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“IMPACT OF FDI ON STOCK MARKET IN INDIA”



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Abstract

In the present era of knowledge, growth and development, India has realised the need of foreign capital for basic infrastructure development. India has reformed various policies and taken effective measures related to foreign investments and globally emerged as one of the favourite foreign investment destination. This is reflected through number of foreign institutional investors (FIIs) and foreign direct investors (FDIs). During last few years, stock market has been dynamic and various benchmarking of Sensex (Sensitivity Index) and Nifty experienced highest peaks and lows. From the data, it has been noted that the presence of FDI and FII is growing in Indian market and they have major impact in the stock market activities. The present study is an attempt to find out the impact of FDI on movement of BSE and NSE during the period under study. Karl Pearson's Correlation Coefficient is used to analyse the data. The result showed the correlation between FDI inflows and NSE as well as BSE.

KEY WORDS: FDI, NSE, BSE, correlation between FDI and BSE, correlation between FDI and NSE.

Introduction

FDI is defined as "A form of long term international capital movement made for the purpose of productivity activity and accompanied by the intention of managerial control or participation in the management of the foreign firm." FDI results in technology and knowledge transfer, capital inflows, etc. in the host country. Thus promotes development and affects the economic environment of the country. Stock market is the indicator of country's economic and financial development. In India, two major indices, i.e., Sensex and Nifty reflects the movement of stocks in BSE and NSE respectively. It has been seen from the past data that FDI significantly affect the stock market in India.

Objectives

- To understand the meaning of FDI
- To find a correlation between BSE sensex and FDI
- To find a correlation between Nifty and FDI

Research Methodology

The undertaken study is based on secondary data. The data was collected from various sources like publications from Ministry of Commerce, Govt. Of India, etc. The BSE Sensex and CNX Nifty data is gathered from websites of BSE India and NSE India respectively. Daily closing index value are taken and averaged to get index value for each year. The study period considers data starting from 2004 to 2014.

Karl Pearson's Correlation coefficient is used for data analysis. Correlation coefficient is a statistical tool that determines the degree to which two variables' movements are associated. The value of correlation coefficient varies from -1 to 1.

Literature Review:

Jayachandran and Selian studied the relationship among Foreign Direct Investment (FDI), trade and economic growth of India over the period 1970-2007. Granger causality test was used for data analysis. The result showed the existence of casual relationship between the variables. The direction is from FDI to growth rate.

Bansal and Pasricha examined the post effect of FIIs' entry to the Indian stock market volatility. They found out that there was no significant change in Indian stock market average returns. Post foreign investors' entry, volatility seemed to be reduced.

John Andreas analysed how FDI inflows affect the host country's economic growth. According to him, FDI brings technology advancements and capital inflows and thus should positively affect the host country's economic growth. He collected data from across 90 countries during 1980 to 2002 and analysed them by using cross section and panel data analysis. He concluded that FDI positively affect host country's economic growth in developing economies but not in developed economies.

Pal, P. Observed that the share of FIIs are increasing in the Indian stock market and their impact on the domestic market is also increasing. From the data of trading activities of FIIs and domestic stock market turnover it has been found that FIIs are becoming more important at the margin.

Jatinder Loomba attempted to investigate the trading behaviour of BSE Sensex and FIIs. As per the study, there was a significant positive correlation between FII activity and its effect on Indian capital market.

Foreign Direct Investment (FDI):

FDI is a direct investment into production or business in a country by an individual or company from another country. It is either by purchasing company in the target country or by expanding operations of an existing business in that country. FDI brings better knowledge and technology along with the capital. The FDI inflows in India during 2004-05 to 2013-14 are as below:

Table 1 [Insert here]

Indian Stock Market- BSE Sensex and CNX Nifty:

Stock market is a market where trading of company stock, both listed securities and unlisted securities take place. An index is an indicator which denotes the collective movement of most of the stocks.

Sensex (Sensitive Index) is the benchmark of the Bombay Stock Exchange (BSE). It comprises of 30 of the largest and most actively traded stocks on BSE. It was formed in 1986 and it is the largest stock index in India.

Nifty is an indicator of all the major companies of the National Stock Exchange. Nifty is endorsed by Standard & Poor's and comprises of 50 of the largest and most liquid stocks on NSE of India. It represents the market for benchmarking Indian investments.

In this paper, we have used Sensex and Nifty indices as major indicators of Indian stock market and their movement in relation to Foreign Direct Investment (FDI). Annual averages of S&P BSE Sensex and CNX Nifty are as below:

Table 2 [Insert here]

Need for FDI:

India is one of the fast developing countries. Growth of many developing countries is hindered by insufficient funds for infrastructure development. Growing India requires foreign investments for the basic infrastructure development like roads, ports, warehouses, financial services, etc. Highly capital intensive areas also seek FDI for their development. FDI is the remedy for scarce resources. FDI inflows encourage a transparent and effective policy environment and builds human and institutional capacities for its execution.

Benefits of FDI:

- Economic growth: One of the most important advantages of FDI is it helps in accelerating economic growth of the country. The infusions of foreign investments in various industries help in their growth as well as development and result in overall economic growth
- Trade: Opening and liberalising FDI policies have resulted in wide opportunities for imports as well as exports. India manufactures superior quality goods due to greater amount of FDI inflows in the country
- Employment: By setting up the industrial units in the nation, FDI creates number of employment opportunities. Thus FDI helps in employment generation
- Better technology and knowledge transfer: FDI helps in getting access to the best available knowledge, technology and methods across the globe. It helps in developing the know how process in India for technology advancement in India

Data analysis:

- FDI & BSE SENSEX Correlation:

Table 3 [Insert here]

Karl Pearson's Correlation coefficient:

$$\begin{aligned} r &= \frac{\sum dxdy}{\sqrt{\sum dx^2} \sqrt{\sum dy^2}} \\ &= \frac{433772995.3}{(13073.27186) (40473.51947)} \\ &= \frac{433772995.3}{529121323.2} \\ &= 0.819798742 \\ &= 0.82 \text{ (rounding off)} \end{aligned}$$

From the analysis of data (Table 3), it has been found that BSE Sensex and FDI have followed a close relationship. Karl Pearson correlation coefficient shows the positive correlation between the FDI's and BSE Sensex (0.82).

- FDI & CNX Nifty Correlation:

Table 4 [Insert here]

Karl Pearson's Correlation coefficient:

$$\begin{aligned} r &= \frac{\sum dxdy}{\sqrt{\sum dx^2} \sqrt{\sum dy^2}} \\ &= \frac{129754893.77}{(4173.062453)(40473.51947)} \\ &= \frac{129754893.77}{168898524.441} \\ &= 0.768241724 \\ &= 0.77 \text{ (rounding off)} \end{aligned}$$

From the analysis of data (Table 3), it has been found that CNX Nifty and FDI have followed a close relationship. Karl Pearson correlation coefficient shows the positive correlation between the FDIs and CNX Nifty (0.77)

Conclusion:

FDI inflows have provided opportunities to Indian industries to get the access of global managerial skills and practices, latest technologies, knowledge across the globe and also help in human and natural resources' optimization. FDI allows taking global competitive advantages with higher efficiency. FDI inflows boost the economy. The current study is evident that there is a positive correlation between FDI inflows & sensex and FDI inflows & nifty.

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Table 1:

AS PER INTERNATIONAL BEST PRACTICES:

(Data on FDI have been revised since 2000-01 with expended coverage to approach International Best Practices) (Amount US\$ million)

Financial Year (April-March)	Total FDI Flows	%age growth over previous year (in US\$ terms)
2004-05	6,051	-
2005-06	8,961	(+)48%
2006-07	22,826	(+)146%
2007-08	34,843	(+)53%
2008-09	41,873	(+)20%
2009-10 (P)(+)	37,745	(-)10%
2010-11(P)(+)	34,847	(-)08%
2011-12(P)	46,556	(+)34%
2012-13(P)	36,860	(-)21%
2013-14(P)(Apr-Jan,2014)	28,807	-
Cumulative total (from April,2004 to January 2014)		-

Source:

(i) RBI's Bulletin March, 2014 dt. 10.03.2014 (Table No. 34 – FOREIGN INVESTMENT INFLOWS).

(ii) Inflows under the acquisition of shares in March, 2011, August, 2011 & October, 2011, include net FDI on account of transfer of participating interest from Reliance Industries Ltd. to BP Exploration (Alpha).

(iii) RBI had included Swap of Shares of US\$ 3.1 billion under equity components during December 2006.

(iv) Monthly data on components of FDI as per expended coverage are not available. These data, therefore, are not comparable with FDI data for previous years.

(v) Figures updated by RBI up to January, 2014.

‘#’ Figures for equity capital of unincorporated bodies for 2010-11 are estimates. (P) All figures are provisional

“+” Data in respect of ‘Re-invested earnings’ & ‘Other capital’ for the years 2009- 10, 2010-11, 2012-13 & 2013-14 are estimated as average of previous two years.

Table 2:

Year (Apr-March)	Annual Avg. Of S&P BSE Sensex	Annual of CNX Nifty
2004-05	5741.0	1805.3
2005-06	8280.1	2513.4
2006-07	12277.3	3572.4
2007-08	16568.9	4896.6
2008-09	12365.6	3731.0
2009-10	15585.2	4657.8
2010-11	18605.2	5583.5
2011-12	17422.9	5242.7
2012-13	18202.1	5520.3
2013-14	19789.5	5918.7

Source: BSE, NSE.

Table 3:

Years	Sensex Value (X)	Deviation (dx)	dx^2	FDI (Y)	Deviation (dy)	dy^2	Dxdy
		14483.78			29936.9		
2004-05	5741.0	-8742.78	76436202.13	6,051	-23885.9	570536218.8	208829168.8
2005-06	8280.1	-6203.68	38485645.54	8,961	-20975.9	439988380.8	130127771.3
2006-07	12277.3	-2206.48	4868553.99	22,826	-7110.9	50564898.81	15690058.63
2007-08	16568.9	2085.12	4347725.414	34,843	4906.1	24069817.21	10229807.23
2008-09	12365.6	-2118.18	4486686.512	41,873	11936.1	142470483.2	-25282808.3
2009-10	15585.2	1101.42	1213126.016	37,745	7808.1	60966425.61	8599997.502
2010-11	18605.2	4121.42	16986102.82	34,847	4910.1	24109082.01	16986102.82
2011-	17422.9	2939.1	8638426.374	46,556	16619.1	276194484.8	48845529.

12		2					19
2012-13	18202.1	3718.3	13825903.62	36,860	6923.1	47929313.61	25742301.19
2013-14	19789.5	5305.7	1622064.718	28,807	-1129.9	1276674.01	-5994933.028
Total	144837.8		170910437.2	2,99,369		1638105778.8	43377299
	$\bar{x} = \frac{fx}{n}$ =144837.8 / 10 =14483.78		$\sqrt{\Sigma dx^2}$ = 13073.2718	$\bar{y} = \frac{fy}{n}$ =299369 / 10 =29936.9		$\sqrt{\Sigma dy^2}$ = 40473.5194	

Table 4:

Years	CNX Nifty Value (X)	Deviation (dx)	dx ²	FDI (Y)	Deviation (dy)	dy ²	Dxdy
2004-05	1805.3	-4284.17	6144796.4769	6,051	-23885.9	570536218.8	59210040.933
2005-06	2513.4	-1770.77	3135626.3929	8,961	-20975.9	439988380.8	37143494.443

2006-07	3572.4	-711.77	506616.5329	22,826	-7110.9	50564898.81	5061325.2 93
2007-08	4896.6	612.43	375070.5049	34,843	4906.1	24069817.21	3004642.8 23
2008-09	3731.0	-553.17	305997.0489	41,873	11936.1	142470483.2	- 6602692.4 37
2009-10	4657.8	373.63	139599.3769	37,745	7808.1	60966425.61	2917340.4 03
2010-11	5583.5	1299.3 3	1688258.4489	34,847	4910.1	24109082.01	6379840.2 33
2011-12	5242.7	958.53	918779.7609	46,556	16619.1	276194484.8	15929905. 923
2012-13	5520.3	1236.1 3	1528017.3769	36,860	6923.1	47929313.61	8557851.6 03
2013-14	5918.7	1634.5 3	2671688.3209	28,807	-1129.9	1276674.01	- 1846855.4 47
Total	42841.7		17414450.241	2,99,369		1638105778.8 4	12975489 3.77
	$\bar{x} = \frac{fx}{n}$ =42841.7 /10 =4284.17		$\sqrt{\Sigma dx^2}$ = 4173.0624	$\bar{y} = \frac{fy}{n}$ =299369 /10 =29936.9		$\sqrt{\Sigma dy^2}$ = 40473.5194	