

## **Aftermath of Foreign Portfolio Investment on Paramount Economic Indicators In Indian Scenario: An Empirical Analysis**

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**Abstract:** Foreign Portfolio Investment (FPI) is permitted to enter into our nation just through stock trades either as value or obligation. Money markets is a place at where speculators, regardless of whether Indians or outsiders can contribute or take the assets for capital appreciation. Their choice to contribute or pull back the assets relies on the various components. The different advocates opined that the macroeconomic factors are one of them. Macroeconomics is the evaluation of the country's economy all in all. It investigates the repetitive developments and patterns presence in economy. The day by day exchange of FPI is the explanation for the instability in the securities exchanges and has solid effect on the different full scale financial factors and the economy all in all. Along these lines, the paper endeavours to examine the effect of FPI on Paramount Economic Indicators in Indian Scenario.

**Keywords:** - Stock Trades, Money Markets, Macroeconomic Factors, Economy, FPI

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### **I. Introduction**

National Stock Exchange is one of money markets which go about as a key place in the flow of money where high instability is kept up. From the information perceived in recent years demonstrates clear proof that there is a gigantic venture going into these securities exchanges through different sources and the number of organizations recorded in the National stock trade has likewise expanded essentially. Foreign investment helps the domestic investments by increasing economic activities and capital formation and it makes the domestic market more competitive. Foreign institutional Investors (FIIs) boost up the domestic investment by increasing capital inflows through the secondary markets and by nature, it is very volatile.

Time discrepancy in market instability may continually be clarified by macroeconomic and small scale basic components. Unpredictability in national markets is controlled by world factors and part ascertained by confined market impacts, accepting that the national market is internationally connected. It is additionally unchanging that world variables could have an expanded effect on unpredictability with expanded market combination. Research has likewise demonstrated that capital market advancement strategies as well, are probably going to influence instability. It would hold any importance with strategy producers that the connection between's the two has been found to be sure on account of a few nations.

### **II. Literature Reviews**

**Kumar & Pradhan (2002)**<sup>3</sup> conducted a study to find out the effects of FII inflows on the Indian stock market and concludes that FII investments are more driven by Fundamentals and do not respond to short-term changes or technical position of the market

**Pal (1998)**<sup>6</sup> in his study highlighted that FII flows have failed to invigorate the stock market in India. It further analyses the linkages between the stock market and domestic saving rate both theoretically and at empirical level in context of Indian experience.

**Miguel D. Ramirez (2006)**<sup>4</sup> conducted a study and unearth that that increase in both private and foreign investment per worker have a positive and economically significant effect on the rate of labour productivity growth.

**Mohan (2005)**<sup>5</sup> highlighted that flows of private capital in form of FII in recent years have amplified the Forex reserves in emerging markets and helped in enhancing capital markets in India. The study further analyses the implications of an enlarged FII presence in terms of stock market and macroeconomic volatility. The study concluded that drastic increased in FII flows in Indian economy has shifted the focus of equity market from mutual funds to FII inflows.

**Research Gap**

There is no conclusive evidence in the literature suggesting the pattern of FPI in Indian economy in the last twenty four years and also analysing the impact of FPI on leading Economic indicators in Indian scenario, the present study has been directed to these objectives.

**OBJECTIVES:-**

- To study the pattern of FPI in Indian economy in the last twenty four years.
- To find out the impact of FPI on leading Economic indicators in Indian scenario.

**III. Research Methodology**

**Data collection:**

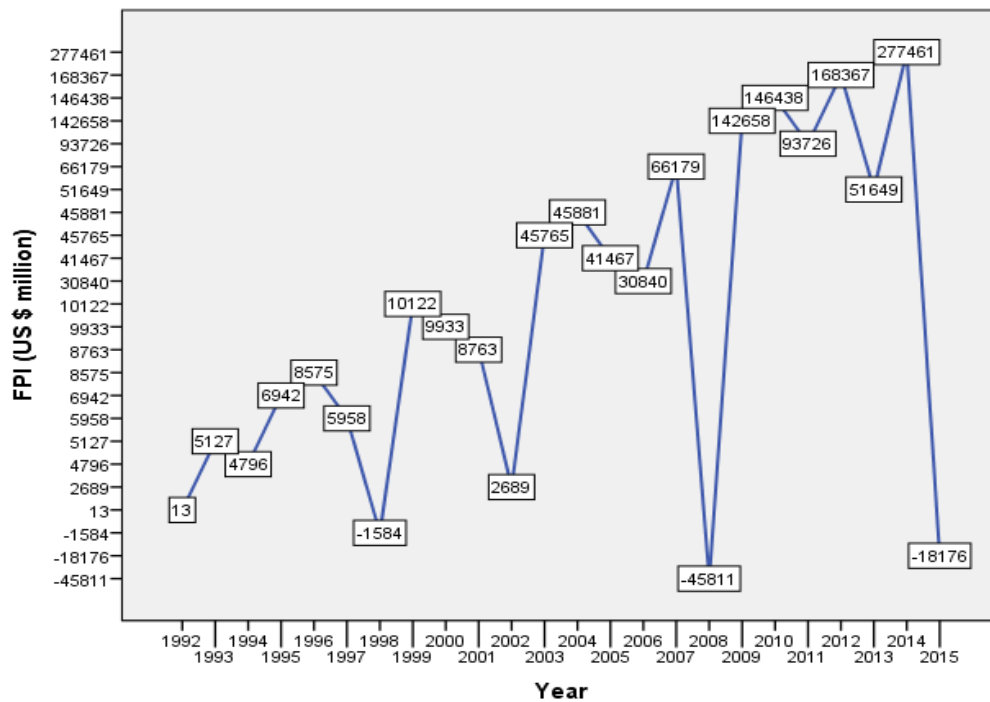
The present research will investigate the relation of economic indicators and FPI for Indian subcontinent. The study is based on the secondary data. The Indian data of Gross Domestic Product growth, BSE SENSEX, NSE NIFTY Foreign exchange reserve(FCA) from 1992 to 2015 have been used to perform the analysis.

**Analytical tools:**

A line in a two-dimensional or two-variable space is defined by the equation  $Y=a+bX$ ; in full text, the  $Y$  variable can be expressed in terms of a constant ( $a$ ) and a slope ( $b$ ) times the  $X$  variable. The constant is also referred to as the intercept, and the slope as the regression coefficient or  $B$  coefficient.

**IV. Data Analysis**

TAB 1: FPI FROM 1992-2015



**Interpretation:**

The above line chart shows the growth of FPI in Indian economy. From 1992 to 2002, there was no significant movement of FPI. In the year of 2008, it was significantly decreased and went to negative amount. On the other hand, in 2011 there was again a drop down. In 2013 it was significantly decreased. So the equation of the model is polynomial which is best fitting among the regression model. The  $R^2$  value 0.440, explains that about 44% of the total variation of the dependent variable by the independent variable.

$$y = -11.17x^4 + 516.1x^3 - 7271x^2 + 36783x - 43730$$

$$R^2 = 0.440$$

**Analysing the impact of FPI on leading Economic indicators in Indian scenario**

The following Equations are being formulated to measure the relationship between FDI and other economic indicators. Where Economic indicators are dependent variable and FDI is independent variable.

$$1. \quad GDP = \alpha + \beta_1 FPI + e \quad (1)$$

$$2. \quad NSE (NIFTY) = \alpha + \beta_1 FPI + e \quad (2)$$

$$3. \quad BSE (SENSEX) = \alpha + \beta_1 FPI + e \quad (3)$$

$$4. \quad FCA = \alpha + \beta_1 FPI + e \quad (4)$$

**Impact of FPI on GDP**

**Tab 2: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.977 <sup>a</sup>	.955	.953	515.93428

a. Predictors: (Constant), FPII

According to Table – 2, it shows the regression model fit summary, the *R* value which is .977, signifies that 97.7% of correlation is present between the dependent and independent variables. Next, the *R*<sup>2</sup> value which is 95.5%, it depicts that the linear regression explains 95.5% of the variance in the dataset when the independent variable in the model affects the dependent variable, and the Adjusted *R*<sup>2</sup> value which is .953 shows that 95.3% of variation is explained by only independent variables that in actuality affect the dependent variable.

**Tab 3: ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	123450562.784	1	123450562.784	463.772	.000 <sup>b</sup>
1 Residual	5856140.066	22	266188.185		
Total	129306702.851	23			

a. Dependent Variable: GDP

b. Predictors: (Constant), FPI

According to Table – 3, the F-test with a high value of 463.772 and degree of freedom (df) with value of 23, states that there is no linear relationship between the any two variables in the model. The p-value (Sig.) of .000 < 0.05, which is less than 0.05, indicates that, in general the regression model is statistically significant and predicts the outcome variable.

**Tab 4: Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-301.596	187.055		-1.612	.121
	FPI	.004	.000	.977	21.535	.000

a. Dependent Variable: GDP

According to Table – 4, the independent variable “FPI” is having a beta value of 0.004. A 1 unit increase in the X1 (FDI) will increase 0.004 unit in the Y (GDP).

$$Y = -301.596 + 0.004X_1$$

**Impact of FPI on NSE**

**Tab 5: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.977 <sup>a</sup>	.955	.953	516.06205

a. Predictors: (Constant), FII

According to Table – 5, it shows the regression model fit summary, the *R* value which is .977, signifies that 97.7% of correlation is present between the dependent and independent variables. Next, the *R*<sup>2</sup> value which is 95.5%, it depicts that the linear regression explains 95.5% of the variance in the dataset when the independent variable in the model affects the dependent variable, and the Adjusted *R*<sup>2</sup> value which is .953 shows that 95.3% of variation is explained by only independent variables that in actuality affect the dependent variable.

Tab 6: ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	123389341.047	1	123389341.047	463.312	.000 <sup>b</sup>
	Residual	5859040.838	22	266320.038		
	Total	129248381.886	23			

a. Dependent Variable: NSE  
 b. Predictors: (Constant), FPI

According to Table – 6, the F-test with a high value of 463.772 and degree of freedom (df) with value of 23, states that there is no linear relationship between the any two variables in the model. The p-value (Sig.) of .000 < 0.05, which is less than 0.05, indicates that, in general the regression model is statistically significant and predicts the outcome variable.

Tab 7: Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-300.256	187.101		-1.605	.123
	FPI	.004	.000	.977	21.525	.000

a. Dependent Variable: NSE

According to Table – 7, the independent variable “FPI” is having a beta value of 0.004. A 1 unit increase in the X1 (FDI) will increase 0.004 unit in the Y (NSE).

$$Y = -300.256 + 0.004X_1$$

**Impact of FPI on BSE**

TAB 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.881 <sup>a</sup>	.776	.766	1467.06612

a. Predictors: (Constant), FPI

According to Table – 8, it shows the regression model fit summary, the R value which is .881, signifies that 88.1% of correlation is present between the dependent and independent variables. Next, the R<sup>2</sup> value which is 77.6%, it depicts that the linear regression explains 77.6% of the variance in the dataset when the independent variable in the model affects the dependent variable, and the Adjusted R<sup>2</sup> value which is .766 shows that 76.6% of variation is explained by only independent variables that in actuality affect the dependent variable.

Tab 9: ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	164254216.998	1	164254216.998	76.316	.000 <sup>b</sup>
	Residual	47350225.903	22	2152282.996		
	Total	211604442.900	23			

a. Dependent Variable: BSE  
 b. Predictors: (Constant), FPI

According to Table – 9, the F-test with a high value of 76.31 and degree of freedom (df) with value of 23, states that there is no linear relationship between the any two variables in the model. The p-value (Sig.) of .000 < 0.05, which is less than 0.05, indicates that, in general the regression model is statistically significant and predicts the outcome variable.

Tab 10: Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	509.182	531.893		.957	.349
	FII	.004	.000	.881	8.736	.000

a. Dependent Variable: BSE

According to Table – 10, the independent variable “FPI” is having a beta value of 0.004. A 1 unit increase in the X1 (FDI) will increase 0.004 unit in the Y (BSE).

$$Y = 509.182 + 0.004X_1$$

### Impact of FPI on FCA

Tab 11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.947 <sup>a</sup>	.898	.893	2720.48423

a. Predictors: (Constant), FPI

According to Table – 11, it shows the regression model fit summary, the R value which is .947, signifies that 94.7% of correlation is present between the dependent and independent variables. Next, the R<sup>2</sup> value which is 89.8%, it depicts that the linear regression explains 89.8% of the variance in the dataset when the independent variable in the model affects the dependent variable, and the Adjusted R<sup>2</sup> value which is .893 shows that 89.3% of variation is explained by only independent variables that in actuality affect the dependent variable.

Tab 12: ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1426568945.288	1	1426568945.288	192.753	.000 <sup>b</sup>
	Residual	162822757.757	22	7401034.444		
	Total	1589391703.045	23			

a. Dependent Variable: FCA

b. Predictors: (Constant), FPI

According to Table – 12, the F-test with a high value of 192.753 and degree of freedom (df) with value of 23, states that there is no linear relationship between the any two variables in the model. The p-value (Sig.) of .000 < 0.05, which is less than 0.05, indicates that, in general the regression model is statistically significant and predicts the outcome variable.

Tab 13: Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-832.943	986.326		-.844	.407
	FII	.012	.001	.947	13.884	.000

a. Dependent Variable: FCA

According to Table – 13, the independent variable “FPI” is having a beta value of 0.012. A 1 unit increase in the X1 (FDI) will increase 0.012 unit in the Y (FCA).

$$Y = -832.943 + 0.012X_1$$

### V. Conclusional Observation

1. This research manifested that FPI have positive impact on stock market development indicators (BSE and NSE). The correlation result shows that there is a positive correlation among the economic indicators FPI, NSE and BSE (0.977, 0.881) and are also statistically significant with p value being less than 0.05.

**Dhiman & Sharma (2013)**<sup>1</sup> probed that the influx of capital in terms of Foreign Portfolio Investors (FPI) has a positive impact on the economy as well as the capital markets. They concluded that there is strong degree of correlation between FPI & Sensex, and FPI & Nifty.

2. Another observation of this research shows that FPI also have positive impact on GDP in India. The correlation result shows that there is a positive correlation among the economic indicators FPI and GDP (0.977) and is also statistically significant with p value being less than 0.05.

**Yameen & Ahmad (2015)**<sup>7</sup> have conducted a study and concluded that there is a strong positive relation between FPI and GDP

3. The third observation of this research shows that FPI also have positive impact on FCA in India. The correlation result shows that there is a positive correlation among the economic indicators FPI and FCA (0.947) and is also statistically significant with p value being less than 0.05.

**Kotishwar (2016)**<sup>2</sup> found that FPI have a significant impact on foreign exchange reserves.

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