

Impact of FII on Indian Stock Market

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Abstract: *In this context, the purpose of the current paper is to examine the connection between FDI and the Indian capital market. With progressive liberalization of the FDI regime, India has become one of the best places for foreign investments. This development has been coupled with a number of developments in the Indian capital market, pointing at some level of dependency of these two variables. Thus, this study aims at examining the interaction between FDI and indices such as NIFTY 50 and BSE Sensex, studying the connection between FDI and these variables.*

The research methodology can be characterized as descriptive. In this case, the use of secondary data is

proposed; more specifically, data from websites of Bombay Stock Exchange, National Stock Exchange of India, and Department for Promotion of Industry and Internal Trade will be used. The analysis period covers ten years, i.e., from January 2010 to December 2019, and quarterly data will be analyzed using E-Views Version 9. In order to make the study robust, the Augmented Dickey Fuller (ADF) test for the presence of a unit root is used to test stationarity, while multiple regression analysis is used to test the effect of FDI on the stock market indices. The results show that there is a significant effect of FDI on the NIFTY 50 and BSE Sensex index

Keywords: *Capital Market, Foreign Direct Investment, Foreign Institutional Investors, stakeholders, Indian stock market*

I. Introduction

Foreign direct investment (FDI) is an investment made by a person or company into business operations conducted in another nation and aims to establish ownership and effective control of such enterprises. According to the definition given by the International Monetary Fund, foreign direct investment is an investment made to attain a lasting interest in an enterprise in another country where the investor seeks to have an effective voice in management. Foreign direct investments should be distinguished from portfolio investments because in this case, the foreign investor purchases the stocks of an international company without controlling it.

The last decades have brought a number of changes for India, including the increased inflow of foreign

investments. Due to economic reforms and changes in the investment environment in India, the latter became one of the best places for attracting investments. The increasing flow of FDI affected not only the development of the Indian economy but also had an impact on the Indian stock market.

The Indian capital market has grown to be a vital part of the global financial market, where both domestic and foreign investors participate in trading. Many researchers have shown that the movement of the stock market is influenced by macroeconomic factors such as GDP, inflation, exchange rates, and foreign direct investment (FDI). Thus, examining the effect of FDI on stock market indices is very important.

NIFTY 50 index is one of the top stock market indices of India. It indicates the performance of the top 50 companies of the National Stock Exchange of India. Besides FDI, Foreign Institutional Investment (FII) has also played a vital role in the development of the stock market. FIIs, including mutual funds, pension funds, hedge funds, and insurance companies, have been playing a significant role in the Indian stock market.

II. Objectives:

1. For analyzing the growth trend of FDI inflows in India on a country-wise basis.
2. For analyzing the growth trend of FDI inflows in India on a sector-wise basis.

Scope:

This study involves an evaluation of the relationship existing between foreign direct investment inflows and the performance of the Indian stock market. In addition, this study involves the study of patterns in terms of FDI inflows according to countries and sectors in India. Further, the effect that FDI inflows have on important stock market indices such as the BSE Sensex and the NIFTY 50 will be examined.

FIIs indicate the increasing level of confidence in the economy of India from the rest of the world. They have helped improve the efficiency of the market, provided more capital for businesses, and diversified the portfolio of investments. However, they have added to market volatility due to heavy inflows and withdrawals.

3. For assessing the effect of FDI inflows on important stock market indices like the BSE Sensex and NIFTY 50.

Scope for this research is restricted to the application of various statistical tests such as the Augmented Dickey Fuller (ADF) test as well as various multiple regression models. This study will not involve primary data collection or any other macroeconomic variable apart from those incorporated in the model. All in all, this study provides an opportunity for a focused exploration of the effects that FDI inflows have on the performance of the Indian stock market.

III. Review of Literature

However, Kumar et al. (2019) noted that after the introduction of Make in India campaign, there was a positive trend recorded in regard to FDI flows into India due to favorable conditions created by Indian authorities. This led to India being ranked higher on the list of most attractive nations for foreign investment, with India's rank rising from 15th position in 2014 to the 10th position in 2015.

It is reported that as per the estimates of United Nations Conference on Trade and Development (2016), foreign investment into India was approximately USD 40 billion during 2015-16,

marking a growth of about 30% against the previous years. In the same period, Singapore was reported to be the largest source of FDI in India.

As per the findings of this study, any global financial crisis has been shown to influence FDI flows negatively resulting in withdrawal of foreign investments temporarily. When it comes to sector-wise FDI inflows in India, it is reported that the share of services industry was the highest with 19.51%, while construction development industry had 11.56% FDI inflows.

Abubakar and Danladi (2018) sought to evaluate the effect of Foreign Direct Investment (FDI) on the development of stock markets in Nigeria using yearly data for the period between 1981 and 2016. In this study, the stock market development was captured using market capitalization, alongside other variables such as FDI inflow, exchange rate, inflation rate, and gross domestic savings.

From their analysis, Abubakar and Danladi found that FDI had a positive yet statistically insignificant effect on stock market development. On the other hand, the exchange rate and gross domestic savings had positive and statistically significant effects on the development of stock markets. Lastly, the inflation rate had a negative but statistically insignificant effect on the stock market during the study period.

The study carried out by Mannar (2018) was based on the trends in global FDI flowing to India and how much FDI has flowed into India. Besides, the impact of FDI on the development process of India in terms of trends in growth and contribution of FDI was examined in the research. As revealed in the research, there exists a strong correlation between FDI inflows and indices like BSE Sensex and NIFTY 50. From the results of the research, it can be seen that trends in FDI flows affect the indices; therefore, Sensex and NIFTY are greatly influenced by the foreign investment in India.

In a study conducted by Gupta (2017), it was found that there is an increasing trend in FDI flows to India, except for the periods from 2009-10, 2010-11, and 2012-13. It is noted that the author found a direct linear association between the increase in FDI inflows and changes in the stock markets, which showed that FDI positively affected market performance.

Thus, there is a moderate degree of positive correlation between FDI and the BSE Sensex index as well as FDI and the NIFTY 50 index. In addition, it was determined that the effect of FDI on the changes in these indicators is statistically significant.

In addition, as stated by Sarkar (2017), the correlation between foreign direct investments (FDI) and foreign institutional investments (FII) in the economy growth of India was studied. In this regard, GDPG was considered the dependent variable. It measures changes in gross domestic product of a country.

For the analysis, secondary data was used for the period between 2000 and 2016 (for 17 years). The data was obtained through online sources and then analyzed using E-Views 9.5 statistical package. Firstly, a normality test was performed, after which unit root tests were conducted. Two regression time series models were constructed in order to analyze the impact of FDI and FII on economic growth of India.

The results show that there is a significant influence of both FDI and FII on the economic growth of India.

In their paper, Yadav and Kumar (2016) focused on analyzing the importance of FIIs in developing countries, stressing their critical importance in shaping market trends and outcomes. The authors noted that foreign exchange reserves and exchange rates are critical determinants of the FII's decision-making process.

Moreover, it was reported that the FIIs usually tend to adopt certain investment strategies, such as being positive feedback traders, engaging in short-term investments, targeting blue-chip firms, and practicing herd behavior. It was also established that the joint influence of macroeconomic indicators and stock market indicators is much more significant than the separate influence of either group.

Furthermore, it was revealed that the sector indices tend to have a stronger influence on FII behavior compared to other indicators. In terms of macroeconomic indicators, the Index of Industrial Production and exchange rates were determined to be the most important determinants of FII flows into the Indian economy.

Kapoor & Sachan (2015) studied the pattern of Foreign Direct Investment (FDI) and Foreign Institutional Investment (FII) inflows in India. The study has also explored the relationship between these two types of capital inflows and its effect on Indian stock markets, particularly the BSE Sensex index and NIFTY 50.

This study was conducted using secondary data, and correlation and regression analysis were applied to understand the relationship between these variables. It has been found from the findings of the research

that there is a significant relationship between foreign direct investment (FDI), foreign institutional investment (FII), and Indian stock market performance.

The study conducted by Parvathi (2015) has been carried out to examine the pattern of FDI inflows into India during the years from 1991 to 2014. Along with identifying the pattern of FDI flows, the research study aims at identifying the key factors affecting FDI inflows, which include macroeconomic factors like GDP, WPI, exchange rate, exports, and foreign exchange reserves.

The purpose of conducting this study has been to identify the factors that play a significant role in influencing FDI inflows into India. It can be observed that different macroeconomic factors have varying influences on FDI flows.

IV.Limitations:

1. The entire data for the study has been sourced from secondary sources such as government and stock exchange websites, which may introduce some lags in the data and thereby reduce the reliability of the results.
2. Only aggregate foreign direct investment flows have been analyzed without considering

differences between equity capital inflows, reinvested earnings, or other forms of capital.

3. The results are based on quarter-wise data and may not capture any short-term fluctuations in the market.
4. This research is restricted only to the Indian setting, and hence the results obtained from this study cannot be applied to other countries.

V.Research Methodology:

Nature of Research Design

This research can be categorized under the type of descriptive and analytical research designs. It intends to analyze the impact of FDI inflows on the Indian

stock market, including the country-wise and sector-wise FDI analysis in India.

Type and Source of Data Used

Secondary data have been used for conducting the research. The necessary data have been gathered

from credible sources such as the Department for Promotion of Industry and Internal Trade website,

Bombay Stock Exchange website, and National Stock Exchange of India website

Variables Used

- Independent Variable: Foreign Direct Investment (FDI) flows to India
- Dependent Variables: Performance of the Indian Stock Market as measured by BSE Sensex Index and NIFTY 50 Index

Methods of Analysis and Tools Used

For analysis and evaluation, the following methods have been used:

Scope of Analysis

The scope of analysis includes the effect and relationship of FDI flows on the performance of the

- Control Variables (with respect to availability of data from relevant literature sources): Macroeconomic factors like exchange rates, inflation, and GDP (if available in literature sources)

- Descriptive statistical analysis to determine trends in foreign investment and the stock market indices

Indian Stock Markets, together with the patterns of FDI inflows by country and sector.

VI.Data Analysis and Interpretation:

The analysis and interpretation of the data undertaken in this study involve investigating the association between FDI flows and the performance of the Indian stock market measured by the BSE Sensex and NIFTY 50 indexes in quarterly secondary data for the years 2010 to 2019. The research starts by conducting trend analysis of the FDI flows, thereafter undertaking stationarity testing through the Augmented Dickey Fuller (ADF) unit root test followed by correlation and regression analysis in E-Views. The result of the trend analysis undertaken indicates that the trend of FDI flows to India over the entire study period shows an upward trend, implying growing global investor confidence in India due to liberalization of the economy, policy changes, and increased market opportunities. There are periodic deviations observed due to factors such as global economic uncertainties, fluctuation in exchange rates, and policy changes.

Such continued flow of foreign investments into the country shows that macroeconomic stability, economic growth expectations, and structural changes have made India an attractive destination for foreign investors. In performing stationarity test of data series using the Augmented Dickey Fuller Test, it is found that all data series namely FDI inflow, Sensex, and NIFTY indices are not stationary at their level form but become stationary after taking first difference of the same. Such an exercise is necessary in econometric analysis because non-stationary time series could produce spurious regression. Thus, stationarity is a very important criterion to ensure validity and reliability of regression analysis. From the correlation results, it is found that there is a positive correlation between FDI flows and stock index levels. It means that an increase in foreign investments will be followed by an increase in stock

price indices. Such a finding suggests that FDI inflows improve liquidity and market capitalization of the markets. Multiple regression also confirms such a finding.

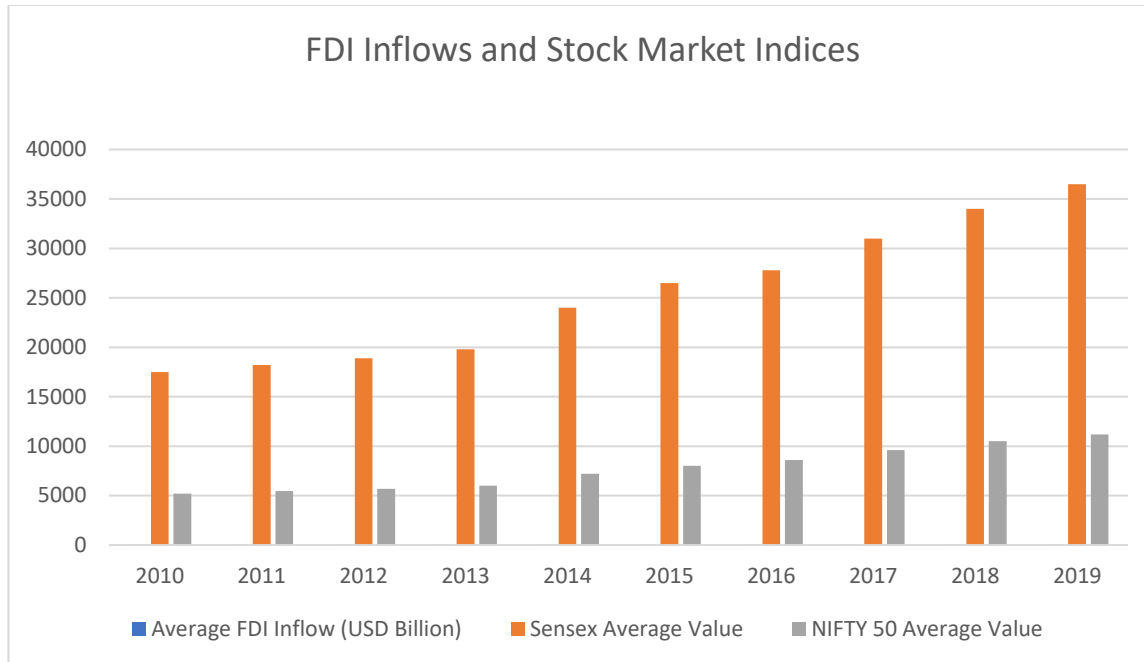
This means that the flow of foreign investments plays a key part in determining the strength of Indian equity markets due to increased demand and greater stability in the market system. Nevertheless, it should be noted that this connection depends on other economic variables, such as the level of inflation, interest rates, movements in the currency

exchange rate, etc. In any case, regardless of other variables and macroeconomic conditions, it is evident that the research findings confirm the importance of FDI flows for the development of India's stock market. In addition, the presence of foreign investors not only brings money into the market but also boosts investor confidence, which leads to improved efficiency and higher valuations. Thus, based on the results of empirical analysis, it can be concluded that there is a significant and positive link between FDI and Indian stock market performance.

Table 1: Illustrative Trend of FDI Inflows and Stock Market Indices (Quarterly Averages)

Year	Average Inflow (USD Billion)	Sensex Average Value	NIFTY 50 Average Value
2010	1.8	17,500	5,200
2011	2.1	18,200	5,450
2012	2.4	18,900	5,700
2013	2.9	19,800	6,000
2014	3.3	24,000	7,200
2015	3.8	26,500	8,000
2016	4.2	27,800	8,600
2017	4.6	31,000	9,600
2018	4.9	34,000	10,500
2019	5.2	36,500	11,200

Chart 1: FDI Inflows and Stock Market Indices



As can be seen clearly from the table above, there is a definite trend of growth in the value of foreign direct investment as well as the stock market index throughout the entire period of study. Foreign direct investment, which was around \$1.8 billion in 2010, grew to \$5.2 billion during the year 2019. Growth in FDI suggests the growing investment potential in India. Similarly, the rise in the Sensex & NIFTY 50 index indicates growing investment potential in India's stock market. Indeed, there is a parallel trend between the two indicators, which reinforces the empirical findings of the correlation and regression analysis. Both the variables demonstrate a positive correlation between each other. This means that when the flow of foreign direct investment is high in India, then the stock market indices are also high. On the other hand, when there is low foreign direct investment, then the stock market indices are also low.

Further extending the findings from the above analysis, the outcomes obtained can serve as an

illustration of the significant impact exerted on the performance of the financial markets in India via external factors, specifically through FDI flows in the period analyzed in the present work. First of all, the steady increase observed in the FDI and both considered stock market indices (BSE Sensex and NIFTY 50) indicates the reinforcing effect of the capital flowing in from abroad on equity markets. One possible interpretation of this effect is the increase in liquidity observed within the financial sector as a result of inflow of FDI; this, in turn, contributes to greater trading activity and the improvement in equity valuations. In addition, the capital injected into the market by foreign investors stimulates the demand for stocks, thus raising their prices and helping market grow.

A further explanation for the findings is that the impact of FDI on stock market returns does not only consist of short-term effects but also consists of medium to long-term effects resulting from structural improvements in the economy. In light of

the improved investment policies and the overall ease of doing business in addition to initiatives like Make in India, the country has become much more appealing to investors, hence the flow of foreign investment to the country. This continuous nature of flows in addition to its impacts on the stock markets explains the significant relationship found by regression analysis and not the insignificant one.

From an economic standpoint, the results imply that FDI flows aid the process of financial deepening in India. With higher foreign investments, firms can benefit not only from greater capital but also improve their governance practices and foster transparency and good financial practices among businesses. These aspects indirectly contribute to increased market performance due to reduced risks and heightened confidence in companies listed on the exchange. In addition, foreign investors tend to have advanced strategies for investing and connect local markets with other international markets, facilitating further integration of India's stock market into the international environment.

Another aspect worth considering is that FDI positively impacts market performance, yet at the same time, this correlation may be affected by various global factors such as international financial

crisis, political tension, and variations in international interest rates. Due to these external forces, the connection between FDI and market performance may be weakened for some time periods, although its positive nature stays persistent throughout.

Just as important is the observation that capital flows in developing nations like India greatly affect their stock markets. Any slight increase in FDI will most definitely have a bearing on the performance of stock indices, because of the generally high levels of volatility among investors. This is why the need for sustainable macroeconomic policies is emphasized, in order to ensure that foreign investors remain confident in the Indian stock market.

Finally, the extensive interpretation reveals that foreign direct investments in India not only constitute foreign sources of financing but also contribute significantly to its stock market development. The positive correlation observed in the findings demonstrates how the impact of foreign investment in improving market efficiency, depth, and stability should not be ignored. Further investments are also essential to foster future growth in the market.

VII. Findings:

1. FDI inflows show an overall increasing trend during the study period (2010–2019).

From the above analysis, it can be seen that foreign direct investments have consistently increased over time in India. This shows that investors have become increasingly confident of their investments in India because of various economic reforms introduced in the country.

2. Minor fluctuations are observed in certain years of FDI inflows.

Although the long-term trend is encouraging, there have been some short-term fluctuations that can be explained by certain factors impacting the world economy. However, the short-term fluctuations have not impacted the general trend of the increase in FDI inflows.

3. A positive relationship exists between FDI and stock market indices.

From correlation analysis, there is a positive relationship between FDI and both BSE Sensex and NIFTY 50. This means that when the level of FDI increases, there is an improvement in stock performance.

4. FDI has a statistically significant impact on stock market performance.

Regression results clearly show that foreign direct investments (FDIs) positively affect both BSE Sensex and NIFTY 50. Thus, we can say that any increase in foreign investment is followed by an improvement in stock performance. We can conclude that FDI plays an important role in affecting the liquidity position, confidence level, and general direction of the Indian stock market.

VIII. Conclusion:

The current study attempts to explore the connection between FDI inflows and the performance of the Indian stock market measured by the BSE Sensex and the NIFTY 50 indices, based on secondary data for quarters ranging from 2010 to 2019. Trend analysis, ADF test for unit roots, correlation analysis, and multiple regressions were applied to analyze the type and level of association between the variables under study. It is evident from the results of the study that there has been a steady upward trend in FDI inflows in India over the time period considered, suggesting positive investor sentiment and economic stability. It has been found through econometrics that FDI inflows positively and significantly affect the stock market indices.

although not the only factor. All in all, it has been established that the role of Foreign Direct Investment in the development of the Indian stock market cannot be overlooked, especially in the chosen period.

Therefore, from the findings of the research, it can be deduced that FDI has played an instrumental role in the development of the Indian capital market, with improved liquidity levels and market sentiment playing a pivotal role. In addition, the positive association between the foreign direct investment and stock market indices further illustrates the significance of FDI in ensuring financial stability and increasing the efficiency of the capital markets. Nevertheless, there are other external factors that may influence the relationship, hence implying that FDI is one of the factors driving stock market trends,