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FRIDAY-THE-THIRTEENTH EFFECT- IN INDIAN STOCK MARKET DURING 1992-2004

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Abstract: *Superstition is deep-rooted in Indian society, where irrational fear still influences the mass mind. In this context, it is pertinent to investigate whether the Indian securities market is also affected by superstitions or has it been able to immunize itself against its force. From the empirical perspective, 'Friday-the-thirteenth' seems to be a natural choice to study this issue.*

Keywords: superstition, Indian Society, Indian stock market, Friday the thirteenth.

INTRODUCTION

Superstition is deep-rooted in Indian society, where irrational fear still influences the mass mind. In this context, it is pertinent to investigate whether the Indian securities market is also affected by superstitions or has it been able to immunize itself against its force. From the empirical perspective, 'Friday-the-thirteenth' seems to be a natural choice to study this issue.

Since the pioneering works of Fama (1965) and Cross (1973) there have been many anomalies documented concerning the behaviour of security price returns. The most prevalent of these anomalies appear to be weekend effect, where stocks exhibit significantly lower returns over the period between Friday's close and Monday's close (French 1980, Lakonishok and Levi 1982, keim and Stambaugh 1984); a January effect, where returns are unusually high during the month of January as compared to any other month (Rozeff and Kinney 1976, Reinganum 1983); and a Holiday effect, where returns are much higher on trading days immediately prior to holidays (Ariel 1990, Kim and Park 1994). The other irregularities include monthly effect (Ariel 1987), turn-of-the month effect (Lakonishok and Smidt 1988) and relatively less documented Friday-the-thirteenth effect (Kolb and Rodriguez 1987).

FRIDAY THE THIRTEENTH EFFECT

The anomalies mentioned above have originally been documented for the US market and its empirical confirmation and extension has now taken place to other

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capital markets mostly in developed world. In spite of these phenomena appearing in different markets around the world, there still remain people who believe that some of these regularities are artifacts caused by institutional factors such as ex-dividend, tax and liquidity effects (Bowers and Dimson 1988). Hence, one's belief regarding the true market anomalies would be strengthened it known to also occur in other capital markets of developing economies which are characterized by separate cultures and institutional arrangements. Thus, it is of interest to search whether such anomalies exist for a developing market such as one in India. In fact very little empirical research on calendar anomalies has been undertaken on security market using Indian data. Chaudhury (1991) studied BSE Sensex between June 1988 and January 1990 and found that average return on Monday is negative and highest returns are on Friday. Poshakwale (1996) studied BSE National Index and found that mean return except for Monday and Wednesday are positive. Arumugam (1998) investigated the "day-of-the week effect" on stock return for a longer time series (April 1979 to March 1997) and used the dummy variable regression model used in international studies. He divided the data set for different sub-periods and also for bull and bear phases of the market. Friday returns are found to be significantly positive in all periods except the sub-periods 1979-85, bull and bear phases. While Monday returns are significantly negative in the bear phase, they are significantly positive in the bull phase, and become insignificant in other periods. Though the results are the first comprehensive analysis of the 'day-of-the week' effect in Indian markets, the study deals with only one aspect of market anomalies.

Table 1
Means, Standard Deviations and t-statistic of the returns on BSE Sensex by month-of-the year

Month	*Statistics*	*1992-04*	*1992-95*	*1996-99*	*2000-04*
January	Mean	0.220	0.116	0.182	0.445
	SD	1.359	1.662	1.439	0.892
	t-statistic	2.333*	0.616	1.144	3.268
February	Mean	0.184	0.267	0.207	0.077
	SD	1.710	2.022	1.674	1.394
	t-statistic	1.647	1.166	1.100	0.486
March	Mean	-0.238	-0.495	0.123	-0.344
	SD	2.102	1.902	2.495	1.821
	t-statistic	-1.754	-2.315*	0.442	-1.699
April	Mean	-0.045	0.011	-0.036	-0.101
	SD	1.953	1.637	2.561	1.541
	t-statistic	-0.341	0.055	-0.120	-0.585
May	Mean	-0.008	0.119	0.025	-0.157
	SD	1.977	1.493	2.193	2.161
	t-statistic	-0.062	0.711	0.102	-0.672

contd. table 1

Month	*Statistics*	*1992-04*	*1992-95*	*1996-99*	*2000-04*
June	Mean	0.120	0.086	0.129	0.144
	SD	1.544	1.352	1.952	1.232
	t-statistic	1.239	0.585	0.614	1.074
July	Mean	-0.019	0.045	-0.070	-0.070
	SD	1.466	1.319	1.787	1.085
	t-statistic	-0.200	0.353	-0.365	-0.440
August	Mean	0.126	0.102	0.005	0.439
	SD	1.359	1.485	1.257	1.257
	t-statistic	1.360	0.645	0.039	2.207*
September	Mean	-0.129	-0.071	-0.248	-0.032
	SD	1.546	1.161	1.996	1.355
	t-statistic	-1.254	-0.622	-1.130	-0.155
October	Mean	-0.095	-0.145	-0.258	0.193
	SD	1.539	1.557	1.970	1.222
	t-statistic	-0.909	-0.900	-1.163	1.034
November	Mean	0.090	0.141	0.254	0.311
	SD	1.460	1.476	1.477	1.082
	t-statistic	0.898	0.867	1.556	1.773
December	Mean	0.086	0.116	0.107	0.042
	SD	1.719	1.662	2.129	1.323
	t-statistic	0.790	0.616	0.451	0.298

The null hypothesis is :

H_0 : m (mean return on Friday the 13th) =m (mean return on other Fridays), against the alternative hypothesis

H_1 : m (mean return on Friday the 13th) <m (mean return on other Fridays).

Table 2
Friday returns of Sensex 1992-2004

	1992-2004
Friday the 13th	
Mean	0.126
SD	1.332
Observations	16
Other Fridays	
Mean	-0.053
SD	1.649
Observations	536
t-statistic	-0.686

The data consists of 652 Friday returns between June 1992 to June 2004, which includes 16 daily returns on Friday the thirteenth for BSE Sensex.

FINDINGS AND CONCLUSION

For the whole period mean returns for the BSE Sensex (1992-2004) mean returns on Friday-the-thirteenth are actually higher than that of on the remaining Fridays although the difference was not statistically significant. The result indicates that there is certainly no evidence of mean returns being lower on Friday-the-thirteenth than on other Fridays for the whole period. Thus, it may be concluded that there is no "Friday-the-thirteenth effect" in Indian capital Market.

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