Chapter: 8
Summary and Conclusion

8.1 Prologue

An IPO usually occurs when a company which is presently not listed at any stock exchange makes either a fresh issue of shares or makes an offer for sale of its existing shares or both for the first time to the public through a public offering for its security. The shares are made available to the investors at the price determined by the promoters of the company in consultation with the investment bankers. The successful completion of the IPO process leads to the listing in the secondary market and subsequently trading begins at the designated stock exchange.

The role of capital market in promoting the household savings to productive investment avenues through participation of investors has not yet reached its zenith in India. The number of retail investors in Indian capital market is abysmally low despite the initiatives taken by the market regulators. The objectives of these initiatives are not only to encourage participation in the growth story of corporate India but also to earn higher return through the investment and subsequently link the growth of corporate sector to the growth of income of the households, thereby paving the way for more inclusive growth through distribution of wealth.

Against such a backdrop, it is felt necessary to identify whether the investors especially the retail individual investors who have directly participated in the equity cult through this IPO issue, have been adequately rewarded or not. The present study has made a humble attempt to enquire about the performance of a sample of forty seven IPO companies.

8.2 Summary of the study

The present research work has two aspects- exploratory as well as empirical. The former part deals with the evolution of equity market in general and IPO market in particular right from its introduction down to the present era. The regulatory framework that guides the IPO market and the international scenario of the IPO activity especially the markets of developed countries and that of emerging nations
has been dealt extensively in the study along with the necessary detail regarding the conceptual issues pertaining to equity issue and investment analysis. The empirical part, on the other hand, evaluates the performance of the sample IPO companies with the application of relevant statistical models on the collated secondary data and then interprets the result derived and draws relevant inferences.

In the first chapter, attempts have been made to introduce the topic and to make an in depth review of literature on the related aspects. On the basis of the same, vacuum in the existing research works especially in long-run Indian IPO performance has been identified and in the light of this we have set our objectives for the study along with its rationality. Data and broad methodology for the study are also discussed in this chapter. The chapter has dealt with the limitations of the study and finally it ends up with chapter planning.

The second chapter has discussed at length the conceptual framework guiding the equity issue and its different forms along with the method of security analysis for making informed investment decision, prevalent in existing literature. This chapter focuses on wide range of issues such as fundamental analysis, technical analysis and EMH. Special attention is also given on EMH and its different form of market efficiency as espoused by E. Fama. It is important to note that this particular research has drawn theoretical relevance from the semi-strong version of EMH. Besides these conventional theories guiding the equity issue analysis, the study has also delved into some of the core theory which is IPO specific. The theoretical aspects of IPO underpricing, observed internationally in the short-run and its possible explanations have also been discussed. The other important concept of IPO anomalies such as IPO underperformance observed in long-run and the hot-issue phenomena are also considered here. Thus, the second chapter concentrates on the conceptual framework of investment and gives the prelude to the fundamentals of equity investment decision in general and IPO in particular.

The third chapter has dealt with the genesis and evolution of IPO market. The chapter begins with the importance of capital market as the driver of economic growth and development of a nation. It is generally believed that without an efficient and vibrant capital market, sustainable economic growth and capital formation is rather difficult to achieve. The chapter also gives a brief history of the stock exchange in
India during the pre-independence era and various historical events and legislations prevalent during that period. The various reform measures implemented during the post-independent period till the new economic policy in 1991 are also discussed here. With the onset of economic liberalization, the most significant reform observed in the realm of capital market was the abolition of Capital Issue Control Act (CICA, 1947) and subsequent formation of Securities and Exchange Board of India (SEBI) in the year 1992. The establishment of National Stock Exchange is another important landmark in Indian capital market as it provides for the first time a modern state of the art fully automated screen-based trading mechanism with national reach. The chapter finally explores the matter relating to IPO- its rationale, advantages and disadvantages etc. The chapter thus, gives an idea of origination and evolution of the Indian stock market with special emphasis given on the IPO fundamentals.

The fourth chapter has delineated the process of issue management and its related rules and regulations as framed by the market regulator SEBI. The chapter begins with the preliminary discussion on role and power of SEBI, its objectives and functions. It is needless to mention that Indian capital market has transformed radically during the last two decades with the implementation of certain practices dictated by SEBI. Some of the changes that bring about efficiency and transparency of the system are depository system, intermediary system, fast track issue, bookbuilding method of pricing etc. This chapter focuses in detail on the book building method of pricing the new issue. It is observed that the earlier mechanism of determining the offer price of a new issue through fixed price method is replaced by free-pricing method. However, with the onset of bookbuilding method, transparency in the process of pricing has given a positive vibes to the investing community as the process of bookbuilding is an interactive one. The listing requirement and the eligibility criteria of the national stock exchange have also been discussed in this chapter.

Another important area, the IPO grading process, relatively an unexplored territory in the world of finance, is also elaborated here. In India, the IPOs coming to the market are compulsorily graded on a scale of ‘1 to 5’ by regulation with ‘1’ signifies poor fundamentals and ‘5’ very strong fundamentals. SEBI has mandated that all firms desirous to tap the equity market for the first time after 1st of May 2007 needs to be graded. The chapter also gives detailed regulatory norms for different
categories of investors with special emphasis on the retail investors and promoters. Thus, the chapter has extensively studied the issue management and the regulatory framework necessary for new issue and the other relevant topic in order to be consistent with the objective of our study.

Chapter five gives an account of international IPO activity and the global trend of new issue. The chapter explores the contribution of major world market in raising equity finance through the IPO process, certain unique features of IPO market that has been observed internationally such as underpricing phenomenon in the short-run have been discussed. It is found that underpricing is ubiquitous, with the amount and the extent of underpricing varies across countries. It has enquired about the possible reasons for the underpicing and it is apparent from the figure that emerging market like China, Brazil have contributed much higher initial return than the developed markets like United States and United Kingdom. It is noticed that the mandatory disclosure norm and its stringency have cast a negative impact on the underpricing. The chapter also explores the long-run IPO performance and its possible explanation of underperformance. Another important feature of the international IPO activity as is observed during the last decade is the contribution of emerging nations in the overall international IPO market. Among the emerging markets the block of BRIC nations has witnessed phenomenal growth in new issue market during the last decade. It is also noticed that among BRIC nations, the growth of Chinese new issue market is really stupendous. Besides the BRIC countries, we have also explored the European and American IPO markets have also looked upon. While studying, US new issue market it is found that the year 2008 is regarded as one of the worst years for American economy. The subprime crisis and subsequent liquidity crunch have triggered recession in US and the impact of the recession felt globally and this hindered the growth prospect of new issue across international market. It is also perceived that India has become one of the key players of the international finance as it is more and more integrated with the international market. Thus the study of international scenario of IPO is fundamental to know the direction of the capital market in India. This chapter gives us ample instances which signify that IPO activity in India is playing in tandem with the international experiences.
In chapter six, it is discussed at length the various aspects of IPO activity in India. Indian economy has expanded at a brisk space during the last two decades giving the much needed boost to the corporate sector and buoyant stock market. While assessing the Indian IPO activity, it is segregated into two phases: a) pre-reform phase and b) post-reform phase. The pre-reform era begins with the post-independence period till the introduction of new economic policy in 1991, the year from 1991 to till date is earmarked as the post-reform period. The IPO boom was first witnessed during 1980s when Coalgate, Ponds and dozens of other FERA (Foreign Exchange Regulation Act, 1973) regulated companies were reduced their foreign holding through public issue. However, we have considered the new issue data for the post-reform era and found that the new issue market has come into prominent during 1990s. It is seen that the IPO activity surged appreciably during the 1998-99 to 2000-01 and again in 2003-04 to 2007-08. The intervening period observed bearish phase, signifying that the IPO market in India generally moves in cycles, consistent with the IPO activity as observed globally.

The chapter also aspires to explore the validity of the claim that the bookbuilding issue is gradually eclipsing the fixed price issue in IPO pricing. The result shows that it is indeed gaining popularity over the conventional fixed price offer and as per the report more than 80 percent new issues in India is following the bookbuilding method of pricing. We have not been able to collect the information on the shareholding pattern of the IPO companies at the time of going public and the exact figure of FII and retail investment in IPOs. Finally, the chapter ends up with the discussion of retail investors and foreign institutional investors’ contribution in some of the Indian companies which went public during the study period. It is ascertained that the retail individual investors’ contribution in equity shares or in IPO is below the desired level.

In chapter seven, the empirical findings of the study have been narrated in detail. The research project endeavours to make an examination of the stock market performance of Indian initial public offerings listed at NSE during the study period of 1999 to 2007. The chapter has also delineated in detail the various models applied and its background along with necessary explanations. It is noticed that in majority of the
existing literature, the conclusions are drawn based either on daily return or monthly return. But to have better outcome the study has considered both the form of return.

The followings are the major findings of our research work which is found consistent with literature.

1. It is observed that underpricing exists in Indian capital market based on the performance of IPOs listed in NSE. By underpricing, the excess of observed adjusted returns over the benchmark market return during the time interval is considered. Thus, the prevalence of positive abnormal return is considered to be the pre-requisite of underpricing which is purely seen as short-run phenomena, internationally.

2. Using the daily data, it is observed that on an average the listing day abnormal return of the IPO companies using MAAR model is around 44% whereas the 5% trimmed mean is around 37%. The trimmed mean gives us better insight about the actual mean which is usually arrived at by removing 5% of the extreme values (both largest and smallest) before calculating the mean and thereby removing the outlier, if any.

3. Underpricing phenomena can also be observed by using MAER and MMAR model and also from the MAAR model (employed specifically to look into the performance on the listing day). Thus the underpricing phenomena are strongly substantiated irrespective of the model being employed. Using the daily returns for measuring the short-run performance using the CAR methodology and by employing MAER and MMAR model, it is suggested that the presence of average underpricing in the six months immediately after the listing is to the tune of around 44 percent and 36 percent respectively under MAER and MMAR model.

4. The study has also conducted parametric one-sample t-test with the null hypothesis of zero abnormal return in the short-run. The test statistic of the models employed in the analysis of short-run performance of IPO rejects the null hypothesis at 1% level of significance and thereby, signifies that we may accept the alternative hypothesis which advocates the presence of abnormal return at the initial listing day through the first six months.
5. While studying the short-run performance of IPO companies using daily return data, it is found that the Indian IPOs in general, has a higher probability of earning positive returns. However, daily returns are by and large non-normal and outlier-prone. The Kolmogrov-Smirnov and Shapiro-Wilk normality test are used to ascertain whether the observed return data series are normal or not. The results show that daily data are highly non-normal in nature.

6. By employing binomial test (a non-parametric test) which separates all values into a dichotomous group, the short-run underpricing phenomenon is also substantiated. It suggests that the probability parameter for both the group (group 1 and group 2) is not equally likely to occur in the short-run. Therefore, it may be concluded that the majority of the companies are registering positive abnormal return in the short-run as is observed from the non-parametric binomial test.

7. The long-run performance analysis of IPO is indeed very challenging as reported in literature on IPO. The reasons for this are varied. However, to combat this challenge we have used number of statistical tools besides the usual technique to measure short-run performance. The study has also used both the daily return as well as monthly return data to measure the long-run performance. The long-run result using the CAR methodology for daily and monthly return has provided contradictory results. While using the daily data under MAER model, the presence of significant abnormal return in the long-run under parametric test is observed. But when monthly return is considered the reverse of this result is found.

8. In case of MMAR model using daily return the study has failed to reject the null hypothesis (except in year-four) at 5% level of significance using parametric t-test. While using monthly return, no evidence of statically significant abnormal return using the MMAR model is found. Thus, it may be inferred that there exist no positive abnormal return in the long-run and the assertion of long-run underperformance tends to hold good in Indian context as well.

9. Using the monthly returns for long-run IPO performance, the study clearly demonstrates that there exist positive average returns even in long-run.
However, when we use parametric statistical test, we fail to reject the null hypothesis of positive abnormal return and therefore the conclusion that there exist long-run underperformance in the Indian IPOs is found to be correct. It is true that we have found positive long-run average abnormal return for Indian IPOs, unlike the other countries however, if we closely observe the other parameter especially the 5% trimmed mean and the median value we get different results altogether. These results give some important insight about the actual performance of long-run IPO.

10. It is also observed that while analyzing the long-run performance of IPOs, monthly return data has an advantage over the daily data because as the time horizon increases the monthly return data tend to follow normality (as is observed from the Kolmogrov-Smirnov and Shapiro-Wilk test). This is particularly evidenced from long-run CAR methodology under MMAR model and to some extent in MAER model. This finding of us is also consistent with the international experience reported in the literature.

11. The study has also employed BHAR methodology to find the long-run IPO performance. Though it has reported positive average abnormal return in all the five-year interval, but if the 5% trimmed mean is considered, we found a drastically different picture. Here, only in the first-year the positive abnormal return of merely 4 percent is observed same is the case with median value. While the rest of the year-interval registered negative abnormal return under MAER model of BHAR. The results are almost identical with the MMAR model of BHAR and the conclusion of the parametric test statistic exhibits presence of underperformance in the long-run. This is statistically not significant even at 5% level.

12. It is found that long-horizon BHAR is significantly right skewed, although cumulative abnormal returns (CAR) are not. The skewness bias of BHAR also exacerbates the negative bias in test statistics. It is also noticed that the skewness of BHARs is much more pronounced than that of CARs. According to the opinion of the savants in this field, CARs help avoid the problems of extreme skewness and kurtosis relative to BHARs and therefore, are helpful in double checking any conclusion presented by BHARs result. This finding of our study is also consistent with the existing literature. Application of both
techniques also provides a test of robustness for the results. This test of robustness of BHARs and CARs are critical to understand the performance direction and both techniques are found complement to each other.

13. The non-parametric binomial tests for long-run performance of sample Indian IPOs, however, reveal a mixed picture. In case of BHAR method using monthly return both under MAER and MMAR model reveal that the majority of the IPO firms are registering less than zero abnormal return. While for CAR method using monthly and daily return under MMAR model, the binomial tests exhibit substantially different picture. Same is the case with MAER model for daily and monthly abnormal return. It is observed that the monthly CARs under MAER and MMAR model have the greater propensity to register less than zero abnormal return than the daily return data as depicted from the dichotomous group in binomial test.

14. Besides the usual parametric and non-parametric procedure, the study has also employed wealth relative to ascertain the long-run performance of IPOs. Generally, a wealth relative of greater than one indicates better performance of the respective IPO companies over the market index. The wealth relative of less than one indicates underperformance of IPO companies in relation to benchmark. We have calculated wealth relative considering two formats: a) wealth-relative based on simple average return (Levis, 1993) and b) wealth-relative based on holding-period return (Ritter, 1991) over the five-year periods. We have observed that 26 companies out of 47 have registered wealth relative of more than one using simple average return whereas only 20 companies has shown wealth relative of more than one using holding period return. From these it can be inferred that the long-run performance of Indian IPOs is not as distressful as reported in the international literature for other countries at least in case of wealth relative involving simple average return.

15. However, it may be concluded that long-run price performance is difficult and treacherous as it involves lot of underlying factors which changes as the time horizon increases. It is even more difficult because the long-run performance is very sensitive to the choice of methods and the benchmark employed unlike the short-run.
16. We have also performed cross-section analysis using multiple regressions to test how far the first day CAR performance can be explained by various issue-specific factors, viz., total assets, the age of the firm, issue size and book to market ratio. The results of the analysis can now be described below.

a) Log of total assets is an important determinant of firm specific performance. A positive beta coefficient is observed. However, the factor seems insignificant (even at 10% level of significance) in explaining variation in the first day CAARs (p-value 0.123). We have observed a positive coefficient which demonstrates that if the asset size of the companies is large there exists positive 1st day abnormal return.

b) Firm age denotes the age of the firm at the time of IPO. The variable with a positive coefficient and with a t-value of 2.859 is found to be statistically significant at 5% level. To be more specific, the corresponding p-value (sig) is 0.007. The positive coefficient along with positive t-statistic suggests that there exists direct relationship between age of the firm and the first day abnormal return.

c) Log of issue size with a negative beta coefficient suggests that when the issue size is large, the average 1st day return is less. That is the return of the smaller issue gives better return than their big counterpart. This is statistically significant at 5% level of significance. The exact figure of p-value is found at 0.041.

d) Book to market ratio coefficient is expected to be negative. As a high book to market value ratio indicates an over-priced securities. The study finds an inverse relationship between book to market ratio and the 1st day cumulative abnormal return using MMAR. The p-value figure of 0.02 is found significant at 5% level.

Some other observations

The following general observations can be made about IPOs in India

a) The fact that global IPO markets move in cycles seem to be correct for Indian IPOs as well. This can be seen from the fact that IPO markets seen unusual
rise in number and money raised in certain year (e.g. 2001, 2005-07). This period may be referred to as hot issue period.

b) The Indian IPO market and its activity almost invariably replicate the performance of global new issue market. This could be seen from the fact that global IPO markets were hit adversely in the year 2008 following the US and European recession. The IPO activity in India also hit adversely in that year in comparison to the previous year (2007).

c) It is important to note that surge in inflow of capital through equity route is usually propelled by foreign institutional investors who are eager to invest in high growth emerging markets like India because of the lack of growth opportunity in developed market.

d) The Indian IPO goes through certain phases in their life cycle from being private limited to public limited company. It is seen when an IPO is listed usually a hype is created amongst the investors and it is noticed in most of the instances that this situation persists for nearly six months. This period may be referred to as bandwagon stage. After that sudden slump is observed known as underperformance and finally after sometimes it behaves like an ordinary share, this stage is called as equilibrium stage. This can be seen from the graphical presentation of long-run performance.

e) It is generally believed that the pricing of IPOs through bookbuilding helps to determine a realistically fair price as it is determined on the basis of bids made by the investors, unlike fixed price offers. This helps the company to realize the proceeds easily since the demand for the issue is also known beforehand and consequently, there are less chances of IPO underpricing. However, it is observed that despite majority companies in India opt for bookbuilding method of pricing new issue, the underpricing has not diminished at all.

Last but not certainly the least, the present study made a humble attempt to enquire all the issues that we have set in the objectives of study. It is indeed important to recollect those objectives and it is amply clear from the study that we have able to answer the research questions that we wish to study in this research endeavour.
8.3 Implications for the investors

It is now amply clear that IPO may act as an important investment vehicle to investors as it generally provides moderate to handsome return relative to other investment alternatives. The present study and its empirical findings seem to be useful to investors as it provides evidences of Indian IPO’s performance relative to a benchmark. To determining whether an investment is superior to another, we need to compare excess returns. The excess return on the investment is the difference between what the investment earned and what other investments with the same risk earned. A positive excess return means that an investment has outperformed other investments of the same risk. In this research it is observed that IPO investment generally provides a positive return at least during short-run. In this regard it is to be worth noting that though IPO in the long-run provide positive return but when it is adjusted to benchmark, no statistically significant positive abnormal return is observed.

It is generally perceived that IPOs are low hanging fruits and if investors were to get allocations in IPOs and was to flip these shares on the day of the listing of the firm, then on an average they would be able to get returns higher than market. However, it should be remembered that mere investing in IPO cannot necessarily guarantee positive abnormal return as there is an element of risk involved. The risk is blocking one’s money in IPOs and getting no allocations. Moreover, to make any analysis on IPO is very difficult since one may not find enough information on some of the relevant factors and unlike listed securities there is no history of stock prices. The following basic factors must be addressed by the retail investors before making the crucial decision for investment.

a. Who are the promoters? What is their credibility and track record?

b. What is the business of the company and its product, its acceptability and potentiality?

c. Does the company have any technology tie-up? If yes, what is the reputation of the collaborators?

d. What is the objective of the issue?

e. Who has appraised the project? Whether the issue has been underwritten and by whom?
f. Investment objective of the individual investors.

g. Finally 4P’s must be taken into account namely prospectus, promoters, price and performance.

8.4 Implications for the policy makers

The role of capital market in taking the household savings to productive investment avenues through participation of investors has not yet reached its zenith in India. The number of retail investors in Indian capital market is abysmally low despite the initiative taken by the different market regulators. The objectives of these initiatives of larger participation of the retail investors by the market regulator are not only to encourage participation in the growth story of corporate India but also to earn higher return through the investment, and link the growth of corporate sector to the growth of income of the households, thereby paving the way for more inclusive growth through distribution of wealth. This can only be ensured through an effective outreach mechanism initiative for the retail investors where they can be educated as well as encouraged to take informed decisions in order to get higher returns than they would have earned through other mode of savings.

Another important area that our policy makers need to check is the presence of multiple regulatory bodies governing a particular sector or area. These makes the process of regulation unduly complicated and ultimately delayed the policy decision. At the same time, the market regulator SEBI must be given enough legal power to conduct inquiries of any fraud or irregularities perpetrated by the individual or institutions associated with the securities market.

8.5 Further Scope of Research

From the discussion made so far, we have documented certain areas which needed special vigilance. Here, we have analysed the performance of IPO and its ability to generate abnormal return in different time horizon. We have studied the post-issue price performance using benchmark adjusted return model; however as has been depicted in the review of literature segment, there are many methods available for benchmark selection and its sensitivity to various return models. There has been a consensus among the researcher in IPO that the benchmark to be employed should be
broad-based. Though we have taken Nifty 500 as our benchmark, matching firm-adjusted returns is another relevant method to make further analysis.

a) The study may also be conducted either the matching-firm-based or control-firm based abnormal return which may predict better result. We have not come across with such study in Indian context for variety of reasons. The main problem is to select properly the appropriate matching-firm.

b) Another area of research in this field may be conducted using both accounting and operating results in calculating the post-IPO performance along with the price performance.

c) The long-run performance is achieved using event-study methodology and a wide variety of matching procedure of parametric statistical tests is basically evidence of misspecification. There is an impressive body of empirical evidence which indicates that the long-run performance of IPO is mostly deceitful. To mitigate these, many procedures are suggested to combat with the test statistics misspecification, among them the bootstrapping procedures is the most promising one.

d) Finally Kothari and Warner (1997) offer a positive prescription of better long-horizon event studies. According to them non-parametric procedures and bootstrap tests could easily be used coupled with matched portfolio-based abnormal performance measures to more accurately calibrate statistical significance to tackle the non-normality of stock return.

e) While performing cross-sectional regression analysis we have certain expectation about the possible magnitude of the coefficient but in reality while performing the regression, we find completely different relationship as evidenced from the beta coefficient. We are of the opinion that this requires thorough investigation for researchers in this field. Similarly, the research work can be undertaken to identify the factors which have a role in long-run underperformance.

Last but not the least we believe that the market has its own story to tell. The market knows everything and it is almost next to impossible to predict the pattern or behavior and movement of markets convincingly. To quote a Japanese proverb about the market and it’s functioning “If you want to know what’s happening in the market, ask the market.”