

# An Analytical Study of Impact of FDI on Indian Stock Market

*Khushbu Sahu*

Assistant Professor  
Chameli Devi Group of Institutions, Indore

## ABSTRACT

Extreme levels of globalization have resulted in double-digit economic growth, which has intensified competition and sped up the pace of innovation. However, the FDI application has significantly influenced the growth and volatility of the Indian stock market. As a result, the current research makes an effort to assess the impact of FDI inflows on fluctuations of the SENSEX and Nifty on the BSE (Bombay Stock Exchange) and NSE (National Stock Exchange) throughout the study period. The research is initially based on last eight years of secondary data for the period from April 2015 to March, 2023. The Simple Linear Regression, Karl Pearson's coefficient of correlation, Analysis of Variance, Trend Percentage etc. are the tools used for the analysis of data using the statistical method in MS Excel. The relationship between Foreign Direct Investment (FDI) with BSE-Sensex is 0.733; NSE Nifty is 0.724. It indicated that the two variables are in partial positive relation with FDI. This research depicted that flow of FDI in India has significant impact on BSE SENSEX and NSE Nifty movements. By keeping this in mind that Foreign Capital has significant impact on Indian Market, they must attract to the Foreign Capital in India by offering more opportunities for the growth of the economy.

## INTRODUCTION

Extreme levels of globalization have resulted in double-digit economic growth, which has intensified competition and sped up the pace of innovation. Foreign direct investment inflow has consequently emerged as an informing indicator of economic development in both developed and developing nations. A multinational company can expand its influence and business operations through accessing new consumption and production markets in India with the help of FDI. It can attain access to scarce resources like precious metals and fossil fuels, as well as skilled and unskilled labor, management know-how, and technologies. Foreign investment facilitates the flow of sophisticated technology into the nation

and tends to help the industry advance into advanced technology, in addition to helping to create significant economic activity and employment. Earlier research have shown FDI inflow is one of several macroeconomic factors—including GDP, inflation, exchange rates, and others—that have significantly influenced the growth and volatility of the Indian stock market. Numerous empirical studies have demonstrated how important FDI has been to the host countries' overall economic development and growth. Therefore there is importance of the analysis of impact of FDI on the Indian stock Market.

Any investment that flows from one country into another is known as foreign investment. Inflow of investment from other countries is encouraged since it complements and stimulates domestic investments in capital-scarce economies of developing countries. Since 1991 Foreign investments in the country are allowed to take the form of investments (thru stock market) in listed companies referred as FII investments and investments in listed/unlisted companies other than through stock exchanges are referred as Foreign Direct Investment. Additionally, FDI is an investment made by a foreign company, into a company based in another country, companies making such direct investments have a significant degree of influence and control over the company into which the investment is made.

### **LITERATURE REVIEW**

Honey Gupta (2017) discovered a considerable association between foreign direct investment and the stock market, as well as a major effect on the movements of the BSE Sensex and NSE nifty. It suggests that for the smooth and quick development of the stock market and the economy as a whole, the Indian government and its implementing organizations should endeavour to bring higher FDI. Nagpal et al. (2016) analysed the impact of FDI and FII flow on Indian Stock market including BSE Sensex and NSE Nifty, during the period from 2005-06 to 2014-15. They concluded that impact of flow of FDI & FII on Indian stock market was significant. Tamilarasu.J. (2015) used correlation matrix analysis and simple regression to examine the extent to which foreign direct investment contributed to the volatility of various BSE and NSE indices between April 2009 and March 2014. The analysis showed that while FDI and BSE 100 have a strong correlation, foreign direct investment does not significantly affect the movement of the stock market indices BSE100, BSE200, BSE500, BSESENSEX, CNX100, CNX500, CNX MIDCAP, and CNX NIFTY. Prasanna (2008) has focused on how foreign institutional investment has impacted various companies,

particularly those that are part of the Bombay Stock Exchange's Sensex index. It investigated the link between foreign institutional investment and specific firm traits like ownership structure, financial performance, and stock performance. It has been noted that foreign investors made greater investments in businesses where a larger percentage of shares are held by the general public. The foreign investments and the promoters' holdings are at odds with one another. Foreign investors favour businesses where the promoters' family ownership is not very significant. Share returns and earnings per share are among the financial performance metrics that impacted FII's financial decisions.

### **OBJECTIVE**

- To analyse the effect of foreign direct investment inflow on BSE Sensex and NSE Nifty.
- To study the trends of FDI inflows in India.

### **HYPOTHESES**

H<sub>01</sub>:- There is no significant impact of FDI inflow and movement on BSE Sensex.

H<sub>11</sub>:- There is significant impact of FDI inflow and movement on BSE Sensex.

H<sub>02</sub>:- There is no significant impact of FDI inflow and movement on NSE Nifty.

H<sub>12</sub>:- There is significant impact of FDI inflow and movement on NSE Nifty.

### **RESEARCH METHODOLOGY**

**The research methodology is as follows:**

#### **PERIOD OF THE STUDY**

The present study covers the time period of 10 years from April, 2015 to March, 2023.

#### **DATA COLLECTION**

This research is based on secondary data. The required data related to FDI have been taken from various sources i.e. Bulletins of Reserve Bank of India, publications from Ministry of Commerce, Govt. of India. The BSE Sensex and NSE Nifty data is picked up from the websites of BSE India and NSE India respectively. Daily closing index value are taken and averaged to get the index value for each year, which is considered as more representative figure of index for the entire year rather any one day's/month's closing figure of the index.

#### **ANALYTICAL TOOLS & TECHNIQUE**

The Simple Linear Regression (step-wise method), Karl Pearson's coefficient of correlation, Analysis of Variance, Normal P-P plot, Scatter plot, Histogram,

descriptive statistics (Mean & Standard Deviation), Compounded Annual Growth Rate, Trend Percentage etc. are the tools for the analysis of data.

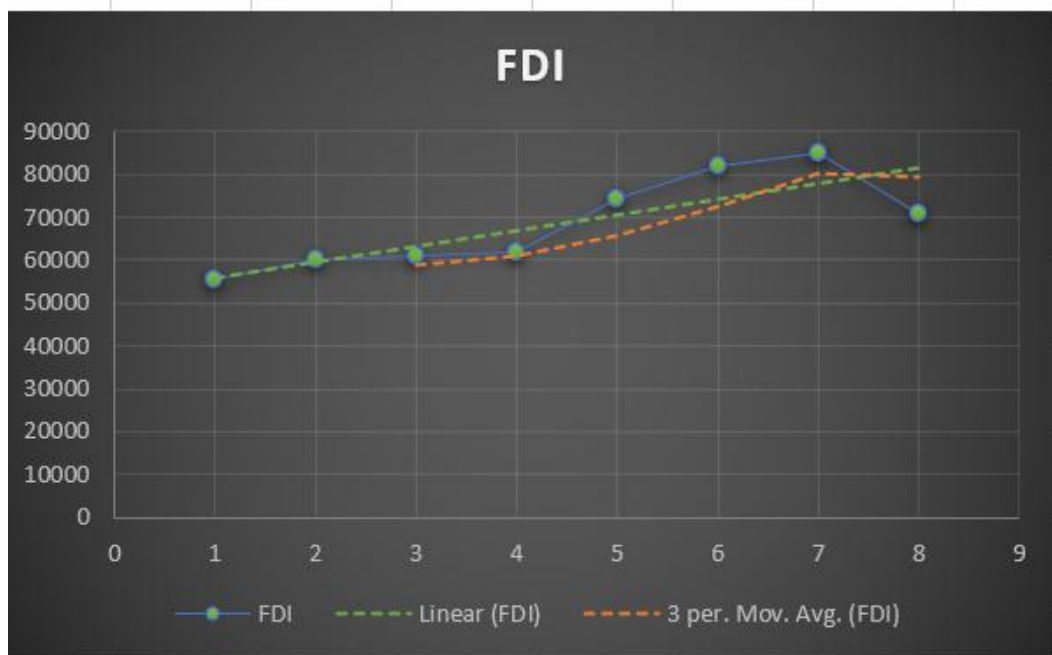
### ANALYSIS AND DISCUSSION

Table No.1 presents the amount of flow of FDI in India in terms of US\$ million, the BSE Sensex and Nifty during the period of study. The table clearly depicts that, FDI total inflows in the year 2015-16 was US \$ 55457 million and thereafter it increased in subsequent years to US \$ 84,835 million in 2021-22. But in the year 2022-2023 observed a fall in FDI inflows in India due to various factors, including the ongoing conflict between Russia and Ukraine, changes in US monetary policy, and other global uncertainties. The 2023 Economic Survey indicates a rebound in incoming FDI, nevertheless. The National Single-Window System (NSWS), which streamlines the approval and clearance process for investors, entrepreneurs, and businesses, sectorial production-linked incentive (PLI) schemes, growth prospects in tier-2 and tier-3 cities, and new investment facilitation measures are all the reasons for this. The rise of India's high-tech industry, the size of the market, and improvements in the digital and technological environment is additional factors accelerating the country's growth trajectory.

**Table 1: Year-wise FDI, BSE SENSEX & NSE Nifty (US \$ Million)**

Year	FDI	Trend	BSE Sensex	NSE Nifty
2015-2016	55457	100	26322.1	7983.8
2016-2017	60,220	108.58	27338.22	8421
2017-2018	60,974	101.25	32396.83	10030
2018-2019	62,001	101.68	35971.79	10859.5
2019-2020	74,391	119.98	39360.89	11488
2020-2021	81,973	110.19	40015.31	12016.89
2021-2022	84,835	103.49	55774.58	16662.7
2022-2023 (P)	70970	83.65	58307.52	17335.9
Total	550821	-	315487.2	94797.79
Mean	68852.625	-	39435.91	11849.72
S.D.	10860.9386	-	11972.03	3472.65

Source: Compiled from Fact Sheet on Foreign Direct Investment, DIPP,  
www.bseindia.com and www.nseindia.com



The beginning trend percentage of FDI has been at 100% level and it is showing the increasing trend but not constant increase in trend. It went down also to 83.65 % in the year ended 2023, which was lowest among over years. Three Years moving average showing the fluctuating trend of the FDI.

**IMPACT OF FDI ON INDIAN STOCK MARKET**

To study the impact of FDI on BSE SENSEX and NSE Nifty during the period of study, FDI is taken as independent variable and BSE SENSEX and NSE Nifty are taken as dependent variable. For the purpose of analysis Simple Linear Regression has been applied using Excel advance data analysis tool.

Model Building:

$$Y = a + b X$$

Model (a):

$$SENSEX = a + b FDI$$

Model (b):

$$NIFTY = a + b FDI$$

Where, a = intercept    b = slope    Y = Dependent Variable    X = Independent Variable    The result of Regression Analysis is depicted in the tables below:

**Table 2: Model Summary**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Standard Error
BSE Sensex	0.733439752	0.53793387	0.460922849	8790.08657
NSE Nifty	0.724341	0.52467	0.445448	2586.022

Source: Author's Computation

The table 2 is the model summary revealed the strength of the relationship between the model and the dependent variable i.e., R, the Karl Person's correlation coefficients. Relation between Foreign Direct Investment (FDI) with BSE-Sensex is 0.733; NSE Nifty is 0.724. It indicated that the two variables are in partial positive relation with FDI, which was found significant at 5 percent level of significance. R square, the coefficient of determination, showed the percent of variation in the dependent variable as explained by the model. Table 2 indicated that 53.8 percent and 52.5 percent of the variation in BSE SENSEX and NSE Nifty was explained by the model, FDI respectively.

**Table 3: ANOVA**

Model		df	SS	MS	F	Significance F
BSE Sensex	Regression	1	539712293	539712293	6.985154	0.038388989
	Residual	6	463593731.4	77265621.91		
	Total	7	1003306024			
NSE Nifty	Regression	1	44290051	44290051	6.622802	0.042137
	Residual	6	40125058	6687510		
	Total	7	84415109			

*Source: Author's Computation*

The ANOVA table 3, tests the acceptability of the model from a statistical perspective. The Regression row displays information about the variation accounted for by the model. The Residual row displays information about the variation that has not been accounted by the model. F statistic is found significant, since the p values (0.038 and 0.042 respectively for Sensex and Nifty) are less than 0.05, so null hypotheses  $H_{01}$  and  $H_{02}$  are rejected and the alternative hypotheses  $H_{11}$  and  $H_{12}$  are accepted. Thus, there exists a linear relationship between the variables in the model. Hence, it has been concluded that Flow of FDI has significant impact on BSE SENSEX and NSE Nifty movements.

**Table 4: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Significance
		B	Standard Error	B		
BSE Sensex	Constant	-16229.48808	21289.93388		-0.762308054	0.474767
	FDI	0.808471617	0.305898097	0.733439752	2.642944253	0.038389
NSE Nifty	Constant	-4096.48	6263.447		-0.65403	0.537339
	FDI	0.231599	0.089994	0.724341	2.57348	0.042137

*Source: Author's Computation*

The Unstandardized coefficient B = Beta value in Table 4 gives the slope value of the regression model and also indicated that how much the Dependent Variables including BSE Sensex and NSE Nifty are dependent upon the Independent variable. In table 4 the b-value for FDI is 0.808, it means that if FDI increases by 1 unit, Sensex would increase by 0.808. Similarly, for every 1 unit increase in FDI, NSE Nifty will increase by 0.231.

### **FINDINGS**

The flow of Foreign Direct Investments have been indicated a fluctuating trend during the period of the study.

There is a direct linear relationship between FDI inflow and movement & BSE Sensex and FDI inflow and movement & NSE Nifty, means that if FDI increases then BSE Sensex and NSE Nifty would also increase in same direction.

### **CONCLUSION**

The findings indicated that there is direct linear relationship between FDI inflow and movement on BSE Sensex and NSE Nifty. Inflow of FDI is helping to speed up the Indian economy, giving industry opportunities for technology upgrading, access to international managerial skills and practice, better utilisation of natural and human resources as well as competitive advantage with greater efficiency.

By keeping this in mind that Foreign Capital has significant impact on Indian Market, they must attract to the Foreign Capital in India by offering more opportunities for the growth of the economy. As due to great pandemic India suffered a lot although it has not been lost the interest of foreign capitalist but global events may affect the Indian economy as recent Russia Ukraine war, in this case Indian government need to focus on attracting to the foreign investors with political stability.

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