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A Methodological Analysis On Impact Of Institutional Investments On Bse Sensex Return

KEYWORDS: Mutual Funds, Foreign Institutional Investments, Return, Residual Analysis

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ABSTRACT *Bombay Stock Exchange is one of the pertinent secondary financial markets which enriches the buying and selling of corporate shares or debentures. The institutional investments i.e. Mutual Funds (MFs) and Foreign Institutional Investments (FIIs) are the incredible players in this relevant market. During the last decade (2002-2011), Indian securities market has witnessed various reforms and liberalization of mutual funds and FIIs norms which hiked the performance of Indian market. The study focuses on finding whether the return of BSE SENSEX is also being dominated by these institutional investments. The total population includes monthly adjusted closing price of BSE SENSEX, FIIs, and MFs. The period of study is 7 years from 2005-06 to 2011- 12. Various statistical tools have been applied in this study. Finally, the results showed that the quantum of Mutual funds and Foreign Institutional Investments positively helped to increase the return of the Indian stock market.*

INTRODUCTION
The stock market is a mechanism for channeling funds from investors to companies thereby enabling rising of equity and non-equity resources. In India, Bombay Stock Exchange and National Stock Exchange, facilitate trading in the Equity market. The two exchanges help the investors for trading in various securities viz., equity, and preference shares etc. One of the most dominant investors groups that have emerged to play a critical and important role in the overall performance of the stock market is that of Institutional Investors.

MUTUAL FUNDS
A mutual fund is just connecting bridge or a financial intermediary that allows a group of investors to pool their money together with a predetermined investment objective. The mutual fund will have a fund manager who is responsible for investing the gathered money into specific securities (stock or bonds). When you invest in a mutual fund, you are buying units or positions of the mutual fund and thus on investing becomes a shareholder or unit holder of the fund.

FOREIGN INSTITUTIONAL INVESTMENTS
FII is defined as an institution organized outside of India for the purpose of making investments into the Indian securities market under the regulations prescribed by Securities and Exchange Board of India (SEBI). A domestic portfolio manager can also register itself as an FII to manage the funds of sub-accounts foreign institutional investor means an entity established or incorporated outside India which proposes to make investment in India.

SENSEX RETURN
The stock return represents the percentage of variations in the stock price. The adjusted closing price of BSE SENSEX has been used for calculating the monthly stock return. The adjusted prices are incorporated with the effect of cash dividends, stock dividends and stock splits. Monthly return has been calculated by using the following formula.

$$\frac{P_t}{P_{t-1}} * 100$$

Where, P_t , P_{t-1} are the adjusted closing price of the BSE Sensex at time t, t-1.

STATEMENT OF THE PROBLEM
Mutual funds and Foreign institutional investors are the important root of the financial resource mobilization. A very strict and conservative regulation has led to the minimal participation of mutual funds and the narrowed scope for foreign institutional investors. In addition, the speculative movements and scams sprouted in the market, it worsened the market sentiments and participation. This incident made the market unpredictable and highly volatile and created the 'Financial Bubbles' also. For this, SEBI has reframed the regulations of the MFs and FIIs. Hence, it becomes necessary to analyze the impact of these institutional investments on the Indian stock market returns in current changing scenario.

MAIN OBJECTIVE
The main objective of the present study is to identify the impact of Institutional Investments on Bombay Stock Exchange Sensitive Index (BSE) Return in India.

HYPOTHESES
The following hypotheses are framed in favour of the main objective.

Ho: There is no significant relationship among MFs, FIIs and BSE Return.

Ha: There is a significant relationship among MFs, FIIs and BSE Return.

Ho: There is no significant difference between institutional investment and BSE Sensex Return.

Ha: There is a significant difference between institutional investment and BSE Sensex Return.

Ho: There is no significant impact of Institutional investment on BSE Sensex Return.

Ha: There is a significant impact of Institutional investment on BSE Sensex Return.

METHODOLOGY
Purposive sampling technique was adopted to conduct the present study. The study is descriptive in nature. The total population includes monthly adjusted closing price of BSE SENSEX, FIIs, and MFs. The secondary data was collected through the official website of Bombay Stock Exchange of India and www.moneycontrol.com . The period for which the study was conducted is 7 years (2005-06 to 2011-12).

FRAMEWORK OF ANALYSIS
Pearson correlation was used to find out the significant rela-

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tionship between monthly Institutional investment and BSE Sensex return.

Paired samples t-test has been used to find out the significant difference between monthly Institutional investment and BSE Sensex return.

Ordinary Least Square multiple regression was used to find out the impact of monthly Institutional investment and BSE Sensex return.

RESULTS AND DISCUSSION

Before analyzing the impact relationship between Institutional investment and BSE Sensex return, it is important to find out the significant relationship and difference between monthly Institutional investment and BSE Sensex return.

Interpretation 1: Relationship between Institutional investments and BSE Sensex Return

Pearson Correlation has been used to find out the significant relationship between Institutional Investments (MFs and FIIs) and BSE Sensex Return during the study period. For this, the following hypotheses were framed.

Ho: There is no significant relationship among MFs, FIIs and BSE Return.

Ha: There is a significant relationship among MFs, FIIs and BSE Return.

Table 1: Relationship between Institutional Investments and BSE Sensex Return

		MFs	FIIs	Return
MFs	Pearson Correlation Sig. (2-tailed) N	1 83	-.617** .000 83	-.171 .122 83
FIIs	Pearson Correlation Sig. (2-tailed) N	-.617 .000 83	1 83	.614** .000 83
Return	Pearson Correlation Sig. (2-tailed) N	-.171 .122 83	.614** .000 83	1 83

****. Correlation is significant at the 0.01 level (2-tailed).**
Source: www.bseindia.com and www.moneycontrol.com

The above table shows that there is a positive significant relationship between FIIs and BSE Sensex return. It also shows that there is a negative and insignificant relationship between MFs and BSE Sensex return during the study period 2005-06 to 2011-12.

Interpretation 2: Significant Difference between Institutional investments and BSE Sensex Return

Paired samples t-test has been used to find out whether there is any significant difference between Institutional Investments (MFs and FIIs) and BSE Sensex return during the study period. Hence, the following hypotheses were framed and tested.

Ho: There is no significant difference between institutional investment and BSE Sensex Return.

Ha: There is a significant difference between institutional investment and BSE Sensex Return.

Table 2: Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	MFs & Return	83	-.171	.122
Pair 2	FIIs & Return	83	.614	.000

Table 3: Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Dev.	Std.Error Mean	Lower	Upper	t	df	Sig (2-tailed)
Pair 1	MFs-Return	108.898	2.346	257.473	-403.298	621.1	.423	82	.673
Pair 2	FIIs-Return	4.2179	8.862	972.728	2.283	6.153	4.33	82	.000

Source: www.bseindia.com and www.moneycontrol.com

The above table shows the paired samples t-test of Institutional Investments and BSE Sensex return for the study period. MFs and Return is considered as Pair 1 and FIIs and BSE Sensex return is considered as Pair 2. The above result shows that the p-value for FIIs and BSE Sensex Return is below the significant value of 0.05 and it is also found that the p-value of MFs and BSE Sensex Return is greater than the significant value of 0.05. Hence, it can be concluded that FIIs and BSE Sensex Return have a significant difference during the study period.

Interpretation 3: Impact of Institutional Investments on BSE Sensex Return

OLS multiple regression has been used to detect the impact of Institutional Investments (MFs and FIIs) on BSE Sensex Return during the study period. For this objective, the following hypotheses were framed and tested.

Ho: There is no significant impact of Institutional investment on BSE Sensex Return.

Ha: There is a significant impact of Institutional investment on BSE Sensex Return.

Table 4: Model Summary

R	R Square	Adjusted R Square	Standard Error of the Estimate
.688[a]	.446	.432	6.1204

Predictors: (Constant), FIIs, MFs

The above model summary shows that the independent variables MFs and FIIs influence the dependent variable BSE Sensex return at 44.60% (nearer to 50%) during the study period.

Table 5: ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression Residual Total	2415.663 2996.731 5412.394	2 80 82	1207.832 37.459	32.244	.000[a]

a.Predictors: (Constant), FIIs, MFs
b. Dependent Variable: Return
Source: www.bseindia.com and www.moneycontrol.com

The ANOVA table shows the p-value of 0.000 which is less than the significant value of 0.05. It confirms that the independent variables MFs and FIIs are the best predictors for BSE Sensex return during the study period.

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Table 6: Coefficients[a]

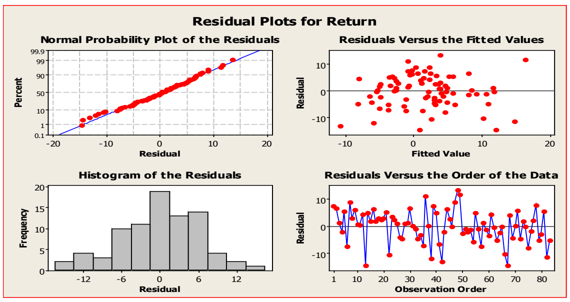
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	Beta		
1 (Constant)	-1.711	.800		-2.139	.036
MFs	.001	.000	.335	3.168	.002
FIIs	.001	.000	.820	7.762	.000

Dependent Variable : Return

The above multiple regression analysis shows the p-value of MFs and FIIs (0.000) which is less than the significant value of 0.05. It means that one unit change in MFs and FIIs is the cause for .001 unit change in BSE Sensex Returns. Therefore, the following ordinary least square multiple regression models can be made with the help of the above result.

BSE Return = 0.01 MFs + 0.01 FIIs -1.711

Figure 1: Residual Plots for BSE Sensex Return



Source: www.moneycontrol.com

The above chart indicates the residual plots for BSE Sensex return. The histogram indicates that there is no outlier in the data. The normal probability plot shows an approximately linear pattern consistent with a normal distribution. The residuals versus fitted value graph shows that the residuals appear to be randomly scattered about zero, except for the outlier in the bottom half of the plot. The residual versus order graph also shows that the residuals randomly scattered around zero. It indicates that the errors are independent of each other and it indicates the normality and goodness of fit of the model. Therefore, it is observed that ordinary least square multiple regression model is fitted properly by residual analysis.

CONCLUSION

The Indian stock market has one of the most modern securities market among all the countries in the world. The market has also witnessed a growing trend of institutionalization that may be considered as a consequence of globalization. The growing thump of institutional investors is the important feature of the developed markets. This paper sets out to find out whether our markets' return has also being dominated by the institutional investors. The combined power of using the direction of the flow of funds from Mutual funds and Foreign Institutional Investments are a strong force. The multiple regression results show that both Mutual funds and Foreign Institutional investments significantly provide its contribution to the Bombay Stock Exchange Sensitivity Index Return in India. Hence, it can be concluded that the quantum of Mutual funds and Foreign Institutional Investments positively helped to increase the return of the Indian stock market.

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