

# BEHAVIORAL PATTERN OF THE FOREIGN INSTITUTIONAL INVESTORS OF INDIA

## A STUDY OF FEW SIGNIFICANT YEARS

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### **P**URPOSE

*THIS paper will primarily try to analyse FII trading behavior in the Indian IPO market. As we know that FII's invest in various sectors, one of the primary purposes of this paper would be to examine: a) Whether there exists any sectoral preference on their part while investing in IPO's; b) Whether short term profitability of the IPO's across sectors vary significantly; c) Whether there exists any significant variation in preference of the FII's while investing in IPO's across years; d) Whether short term profitability of the IPO's vary on an yearly basis; e) Whether there exists any significant variation in preference of the FII's across year, sector and combination of year and sector while investing in IPO's.*

**Design/Methodology/Approach:** *Statistical tools like one way anova and two way anova tables have been applied to study the significance of yearly and sectoral impacts of investments by the FII's. We have also used diagrammatic representations through pie charts to reflect upon aspects of short term profitability of FII's and their investment proportions as well. We have also used correlation to see if there is any correlation between FII investment proportions and short term profitability of the IPO's.*

**Findings:** *We observe that the short term performance of the stocks on an average were unsatisfactory all the three years taken together ( 2009 to 2011). Most of the IPO's were in the 0 to 20% profit category or 0 to -20% loss category as evident from fig 1. One significant reason for this might be the global recession and it's prolonged effect since it struck at 2008. Thus we see that most of the FII 's in this period had invested around 10 % in the IPO's. Though there is no significant correlation observed between short term profitability and FII investments but it is also true that FII's on an average had invested around 10 % as evident from fig 2. Given the fact as is evident from our data analysis that there was found no significant correlation between FII investments in the Indian IPO market and that of short term profitability of the stocks we may say that FII's are in general not motivated by short term profitability of stocks post IPO. The interaction effects of year and sector taken together along with their individual effects have also not been able to influence their investment decisions. Thus we can say that the contribution of the FII's to capital formation through the Indian IPO market over this period was not significant enough nor have their investments made significant price rise for the stocks post IPO. So we may summarise to say that FII contributions to capital formation and capital gains have not been significant enough.*

**Research Limitations:** *It considers a time period ranging from 2009 to 2011 which is just after the recession of 2008 and could bring about some chances of biasedness to our study.*

**Practical Implications:** *The primary significance of undertaking this research was to study some*

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*of the major behavioral aspects of the FII's in the Indian IPO market. As we know that FII's have known to cause significant upheavals in the Indian stock market by their sudden inflows and outflows of investments at the slightest hint of prospect or trouble respectively it was necessary to understand their intention in the capital formation of our country which is primarily done through the Indian IPO market.*

**Keywords:** *Foreign Institutional Investors, Initial Public Offer, Capital Flows, Annona.*

## **Introduction**

Any investment flowing from one country into another is foreign investment. These foreign investments can be categorized into various categories like foreign direct investment (FDI), foreign institutional investment (FII), non-resident Indian (NRI) and persons of Indian origin (PIO) investment. Inflow of investments from other countries is encouraged since it complements domestic investments in capital-scarce economies of developing countries. India opened up to foreign investments gradually over the past two decades, especially since the landmark economic liberalization of 1991. India has steadily been increasing its trade with other countries and attracting more foreign investments since the launch of its economic reforms in 1991. These reforms have involved the opening of the economy for international competition, making it more competitive, getting the government out of the huge morass of regulation, empowering the States to take more responsibilities for economic management and thereby creating competition between the states for foreign investors (Yogarajah, Khatri & Ahmed, 2003). FDI has grown in importance in the global economy with FDI stocks now contributing over 20% of global GDP. In the last few years, the emerging market countries such as China and India have become the most favored destinations for FDI and investor confidence in these countries has soared (Anand, 2006). China has been able to attract \$ 15 billion more in FDI than India, because of the combined effect of its policies. It may be worthwhile for Government of India to take a second look at some of the policies and strategies adopted by the China, if it wants to be a future magnet for FDI (Dondeti & Mohanty, 2007). In India, foreign institutional investors (FIIs) have been allowed to invest in the domestic financial market since 1992. This decision to open up the Indian financial market to FII portfolio flows at that point in time was influenced by several factors such as the complete disarray in India's external finances in 1991 and a disorder in the country's capital market.<sup>1</sup>

The FII inflows into an Indian equity market can be classified into two ways viz., Primary market and Secondary market. The FII inflow to primary market in India comes mainly through the conversion of foreign currency convertible bonds (FCCBs), private placement to qualified institutions placements (QIPs), initial public offers (IPOs), follow-on overseas offers, conversion of warrants and preferential offers. As far as the secondary market is concerned, the significance of FIIs is very much evident as one of the familiar reasons offered by the market analysts may be "FIIs fuel rally" at the time of market rises and "Market melts due to FIIs selling" at the time of down trend (Karthikeyan & Mohansundaram, 2012).

An International portfolio flows are, as opposed to foreign direct investment, liquid in nature and are motivated by international portfolio diversification benefits for individual and institutional investors in industrial countries. They are usually undertaken by institutional investors like pension funds and mutual funds. Such flows are, therefore, largely determined by the performance of the stock markets of the host countries relative to world markets (Chakrabarti, 2001). Two of the most important functions of a financial system are to facilitate risk sharing among the investors and capital formation by firms. The initial public offering (IPO) process performs both these functions by allowing the initial owners of a firm to raise capital by transferring and sharing some of the firm's risk with the wider investing public. Thus, an important distinguishing feature of any IPO market is the tendency for the market to undergo periods of concentrated activity, often referred to as periods of the 'hot' and 'cold' markets. The frequently used concept of hot IPO markets is based on volume as described by Loughran and Ritter (1995) as they describe the 1980s period in the U.S. as 'hot' because of the higher issuance volume than

before. Thus FIIs trading behavior which is primarily characterized by erratic investment flows into and out of international developing nations needed to be analyzed in the light of the changing behavioral pattern of the IPO market itself.

## **Literature Review**

A number of parallel developments have triggered the surge in international portfolio investment over the past decade or so. First, institutionalization of savings in the USA and the developed world since the 1980s placed a massive and increasing volume of funds under the management of professional portfolio managers, who for tactical reasons tend to prefer a widely diversified portfolio spread out internationally. Second, there has been a trend towards financial liberalization both in developing countries and countries in transition thus allowing global fund managers to reach the financial markets of these countries. Third, developments in information technology has immensely lowered the cost of international trading in securities and made information dissemination on a near real time basis possible. Fourth, a remarkable expansion of capital markets in emerging economies has taken place due mostly to the widespread privatization of formerly State-owned enterprises. However, the very elements that facilitated the inflow of foreign capital into developing countries have also meant that foreign capital can now be withdrawn from these countries far more quickly (Mukherjee, Bose, & Coondo, 2002).

As part of its initiative to liberalize its financial markets, India opened her doors to foreign institutional investors in September, 1992. This event represents a landmark event since it resulted in effectively globalizing its financial services industry. A study was made to analyze the impact of trading of Foreign Institutional Investors on the major stock indices of India. It was found that unexpected flows had a greater impact than expected flows on stock indices and it was also concluded that foreigners do not substantially destabilize the market (Sandhya & Sen, 2003).

Studies tend to show the predominance of the Indian equity market return as the prime mover of the FII net inflow into India. This may be a matter of concern as this suggests that the rate of FII inflow into the country would be governed mostly by the performance of the domestic equity market and/or foreign investors' expectation about this performance and hence variation in the country's foreign exchange reserve would, to some extent, be outside the monetary authority's control. Given the fact that FII flows can be extremely volatile, a drop of return in the India equity market may result in sudden massive withdrawals of FII which may result in quite disturbing consequences on the country's economy, unless an appropriate stabilization mechanism is built into the domestic economic system (Chakraborty et al., 2001, 2002).

The findings of several studies on FII flows to emerging equity markets over the world have shown the importance of financial market infrastructure such as the market size, market liquidity, trading costs, information dissemination, and legal mechanisms relating to property rights etc., for attracting foreign portfolio investments into those countries. In some studies, variables relating to investment barriers, dividend yield, liquidity, firm size and profitability etc., have also been found to be significant determinants of FII inflow. These apart, the need for harmonization of corporate governance, accounting, listing and other rules with those followed in international financial centers as well as strengthening of securities markets' enforcement have also been stressed for improving competitiveness in attracting foreign portfolio investment inflow.

Researchers also confirm that foreign institutional investment is good news for the Indian stock market. The improved market liquidity eventually contributes to market efficiency while the FII activity does not change the volatility- risk exposure of investors in India. Their results shall possibly elevate fears in the minds of domestic financial institutions, regulators and other market participants who generally blame FII activity for any market anomalies and breakdown. In their view, increasing FII activity is providing healthy competition to domestic players by providing greater depth in trading. It is improving the market characteristics in a positive way (Sehgal & Tripathi, 2009).

Froot & others explored daily international portfolio flows into and out of 44 countries from 1994 to 1998 by using VAR analysis. They found several facts concerning the behavior of flows and their relationship with equity returns. First, they detect regional flow factor that has increased in importance through time. Second, the flows appear to be stationary, but far more persistent than returns. Third, flows are strongly influenced by past returns, a finding consistent with positive feedback trading by international investors. Fourth, inflows have positive forecasting power for future equity return, and this power is statistically significant in emerging markets. Fifth, the sensitivity of local stock prices to foreign inflows is positive and large (Froot et al., 2001).

Similar researches on FII investments in the Indian primary market reveal that such inflows are positively affected by market capitalisation and the size of the IPOs. FIIs might feel secure to invest in those IPOs whose volumes are big. It was also analyzed that Agarwal (2014).

### **Purpose**

**This paper** will primarily aims to analyse FII trading behavior in the Indian IPO market. As we know that FIIs invest in various sectors, and the primary purposes of this paper would be to examine:

- a) Whether there exists any sectoral preference on their part while investing in IPOs.
- b) Whether short term profitability of the IPOs across sectors varies significantly.
- c) Whether there exists any significant variation in preference of the FIIs while investing in IPOs across the years.
- d) Whether short term profitability of the IPO's varies on a yearly basis.
- e) Whether there exists any significant variation in preference of the FII's across year, sector and combination of year and sector while investing in IPO's.

### **Data & Period of Study**

All the 109 IPOs that came up during the years 2009, 2010, and 2011 have been considered for each IPO, the proportion of FII investment in the particular IPO concerned has been calculated. The difference between the listed closing price for the quarter ending with the date of issue of the IPO and the closing listed price of the issue six months from that date has been considered. All data have been taken from the SEBI (Securities and Exchange Board of India).

The variables have been named as follows:

PROP – Proportion of FII investment in each IPO.

VALUE\_QE – Listed closing price of the IPOs on the quarter ending date from the date of listing.

VALUE\_6M – Listed closing price of the IPOs, 6 months post date of listing.

DIFF – (VALUE\_QE- VALUE\_6M).

RETURNPERC – The percentage of return over the six month period.

### **Research Methodology**

Statistical tools like one way ANOVA and two way ANOVA tables have been applied to study the significance of yearly and sectoral impacts of investments by the FIIs. We have also used diagrammatic representations through pie charts to reflect upon aspects of short term profitability of FIIs and their investment proportions as well. We have also used correlation to see if there is any correlation between FII investment proportions and short term profitability of the IPOs.

**Data Analysis**

**Table No. 1**

<b>Descriptive Statistics</b>					
	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
PROP	109	0	0.85	0.2479	0.17982
VALE_QE	109	6.23	1331.4	163.17	194.28442
VALUE_6M	109	4.56	1248	161.25	183.49466
DIFF	109	-809.6	319.5	-0.878	101.2214

The Table No. 1 of descriptive statistics shows that the average investment of FIIs in IPOs is around 0.24 with a standard deviation of 0.17 which is not very high signifying that the mean is fairly representative. However, the standard deviation of the closing quarter ending price in the quarter of listing is as high as 194 and that of the quarter ending process post six months from the date of listing is as high as 183 indicating high variability of closing prices from the mean. The capital gains accruing from these closing prices, however, show a negative on an average as high as 0.878 with a high standard deviation. This of course suggests that the short term performance of the stocks on an average were unsatisfactory all the three years taken together.

**Means of Prop & Diff Sectorwise**

**Table No. 2**

<b>Sector</b>		<b>PROP</b>	<b>DIFF(Rs.)</b>
IT	Mean	0.2676	-8.744
	Std. Deviation	0.19308	78.3383
Energy	Mean	0.2997	7.585
	Std. Deviation	0.16372	38.1608
Miscellaneous	Mean	0.2048	16.027
	Std. Deviation	0.16278	62.7239
Civil	Mean	0.3110	-4.561
	Std. Deviation	0.22564	89.0392
Banking & Finance	Mean	0.2130	-58.506
	Std. Deviation	0.15815	238.68
Metals & Mining	Mean	0.2772	-6.603
	Std. Deviation	0.14204	52.5150
Total	Mean	0.2479	-0.878
	Std. Deviation	0.17982	101.22

**Oneway Anova of Prop & Diff Sectorwise****Table No. 3**

		Sum of Squares	Df	Mean Square	F	Sig.
PROP	Between Groups	0.228	5	0.046	1.441	0.216
	Within Groups	3.264	103	0.032		
	Total	3.492	108			
DIFF	Between Groups	55060.782	5	11012.156	1.079	0.377
	Within Groups	1051482.875	103	10208.572		
	Total	1106543.657	108			

The significant value of the F statistic in the ANOVA table while testing equality of means of FII investment proportion (PROP) in Indian IPOs across sectors indicate that there is no significant differences between means. Similar is the case when we tested equality of means for the difference between the two prices of the scripts over a period of six months (DIFF) on the two dates indicating no remarkable difference on an average. The p value in both the cases being greater than 0.05 justifying the results.

**Means of Prop & Diff Yearwise****Table No. 4**

Year		Prop	Diff (Rs.)
2009	Mean	0.2593	15.284
	Std. Deviation	0.21425	77.4402
2010	Mean	0.2767	-7.904
	Std. Deviation	0.16747	1.2281E2
2011	Mean	0.1868	5.158
	Std. Deviation	0.17655	55.1681
Total	Mean	0.2479	-0.878
	Std. Deviation	0.17982	1.0122E2

**Oneway Anova of Prop & Diff Yearwise****Table No. 5**

		Sum of Squares	Df	Mean Square	F	Sig.
PROP	Between Groups	0.173	2	0.086	2.756	0.068
	Within Groups	3.320	106	0.031		
	Total	3.492	108			
DIFF	Between Groups	8144.284	2	4072.142	0.393	0.676
	Within Groups	1098399.373	106	10362.258		
	Total	1106543.657	108			

The significant value of the F statistic in the ANOVA table while testing equality of means of FII investment proportion across years indicate that there are no significant the differences between means. Similar is the case when we tested equality of means for difference between the two prices on the two dates indicating no remarkable difference on an average.

Thus we see that on an average FII investment across sectors and the years were not noticeably different nor were short term profits from those issues significantly different across years and sectors. The p value in both the cases being greater than 0.05 justifying the results.

**Univariate Analysis of Variance**  
**Tests of Between-Subjects Effects**

**Table No. 6**

Dependent Variable: Prop					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	0.542 <sup>a</sup>	14	0.039	1.234	0.265
Intercept	3.207	1	3.207	102.171	0.000
SN	0.212	5	0.042	1.353	0.249
Year	0.033	2	0.016	0.520	0.596
SN * Year	0.225	7	0.032	1.022	0.421
Error	2.950	94	0.031		
Total	10.192	109			
Corrected Total	3.492	108			

a. R Squared = 0.155 (Adjusted R Squared = 0.029)

The significance value of the interaction term is greater than 0.10 showing that it is not important.

We tried to analyze the difference in mean using two way ANOVA with interaction effect. On the basis of the Table No. 6 it is evident that neither the main effects (Year and Sector) nor their interaction effects play a significant role in explaining the variation in investment proportions of the FIIs.

**Univariate Analysis of Variance**  
**Tests of Between-Subjects Effects**

**Table No. 7**

Dependent Variable: Diff					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	184631.726 <sup>a</sup>	14	13187.980	1.345	0.197
Intercept	7145.832	1	7145.832	0.729	0.396
SN	96133.037	5	19226.607	1.960	0.092
Year	15328.352	2	7664.176	0.781	0.461
SN * Year	116639.773	7	16662.825	1.699	0.119
Error	921911.931	94	9807.574		
Total	1106627.679	109			
Corrected Total	106543.657	108			

a. R Squared = 0.167 (Adjusted R Squared = 0.043) The significance value of the interaction term is greater than 0.10 showing that it is not important.

We tried to analyze the difference in mean using two way ANOVA with interaction effect. On the basis of the Table No. 7 it is evident that neither the main effects (Year and Sector) nor their interaction effects play a significant role in explaining the variation in short term profitability of the IPOs.

**Correlations**

**Table No. 8**

Diff		
PROP	Pearson Correlation	-0.137
	P VALUE	0.154

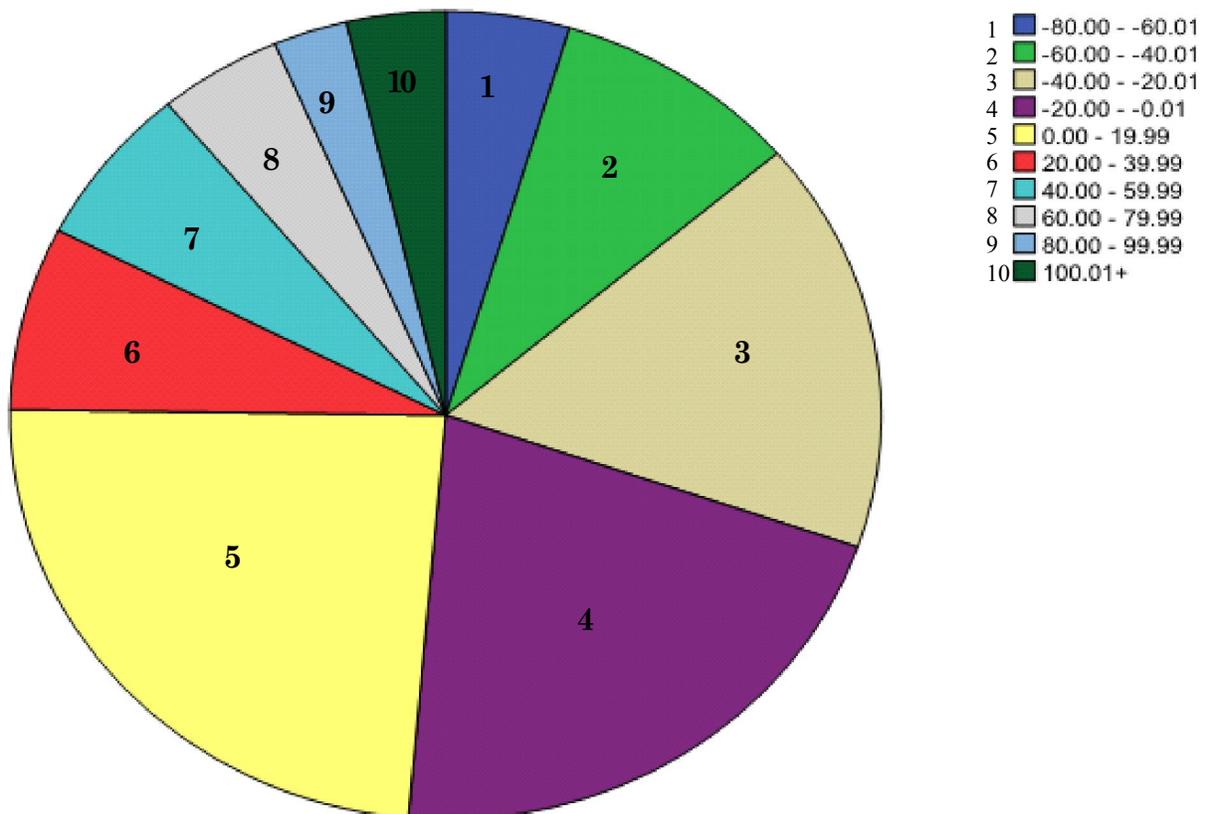
There is no significant correlation between PROP and DIFF (p Value >0.05 using test for significance of correlation).

**Returnperc (Binned)**

**Table No. 9**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid -80.00 - -60.01	5	4.6	4.6	4.6
-60.00 - -40.01	10	9.2	9.2	13.8
-40.00 - -20.01	18	16.5	16.5	30.3
-20.00 - -0.01	23	21.1	21.1	51.4
0.00 - 19.99	26	23.9	23.9	75.2
20.00 - 39.99	8	7.3	7.3	82.6
40.00 - 59.99	7	6.4	6.4	89.0
60.00 - 79.99	5	4.6	4.6	93.6
80.00 - 99.99	3	2.8	2.8	96.3
100.01+	4	3.7	3.7	100.0
Total	109	100.0	100.0	

**RETURNPERC (Binned)**



**Figure 1**

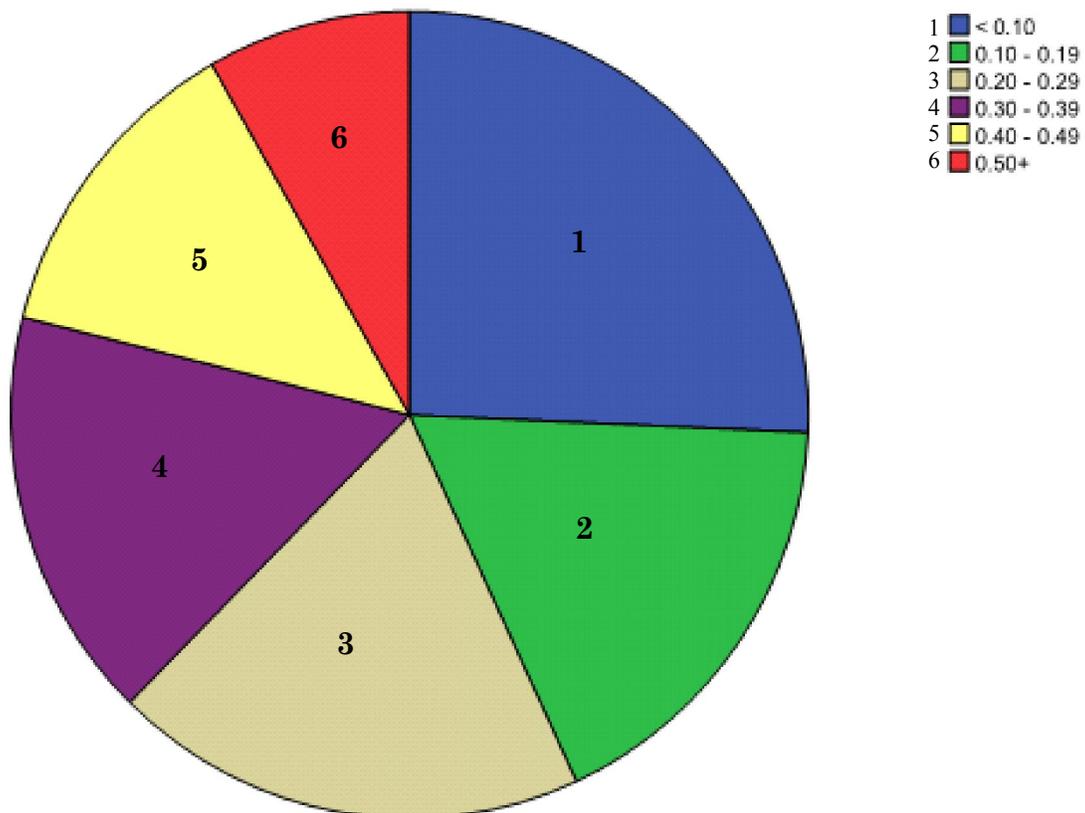
Observing the pie chart on the percentage of return, we see that most of the IPOs were in the 0 to 20% profit category over a period of six months. Further, an almost equivalent number of IPOs were in the 0 to -20% category. Observing the frequency distribution table, we see that on an average 50% of the stocks made losses and 50% made profits.

**Propn (Binned)**

**Table No. 10**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid < 0.10	28	25.7	25.7	25.7
0.10 - 0.19	19	17.4	17.4	43.1
0.20 - 0.29	21	19.3	19.3	62.4
0.30 - 0.39	18	16.5	16.5	78.9
0.40 - 0.49	14	12.8	12.8	91.7
0.50+	9	8.3	8.3	100.0
Total	109	100.0	100.0	

**PROPn (Binned)**



**Figure 2**

Observing the pie chart above we see that almost 25% of the FIIs had invested less than 10% in IPOs.

## Summary and Conclusion

The primary significance of undertaking this research was to study some of the major behavioral aspects of the FIIs in the Indian IPO market. As we know that FIIs have known to cause significant upheavals in the Indian stock market by their sudden inflows and outflows of investments at the slightest hint of prospect or trouble respectively it was necessary to understand their intention in the capital formation of our country which is primarily done through the Indian IPO market.

We observe that the short term performance of the stocks on an average were unsatisfactory all the three years taken together (2009 to 2011). Most of the IPOs were in the 0 to 20% profit category or 0 to -20% loss category as evident from Figure 1. One significant reason for this might be the global recession and its prolonged effect since it struck at 2008. Thus we see that most of the FIIs in this period had invested around 10% in the IPOs. Though there is no significant correlation observed between short term profitability and FII investments but it is also true that FIIs on an average had invested around 10% as evident from Figure 2. Given the fact as is evident from our data analysis that there was found no significant correlation between FII investments in the Indian IPO market and that of short term profitability of the stocks we may say that FIIs are in general not motivated by short term profitability of stocks post IPO. The interaction effects of the year and sector taken together along with their individual effects have also not been able to influence their investment decisions. Thus, we can say that the contribution of the FIIs to capital formation through the Indian IPO market over this period was not significant enough nor have their investments made significant price rise for the stocks post IPO. So we may summarize to say that FII contributions to capital formation and capital gains have not been significant enough.

## Limitations and Scope for further Research

This study is of course based on IPOs that came up during (2009 to 2011) which was immediately after the aftermath of the global recession of 2008 and so there might have been some effect of the same. Moreover it is based only with the Primary Market and so such analysis could be carried out with FII trading behavior in the secondary market as much of the trading volume of the FIIs is dominated by in secondary market.

## Notes

- <sup>1</sup> Measures to integrate Indian markets with those of the rest of the world were taken following the recommendations of the Rangarajan Committee on Balance of Payments and an Expert Group on Foreign Exchange Markets in India headed by O.P. Sodhani.

## References

- Agarwal, B. (2014). Foreign institutional investors and the Indian IPO Market - An investigation from 2009 to 2011, *Asia-Pacific Journal of Management Research and Innovation*, 10(3), 203-210.
- Anand, A. (2006). Foreign direct investment India vis-a-vis China, *Delhi Business Review*, 7(2), 43-58.
- Ananthanarayanan, S., Krishnamurti, C., & Sen, N. (2009) Foreign institutional investors and security returns: Evidence from Indian stock exchanges. In: 7th INFINITI Conference on International Finance 2009 - Credit Markets, Credit Institutions and Macroeconomic Volatility, 8-9 Jun 2009, Dublin, Ireland.
- Batra, G.S. (2004). Globalisation of Financial Markets. New Delhi: Deep & Deep Publications Pvt. Ltd.
- Chakrabarti, R. (2001). FII flows to India : Nature and causes. *Money and Finance*, 2(7), 61-81.
- Dondeti, V.R., & Mohanty, B.B. (2007). Impact of foreign direct investment on the gross domestic product, exports and imports of four asian countries: A panel data analysis, *Delhi Business Review*, 8(1), 1-21.
- Froot, K.A., O'Connell, P.G.J., & Mark, S.S. (2001). The portfolio flows of international investors. *Journal of Financial Economics*, 59(2), 151-193.
- Handbook of Statistics (2010). Handbook of statistics on the Indian securities market 2009, [http://www.sebi.gov.in/cms/sebi\\_data/attachdocs/1288678534212.pdf](http://www.sebi.gov.in/cms/sebi_data/attachdocs/1288678534212.pdf), Accessed on August 24, 2014.

- Karthikeyan, P., & Mohanasundaram, T. (2012). FII flows & Indian equity market performance. *Asian Journal of Management Science*, 1(1), 12-22.
- Loughran, T., & Ritter, J.R. (1995). The new issue puzzle. *The Journal of Finance*, 50(1), 23-51.
- Machiraju, H.R. (2009). *International Financial Markets and India (3rd ed.)*. New Delhi: New Age International Pvt. Ltd. Publishers.
- Mukherjee, P., Bose, S., & Coondoo, D. (2002). Foreign institutional investment in the Indian equity market: An analysis of daily flows during January 1999 – May 2002. *Money and Finance – ICRA (April - Sept.)*, 21-51.
- Rangarajan, C. (2000). Capital flows: Another look. *Economic & Political Weekly*, 35(50), 4421-4427.
- Sehgal, S., & Tripathi, N. (2009). An examination of home advantage (bias) argument in the Indian financial markets: Domestic financial institutional investors (DFIIs) vis-a-vis foreign institutional investors (FIIs). *Asian Journal of Finance & Accounting*, 1(2), 163-174.
- Yogarajah, A., Khatri, N., & Ahmed, Z.U. (2003). Impact of a country's industrial policy on a firm's foreign direct investment decision, *Delhi Business Review*, 4(2), 9-19.