

## Post issue performance of IPOs in Indian stock market: A pragmatic approach

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### Abstract

The public participation in stock market and particularly for IPOs drastically increasing increased in recent period with expectation of high listing and short run gains. However, the research studies on profitability from IPOs investments is still in adequate in Indian context, Therefore, present study examined the returns generated on listing day, short period, medium and long period by IPO companies listed between 2016-2024. Besides, the study also paved a way in research domain by providing well designed investment strategies with back test the post IPO performance of the companies and their generated returns. Present study is a unique study with combination of pragmatic approach and model examination useful for investors, research analyst, investment advisors, portfolio managers and policy makers to get valuable insights for decision making, portfolio design and policy making. The outcome of the study is proved that longer the investment period leads to higher return on Investment in IPOs. IPOs in India significantly created wealth for investors who held shares for long run than short period.

**Keywords:** Initial public offerings, listing gains, short term gain & long-term gains, IPO returns

### Introduction

The IPO is a remarkable route for the growing firms to fund their projects with public funds rather than depending on the high cost funding, Jeelan Basha (2021) <sup>[6]</sup>. The financial markets are categorized into primary and secondary market where former deals with new issues or first-time issue while latter deals with trading of already issued shares. The primary market facilitates the corporates to access large funds directly from public through transferring of equity/debt instruments between corporate and investors whereas secondary market works as platform to boost the liquidity in market to the investors by transferring shares among investors. In primary market wide range of financial instruments can be offered such as equity, bonds, government securities, ADRs, GDRs etc. The equity shares of corporate securities, ADRs and GDRs, corporate bonds regulated by SEBI whereas government securities regulated by RBI. The function of primary market consists of tapping large market of capital, fosters competitive process, ownership diversification, fair disclosures, investors evaluation, good exit route for early investor, liquidity for securities and regulatory supervision. The growth in primary markets indicates public interest towards investments in stock market Sanjay Dessai & sanjay prabhakar (2015) <sup>[12]</sup>. In India stock market the activities are significantly increasing since 2001 with entry and active participation of FII, DII and retail investors, Dsouza (2021) <sup>[2]</sup>.

In India, primary market is very attractive in world due to one of fast emerging markets in world with high GDP growth rate, government stability, strong industrial policy, skilled human resources, huge population, demographic dividend etc. In India, the primary market is growing very fast year by year in terms of companies and amount since 2015 <sup>[12]</sup>-16, it is evidence that, in 2013-14 and 2014-15, total number of companies came for IPO are 41 and 43 with to raise capital of Rs 1548 Cr and Rs 1647 Cr. But, in 2015 <sup>[12]</sup>-16, 70 companies rose capital of Rs 15,677 Cr and in 2017-18, 188 companies listed in stock market and rose historical highest capital of Rs 1,12,553 Cr. Recently in 2023-24, 272 companies listed in stock market and rose

public funds of Rs 67, 955 Cr from primary market (SEBI Hand Book 2023 <sup>[13]</sup>-24).

In primary market the liquidity is measured in three parameters such as market capitalization to GDP ratio, turnover ratio and traded value. In 2013-14 the market capitalization to GDP rate (BSE&NSE) was 65.40 percent which rose to 79.60 percent in 2014-15 and drop to historical lowest of 56.20 percent in 2019-20 due to covid effect. But in 2020-21 first time market capitalization cross India's GDP i.e. 102.9 percent, similarly in 2021 <sup>[2]</sup>-22, 111.90 percent and reached to highest of 131 percent in 2023-24.

### Review of literature

The fair pricing of shares in IPO is very challenging due to difficult in anticipation of relationship between dynamic internal and external factors affect the share price such as company reputation, future of industry, company performance, fundamental factors, market sentiment, demand for the product, business expectation, expectation of investors etc. The inefficiency in fixation of IPO pricing causes either under or over pricing of IPOs which in turn gives the scope for huge returns/losses on listing day and performance thereafter. The underpricing of IPOs is one of the major researches thrust area in stock market which causes significant difference between issue price and listing price and generating huge returns to the investors in very short period in India (Mehta (2015). Ravindra & Kanahalli (2016) <sup>[11]</sup>, analyzed the performance of Indian IPOs on listing day, 30 days and 90<sup>th</sup> day and revealed that, significant returns generated by majority IPOs on listing data as compared rest of two period. Kawadkar, Hemraj. (2023) study found no relationship between No. of IPO issues in the year and listing day gains in Indian context by selecting 106 IPOs between 2016 <sup>[7]</sup>-17 to 2020-21. Sanjay Dessai & sanjay prabhakar (2015) <sup>[12]</sup>, analyzed the sectorial wise performance of IPOs companies between 2010 <sup>[15]</sup>-2013 from six to 36 months. The study observed negative returns generated by many sectors in three years holding period. Sanjib Biswas & Neha Joshi (2023) <sup>[13]</sup>, study

revealed that there is no immediate reflection of financial performance on the stock prices of in three years of 18 IPO companies from BSE in India.

Kumar, Abhishek & Sahoo, Seshadev. (2021) <sup>[8]</sup> study analyzed the performance of 129 IPO companies in the long run as comparison between Anchor based and non-anchor based back companies and reported that superior returns by non-anchor-based IPOs companies than anchor-based IPOs in the long turn. Besides, the study also observed that offer size, investment grade, post-issue promoter holding and IPOs issued during IPO periods are significant factors to explain the 36-month performance aftermarket. Che-Yahya & Matsuura, Y. (2021) <sup>[3]</sup> study found the significant impact of the investor's sentiment in generating the returns and trading volume on the first day of trading after IPOs but observed reversals in returns in the first trading year due to insignificant effect of investors sentiment. Babu & Dsouza (2021) <sup>[3]</sup> study analyzed the performance of 52 IPOs between 2018-2020 and found significant positive returns on the listing day and observed highest positive returns on the third day and negative trend thereafter. The study found that significant impact of subscription rate on the IPO performance while insignificant impact of issue price market returns, PAT, and promoters holdings.

Sehgal, S., & Singh, B. (2008) <sup>[14]</sup> observed the long run performance of IPOs in Indian stock market by considering 438 IPOs of BSE during 1992-2001. The study found 99.20 percentage of returns which is significantly higher than the global returns. Besides the study found firm age, subscription rate and listing delay are significant determinants of IPO performance. The study evidence that, Indian stock market are not tend to no long run negative returns. Alvarez S., Gonzalez V.M. (2005) <sup>[1]</sup> observed 14 percentage of average returns of IPOs in sapanish stock market on listing day but negative returns in the long run. Ghosh S. (2005) <sup>[5]</sup> analyzed the factors explain the underpricing of 1842 IPO companies in India during 1993-2001 and revealed that low under-pricing of large business groups during hot (high volume) period than slump period. Pandey A. (2004) <sup>[10]</sup> analysed the initial and long run performance of 64 fixed price and 20 book build IPOs and revealed that some companies were offered large portion of their holding to raise small amount of money through fixed price method and some companies were offered small portion of their holding to rise large amount of money. Madhuri Malhotra & Premkumar (2017) <sup>[9]</sup> study found the significant positive relationship between issue size and long run under performance of IPOs where as insignificant association with firm age, time lag, and company size.

## Research problem

Investments in IPOs looks like good opportunities to the investor to earn substantial returns. This indicates how investments in stock market are looking attractive than other investment avenues. In this context, in the minds of investors a question may rise on IPOs investments whether investments in all IPOs is profitable, if yes to what extent, if not what is extent risk investor has to take. Further, question may rise whether investment in IPOs should exit on listing day or to carry for long period. Another question is that IPOs in India generated goods returns only on listing day? and what is rate of returns of listing companies across different periods during post issue. The present study address these all question of investors in simple and

systematic manner by taking historical returns generated by the listed companies across the different periods` after issue. Besides, present study helped the investors in formulating effective investment strategies for short period and long period by comparing IPOs historical returns. The present research paper is a pioneer study with a unique model of comparing actual research result with different investment strategy and provides valuable outcomes for decision making by different stakeholders such as investors, research analysts, investment advisors, companies and policy makers.

## Objectives of the study

- The present study is aimed to measure the post issue performance of IPO companies on listing day, short period, medium period and long period.
- The study is also aimed to present the actual rate of return generated by the IPO companies across the period with practical investment strategies.

## Research methodology

In the present study sample size and companies are selected by using multiple stage sampling technique. In the first stage among all IPOs during the period of 2016-2024 only equity issued IPOs are selected, in the second stage only non-stock split companies are selected and we left the stock split companies, and third stage eligible companies as per the listing gains, short period (12 months completed), medium term (36 months completed) and long run (8 years completed) are selected. As per the strategy number of eligible companies are for different periods such as 247 companies (listing day), 180 companies (short period), 104 (medium term period) and 16 companies (long run). The study period covers the April 1<sup>st</sup>, 2016- October 31, 2024 returns generated by the IPOs. The research techniques used are measuring the period returns over issue price in percentages across the period overs. The study provided a demo on the rate of return generated by the IPOs across the period by designed and examined investment strategy which gives practical insights to the investors, policy makers, investment advisors to take valuable investment decisions.

## Definition of the research variables

**Listing Performance:** In the study, listing performance is measured in terms of gain/loss on listing day of post issue. The gains or loss on listing day is referred as difference between issues price of a share and closing price of the share on listing day. If closing price of share on listing day is higher than issues price, it is called as listing gain, in contrast, if closing price less than issue price it is called as listing loss.

**Short term performance:** In the study, short term performance is measured in terms of gain/loss on investment after 12 months. The gain or loss in short term is referred as difference between issue price of share and closing price of the share on end of the last working day of 12 month after listing. If closing price of on 12 month is higher than issues price, it is called as short term gain, in contrast, if closing price less than issue price it is called as short term loss.

**Medium term performance:** In the study, medium term performance is measured in terms of gain/loss on investment after 36 months. The gain or loss in medium

term is referred as difference between issue price of share and closing price of the share on end of the last working day of 36 month after listing. If closing price of on 36 months is higher than issues price, it is called as medium-term gain, in contrast, if closing price less than issue price it is called as medium-term loss.

**Long term performance:** In the study, long term performance is measured in terms of gain/loss on investment after 8 years. The gain or loss in long term is referred as difference between issue price of share and closing price of the share on end of the last working day of 8<sup>th</sup> year after listing. If closing price of on 8<sup>th</sup> year is higher than issues price, it is called as long-term gain, in contrast, if closing price less than issue price it is called as long-term loss.

### Limitations of the study

1. The study ignored the IPOs which went for stock split during study period from the issue (which will be covered in the next research study).
2. The sectorial wise gains are not analyzed in the study.
3. The study assumed that investor got allotment in all IPOs which is practically not possible and affect the returns as given in the strategy.
4. The study has not done year wise gains across the investment strategies.
5. The differences in lot size and allotment of shares affect the result differently.
6. The study has not studied the impact of subscription rate, issue size, timing etc., on the post issue performance.

### Data analysis and interpretation

**Table 1:** No. of companies generated returns less than 100 percent on listing, short term, medium term and long-term period (2016-2024)

| Returns (%) | Positive returns        |                        |                       |                     | Negative returns        |                        |                       |
|-------------|-------------------------|------------------------|-----------------------|---------------------|-------------------------|------------------------|-----------------------|
|             | Listing Gains (One Day) | Short Term (12 Months) | Medium Term (3 years) | Long term (8 years) | Listing Gains (One Day) | Short Term (12 Months) | Medium Term (3 years) |
| 0-10        | 33                      | 12                     | 3                     | 1                   | 47                      | 12                     | 8                     |
| 10-20       | 37                      | 16                     | 7                     | 1                   | 15                      | 7                      | 6                     |
| 20-30       | 33                      | 12                     | 2                     | 2                   | 4                       | 12                     | 5                     |
| 30-40       | 16                      | 15                     | 3                     | 1                   | 1                       | 10                     | 6                     |
| 40-50       | 14                      | 14                     | 2                     | 1                   | 0                       | 6                      | 9                     |
| 50-60       | 7                       | 5                      | 3                     | 1                   | 0                       | 4                      | 3                     |
| 60-70       | 7                       | 6                      | 2                     | 0                   | 0                       | 5                      | 2                     |
| 70-80       | 8                       | 4                      | 2                     | 0                   | 0                       | 1                      | 0                     |
| 80-90       | 5                       | 6                      | 9                     | 0                   | 0                       | 0                      | 1                     |
| 90-100      | 4                       | 8                      | 3                     | 0                   | 0                       | 0                      | 1                     |
| Sub-I Total | 175                     | 98                     | 36                    | 7                   | 67                      | 57                     | 41                    |

**Source:** Computed by Researcher

**Table 2:** No. of companies generated returns more than 100 percent on listing day, short term, medium term and long term period (2016-2024)

| Returns (%)  | Listing Gains (One Day) | Short Term (12 Months) | Medium Term (3 years) | Long term (8 years) |
|--------------|-------------------------|------------------------|-----------------------|---------------------|
| 100-200      | 1                       | 17                     | 19                    | 4                   |
| 200-300      | 0                       | 3                      | 3                     | 2                   |
| 300-400      | 0                       | 3                      | 4                     | 0                   |
| 400-500      | 0                       | 1                      | 1                     | 1                   |
| 500-600      | 0                       | 0                      | 0                     | 2                   |
| 600-700      | 0                       | 0                      | 1                     | 0                   |
| 700-800      | 0                       | 1                      | 0                     | 0                   |
| Sub-II Total | 01                      | 25                     | 28                    | 9                   |
| Total(I+II)  | 176                     | 123                    | 64                    | 16                  |

**Source:** Computed by the Researcher

### Listing gains performance of ipo companies

Listing day performance analysis of selected companies since IPO is analyzed. In the present study the listing gains defined as return generated by IPO companies on it is issue price on its listing day (closing price of the share over issue price) performance is measured on trailing returns generated by the companies on the listing day over its issue price. Therefore, since 2016 total 247 companies are listed. Therefore, trailing returns generated by these 247 companies by the end of listing day is considered as listing gains or performance of post IPOs companies. Out of 247, 175 companies reported positive returns, 67 companies reported negative returns and five company reported zero returns. The study found that, BLSE services limited reported highest listing gains of 171.11 % over

issues whereas Mahendra logistics reported lowest positive listing gains of 0.23%. In overall, the study found that out of 175 companies, 11 companies reported listing gains of 100-200 % returns over issue price, four companies listing gains is 90-100 %. five companies listing gains 80-90 %, eight companies listing gains is 70-80, 7 companies 60-70%, 7 companies 50-60 % %, 14 companies are 40-50 %, 16 companies listing gains are 30-40 %, 33 companies listing gains are 20-30 %, 37 companies reported 10-20 %.33 companies reported in the range of 0-10 %. On the contrary, out of 247 companies 67 companies reported negative returns on listing day. They are as follows 47 companies reported negative short-term returns of 0-10 %, 15 companies negative return is 10-20 %, four companies

negative return is 20-30 %, one companies negative return is 30-40 %.

### Short term performance of IPO companies

Short -term performance analysis of selected companies since IPO is analyzed. In the present study the short term is defined as one year since their IPO listing day and performance is measured on trailing returns generated by the companies on the ending day of one year against its issue price. Therefore, since 2016 total 180 companies are completed one year period. Therefore, trailing returns generated by these 180 companies by the end of year is considered as short-term performance of post IPOs companies. Out of 180, 122 companies reported positive returns, 57 companies reported negative returns and one company reported zero returns. The study found that, Global Health Limited reported highest short-term returns of 797.59 % over issues whereas Ujjivan financial services reported lowest positive returns of 0.70%. In overall, the study found that out of 122 companies, one company reported 457.14 % returns over issue price, of three companies reported in range of 300-400 %, three companies return in the range of 200-300 %, 17 companies return are 100-200 %, and 98 companies in the range of 10-100 %. In general, due to high-risk character of investment in stock market the minimum returns in the short run (one year) should be at least more than 25 percentage over issue price. As per this assumption, 89 companies reported short term return above 25 percentage which indicates good performance. In total 98 companies, 12 companies reported short term returns of 0-10 %, 16 companies return is 10-20 %, 12 companies return is 20-30 %, 15 companies return is 30-40 %, 14 companies return is 40-50 %, five companies return is 50-60 %, six companies return is 60-70, four companies return is 70-80 %, six companies return is 80-90 %, eight companies return is 90-100 %. On the contrary, out of 180 companies 57 companies reported negative returns in the short period. 12 companies reported negative short term returns of 0-10 %, seven companies negative return is 10-20 %, 12 companies negative return is 20-30 %, 10 companies negative return is 30-40 %, six companies negative return is 40-50 %, four companies generated negative return is 50-60 %, five companies negative return is 60-70 and one companies generated negative return is 70-80 %.

### Medium- term performance of ipo companies

Medium -term performance analysis of selected companies since IPO is analyzed. In the present study the medium term is defined as three years since their IPO listing day and performance is measured on trailing returns generated by the companies on end day of its third year against its issue price. Therefore, since 2016 total 104 companies are completed three years period. Therefore, trailing returns generated by these 104 companies by the end of third year is considered as medium-term performance of post IPOs companies. The study found that, Avenue Super-marts Limited reported highest medium-term returns of 645.15% over issues whereas Parag milk food reported lowest medium- term returns of 0.92 %. In overall, the study found that out of 104 companies, 64 companies reported positive returns while rest of 40 companies reported negative returns. In positive returns one company reported medium term returns over issue price of 460.24%, four companies reported in range of 300-400 %, five companied returns in the range of 200-300 %, 17 companies return are 100-200 %, and 36 companies in the range of 10-100 %. In general, due to high-risk character of investment in stock market the minimum returns in the long run (three years) should be at least more than 100 percentage over issue price. In the present study, out of 16 companies 28 companies reported more than 100 % of returns on their issue price which are considered as outperformed whereas 36 companies medium term returns are less than 100 percentage which indicates underperformance. These companies are as follows three companies reported short term returns of 0-10 %, seven companies return is 10-20 %, two companies return is 20-30 %, three companies return is 30-40 %, two companies return is 40-50 %, three companies return is 50-60 %, two companies return is 60-70, two companies return is 70-80 %, nine companies return is 80-90 %, three companies return is 90-100 % However, negative returns reported by 40 companies in the medium-term period over its issue price which indicated worst performance. In the study Chand company limited reported highest negative returns of -91.94 percentage during post IPO period.

**Table 3:** investment strategy and outcome

| Strategies                    | Strategy i                  | Strategy ii                    | Strategy iii                        | Strategy iv                     |
|-------------------------------|-----------------------------|--------------------------------|-------------------------------------|---------------------------------|
|                               | Listing day gains (One day) | Short period gains (12 months) | Medium term gains (36 months gains) | Long term gains (8 years gains) |
| 1. No. of Companies           | 247                         | 180                            | 104                                 | 16                              |
| 2.Total Investment (Rs)       | 2,47,00,000                 | 1,80,00,000                    | 1,04,00,000                         | 16,00,000                       |
| 3.Total Gain (Rs)             | 63,29,295                   | 95,31,400.06                   | 79,24,407                           | 28,62,434                       |
| 4. Total loss (Rs)            | 6,13,875                    | 16,67,080                      | 13,19,355                           | 0                               |
| Net gain/ Net loss (Rs) (3-4) | 57,15,420                   | 78,64,320                      | 66,05,051                           | 28,62,434                       |
| Total Amount in Hands (Rs)    | 3,04,15,419                 | 2,58,64,320                    | 1,70,05,051                         | 44,62,434                       |
| Net gain/ Net loss (%)        | 23.13                       | 43.69                          | 63.51                               | 178.90                          |

**Source:** Compiled by the Researcher

### Long term performance of IPO companies

Long term performance analysis of selected companies since IPO is analyzed. In the present study the long term is defined as eight years since their IPO listing day and performance is measured on trailing returns generated by the companies on end day of its eighth year against its issue price. Therefore, since 2016 total 16 companies are

completed eight years period. Therefore, trailing returns generated by these 16 companies by the end of eighth year is considered as long-term performance of post IPOs companies. The study found that, Bharath wire ropes limited reported highest long-term returns of 575.56 % over issues whereas Parag milk food reported lowest long returns of 0.47 %. In overall, the study found that out of 16 companies,

two companies reported long term returns in range of 500-600 %, one is 407.20 %, two companies are 200-300 %, four companies are 100-200 percentage and six companies in the range of 10-100 %. In general, due to high-risk character of investment in stock market the minimum returns in the long run (eight years) should be at least more than 200 percentage over issue price. In the present study, out of 16 companies only five companies reported more than 200 % of returns on their issue price which is considered as outperformed whereas 11 companies' long term returns are less than 200 percentage which indicates underperformance. However, no company reported negative return in the long run.

### How above research outcome helps in formulating investment strategy?

In this study comparison of actual result with assumed investments strategy is made and revealed whether Investment in IPOs is profitable or not and whether Indian IPOs attractive, if yes, to what extent. This assumes, that an

investor invested Rs 1,00,000 in every IPOs as above and what is his total investment, gains or loss across the periods, if sold at the end of listing day, held for short period (12 months), medium period (36 months) and long period (8 years).

### Practical applicability and result of the research outcome

**Strategy:** Based on the above research outcome, four investment strategies are designed and examined. The study observed the gains or loss on investment in rupees and percentage and total amount in hand in different periods. The periodical analysis consist of gains on listing day, gain on holding shares for one year (12 months), gain on holding for three years (36 months), gain on holding shares for long period (8 years). The assumption in this strategy is investor got allotment in all IPOs worth of Rs 1,00,000 and held shares for different period as said above.

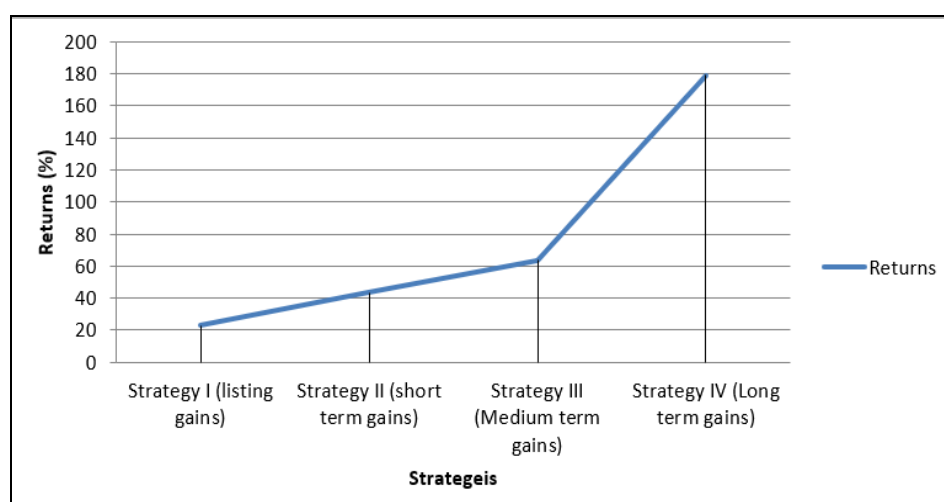


Fig 1: Strategy and returns of IPOs investment

### Discussion on outcome of the strategy

**Strategy 1:** The strategy one focused only on listing gains. This strategy has some assumption like investment in every IPO irrespective of nature and size of the IPO and other factors and aimed to exit at the end of listing day. The investment period is consider maximum period of 15 days from the day of IPO of closing to listing day. The investor in this strategy investment enter in every IPO in stock market during 2016<sup>[7]</sup>-2024, assumed to apply and allotted Rs 1,00,000 worth of shares. As per the research result, no. of eligible companies are 247 and total investment is Rs 2.47 Cr, total gain is Rs 63.29 Laksh and loss is Rs 6.13 Lakhs. The Net gain is Rs 57.14 Lakhs which 23.23 percentage over investment.

**Strategy 2:** The strategy two focused only on short term gains (returns for 12 months). This strategy has some assumption like investment in every IPO irrespective of nature and size of the IPO and other factors and aimed to exit at the end last trading day of 12 month. The investor in this strategy investment enter in every IPO in stock market during 2016<sup>[7]</sup>-2024, assumed to apply and allotted Rs 1,00,000 worth of shares. As per the research result, no. of eligible companies (completed 12 months) are 180 and total investment is Rs 1.80 Cr, total gain is Rs 95.31 Laksh and

loss is Rs 16.67 Lakhs. The net gain earned is Rs 78.64 Lakhs which 43.69 percentage over investment.

**Strategy 3:** The strategy three focused only on medium term gains (returns for 36 months). This strategy has some assumption like investment in every IPO irrespective of nature and size of the IPO and other factors and aimed to exit at the end last trading day of 36 month. The investor in this strategy enter in every IPO in stock market during 2016<sup>[7]</sup>-2024, assumed to apply and allotted Rs 1,00,000 worth of shares. As per the research result, no. of eligible companies (completed 36 months) are 104 and total investment is Rs 1.40 Cr, total gain is Rs 79.24 Laksh and loss is Rs 13.19 Lakhs. The net gain earned is Rs 66.05 Lakhs which 63.51 percentage over investment.

**Strategy 4:** The strategy four focused only on long term gains (returns for 8 years). This strategy has some assumption like investment in every IPO irrespective of nature and size of the IPO and other factors and aimed to exit at the end last trading day of 8 years. The investor in this strategy enter in every IPO in stock market during 2016<sup>[7]</sup>-2024, assumed to apply and allotted Rs 1,00,000 worth of

shares. As per the research result, no. of eligible companies (completed 8 years) are 16 and total investment is Rs 16 Lakhs, total gain is Rs 28.62 Lakhs and there is no loss in these companies. The net gain earned is Rs 28.62 Lakhs which 178.90 percentage over investment.

### Conclusion

The present study is a unique model in research domain by application of research outcome in well-designed investment strategies and finding the real outcome of research result which provides valuable insights to the investors, research analysts, investment advisors, portfolio managers and policy makers for decision making. In the present IPOs listed in eight years are selected and their historical returns on listing day, one year, three years and eight years is analysed and output is presented. In the study sample size of the companies is selected by using multiple stage sampling technique which causes variation in sample size across the periods. The study found that IPOs generated listing gains of 23.13 percentage, short term gains of 43.69 percentage, medium term gains of 63.51 percentage and 178.90 percentage in long run. This indicates post IPO returns are large when investment period is longer and vice versa. The outcome of the study is very useful for investors, research analysts, investment advisors, portfolio managers and policy makers for investment decisions.

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