

# IMPACT OF FOREIGN INSTITUTIONAL INVESTMENT ON INDIAN STOCK MARKET

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## ABSTRACT

*The economic liberalisation process has been opened up new dimensions for the Indian economy since 1991. The liberalisation process has achieved new heights and changes in the structure and functioning of the Indian stock market. Foreign capital is flowing from developed countries to developing countries, and it has been the foreign institutional investors have played a vital role in the Indian stock market. FIIs have been allowed to invest in the domestic financial market since 1992. The FIIs has influenced the several factors such as stock market, money market and foreign exchange markets. The objective of this analysis is to study the impact of foreign institutional investment on the Indian stock market. The study attempted to analyse the growth and share of foreign institutional investment in the Indian economy. The study identifies the following variables viz., the annual growth rate of foreign institutional investment and stock market such as BSE and NSE during the period from 1990-91 to 2017-18. The study obtained data from the Foreign Portfolio Investment Monitor by National Securities Depository Limited and Handbook of Statistics on Indian Securities Market for various issues. For analyse, the study also uses the annual growth rate, unit root test, co-integration and Granger causality test.*

**Key Words:** FII, Turnover at BSE and Turnover at BSE

**JEL Code:** F21, M51 and M52

## I. INTRODUCTION

The economic liberalisation process has been opened up new dimensions for the Indian economy since 1991. The liberalisation process has achieved new heights and changes in the structure and functioning of the Indian stock market. Foreign capital is flowing from developed countries to developing countries and it has been the foreign institutional investors have played a virtual role in the Indian stock market. FIIs have been allowed to invest in the domestic financial market since 1992. The FIIs influenced several factors such as stock market, money market and foreign exchange markets. The Foreign Institutional Investors have occupied an essential part of the Indian stock markets. FII contributes to the inflow of FOREX in the economy of India. FII is support to reduce the cost of capital and provide access to global credit and supplement the level of savings and investments in the domestic business. The objective of this analysis is to study the impact of foreign institutional investment on the Indian stock market. The study attempted to analyse the growth and share of foreign institutional investment in the Indian economy.

## II. REVIEW OF SELECT STUDIES

Most of the empirical studies have focused on the Impact of Foreign Institutional Investment on Indian stock market. Many of the research works have studied various aspects related to Foreign Institutional investment in general but specific studies on the Impact of Foreign Institutional Investment on Indian stock market are very much limited in the available literature. Some of the works undertaken in this direction are:

Karan Walia, et al. (2012)<sup>1</sup> states that foreign institutional investors have gained a significant role in Indian stock markets. In this present paper examines the contribution of foreign institutional investment on the sensitivity index. This paper attempts to understand the behavioural pattern of FII from 2001 to 2010 and discuss the volatility of BSE Sensex due to FII. Conclude this research paper it is clear that the FIIs are influencing the Sensex movement to a greater extent. The Sensex had increased when there are positive inflows of FIIs and there was a decrease in sensex when there were negative FII inflows.

M.K. Roy (2001)<sup>2</sup> argued that a comprehensive liberalisation strategy takes care of both growth and efficiency of the equity market; many economists are not accepting this statement. This study aims to evaluate the implications of financial liberalisation on the growth and effectiveness of the Indian stock market. The underlying purpose of the study is simple. The success of liberalisation largely depends on efficient mobilisation and allocation of resources by the financial system for productive investment. The results of the analysis show that in the market, fails to discharge these avowed objectives, the programme of privatisation to say the least will suffer a big jolt in LDCs.

Peter E Robertson (2010)<sup>3</sup> this paper examines the impact of the rise in India's investment rate on its economic growth, using the neoclassical growth model. This research paper finds that the increases in the investment rate have been a secondary source of growth, contributing less than one percentage point to India's overall growth rate of GDP per worker of 2.7 percent. The paper shows that the current investment boom will have a minimal effect on future growth rates and that the benefits from further increases in the investment rate are also likely to be small.

Hemkant Kulshrestha (2014)<sup>4</sup> examines whether the market movement reflects on these investors and their impact on the capital markets. FIIs, because of their short-term nature, can have bidirectional causation with the returns of other domestic financial markets such as money markets, stock markets and foreign exchange markets. This paper finds out determinates of foreign institutional investment in India, a country that opened its economy to foreign capital due to their foreign exchange crisis.

Renuka Sharma and Kiran Mehta (2012)<sup>5</sup> study the relationship in the movement of investment by FII and progress of Indian stock market. This study examines that allowed to invest in all traded securities on the primary market and secondary markets including various financial products, viz., shares, debentures and warrants etc. The research work, continuous shreds of evidence are an indication of the volatility shifts on the stock market due to the behaviour of foreign institutional investors.

Amar Johri et al. (2012)<sup>6</sup> examined that foreign investment refers to investments in the financial assets and production processes of another country different from the host country. After the opening up of the borders for capital movement, these investments have grown in leaps and bounds. In this research affect the factor productivity of the recipient country and can also change the balance of payments.

### **III. METHODOLOGY:**

This study used the following secondary data viz., Foreign Institutional investment, Indian Stock Market such as Turnover at BSE and Turnover at NSE in the Indian economy. The variables are measured in Rupees in Crores. The study period from 1990-91 to 2017-18 and this period divided into three sub-periods viz., 1990-91 to 1999-2000, 2000-01 to 2009-10 and 2010-11 to 2017-18. The data are collected from Foreign Portfolio Investment Monitor by National Securities Depository Limited and Handbook of Statistics on the Indian economy for various issues. For analyse the study used the annual growth rate, averages, percentages, unit root test, co-integration and Granger causality tests model. This study combines regression time series model to determine the impact of FII on the Indian stock market, and the equation of that is as follows:

$$FII = \alpha + \beta_{1t}\text{Turnover at BSE} + \beta_{2t}\text{Turnover at NSE} + \mu_{it} \quad (1)$$

<sup>1</sup>Karan Walia, Rimpi Walia and Monika Jain (2012), "Impact of Foreign Institutional Investment of Stock Market", International Journal of Computing and Corporate Research, Vol. 2, Issue 5, pp. 1-16.

<sup>2</sup> M K Roy (2001), "Stock Market in a Liberalised Economy Indian Experiences", Economic and Political Weekly, pp. 367

<sup>3</sup>Peter E Robertson (2010) "Investment Led Growth in India: Fact or Mythology?", Economic and Political Weekly, Vol. 45, No. 40, pp. 120-124.

<sup>4</sup>Hemkant Kulshrestha (2014) "Impact of Foreign Institutional Investors (FIIs) on Indian Capital Market", International Journal of Research in Business Management, Vol. 2, issue. 3, pp. 35-52.

<sup>5</sup> Renuka Sharma and Kiran Mehta (2012) "Foreign Institutional Investors and Indian Stock Market", Gian Juoti E-Journal, Vol. 2, Issue. 3, pp. 17

<sup>6</sup>Amar Johri, Akhilesh Sharma and Deepika Acharya (2012) A Study of FIIs' Investment Pattern in Context to Indian Stock Market & Its Impact on Stock Market Returns", International Journal of Research in Management, Vol. 6, Issue. 2, pp. 139

**IV. EMPIRICAL RESULTS:****4.1 Growth of FIIs, Turnover at BSE and Turnover at NSE**

Table 1 explains that growth of Foreign institutional investment, Turnover at BSE and Turnover at NSE are measured in Rupees in Crores during the period 1990-01 to 2017-18 and the periods divided into three sub-periods 1990-91 to 1999-2000, 2000-01 to 2009-10 and 2010-11 to 2017-18.

In the first decade, Foreign Institutional Investment was opened on 1992-93 to the Indian Economy with Rs.13 Crores, and it reached to the highest value of Rs.10122 Crores in 1999-2000. The year 1998-1999 recorded the lowest amount of FII with Rs.-1584 Crores. The period 1993-94 recorded with the highest annual growth rate, with 39338.46 per cent. The turnover of BSE registered with Rs.36011 Crores during the year 1990-91, and it reached the value of Rs.685028 Crores during the year 1999-2000. The year 1996-97 witnessed the highest annual growth rate of 148.26 per cent and the average annual growth rate with 200.25 per cent during this period. From the turnover of Rs.1805 Crores in 1994-95, NSE reached Rs.839051 Crores during the year 1999-2000. NSE recorded the highest annual growth rate with 3627.81 per cent and the average annual growth rate was with 9276.96 per cent during the year 1995-96.

In the Second decade, Foreign Institutional Investment was Rs.9933 Crores in 2000-01, and it reached Rs.142658 Crores in 2009-10. The highest value of FII was Rs.142658 Crores in 2009-10 and the lowest amount of Rs.-45811 Crores in 2008-09. The highest annual growth rate of 1601.93 per cent in 2003-04 and the average annual growth rate was 148.47 per cent in during this period. Turnover at BSE was Rs.1000032 Crores in 2000-01, and it reached Rs.1378809 Crores in 2009-10. The highest annual growth rate of 65.12 per cent in 2007-08 and the average annual growth rate was 4.21 per cent in during this period. Turnover at NSE was Rs.1339511 Crores in 2000-01, and it reached Rs.4138024 Crores in 2009-10. The highest annual growth rate of 82.55 per cent in 2007-08 and the average annual growth rate was -61.69 per cent in during this period.

In the Third decade, Foreign Institutional Investment was Rs.146438 Crores in 2010-11, and it reached Rs.144682 Crores in 2017-18. The highest value of FII was Rs. 277461 Crores in 2014-15 and the lowest amount of Rs.-18176 Crores in 2015-16. The highest annual growth rate of 437.20 per cent in 2014-15 and the average annual growth rate was -0.17 per cent in during this period. Turnover at BSE was Rs.1103466 Crores in 2010-11, and it reached Rs.1082968 Crores in 2017-18. The highest annual growth rate of 63.87 per cent in 2014-15 and the average annual growth rate was -0.27 per cent in during this period. Turnover at NSE was Rs.3577410 Crores in 2010-11, and it reached Rs.7234827 Crores in 2017-18. The highest annual growth rate of 54.16 per cent in 2014-15 and the average annual growth rate was 14.61 per cent in during this period.

The impact of Foreign Institutional investment on the Indian stock market of the variables Foreign Institutional Investment, Turnover at BSE and Turnover at NSE has increased year by year. This means that foreign institutional investment is highly influencing on the Indian stock market.

**TABLE 1**  
**Growth of Foreign Institutional Investment on the Indian Stock Market**

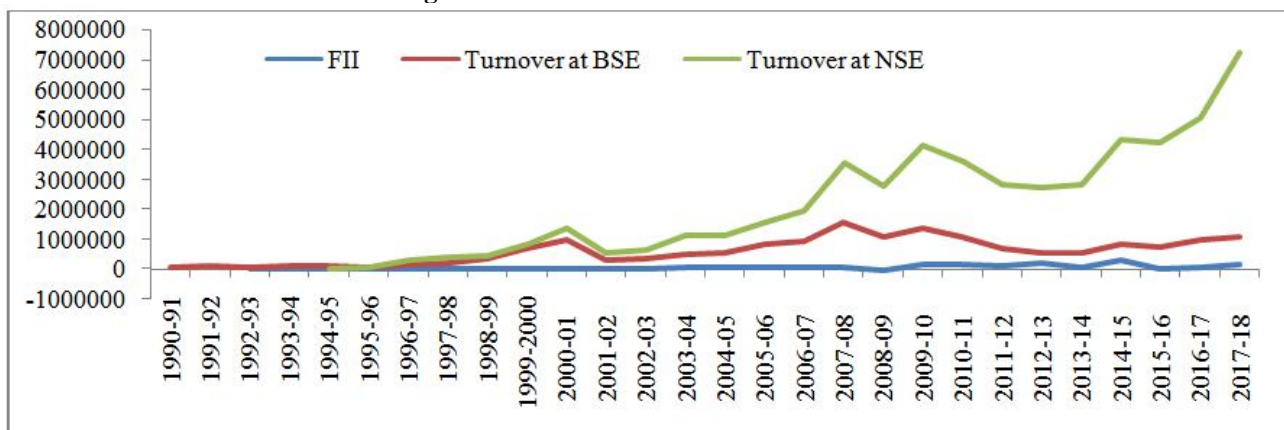
Year	FII	Annual Growth Rate of Agriculture	Turnover at BSE	Annual Growth Rate of Industry	Turnover at NSE	Annual Growth Rate of Service
1990-91	-	-	36011	-	-	-
1991-92	-	-	71777	99.32	-	-
1992-93	13	-	45696	-36.34	-	-
1993-94	5127	39338.46	84536	85.00	-	-
1994-95	4796	-6.46	67749	-19.86	1805	-
1995-96	6942	44.75	50063	-26.11	67287	3627.81
1996-97	8575	23.52	124284	148.26	294503	337.68
1997-98	5958	-30.52	207646	67.07	370193	25.70
1998-99	-1584	-126.59	312000	50.26	414474	11.96
1999-2000	10122	-739.02	685028	119.56	839051	102.44
<b>Average</b>	<b>4994</b>	<b>11108.79</b>	<b>168479</b>	<b>200.25</b>	<b>331219</b>	<b>9276.96</b>
2000-01	9933	-1.87	1000032	45.98	1339511	59.65
2001-02	8763	-11.78	307292	-69.27	513167	-61.69
2002-03	2689	-69.31	314073	2.21	617989	20.43
2003-04	45765	1601.93	502618	60.03	1099533	77.92
2004-05	45881	0.25	518716	3.20	1140071	3.69
2005-06	41467	-9.62	816074	57.33	1563501	37.14

2006-07	30840	-25.63	956185	17.17	1945287	24.42
2007-08	66179	114.59	1578856	65.12	3551038	82.55
2008-09	-45811	-169.22	1100074	-30.32	2752023	-22.50
2009-10	142658	-411.41	1378809	25.34	4138024	50.36
<b>Average</b>	<b>34836</b>	<b>148.47</b>	<b>847273</b>	<b>4.21</b>	<b>1866014</b>	<b>23.21</b>
2010-11	146438	2.65	1103466	-19.97	3577410	-13.5
2011-12	93726	-36.00	667022	-39.55	2810893	-21.43
2012-13	168367	79.64	548774	-17.73	2708279	-3.65
2013-14	51649	-69.32	521665	-4.94	2808488	3.70
2014-15	277461	437.20	854844	63.87	4329655	54.16
2015-16	-18176	-106.55	740089	-13.42	4236983	-2.14
2016-17	48411	-366.35	998261	34.88	5055913	19.33
2017-18	144682	198.86	1082968	8.49	7234827	43.10
<b>Average</b>	<b>114070</b>	<b>-0.17</b>	<b>814636</b>	<b>-0.27</b>	<b>4095306</b>	<b>14.61</b>

Sources: Foreign Portfolio Investment Monitor by National Securities Depository Limited

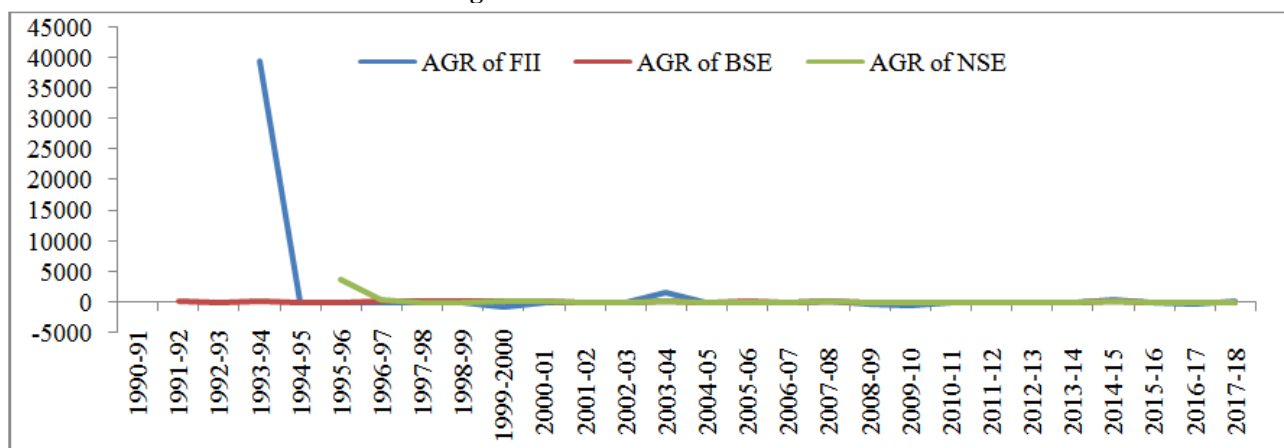
**DIAGRAM 1**

**Growth of Foreign Institutional Investment on the Indian Stock Market**



**DIAGRAM 2**

**Annual Growth of Foreign Institutional Investment on the Indian Stock Market**



#### 4.2 Unit Root Test

The study applied unit root test results of the Augmented Dickey-Fuller test with constant and linear trend specifications. Table 2 shows that the unit root results of all the study variables of Foreign Institutional investment, Turnover at BSE and Turnover at NSE on the Indian stock market. ADF test is used to evaluate the null hypothesis of a unit root.

For Foreign Institutional Investment, the statistic values are statistically significant at 1 per cent level in the intercept with linear trend specifications in the level and intercept and intercept with linear trend specifications in the first

difference in unit root test of ADF test. The result indicates that it rejects the null hypothesis. Hence Foreign Institutional Investment is stationary at the level and first difference.

For Turnover at BSE, the statistic values are statistically significant at 1 per cent level in the intercept and intercept with linear trend specifications in the first difference unit root test of the ADF test. The result indicates that it rejects the null hypothesis. Hence Turnover at BSE is stationary at first difference.

For Turnover at NSE, the statistic values are statistically significant at 1 per cent level in the intercept and intercept with linear trend specifications in the first difference unit root test of the ADF test. The result indicates that it rejects the null hypothesis. Hence Turnover at NSE is stationary at first difference.

**TABLE 2**  
**Unit Root Test for Foreign Institutional Investment on the Indian Stock Market**

Variables	Level		First Difference		Remarks
	Intercept	Linear Trend	Intercept	Linear Trend	
<b>FII</b> s	-1.285496	-6.692021***	-7.040117***	-6.862513***	<b>I(0)</b>
<b>BSE</b>	-1.739224	-2.507303	-5.811787***	-5.692166***	<b>I(1)</b>
<b>NSE</b>	1.004064	-1.440997	-4.962629***	-5.434247***	<b>I(1)</b>

\*\*\* denotes the level of significance at 1 per cent

### 4.3 Co-integration Test

Table 3 represents the Johansen co-integration tests on the basis of two statistics, viz., trace test statistics and maximum Eigen value test statistics the co-integration test accepts/rejects null hypotheses. The results of the statistics of Trace and Max Eigen value are more than the critical value at five per cent level of significance, which indicates the reject the null hypothesis. Therefore we can reject the null hypothesis of even more than two co-integrated equations among the three variables, such as Foreign Institutional Investment, Turnover at BSE and Turnover at NSE on the Indian stock market.

**TABLE 3**  
**Co-integration Test for Foreign Institutional Investment on the Indian Stock Market**

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigen Value	Trace Statistic	0.05 Critical Value	Probability
None	0.661115	38.84937	29.79707	0.0035
At most 1	0.242015	10.71489	15.49471	0.2296
At most 2	0.126301	3.510492	3.841466	0.0610
Unrestricted Cointegration Rank Test (Maximum Eigen Value)				
Hypothesized No. of CE(s)	Eigen Value	Max-Eigen Statistic	0.05 Critical Value	Probability
None	0.661115	28.13448	21.13162	0.0044
At most 1	0.242015	7.204399	14.26460	0.4652
At most 2	0.126301	3.510492	3.841466	0.0610

### 4.4 Granger Causality Test

The study explains the direction of the relationship and it to check the Granger casualty test has been conducted. The test investigates casualty between three variables such as Foreign Institutional Investment, Turnover at BSE and Turnover at NSE.

Table 4 exhibits the results of the Granger casualty test exhibit rejection of all null hypotheses. It indicates the absence of any casualty between one Foreign Institutional Investment on Turnover at NSE on the Indian stock market. However, in respect of Foreign Institutional Investment and Turnover at NSE uni-directional relationship has been evidenced. The probability of F statistics rejects the null hypotheses. Therefore we have sufficient evidence to conclude that investment by foreign institutional investment Granger cause Turnover at NSE on the Indian stock market.

**TABLE 4**  
**Granger Causality Test for Foreign Institutional Investment on the Indian Stock Market**

Null Hypothesis	Observation	F-Statistic	Probability
FII does not Granger Cause Turnover at BSE	26	1.35568	0.2794
BSE does not Granger Cause Turnover at FII		1.86144	0.1802
FII does not Granger Cause Turnover at NSE	26	3.28994	0.0572
NSE does not Granger Cause Turnover at FII		4.69819	0.0206

## 5. CONCLUSION:

The study analysed time series data on the impact of Foreign Institutional Investment on the Indian stock market, and its attempt to establish the growth and relationship with the Foreign Institutional Investment, Turnover at BSE and Turnover at NSE for 28 years from 1990-91 to 2017-18. The impact of Foreign Institutional investment on the Indian stock market of the variables Foreign Institutional Investment, Turnover at BSE and Turnover at NSE has increased year by year. It means that foreign institutional investment is profoundly influencing on the Indian stock market. The Granger casualty between Foreign Institutional Investment and Turnover at NSE is significant at five per cent level. Therefore, the study concludes that investment by foreign institutional investment Granger causes Turnover at NSE on the Indian stock market. The Government should focus on strengthen and promote the financial market for long term growth and industrialisation. Therefore the policy framework for the liberalisation of Turnover at Bombay Stock Exchange should be formulated with consideration to impact on the Indian stock market. Foreign Institutional Investment to give rise to the local stock market such as Bombay Stock Market in the Indian economy. The Foreign Institutional Investment is increasing the global investor confidence in a particular economy and stock market.

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