CHAPTER VI
FINDINGS & RECOMMENDATIONS

The study is an attempt to examine the pricing behavior of IPOs in India. The pricing behaviour of IPOs has been studied with the help average market adjusted abnormal return (Average MAAR), average buy and hold abnormal return (Average BHAR) & wealth relative (WR) in new issue market in India. Therefore, degree of underpricing and overpricing upto three years after listing of IPOs has been reported. Determinants affecting the pricing behaviour of IPOs & subscription have been identified. This chapter is categorized in to two sections. Section 1 enlightens findings of the study.

Recommendations for investors, companies going for IPOs, intermediaries (underwriters, brokers) & Securities Exchange Board of India have been described in section 11.

SECTION -1
FINDINGS OF THE STUDY

Summarized View of Characteristics Of Selected IPOs

The average offer price of 488 IPOs is 80.99 rupees. The offer price of Jet Airway’s IPO is found the highest (1100 rupees). Number of companies has issued IPOs at Rs. 10(minimum value). DLF Limited has launched the biggest IPO in terms of size. The offer size is Rs. 918750 lakhs (91875 million) rupees. Average index return is reported 1.95 per cent. The post issue promoter holding of Akruti Nirman Limited is noticed the highest (89.96 per cent). City Union Bank, South Indian Bank and Infrastructure Development Finance Company limited have zero per cent post issue promoter holding. Indiabulls Financial Services Limited has taken only 15 days to be listed after closing the offer. On an average company take 163 days to be listed after offer closing in BSE. The IPO of Sankhya InfoTech limited was the most oversubscribed IPO. S Kumars. Com Limited scored the highest average market adjusted abnormal return that was
4128.36 per cent. The Average MAAR is reported 82.67 per cent. Age of the company is the difference between the incorporation year and the year in which IPO is issued. Therefore, for few companies the age is reported zero, in other words, in the year of incorporation they have launched their IPO. The average age of the companies is found 12.02 years. The variability is compared among the different variable through standard deviation and coefficient of variation. The variability is very high in Size of the IPOs. The coefficient of variation of average MAAR is 386.33 per cent.

**Pricing Behaviour of IPOs on listing day & after listing**

It is reported that average market adjusted abnormal return (Average MAAR) for all 488 IPOs is 82.67 per cent. WR for the same is also 1.7723 (more than one). Hence, it is concluded that on the listing day during the study period Indian IPO market remain underpriced. The results of the study are in similar lines with other studies like, Shah Ajay(1995), Madhusoodan & Thiripalraju(1997), Krishanmurti and Kumar (2003), Singh & Mittal( 2003), Sehgal & Singh(2007), Shelly & Singh (2008), Sahoo & Rajib (2010)& Jain & Padmavathi (2012). It is also found that average BHARs of after listing one month, two months, three months & six months are significantly different from zero. Thus, it is concluded that during the study period Indian IPO market remain underpriced in the short-run also.

After listing one year Average BHAR is 37.434 per cent. It is significantly different from zero. After listing two years and three years average BHARs are also positive, but the calculated values are not statistically significantly indicating that there is no underpricing market after two and three years after listing on the IPOs. The values of WR are also gradually declining which confirms the results of average BHARs. However, no value of WR is less than one which means that in Indian IPO market there is no evidence of underperformance. However, the extent of underpricing has gradually declined after listing of IPOs in India. The following Null Hypotheses regarding pricing behaviour are defined and tested:
Table 6.1
Null Hypotheses Testing of Pricing Behaviour

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Null Hypotheses (H₀)</th>
<th>Test Result</th>
<th>Interpretations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Average MAAR is not significantly different than zero</td>
<td>Rejected</td>
<td>Underpricing</td>
</tr>
<tr>
<td>2</td>
<td>Average BHAR after listing one month is not significantly different than zero</td>
<td>Rejected</td>
<td>Underpricing</td>
</tr>
<tr>
<td>3</td>
<td>Average BHAR after listing two months is not significantly different than zero</td>
<td>Rejected</td>
<td>Underpricing</td>
</tr>
<tr>
<td>4</td>
<td>Average BHAR after listing three months is not significantly different than zero</td>
<td>Rejected</td>
<td>Underpricing</td>
</tr>
<tr>
<td>5</td>
<td>Average BHAR after listing six months is not significantly different than zero</td>
<td>Rejected</td>
<td>Underpricing</td>
</tr>
<tr>
<td>6</td>
<td>Average BHAR after listing one year is not significantly different than zero</td>
<td>Rejected</td>
<td>Underpricing</td>
</tr>
<tr>
<td>7</td>
<td>Average BHAR after listing two years is not significantly different than zero</td>
<td>Accepted</td>
<td>Neither Underpricing Nor Overpricing</td>
</tr>
<tr>
<td>8</td>
<td>Average BHAR after listing three years is not significantly different than zero</td>
<td>Accepted</td>
<td>Neither Underpricing Nor Overpricing</td>
</tr>
</tbody>
</table>

Year-Wise (Chronological) Price Behaviour of IPOs

It is found that IPOs of six years out of fifteen years showing their highest WR on the listing day of the issue. Investors could earn the highest return by selling their IPOs on the very first day of IPO trading. Only one year IPOs (1998-99) reported highest WR after listing of three years. Moreover, only two years IPOs (2002-03, 2005-06) scored its highest WR after listing two years. It is also noticeable that IPOs of nine years out of fifteen have their highest WR after listing six months or before it. It is concluded on the base of above discussion that investors should exit before two years of the IPO launching. Even, Investors
can earn an attractive amount by selling the share on the very first day of its listing. It is also noticeable that the WR for the all 488 IPOs is highest on listing day of the issue. No doubt a short-run investment in IPOs is more attractive rather than long-run, but it does not mean that there is underperformance in IPO market upto 36 months of the listing. The level of underpricing declines in long run but there is no negative returns or underperformance. WRs for the all 488 IPOs are greater than one for short-run as well as long run.

**Sector –Wise Price Behaviour of IPOs**

The whole sample of 488 IPOs covered 23 sectors. Six sectors out of twenty three have scored their maximum WRs on the listing day of the issue. Three sectors out of twenty three have scored their maximum WRs after listing one month. One sector out of twenty three has scored its maximum WRs after listing two months. Eight sectors out of twenty three have scored their maximum WRs after listing six months. Two sectors out of twenty three have scored their maximum WRs after listing one year. Two one sector has scored its maximum WR after listing two years. Only one sector has scored its maximum WR after listing two years. It is noticeable that mostly sectors having their Maximum WRs on after listing six months or before of that. On the base of above discussion, it can be concluded that short- run investment is better rather than long term in IPOs. On the basis of sector –wise study, it can be said that short term investment is better than as compare to long run. Telecom, Investment services & Communication equipment sectors should be preferred for investment till listing day because the wealth relatives were highest on the listing day. However, investment in banking sector IPOs is exception to this. Through a case study of banking sector IPOs, study proved that investment in banking sector is very lucrative for long run. A continuously rise in the average buy and hold abnormal return of banking sector IPOs have been observed. Wealth relatives of the same verified the results. Automobile ancillaries, Business consultancy, construction & steel companies can be considered for investment more than one year.
Phase-Wise Comparative Price Behaviour Of IPOs

The whole fifteen years has been classified into three phases that is Phase I from 1993-1996, Phase II from 1997-2003 and Phase III 2004-2007. Average market adjusted abnormal return for all three phases is positive & significantly different than zero at 5% level of significance. Indian IPO market has shown underpricing on listing day for all three phases of the study period. In short-run average BHARs for all three phases are positive & significantly different than zero at 5% level of significance. Hence, it is concluded that during the study period Indian IPO market remain underpriced in short-run also. Only for phase 1993-96 after listing two years & three years value of wealth relatives are less than one, which confirms the overpricing. Moreover, the investors who have purchased IPOs during 1993-96 after listing two years and three years of the listing faced significantly negative average BHAR. Investors who purchased the IPOs during this phase II have scored always positive return upto three years of the listing. Hence, it may be concluded the 1997-2003 was the golden phase from the investors’ point of view. In long run there are mixed results, Investors who purchased IPOs during 2004-07 has scored always positive return but the average BHAR is not significantly differ than zero for after two & three years of the listing.

Fixed Price V/S Book Built IPOs Comparative Price Behaviour

The sample of the research is constituted by adding together 322 fixed price and 166 book built initial public offers. It is evident that there is difference in price behaviour of both types of IPOs in Indian IPO market. The price performance of book built IPOs is significantly higher up to after listing one year of IPOs. But for after listing two and three years the price performance of fixed priced IPOs is better than the book built IPOs. The variability in the price performance after listing of book built IPOs is very high. Average MAAR & BHAR for both types IPOs is remained positive. Hence, investors of IPOs have not experienced any loss up to after listing three years. All the values of Wealth Relatives are remained more than one. Therefore, it is concluded that there is no
signal of underperformance up to three years after listing of IPOs. It is found that in long run underpricing is not there for book built issues. For fixed price issues underpricing is in existence for after listing one year. Madhusoodhanan and Thiripalraju (1997) analysed the Indian IPO market for the short run as well as long term underpricing (1922 issues listed during 1992-1995). The study indicated that, in general, the underpricing in the Indian IPOs was higher than experiences of other countries. In the long-run too, Indian offerings had given high returns compared to negative returns reported from other countries. The results of the present study based on consolidated sample of 488 are also similar with the results of Madhusoodhanan and Thiripalraju (1997).

**Premium & At Par IPOs Comparative Price Behaviour**

The sample of the research is constituted by adding together 170 at par and 318 premium initial public offers. The results of the study are consistent with the study of Singh & Mittal (2003). At par IPOs have high volatility in price performance after listing as compared to Premium IPOs. In Indian IPO market there is no clue of underperformance as mentioned by fewer studies but the degree of underpricing gradually declines after listing of IPOs. It is proved that the extent of underpricing is higher for at par IPOs, generally. It is concluded that at par IPOs scored high level underpricing as compare to premium IPOs, generally. Underpricing is more than four times for par Issues as compare to premium IPOs on listing day. But both types of at par & premium IPOs are showing underpricing on listing day or first trading of IPOs. In short-run (one month after listing, two months after listing, three months after listing and six months after listing) average BHARs for at par or non-premium IPOs are significantly higher than the premium issues. However, average BHARs for both types of IPOs are positive & significantly different than zero at 5 per cent level of significance. Hence, it is concluded that during the study period Indian IPO market remain underpriced in short-run also. In long run premium issues are not underpriced. The average BHARs after listing one year; two years and three
years are not significantly different than zero at 5 per cent level of significance. At par IPOs are also not underpriced after listing two and three years. In long run, only at par IPOs are underpriced after one year listing (Average BHAR after listing one year significant five per cent level).

**Multivariate Regression Models**

The variables have been transformed in line with the other studies (Jain Neeta & Padmavathi C, 2012; Shelly& Singh Balwinder, 2008; Singh Balwinder & Mittal R K, 2003) & the following abbreviations have been used in the Multivariate Regression Models:

1. Index Return in percentage( Return of sensex one month before the IPO)=IR
2. Post Issue Promoters Holding in percentage= PIPH
3. Natural Log. of Age (difference between incorporation year and year of IPO has been taken and one is added for computation of age) =AGE
4. Natural Log. of Offer Size=OS
5. Natural Log. of Offer Price=OP
6. Natural Log. of Lead Time( Gap between listing day and IPO offer close in days)= LT
7. Natural Log. of Number of times issue subscribed=SUB
8. Natural Log. of Average MAAR= M
9. Natural Log. of Average BHAR after listing One month= BM1
10. Natural Log. of Average BHAR after listing two months= BM2
11. Natural Log. of Average BHAR after listing three months= BM3
12. Natural Log. of Average BHAR after listing six months= BM6
13. Natural Log. of Average BHAR after listing one year= BY1
14. Natural Log. of Average BHAR after listing two years= BY2
15. Natural Log. of Average BHAR after listing three years= BY3
M has significant positive correlation with SUB (.341) and LT (.098). M has significant negative correlation with AGE (-.117), OS (-.193) & OP (-.515). However, M has no significant correlation with PIPH and IR.

It is considered SUB is dependent on five independent variables; AGE, PIPH, IR, OP and OS. SUB has significant positive correlation with all five dependent variables. The following Multivariate Regression Models are fitted & hypotheses have been tested:

**Table 6.2**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Null Hypothesis (H₀)</th>
<th>Sig.</th>
<th>Test Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SUB is not significantly depend on (AGE,OP,OS,IR,PIPH)</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>2</td>
<td>M is not significantly depend on (AGE,OP,OS,IR,PIPH,LT,SUB)</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>3</td>
<td>BM1 is not significantly depend on (M,AGE,OP,OS,IR,PIPH,LT,SUB)</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>4</td>
<td>BM2 is not significantly depend on (M,AGE,OP,OS,IR,PIPH,LT,SUB)</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>5</td>
<td>BM3 is not significantly depend on (M,AGE,OP,OS,IR,PIPH,LT,SUB)</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>6</td>
<td>BM6 is not significantly depend on (M,AGE,OP,OS,IR,PIPH,LT,SUB)</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>7</td>
<td>BY1 is not significantly depend on (M,AGE,OP,OS,IR,PIPH,LT,SUB)</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>8</td>
<td>BY2 is not significantly depend on (M,AGE,OP,OS,IR,PIPH,LT,SUB)</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>9</td>
<td>BY3 is not significantly depend on (M,AGE,OP,OS,IR,PIPH,LT,SUB)</td>
<td>.000</td>
<td>Rejected</td>
</tr>
</tbody>
</table>
TABLE 6.3
Significant Determinants for Different Dependent Variables

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Dependent variable</th>
<th>Variables with Significant Positive Impact</th>
<th>Variables Negative Significant Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M</td>
<td>SUB</td>
<td>OP, OS</td>
</tr>
<tr>
<td>2</td>
<td>BM1</td>
<td>M, SUB</td>
<td>OP</td>
</tr>
<tr>
<td>3</td>
<td>BM2</td>
<td>M, SUB</td>
<td>OP</td>
</tr>
<tr>
<td>4</td>
<td>BM3</td>
<td>M, SUB</td>
<td>OP</td>
</tr>
<tr>
<td>5</td>
<td>BM6</td>
<td>M, SUB</td>
<td>OP</td>
</tr>
<tr>
<td>6</td>
<td>BY1</td>
<td>M, OS,IR</td>
<td>OP</td>
</tr>
<tr>
<td>7</td>
<td>BY2</td>
<td>M, A, OS</td>
<td>OP</td>
</tr>
<tr>
<td>8</td>
<td>BY3</td>
<td>M, A, OS</td>
<td>OP</td>
</tr>
<tr>
<td>9</td>
<td>SUB</td>
<td>IR, OP</td>
<td>-</td>
</tr>
</tbody>
</table>

SECTION II

RECOMMENDATIONS OF THE STUDY

Recommendations for investors, companies going for IPOs, intermediaries (Underwriters, Book Running Lead Manager, Bankers to issue) & Securities Exchange Board of India have been described in section 11. The recommendations have been extracted on the base of results of the presents study.

Recommendations for Investors

The prime objective of the present study was to examine that pricing behaviour of initial public offers (IPOs) in India during 1993 to 2007. By using various price performance indicators, it is an attempt to find out the behaviour of pricing of initial public offers. The following recommendations on the base of the detailed analysis are as:
On the basis of detailed analysis of price performance of IPOs, it is concluded are underpriced. The investors benefited if allotted shares by the company. The shareholders are able to capitalize their gain even if they exist from the stock on the listing day of the IPOs. The benefit of underpricing is usually available upto two years of the listing day. It is concluded on the basis of overall sample price performance that generally, the best time to exit from a stock is listing day. Because the average market adjusted abnormal return is highest on the very first day of the IPO trading.

It is observed that investment in primary market is beneficial for the investors. Because, if they buy the IPO, the market adjusted abnormal return and buy and hold return both are positive after listing. The results are also verified by wealth relatives. It means investment in primary market particularly initial public offers is profitable. On an average primary market or new issue market is performing better than the secondary market.

On the basis of sector –wise study, it can be said that short term investment is better than as compare to long run. Telecom, Investment services & Communication equipment sectors should be preferred for investment till listing day because on that day they have highest WRs. However, investment in banking sector IPOs is exception to this. Through a case study of banking sector IPOs, study proved that investment in banking sector is very lucrative for long run. A continuously rise in the average buy and hold abnormal return of banking sector IPOs have been observed. Wealth relatives of the same verified the results. Automobile ancillaries, Business consultancy, Construction & Steel companies can be considered for investment more than one year.

Bookbuilt IPOs generates more underpricing as compare to fixed priced IPOs. But the degree of underpricing of bookbuilt IPOs gradually declined.
• At par issues are more profit generating as compare to premium issues. The result are consistent with (Singh, Mittal, 2003). Investors should prefer at par or low premium IPOs. But, for long term correction is very high for the same. Therefore, short run investment in at par IPOs advisable.

• Index return has positive impact on subscription level which leads to higher return on IPOs. Therefore, IPOs are coming with higher IR should be preferred.

• Average market adjusted abnormal return has significantly negatively affected by OP& OS. Thus, study advices for investment in low offer priced issue and small size issues.

• Subscription has significant positive impact on AMAAR. Thus, if the Subscription is high investors should invest their money chances are there it would lead to higher profit or higher AMMAR.

• For long term point of view IPOs with high subscription, older firms and with good Average market adjusted abnormal return can be considered as better options.

**Recommendations for Companies going public**

The following recommendations for companies going public on the base of the detailed analysis are as:

• It is proved that high subscription is the result of high market activity. Therefore, companies should come with good index return and then there would be more subscription.

• During hot period or boom, it is beneficial to launch the IPOs. It would lead to reduction in the advertisement cost as well as high subscription.

• It is found that underpricing is very high 82.67 per cent on the listing day. Offer price should be fair. Companies going public can increase the offer price. Because underpricing is very high as compare to other countries, it’s an in indirect cost for firm.
High chances of corrections are there is very high return on listing day it is observed in telecom sector the WR was high on listing day and the correction was very significant later. High correction spoils the image of the company in market.

Fixed price method pricing has shown more stability. The volatility of return is very high in book built issues. It leads to winner curse (Rock, 1986). It is also found that the level of underpricing is low for fixed price issues up to after listing one year as compare to the book built issues. WRs for both types of issues are generally continuously declining. But value of all WRs is greater than one, which means there is no loss to the investors who have applied for IPOs up to 36 months & there is no sign of underperformance in Indian IPO market as claimed by fewer studies. The variations of return are very high in book built IPOs. Fixed price method can be considered to reduce the same.

For at par IPOs the average market adjusted abnormal return (MAAR) is very high as compare to premium issues. The variability of return is reported very high in at par issues. Average MAAR is an indicator of the level of the underpricing on the listing day of the issues. It is concluded that par Issues scored high level underpricing. The level for underpricing is more than four times for par Issues as compare to premium IPOs. But both types of issues at par & premium are showing underpricing. Generally, it is analysed that the level of underpricing is declining gradually for both types of IPOs. In long run premium issues are not underpriced. The average BHARs after listing one year; two years and three years are not significantly different than zero at five per cent level of significance. The par issues are also not underpriced after listing two and three years. Companies for going public should also consider that premium issues provide stability in prices. Premium IPOs are less risky, due to entry norms.
Recommendations for Intermediaries

Primary market intermediaries consists Book Running Lead Manager, Syndicate members, Registrars, Underwriters, Bankers to issue and Advertisement agenesis. The recommendations for various intermediaries are as:

- The role of the BRLM is very prominent in price deciding. They should identify the fair price of the IPO. Otherwise it would lead to price anomaly. It is not good sign for the issuer company. It has also negative impact on the image of BRLM. There is great urgency of fair pricing. Because the level of underpricing is still very high in India as compare to other countries.

- It is found that listing delay is also a constraint in India. It is found average lead time is more than 162 days. It is further recommended that the process of listing of company should be quick & prompt. Listing delay kept investors unsecure. Money invested in applications also lead to liquidity crisis for investors.

- Application money invested by applicants of IPOs has an indirect cost for applicants. The refund should be promptly refunded, if IPOs are not allotted to them.

- Fair pricing of IPOs also leads to less correction in stock market. The confidence of the investors will increase and it would also lead to low variability prices of the IPOs after listing.

Recommendations for SEBI

SEBI is the regulatory body came into existence 1988. The statutory powers have been provided in January 1992. The role of CCI has been abolished in May 1992 & SEBI has authorized to regulate the Indian securities market. The recommendations for SEBI are as:

- The underpricing is very high in India capital market. It is more than 82 per cent. Being a regulator SEBI should resolve the anomaly of IPOs pricing. Fair pricing would lead to stabilization of prices. The entry norms should be more stiffen.
• Stabilizing the stock prices would lead to lesser correction. The variability of the stock prices would be lower. SEBI should set up more strengthen circuit & filter system to ensure the stabilization of IPOs prices particularly on listing day.

• Sustainable growth of the capital market is the prime objective of SEBI. It can be achieved through fair pricing. Fair pricing leads to create confidence of investors and issue companies. Substantial size of the investors provides sufficient funds to companies. It would lead to sustainable growth of Indian capital market.

• It is recommended that new companies can launch their IPOs at par. The defaulter companies enter in the market due to lesser norms. It is observed that at par IPOs companies prices show high level of price volatility but premium issue have stabilized prices as compared to par IPOs. Therefore, entry norms for without track record or new companies must be stiffen.

• IPO grading is made mandatory by SEBI. SEBI should ensure more transparency in grading process by credit rating companies. Then only it will serve the purpose of investor protection and transparency.

• There should be proper check and entry norms for companies for going public otherwise the defaulter Companies will enter and cheat the investors. The scams reduce the morale of investors; SEBI should ensure the fairness in the securities so that scams must not be repeated.

Finally, it may be concluded that all these efforts will make Indian primary market more efficient. Efficiency of the market will boost up the confidence of the inside as well as outside investors (FIIs). It will attract more act volume of capital. Availability of more capital to corporate sector will help it to diversify and expand creation of more employment opportunities & better growth of the economy. There would be positive impact on economic development due to high generation of employment as well as fund raised by Indian corporate for expansion and diversification.