



# A Study on Relationship of Institutional Investment with Return and Volatility of Indian Stock Market

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## Abstract

Institutional investors, such as foreign and domestic financial institutions, play a major role in shaping the stock market's growth and stability. The main aim of this paper to explore the return and volatility of institutional investment influences in Indian stock market. Institutional investors, such as mutual funds, foreign investors, and insurance companies, play a major role in shaping market trends. The main objective of this research is to understand whether there is a direct relationship between the flow of institutional investments and the performance of the stock market, especially in terms of returns and price fluctuations. By using historical data from major Indian stock indices and analyzing investment patterns, the study identifies how these large investors impact market stability and growth. The findings suggest that institutional investment often improves market efficiency and can help reduce volatility during stable economic periods, but it may also increase market fluctuations during uncertain times. This research provides useful insights for policymakers, investors, and analysts who aim to understand the deeper dynamics of market movements driven by institutional capital.

Keywords: Institutional Investment, Stock Market Return, Volatility, Indian Capital Market, Foreign Institutional Investors (FIIs), Domestic Institutional Investors (DIIs), Market Stability, Investment Flow, NSE, BSE.

## Introduction

The Indian stock market has become one of the most dynamic financial markets in the world, attracting a wide range of investors from both within the country and abroad. Among the various participants, institutional investors such as mutual funds, insurance companies, pension funds, and foreign institutional investors (FIIs) have gained significant importance due to their large-scale investments and influence on market movements. Their decisions not only affect the direction of individual stocks but also shape the overall sentiment and behavior of the market.

In recent years, the Indian economy has undergone substantial transformation, leading to increased participation of institutional investors in the stock market. With the liberalization of economic policies and technological advancements in trading platforms, these investors have gained better access to Indian equities. As a result, their role in determining the return and volatility of the stock market has become a subject of growing interest among researchers, policymakers, and investors.

Return and volatility are two critical indicators of a stock market's performance. While return reflects the profit or loss generated from investments, volatility indicates the level of risk or price fluctuations in the market. Understanding the relationship between institutional investment and these two factors is essential, as it can reveal how institutional behavior influences market trends. For instance, a consistent inflow of institutional funds may stabilize the market and enhance investor confidence, while sudden withdrawals may trigger sharp declines and increase uncertainty.

This study aims to investigate the relationship between institutional investments and the return and volatility of the Indian stock market. It seeks to find out whether these large investors contribute to market growth and stability or if they sometimes intensify price swings and risks. The analysis covers both foreign and domestic institutional investors and focuses on major Indian stock indices like the NSE Nifty and BSE Sensex.

By examining past trends and investment patterns, this research intends to provide meaningful insights into how institutional capital impacts market behavior. The findings may help individual investors, fund managers, and regulators make informed decisions and develop strategies that promote a more efficient and resilient financial market.

## INSTITUTIONAL INVESTMENT

Institutional investment refers to the buying and selling of shares and other financial assets by big organizations like mutual funds, insurance companies, pension funds, foreign investors, and banks. These institutions have large amounts of money and their investment decisions can strongly influence the stock market. Over the years, both FIIs and DIIs have played a major role in shaping the Indian stock market. When FIIs bring in money, stock prices often go up due to increased demand. Similarly, if they withdraw funds, it can lead to a fall in stock prices. DIIs also invest actively and sometimes help stabilize the market when foreign investors pull out.

Institutional investors generally make investment decisions based on economic indicators, government policies, company performance, interest rates, inflation, and global market trends. Their investments are usually backed by deep research and long-term outlooks, unlike many individual investors who may invest based on market rumors or short-term gains. In recent years, especially after the COVID-19 pandemic, DIIs have increased their share in the market. Retail investors in India have also grown, but institutional investors still hold the largest portion of market capitalization in many major listed companies. Overall, institutional investment brings liquidity, stability, and professional decision-making to the Indian stock market. However, heavy dependence on FIIs can also make the market vulnerable to global uncertainties. Therefore, a balanced mix of foreign and domestic institutional investments is important for the steady growth of the Indian stock market.

- **Foreign Institutional Investors (FIIs):** These are global investment firms or funds that invest in Indian markets from outside the country.
- **Domestic Institutional Investors (DIIs):** These include Indian mutual funds, insurance companies, banks, and other financial institutions.

### **Foreign Institutional Investors (FIIs) and Domestic Institutional Investors (DIIs)**

Institutional investors play a significant role in the development and functioning of the stock market. They bring in large amounts of capital, influence market trends, and impact stock prices through their buying and selling activities. In India, institutional investors are mainly categorized into two groups: Foreign Institutional Investors (FIIs) and Domestic Institutional Investors (DIIs).

#### **Foreign Institutional Investors (FIIs):**

FIIs refer to investment institutions based outside India that invest in the Indian financial markets. These include hedge funds, pension funds, mutual funds, insurance companies, and other financial institutions registered with the Securities and Exchange Board of India (SEBI). FIIs are known for their ability to bring large amounts of foreign capital into the Indian stock market. Their participation is often seen as a sign of global confidence in the Indian economy.

FIIs are considered to be highly sensitive to global economic events, currency fluctuations, interest rates, and geopolitical risks. As a result, their investment behavior can lead to short-term volatility in the Indian stock market. For example, heavy FII inflows may lead to a rise in stock prices, while sudden outflows can trigger market corrections or even crashes. Despite this, FIIs are crucial for providing liquidity and enhancing the market's global appeal.

## Domestic Institutional Investors (DIIs):

DIIs are investment institutions that operate within India. These include Indian mutual funds, insurance companies, banks, pension funds, and other domestic financial organizations. Unlike FIIs, DIIs are generally more stable in their investment approach and are less affected by global economic shocks. They usually take a long-term view while investing in the stock market, which helps in maintaining market stability.

DIIs have become more prominent in recent years, especially when FIIs have pulled back due to global uncertainties. Their consistent investments act as a balancing force against the volatility caused by foreign investors. DIIs also have better knowledge of the local market conditions, which allows them to make informed decisions based on domestic economic indicators.

Both FIIs and DIIs are vital to the Indian stock market. While FIIs bring in foreign capital and global exposure, DIIs contribute to market resilience and long-term growth. Analyzing their investment patterns helps in understanding the overall movement of the market and predicting future trends.

## Review of Literature

The impact of Foreign Institutional Investors (FIIs) on the Indian stock market has remained a significant subject in financial research. Over time, numerous scholars have examined how FII flows influence market dynamics, returns, liquidity, and volatility. More recent studies have also focused on the post-pandemic recovery, global uncertainty, and economic policy shifts that affect FII behavior.

**Sharma, R., & Gupta, S. (2025)** examined the role of both Foreign Institutional Investors (FIIs) and Domestic Institutional Investors (DIIs) in shaping the return and volatility of the Indian stock market. Using data from 2020 to 2024, the authors analyzed daily trading volumes and net investments of institutional investors in relation to Nifty 50 index performance. The researchers used regression and GARCH models to assess volatility. Their results showed that FIIs had a strong positive relationship with short-term market returns but also contributed significantly to market volatility during global economic events. In contrast, DIIs were found to provide stability during uncertain periods, often acting as a buffer when FIIs withdrew capital. The study concluded that while institutional investments can boost returns, they also bring varying degrees of risk depending on the source of the investment.

**Mehta, P., & Rao, T. (2025)** focused on effect of returns and volatility of institutional investments in different sectors in the Indian stock market. The authors used sector-wise FII and DII investment data from 2021 to 2024 and compared it with sectoral index movements on the NSE. Through econometric analysis and variance decomposition, they found that institutional investments had the highest impact on the banking and IT sectors in terms of both returns and price fluctuations. The study also highlighted that DIIs showed a preference for

defensive sectors during volatile periods, helping reduce overall market instability. Meanwhile, FIIs were more active in high-growth sectors, which increased both returns and volatility. The authors concluded that understanding the behavior of institutional investors at the sector level can help develop better risk management and investment strategies.

**Shah and Iyer (2024)** focused on algorithmic trading by institutional investors and its impact on market behavior. Their findings indicated that modern FIIs use AI-driven strategies that respond instantly to both news and price movements, making the market more efficient but also more reactive.

**Patel and Nair (2023)** examined the impact of geopolitical tensions, inflation, and interest rate changes on FII flows. They discovered that in the short term, FIIs react quickly to global risks, but over the long term, their confidence depends more on India's policy stability and growth outlook. The study recommends active monetary and fiscal coordination to support stable FII investments.

**Rao and Menon (2022)** analyzed the volatility caused by FII activity using the GARCH model. They concluded that while FIIs contribute to market efficiency, sudden and large fund movements amplify volatility, especially in mid-cap and small-cap segments. Their research suggested that better regulatory monitoring can reduce volatility without discouraging FII participation.

**Verma and Srivastava (2021)** conducted a sectoral study to examine how FII investments affect specific industries such as IT, pharma, and banking. They found that sectors with high transparency and strong global demand receive more FII inflows. The findings also suggest that investors prefer regulated and technology-driven industries during periods of uncertainty.

**Mishra and Agrawal (2020)** explored the impact of COVID-19 on FII movements in India. Their analysis showed a sharp outflow of funds in early 2020 due to global panic, followed by a quick return as the Indian economy showed signs of resilience. The study highlighted that global health and policy events can significantly affect foreign investor behavior, often more than domestic factors.

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**Kaur and Dhillon (2019)** studied the connection between FII inflows and the Nifty 50 index using regression models. They found that FIIs tend to enter when markets show stable growth and exit during uncertain times, which often triggers short-term volatility. Their study emphasized the importance of strong economic indicators to attract and retain foreign capital.

## Objectives of the Study

This study mainly focusses on the relationship of institutional investment and return & volatility of Indian stock market. The objectives of study are following:

1. To study the return of selected Indian Stock Market Indices and India VIX.
2. To measure the relationship of return and volatility with institutional investments (FIIs and DIIs).

## Hypothesis

1.  $H_0$ : There is no significant relationship of return and volatility with institutional investments (FIIs and DIIs).

## RESEARCH METHODOLOGY

The research design of present work is descriptive-cum-analytical in nature. The present research work mainly based on the secondary source of data related to foreign institutional investment and domestic institutional investments in equity cash segment and data return & volatility for the period 2015 to 2024. The required data of FIIs, DIIs, and return of selecting Indian stock market indices & India VIX were collected from the website of NSE for the study period from 2015 to 2024 on annually closing basis. The collected data in the present research work are analyzed with help of statistical tools and techniques such as average, standard deviation and multiple regression analysis.

## DATA ANALYSIS AND INTERPRETATION

To meet the objective of the study that the relationship of institutional investments (FIIs and DIIs) with returns & volatility of Indian stock market. FIIs equity cash and DII equity cash are considered as proxy variables of Institutional Investment and ten indices such as Nifty-50 Index is the proxy of Indian Stock Market. The data of Nifty-50 is taken annually closing of calendar year. The collected data are analyzed by using descriptive statistic and multiple regression analysis. The analysis of collected data are following:

Table -1

Showing the Descriptive Analysis Annual Return of all selected Indian Stock Market Indices (in percent)

Years	Nifty	Sensex	Bank Nifty	NIFTY IT	AUTO	PHARMA	FMCG	METAL	ENERGY	REALTY
2015	-4.06	-5.03	-9.68	4.26	15.63	-1.21	0.33	-31.35	-3.78	-11.98
2016	3.01	1.95	7.42	-9.77	-13.14	9.17	2.78	45.2	5.49	-3.87
2017	28.65	27.91	40.5	11.9	-12.68	33.3	29.38	48.54	33.89	98.39
2018	3.15	5.91	6.35	26.06	-7.78	-24.3	13.65	-19.94	-5.64	-31.12
2019	12.02	14.38	18.41	8.95	-9.37	-10.05	-1.29	-11.2	-1.19	22.14
2020	14.9	15.75	-2.79	55.63	60.38	11.5	13.46	16.18	-2.46	6.91
2021	24.12	21.99	13.49	59.58	10.41	18.96	9.96	69.66	40.36	53.14
2022	4.32	4.44	21.15	-26.78	-10.27	15.71	17.54	21.76	23.87	-11.24
2023	19.42	18.74	12.34	24.2	-1.76	47.41	29.01	18.66	-0.14	70.85
2024	8.75	8.17	5.32	22.03	39.1	22.64	-0.33	8.42	5.14	-34.39
<b>AV</b>	<b>13.15</b>	<b>11.42</b>	<b>11.25</b>	<b>17.61</b>	<b>7.05</b>	<b>12.31</b>	<b>11.45</b>	<b>16.59</b>	<b>9.55</b>	<b>15.88</b>
<b>SD</b>	<b>9.38</b>	<b>10.08</b>	<b>13.82</b>	<b>26.56</b>	<b>24.99</b>	<b>20.73</b>	<b>11.44</b>	<b>31.90</b>	<b>16.81</b>	<b>44.69</b>
<b>CV</b>	<b>71.36</b>	<b>88.27</b>	<b>122.87</b>	<b>150.84</b>	<b>354.36</b>	<b>168.38</b>	<b>99.92</b>	<b>192.25</b>	<b>176.00</b>	<b>281.37</b>

Source: www.nseindia.com

Table-1 exhibits that the annual returns (in percentage) of ten major Indian stock market indices from 2015 to 2024. These indices include Nifty, Sensex, Bank Nifty, NIFTY IT, Auto, Pharma, FMCG, Metal, Energy, and Realty. The result indicates that considerable variation in yearly returns across different sectors. For instance, in 2017 and 2021, most indices performed well, with notable gains in Nifty, Sensex, Bank Nifty, and Metal, indicating strong market conditions. In contrast, 2015 and 2018 saw several indices, such as Metal and Realty, posting significant negative returns, reflecting challenging market periods. The average return (AV) over the ten-year period shows that the NIFTY IT index had the highest average annual return at 17.61%, followed by Metal at 16.59% and Nifty at 13.15%. On the other hand, the Auto index had the lowest average return at just 7.05%, suggesting weaker performance over the years. The standard deviation (SD), which indicates the level of volatility or risk, was highest for the Realty sector at 44.69%, followed by Metal and NIFTY IT. This means these indices experienced more fluctuations in their returns. The coefficient of variation (CV), which measures risk relative to return, was the lowest for Nifty (71.36), indicating it had the most stable returns among all indices. Conversely, the Auto and Realty sectors had very high CVs, showing they were more volatile and less

predictable in terms of returns. Overall, the table highlights both the growth potential and the risks associated with different sectors of the Indian stock market over the past decade.

**Table-2**

**Relationship of Institutional Investment with Indian Stock Market Indices and India VIX**

Dependent Variables		FII	DII
Nifty-50	Pearson Correlation	0.233	-0.154
	Sig. (2-tailed)	0.516	0.671
Sensex	Pearson Correlation	0.209	-0.129
	Sig. (2-tailed)	0.563	0.723
Sensex	Pearson Correlation	0.209	-0.129
	Sig. (2-tailed)	0.563	0.723
Nifty IT	Pearson Correlation	0.317	-0.207
	Sig. (2-tailed)	0.372	0.566
Nifty Auto	Pearson Correlation	-0.008	0.128
	Sig. (2-tailed)	0.983	0.724
Nifty Pharma	Pearson Correlation	-0.179	0.315
	Sig. (2-tailed)	0.620	0.376
Nifty FMCG	Pearson Correlation	0.055	-0.073
	Sig. (2-tailed)	0.880	0.840
Nifty Metal	Pearson Correlation	-0.087	-0.043
	Sig. (2-tailed)	0.811	0.907
Nifty Energy	Pearson Correlation	-0.331	0.092
	Sig. (2-tailed)	0.351	0.801
Nifty Realty	Pearson Correlation	0.375	-0.309
	Sig. (2-tailed)	0.286	0.385
India VIX	Pearson Correlation	0.166	-0.255
	Sig. (2-tailed)	0.646	0.478

Source: www.nseindia.com using SPSS

Table-2 presents the relationship between institutional investments specifically Foreign Institutional Investors (FII) and Domestic Institutional Investors (DII) and various Indian stock market indices along with the India VIX (Volatility Index), using Pearson correlation analysis. A Pearson correlation value ranges between -1 and 1, where values closer to 1 indicate a strong positive relationship, values near -1 show a strong negative relationship, and values around 0 suggest little to no relationship. In this analysis, none of the correlations are statistically significant, as the significance (p-value) for all variables is greater than 0.05. This means there is no strong evidence of a meaningful linear relationship between institutional investment and the selected indices or the India VIX during the observed period. Looking at the results, FII shows a weak positive correlation with Nifty-50 (0.233), Sensex (0.209), Nifty IT (0.317), and Nifty Realty (0.375), suggesting a slight upward

movement in these indices when FII investment increases, though the relationship is not strong. On the other hand, it has a slight negative correlation with Nifty Auto, Nifty Pharma, Nifty Metal, and Nifty Energy, indicating a minimal inverse movement. DII investments show weak negative correlations with indices like Nifty-50 (-0.154), Sensex (-0.129), Nifty IT (-0.207), and Nifty Realty (-0.309), hinting that DII flows may slightly move in the opposite direction of these indices. Interestingly, DII has a slightly positive relationship with Nifty Auto (0.128) and Nifty Pharma (0.315), but again, these values are weak and statistically insignificant. As for the India VIX, which represents market volatility, both FII (0.166) and DII (-0.255) show weak correlations, indicating a very limited and non-significant association between institutional flows and market volatility. Overall, this table suggests that there is no strong or statistically reliable relationship between institutional investments and the performance of major Indian stock indices or market volatility during the period under study.

### Conclusion

The concludes that NIFTY IT and Metal indices had the highest average returns, showing strong growth potential, while the Auto sector had the lowest average returns. The Realty and Metal sectors were found to be the most volatile. Whereas the Nifty-50 and FMCG offered more stable returns with lower risk. The study also reveals that the relationship between institutional investments Foreign Institutional Investors (FII) and Domestic Institutional Investors (DII) and various stock indices. However, the Pearson correlation results reveal that these relationships are weak and not statistically significant. In simple terms, this means that institutional investments did not have a strong or consistent impact on the movements of stock indices or market volatility (India VIX) during the study period. While there were some minor positive and negative associations, they were too weak to draw reliable conclusions. the findings of the study suggests that some stock market sectors have shown strong performance and others have been more volatile, institutional investment flows (FII and DII) did not significantly influence market performance or volatility in a consistent or meaningful way over the last ten years. Investors should therefore consider both sector-specific trends and broader market risks while making investment decisions.

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