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Differences in IPO Performance of Companies Listed on Main Board and SME Platform of BSE

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ABSTRACT

The focus of present study is to analyze the performance of IPOs listed on the main market of BSE and SME platform of BSE. We have used a sample of 183 companies listed on BSE and 78 companies listed on SME platform of BSE. The study results reveal a higher mean of initial return for the SME IPOs in comparison with the initial return of IPOs listed on the main market of BSE. In addition to this study observed a higher standard deviation of initial returns in the case of larger firms listed on the main market of BSE. This study used two sample "*t*" test to investigate the difference between the means of initial return of IPOs of companies listed on the main board and SME platform of BSE. This study concludes that there is no significance difference between the means of two categories of initial return of IPO companies listed on main board BSE and SME platform of BSE. However, there is no significance difference between the variances of IR of two categories of IPOs listed on the main board and SME platform of BSE.

JEL Classification: G100, G240, C200.

Keywords: Initial return, IPO performance, SME IPO, Stock market.

1. INTRODUCTION

One of the more important and focused research areas in the empirical finance is under pricing of initial public offerings (IPO). This is the most interesting puzzle in empirical finance which is relevant for both the academicians and practitioners. There are various theories in literature which explain under pricing of IPOs such as information asymmetry, agency cost theory and signaling (Baron, 1982; Allen & Faulhaber, 1989).

A very large growing body of literature has investigated the long term and short-term performance of IPOs in the case of large companies listed on the main market of both NSE and BSE. In the context of India, the extant literature focused on both short run and long-run performance of IPOs of companies listed on main market by using various performance measures (Jain & Kimi 1994; Madhusoodnan & Thiripalraju, 1997; Kakati, 1999; Sehgal & Singh, 2008; Kumar, 2007; Sharma et. al., 2012; Shah & Mehta 2015). There is a dearth of research which has focused on small and medium enterprises (SME) IPO Performance in India. There has been significant increase in the number of SME IPOs listed on the SME platform of BSE. Moreover, there is more information asymmetry in the case of SME IPOs. It is interesting to understand and analyze the SME IPOs performance due to the higher financial constraints faced by the SME firms in financing their capital requirements. The objective of present study is to analyze IPO performance of companies listed on the main market and SME Platform of BSE by using the initial returns of IPOs. Further, we investigated is there any difference between the means and variances of two categories of IPOs listed on the main board and SME platform of BSE. The outline of this paper is structured into six sections. The section 2 narrates literature review related to the present study. Section 3 discussed the data and sample used in the study. Section 4 discussed methodology used in this study. Section 5 provides results and discussion of the study. Section 6 provides the conclusion of the study.

2. LITERATURE REVIEW

The extant literature discussed various reasons for IPO under pricing. The model of asymmetric information suggests that the pricing decision is left on the underwriter by the issuers, where the investment bank finds cheaper to market an IPO when it's under priced (Baron, 1982). The signaling theory says that by under pricing new issues it is being signaled that the future offerings can be sold at higher prices by issuers and insiders (Allen & Faulhaber, 1989). Inside information is being given to the potential investors by the entrepreneurs and without this financial market performs poorly. With a sample of 1526 IPOs, Ritter (1991**)** investigated the long-run performance of IPOs by using average-benchmark and cumulative average-benchmark adjusted aftermarket performance with regression analysis. His study concluded the time and industry-dependence of the long-run performance of the initial public offering.

Madhusoodanan & Thiripalraju (1997) analyzed the Indian IPO market for the short-term and long-term under pricing. The study examined the impact of the issue size on the magnitude of under pricing and the performance of the merchant bankers in pricing these issues. Their study concluded that one of the most important aspects of mispricing in IPOs in India due to the prior fixation of the issue price.

Kumar (2007) examined IPOs issued through book building process with an objective to find fare pricing in short run as well as long run. His study concluded that the IPOs are under priced and outperformed for a period of 2 years after IPO. Chorruk & Worthington (2009) studied the pricing and performance of SME IPOs on the Thai market for the period of 7 years. The study analyzed four complementary measures of under pricing namely headline under pricing, under pricing issuer loss, under pricing loss by market value and under pricing loss by issue price. The data were collected based on monthly average, cumulative abnormal returns (CAR), buy and hold returns (BHR) and wealth relatives (WR). The empirical results reveal that modest level of under pricing and in case of return SMEs generally outperform the market, while in their second year after performance was identical.

Sharma & Seraphim (2010) analyzed the link between the underwriter's reputation and the IPO under pricing phenomenon. They found that the magnitude of under pricing was less for prestigious investment banks in comparison to less prestigious ones. It also says that prestigious investment banks manage issues having the higher magnitude of offer size. The age or maturity of a firm has the positive correlation with the prestige of investment bank. It can be used by the companies to take decisions on investment banks.

Sahoo & Rajib (2010) analyzed IPOs from the listing day to 36 months using two methods namely, wealth relative (WR) and buy-and-hold market-adjusted return (BHAR). Their study concluded that during highly active period of IPOs shows fewer returns because of the over-expectation of the investors and because the inadequate pricing gets improved, which results in less valuation. Sharma, Mittal & Gupta (2012) examined the performance of IPOs in India, by examining the sector-wise behavioral pattern of different companies from the time of listing to three years. The study concluded that under pricing of IPOs attracts many potential buyers to purchase stocks or shares at an attractive price to get assured profits.

Jain & Padmavathi (2012) analyzed the factors affecting under pricing of IPOs in the Indian capital market. The research found that irregularly informed investor is the main reason for under pricing, which is measured by the accumulated 30-day stock market return and the standard deviation of returns. The study concluded that when market conditions are favorable to an IPO, the level of under pricing is relatively small.

Singh & Kumar (2012) studied the short run as well as long-run under pricing of the Initial Public Offerings in the Indian Capital markets by looking at the various factors affecting them. It was done by dividing the sample by issue size at issue price into three parts: small, medium and large issue size and adjusting its initial return by co-relation. It was found that more mature firms went for large issues, on the average and good sectors performed better and reported positive cumulative adjusted returns.

Kongthon & Hirawat (2015) analyzed the effects of ownership structure on operating performance of SME IPOs post a year. The study collected short term as well as long term performance by market adjusted abnormal return (MAAR) and long-run market performance by cumulative abnormal return (CAR) & buy and hold abnormal return (BHAR) for the period of six years. They found out that under priced does not mean that it would be a good performing IPO company in the MAI market. The BHAR does not prove the under performance of MAI IPO companies after listing 36 months. These results were not same as the previous studies of the Thai IPO companies listed in SET and MAI. Shah and Mehta (2015) investigated the relationship between the degree of under pricing and issue price, size, oversubscription, market returns by using regression method with a sample of 113 companies for a duration of four years. The study concluded that investors can invest into the new issues that are under priced during an initial time period.

Huang et. al., (2016) investigated whether a firm complies with Section 404 i.e. compliance in the SEC (U.S. Securities and Exchange Commission) during the IPO issue year. Their study considered long-term abnormal stock returns over three-time intervals of 6 months, 12 months, and 24 months after the issue. In addition, they also used industry-adjusted ROA as a performance measure, with qualitatively similar results. The results suggest that compliance with SOX 404 does not impact under pricing.

Wong & Ting (2017**)** analyzed the market behaviors of IPO in an emerging economy i.e. Malaysia. Their study concludes that like other country's IPOs, Malaysian IPOs experience a statistically significant under pricing on the time period, the initial day and after-market periods. Rahman, Kuhan & Kavida (2017**)**

analyzed the impact of macroeconomic variables like Index of Industrial Production (IIP), Gross Domestic Product (GDP), Interest Rate (IR), Foreign Direct Investment (FDI), Inflation Rate (IF), Exchange Rate (ER) and Crude Oil Price (CP) on S&P BSE SME IPO index. They used correlation, multiple regression and Granger causality tests to find out the relationship and impact. They found out that Inflation rate and Interest rate have a positive impact on the stock market index and the Exchange rate has a negative impact. The Granger Causality test shows a unidirectional relationship between SME IPO index and Crude Oil price, GDP, FDI and Interest Rate.

Tripathi, Pradhan & Pandey (2017) analyzed the performance of BSE SME and NSE EMERGE platforms IPOs and the relationship between the magnitude of under pricing and subscription rate. The authors found out that during the period of study there was a decreasing trend in the magnitude of under pricing but ANOVA reports that it was not statistically meaningful. By the help of correlation analysis, they found out the relationship between magnitude of under pricing and subscription rate which resulted as positive i.e. the two variables move in the same direction.

In the context of India, Satya & Guruprasad (2014) investigated pricing performance of IPO in both short and long runwith a sample of 24 IPOs by using Market adjusted abnormal return andBuy and hold abnormal return respectively. Bhattacharya (2017) analyzed the Indian SME IPO market and found that the timing of IPO and the underwriter's reputation predict the long run performance of SME IPOs. IPOs that are either timed to market or have larger allocations to market makers give the higher initial performance and the IPO allocation to market makers and IPO demand for individual retail investors increase liquidity in the IPO aftermarket.

3. DATA AND SAMPLE

The study sample consists of 183 IPO companies listed on the main market of BSE and 78 IPO companies listed on SME platform of BSE starting from the year 2010 to 2017. The data were sourced from BSE main board and SME platform Website and Money control Website.

4. METHODOLOGY

For the purpose of calculating initial returns, we have considered the difference between closing price on the listing date and the offer price of IPO. At first, we calculated the initial returns (IR) of sampled firms included in the study. This study has used various measures of descriptive statistics to make a comparison between the IPO performance of Main Board and SME IPOs. Further, we examined the statistical difference between the means and variances of IR of both the samples by applying two sample "*t*" test and "F" test.

5. RESULTS AND DISCUSSION

Table 1 provides the summary statistics of the initial returns (IR) of IPOs in the case of large companies listed on the main market of BSE. These results suggest that minimum and maximum IR of this category of IPOs is –0.972 and 1.535 respectively. The mean IR of observed sample is -0.008 with a standard deviation of 0.439. The median IR for the sampled firms equals to 0.009. The average IPO issue size of large sized firms is 658.17 crores with a standard deviation of 1499.17 crores.

Table 1
Summary Statistics of IPO Initial Returns (IR) – Main market of BSE

Mean	*Median*	*Minimum*	*Maximum*
–0.008	0.009	–0.972	1.535
Std. Dev.	C.V.	Skewness	Ex. kurtosis
0.439	52.863	0.158	1.158
5% Perc.	95% Perc.	IQ range	Missing obs.
–0.829	0.673	0.406	0.000

Source: Author's own calculation.

Table 2 provides the summary statistics of the initial returns (IR) of IPOs in the case of SME companies listed on the SME platform of BSE. These results suggest that minimum and maximum IR of this category of IPOs is –0.958 and 1.463 respectively. The mean IR of an observed sample is –0.100 with a standard deviation of 0.382. The median IR for the sampled firms equals to 0.006. While in the case of companies listed on SME Platform of BSE the average IPO issue size is 9.09 Crores with a standard deviation of 11.802 Crores.

Table 2
Summary Statistics of IPO Initial Returns (IR) – BSE SME Platform

Mean	*Median*	*Minimum*	*Maximum*
–0.100	0.006	–0.958	1.463
Std. Dev.	C.V.	Skewness	Ex. kurtosis
0.382	3.832	0.194	2.980
5% Perc.	95% Perc.	IQ range	Missing obs.
–0.890	0.455	0.345	0.000

Source: Author's own calculation.

Null hypothesis: Difference of means = 0

Sample 1: IR of Companies listed on the main board of BSE

n = 183, mean = –0.008, s.d. = 0.439

Standard error of mean = 0.032

95% confidence interval for mean: –0.072 to 0.055

Sample 2: IR of Companies listed on the SME Platform of BSE

n = 78, mean = –0.099, s.d. = 0.382

Standard error of mean = 0.043

95% confidence interval for mean: –0.185 to –0.014

Test statistic: $t(259) = (-0.00829781 - 0.0996295)/0.0571375 = 1.6$

Two-tailed p-value = 0.1112, (One-tailed = 0.05558)

The above test static reveals that the null hypothesis is accepted and there is no significance difference between the means of IR of IPOs of companies listed on the main market and SME platform of BSE.

Null hypothesis: The population variances are equal

Sample 1: n = 183, variance = 0.192412, *Sample 2: n* = 78, variance = 0.145769, *Test statistic:* F(182, 77) = 1.31998, Two-tailed *p*-value = 0.1656, (one-tailed = 0.08278)

The above test static reveals that the null hypothesis is accepted and there is no significance difference between the variances of IR of IPOs of companies listed on the main market and SME platform of BSE.

6. CONCLUSION

The major purpose of this study is to investigate the performance of IPOs listed on the main market and SME platform of BSE. This study used a sample of 183 companies listed on main market of BSE and 78 companies listed on SME platform of BSE. At first, we computed the IR of both the samples by considering difference between listing price and offer price of IPO.

The univariate analysis of sample reveals a higher mean of IR for the SME IPOs in comparison with the IR of IPOs listed on the main market of BSE. In addition, we also observed a higher standard deviation of IR in the case of larger firms listed on the main market of BSE. This study used two sample "t" test to investigate the difference between the means of initial return of IPOs of companies listed on the main board and SME platform of BSE. Further, we used "F" test to investigate the difference between the variances of initial return of IPOs of companies listed on the main board and SME platform of BSE. Based upon results, we conclude that there is no significance difference between the means of two categories of IR of IPO companies listed on main market and SME platform of BSE. Further, we observed that there is no significance difference between the variances of IR of two categories of IPOs listed on the main board and SME platform of BSE. The present study has various implications for the investors, portfolio managers, and market regulators.

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Appendix 1
Differences in Public issue of Main Board and SME Plat form BSE

Particulars	*BSE-SME Platform*	*Main Board*
	Pre-Issue details	
IPO Application Size	Not Less than 1 Lakh	₹10000-15000 (minimum)
Observations on DRHP	By the Exchange	By SEBI
Post-Issue Paid-up Capital (Face value)	Minimum Rs3 Crore	Minimum ₹10 Crore
Minimum Pre-Tax Operation Profit	No such requirement	At least Pre-tax Operating Profit of ₹15 crore (for 3 out of preceding 5 years)
IPO Grading	Non-Mandatory	Mandatory
Issue Size	No restriction	No restriction
IPO Underwriting	100% Underwritten (Atleast 15% of the issue size on the books of the merchant banker)	Mandatory (Not required where 75% of the issue is offered for compulsory subscription by QIBs)
Minimum No. of Allottees in the IPO	At least 50	At least 1000

Source: bsesme.com