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Impact of Foreign Institutional Investments on Indian Mutual Funds

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Abstract : The purpose of this paper is to examine the effects of Foreign Institutional Investments on Mutual Funds in India. This paper will examine both, positive and negative impacts of FIIs and how investors would be able to gain confidence while investing in Mutual Funds. The aspect of this research is mainly the probable impact of the FII's on the mutual fund movements and to find the correlation between mutual fund investments and the foreign institutional investments.

Key Words: Foreign Institutional Investments, Indian Mutual Funds

1. INTRODUCTION

Over the past few decades, the impact of Foreign institutional investments (FII's) have been in news due to their huge volume as well as their skills to make the markets more violent. The link that exists between the mutual funds as well as the foreign institutional investments is that of the stock markets. India has seen a steady growth in FII inflows since the opening up of its markets as a part to liberalization and since then there has been no looking back. The FII's help in driving the market index up and down which in turn gives the Net asset value (NAV) of the mutual funds. Fluctuating FIIs have an immense influence on the stock market since the bulk of their investment is in the stocks.

2. FOREIGN INSTITUTIONAL INVESTMENT

A foreign institutional investment fund or investor means that investing in the country outside of which it is originally headquartered or is actually registered. In a country like India it means that the outside entities are investing in the financial markets of India. FII's is a broad term which includes all these mutual funds, hedge funds, investment banks and pension funds. Foreign institutional investments are generally found in countries which have developing economies rather than already developed economies because the developing economies have a higher potential of growth. In India all the FII's are listed through the SEBI that is the securities and exchange board of India.

3. MUTUAL FUND

Mutual funds can be referred to as financial intermediaries or a type of investment vehicle that allow group of investors to pool in their resources and invest together in securities like money market instruments, stocks, bonds, and various other assets. The biggest advantage of Mutual funds is that it gives small and individual investors the access to diversified as well as professionally managed portfolios at comparatively lower costs. The biggest advantage of a mutual fund investment is diversification, as it helps in lowering the risk since the money gets invested in multiple stocks so, if one stock goes down due to any reason, the other might be up so the potential losses can thus, be prevented.

4. REVIEW OF LITERATURE

The researcher has reviewed the research articles with context to the foreign institutional investments and the mutual funds. The vivid account of such review has been presented here.

(Hess, July 1998) in his article aims to throw some light on the major factors that are responsible for building the confidence of the investors so that they are driven to invest in the equity markets of developing countries and ultimately aid in their economic development of the nation. This paper also tells that international trend has shown a move away from the floor-based system towards a screen-based trading system. With such as system, the participants are able to see the entire market along with maintaining control and preventing fraud by establishing transparent audit trails.

(Pal, 2014) studied the overall performance of some selected schemes of the mutual funds on the basis of specifically risk and return relationship. Overall, from this research the author could conclude that there is a positive return from investments in mutual funds schemes and it is good source of investments for specially the middle-class sector of the India as they have small amounts of savings. The research ratios calculated in this are helpful for small investors to analyse the performance and then invest.

(Zafar, D.S.Chaubey, & Syed Imran Nawab Ali, July 2015) studied that how the overall performance of mutual funds Is assessed as well as to analyse the NAV with their returns. In this research has been conducted for 1 year from 2007 to 2008 with thirteen most preferred public and private equities. This study has resulted significant data on risk and return associated with funds.

(Batra, 2003) in his paper ties to understand the behaviour of foreign institutional investments and their returns in the Indian equity markets. From this study it can be found that there is positive feedback of FII's investors at the aggregate level on daily basis but same is not the case on monthly basis. After this analysis it was also concluded that there is a tendency of generally all foreign investors to herd on Indian equity markets.

(Yadav, 2017) studied that there exists a correlation between the FII flows as well as the stock markets. In order to get the foreign capital flow countries, seek to strengthen the capital markets as well. There are the few reasons that the markets of developing countries are reaching great heights. In this research the researcher has taken into consideration stock markets of New York, Tokyo, Hongkong, Russia as well as Korea.

5. OBJECTIVES OF STUDY

1. To establish the relationship between the two variables foreign institutional investments and mutual funds.
2. To understand the impact of foreign institutional investments on the movement of Indian mutual funds.
3. To overall analyse as well as evaluate the effectiveness of investing in the mutual funds.

6. SCOPE OF STUDY

This research mainly focuses on studying the growth of the mutual funds industry and the overall growth of Foreign Institutional investments in India. The statistical models of correlation and regression have been used to fin the relationship that exists between the variables that are considered under study that is S&P CNX Nifty, FII inflows and mutual funds. In the following research the researcher has taken historical month wise data of the past years from 2000 to 2005 for the purpose of this research.

7. METHODOLOGY

The market environment has undergone a drastic change and has become much more different as well as competitive thereby resulting in the growth of the issuers of securities and intermediaries. These FII inflows have recently become the preponderant owners of the free float of most blue-chip Indian stocks. As a result of which, they have a major impact on the market volatility. It is this volatility that will be understood here

The statistical tools of correlation and regression have been used to bring out the dependency relation between the variables that are the Index S&P CNX Nifty, FII inflows and the Mutual fund flows. With the help of the correlation, the degree of correlation between the proposed variables can be understood and this further corroborates the results obtained from the regression analysis.

The data considered is monthly data of Nifty, FII flows and the mutual fund flows from January 2000 to December 2005. the period from 2000 to 2005 has been selected since this period captures some of the great peaks and dips in the Indian market. Also, this period marks some significant developments in the financial markets such as rolling settlements, derivatives etc.

8. LIMITATIONS OF STUDY

1. Historical month wise data has been taken into consideration for the study starting from 2000 to 2005.
2. All the other factors except the FII's flows that affect the mutual funds flow has not been taken into consideration for the purpose of this study.

9. RESEARCH ANALYSIS

Regression- The main aim of this statistical tool is to predict the values of a dependent variable based on the values of one of more independent variables

Using the Index – S & P CNX Nifty as the dependent variable (Y) and the FII inflows and Mutual Fund flows as the independent variables (X1 and X2 respectively), a regression analysis was carried out to determine the extent to which the index is dependent on the FII inflows and mutual fund flows.

The entire analysis was looked at into two parts.

Case I

In this case, the lag variables were not been taken. The variables were defined as follows:

Dependent variable: Nifty

Independent variables: FII inflows and Mutual fund flows

The hypothesis was framed as follows:

H0: FII inflows and Mutual Fund flows have a significant impact on the nifty variations.

H1: FII inflows and Mutual Fund flows do not have a significant impact on the nifty variations.

Firstly, a simple regression was carried out so as to evaluate the effect of FII flows on the nifty volatility. This yielded the Adjusted R square value of: 0.224

This meant that 22.4% of the variation in the nifty could be explained by the FII inflows.

Next mutual fund flows were introduced as an additional independent variable. Regression analysis with these two independent variables yielded the value of Adjusted R Square to be: 0.8413

This implied that 84.13% of the variation in nifty could be explained by FII inflows and mutual fund flows taken together.

This marked an increase over the previous value and was indicative of the fact that mutual fund flows did have much effect on the nifty movements

The regression equation thus obtained can be written as:

$Yi = -119.83 + 0.0273 X1 + 0.0123 X2$

Here,

ß0 is 119.83, which implied that even if the FII inflows and mutual fund flows were not taken into account, the nifty moved to the tune of -119.83 units.

ß1 is 0.0273, which implied that if mutual fund flows were kept constant, for a 1-unit change in the mutual fund flows, the nifty changed by 0.0273 units.

ß2 is 0.0123, which implied that if FII inflows are kept constant, for a 1-unit change in the mutual fund flows, the nifty changed by 0.0123 units

F-Value is close to zero which confirms that the regression equation is linear and Impact is significant.

Moreover, p values of both the independent variables are less than 0.05 which clearly shows that both FII and Mutual Funds Flows have impact on dependent variables.

Together, FII inflows and Mutual fund flows explained a significant percentage of the variation in the index (84.13%).

Therefore, the null hypothesis was accepted. FII inflows and Mutual Fund flows have a significant impact on the nifty variations.

This was also corroborated by the correlation coefficient 'r', which calculated the degree of correlation between the nifty values and FII inflows.

Using the correlation function, r = 0.4846. This was a small value indicating a low degree of correlation between the two variables this could also be seen from the scatter diagram.

Case II:

In this case analysis is done to establish any causal relation between FII flows and Mutual Fund Flows.

Dependent variable: Mutual Fund Flows

Independent variables: Mutual Fund Lag Variables and FII flows

The hypothesis was framed as follows:

H0: FII flows have a significant impact on Mutual Fund Flow.

H1: FII Flows does not have a significant impact on Mutual Fund Flows

Firstly, the Mutual fund flows were regressed with there first period lag variable.

This yielded the value of adjusted R Square as: 0.95165

This meant that 95.2% of the variation in the Mutual fund could be explained by the first period lag variable.

Next, the second period lag variable was introduced and the regression analysis was carried out.

The value of Adjusted R square was: 0.95288

This indicated that 95.3% of the variation in the mutual fund flows could be explained by the two lag variables taken together.

Now, third Pd Lag variable was introduced and the regression analysis was carried out.

The value of Adjusted R square was: 0.95266

This value was the less than the preceding value and therefore indicated that the value of Adjusted R square had stopped increasing.

It was at this point that the new independent variable – the FII flows was introduced to see Whether FII flows had any causal effect on Mutual Fund flows.

The regression analysis that followed yielded the value of adjusted R Square to be: 0.953053

This implied that 95.3% of the variation in the Mutual Fund could be explained by the two lag variables and the FII flows taken together. The third lag variable was not included in the analysis since that was the point where the

Adjusted R square stopped increasing. This value marked an increase over the previous value thereby implying that the FII did have a causal relationship with the mutual fund flows.

The regression equation obtained can be written as:

Yi = 1978.67 + 1.2052X1 -0.2183X2 + 0.3502X3

Here,

ß0 is 1978.67, which implied that even in the absence of the independent variables, the Mutual Fund flows did change by 1978.67 units.

ß1 is 1.2552, which implied that keeping all the other lag variables and FII constant, with a 1-unit change in lag variable, there was a change in the Mutual Fund by–1.2052 units.

ß2 is (-)0.2183, which implied that keeping all the other lag variables and FII constant, for a 1-unit change in the lag variable, there was a change in the mutual fund by (-)0.2183 units.

ß3 is 0.3502, which implied that keeping all the other lag variables with a 1`-unit change in FII flows, there was a change in the Mutual fund by 0.3502 units.

F-Value is close to zero which confirms that the regression equation is linear and impact is significant.

Moreover, p values of first and third the independent variable (Mutual Fund first Pd. Lag and FII Flows) is less than 0.05 which clearly shows that both FII and First Pd.

Lag have impact on dependent variable (Mutual Funds)

As the p value of second variable is more than .05, it shows that it does not have a significant impact on the dependent variable and it can be dropped.

Thus, it could be said that the FII flows have significant impact on Mutual fund flows.

Therefore, the null hypothesis was accepted.

This was also corroborated by the calculation of the correlation coefficient ‘r’. r=0. 3767. This was indicative of the fact that correlation did exist between the two variables.

Correlation analysis produced a correlation coefficient of 0.485, which implies that there is a relationship between the FIIs (independent variable) and the Nifty (dependent variable). Simple regression analysis between FIIs and Nifty index produced the result that 22.4% of the variations in the Nifty can be explained by the FIIs. This is not a very significant figure. Multiple regression analysis taking FIIs and mutual funds as the independent variables and Nifty as the dependent variable came out with the finding that coefficient of determination is 0.841. This implied that only 84.1% of the variation in the volatility in Nifty could be explained by the two independent variables. Also, it was found out that correlation analysis between FIIs and Mutual Funds produced the result that 0.3767 of correlation exist between the two and high correlation exists between Nifty and Mutual Fund Flows (0.9066).

More over FII along with Mutual fund Lag variable as Independent variables did have a significant impact of around 95.31% on the Mutual Fund Flows.

10. HYPOTHESIS TESTING

Case – 1

Nifty Regressed with FII Flows

Regression Statistic	
Multiple R	0.484624305
R square	0.234860717
Adjusted R Square	0.223930155
Standard Error	408.7253.55
Observations	72

ANOVA

	df	SS	MS	F	Significance F
Regression	1	3589476.226	3589476	21.48661	1.6051E-05
Residual	70	11693949.11	167056.4		
Total	71	15283425.33			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1304.951064	60.13704836	21.69962	8.46E-33	1185.0116	1424.891	1185.012	1424.891
X Variable 1	0.079387227	0.017126423	4.635365	1.61E-05	0.04522968	0.113545	0.04523	0.113545

Nifty Regressed with FII Flows and Mutual Fund Flows

Regression Statistic	
Multiple R	0.919655155
R Square	0.845765603
Adjusted R Square	0.841295041
Standard Error	184.8316854
Observations	72

ANOVA

	df	SS	MS	F	Significance F
Regression	2	12926195.45	6463098	189.1855	9.8232E-29
Residual	69	2357229.883	34162.75		
Total	71	15283425.33			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-119.8 39097	90.3730527 9	-1.32 597	0.78922 3	-300.1 21161	60.457 34	-300.1 21	60.4573 4
X Variable 1	0.02732296 6	0.00836065 8	3.2680 4	0.00169	0.010643 91	0.0440 02	0.01064 4	0.04400 2
X Variable 2	0.01231647 6	0.00074501 6	1653.1 82	1.08E-25	0.010830 21	0.0138 03	0.01083	0.01380 3

Case – 2

Mutual fund flows Regressed with First Pd. Lag

Regression Statistic	
Multiple R	0.9758806
R square	0.9523429
Adjusted R Square	0.9516522
Standard Error	7012.1077
Observations	71

ANOVA

	df	SS	MS	F	Significance F
Regression	1	6.78E+10	6.78E+10	1378.841533	2.43589E-47
Residual	69	3.39E+09	49169655		
Total	70	7.12E+10			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-227.53224	3470.749	-0.06556	0.947920016	-7151.48468	6696.42	-7151.48	6696.42
X Variable 1	1.0129809	0.078	37.13276	2.43589E-47	0.958558876	1.067403	0.958559	1.067403

Mutual Fund Flows Regressed with First and second Pd. Lag

Regression Statistic	
Multiple R	0.9768559
R square	0.9542474
Adjusted R Square	0.9528816
Standard Error	6956.5165
Observations	70

ANOVA

	df	SS	MS	F	Significance F
Regression	2	67624409737	3.38E+10	698.6986	1.33E-45
Residual	67	3242339188	48393122		
Total	69	70866748925			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1092.0073	3593.724093	0.303865	0.762172	-6081.11	8265.113	-6081.1	8265.113
X Variable 1	1.2076155	0.120625656	10.01127	6.13E-15	0.966846	1.448385	0.966846	1.448385
X Variable 2	-0.2082706	0.126730852	-1.64341	0.104984	-0.46123	0.044685	-0.46123	0.044685

Mutual Fund Flows Regressed with first, second and third Pd. Lag

Regression Statistic	
Multiple R	0.977602
R square	0.955706
Adjusted R Square	0.952662
Standard Error	6941.881
Observations	69

ANOVA

	Df	SS	MS	F	Significance F
Regression	3	6.76E+10	22528288648	467.4916758	6.46E-44
Residual	65	3.13E+09	48189710.77		
Total	68	7.07E+10			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
ıtercept	-532.613	3743.963	-0.142 259 06	0.887315 423	-800 9.82	6944.5 93	-8009. 82	6944.5 93
X Variable 1	1.23531 3	0.123008	10.04255 569	7.52364E -15	0.9896 5	1.4809 77	0.98965	1.4809 77
X Variable 2	-0.402 73	0.191439	-2.1036 9404	0.039279 131	-0.78 506	-0.02 04	-0.7850 6	-0.02 04
X Variable 3	0.18135 2	0.129052	1.405265 435	0.164703 96	-0.07 638	0.4390 86	-0.076 38	0.4390 86

Mutual fund Flows Regressed with First, second Pd. Lag and FII Flows

Regression Statistic	
Multiple R	0.977289121
R square	0.955094027
Adjusted R Square	0.953052846
Standard Error	6943.866204
Observations	70

ANOVA

	df	SS	MS	F	Significance F
Regression	3	6.77E+10	2.26E+10	467.912552	2.15257E-44
Residual	66	3.18E+09	48217278		
Total	69	7.09E+10			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1878.672334	3655.851	0.513881	0.609051489	-5420.46763	9177.812	-5420. 47	9177.812
X Variable 1	1.20521463	0.120426	10.00794	7.31125E-15	0.964775143	1.44565	0.964775	1.44565
X Variable 2	-0.218 32386	0.129821	-1.72 151	0.089842451	-0.4715 3011	0.034 882	-0.471 53	0.034882
X Variable 3	0.350293572	0.314023	1.115501	0.036808119	-0.2766 742	0.977 261	-0.276 67	0.977261

11. CONCLUSION

After the above research it can be concluded that mutual funds still remain the safest investment option. This holds true especially for small investors who have little knowledge about the market. As established by the analysis FIIs do have an effect on the mutual fund's flows, but investors need not worry about losing their money due to FII flows volatility in the markets. The advantages associated with mutual fund investments are more than the offset negative effects that can be witnessed in the face of FIIs. It should not be forgotten that mutual funds are not only of equity type there are bond mutual funds as well as money market mutual funds Investments. FII's have both positive and negative aspect associated to it but after the evaluation it is seen that FII volatility do not negatively impact the mutual fund flows to a great extent and there is no need for the investor to stress over it.

Efforts should be made in order to enhance investors' confidence in Mutual funds and steps should be taken in order to increase the domestic funds in the stock market so that these large domestic funds provide a counter-balance to FIIs. Even FIIs are major sellers during a particular month, Mutual funds can be the major buyers and this would avoid too much volatility of stock markets and thus safeguarding the interest of the retail investors. Further research could be done on the various other factors that affect the Mutual fund flows and ultimately affect the investors Apart from FII, other micro and macro-economic variable factors could be taken into consideration and what is there impact on the Stock market and Mutual fund flows.

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