"IMPACT OF FDI ON THE PERFORMANCE OF HEALTHCARE STOCKS; AN ANALYTICAL STUDY"

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Abstract : *India is one of the biggest emerging markets in the world and has become an important destination for Foreign Direct Investment (FDI) and Foreign Portfolio Investment. The healthcare sector in India is expanding rapidly and has not been as severely impacted by recent economic slowdown as some of the other industries. Thereby it has shown the potentiality of growth and stability.*

Foreign Direct Investment in any economy has become a strategic component of investment and needed for maintaining the pace of growth and development of the particular sector as well as economy, as the Foreign Institutional Investment is treated as hot money for the host country, the direct investment is considered to be ideal source of fund for the development of particular sector and economy. The paces of Direct Investment inflows in healthcare sector initially were low due to regulatory policy framework but later there is a sharp rise in investment flows from 2005.

The primary objective of this study is to find out the impact of inflow of Foreign Direct Investment on the performance of healthcare stocks with special reference to the S&P BSE Healthcare index, and also to study the recent reforms related to FDI. The research is based on the historical data of index and inflow of Foreign Direct Investment into healthcare sector for the period of 35 months from March 2010 to January 2013. The necessary data for the study is collected through various secondary sources of official government websites and has been analysed using various statistical tools like linear regression and Karl's Pearson's co-efficient of correlation. The significance of the impact of Foreign Direct Investment on stock price has been tested using ANOVA model.

Key words : *Indian pharmaceutical sector, FDI, inflow and reforms.*

Introduction

The healthcare sector has an important place in the Indian economy due to its contribution in terms of revenue and positive technological spillovers to other sectors of the economy. The sector has witnessed a phenomenal expansion in the last few years growing at over 12% per annum, the sector has emerged as one of the most challenging sectors as well as one of the largest service sector industries in India with estimated revenue of approximately US$ 2.8 Trillion; it constitutes 5.2% of India's GDP and employs 4 million people. As per a recent CII-McKinsey report, the growth of healthcare sector can contribute to 6-7% of GDP over next few years.

By observing the facts of the industry, we can say that the healthcare and pharmaceutical sector is a sun-rise industry with vast opportunities for both the domestic and foreign players. With the changes in the regulatory environment regarding FDI, patent laws, the spotlight is now on India for contract research, joint ventures and alliances.

Recognizing the significant potential and challenges in the health sector, the government has taken many attractive measures and has prioritized it in the Eleventh Five Year Plan, open up of the sector for the foreign players and so on. The private sector firms in the sector plays a significant role by contributing 4.3% of GDP and 80% share of healthcare provision. However, deficiencies persist with respect to access, affordability, efficiency, quality and effectiveness, despite the high level of overall private and public expenditure on health.

Initially the government imposed high custom duty on imported medical equipment and some other technologies related to healthcare, making it difficult for private entrepreneurs to set up hospitals. But in

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post liberalization the sector has given many incentive measures, favourable & growth oriented measures including the reduction of duties and allowing the duty free import of some life saving medicines and equipments, etc.

Because of all the above reasons, Healthcare is considered to be a fastest growing service sector in India. The financing of health services can come from various sources such as equity, debt, offshore, government incentives etc. which can be broadly sub divided into commercial finance, official aid or non-governmental finance. Commercial financial flows may further be divided into portfolio/equity investments, commercial loans or FDI. A significant aspect of this is direct trade in health services, a result of the rise of transnational corporations, challenges in health care financing, porous borders and improved technology creating the scope for increased "foreign direct investment" (FDI) in healthcare sector.

Introduction to FDI:

Foreign Direct Investment (FDI) has grown dramatically as a major form of international capital transfer over the past decade. Foreign Direct investment can be defined as an investment involving a long-term relationship, and reflecting a long lasting interest and control, of a firm or individual from one country in another. The fast and steadily growing economy of India in majority of its sectors, has made India one of the most famous and popular destinations in the whole world, for Foreign Direct Investment. India's ever-expanding markets, liberalization of trade policies, development in technology and telecommunication, and loosening of diverse foreign investment restrictions, have further collectively made India, the apple of investors' eye, for most productive, profitable, and secure foreign investment.

In recent years, bulk of the foreign direct investment in Indian business sectors of infrastructure, telecommunication, information technology, computer hardware and software, and hospitality services, have been made by investors of countries like US, UK, Mauritius, Singapore, and many others. Global Jurix, one of the leading full-fledged legal organizations of India with global repute, has been helping companies, business corporations, organizations, and other potential investors of countries all around the world, in making foreign direct investment in Indian business sectors, in various ways.

Foreign Direct Investment (FDI) is widely considered to be beneficial for the host economy since it can result in positive externalities (spill over effects) through various transmission channels, for instance, transfer of technology, increased competition and imitation effects. This study analyses intra- industry spill over effects of FDI in the healthcare sector in India and the proposal of the Government to regulate the FDI in it.

A foreign investment could be a direct or portfolio investment. A direct investment is an acquisition or construction of physical capital by a firm from one (source) country to another (host) country. As it is mentioned above, the FDI is an investment that involves a long- term relationship and control by a resident entity of one country, in a firm located in a country other than that of the investing firm. Money capital, managerial or technical guidance is also involved in FDI. FDI is generally defined as resident firms with at least 10% of foreign participation.

The Indian healthcare industry has developed through a range of governmental incentives and, foreign firms that have invested in the industry have additionally contributed to the growth. The results are mixed. Spill over effects are visible in many of the spill over channels from FDI and the regression results show that firms with foreign ownership experience higher productivity levels. However, the correlation between FDI and productivity in domestic firms is insignificant, due to various reasons depending on whether the benefits from FDI are materialized, local firms' absorptive capability and factors such as the market structure, competitiveness, trade and technological policies.

Indian Healthcare Sector and Foreign Direct Investment (FDI):

Foreign Direct Investments (FDI) in the hospitals and diagnostic centre segment has reached a new high with total cumulative FDI inflow crossing Rs 35, 544.34 million (M Neelam Kachhap, 2010). This may be small but significant step for the healthcare sector. However, the benefits of such investments would only materialize under conducive regulatory environment focusing on affordability and accessibility. Interestingly, the private sector, over the years, has increased its stake in healthcare delivery. This in recent years, has caused foreign players and non resident Indians to enter the Indian healthcare market.

Recent reforms in FDI:

Foreign Direct Investment in any economy has become a strategic component of investment and needed for maintaining the pace of growth and development of the particular sector as well as

economy. As the money coming through portfolio investment is very risky and considered to be a hot money, the direct investment which take place in terms of strategic alliance, mergers, acquisitions has become crucial for any country.

Proper, time based revival of the policies relating to FDI is very much necessary for any country for that matter to make it more appropriate in terms of benefit derived from it. India as a country encouraging flow of direct money had taken many initiatives and has revised and reformed many policies related to FDI. Some of the popular reforms with respect to FDI in India are as follows:

- **FDI in Multi-Brand Retail:** This was one of the best and biggest reforms made by the government. This reform made the government almost go down with a huge political turmoil which made them to face voting in both the houses of the parliament. The government successfully survived and finally announced 51 percent of FDI in multi-brand retail.

- **FDI in Single-Brand Retail:** In the year 2012 only, the government of India cleared the way for 100 percent ownership in single brand retail which was previously limited to 51 percent ownership. This economic reform is said to open the gate for international brands like Starbucks and Ikea and others to do their business independently without having partnership with any local company of India.

- **FDI in Aviation Sector:** Aviation reforms were also approved by the government which will allow foreign air carriers to have 49 percent stake in the Indian aviation sector. This FDI came as a breather for domestic carriers like Kingfisher and Jet to get some funding from foreign market and pay their debts.

- **Insurance and pension Bill:** In the sector of insurance, Government of India set the FDI limit to 49 percent and the same rate was fixed for the pension sector. It was expected that as per the proposal by the standing committee on finance the limit will be set to 26 percent but government stepped further and approved 49 percent FDI in this sector.

- **Conversion of portfolio investment into direct investment:** This is an unexpected move proposed by finance minister P Chidambaram in his speech of budget announcement 2013. As per this move, the investment made by any foreign investor in single company of more than 10% of investment is considered to be a direct investment even though it is a portfolio investment.

Review of literature:

There is no much studies done on the topic FDI in healthcare however, there are many similar studies conducted on FDI and Indian economy. Most of the existing studies on the relationship between FDI and stock market performance fall under the domain of the macroeconomics mainly in the area of international trade and investment. In Indian context, very few studies, have analyzed the impact of FDI on stock performance. In India, Lall and Mohammad (1983) found that FDI in large businesses were positively associated with stock price volatility and export propensities.

Jaya Gupta made an attempt to review the change in sectoral trends in India due to FDI inflows since liberalisation. This paper examined the changed policy implications on sectoral growth and economic development of India as a whole.

Banga (2003) examined the hypothesis that FDI has not played any significant role in performance of stocks across the various industries in India. He found that FDI has to some extent result in to diversification of the market portfolio. Further, regarding the impact of source-country of FDI, Banga (2003) found that US FDI has a positive and statistically significant effect on export performance of industries in the non-traditional export sectors, which in turn affect stock prices, while Japanese based FDI has no significant impact.

Bajaj and Nigam in their work made an attempt to analyze and study the impact of globalisation in the pharmaceutical industry in terms of domestic productivity and competitiveness etc. The analysis of the study reveals that the spills over effects have had a manifold impact on the Indian pharma industry with the new WTO patent regime introduced in 2005.

Sudershan K in his thesis made an attempt to examine the impact of FDI inflow on performance of select pharmaceutical companies' stocks in India. The study reveals that higher proportion of FDI will result into better performance of companies' stocks.

Chopra examines the effect of policy reforms on the FDI in India. The analysis has been carried out with the help of annual data from 1980 to 2000. The research includes policy related variables such as the degree of openness of the economy, debt-service ratio, foreign exchange rates and GDP as the explanatory variables of FDI inflows in India. Empirical results show that GDP is an important factor which

motivates FDI in the country.

Objectives of the study:

- ✓ To analyse the impact of FDI on healthcare stocks
- ✓ To study the trend of FDI inflow in India and healthcare sector.
- ✓ To identify the recent reforms with relation to FDI.

Scope of the study:

This study is mainly concentrating towards the healthcare sector and thereby restricting the study only to BSE healthcare index. Based on the availability of data, and for better analysis and convenience the study is conducted for the period of 35 months starting from March 2010 to January 2013.

Research methodology:

Data collection:

The present study is based on the secondary data collected from various sources for the last 35 months. Annual reports, bulletins and other published article related to direct investment from DIPP and other government websites were collected to gather the data related to FDI and historical daily closing prices of the S&P BSE Healthcare index was downloaded from the BSE India website.

Data analysis techniques:

The data collected through various sources mentioned above are analysed using various statistical tools such as Karl Pearson's coefficient of correlation, linear regression and trend analysis. Correlation coefficient is used to find the relationship between two variables, the extreme ends of the results are +1 and -1where the +1 represents that the variables are perfectly positively correlated and -1 represent perfect negative correlation between the variables. Regression model is used to evaluate the effect of independent variable on the dependent variable. In the study n number of independent can be considered to find the effect on one dependent variable but in this study only one independent variable is considered therefore it is a linear regression. The equation is $Y= \alpha+\beta (X)$ where the Y is dependent variable i.e. BSE Healthcare and X is independent variable (FDI).

Hypothesis:

H0: flow of FDI into Indian healthcare sector and S&P BSE Healthcare index trends are independent.

H1: flow of FDI into Indian healthcare sector and S&P BSE Healthcare index trends are dependent.

ANALYSIS OF RESULTS AND DISCUSSION:

Table 1: Trend analysis of FDI in the economy as well as healthcare sector:

The flow of FDI into Indian economy, FDI into healthcare sector only, share of healthcare sector in total FDI flow is shown in the table along with year on year growth rate. The direct investment shown in the table are in terms of crore of Indian Rupee denomination.

		FDI INFLOW (in crore Rs.)		GROWTH (%)	
FY	QUARTERS	HEALTHCARE	ECONOMY	HEALTHCARE	ECONOMY
2010-11	Q1	439.28	26,261.00	-	-
	Q2	1,172.50	24,309.00	166.914	-7.43308
	Q3	252.09	22,607.00	-78.4998	-7.00152
	Q4	411.19	15,343.00	63.11238	-32.1316
2011-12	Q1	13,619.75	60,164.00	3212.277	292.1267
	Q2	887.12	26,107.00	-93.4865	-56.6069
	Q3	20,919.40	25,748.00	2258.125	-1.37511
	Q4	1,255.95	61,928.00	-93.9962	140.5158
2012-13	Q1	2,756.55	23,820.00	119.4793	-61.536
	Q2	722.84	46,312.00	-73.7774	94.42485
	Q3	1,077.22	22,105.00	49.02606	-52.2694
	Q4	Insufficient data	Insufficient data	NA	NA

(Source: DIPP & BSE)

By looking at the table it can be observed that the inflow of the FDI into Indian economy was initially decreased from Rs. 26261 crore in Q1 of the financial year 2010-11 to Rs. 15343 crore in Q4 of the same FY, in terms of percentage it lost around 41.58% during this time. Then it saw a sudden increase of 292% but later again it decreased by 56.6% and continued its volatility. The healthcare during the same observation period also exhibit the same kind of volatility, it started the FY 2010-11 with 439.28 crore inflow suddenly it increased to 1172.5 crore and flowed in the same manner throughout the observation period.

During the observation period, the healthcare sector saw a highest of 20919.4 crore inflow in the quarter 3 of FY-12 and the low of 252.09 crore in the quarter 3 of FY-11. In the same period the Indian economy saw the highest inflow of 61928 crore in Q4 of the FY-12 and the low of 15343 crore in Q4 of FY-11.

The cumulative value of FDI inflow into healthcare sector in last 12 years is Rs. 48526.64 whereas the same into Indian economy is Rs. 878961.76. It depicts that the healthcare sector attracts around 5.37% FDI during this period.

Table 2: FDI inflow to healthcare and BSE Healthcare index average closing prices:

The following table represent the average amount of FDI inflow to the healthcare sector during the considered period along with the average of daily closing index values of S&P BSE Healthcare for each quarter of the observation period.

FY	QUARTERS	INDEX	FDI(in crore)
2010-11	Q1	5527.92	146.43
	Q2	5712.277	390.83
	Q3	6583.43	84.03
	Q4	5992.823	137.06
2011-12	Q1	6341.177	4,539.92
	Q2	6083.6	295.71
	Q3	6020.72	6,973.13
	Q4	6432.723	418.65
2012-13	Q1	6774.93	918.85
	Q2	7388.55	240.95
	Q3	7899.777	359.07
	Jan13	8016.93	2,584.08

(Source: DIPP and BSE)

From the above table we can observe that the value of index during the study period was gradually increased at a constant rate whereas the average inflow of the FDI into the sector was fluctuating in very high rate.

A. Correlation between FDI and index values:

Correlation is applied to study the statistical relationship of two variables. In our study this model is used to study the relationship between the FDI inflow and the movement of the index value of S&P BSE healthcare. The following table presents the output when it is applied for 35 months. The result depicts that there is very negligible negative correlation between the two variables when it is run at 1% level of significance.

	FDI	BSE HEALTHCARE
FDI	1	
BSE HEALTHCARE	-0.09968	1

B. Impact of flow of FDI on healthcare index:

Following table is the summary report of the strength of the relationship between the independent variable (FDI) and the dependent variable (index value).

Regression Statistics	
Multiple R	0.099679
R Square	0.009936
Adjusted R Square	-0.021
Standard Error	756.0517
Observations	35

R is the multiple correlation coefficient, is the linear correlation between the observed variables. High value indicates a strong relationship and a low value indicates the weak relationship. R square, the coefficient of determinant which shows that to what extent the independent value will accounts for the variation in the dependent variable's value. In this case the FDI will able to explain very negligible amount of variation (i.e. only 1%).

C. ANOVA:

ANOVA stands for Analysis of Variance, this is a model used as a statistical method for making simultaneous comparisons between two or more means; a statistical method that yields values that can be tested to determine whether a significant relation exists between variables or not.

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	183569.0913	183569.1	0.321142	0.574876
Residual	33	18291655.52	571614.2		
Total	34	18475224 .61			

In the above table, regression row displays information about the variation accounted for by the model. The residual row displays information about the variation that has not been accounted by the model. It can be observed that the variation caused by the regression is very negligible and the significance F, the p value, is greater than the level at which the test is conducted (i.e. 0.5748>0.01).

FINDINGS OF THE STUDY:

- ✓ FDI inflow into the healthcare sector has shown greater variation during the considered period of study.
- ✓ FDI inflow into the Indian economy also exhibited huge volatility during the study
- ✓ The movement of S&P BSE healthcare index shown the constant growth during the considered period.
- ✓ There is very negligible negative correlation between the two variables i.e. FDI and index.
- ✓ The F value (0.321142) of the study falls well under the acceptance region (the table value for the V1=1 & V2=33 is 7.435), therefore the null hypothesis H0 is accepted and alternative hypothesis H1 is rejected.

SUMMARY AND CONCLUSION:

Any fund comes in the form of direct investment into the business or the portfolio investment has the considerable level of influence on the performance of the company as well as the listed stocks of the company. The fund which entered as direct investment in the form of technological support, strategic alliance, acquisition of domestic company has long term impact on the stock market than that of portfolio investment.

From the study, it is evident that the flow of fund into the healthcare sector is at a varying level in the recent past. The flow of fund into the sector is comparatively less as compared to the total FDI flow into the economy. IN the last few years there has very dynamic flow of direct funds into the sector as well as Indian economy as the flow of fund suddenly increased to new heights and fell to new depth.

The study also reveals that there is no strong relationship between the flow of outside fund in the name of FDI and the performance of stocks related to healthcare sector. It is well known to the people that the healthcare stocks are defensive stocks and does not react to the changes of environment such as flow of fund, announcements & results and the general political news on the economy.

Finally it can be concluded saying that the recent developments in the economy and sector with relation to FDI has very little impact on the performance of stocks and index of healthcare sector.

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