**Migration Letters**

Volume: 21, No: S4 (2024), pp. 768-776

ISSN: 1741-8984 (Print) ISSN: 1741-8992 (Online)

www.migrationletters.com

# An Empirical Study On Optimal Investment Horizon While Investing Through IPO W.R.T. Indian Stock Market

Dr. Alpesh Gajera[1] , Dr. Navjyot Raval[2] , Prof. Rutu Padhiyar[3] , Dr. Dhaval Vyas[4]

**Abstract:**

*Many of Indian retail investor's stock market investment journey start with IPO, initially they participate only in IPO and then slowly they may get involve themselves in secondary market either as an long-term investor or as an short term investor. Now a day's majority of IPO are getting listed with premium and few are also getting listed with discount. Generally when IPO listed with premium retail investor book the profit but when it is listed with discount at that point of time investors are in dilemma regarding whether they should hold the investment on exit by booking loss. In this research paper researchers have tried to analyze the optimal time horizon which investor should keep in mind to make their IPO investment profitable if it listed with discount. For attaining the objectives of the research all 109 listed IPO's between year 2015 to 2019 have been taken as sample and analyzed their monthly return with respect to issue price for attaining the main objective of getting minimum investment horizon which give profit to investors. After analysis it is found that return produce by IPO at the time if listing is highest in majority of the sample and same return will be available at least after 5 months of listing.*

***Key Words**: IPO, Primary Market, Stock Market, Investment horizon, Indian Stock Market*

*JEL Classification: G10, G11, G12, G13, G14*

## Introduction:

Stock market is a place where the shares of public listed companies are being traded. In the stock market, there are basically some of the exchanges, which works as a platform for the investors or trader to make a trad[1]e. In India there are basically 2 platforms, which facilitates traders to trade, which are, BSE (Bombay Stock Exchange) and NSE (National Stock Exchange). Apart from there may be other regional exchanges but they are not playing meaningful role anymore.

In the stock market people generally comes to make trade on the shares or stocks (which represents ownership in a firm or corporation and represents proportional claim on its wealth or assets and earnings) issued by the firm or corporation; as to gather money from the public for future requirement or expansion of the business.

In the stock market, when any firm wants to collect money from the market, then they need to go for Primary market (component of the Capital market), where they may sell the shares for

[1]Professor & Dean Darshan Institute of Management Darshan University, Rajkot – 363650 Gujarat, India.
[2]Associate Professor Darshan Institute of Management Darshan University, Rajkot – 363650 Gujarat, India.
[3]Assistant Professor Darshan Institute of Management Darshan University, Rajkot – 363650 Gujarat, India.
[4]Assistant Professor Darshan Institute of Management Darshan University, Rajkot – 363650 Gujarat, India.

the first time, which is known as Initial Public Offer (IPO), afterwards the firm is getting listed in the stock market and the shares of the firm can be traded in the Secondary market, which is regulated by Security and Exchange Board of India (SEBI).

**Literature Review:**

**Srivastav S, (2018)** identifies the factors affecting the listing of IPOs in the market and analyzing the scenario of risk-return tradeoff in the market. The study examined the different factors, like, offer size, managerial structure as well as quantitative financial information are important for the investment, along with that the factors like, psychological and sociological also plays important role for the decision making for investors. Furthermore, study also tried to focuses on the risk-return trade off in the IPO investment. The study emphasized that investors generally make decision with idiosyncratic and market risk, the combination of which makes total return. Thereby, study identifies that there has been a significant impact of the risk on the investment horizon of general investors. In order to know the risk and return tradeoff, study has tried to established hypothesis, in which one hypothesis tried to find risk and return tradeoff between SME IPO and Mainstream IPO, while another hypothesis tried to study the impact of SEBI reforms over the performance of IPOs.

**Fredrik B & Mohamed S (2012),** has been focused to explore whether retail investors can make profit through IPO, is there any differences between industries in the Nordic markets by looking at the initial returns of IPOS and help in deciding investors whether to hold or sell the securities in the short term by investigating different time lags up to one month. While conducting the research, authors tried to find out the profit opportunity for the retail investors through hypothesis testing in which they had taken 3 different time lags, one was on the day of listing, quoted as t+0; then for a week, quoted as t+5 and for a month, quoted as t+20. Through the result it has been concluded that there was underpricing till first month and it triggered as a profitable opportunity. The final conclusion stated that investors should sell their sales asap and that there is no significant difference between industries in regards to return. Research also concluded that there is no significant difference between the time lags in regards to initial return and finally we conclude that there is no significant difference among the industries in the Nordic markets in regards to initial return.

**Mittal S, Verma S (2016)** the research has been done through studying the past literature as to study the performance of the IPOs in the long run, in the research author came to the conclusion that most of the IPOs in developed countries have performed poor in the long run and it vary country to country. In the India study conducted by some of the authors revealed that IPOs in India have started to perform poorly after the year of listing. The study also found that returns may vary as per type of methods used to calculate. On the basis of this it may be concluded that methodology to measure long run performance of IPOs is still a puzzling aspect which must be explored with the help of reliable data at global level so that a concrete outcome may come to rely on methodology for measuring long run performance. Broadly the long run performance issue is associated with three broad dimensions which are 1. Methodology used to measure returns 2. Matching criterion 3. Time frame.

**Sehgal S, Sinha B (2013),** was primarily aimed to the valuation of IPOs with reference to Indian market in short term with reference to two propositions i Fundamental determinants of short run initial returns; ii. Impact of IPOs‟ mispricing on investment banks‟ reputation was specifically examined, in which it has been found that average short-term return for 432 stocks, for the period of 2002 to 2011, is 24.93%. Afterwards the study revealed that short term return has been significantly coming down to -1.21% for the 6-month period. Alon with this, researcher has also tried to give detailed explanation between dependent and independent variables, which are number of times IPO subscribed, size of company, listing delay, industry p/e ratio, investment bank reputation, etc. In conclusion, author has mentioned that, the Indian IPOs seemed to be overvalued initially and as more information flows into the system reducing the degree of uncertainty, the pricing moves back to the equilibrium value resulting in a negative return between the second trading days to the end of 6th month. Thus, the Indian market takes about 6 months to fully incorporate information relating to IPOs. From the policy perspective, with a view to control excess speculation in the short run, the Government may consider a lock-in-period of 6 months for IPOs, till the time they are able to achieve their equilibrium value. In other words, public trading of newly listed IPOs may begin six months from the listing date. In addition, the capital market regulator may recommend a comprehensive model as a benchmark for determining the fair pricing of IPOs.

**Timilsina B, (2010)**, tries to identify the investment sentiments of the Nepalese people towards the primary capital market. The reason behind the same, is that, the current is yet in developing stage, where there are a smaller number of investors, a smaller number of brokers, the growing market and many of the obstacles are presented till the market has been developing simultaneously. After careful analysis research comes to the conclusion that most of the investors are majorly interested in the investment of financial sector IPOs or insurance companies' IPOs rather than general IPOs. The finding states there are various factors that play an important role, which are, the services to client are seems to be provided satisfactory service, both market segments either primary/secondary market has witnessed significant growth. Although these markets need to be adopted major changes like, the primary market deserve specific mention are the establishment of merchant banks, provision of speedy up allotment/refund, proportionate allotment of shares, allotment of financial institution, increase in minimum application amount of investment in primary issue such change have brought significant public response in new issue.

**Perminaitė J (2016-17),** put the efforts to identify the influence of micro and macro indicators over the overpricing before and after the global financial crisis especially with respect to EU market. In the said study, author has identified some of the micro factors (like, age & size of firm, governance, financial position, social policy and IPO firm dependence on tech. sector) and macro factors (like, underwriter reputation, investors sentiments, market conditions and type of IPO market). From the study, it has been found that the overpricing can be expected mostly in the hot periods, along with that in the study it could be found out that there had been a greater number of IPOs being overpricing before the crisis rather than after crisis period, and in the study, it has also been found that there’s been major influence of macro indicators for the overpricing rather than micro factors.

**Kuiper D (2017)** tries to identify the effect on firm’s performance after going public, in the time period of before, after and mid crisis in the US. For the purpose of studying performance of small, medium and large firms, the data 305 firms have been taken into consideration. For the sake of study, the author has tried to adopt 3 different methodologies, in which first one is of intra-firm approach, whereby author has used EBITDA for calculating ROA and thereafter author has conducted study using inter-firm approach, where the calculation of all the 305 firms’ operating performance has been taken into the consideration. Based on the previous studies, author has tried to conduct study on the basis of 3rd approach, named as effect of financial crisis, whereby the performance of firms has been separated in 3 parts ‘pre financial crisis’, ‘mid-financial crisis’ and ‘post-financial crises. In the study, it has been found that the first approach was not quite convincing as the study revealed that IPOs are having no significant effect on the performance, afterwards second approach has found that when operating performance of firm is adjusted with industry performance, the performance of the firms has decreased significantly after going public.

**Dr. S. Poornima, Aala J. Haaji & Deepha B. (2016)** have studied the performance of IPOs of companies listed on NSE, India and Gulf based GCC index. In the said study, the data 9 companies for the year 2013-14 have been taken into consideration. For the purpose of research, the use of traditional return calculation, and Market average excess returns formulas have been used, where the financial model was used to measure long term performance including initial return as well as excluding initial return. From the study, conclusion has been found that, there were five companies which profited as buying from primary market and sold in secondary market, along with that only one company is there which made profit from primary market and same in the case of secondary market.

**S. Saravanan, R. Satish (2018)** conducted study for exploring the determinants of retail investors investment behavior about IPO market in India, and during the study five factors had been considered based on the emerging literature to identify the pattern of Relationship between Information asymmetry, Market and Company Perception, Societal Perception, Representativeness and Familiarity, Intention. Through the study, it has been revealed that information asymmetry is an important factor influencing and shaping an Investor's idea about the Perception related to Market/Company and Representativeness/Familiarity. Here the sufficiency of data available to make decisions and the investment banker/brokers credibility are viewed as a better symptom on the IPO issue. Of the Heuristics considered Familiarity of the company, Familiarity of the issuers business and following the decisions of sources an investor trust (i.e.) Herd Behavior plays a major role in influencing the model. Among the fundamentals of an IPO issue; Pricing of the issue, Positive trend in the IPO market of Market related considerations and Management practices, Age of the firm of Company related considerations plays a major role in influencing the said construct. Of the societies front the expectations of the family, thinking of the friends/family about the investor's influences the perception on IPO investment decisions.

**Mutswenje V (2014)** was focused on the study of different factors that influences the decision of investors especially w.r.t NSE (Nairobi Stock Exchange). The said study was conducted using the survey method in which 42 out of 50 samples have been considered for the study. During the course of study, author has coded and tabulated the data and the same was analyzed using frequencies, mean scores, standard deviations, percentages, Friedman's test and Factor Analysis Techniques. Results of factor analysis revealed that the most important factors were: Firms position and performance; Investment returns and economic conditions; Diversification and loss minimization; Third party opinion; The goodwill of the firm and accounting information; Perception towards the firm; Environmental factors; Firms feeling and Risk minimization. Friedman's ranking was used to identify the most important individual factors that influence investment decision in NSE. The factors were reputation of the firm, firm's status in industry, expected corporate earnings, profit and condition of statement, past performance firm's stock, price per share, feeling on the economy and expected divided by investors.

**Zinzuvadiya M & Nagariya A (2020),** has conducted the study to find the correlation between BRICS countries in terms of risk and return. For the purpose of studying the correlation the use of Pearson correlation has been taken into consideration. In the said study it had been found that in year 2017 there was higher return calculated at 28.95% and the lower return was observed in year 2015 at -4.35 and while in recent year 2019 market return stood at 12.44%, which shows that the Indian people are considering stock market one of the valuable investment avenues.

## Objective of the Study

The purpose of undertaking any research study is to answer the questions through the application of scientific procedures. The research objectives of the study can be,

- To study the IPO performance on the stock market in terms of absolute return
- To establish an optimal time horizon in terms of the number of months' investors should hold IPO investment to generate the best return

**Sampling & Data Collection**

**Research Design**

In fact, the research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data.

For the purpose of said study, the use of Analytical Research design has been taken.

**Data Collection Source**

In this study, the reports of various authors as well as other reports of different students have been taken for the study and the use of other research scholars' report had also been referred. Apart of that the use of news agencies' websites had been beneficial to broaden the knowledge of the subject.

**Data collection instruments:**

Data collection instrument is a mode through which data is being collected for the concerned research. In the said research the data of different companies, which had gone public in past years have been taken. Which means that the data of 109 companies (from 1st January, 2015 to 31st December, 2019) have been considered for the same. For the purpose of study post IPO 12 months' data of the public firms has been taken, which were helpful for the study of monthly price movement since the day of listing.

**Sample Size:**

Data (Monthly price for the period of 12 months) of 109 companies.

**Types of Sampling**

Hereby in this research, the use of convenience sampling of non-probability sampling has been used for undertaking a survey.

**Date Analysis:**

**Level – 1: Return Analysis**

1. Level – 1 Return Analysis

| Sr. No. | Pair T-test | Mean return | Variance | Df | T-cal |
|---|---|---|---|---|---|
| 1 | Listing Gain | 14.515 | 815.03 | 108 | 2.011 |
| | Closing Gain | 9.937 | 1490.78 | | |
| 2 | Listing Gain | 14.515 | 815.03 | 108 | 2.223 |
| | 1 Month Gain | 8.429 | 1761.89 | | |
| 3 | Listing Gain | 14.515 | 815.03 | 108 | 0.837 |
| | 2 Month gain | 11.704 | 2276.2 | | |
| 4 | Listing Gain | 14.515 | 815.03 | 108 | -0.454 |

| | | | | | |
|---|---|---|---|---|---|
| | 3 Month gain | 16.582 | 3393.79 | | |
| 5 | Listing Gain | 14.515 | 815.03 | 108 | -0.722 |
| | 4 Month Gain | 18.372 | 4452.31 | | |
| 6 | Listing Gain | 14.515 | 815.03 | 108 | -1.372 |
| | 5 Month Gain | 22.375 | 5412.49 | | |
| 7 | Listing Gain | 14.515 | 815.03 | 108 | -1.231 |
| | 6 Month Gain | 21.245 | 4642.29 | | |
| 8 | Listing Gain | 14.515 | 815.03 | 108 | -1.738 |
| | 7 Month Gain | 24.248 | 4937.87 | | |
| 9 | Listing Gain | 14.515 | 815.03 | 108 | -1.912 |
| | 8 Month Gain | 26.692 | 6153.106 | | |
| 10 | Listing Gain | 14.515 | 815.03 | 108 | -2.251 |
| | 9 Month gain | 27.764 | 5341.27 | | |
| 11 | Listing Gain | 14.515 | 815.03 | 108 | -2.6114 |
| | 10 Month gain | 30.696 | 5934.56 | | |
| 12 | Listing Gain | 14.515 | 815.03 | 108 | -2.03 |
| | 11 Month Gain | 27.111 | 5815.1 | | |
| 13 | Listing Gain | 14.515 | 815.03 | 108 | -2.152 |
| | 12 Month Gain | 28.568 | 6440.02 | | |

T – critical = ± 1.98

From the above study, it has been found that, there has been significance difference in the return earned over the period of time, while particularly from period of 2 months till period of 8 months, study found that these periods had no significance difference in the average return earned by the IPOs.

Level – 2 Risk Analysis

| Sr. No. | F - test | Mean return | Variance | Df | F - Cal |
|---|---|---|---|---|---|
| 1 | Listing Gain | 14.515 | 815.03 | 108 | 0.546 |
| | Closing Gain | 9.937 | 1490.78 | 108 | |
| 2 | Listing Gain | 14.515 | 815.03 | 108 | 0.462 |
| | 1 Month Gain | 8.429 | 1761.89 | 108 | |
| 3 | Listing Gain | 14.515 | 815.03 | 108 | 0.358 |
| | 2 Month gain | 11.704 | 2276.2 | 108 | |
| 4 | Listing Gain | 14.515 | 815.03 | 108 | 0.24 |
| | 3 Month gain | 16.582 | 3393.79 | 108 | |
| 5 | Listing Gain | 14.515 | 815.03 | 108 | 0.183 |
| | 4 Month Gain | 18.372 | 4452.31 | 108 | |
| 6 | Listing Gain | 14.515 | 815.03 | 108 | 0.15 |
| | 5 Month Gain | 22.375 | 5412.49 | 108 | |
| 7 | Listing Gain | 14.515 | 815.03 | 108 | 0.175 |
| | 6 Month Gain | 21.245 | 4642.29 | 108 | |

| | | | | | |
|---|---|---|---|---|---|
| 8 | Listing Gain | 14.515 | 815.03 | 108 | 0.165 |
| | 7 Month Gain | 24.248 | 4937.87 | 108 | |
| 9 | Listing Gain | 14.515 | 815.03 | 108 | 0.132 |
| | 8 Month Gain | 26.692 | 6153.106 | 108 | |
| 10 | Listing Gain | 14.515 | 815.03 | 108 | 0.152 |
| | 9 Month gain | 27.764 | 5341.27 | 108 | |
| 11 | Listing Gain | 14.515 | 815.03 | 108 | 0.137 |
| | 10 Month gain | 30.696 | 5934.56 | 108 | |
| 12 | Listing Gain | 14.515 | 815.03 | 108 | 0.14 |
| | 11 Month Gain | 27.111 | 5815.1 | 108 | |
| 13 | Listing Gain | 14.515 | 815.03 | 108 | 0.126 |
| | 12 Month Gain | 28.568 | 6440.02 | 108 | |

F – Critical = 0.727

From the given study, it can be concluded that every null hypothesis has been rejected, and which means that there has been significance variance in the average return being given by the IPOs for different period of time.

### 3. IPO Yearly Return Analysis (ANOVA)

I. Difference in monthly return on yearly basis in IPO
While study was being done through the Anova hypothesis**,** the findings had come that, there has been significance difference in the monthly performance of IPOs for different years. Which means there has been much variances in the returns of different months in between different years.

II. Difference in yearly returns of IPO
Through the study of Anova, it has been found that, there has been much difference or variance in the returns being earned in different years.

**Conclusion**

As of the data being studied and different hypothesis has been tested, it has been found that, for various time period, the null hypothesis has been rejected, while conducting T-test, we had found that, there has been significant difference between the gains earned on the time of listing and return being gained after particular time period and there has been significant difference between the average returns earned.

Even through the test being conducted F-test, as to see how much variance is there in the returns being earned after the day of listing, it was found from the study, that there has been significance variance in the returns being earned after the day of listing and at a time of listing, and various hypothesis has been rejected.

At last the use of Annova study has been used to analyse whether there has been difference between the means and variances of yearly gain and monthly gain, and the study could reveal that, the significance difference is present between the means and variances of the returns provided by the IPOs.

While the study could able to reveal some of the results which are as follows, as available through the careful analysis of period returns earned by the IPOs.

- Year 2017 has given the higher average return at a time of listing of the IPO with 22.5% average return followed by 2019 15.64%, 2016 13.31% and 2018 and 2015
- However, if we look at the data at a time of closing the returns have decreased to the significant level, like in 2019 20.90%, followed by 2017 15.77%, and later 2018, 2016, 2015
- In terms returns being earned in particular, it has been observed that the year 2017 and 2019 have been proved to be profitable for the investors, as at a time of listing in year 2019 it could give 15.64%, 27.78 (3 month's gain), 20.61 (semi-annual gain), 47.21% (9 month's gain), 52.03% (annual gain) and in the year 2017, IPOs were able to provide 22.5% return at a time of listing, while after that it could give the return of 32.38% (3 month's gain), 44.18% (semi-annual gain), 41.85% (9 month's gain) and 32.45% (yearly gain).

**Time period for holding the IPO and get sufficient return**

As the main topic of the study, has been focusing on determine the time period for holding the IPO and get preferred return, it is found that average IPO has given the optimal return to the investors is of 5 months after the listing of the IPO on the stock exchange. Through the data it can be found that every year after period of 5 months, IPOs could give positive result for every year, like 4.84% (2015), 18.37%(2016), 38.64% (2017), 1.25 (2018), 39.26 (2019).

As of study it also came to the light that time period in between the day of listing and at a time of closing the gain has significantly dropped and was not able to maintain the level of return as it was at a time of listing, except 2019, in that year only investors were able to gain more closing gain than that of listing (5.26% [20.9-15.64]).

Apart of that, the data could also saw that, after 12 months, the IPOs were able to gain much return of 30-50% and data has shown that in the year 2016, 2017 and 2019, IPOs were able to provide greater results after a year of listing. However, the situation in years 2015 and 2018 were not much good, as it could only provide 4.95% and 1.00% annual gain.

Through the study, it has been found that, after the time of listing, till period of 4 months, IPOs were not able to perform better in the market as of listing time, and almost after 5 months, IPOs have performed better, thereby it may not be advisable to hold the shares for 4 months, if one is looking for short term investment rather it would be good to make profit or book loss and exit the market or wait till 5 months.

However, shares were able to retain the good position after a time period of 12 moths, and some years have given much return than that of listing, and if one wants to hold investment for mid to long term period than 12 months' period may prove beneficial.

## References

Allen F. and Faulhaber (1989). "Signaling by Under-Pricing in the IPO Market." Journal of Financial Economics, Volume 23, Issue 2, pp.303-323.

Avadhani V. (1997). "Indian Capital Market." Himalaya Publishing House, Mumbai, pp.1-10.

Bansal Y. and Desai A.N. (2012). "IPO Volatility in Indian Markets." Indian Journal of Finance, Volume 6, Issue 2, pp.4-12.

Daily M.C., Certo T. S., Dalton R. D. (2005). "Investment Bankers and IPO Pricing: Does Prospectus Information Matter?" Journal of Business Venturing, Volume 20, Issue 1, pp.93-111.

IPO (n.d.). "How is IPO Priced?", http://surakshit5.blogspot.com/2008/02/how-is-ipo-priced.html accessed on December 19, 2011.

Madan A. A. (2003). “Investments in IPOs in the Indian Capital Market.” Bimaquest, Volume III, Issue 1, pp. 24-34.

Madhusoodanan T.P. and Thiripalraju M. (1997). “Under-Pricing in Initial Public Offerings: The Indian Evidence” Vikalpa - The Journal For Decision Makers, Volume 22, Issue 4, pp.17-30.

Aggarwal, R., Prabhala, N.R., & Puri, M. (2002). “Institutional Allocation in Initial Public Offerings: Empirical Evidence.” Journal of Finance, 57 (3), pp. 1421-1442, DOI: 10.1111/1540-6261.00465.

Allen, F., & Faulhaber, G. R. (1989). “Signaling by Underpricing in the IPO market.” Journal of Financial Economics, 23 (2), pp. 303-323.

Baker, M., & Wurgler, J. (2000). “The Equity Share in New Issues and Aggregate Stock Returns.” Journal of Finance, 55 (5), pp. 2219-2257, DOI: 10.1111/0022-1082.00285.

Bansal, Y., & Desai, A.N. (2012). “IPO Volatility in Indian Markets.” Indian Journal of Finance, 6 (2), pp. 4 - 12.

Chemmanur, T.J., & He, J. (2011). “IPO Waves, Product Market Competition, and the Going Public Decision: Theory and Evidence.” Journal of Financial Economics, 101 (2), pp.382-412.

Cloak, G., & Gunay, H. (2011). “Strategic Waiting in the IPO Markets.” Journal of Corporate Finance, 17 (3), pp. 555-583.

Daniel, K. (2002). “Discussion of “Why don't Issuers get upset about Leaving Money on the Table in IPOs.” The Review of Financial Studies, 15 (2), pp.445-454.

Deb, G. S. (2009). “Some insights into IPO underpricing in India”, Vilakshan : The XIMB Journal of Management, 6 (2), pp.1-14.

Deb, K.S., & Marisetty, V. B.(2011). “Information Content of IPO Grading.” Journal of Banking and Finance, 34 (9), pp.2294-2305.

Ghosh, S. (2005). “Underpricing of IPOs : The Indian Experience Over the Last Decade.” Emerging Markets Finance & Trade, 41 (6), pp. 45-57.

Jain, N., & Padmavathi, C. (2012). “Underpricing of IPOs in the Indian Capital Market.” Vikalpa : The Journal for Decision Makers, 37 (1), pp. 83-95.

Jain, N., & Singh, R. (2012). “Determinants of IPO Subscription in India.” Vilakshan: The XIMB Journal of Management, 9 (2), pp. 121-134.

Krishnamurti, C., & Kumar, P. (2002). “The Initial Listing Performance of Indian IPOs.” Managerial Finance, 28 (2), pp. 39-51.

Kumar, S.S.S. (2007). “Short and Long-Run Performance of Bookbuilt IPOs in India.” International Journal of Management Practices and Contemporary Thoughts, 2 (2), pp.20-29.