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LISTING DAY PERFORMANCE OF MAINSTREAM IPOs LISTED ON NSE CLASSIFIED INTO MANUFACTURING AND NON-MANUFACTURING SECTOR

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Abstract
IPOs performance bifurcated into manufacturing and non-manufacturing sector listed in National Stock Exchange platform excluding IPOs of SMEs is the intention of this research paper along with an idea to know the variables that influence IPOs performance on listing day. IPOs while provide positive Initial return it is a loss for the issuer who has priced it lesser or the gain for investor who invested. The present study has 100 book build IPOs listed between Jan 2011 and April 2017. In the specified period the average return at the end of listing day was around 8% for non-manufacturing IPOs and around 12% for manufacturing sector IPOs which was adjusted with the market. Return on Opening, Proceeds and No of shares seems to be a dominant variable followed by Subscription which has partial influence in manufacturing sector. In non-manufacturing sector only Return on Opening influences the listing day return.

Keywords: IPO, Listing Day Return, Return on Opening, Book Building JEL: G19, G40.

Introduction

IPOs are used in multiple scenarios, but in broad it can be bifurcated into Exit route or capital formation of the company. Investor's who are existing in the company when they feel it's done with the association of company or find suitable other investments, try to move out of the company associated so long through IPOs where it's an exit route. On the other end companies in need of capital to expand or reduce debt uses IPO as a capital formation activity. Initial Public offering is a most complex mechanism of capital formation since its highly uncertain compared to the existing financial securities where there is more information publicly available like company's sensitivity and historic prices. IPO is an untested one since company for the first time sells its share for general public. Since its untested return and risk involved in an IPO investment is difficult to measure. The most common proxy used to measure is listing day return. Many researchers have provided many proxies to measure the listing day returns. IPOs in major platforms are using book building mechanism to identify the pricing demand from the market.

Expectation of every investor is to get a maximum return on their investments, similarly expectation of every IPO issue is to get maximum money from investors irrespective of whether it's a capital formation or exit strategy. When more money is left for investors it is either a loss for the primary investor who exits the company through IPO or loss of capital if the intention of IPO is either to expand or reduce debt. When no money is left for the investors, it discourages any further IPO investments. The degree to which an investor or an issuer benefits from the IPO is a most complex question to answer. Here the attempt is to understand what favour the listing day return.

Nandha and Sawyer(2002) studied the IPOs in the period 1994-1995 in which they proposed that higher promoter holding has led to higher initial return since promoter holding shows the interest and the confidence they have in company's future which reduces the uncertainty involved in the issue. Ghosh(2005) studied the IPOs in the period 1991-2001 where the following were his observations. Time between offer close and listing day provides more information about the issue which may not be available at the time when offer is open. So this time lag becomes a significant factor for returns of listing day. When the issue is larger listing day returns are lesser on comparison with smaller issues which is attributable to higher risk in smaller issues and vice versa. Larger issues have more attention and hence less riskier. When the market return is better IPO's tend to provide more listing day return because of optimism of investors. Kumar(2007) studied 156 IPOs which were book build between 1999 and 2000 and came off with following observations. Larger issues are less riskier and hence they price higher. When market condition is good many investors demand may not be fulfilled and hence listing day return may be more since investors of unfulfilled demand try to enter the stock on the listing day. Also the major determinant of listing day return is opening price on the listing day. Shelly and Singh(2008) studied 963 fixed price IPOs listed between 1992 to 2000 and came off with following observations. Firm's age is a determinant where the older ones are priced higher and younger ones provide more return. Subscription is positively correlated to the listing day return. Madhusoodanan and Thiripalraju(1997) studied IPOs in the period 1992 to 1995 and came off with the following observations. Delay in listing an IPO and the offer size of the issue are key determinants of listing day returns. Madhusoodanan and Rajan(2004) studies 92 IPOs in the period 1999 to 2003 and came off with the following observations. Smaller issues tend to provide more on the table with more underpricing and viceversa for larger issues.

Variables of the Research

Age

Ghosh(2005) Older the firm more is thee information related to the history of operations and so the investors can rely on the performance of firm based on age, which can be used as proxy for risk and also provides a signal on value of the issuer. Ritter(1991) identified relationship between listing return and the age, where he proved a negative relationship. When the firm is older they tend to leave lesser money on the table for investor in comparison with the firm which are younger. Loughran and Ritter(2004) studies the ipo issues based on a firm maturity and proved firms that are younger try to leave money for the investors when compared to a matured firm. Maturity of firm and the initial return takes a inverse relationship. Mauer and Senbet(1992) Initial returns through IPO is related negatively to the age of company.

Pre IPO Leverage

Modigliani and Miller(1963) stated that debt does has impact on the firm's value. Since the payment of interest on debt is tax deductible, value of the firm proportionately increase owing to the amount of debt in the capital structure of the firm and hence highly levered firms have a better market place. Ross(1977) proposed that debt level should be optimum such that benefit of tax and cost of stress due to debt to be balanced. Jensen and Meckling(1976) As debt increases, agency cost of debt also increases. Myers and Majluf(1984) proved a capital structure model which explained a firm with lower debt will be highly profitable and has enough earnings to fund their investment needs. High Pre IPO leverage is a signal of high financial distress, agency cost. Firm cannot have enough fund for internal finance. Value of highly levered firm is low at the time of IPO. Neeta and Padmavathi(2012) IPOs of firms with lower Pre IPO leverage leave more for the investors through initial returns.

Promoter's Holding in Post Issue Equity

Leland and Pyle(1977). Higher retention ratio indicates the interest of promoter to be associated with the company and in turn the possible cash flows into the company. Allen and Faulhaber(1989) Company with good value tend to keep with them more stake to dilute in seasoned equity offerings at a better price.

Issue Size

Ghosh(2005) and Kumar(2007) Issues of bigger size has lot of media and analyst attention along with regulator attention. They are of lesser risk, which leaves a lesser return on table for investors. Larger the issue, larger is the supply and so lower the return or higher is the valuation of issue. Beatty and Ritter(1986) Issues of smaller size are more speculative and hence provided with a lower price to compensate the speculation. Probability of issue getting failed is lesser. Mok and Hui(1998), Rajan and Madhoosudanan(2004) and Yu and Tse(2006) Offer size and initial return are inversely proportional or on opposite direction. Shah(1995), Mauer and Senbet(1992) Initial returns in an IPO is related negatively to the offer size. Alwarez and Gonzaley(2001) IPO size has significantly impact on the stock return.

Market Conditions

Su(2004) good market conditions doesnot need discounts since market itself is better to offer a better returns. Neeta and Padmavathi(2012) When the volatility of index is higher, initial returns are also high. Loughran and Ritter(2002) Market returns before IPO issue has a positive result in initial returns. Gupta(2011) During the period of economic slowdown, market slowdown and pessimism, IPOs provided negative initial day returns. Lowry and Schwert(2002) Activity of an IPO issue is influenced by IPO demand and Initial return of past IPO. Loughran, Ritter and Rydqvist(1994) Overoptimistic is the period during which firms try to issue their IPOs. Aggarwal and Kung(1994), McGuiness(1992) Initial returns in a IPO is due to rising stock markets. Ritter(1984) and Hansen et al(1987) IPO activity depends on time and hot issue period features large first day returns and number of companies issuing offers is higher.

Subscription Pattern

Shelly and Singh(2008) IPOs with fixed pricing mechanism has significance with subscription. Jain and Singh(2012) Investors who are less informed follow investors who are relatively more informed. Higher the demand, Higher the returns for the issue purely based on interest to acquire by new investors into the issue and attempt by exiting holders to increase their stake in the issue. Neeta and Padmavathi(2012) Higher market adjusted initial returns is due to more demand of the issue. Khurshed et al(2008) Subscription pattern of qualified institution buyers influence the subscription level of retail investors and Non Institutional Investors. Cornelli, Goldreich and Ljunquist(2005) Individual of retail investors higher interest leads to more initial returns. Derrien(2005) IPOs with higher retail investors demand has provided higher initial returns. Chaturvedi, Pandey and Ghosh(2006) Issues that are oversubscribed provided more initial day returns. Indicators of higher subscription are market index, nature and type of business, promoter's track record and foreign collaborations. Arif(2009) Retail investors follow the demand patterns of Qualified institutional buyers. Lakonishok et al(1992), Shleifer and Summers(1990) Less informed investors are likely to follow the investors who participate earlier.

Return on Opening
Kumar(2007) return on opening is more significant to the level of market adjusted initial return. Neeta and Padmavathi(2012) Higher market adjusted initial return is due to higher market adjusted return on opening.

Initial Day Return
Ghosh(2005), Kumar(2007), Shelly and Singh(2008) Initial return is the original value of the issue that is listed. Allen and Faulhaber(1989), Grinblatt and Hwang(1989) and Welch(1989) Issuer tries to leave some return to investors to come back into the market and sell again when the market is more favourable. Tinic(1988) Initial returns is a form of insurance against legal liabilities and the associated damage to reputation of both investment banker and issuers. Madhusoodanan and Thiripalraju(1997) In short run IPOs provide a better return and this is higher compared to the IPO experiences in other countries.

Objectives
To measure the initial day performance of manufacturing and non-manufacturing sector IPOs
The relationship between firm specific data (Age of the company, Issue size, Subscription, Post issue promoter's holding, No of shares), Market specific data (Market return, Market Volatility, Return on opening) and the level of dependent variable i.e Return on the listing day.

Data Selection and Sample Selection
Sample size is 100 book build IPOs listed during the period of Jan 2011 to Apr 2017. In the above said period the total number Book build IPOs listed through NSE major platform were 100 in count. Since data for all 100 were available all were included in this study. Closing price, Issue price, Listing price, Date of listing, Offer closing date were extracted from NSE website and websites who concentrate more on information related to IPOs. Index return and Index volatility were calculated based on Nifty 500 figures. One month return of index before the day of offer opening is used to calculate Index return and standard deviation of Index return during the one month prior to offer opening is used to calculate the Index volatility.

Age was calculate based on the difference between year of incorporation and year of listing. Total assets and long term debt, promoter's holding, subscription figures were taken from prospectus and website like chittorgarh based on the basis of allotment prepared through registrar and made public through the above said website.

Measurement of Initial Return and Description of the Considered Variables
Description and Measurement of Variables

- Age is expected to have negative impact on positive returns
- Leverage is expected to have positive influence on returns
- Market Adjusted Return on Opening is expected to have positive influence on returns
- Proceeds is expected to have negative influence on returns
- No of Shares is expected to have positive influence on returns
- Subscription Pattern is expected to have positive influence on returns
- Post issue promoter's holding is expected to have negative influence on returns
- Market return and volatility is expected to have positive influence on returns

Return on Opening
Return on Opening = $[\{(OP_1/OP_0)-1\}*100]$
Market Adjusted Return On Opening (MAROP) =

$$[\{(OP_1/OP_0)-1\}*100] - [\{(OS_1/OS_0)-1\}*100]$$

OP_1 = Opening Price or Listing Price of the share on Listing Day
OP_0 = Offer Price or Issue Price of the Share
OS_1 = Opening Nifty 500 on the Listing Day
OS_0 = Opening Nifty 500 on the Offer Closing Day

Initial Day Return
Initial day return in IPOs is estimated either with raw data or Market Adjusted Initial Returns (MAIR). Raw return is the deflated differential with issue or offer price.
Initial Day Return = $[\{(CP_1/OP_0)-1\}*100]$

MAIR is difference between raw return and return of the market on listing day. Here estimate market return of Nifty 500 is used as benchmark rate for the excess return. The evaluation proves whether IPO outperforms the benchmark on the first day of listing. Benchmark return is the closing index value of the listing day deflated with index value at offer close day and differentiated by basic unit value.

Market Adjusted Initial Return (MAIR) = [{(CP_1/OP_0)-1}*100] - [{(CS_1/CS_0)-1}*100]

CP_1 = Closing Price of Share on Listing Day
OP_0 = Issue Price or Offer Price of the Share
CS_1 = Closing Nifty 500 on the Listing Day
CS_0 = Closing Nifty 500 on the offer closing Day

Model

Ln MAIR = α+β1 Ln Age + β2 Ln Proceeds + β3 Ln Tot_Sub + β4 Leverage + β5 Ln PIPH + β6 Ln MAROP + β7 Ln NoOf Shares + β8 Mkt_Ret + β9 Mkt_Dev + e

To solve the problem of heteroskedasticity some of the independent variables and dependent variable are taken in natural logarithm form.

Results and Discussion

Table 1: Descriptive Statistics of the Variables used in the study

Statistics											
		AGE	**PROCEEDS**	**TOT_SUB**	**LEVERAGE**	**PIPH**	**MAROP**	**MAIR**	**MKT_RET**	**MKT_DEV**	**NOOFSHARE**
N	Valid	100	100	100	100	100	100	100	100	100	100
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		19.130	550.172	16.583	50.408	57.187	8.846	9.936	0.351	4.543	34037044.900
Median		15.000	343.240	2.955	47.070	59.800	4.030	5.675	1.035	4.210	13674254.500
Std. Deviation		19.338	828.505	25.719	28.680	19.311	18.252	32.277	4.689	1.513	82709056.085
Skewness		3.680	4.244	2.277	-0.131	-0.954	2.026	0.237	-0.446	0.536	6.973
Std. Error of Skewness		0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241
Kurtosis		18.033	22.841	6.294	-0.907	1.253	6.146	1.307	0.039	-0.495	57.716
Std. Error of Kurtosis		0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478
Minimum		3.000	23.500	0.750	0.000	0.000	-20.510	-77.860	-11.740	2.000	3350000.000
Maximum		142.000	6056.790	143.990	107.470	89.800	98.260	112.010	12.880	8.040	750000000.000

To make the return on opening and initial return normally distributed the equations of MAIR and MAROP are modified to the natural logarithm.

Based on the multiple regression model following observations were made. For IPOs under Non-Manufacturing sector the variables considered explained 39% of variance and for IPOs under Manufacturing Sector the variables considered explained 49% of variance. Model Seems more relevant for manufacturing sector in the considered period. Of the 100 IPOs 37 were from manufacturing sector and rest 63 are from non-manufacturing sector. IPOs from non-manufacturing sectors managed 8.65% of return on listing day adjusted with market return and IPOs from manufacturing sector managed 12.14% of return on listing day adjusted with market return.

Market adjusted return on opening was significant and positive overall, and also when divided into manufacturing and non-manufacturing. Proceeds of an IPO were partially significant overall, but against the expectation of negative influence. Proceeds in manufacturing sector were highly significant whereas insignificant in non-manufacturing sector.

Subscription pattern was insignificant overall and also had negative influence as against the expectations. When considered in manufacturing sector subscription has partial significance but not so strong. No of Shares is insignificant overall and against the expectation of positive influence. When considered in manufacturing sector the variable is significant to influence the return. All other variables were insignificant in influencing the listing day return.

Conclusion

This study has examined the listing day returns of all the firms that have gone public through Initial Public Offering in mainstream from the period 2011 to April 2017 divided into manufacturing and non-manufacturing sectorr. The average listing day return is found to be approximately 8.65% for manufacturing sector and 12.14% for non-manufacturing sector. With a regression approach to identify the variables that influence listing day returns, Return on Opening, Proceeds and No of shares seems to be a dominant variable followed by Subscription which has partial influence in manufacturing sector. In non-manufacturing sector only Return on Opening influences the listing day return.

Annexure

Table 2: Descriptive Statistics of the Variables used in the study after transformation

		LnAGE	LnPROCEEDS	LnTOT_SUB	LEVERAGE	PIPH	LnMAROP	LnMAIR	LnNOOFSHARE	MKT_RET	MKT_DEV
N	Valid	100	100	100	100	100	100	100	100	100	100
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		2.659	5.634	1.673	50.408	57.187	0.073	0.046	16.570	0.351	4.543
Median		2.708	5.838	1.083	47.070	59.800	0.040	0.057	16.431	1.035	4.210
Std. Deviation		0.726	1.192	1.515	28.680	19.311	0.150	0.335	1.034	4.689	1.513
Skewness		0.446	-0.020	0.577	-0.131	-0.954	1.227	-1.303	1.127	-0.446	0.536
Std. Error of Skewness		0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241
Kurtosis		0.498	-0.431	-1.144	-0.907	1.253	2.606	3.349	1.587	0.039	-0.495
Std. Error of Kurtosis		0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478	0.478
Minimum		1.099	3.157	-0.288	0.000	0.000	-0.261	-1.250	15.024	-11.740	2.000
Maximum		4.956	8.709	4.970	107.470	89.800	0.673	0.738	20.436	12.880	8.040

Table 3: Model summary of Non-Manufacturing sector IPOs

Model Summary[b]					
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	.620[a]	.385	.280	.27841	1.691
a. Predictors: (Constant), LnMAROP, PIPH, LEVERAGE, MKT_RET, LnNOOFSHARE, LnAGE, MKT_DEV, LnPROCEEDS, LnTOT_SUB					
b. Dependent Variable: LnMAIR					

Table 4: ANOVA table for Non- Manufacturing sector IPOs.

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	2.570	9	.286	3.684	.001[b]
	Residual	4.108	53	.078		
	Total	6.678	62			
a. Dependent Variable: LnMAIR						
b. Predictors: (Constant), LnMAROP, PIPH, LEVERAGE, MKT_RET, LnNOOFSHARE, LnAGE, MKT_DEV, LnPROCEEDS, LnTOT_SUB						

Table 5: Coefficients of Non-manufacturing sector IPOs

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.105	.650		.161	.873
	LnAGE	-.024	.057	-.054	-.425	.673
	LnPROCEEDS	.048	.046	.167	1.044	.301
	LnTOT_SUB	.012	.041	.057	.291	.772
	LEVERAGE	.000	.001	.042	.353	.725
	PIPH	.001	.002	.037	.321	.750
	LnNOOFSHARE	-.023	.044	-.078	-.520	.605
	MKT_RET	-.002	.009	-.024	-.200	.842
	MKT_DEV	-.015	.028	-.071	-.537	.594
	LnMAROP	1.071	.363	.515	2.953	.005
a. Dependent Variable: LnMAIR						

Table 6: Model Summary of Manufacturing sector IPOs

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.697[a]	.485	.314	.29022	1.706
a. Predictors: (Constant), LnMAROP, LnNOOFSHARE, LnAGE, MKT_RET, PIPH, LEVERAGE, MKT_DEV, LnPROCEEDS, LnTOT_SUB					
b. Dependent Variable: LnMAIR					

Table 7: ANOVA table of Manufacturing sector IPOs

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.144	9	.238	2.828	.018[b]
	Residual	2.274	27	.084		
	Total	4.418	36			
a. Dependent Variable: LnMAIR						
b. Predictors: (Constant), LnMAROP, LnNOOFSHARE, LnAGE, MKT_RET, PIPH, LEVERAGE, MKT_DEV, LnPROCEEDS, LnTOT_SUB						

Table 8: Coefficients of Manufacturing sector IPOs

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.558	1.587		2.241	.033
	LnAGE	.057	.086	.114	.667	.510
	LnPROCEEDS	.204	.075	.660	2.716	.011
	LnTOT_SUB	-.136	.067	-.554	-2.033	.052
	LEVERAGE	-.001	.003	-.055	-.300	.767
	PIPH	-.002	.005	-.090	-.490	.628
	LnNOOFSHARE	-.281	.091	-.665	-3.076	.005
	MKT_RET	.020	.012	.283	1.636	.113
	MKT_DEV	.042	.046	.170	.916	.368
	LnMAROP	1.647	.519	.643	3.176	.004
a. Dependent Variable: LnMAIR						

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