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Impact Of Institutional Investments On The Indian Stock Market

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Abstract: The liberalization of financial markets during the 1990s facilitated the inflow of Foreign Institutional Investments (FIIs) into emerging economies, including India. This study examines the influence of institutional investors—specifically FIIs and Domestic Institutional Investors (DIIs)—on the Indian stock market. With India emerging as one of the most attractive destinations for portfolio investments, understanding the investment behaviour of FIIs and DIIs becomes critical for analyzing market movements and volatility. The study is analytical in nature and based on secondary data collected over 55 months, from January 1, 2020, to July 31, 2024. It investigates whether the investments or withdrawals by FIIs and DIIs significantly impact the BSE Sensex, both on the same and succeeding days. Using statistical tools such as correlation and Ordinary Least Squares (OLS) regression analysis (via E Views software), the study evaluates the causal relationship and market responsiveness to institutional investor activities. The findings aim to enhance understanding of market dynamics and provide insights for investors, researchers, and policymakers.

Index Terms - Foreign Institutional Investors (FIIs), Domestic Institutional Investors (DIIs), Indian Stock Market, BSE Sensex

INTRODUCTION

The strong waves of globalization leading to widespread liberalization and implementation of financial market reforms in many countries of the world had set the pace for FIIs flow during 1990s. One of the important features of globalization in the financial service industry is the increased access provided to non-local investors in several major stock markets of the world. Increasingly, stock markets from emerging markets permit institutional investors to trade in their domestic markets. Most of the developing countries opened their capital markets to foreign investors either because of their inflationary pressures, widening current account deficits, and exchange depreciation or increase in foreign debt as a result of economic policy.

Positive fundamentals combined with fast growing markets have made India an attractive destination for foreign institutional investors.

Portfolio investments brought in by FIIs have been the most dynamic source of capital to emerging markets in 1990s (Bekaert and Harvey, 2000). India opened up its economy and allowed Foreign Institutional Investment in September 19921 in its domestic stock markets. This event was a landmark moment in the economic history of India, in effectively globalizing its financial services industry. Initially, pension funds, mutual funds, investment trusts, Asset Management companies, nominee companies and incorporated/institutional portfolio managers were permitted to invest directly in the Indian stock markets.

Beginning 1996-97, the group was expanded to include registered university funds, endowment, foundations, charitable trusts and charitable. Till December 1998, investments were related to equity only as the Indian gilts market was opened up for FII investment in April 1998. Investments in debt were made from January 1999. Foreign Institutional Investors continued to invest large funds in the Indian securities market. For two consecutive years in 2004-05 and 2005-06, net investment in equity showed year-on-year increase of 10%. Since then, FII flows, which are basically a part of foreign portfolio investment, have been steadily growing in importance in India.

STATEMENT OF THE PROBLEM

Capital plays a pivotal role in driving economic growth, and it is often regarded as the backbone of any economy. In developing countries like India, domestic capital alone is insufficient to meet the ever-growing investment needs essential for sustained development. Consequently, foreign capital emerges as a crucial supplement, primarily in the form of Foreign Direct Investment (FDI) and Foreign Institutional Investment (FII).

The Indian capital market has historically exhibited a strong dependence on FII inflows. Market trends often mirrored the buying and selling behaviour of foreign institutional investors—wherein net purchases by FIIs typically triggered bullish rallies, and net sales often led to significant market corrections. However, in recent years, domestic investors have become increasingly active and mature participants in the capital market. Their growing contributions have begun to offset the volatility caused by FII movements, thereby fostering greater market stability. Despite this shift, the dynamic interplay between FII activity and domestic investment behaviour continues to raise important questions about the evolving nature of capital market dependency and resilience in India.

SCOPE OF THE STUDY

The present study is confined to the Indian stock market, focusing on the investment behaviour of Foreign Institutional Investors (FIIs) and Domestic Institutional Investors (DIIs). Given India's status as one

of the fastest-growing economies, its capital markets represented by major exchanges like the BSE and NSE,have become significant hubs for institutional investments. This study aims to assess the volume of investments made by FIIs and DIIs and to analyze their impact on the movement of key Indian stock indices. By exploring the strategies of both foreign and domestic players, the study seeks to offer insights into the dynamics of institutional investments and their influence on market trends, thereby providing a foundation for future research in this area.

OBJECTIVES OF THE STUDY

The objectives of the study are as follows:

- To analyse the amount of money invested by the Foreign Institutional Investors and Domestic Institutional Investors in India during the review period.
- To analyse whether investments/ withdrawals made any impact in the stock market index on the succeeding day.
- To analyse whether the volatility in the Indian stock market is exclusively dependent on the purchase and sales activity done by FIIs and DIIs.
- To understand the causal relationship between Foreign Institutional Investments, Domestic Institutional Investments and Sensex.

LITERATURE REVIEW

Numerous studies have examined the influence of FII and DII investments on the Indian stock market.

- Parikkar and Katoti (1994) emphasized FIIs' role in shifting global capital to emerging markets like India due to better growth prospects. Gordon and Gupta (2003) found that both domestic (e.g., credit ratings) and external factors (e.g., LIBOR) significantly affect FII flows, noting seasonality and negative correlation with past stock returns.
- Bose and Coondoo (2004) highlighted how policy reforms, especially post-1995, enhanced FII inflows. Ajay Shah (2008) noted that while both FIIs and DIIs prefer large firms, their behaviors differ significantly. Loomba (2011) found a strong positive correlation between FII activity and market volatility. Bose (2012) observed FII investments could overshadow stock returns in influencing mutual fund flows.
- Morgan Stanley reported that FIIs affect short-term movements, especially in bear markets. Rao and Rani, and Ghosh and Srinivasan (2013), confirmed growing FII presence and their role as key market movers. Singh & Maheshwari found FII impact to be negative and DII positive on market performance. Verma & Prakash (2011) identified the Sensex as a key pull factor for FII.
- Murale and Christy using VAR models, confirmed strong links between FII inflows and Sensex performance. Baik & Lee (2012) reported weak FII predictive power, especially under information asymmetry. Dasgupta’s study found no informational efficiency in Indian markets and recommended inclusion of macroeconomic variables.

- Other studies by Kaur & Kaur, Kirti & Chauhan, and Bansal found mixed impacts—FIIs often associated with volatility and DIIs with stability. Suresh Babu &Prabheesh (2008) and Chakrabarti (2002) found bidirectional and return-driven FII flows. Jain, Meena, and Mathur concluded that Sensex is highly sensitive to FII inflows, rising with positive and falling with negative FII activity.

HYPOTHESIS

From the extensive review, the following hypothesis was formulated.

- H0: The volatility in the Indian stock market is not fully dependent on the activities of FIIs and DIIs($r = 0$)
- H1: The volatility of the Indian stock market is fully dependent on the activities of FIIs and DIIs ($r \neq 0$)

RESEARCH METHODOLOGY

The study is of analytical nature based on secondary data. Data was collected from books, reference journals, various websites including the official web site of SEBI and Bombay Stock Exchange (BSE). The data was analysed by comparing stock market index (SENSEX) and the net investments made by the FIIs and DIIs during the review period. For the purpose of analysis, the activities of the FIIs and DIIs and the movement of SENSEX for a period of 55 months (01/01/2020 to 31/07/2024) were taken.

The collected data was classified, tabulated and analysed with simple statistical tools such as percentage and correlation. Detailed analysis was done with Ordinary Least Square (OLS) regression analysis through a specialised application – E Views.

The detailed analysis on this study covers a period of four years and 7 months (55 months) i.e., 1/1/2020 to 31/7/2024

DATA INTERPRETATION

Overview of Institutional Investment Activity:

The study spans from January 1, 2020, to July 31, 2024, covering a total of 1136 trading days. Of these, FIIs made net investments exceeding ₹3000 crores on 61 days, while net withdrawals of the same magnitude occurred on 130 days. The purpose of focusing on high-value trading days is to observe the immediate and delayed effects of institutional movements on the stock index. The analysis also explores whether DIIs played a stabilizing role during periods of high market volatility triggered by FII activity.

Market Sensitivity to FII Movements:

The data clearly demonstrates that the Indian stock market is highly sensitive to the actions of FIIs. Large-scale withdrawals by FIIs often resulted in significant drops in the Sensex. For instance, on January 31, 2020, FIIs recorded a net sale of ₹4179.12 crores, leading to a 0.465% fall in the index on the same day, followed by a further 2.880% decline the next day. Such patterns indicate a lag in market reactions, revealing that the market may not immediately price in all information, thereby challenging the Efficient Market

Hypothesis (EMH). These delayed effects highlight the role of investor sentiment, reaction time, and possibly the dissemination of information in the market.

Counterbalancing Role of DIIs:

DIIs frequently acted as counterbalancing agents, stepping in as net buyers during periods of significant FII withdrawals. A case in point is February 26, 2020, when FIIs withdrew ₹3336.6 crores and DIIs invested ₹2785.67 crores. Despite this, the market still fell by 0.974% on the same day and 1.330% the next, indicating that while DII investments softened the blow; they could not fully prevent negative sentiment from dragging the market down. This pattern recurs across the dataset, confirming the important yet limited stabilizing role of DIIs in the face of large-scale foreign capital outflows.

Year-wise Institutional Behavior and Market Impact:
2020: Market Collapse Amid Global Crisis:

The year 2020 was marked by the global COVID-19 pandemic, which led to severe volatility in the Indian stock market. FIIs turned aggressive sellers, and the Sensex fell sharply from **41,306 on January 1 to 29,468 on March 31**. DIIs increased their buying during this period but could not fully counteract the panic-driven sell-off.

Signs of Recovery and Budget Impact:

2021 showed mixed investment behaviour, with significant FII inflows following the Union Budget. On February 2, FIIs invested ₹6181.56 crores and DIIs withdrew ₹2035.2 crores, leading to a 2.463% increase in the Sensex, followed by a further 7.58% rally. This was a clear instance of positive market sentiment aligned with FII behaviour, showing how strategic foreign investment can trigger optimism.

Persistent FII Outflows:

In 2022, FIIs were net sellers on 52 days, with consistent outflows during April to June. For example, on May 19, a withdrawal of ₹4899.92 crores by FIIs and an investment of ₹3225.54 crores by DIIs still resulted in a 2.613% market fall, followed by a 2.906% recovery the next day. The prolonged selling pressure by FIIs limited the effectiveness of DII counteractions.

Market Stabilization and Adaptive Strategies:

In 2023, both FIIs and DIIs showed more adaptive investment strategies. On June 28, FIIs invested ₹12,350 crores, while DIIs withdrew ₹1021.01 crores, and the Sensex rose by 0.787%. While the inverse relationship persisted, there was a growing trend of coordinated sentiment and market maturity. In October and November, DII activity frequently offset FII withdrawals, maintaining overall market stability.

Dual Interventions and Synchronized Trends:

In early 2024, the market witnessed some of the largest withdrawals and investments. On January 17, FIIs withdrew ₹10,578.13 crores, and DIIs invested ₹4006.44 crores, yet the market fell by 2.226%. However, examples of synchronized inflows emerged. On June 25, FIIs and DIIs jointly invested over ₹14,000 crores, resulting in a market increase. This trend continued into July, where FIIs made their first ₹5000+ crore investment, driving a 0.68% market rise despite DII withdrawal.

Inverse Relationship and Correlation Patterns:

Across the study period, a clear inverse relationship was often observed between FIIs and DIIs. Whenever FIIs made large withdrawals, DIIs tended to increase their buying activity to stabilize the market. This inverse trend was particularly prominent during 2020 and 2022, where correlation analysis indicated a negative relationship between DII investment and Sensex movement. For example, in April 2021, July 2021, January 2024, and April 2024, DIIs acted aggressively during periods of FII selling. While this behaviour demonstrates the strategic intent of domestic investors, it also underlines their limitations when foreign outflows are overwhelming.

Correlation Analysis:

To explore the relationship between institutional investments and the Indian stock market, Pearson correlation coefficients were calculated between Foreign Institutional Investors (FIIs), Domestic Institutional Investors (DIIs), and the BSE Sensex from 2020 to 2024. The results are presented in Table 1.

Table 1

Pearson Correlation between Institutional Investments and BSE Sensex (2020–2024)

Year	FII & Sensex	DII & Sensex
2020	0.3696	-0.5046
2021	-0.1698	0.2160
2022	0.4953	-0.5002
2023	0.1616	-0.1286
2024	0.2899	-0.1006

Note: Source – Computed by the researcher using E Views (2024).

The correlation between FIIs and the BSE Sensex was found to be positive for most years, indicating a direct relationship between foreign capital inflows and market performance. Specifically, in 2020, the correlation coefficient was r = 0.3696, suggesting a weak positive relationship. This implies that although FII investments had a role in driving index movements, the correlation was not strong enough to be conclusive. In 2021, the coefficient dropped to r = -0.1698, showing a weak inverse relationship, likely due to increased market resilience and mixed global signals. The strongest correlation occurred in 2022, with r = 0.4953,

suggesting a moderate positive relationship and highlighting the direct influence of FII behaviour on market performance during heightened volatility.

In contrast, DII investments generally exhibited a negative correlation with the Sensex. In 2020, the coefficient was r = -0.5046, indicating that DII investments often occurred when the market was declining—likely in an attempt to stabilize market fluctuations caused by foreign outflows. A similar pattern was observed in 2022, with r = -0.5002. For 2021, the relationship was weakly positive (r = 0.2160), reflecting a temporary alignment of DII behaviour with market up trends. In 2023 and 2024, the negative correlation persisted but weakened (r = -0.1286 and r = -0.1006, respectively), suggesting that the influence of DIIs became more complex and less directly associated with immediate index changes. Overall, these correlation results show that FIIs tend to influence the market more directly than DIIs, while the latter often act as a counter-cyclical stabilizing force.

Regression Analysis:

To further understand the impact of institutional investments on the Indian stock market, an Ordinary Least Squares (OLS) regression was conducted using the BSE Closing Rate as the dependent variable and net purchases/sales of FIIs and DIIs as independent variables. The results are summarized in Table 2.

Table 2
OLS Regression Output: Effect of FIIs and DIIs on BSE Closing Rate (2020–2024)

Variable	Coefficient	Std. Error	t-Statistic	p-value
Constant (C)	54693.15	372.4094	146.8630	0.0000
FII_NET_PURCHASES_SALES	0.6067	0.1599	3.7941	0.0002
DII_NET_PURCHASES_SALES	2.1994	0.2432	9.0445	0.0000
Model Statistics				
R-squared	0.0693			
Adjusted R-squared	0.0676			
Standard Error of Estimate	11626.99			
F-statistic	42.1577			0.0000

Note: Source – EViews output (2024). Sample period: Jan 1, 2020, to July 31, 2024; 1136 observations.

The model indicates that both FII and DII net investments are statistically significant predictors of the BSE closing rate. The coefficient for FII_NET_PURCHASES_SALES is 0.6067 (p = .0002), indicating that for every additional ₹1 crore net investment by FIIs, the Sensex increases by approximately 0.61 points, holding other variables constant. This relationship is statistically significant, though the effect size is modest.

More notably, the coefficient for DII_NET_PURCHASES_SALES is 2.1994 (p < .0001), implying that the DII investments have a greater per-unit influence on the market index than FIIs. For every ₹1 crore net investment by DIIs, the BSE closing rate is expected to rise by approximately 2.20 points, assuming all

else remains constant. This suggests that while DIIs may operate more cautiously, their investments have a more substantial effect when deployed.

The model's R-squared value of 0.0693 indicates that about 6.93% of the variation in the BSE Sensex is explained by FII and DII investments. Although statistically significant ($F = 42.16$, $p < .0001$), the low R-squared value suggests that other macroeconomic, political, and global factors also significantly influence the market. The Durbin-Watson statistic (0.0907) indicates the potential presence of positive autocorrelation, suggesting that further model refinements or time-series techniques (e.g., ARIMA) may be needed for more robust predictions.

The correlation analysis confirms that FIIs and DIIs behave inversely, with FIIs showing a more direct relationship with market movements. The negative correlation of DIIs, especially in 2020 and 2022, indicates their counterbalancing role during times of foreign outflows. Regression results further validate the significant role of both FIIs and DIIs, though DIIs exhibit a stronger per-unit influence on market performance. However, the limited explanatory power of the model calls attention to the multifactorial nature of stock index movements, influenced by fiscal policies, global cues, inflation, interest rates, and geopolitical factors.

SUMMARY, FINDINGS AND SUGGESTIONS

The study investigates the relationship between Foreign Institutional Investors (FIIs), Domestic Institutional Investors (DIIs), and the BSE Sensex over the period from 2020 to 2024. By applying correlation and regression analysis, the research examines how net purchases or sales by institutional investors influence stock market movements. While the regression model confirms a statistically significant positive impact of both FIIs and DIIs on the BSE closing rate, the explanatory power of the model remains weak, as indicated by a low R-squared value. This suggests that institutional investments alone do not sufficiently account for fluctuations in the market index. Other external factors such as political events, economic conditions, and social developments also play a critical role in determining stock market outcomes.

The analysis reveals a consistent trend of opposing actions between FIIs and DIIs during the review period. On most occasions when FIIs were net sellers, DIIs emerged as net buyers, helping stabilize the market. For instance, during 657 days of net selling by FIIs, DIIs were net buyers on 553 days. Similarly, DIIs were net sellers on 305 of the 479 days when FIIs were net buyers. Despite large FII withdrawals on various days, the Sensex did not crash; instead, DII investments cushioned the impact. The study also highlights specific dates such as March 23, 2020.when the Sensex saw its largest single-day fall since 1991 due to COVID-19 panic illustrating that the market reacts strongly to external shocks. In years like 2021 and 2022, despite massive FII outflows, the Sensex continued to grow, supported by robust DII investments. Correlation analysis across the years showed varying relationships: in some years like 2020 and 2022, the correlation between FIIs and the Sensex was moderately positive, while in others like 2021, it was weakly negative. DIIs also showed mixed correlations, suggesting that their influence is context-dependent. The

regression model further confirmed that both FII and DII activities positively impact the BSE index, with DIIs having a relatively stronger effect. However, the low R-squared value of 0.069 highlights that most of the variation in the market index is explained by factors beyond institutional investment.

Investors and policymakers should not rely solely on institutional investor trends to interpret or predict market performance. While FIIs and DIIs play an important role, the influence of macroeconomic indicators, fiscal policies, geopolitical developments, and global financial market trends cannot be overlooked. It is essential to take a holistic view of the market, integrating both quantitative and qualitative factors when making investment decisions. Regulators should ensure balanced participation between foreign and domestic investors to maintain market stability. Additionally, providing transparent and timely information on institutional activities could help enhance investor confidence and informed participation.

CONCLUSION AND FUTURE SCOPE

The findings of the study affirm that institutional investments by FIIs and DIIs influence the BSE Sensex but are not the sole determinants of market movement. There is a certain level of influence observed, particularly through the actions of DIIs which often act as market stabilizers during periods of high volatility. However, the correlation and regression results make it evident that the stock market responds to a broader set of influences, many of which are non-financial in nature. The observed trend of FIIs and DIIs taking opposite positions adds to the complexity of the market landscape. Ultimately, the Indian stock market reflects a combination of institutional behaviour, investor sentiment, policy decisions, and external economic and political developments.

This study opens avenues for future research by suggesting the inclusion of additional variables in analytical models. Future research could adopt a multivariate framework that incorporates macroeconomic indicators such as GDP growth, inflation, interest rates, unemployment levels, and global cues to improve model accuracy. A sector-wise or industry-specific analysis of institutional investments could also provide more granular insights into the functioning of the market. Additionally, the role of retail investors, high-frequency trading, and behavioural finance aspects could be explored to develop a more comprehensive understanding of market dynamics. Comparative studies between emerging and developed markets may further help in assessing how the influence of institutional investors varies across economies.

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