

# A Study on Under Pricing and Long-Run Performance of Initial Public Offerings (IPO) in India : A Comparison between State Firms and Private Firms

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## ABSTRACT

The study sought to examine the pricing and long term performance of IPOs of state owned enterprises and compared it with the performance of privately owned enterprises. The study was specifically motivated to find out whether there were differences in the underpricing and long run performance of privatization IPOs and private IPOs at the NSE. Secondary data on new issues was obtained from the NSL. The data was analyzed for abnormal returns and a statistical test was performed using the t- test to establish whether there existed significant difference in the level of underpricing and the three year long run cumulative abnormal returns. The results reveal that there seems to be a general tendency for privatizations to be underpriced to a greater degree than the private company IPOs. The average underpricing of privatization IPOs and private company IPOs was at 62.15% and 25.42% respectively. However, the difference in underpricing in initial mean returns is not statistically significant. In addition, over the long run, three year after listing, both the privatization and private IPOs underperformed the market. They both experienced negative three year cumulative abnormal returns with the private IPOs greatly underperforming with a CAR of negative 6% while privatizations had negative 32%. Both the privatization and private IPOs are very popular as they experienced massive oversubscription. The high initial return on privatization IPOs may be as a result of deliberately chosen behaviour by the government as they pursue their political motives of wider stock ownership and political support for the privatization programme. The major implication of this study is that for speculative investors both the private and privatization IPOs are a good investment in the short run due to the incidence of high initial returns as a result of average underpricing. However, the privatization IPOs fetch higher initial returns as compared to the private IPOs. The long run underperformances imply that investors should not hold on to their private and privatization IPOs for the long term as they are better off buying stock in the market and selling it within the first month of trading.

**Keywords :** IPO, Public Firms, Privatization

## I. INTRODUCTION

Going public is generally perceived as one of the most important milestones in a firm's life cycle (Ritter, 1991). It brings a long very many benefits that can't

be obtained by staying private. It provides access to capital as well as increases the financing alternatives available to a company thus considerably lowering the cost of funding the company's operations and investments. Thus the role of raising capital on the

securities market cannot be underplayed. By going public, a firm enjoys increased liquidity, publicity and prestige. In cases where employee stock purchase plan are instituted, there is increased employee commitment to productivity and work quality. However, at the same time, the company acquires new obligations in form of transparency and disclosure requirements, and becomes accountable to a large group of relatively anonymous shareholders.

Privatization is the modern word used to describe the transfer of the ownership and control of productive assets from government hands to the private sector. The goals of privatization include fostering the development of capital markets, institutions broadening share ownership, improving the economic performance of privatized enterprises and raising revenue (Dowd & Malatesta, 1997). The pace, scope, and structure of privatization program indicate, however, that government place different weights on these various goals. Issuing of initial public offering is one of the ways in which governments divest from state owned enterprises. Most companies that go public do so via an initial public offering (IPO) to investors. Thus IPO is the first sales of stock by a company to the public through investment banking firms. Private IPOs are issued by private companies while privatization IPOs originate from state owned enterprises. IPO may involve issuing securities to the public in any of the following forms; shares, notes and debentures. However, this study will focus on stock or equity issues of state owned and private firms.

The empirical literature on IPO has established three stylized empirical regularities or anomalies (Ibbotson, Sindelar and Ritter, 1994). The first known as the "new issue anomaly." is that on average IPO's are substantially under priced leading to frequent incidence of large initial returns for the investors who are able to buy shares at offer price. Considerable evidence shows that most IPO's across the globe are under priced on average leading to positive initial returns. However, there has been a general tendency for governments around the world to under price the privatization IPOs to a greater degree than their

counterparts of private IPO's. Jenkinson and Mayer (1998) and Menyah and Paudyal (1996) have shown that underpricing on U.K privatization sales is greater than that on IPOs in the private sector. The second regularity is that cycles exist in both volume and average initial returns of IPOs, "hot issue markets" in which average initial returns are unusually high and there are also high volumes and "cold issue markets" in which the average initial returns are unusually low (Ritter, 1998). The third anomaly focuses on long run returns of IPOs, where it has been typically found that over a period of several months or years, the abnormal returns relative to the benchmark portfolio are usually significantly negative. Ritter (1998) documented international evidence on long run underperformance and established that most countries experienced poor stock price performance in the long run. However, Boardman and Larrin (2000) note that unlike private IPOs, privatization IPOs tend to outperform the domestic stock markets in the long run. The pricing of IPO is one of the more puzzling phenomena in finance (Ritter, 2003). Share pricing is a delicate balancing game involving three parties namely investor, transaction adviser, and the issuer. The ultimate aim is to achieve 100% subscription i.e. perfect equilibrium. If the price is set too high, it may fail and be withdrawn. If too low, there will be an opportunity loss to the issuing company. A major reason why most of the initial public offering is not correctly priced is because there is no observable market price prior to the offering and most of the issuing firms have little or no operating history. The market decides that the IPO price is either undervalued or overvalued. Thus it might end up being overpriced or under price

### **1.2 Statement of the Problem**

Despite the existence of voluminous literature on IPOs, work explicitly comparing offers of state owned enterprises (privatization IPOs) to those of privately owned companies in terms of the level of underpricing and long run performance is scarce. The few studies that have compared the two IPOs have had conflicting findings and conclusions. Choi and

Nam (1998) compared the initial returns of privatization initial public offering to private sector IPOs internationally and concluded that there is a general tendency for privatization IPOs to be underpriced to a greater degree than IPOs from private owned enterprises. Vickers and Yarrow (1998), Jenkison and Mayer (1998) and Perotti and Guney (1993) in their study of the privatization process suggest that underpricing is greater for IPOs of state owned than of privately owned enterprises. On the other hand, Dewenter and Malutesta (1997) in their study on the international comparison of state owned public offerings and privately owned enterprises concluded that greater underpricing of privatization IPOs was evidenced only in the UK while in the other countries there was no significant difference. In addition, privatization IPOs are documented to outperform in the long run while the private IPOs underperform. Thus, the privatization IPO significantly outperform the market return of each nation, while private IPOs underperform the market (Choi, 1998)

### **1.3 Objectives of the Study**

- To compare the average initial returns of privatization IPOs and initial public offerings of private companies.
- To compare long run IPO performance of state owned and privately owned firms.

## **II. Review of Literature**

There have been few studies comparing the level of under pricing and long run performance of State owned enterprises to those of privately owned companies. There has been a general tendency for government around the world to under price the privatization IPOs to a greater degree than their counterparts of private IPO's. Jenkison and Mayer (1998), Vickers and Yarrow (1998), Choi and Nam (1998) and Perotti and Guncy (1993) all suggest that underpricing on privatization sales is greater than in the private sector IPOs. In the long run, they

documented outperformance of privatization IPOs and underperformance for the private IPOs. However, Dewenter and Malutesta (1997) in their study on their international comparison of state owned public offerings and privately owned enterprises concluded that greater underpricing of privatization IPOs was evidenced only in the UK while in the other countries there was no significant difference. The greater under pricing in privatization IPOs was mostly attributed to political motives such as wider stock ownership, buying political support for the privatization programmes, promoting capital market development and increased probability of re-election.

## **III. RESEARCH METHODOLOGY**

### **3.1 Research Design**

The study sought to analyze and compare the short run and long run performance of privatization (state owned enterprises) IPO's to those of private firms. The study sought to find out if there was significant difference between the level of underpricing and long run performance of privatization IPO's to private IPO's. The initial average returns and cumulative average returns for the three-year period of the two sets of IPOs was compared. The parametric t test was used to measure the statistical significance.

### **3.2 Source of data. Data collection**

The study made use of secondary data, which was obtained from the NSE. The data of interest was from initial public offerings, which were quoted between 2015 and 2018(March 31). These included; the offer price of the listed firms, the daily prices and performance of NSE index.

### **3.3 Hypothesis**

HO: There is no significant difference between underpricing of state owned enterprises IPOs With those of private firms.

H1: There is significant difference between underpricing of state owned enterprises IPO's With that of private owned enterprises

Ho: There is no significant difference between long run performances of state owned

Enterprises IPOs with those of private firms.  
 H1 I here is significant difference between long run performance of state owned enterprises IPO's with that of private owned enterprises

**IV. Data**

**List of Industries/Sectors:**

- Banks
- Aerospace
- Coal
- Defense
- Finance(Including NBFCS)
- Insurance
- Housing Finance

**V. Data analysis and Interpretation**

The average market adjusted returns (AR) and cumulative average returns (CAR) in percentages for the public and private IPOs with their associated t statistic for the 36 months after going public were computed. Descriptive statistics are used to evaluate the performance.

**5.1 Short run under pricing Initial performance**

$$R_{i1} = (P_{i1} / P_{t0}) - 1$$

- Where  $P_{i1}$  is the closing price of stock  $i$  on the first trading day
  - $P_{t0}$  is the offering price.
  - $R_{i1}$  is the total first day return on the stock
  - The return on the NSE index for the corresponding time period is
- $$R_{m1} = (P_{m1} / P_{m0}) - 1$$
- Where  $R_{m1}$  is the first day comparable market return
  - $P_{m1}$  is the closing NSE index value on the first trading day.
  - $P_{m0}$  is the value of the NSE index corresponding to the offering stock price of firm  $i$

- (the closing value of the index on the day prior to the issue date or opening value of the index on the issue date)

$$MAAR = \{ [(1 + R_{i0}) / (1 + R_{m1})] - 1 \}$$

Mean abnormal return for the first trading day

$$AR = 1 / N \sum MAAR$$

**Lung run performance**

$$AR = 1 / n \sum ar_{i1}$$

Cumulative abnormal return

- $CAR_{i36} = AR = \sum AR (i= 1 \text{ to } 36)$

**5.2 Hypothesis**

- HO: There is no significant difference between underpricing of state firms IPOs with those of private firms.
- H1: There is significant difference between underpricing of state firms IPO's with that of private firms.
- Ho: There is no significant difference between long run performances of state firms IPOs with those of private firms.
- H1: There is significant difference between long run performance of state firms IPO's with that of private owned enterprises.

**Short-Run Under pricing**

Level of initial under pricing in public IPOs:

IPO	MAAR (%)
Bharat Dynamice ltd	-0.2
Hindustan aerospace	10.6
Coal India	78
IDBI	66
Indian bank	41.7

Mean maar(%) = 45.28%

**Level of initial underpricing in private IPOs:**

IPO	MAAR(%)

Hdfc life insurance	21.9
ICICI securities ltd	41.5
SandharTech ltd	2.2
Apollo Micro Sys	47.6
Future Supply Chain	15.2
Mean MAAR	25.68

**Calculation Section:  
Short-Run Performance**

	FULL SAMPLE	PUBLIC IPOs	PRIVATE IPOs
MAAR(%)	26.47	52.15	25.68
STD DEVIATION	36.9	71.32	30.06
MEDIAN	8.5	31.7	15.8
TOTAL NUMBER OF FIRMS	15	6	9

**Parametric t-test**

	PUBLIC IPO	PRIVATE IPO	DIFFERENCE
MAAR(%)	51.15	25.68	25.47
T-statistic			1.26

H0 is Accepted  
There is no significant difference between from each other.

**Long-Run Performance**

	FULL SAMPLE	PUBLIC IPOs	PRIVATE IPOs
CAR(%)	-36	-6	-32
MAAR(%)	6.7	8.1	4.9
Number of Firms	10	4	6
T-Statistics			-0.453

95% Level of t-Statistic is 0.543

Here H0 is Accepted.

There is no significant difference in both the firms

**VI. Findings**

- There has been a general tendency for the privatizations IPOs to be underpriced to a greater degree as compared to their private counterparts.
- Investors will gain higher initial returns if they invested in privatizations IPOs as compared to the private IPOs.
- Under pricing of privatization IPOs have had a great impact on the growth of the India.
- The process of Privatization significantly increasing market capitalization and liquidity.
- Privatization IPOs have supported the wider stock ownership seeing majority of retail investors participating in IPOs.

**VII. Recommended areas for further research**

- Comparison between portfolio to characteristics in long run performance.
- Detect long Run Returns with Cumulative abnormal returns(CAR)
- **Explanatory variables** may tested for both the firms

### VIII. Limitations

- Comparison is limiting in that **matching of IPOs in terms of Industry and Size** was not possible due to the small sample size.

### IX. Conclusion

- Public and Private IPOs are under priced for first trading day, but the mean difference of both IPOs is not statistically significant.
- Firm's size, after market risk level of IPOs and subscriptions ratio is significant factors of underpricing.
- First day MAR, market volatility and retention ratio are significant factor
- Concentration of ownership structure is similar in both groups of IPOs, which is against the signaling theory.
- First Day MAR impact on concentration of ownership.

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