

Impact of Foreign Direct Investment (FDI) on Indian Stock Market

Bhavana Kunnappilly Sankaran
Lecturer, School of Business, Emirates Aviation University,
Dubai

Abstract

With the drastic liberalisation in the Foreign Direct Investment (FDI) regime during past years, Indian capital market has been able to attract more foreign investors. As result of this, India has emerged as one of most favoured destination for investment in the world. FDI has played a vital role in the overall economic growth and development of the host countries. The present study analysed the country wise FDI inflow on different sectors and also assessed its impact on share price movement during post financial crisis period. The necessary data are collected and analysed for the period of ten years starting from 2007-08 to 2016-17. Tools namely mean, coefficient of variation, compound annual growth rate (CAGR), correlation and simple linear regression are used. The result reveals that among the selected countries Mauritius has higher investments, however manufacturing sector attracted more investments than other sectors. FDI has positive relationship with BSE and NSE share price movement hence the government should emphasis more inflows it leads to high economic growth and employment opportunities in the country. It can be concluded from the regression result that FDI have significant effect on NSE share price movement

Key words: Economic liberalisation, foreign direct investment, economic growth and Indian stock market

Introduction

Foreign Direct Investment (FDI) refers to the capital investment made by a foreign entity, in the production and management of an entity in another country. In India, it was first introduced in 1991 under Foreign Exchange Management Act (FEMA). It facilitates international trade and transfer of knowledge and technology between countries. The new economic policy removed all unnecessary rules and offered liberal environment to foreign investors for FDI inflows under automatic route. With the drastic liberalisation in the FDI regime during past years, Indian capital market has been able to attract more foreign investors (Honey Gupta, 2017). As result of this, India has emerged as one of most favoured destination for investment in the world. FDI has played a vital role in the overall economic growth and development of the host countries. It helps in developing the economy by creating employment opportunities, generating revenues in the form of tax and incomes, financial stability to the government, infrastructure development, forward and backward linkages to the domestic firms for the requirements of raw materials, tools, business infrastructure and act as support for financial system. Due to financial crisis in 2007, economic environment at global level was changed.

The stock markets have grown significantly in developed and developing countries over the last two decades. The development and volatility of the Indian stock market has been substantially influenced by several macroeconomic variables namely gross domestic product, exchange rate, FDI inflow, inflation etc. Past studies reveal that foreign direct investment in India has significant effect on Indian stock market. Hence the present study analysed the country wise FDI inflow on different sectors and also assessed its impact on share price movement during post financial crisis period.

Review of literature

Rahul Dhiman et al., (2013) found that fast growing economies such as China, Korea and Singapore have recorded with incredible growth at the onset of foreign direct investment (FDI). The amount of FDI inflow has direct effect on both economy as well as capital markets. It concludes that flow of FDI have significant impact on the trend of Sensex and Nifty. **Sekar K (2015)** stated that due to India's poor environment, it attracts low level of foreign direct investments. Now days the investment climate is more favourable and the FDI policies are liberalised to improve the situation. It is found that investors are preferred to invest in short and medium term investment, FDI is an important source for financing the economic development. It concludes that FDI not alone a solution for poverty alleviation, unemployment and other economic ills. The country requires huge investments to attain 2020 vision. The policy makers need to ensure transparency and consistency in policy making along with broad long term development strategy. **Sandeep Kapoor et al (2015)** stated that FII and FDI are becoming imperative source of finance in developing countries including India. It was found that during 2002 to 2011, FDI inflow has no significant impact of stock market but FII determines the trend of Indian stock market. **Tanu Aggarwal et al (2017)** assessed the impact of foreign direct investments and foreign institutional investments on BSE Sensex during 2006-07 to 2015-16. It reveals that there is a strong positive correlation between FDI and Sensex and weak negative correlation between FII and Sensex. Regression result shows that FDI and FII have no significant effect on Sensex during the study period. **Honey Gupta (2017)** found that foreign direct investment has significant relationship with both the stock market and it has significant impact on BSE Sensex and NSE nifty movements. It recommends that the government of India along with its implementing bodies should try to attract more and more FDI for the smooth and rapid development of the stock market and the economy as a whole.

Objectives

- To assess the growth pattern of country wise foreign direct investment inflow in India.
- To examine the growth pattern of sector wise foreign direct investment inflow in India.
- To analyse the effect of foreign direct investment inflow on BSE Sensex and NSE Nifty.

Methodology

The present study mainly depends on secondary data, the relevant data are collected from RBI, BSE, NSE, money control and other information are collected from books, journals and magazines. The collected data are analysed with the help of SPSS software. The study period covers ten years starting from 2007-08 to 2016-17. For the purpose of analysis tools namely mean, coefficient of variation, compound annual growth rate (CAGR), correlation and simple linear regression are used.

Results and discussion

The results of summary statistics and growth pattern of foreign direct investment inflows in India during 2007-08 to 2016-17 are depicted in Table 1. It reveals that the average FDI inflow during the study period is 23446.8. It can be seen that Mauritius country has the highest mean investment of 8170.9 among the selected countries followed by Singapore. However, Canada has the lowest mean FDI of 62 during the study period. Cayman Islands has the highest dispersion of FDI inflow (134.2 per cent) indicates that FDI investment of the country was not stable during the study period whereas Mauritius has lowest dispersion (33.63 per cent) among the selected countries reveals more consistency in the distribution of FDI inflow. It was found that all the countries have positive growth rate of FDI inflow during the study period except Cyprus and other countries. The highest growth rate is found in Malaysia (28.39 per cent) followed by Japan (24.94 per cent) and Luxembourg (24.39 per cent).

Table 2 shows the results of summary statistics and growth pattern of foreign direct investment inflows in different sectors during 2007-08 to 2016-17. The result indicates that the average FDI inflow during the study period is 23446.8. Further it reveals that the highest mean FDI inflow is found in manufacturing sector (7070.9) followed by financial service (2858.2) and construction (2247.7). Though, trading sector has the lowest mean FDI of 163 during the study period. The coefficient of variation result reveals that real estate sector has the highest dispersion of FDI (113.25 per cent) indicates that FDI investment in this sector was not stable during the study period while electricity has lowest dispersion (27.82 per cent) among the selected sectors reveals more consistency in the distribution of FDI. It was found that FDI investment in all the sectors shows positive growth rate during the study period except construction sector, real estate sector, mining sector and other sector. The highest growth rate is found in communication services (56.66 per cent) followed by wholesale and retail sector (30.06 per cent).

Table 1: Country wise Foreign Direct Investment (FDI) inflow in India during 2008 to 2017

(US \$ Million)

Countries/ Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Mean	SD	CV	CAGR
Mauritius	9518	10165	9801	5616	8142	8059	3695	5878	7452	13383	8170.9	2748	33.63	3.47
Singapore	2827	3360	2218	1540	3306	1605	4415	5137	12479	6529	4341.6	3262.9	75.15	8.73
USA	950	1236	2212	1071	994	478	617	1981	4124	2138	1580.1	1085.4	68.69	8.45
Cyprus	570	1211	1623	571	1568	415	546	737	488	282	801.1	485.8	60.64	-6.8
Japan	457	266	971	1256	2089	1340	1795	2019	1818	4237	1624.8	1111.3	68.4	24.94
Netherlands	601	682	804	1417	1289	1700	1157	2154	2330	3234	1536.8	835.4	54.36	18.33
United Kingdom	508	690	643	538	2760	1022	111	1891	842	1301	1030.6	779.4	75.63	9.86
Germany	486	611	602	163	368	467	650	942	927	845	606.1	249.8	41.22	5.69
UAE	226	234	373	188	346	173	239	327	961	645	371.2	248.5	66.94	11.06
France	136	437	283	486	589	547	229	347	392	487	393.3	144.8	36.82	13.61
Switzerland	192	135	96	133	211	268	356	292	195	502	238	122	51.26	10.09
Hong Kong	106	155	137	209	262	66	85	325	344	134	182.3	98.6	54.09	2.37
Spain	48	363	125	183	251	348	181	401	-	-	237.5	125.1	52.69	23.65
South Korea	86	95	159	136	226	224	189	138	241	466	196	109.2	55.71	18.41
Luxembourg	15	23	40	248	89	34	539	204	-	-	149	180.3	120.98	24.39
China	-	-	-	2	73	148	121	505	461	198	215.43	193.1	89.64	10.49
Malaysia	-	-	-	40	18	238	113	219	-	-	125.6	100.5	80.04	28.39
Cayman Islands	-	-	-	-	-	-	25	72	440	49	146.5	196.6	134.2	6.96
Italy	-	-	-	-	-	-	185	167	279	364	248.75	91.2	36.66	7.0
Canada	-	-	-	-	-	-	11	153	52	32	62	62.9	101.51	11.27
Other Countries	2699	3035	2376	1142	892	1156	795	859	2243	1491	1668.8	840.1	50.34	-5.76
Total FDI inflow	19425	22697	22461	14939	23473	18286	16054	24748	36068	36317	23446.8	7438.7	31.73	6.46

Source: Reserve Bank of India

Table 2: Sector wise Foreign Direct Investment (FDI) inflow in India during 2008 to 2017

(US \$ Million)

Countries/ Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Mean	SD	CV	CAGR
Manufacture	3726	4777	5143	4793	9337	6528	6381	9613	8439	11972	7070.9	2658.7	37.60	12.38
Construction	2551	2237	3516	1599	2634	1319	1276	1640	4141	1564	2247.7	971.8	43.23	-4.77
Financial services	3850	4430	2206	1353	2603	2760	1026	3075	3547	3732	2858.2	1098.6	38.44	0.31
Real estate activities	1336	1886	2191	444	340	197	201	202	112	105	701.4	794.4	113.25	-22.45
Electricity	829	669	1877	1338	1395	1653	1284	1284	1364	1722	1341.5	373.2	27.82	7.58
Communication services	66	2067	1852	1228	1458	92	1256	1075	2638	5876	1760.8	1652.1	93.83	56.66
Business services	1158	643	1554	569	1590	643	521	680	3031	2684	1307.3	911.0	69.68	8.76
Miscellaneous services	1901	1458	888	509	801	552	941	586	1022	1816	1047.4	509.3	48.62	0.45
Computer services	1035	1647	866	843	736	247	934	2154	4319	1937	1471.8	1159.6	78.79	6.46
Hotels and Restaurants	280	343	671	218	870	3129	361	686	889	430	787.7	857.2	108.82	4.38
Wholesale and retail trade	200	294	536	391	567	551	1139	2551	3998	2771	1383	1375.7	99.48	30.06
Mining	461	105	268	592	204	69	24	129	596	141	258.9	214.5	82.86	-11.17
Transportation	816	401	220	344	410	213	311	482	1363	891	545.1	367.6	67.44	0.88
Trading	176	400	198	156	6	140	0	228	-	-	163	127.4	78.15	2.62
Education, Research & Development	156	243	91	56	103	150	107	131	394	205	163.6	97.8	59.80	2.76
Others	884	1097	384	506	419	43	292	232	215	470	454.2	317.8	69.97	-6.12
Total FDI inflow	19425	22697	22461	14939	23473	18286	16054	24748	36068	36316	23446.7	7438.5	31.73	6.45

Source: Reserve Bank of India

Table 3: Correlation results among FDI inflow, BSE and NSE share price movement

	FDI Inflow	BSE Share price	NSE Share price
FDI Inflow	1	0.626	0.649*
BSE Share price		1	0.999**
NSE Share price			1

Note: * indicates significant at five percent level

** indicates significant at one percent level

The correlation result reveals that FDI inflow in India is positively related with BSE SENSEX (0.626) and significantly related with NSE NIFTY (0.649) at five per cent level. On the other hand, share price of BSE and NSE is positively related at one per cent level of significance. **Simple Linear regression results**

Table 4: Model summary

Model		R	R Square	Adj. R Square	Std. error of the estimate
Model I	BSE	0.626	0.392	0.316	5777.52
Model II	NSE	0.649	0.421	0.348	1754.43

The model summary of regression results are depicted in Table 4, it indicates the strength of relationship between the independent and dependant variable. R square indicates coefficient of determination, which is the squared value of multiple correlation. The R square value for the first model (39.2) reveals that 39.2 percent of the variation in dependent variable is explained by the independent variable. However, the second model exposes that 42.1 percent of variation in NSE share price movement is explained by FDI inflow.

Table 5: Fitness of the model

Model			Sum of Squares	Df	Mean Square	F	Sig.
Model I	BSE	Regression	172047871.5	1	172047871.5	5.154	0.053
		Residual	267037981.9	8	33379747.74		
		Total	439085853.5	9			
Model II	NSE	Regression	17888061.43	1	17888061.43	5.812	0.042*
		Residual	24624130.46	8	3078016.31		
		Total	42512191.89	9			

Note: * indicates significant at five percent level

The goodness of fit of the two models are tested with help of ANOVA. For the first model the result reveals that F calculated value is less than the table value, hence the null hypothesis is accepted that FDI inflow does not have any significant influence on BSE share price movement. For NSE, the calculated F value is

greater than the table value hence the null hypothesis is rejected that there is a significant influence of FDI inflow on Indian stock market.

Table 6: Regression coefficient

Model			Unstandardised Coefficients		t	Sig.
			B	Std. Error		
Model I	BSE	Constant	8016.1	6339.23	1.265	0.242
		FDI inflow	0.588	0.259	2.270	0.053
Model II	NSE	Constant	2163.65	1925	1.124	0.294
		FDI inflow	0.190	0.079	2.411	0.042*

Note: * indicates significant at five percent level

The calculated t statistics of FDI coefficient for BSE Sensex (2.270) is less than the table value; hence the null hypothesis is accepted that FDI inflow has no significant influence on BSE share price movement. On other hand, t - statistic value of FDI coefficient for NSE nifty is greater than the table value, hence the null hypothesis is accepted that there is a significant influence of FDI inflow on NSE share price at five percent level.

Conclusion

Foreign direct investment inflow helps to accelerate the Indian economy and also provides opportunities to the industries for technological up-gradation, access to international managerial skills and practices, optimizing deployment of natural and human resources and competitive advantage with greater efficiency. The present study assessed the effect of FDI inflows on the share price moment of Indian stock market namely BSE SENSEX and NSE NIFTY. The result reveals that among the selected countries Mauritius has higher investments, however manufacturing sector attracted more investments than other sectors. FDI has positive relationship with BSE and NSE share price movement hence the government should emphasis more inflows it leads to high economic growth and employment opportunities in the country. It can be concluded from the regression result that FDI have significant effect on NSE share price movement.

References

- Chopra C (2002).** ‘Determinants of FDI inflows in India’, *Decision*, IIM, Calcutta, 27 (2), pp. 137-152.
- Basu P, Nayak NC, Archana (2007).** ‘Foreign Direct Investment in India: Emerging Horizon, *Indian Economic Review*, 42, pp. 255-266.
- Syed Tabassum Sulthana and S. Pardhasaradhi (2012).** ‘Impact of FDI & FII on Indian stock market, *Finance Research*, 1 (3), July 2012, ISSN: 2165-8226, pp. 4-10.

Rahul Dhiman and Preeti Sharma (2013). ‘Impact of flow of FDI on Indian Capital market’, *European Journal of Business and Management*, 5 (9), ISSN: 2222-2839, pp. 75-80.

Banerjee, Arindam (2013). ‘Impact of FDI and FII on the Indian stock market during recent recession period: An empirical study’, *Journal of Management and Science*, 3 (4), December 2013, pp. 8-15

Sekar K (2015). ‘Assessment of impact of foreign direct investment in India FDI in banking and finance’, *Journal of Entrepreneurship & Organisation Management*, 4 (1), ISSN: 216-026X.

Sandeep Kapoor and Rocky Sachan (2015). ‘Impact of FDI & FII on Indian stock market’, *International Journal of Research in Finance and Marketing*, 5 (4), pp. 9-17, ISSN: 2231-5985.

Nagpal, Pooja, Chandrika R, and Ravindra HV (2016). ‘An empirical study on impact of flow of FDI & FII on Indian stock market’, *Adarsh Business Review*, 3 (1), January 2016, pp. 19-25

Tanu Aggarwal et al (2017). ‘Trends and patterns of FDI and FII in India – Implications for the future’, *Global Journal of Management and Business Research: Economics and Commerce (B)*, 17 (3), ISSN: 2249-4588.

Honey Gupta (2017). ‘An analysis of impact of FDI on Indian stock market: with special reference to BSE-SENSEX and NSE-CNX NIFTY’, *Advances in Economics and Business Management (AEBM)*, 4(1), ISSN: 2394-1553, July 2017, pp. 13-17.

