveals that that Alpha 1 (α_1) is greater than Beta 1 (β_1) [1.343331>0.0202434] and $\alpha_1 + \beta_1$ is greater than one which means that the predictions of volatility are explosive.

Table 4

$$GARCH = C(2) - C(3)*RESID(-1)^2 + C(1)*GARCH(-1)$$

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	5906.114	48.05433	122.9049	0.0000
Variance Equation				
	12732.64	28274.34	0.450325	0.6525
RESID(-1)^2(α_1)	1.343331	0.771810	1.740194	0.0818
GARCH(-1) (β_1)	0.020434	0.258253	0.079123	0.9369

The results of Generalised Autoregressive Conditional Heteroscadasticity for foreign institutional investments were presented in Table 5. The GARCH model reveals that

Alpha 1 ($\alpha1$) is greater than Beta 1 ($\beta1$) [0.794374>-0.150992] and the sum of $\alpha1 + \beta1$ is closer to 1 (0.64) which further means lesser chances of volatility.

Table 5

$$GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1)$$

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	13865.95	2680.442	5.173010	0.0000
Variance Equation				
C	1.81E+08	1.79E+08	1.011059	0.3120
RESID(-1)^2	0.794374	0.701148	1.132962	0.2572
GARCH(-1)	-0.150992	0.503666	-0.299785	0.7643

Table 6

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5914.278	200.1857	29.54396	0.0000
NET INVESTMENTS	0.021258	0.009346	2.274466	0.0296
R-squared	0.135519	Mean dependent var		6199.516
Adjusted R-squared	0.109323	S.D. dependent var		978.1290
S.E. of regression	923.1161	Akaike info criterion		16.54883
Sum squared resid	28120733	Schwarz criterion		16.63771
Log likelihood	-287.6046	Hannan-Quinn criter.		16.57951
F-statistic	5.173194	Durbin-Watson stat		0.215270
Prob(F-statistic)	0.029567			

R square, which is, also known as coefficient of determination tells us how much variance in outcome variable is explained by predictive variable $R^2 = .135$ which means 13.5% of all the variance in Returns can be predicted or explained from the behaviour of FIIs which suggests that FIIs are not the only determining factors in deciding the Returns, there are other major factors also, however FIIs as one of the factors cannot be completely ignored.

Limitations

Major limitation of the study is that other factors affecting returns is not taken into account such as risk, inflation etc. Further research can be done on other factors affecting returns from FII investment. Sector wise study on FII affecting the returns of each sector can be done to see the overall impact of FII on the economy by incorporating top sectors that influence the growth of the economy.

Conclusion

The Indian capital markets have come of age where there are significant developments in the last two decades that make the markets on par with the developed markets. The important feature of developed markets is the growing emergence of institutional investors and this paper sets out to find whether our markets have also being impacted or dominated by institutional investors.In the course of capital

market liberalization, foreign capital has become increasingly significant source of finance. Hence there has been growing presence of FIIs in Indian capital market evidenced by increase in their net cumulative investments. This shows that Indian capital markets have become lively in terms of their composition of various constituents of the market. On the other side, the increasing presence of this class of investors leads to reform of securities market in terms of trading and transaction systems, making local markets at par with the international markets. In developing countries like India, foreign capital helps in escalating the productivity of labour and to build up foreign exchange reserves to meet the current account deficit. The increase in FIIs investments brings inflow of capital and the country can have access to foreign capital; however, there are limits in India for FII investment in a single firm. On the flip side, foreign capital is free and unpredictable and is always on the lookout of profit, the reason being, the portfolio managers of these FIIs are always on their toes for booking profits for their dynamic portfolios across countries. There are speculations of broader range on the expectations of foreign institutional investors. It is essential to understand when they withdraw their funds and when they pump in more money. Hence, increased volatility associated with FII investments result in severe price fluctuations which cannot be ignored. The results of my research conveys that there is no volatility in the market on account of FII's however it is important to say that the returns from foreign institutional investors and the net investments made by them are significantly related to a smaller extent that is there are number of other factors which affect the returns of FII which can be the risk associated, type of market etc.

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