

STUDY OF SECONDARY MARKET MOVEMENTS IMPACT ON IPOS DURING OFFERING PERIOD AND ON LISTING DAY

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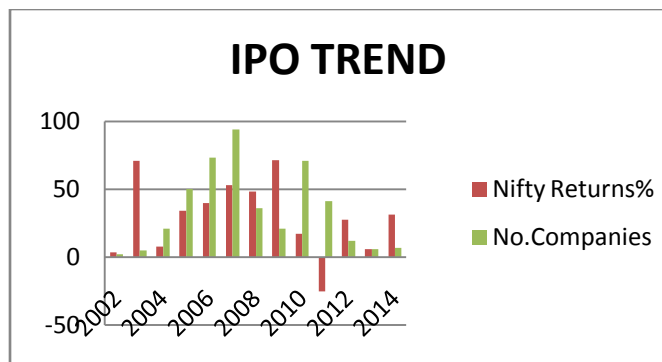
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ABSTRACT

Indian capital market got rationalized in the year 1992 after the inception of NSE the trading system took revolutionary changes in both the segments such as primary market and secondary market. Indian primary market had largely depended on the movement of secondary market and it had given anomaly returns to the long term returns of the primary market. This study has focused to find the secondary market fluctuations driving the offering period to listing date and measured the listing date performance of the companies. The granger casualty test had proved that the numbers of IPOs test which are coming in primary market were not influenced by the secondary market returns. Sharpe differential ratio has been applied to measure short term returns of grade 5 companies from the period 2007 to 2014 ADF has been applied to convert the data into stationary. Johansson co-integration test, regression linear trend model has been applied on the grading system of an IPO. This study had observed that all the IPOs listing day performance is also depend on prior period (offering date to listing date) Secondary market fluctuations. This study is useful to the long term investors of retail HNI, QIB, FII and mutual funds.

Key Words: IPO INDEX, Capital Market, Grading 1-5, IPO, NIFTY, Primary Market and Secondary Market.

INTRODUCTION: IPO grading services is very useful to retail investors who are seeking to invest in companies that are unknown in the equity markets, the grading is carried out by financial “experts” known as rating agencies who provide investors with detailed analyses and independent assessments of companies and that issue such securities. Most Investors rely heavily on these ratings agencies grading before making an investment decision; this is especially true for IPOs .However time and again history has proved these rating agencies grading to be inaccurate, for example many grade 1 (poor rating) companies have given high returns and many grade 5 (Highly rated) companies have given poor returns. My research aims to find cause of these inaccuracies and prove that grading system cannot be relied upon for taking investment decisions, for this I have used secondary market data to find its impact on IPOs during offering period and on listing day. Secondary market keep fluctuating on daily basis and these fluctuations play a major role in decision making of an investor. If there is an upward trend then the value of stock will rise and incase of bearish market the value of most stocks falls this rise and fall impacts investor’s investment decision in both Primary and secondary markets, my study depicts this impact using various Index of both primary and secondary markets in my analysis. The analysis proves that there is significant impact of secondary market movement on primary market IPOs during offering and on listing day, it was found that during bearish market due to a downward trend in the secondary market the investor was discouraged to purchase IPOs of even highly graded companies .



We observe that there is a positive relation between annual Nifty returns and number of IPOs, this true especially from the year 2003 to 2011 where with the increase in annual Nifty returns and number of IPOs i.e. with the rise in Nifty returns there is a rise in number of IPOs and vice versa.

REVIEW OF LITERATURE

Michelle Lowry, G. William Schwert(21 March 2003):The researchers had focused underwriter's treatment of public information in IPO pricing process. The investigation of this paper found two key points. The information pertaining to the company in the primary market is not fully incorporated when it comes to initial price range. It indicated that filing range mid-point is not unbiased predictor of the offer price. This study has been limited from the underwriter and it has not been focused from the investors angle hence this study is not having relevance to my present study.

Raghuram Rajan, Henri Servaes (January 2002):In this Study a simple model is developed in which two market conditions change over time:

- (i) investor psychology/sentiment
- (ii) Feedback trader risk or the propensity of investors to chase trends.

This study shows that these conditions partially explain the three anomalies associated with the IPO market:

- (i) underpricing;
- (ii) windows of opportunity for new issues
- (iii) Long-term underperformance.

The model is limited to a sample of firm commitment IPOs over the 1975-1987 periods and tested using it only. The paper finds that the predictions of the model are largely borne out in the data hence this study is not having relevance to my present study where the study has been emphasized on Indian primary market.

Shane A. Corwin, Jeffrey H. Harris, and Marc L. Lipson:This study examines the NYSE (New York Stock Exchange)-listed IPOs, limit order submissions and depth relative to volume on first trading day only whereas my study's focus is on Indian stock exchange IPO from Offering period to listing day hence the study has no relevance to my area of study.

Asim Kumar Mishra: This study attempts to provide new evidence on the first day IPO market performance on the Indian Stock Exchange. The focus of the study examines how a change in the institutional arrangements that govern the pricing of IPOs, from the traditional fixed price approach to the building of a book, affects the level of underpricing, which has no relevance to the my area of study and also the study focuses on only 235 IPOs listed from April 1, 1997 and March 31, 2008 whereas my study takes into account IPOs listed between 2007-2014 in the Indian stock exchange.

Jay R. Ritter: This study focuses on three empirical patterns which are documented and analyzed:

- 1) Short run underpricing,
- 2) Hot issue markets, and
- 3) long-run underperformance.

The main emphasis is laid on the process of going public, with particular emphasis on how contractual mechanisms deal with potential conflicts of interest, whereas my area of study discusses mainly on secondary markets impact on IPOs during offering period till listing day only.

James c. Brau and stanley e. Fawcett: In this study authors examine and compare the Theory and practice of initial public offering (IPO) underwriter selection, timing, underpricing, motivation Signaling, and the decision to remain private. A Survey of 336 chief financial officers (CFO) was conducted. The study does not have relevance to my area of study as it mainly focuses on the perception of CFOs only whereas my topic takes into account the Secondary market movement's impact on IPO during offering period till listing day.

CarstenBurhop: In this study the author examines the underpricing of IPOs in Imperial Germany's berlin stock exchange between the years 1870 and 1896, the author's findings were that the first day's performance was below average i.e. averaged less than five percent as compared to modern day performance but overall the capital market during the period was observed to be efficient. The study only has historical relevance to German capital market and it is irrelevant to my study as my study is based on Indian markets IPOs between 2007-2014

Thomas J. Chemmanur Karen Simonyan and Hassan Tehranian: We make use of hand-collected data on the quality and reputation of the management teams of a large sample of entrepreneurial firms to analyze the role of management quality in the IPOs of VC-backed firms. We hypothesize i.e VC-backing will be associated with higher management quality, and i.e., both management quality and VC-backing will have a favorable effect on firms' IPO characteristics, highly IPO participation by financial market players, allow firms to go public fast, yield higher IPO and immediate after-market calculation, and will be positively related to changes in post-IPO operating performance. Our empirical findings support the above hypotheses.

Li Jianga, GaoLia: In this study, we separately measure pre-market and aftermarket investor sentiment and investigate their impact on IPO pricing in a two-stage framework. We find that compensation for institutional investors is associated with their fractional allocation and the risk they bear. This helps explain the partial adjustment of offer prices to pre-market sentiment. We also show that pre-market sentiment tends to spill over to the aftermarket period, and aftermarket sentiment causes a further price run-up in the secondary market. All are, our findings suggest that institutional investors play an important role in re-distributing shares in the secondary market and the momentum in investor sentiment makes it possible for underwriters to implement the staged distribution strategy.

Anne Macy: This paper examines the initial public offering (IPO) premiums on equities listed in the German Neuer Market. The Neuer Market was created in 1997 in order to provide a vehicle for new firms to access the capital market in Germany. Regression analysis is applied to a sample of 290 firms with initial public offerings during the first four years of the market. The empirical results indicate that the general performance of domestic and international markets, percent of the stock allowed to free float, and the total number of initial public offerings occurring in the same month are the primary determinants of IPO premiums in the Neuer Market. The findings suggest that a 10 percent increase in the percent of

stock allowed to free float at the time of the IPO results in a decline of more than 5 percent on the speculative return.

OBJECTIVES:

- To know the secondary market returns impact on IPOs of primary market
- To measure the performance of grade 5 companies in short term period
- To know the secondary markets impact on listing day of IPO during the offering period
- To know the primary market Index impact on Indian grading system.

SCOPE: The study has been considered from the year 2007 to 2014. In this analysis grading of IPOs were considered from the NSE primary market segment. Primary market Index has been considered from the BSE segment

Empirical Study: IPO Index (Primary market indicator-BSE)

Nifty- Secondary market indicator

Grading system - 1, 2, 3, 4 & 5.of NSE

LIMITATION:

1. IPO grading were considered from year 2007
2. Primary market Index has been considered from the BSE segment
3. REPO rate has been considered as risk free rate of return
4. Benchmark for secondary market NIFTY has been considered

RESEARCH METHODOLOGY

The Granger causality test is a statistical hypothesis test for ascertaining whether one time series can be used for forecasting another time series. It is originally considered that regressions reflect "mere" correlations, but Clive Granger on the other hand argued that causality in economics could be reflected by measuring the ability of predicting the future values of a time series using historical values of another. $\mathbb{P}[Y(t+1) \in A | \mathcal{I}(t)] \neq \mathbb{P}[Y(t+1) \in A | \mathcal{I}_{-X}(t)]$

The Johansen Co-integration test is used for cointegration that allows for more than one cointegrating relationship i.e. large data samples. Therefore this test is more generally applicable than the Engle-Granger test which is based on the Dickey-Fuller (or the augmented) test for unit roots $X_t = \mu + \Phi D_t + \Pi_p X_{t-p} + \dots + \Pi_1 X_{t-1} + e_t, \quad t = 1, \dots, T$

Augmented Dickey-Fuller test (ADF) is for a unit root in a time series sample. It is an improved version of the Dickey-Fuller test for a larger and more complex set of time series models. In ADF statistic, a negative number is used in the test. The more negative it is, the greater the rejection of the hypothesis. It is given by the following Formula:

$$\Delta y_t = \alpha + \beta t + \gamma y_{t-1} + \delta_1 \Delta y_{t-1} + \dots + \delta_{p-1} \Delta y_{t-p+1} + \varepsilon_t,$$

Sharpe's Differential Ratio: To measure the prior decisions as an input in order to take into account the effects of various variables on the portfolio management system. The Sharpe differential method will be used. In this method better risk adjusted methods can be achieved to maximize profit.

$$\text{Risk Free Rate} + [(\text{Excess market return}) \times \text{Standard deviation}(p)]$$

$$\text{Standard deviation (m)}$$

$$p = \text{Standard deviation of company} \quad m = \text{Standard deviation of market}$$

DATA ANALYSIS

OBJECTIVE 1

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept	Intercept	Intercept	Intercept	Intercept
	No Trend	No Trend	No Trend	Trend	Trend
Trace	1	0	0	0	0
Max-Eig	1	0	0	0	0

*Critical values based on MacKinnon-Haug-Michelis (1999)

Information Criteria by Rank and Model

Data Trend:	None	None	Linear	Linear	Quadratic
Rank or	No Intercept	Intercept	Intercept	Intercept	Intercept
No. of CEs	No Trend	No Trend	No Trend	Trend	Trend
	Log Likelihood by Rank (rows) and Model (columns)				
0	-104.3823	-104.3823	-104.2964	-104.2964	-103.4943
1	-97.67666	-97.47911	-97.42885	-96.99808	-96.25140
2	-97.40759	-96.84978	-96.84978	-94.91274	-94.91274
	AIC	19.70587	SIC	19.85056	

INTERPRETATION: The above table depicts the data cointegration between secondary market returns with number of IPOs in YOY (year on year). The data is cointegrated because the Log likelihood rank values observed are in decreasing trend in all trend models along with the alpha levels hence further analysis can be applied on secondary market returns with number of IPO companies.

Null Hypothesis:	Obs	F-Statistic	Prob.
IPO does not Granger Cause NIFTY	7	0.00466	0.9488
NIFTY does not Granger Cause IPO		3.35991	0.1407

INTERPRETATION: The above analysis of granger casualty test has been applied between secondary market indicated Nifty to number of IPO companies the probability value of null hypothesis is accepting that nifty is not causing the number of companies which raising capital through primary markets.

OBJECTIVE 2

Name of Company	STD DEV(P)	STD DEV(M)	Risk free rate	Excess Returns	Result
MOIL ltd	21.3557551	21.297873	0.520833333	-2.171767568	-2.15322
Coal India LTD.	21.861168	21.7503752	0.520833333	4.359277605	4.901483
L&T FINANCE HOLDINGS LIMITED	23.1787619	22.9460524	0.666	5.019503593	5.099434
Multi Commodity Exchange of India LTD	21.8875099	21.8611004	0.708333333	-4.307805154	-4.28061
Just Dial LTD	21.0888779	20.8198747	0.604166667	14.65348248	14.87183

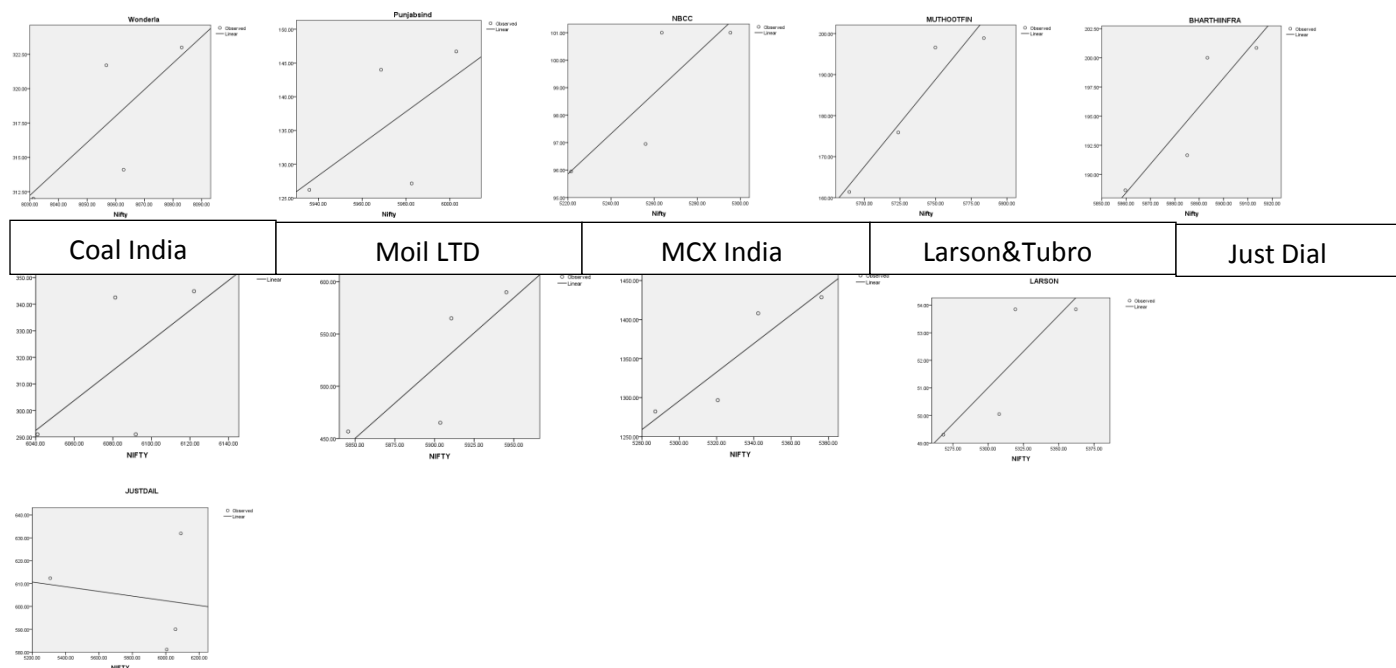
INTERPRETATION:The above table shows five companies which were having grade five is primary markets were tested which sharp differential ratio to measure the performance for short term period i.e. one month from listing date. The result depicts out of 5 companies two had given negative performance but standard deviation is found to be similar to all the companies.

Objective 3:

Equation	Model Summary					Parameter Estimates	
Companies Name	R Square	F	df1	df2	Sig.	Constant	b1
Wonderla Holidays LTD	0.566	2.604	1	2	0.248	-1232.663	0.192
Punjab and Sind bank	0.379	1.218	1	2	0.385	-1280.455	0.237
NBCC	0.7	4.674	1	2	0.163	-286.8	0.073
Muthoot Finance	0.91	20.127	1	2	0.046	-2259.454	0.426
Bharat Infrastructure LTD	0.813	8.708	1	2	0.098	-1249.634	0.245
Coal India LTD	0.387	1.263	1	2	0.378	-3.12E+03	0.565
MOIL	0.665	3.967	1	2	0.185	-7.42E+03	1.345
MCX INDIA	0.839	10.455	1	2	0.084	-8.44E+03	1.837
Larson and Tubro	0.695	4.556	1	2	0.166	-227.102	0.052
JUSTDAIL	0.028	0.058	1	2	0.833	663.879	-0.01

Model Summary and Parameter Estimates

Wonderla Holidays	Punjab and Sind Bank	NBCC	Muthoot Finance	Bharat Infrastructure
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INTERPRETATION:The above table of grade 4 & 5 companies listing day performance has been measured considering offering date to listing date secondary market fluctuations. The regression linear trend has been applied between the secondary markets data from IPO offering opening date to IPO listing date in the exchange the result unveils IPOs are getting influenced on listing date by prior secondary market fluctuations. Except “Just dial” all companies are found to be influenced

OBJECTIVE 4

Model Summary

Multiple R	.986
R Square	.973
Adjusted R Square	.905
Std. Error of the Estimate	.302
Log-likelihood Function Value	-57.455

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	6.550	5	1.310	14.381	.066
Residual	.182	2	.091		
Total	6.732	7			

Coefficients

	Unstandardized Coefficients		Standardized Coefficients		T	Sig.
	B	Std. Error	Beta	Std. Error		
(Constant)	7106.249	1724.595			4.121	.054
grade1	-407.562	317.115	-1.309	1.019	-1.285	.327
grade2	467.312	268.327	10.685	6.136	1.742	.224
grade3	-858.366	433.948	-15.246	7.708	-1.978	.187
grade4	652.915	207.358	10.268	3.261	3.149	.088
grade5	-4615.392	1030.874	-5.149	1.150	-4.477	.046

INTERPRETATION:The above analysis depicts that grading system in India is influenced by the primary market. Fluctuations of the R-square between primary market and all grades 1-5 were affected because analysis of variance value is found to be significant i.e. 0.066. The coefficient values for all grades of IPOs are found to be Significant during the analysis 2007-2014.

FINDINGS:

- 1 Secondary market returns were not having impact on the companies which were coming in the primary market through IPO.
- 2 Grade 5 companies are started to be stronger companies but the analysis of Sharpe differential method fund that in short term they may give negative performance inspite of stronger grade given by the rating agencies.
- 3 The grade five companies standard deviation is found to be similar with the secondary market benchmark during the first month listing period.
- 4 Secondary market fluctuations during the offering period and processing duration is having impact on the listing day of the company
- 5 Irrespective of the different grading to the companies which were given based on the standard practices by the rating agencies are found to be informed by the primary market. Grade 1&2 IPOs after listing had given superior returns and the companies which are having grade 5 had given inferior returns during the analysis period.

CONCLUSION:

I conclude the analysis on the primary market IPOs by considering 2007 to 2014. The emphases of the analysis has been focused to measure the secondary market impact on listing day of an IPO by considering IPO offering date to listing date of an IPO Nifty Fluctuations. The grading system is proved to be inefficient from investor’s perspective. The analysis of variance had proved that stocks sometimes are performing well inspite of lower of lower grading and higher grading stocks in few occasions failed to perform hence there is a further scope to do research on IPO grading so that long term investors in primary market can take an informed decision to invest.

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