

From Chance to Change: Adventitious Investors and Market Dynamics in India

Gourav Mittal¹, Dr. Sonu Dalal^{2*}, Vinod Kumar³, Dr. Raghav Jain⁴

¹Assistant Professor, Guru Jambheshwar University of Science and Technology, Hisar

²Assistant Professor, Parul Institute of Management and Research, Parul University

³Assistant Professor, Guru Kashi University, Talwandi Sabo, Punjab.

⁴Associate Professor, Institute of Information Technology and Management, Delhi

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Abstract

The study aims to investigate the association between FII and Nifty indices. The weekly data from January 15, 2010, to September 15, 2025, is used and analysed using Vector Autoregression (VAR) and the Granger Causality test. NSE was selected in the study because of its most systematic stock market indices, and is widely used for benchmarking by market participants. The results show that foreign institutional investors significantly influence the Nifty indices and the combined effect of both variables also influences the Nifty index. Additionally, the findings of Granger causality show that NFII and Bank Index and NFII and Service Sector have unidirectional causality, whereas NFII and India Consumption have directional causality. The results indicate that the money-related financial experts ought to consider the modifications in the net flow of FII to the Indian Stock Market prior to contributing.

Keywords: Foreign Investors, Nifty Indices, Stock Market, VAR Model.

Introduction

For capital formation, capital markets are of crucial significance as the mobilisation of savings and their distribution for industrial investment are the main functions of these markets. The mobilization of savings and their distribution, thereby Capital formation is stimulated and the process of economic growth is accelerated to that extent (Rastogi & Husain, 2015). The problem of the requirement of funds is resolved with the help of foreign resource flows by emerging economies (Yadav et al., 2024). Foreign resources help fulfil the scarcity of funds in emerging countries. Stock markets are affected in new liberalised countries, however, in various ways. Some authors argued that market volatility leads to a change due to liberalisation policies and instability (Adabag & Ornelas, 2004; Murthy & Singh 2013; Singh et al., 2023). On the other side, present global markets groups witnessed the participation of heterogeneous investors whose main focus is on varied resolutions, i.e., capital generation, uncertainty and assortment variation, sophisticated returns at lesser risk, global savings, etc. (Chakrabarti, 2001; Tripathy & Garg, 2013; Rastogi and Husain, 2015; Arya & Singh, 2022).

Stock markets are nowadays considered the barometers of the economies (Baklaci, 2007; Dan, 2019; Singhanian & Anchalia, 2013). The institutional investors' decisions are backed by various experts, and the highs and lows of the stock market are analysed after they invested mostly in highly profitable stocks. New business ideas can be exploited if economies can do this well to create jobs.

On the other hand, economies that do not manage this process well will fail to support business opportunities, their wealth will be dissipated and a decline will be witnessed in their economic growth rate. In fact, a positive impact has been shown by the healthy investment in the economy, which leads to an enlarged market size, and further capital inflow is attracted in turn. Foreign capital inflow will fulfil this gap, if in the economy domestic capital falls short of required capital investment in this context and a critical role is also played in explaining the growth of the host country (Akula, 2011).

The domestic capital supplementing the economic growth is not only accelerated by it but also brings various assistance to the host nation, like technology, skill advancement and newest savvy. The involvement of foreign investors extends the investor base, boosts risk allocation, and reduces the cost of money for investments by increasing the liquidity of local markets. Furthermore, improved laws and regulations in local markets are a result of international investors' need for larger investment (Yadav et al., 2024). Higher accounting standards and the quality of the information are the main topics of these regulations (Rai & Bhanumurthy, 2004; Saini & Ravinder, 2022). As a result, foreign participation makes financial markets more transparent, which promotes better resource allocation and improved financial markets. If foreign institutional investors have a tendency to use opposite or negative feedback trading approaches—that is, to buy cheap and sell high—they may help to level out or strengthen the domestic stock markets. On the other hand, developing market economies may experience destabilising effects from foreign portfolio movements (Prasanna, 2008; Arya & Singh, 2022; Saini, 2022).

Since the middle of the 1980s, India—one of the world's fastest-growing economies—has been a top investment destination worldwide. Foreign institutional investors (FII) have boosted cross-border flows in the Indian equities market, drawing more attention from scholars and regulators. (Lakshmi & Thenmozhi, 2018). India opened up its gates for foreign funds in 1991, and since then, the foreign funds have arrived in the country. Thus, FIIs started investing their money after 1991 in the Indian Stock Market. The FIIs have been permitted to capitalise the Indian capital markets since September 1992, when the procedures for the Foreign Institutional Investment (FIIs) were dispensed by the Government. India is one of the most favoured destinations for investments by foreigners (Lakshmi & Algappan, 2012; Poonam et al., 2024). According to IBEF (2025), ¹the total FDI inflow into India from Jan 2025 to March 2025 rose to US\$7.4 billion and FDI equity inflow was US\$9.3 billion. Further, in 2023-24, FPIs obtained around Rs. 21,350 crore (US\$2.57 billion) in the stock market, which shows a 90% increase from the year 2022-23.

With the Indian stock market on the rise, the trend and the future outlook in AIIs have raised a question of extreme concern. Positive fundamentals linked with profligate emerging markets have turned India into an attractive destination for foreign institutional investors (Srinivasan and Kalaivani, 2015; Singh et al., 2023; Poonam et al., 2024). The most feasible source of capital into emerging markets in the 1990s has been investments in assortments carried in by FIIs. As a result, uncertainty regarding FII flows and its impact on the stock market and the economy of India as a whole is causing restlessness (Jain et al., 2013; Poonam et al., 2023). Since FII will be determined as an imperative source of finance, it will be inevitable to understand the factors that influence the portfolio decision of the foreign investors. It is practical that the literature covering the association among FII flows and the stock market is highly sporadic and distant in the instance of the Indian stock market. The question that still remains to be answered is therefore, what could be the correlation between FII and stock market.

Against these backdrops, the present study intends to examine the relationship between foreign institutional investors and NSE indices. Secondly, the study also intends to explore the causal relationship between Nifty indices and NFII. The study employed VAR and the Granger test for this purpose.

Literature Review

The literature covers the review of all papers which had covered the areas related to stock market return, foreign investor flows, foreign trading behaviour, market liberalisation, investors' sentiments, trading performances of various investors, and stock market volatility using the VAR model. For example, Froot et al. (2001), using data from August 1994 to December 1998 for 44 countries, examined the daily transnational assortment flows into and out by using the variance ratio and data

covered and found an optimistic concomitant comovement between net arrivals and both equity and exchange returns. Boyer and Zheng (2002) examined the quarterly data from 1952 to 1996 and concluded that no significant relation exists between returns and lagged cash arrivals or cash arrivals and lagged returns. Griffin et al. (2002) described how equity arrivals are affected by stock returns using daily data from January 1996 to February 2001, covering nine countries and sixty stock exchanges. They found the positive nature of the equity flows and related to North American market returns significantly whereas to the European returns, to a lesser extent. Local flows are affected by the exchange rates and foreign arrivals, but their roles are not as important as those of regional index returns both economically and statistically. Griffin et. al. (2003), the cross-sectional relation is studied by him between stock returns and investors' trading of NASDAQ 100 by using daily data and a robust optimism was concluded between organisational trading activity and daily stock returns. Adabag & Ornelas (2004) analysed the repercussions and comportment of foreign investors on the Istanbul Stock Exchange (ISE) using monthly data for the period of seven years and found that when the Turkish market was entered by the foreign investors, it raised the ISE index contemporaneously and vice versa. Richards (2005) covered six Asian equity markets to analyse the daily trading activities of foreign arrivals in these markets and observed that foreign investors interchange verdicts in the equity markets are influenced the global equity markets by recent returns in addition to the domestic market's returns. Baklaci (2007) investigated the relation by using monthly data between foreign investors' exchange movement and yields in the Turkish stock market. They found that between foreign portfolio arrivals and stock returns, there is a bilateral interaction which reflects the price compression repercussion presence and rushing behaviour in the Turkish stock market. Pavabutr & Yan (2007) analysed to find the repercussions of foreign portfolio arrivals on the Emerging Market Volatility of Thailand stock market using daily and weekly data and took Market capitalisation, Trading Volume, US net flows, Market Returns, GDP, and Inflation as study variables. They found that there is an optimistic association between net arrivals and volatility during the crisis period at both a daily and weekly basis. This states that foreign investors might have a weakening impact on emerging markets. Poshakwale & Thapa (2007) observed the repercussions of foreign institutional investments in elucidating the Indian equity markets' short and long-run linkage with the US and the UK equity markets. Taking data of six years, they concluded that Indian stock market co-movements are influenced by the foreign portfolio investment arrivals considerably, with that of the UK and the US. Boyer & Zheng (2009) studied the relation of investor groups between aggregate stock market returns and cash arrivals in the United States used quarterly data from 1952 to 2004. They found that quarterly arrivals are autocorrelated for each of the different investor groups. No evidence exists that shows a relation between arrivals and past returns. Samarakoon (2009) covered the period of January 1992 to December 2004 and investigated the relation in Sri Lanka between equity arrivals and returns by using daily trade data that is categorised by investor classes. He concluded that future returns have no repercussion on FII purchases and DII sales, while FII sales lead to higher future returns. French (2011) by using the Johannesburg Stock Exchange, studied the varying interface between foreign funds and returns from January 2002 to December 2006 and found that highly significant causal nexus between returns on JSE and net equity flows. Ulku (2015) studied foreigners' interchange in European emergent stock markets using monthly data and concluded that there is a concomitant nexus between foreign arrivals and domestic returns that is optimistic in all nations. Onishchenko & Ulku (2019) investigated the foreign investor's evolution of trading behaviour of the Korean stock market for the period of January 2004 to June 2015 and found that Domestic institutions are positive feedback traders, while negative feedback has been given by foreign investor traders. Bansal (2020) investigated the behaviour of investment of various institutional investors and their linkage with the instability of the stock market in India. Using daily data of fourteen years, he concluded that the performance of Net DII flows has positive

repercussions on the stock return, and Net FII flows have adverse repercussions on the stock returns.

Data and Research Methodology

The study takes into account the FPI investments in India and the Indian stock market, considering the Nifty indices. The study employed net foreign institutional investment (FIIs) is measured as purchases reduced by sales and signified by NFII. It is worth mentioning that the FII flows in the case of India are segregated into investment in equities and investment in debt. So, this paper has considered both types of FII investments, i.e., investment in equities and debt. The closing price of ten Nifty indices is used as the proxy for the stock market. The ten Nifty indices selected are Nifty Bank (NBK), Nifty Energy (NEG), Nifty Financial Services (NFS), Nifty India Consumption (NIC), Nifty Infrastructure (NIF), Nifty Metal (NMT), Nifty MNC (NMNC), Nifty PSE (NPSE), Nifty PSU Bank (NPSU), and Nifty Services Sector (NSC). The paper considers weekly data from January 2006 to August 2024, and a total of 834 observations were taken for the study.

The study proceeds with the examination of integration effects in the variables. The ADF unit root test is employed to check the stationarity of the series. To obtain the nexus between multiple variables as these variables tend to vary over the study period, the innovative statistical tool of VAR (Vector Autoregression) is applied. In order to capture the dynamics of the stock market, earlier studies have used the conventional approach of modelling volatility by taking the second-order moment condition of the series. This concept was proposed by Ferderer (1996), who examined the uncertainties in oil price shocks by taking the second-order moment of the oil price. Dissimilar to other studies, the current study employed the Vector Autoregression (VAR) approach to capture the varying nexus between foreign institutional investors and the stock market. The VAR framework provides various advantages, such as it can be used to observe the dynamic relationship between the variables.

Analysis and Discussions

Unit root test

The outcomes of the ADF unit root test are given in Table 1. The table shows that all the variables except NFII have having unit root at the level, as the p-value for all these variables at the level is greater than the 5 per cent level of significance. While NFII is integrated at the first level and has no unit root. When the variables are taken at first difference, all the variables become stationary and hence the series are said to be integrated at the first level. Thus, it can be concluded that all variables except NFII are stationary at the first difference, while NFII is stationary at the level.

Table 01 Augmented Dickey Fuller Unit Root test

Variables	Level		At first difference	
	t-statistics	p value	t-statistics	p value
NFII	-18.15	0.000	-	-
NBK	-0.23	0.355	-28.76	0.00
NEG	0.60	0.902	-23.47	0.00
NFS	-0.58	0.9413	-2.05	0.00
NIC	0.21	0.961	-27.95	0.00
NIF	-1.91	0.36	-18.05	0.00
NMT	-1.75	0.43	-3.58	0.00

NMNC	1.45	0.98	-27.26	0.00
NPSE	-2.16	0.28	-27.99	0.00
NPSU	-2.05	0.892	-29.17	0.00
NSC	1.22	0.95	-28.95	0.00

Source: Author

VAR analysis

After checking the stationarity of all variables given in the time series, the next step is to check the dynamic relationship between lagged values of Nifty indices and NFII over the period of 2012-2024.

Table 02 VAR Estimates

Bank Index (NBK)				
	Coefficient	Std. Error	t-Statistic	Prob.
NBK(-1)	0.245	0.014	26.489	0.000
NBK(-2)	0.145	0.046	2.748	0.154
C	9.56	41.48	-0.784	0.741
NFII	0.245	0.001	10.145	0.001
Energy Index (NEG)				
NEG (-1)	0.942	0.248	21.584	0.000
NEG (-2)	0.061	0.479	1.347	0.458
C	-41.933	44.140	-0.741	0.248
NFII	0.011	0.149	6.074	0.001
Financial Services Index (NFS)				
NFS (-1)	0.148	0.158	20.491	0.000
NFS (-2)	0.147	0.047	2.781	0.004
C	-27.016	30.134	-0.547	0.284
NFII	0.082	0.000	9.347	0.000
India Consumption Index (NIC)				
NIC (-1)	0.796	0.047	26.481	0.000
NIC (-2)	0.067	0.046	2.684	0.040
C	-4.284	5.497	-0.693	0.432
NFII	0.002	0.000	8.	0.000
Infrastructure Index (NIF)				
NIF (-1)	0.983	0.035	27.951	0.000
NIF (-2)	0.005	0.033	0.1469	0.883
C	34.72	17.553	1.978	0.048
NFII	0.004	0.006	6.660	0.000
Metal Index (NMT)				
NMT (-1)	1.011	0.0311	28.826	0.000
NMT (-2)	-0.025	0.0311	-0.611	0.54
C	29.021	15.085	1.930	0.053

NFII	0.004	0.082	4.553	0.000
MNC Index (NMNC)				
NMNC (-1)	0.958	0.035	27.005	0.000
NMNC (-2)	0.047	0.0344	1.354	0.740
C	-10.52	14.222	-0.742	0.489
NFII	0.010	0.0121	8.410	0.001
PSE Index (NPSE)				
NPSE (-1)	0.416	0.026	27.284	0.000
NPSE (-2)	0.014	0.015	0.741	0.771
C	68.168	20.437	3.286	0.000
NFII	0.002	0.662	5.700	0.000
PSU Bank Index (NPSU)				
NPSU (-1)	0.946	0.012	26.245	0.001
NPSU (-2)	0.074	0.081	1.175	0.159
C	58.545	16.039	3.749	0.001
NFII	0.002	0.081	6.158	0.001
Service Sector Index (NSC)				
NSC (-1)	0.884	0.248	25.121	0.001
NSC (-2)	0.129	0.064	3.987	0.002
C	-33.462	20.170	-1.098	0.115
NFII	0.015	0.066	10.582	0.002

Source: Author

The Nifty bank index is affected by NFII activities and its own previous lagged values, as the p-value is significant at 5 per cent. The Nifty Energy index is affected by NFII and its own previous lag. While the Nifty Energy index is not affected by previous own two previous lagged values, as the p-value is not significant at 5 per cent. The Nifty Financial Services index is affected by NFII and its own previous lagged values, as the p-value is significant at 5 per cent. The Nifty India consumption index is affected by NFII and its own previous lagged values. Nifty Infrastructure is affected by NFII and its own previous lagged value. While Nifty Infrastructure is not affected by previous own two previous lagged values, as the p-value is not significant at 5 per cent. The Nifty Metal index is affected by NFII and its own previous lagged value, as the p-value is significant at 5 per cent. While Nifty Metal is not affected by its own two previous lagged values, as the p-value is not significant at 5 per cent. The Nifty MNC index is affected by NFII and its own previous lagged value. While the Nifty MNC index is not affected by previous own two previous lagged values, as the p-value is not significant at 5 per cent. Nifty PSE index is affected by NFII and its own previous lagged value, as the p-value is significant at 5 per cent. While the PSE index is not affected by previous own two previous lagged values, as the p-value is not significant at 5 per cent. The Nifty PSU Bank index is affected by NFII and its own previous lagged value, the p-value is significant at 5 per cent. While the PSU Bank index is not affected by previous own two previous lagged values, as the p-value is not significant at 5 per cent. Nifty Service Sector index is affected by NFII and its previous own lagged values as the p-value.

4.3 Wald coefficient Test

The Wald coefficient test shows the combined repercussion of explanatory variables on explained

variables.

Table 03 Wald Coefficient Test

Test Statistic	Sectors	Value	df	Probability
Chi-square test statistics	NBK	161.7	2	0.000
	NEG	679.1	2	0.000
	NFS	417.5	2	0.000
	NIC	302	2	0.000
	NIF	489.7	2	0.000

Source: Author

The above Wald test investigated the joint impact of explanatory variables on explained variables, and we concluded that each independent variable has a joint impact on Nifty indices, as all p-values of Nifty indices are significant at 5 per cent.

4.4 Granger Causality Test

Table 04 Granger Causality Test

Null Hypothesis:	F-Statistic	Prob.
NBK does not Granger Cause NFII	7.368	0.000
NFII does not Granger Cause NBK	0.132	0.584
NEG does not Granger Cause NFII	5.962	0.000
NFII does not Granger Cause NEG	1.046	0.254
NFS does not Granger Cause NFII	6.887	0.000
NFII does not Granger Cause NFS	0.101	0.017
NIC does not Granger Cause NFII	10.341	0.0001
NFII does not Granger Cause NIC	2.847	0.021
NIF does not Granger Cause NFII	8.784	0.000
NFII does not Granger Cause NIF	0.748	0.481
NMT does not Granger Cause NFII	5.749	0.000
NFII does not Granger Cause NMT	1.748	0.749
NMNC does not Granger Cause NFII	11.767	0.000
NFII does not Granger Cause NMNC	1.749	0.074
NPSE does not Granger Cause NFII	7.126	0.000
NFII does not Granger Cause NPSE	0.047	0.794
NPSU does not Granger Cause NFII	8.454	0.000
NFII does not Granger Cause NPSU	0.749	0.579
NSC does not Granger Cause NFII	10.254	0.000
NFII does not Granger Cause NSC	1.098	0.176

Source: Author

NFII and Bank Index; NFII and Energy Index; NFII and Financial Services; NFII and Infrastructure Index; NFII and Metal Index; NFII and MNC Index; NFII and PSE; NFII and PSU Bank; NFII and Service Sector, such that there is unidirectional causality between NFII and India Consumption.

These results are in line with Froot et al. (2001), Griffin et al. (2002), Griffin et al. (2003), Adabag & Ornelas (2004), Baklaci (2007), Pavabutr & Yan (2007), Poshakwale & Thapa (2007), French (2011), Ulku (2015), Onishchenko & Ulku (2019), Bansal (2020), Verma et al. (2021), Arya and

Singh (2022), Arya et al. (2025) who found an optimistic association between equity flows and stock returns. Froot et al. (2001) argued that foreign stakeholders are inclined to adopt optimistic two-way interchange approaches, i.e., the procedure of purchasing stocks as prices get high and selling them as prices come down and outward influx has predictive capability for future returns in domestic markets with reference to emerging nations. Likewise, Arya and Singh (2022) provided that the stock market is also subject to varying with the happenings in the globe, such as health pandemic, political turmoil, geopolitical crisis and the economic crisis.

While our results differ from Dornbusch and Park (1995), Boyer & Zheng (2002), Boyer & Zheng (2009), Samarakoon (2009) and Nepal et al. (2025), found no relation between returns and cash inflows. Dornbusch and Park (1995) provided that foreign stakeholders trail optimistic two-way interchange approaches that cause stock prices to fluctuate in essentials and such interchange approaches may lead to unusual hikes and downfalls in domestic markets. Singh et al. (2023) provided that the foreign arrivals in India have a stimulus effect on the growth of the economy, which also compels the stock prices to go high and the market gets strengthened.

Conclusion

The main objective of the paper is to investigate the nexus between the Nifty index stock and the movement of foreign institutional investment in the Indian environment. To be more exact, this paper will focus on investigating to which FII flows influence the Nifty indices. Moreover, the paper also aims to note whether a causal relationship exists between the Nifty indices and the foreign flows. After examining the weekly data between January 2006 and August 2024, the paper achieves such conclusions: First, all Nifty indices are affected by foreign flows, and the joint effect of all variables also impacts each index. Second, there is unidirectional causality between NFII and Bank Index; NFII and Energy Index; NFII and Financial Services; NFII and Infrastructure Index; NFII and Metal Index; NFII and MNC Index; NFII and PSE; NFII and PSU Bank; NFII and Service Sector whereas there is bidirectional causality between NFII and India Consumption. In summary, after a study of the literature and ongoing investigation, it has been discovered that FIIs are considerably imperative to the Indian stock market. The scope of the study is limited to how FIIs behave and integrate with the NSE indexes of the Indian stock market.

Various policy implications can be drawn from these findings. As the empirical results suggest a causal relationship between Foreign Institutional Investors and the stock market, particularly the NSE Nifty indices are hugely influenced; thus, the money-related financial specialists should consider the changes in the net stream of FII into the Indian Stock Market before contributing. The money-related financial specialists need to follow FII Net Flow because if there is any increase in the FII Net Flow, then the effect on the records of the stock markets, i.e., BSE Sensex and NSE Nifty, will also rise and when the FII Net Flow decreases, the list price additionally decays.

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