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Long-Term Performance of IPOs: Evidence from NSE India

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ABSTRACT

This paper analyses the long-term performance of IPOs listed on Indian stock exchanges. We analyzed all the IPOs listed on National Stock Exchange and Bombay Stock Exchange spanning from 2004 to 2016. We reported that the cumulative average return to the investor investing in IPOs is slightly higher when compared to the cumulative average returns obtained by investing in Nifty. Our analysis shows that investing in all the IPOs systematically for long-term is a profitable strategy.

JEL Classification: G100, G240, C200.

Keywords: Initial public offering, Under pricing, NIFTY returns.

1. INTRODUCTION

Post-1992, Indian Equity Market has undergone drastic changes through the initiatives of Securities and Exchange Board of India (SEBI). Before that period, the market was mired with scams. One of the famous scams was of Harshad Mehta Securities in 1992. The incident shook the market as the Sensex fell by 12.77 percent. To repress the scams SEBI introduced initiatives to set up important mechanisms for both primary and secondary market after 1998. The objectives for the initiatives were to keep the Indian Equity Market in check regarding safety and transparency. The efforts well paid off. Secondary market comprised of two main stock exchanges, namely Bombay Stock Exchange (BSE) and National Stock Exchange (NSE), both ranks high amongst the world securities market. Indian market is unique in its terms which also comprised of the unusual history of regulations. Post -1991 reforms, the market proved to be efficient. The number of IPOs has been increasing significantly over the years.

Initial Public Offer or IPO is the first step that a company takes to raise its capital. The concept of IPO has been a paradox for corporate finance. In today's time, there are numerous ways to raise capital but the company prefers to go for an IPO. The process not only helps the companies to convert themselves from private to the public but also create a brand name. There is a direct relationship between the performance of an IPO and investors sentiments. Companies market before applying for IPO's which spreads awareness among the investors. Thus, the quality of IPO's in respect of efficiency, transparency, price discovery process has bought at par with the international standard to boost the confidence of investors. Indian IPO is unique in the world as many retail investors participate which could even extend to 99 percent of the total applications. The regulation of SEBI is so stringent that ensures the retail investors are protected from all issuers of IPO's with dubious backgrounds. To begin with the IPO process, the company must file with the Securities and Exchange Commission (SEC). Once the process of filing gets completed, underwriters are appointed to generate an appropriate IPO. Later an exchange is selected where larger scale investors are sought during a period known as "roadshow". At last a date is selected where the shares get distributed to the buyers during the road show, and then sales open to the public.

Under pricing is a hot issue in the IPO market. It's a pricing strategy where the price of IPO is lower than its market value. The phenomenon has been consistent throughout the world. During 2007 the under pricing of IPO's increased, an empirical study indicated positive under pricing (14.455), whereas 60% of the IPOs in the sample was initially overpriced (Mishra, 2010). In Indian Market, both Fixed Pricing and Book Building Methods are used. Book building is a process in which an underwriter determines the price at which IPO will be offered based on the demand from institutional investors. In the process, underwriters build a book of orders from fund managers, which indicate the number of shares and the price. The process of book building leads to a better price discovery for the investors. On the other hand, in a case of Fixed Pricing Method the issuer company can fix the price accordingly, there is no intermediary. The basis of the price issue is clearly stated in the prospectus which discloses both qualitative and quantitative factors which satisfy the issue price. In practice, companies prefer book building over fixed price method worldwide.

The research paper focuses mainly on the long- run performance of IPO in the Indian Market. It witnessed that long-run performance is under priced in the Indian market. Under performance in Long run IPO has been documented in other developed countries too. Reasons for long-term under performance in the USA are unprofitability, ownership, and maturity of the firm (Tonca, 2014). The research was conducted for the period of 2000-2016 i.e. for 16 years. The sample size for the research is 270 companies listed on NSE. Post 19991 reforms the number of IPOs kept on increasing with the number being 29 in 2004, 50 in 2005, 98 in 2007. In 2008 market took a hit due to a financial crisis. The demand for IPO's gradually decreased and continued till 2009. The market recovered in 2010 as 70 companies undergone for IPO. This upward and downward trend continued till 2015. The data was analyzed based on month and sector. The highest number of companies that went for an IPO was in the month of February (34) followed by March (30) and December (30). The lowest that was recorded in the month of June with only nine companies went for IPO over the past 16 years. In a case of sector-wise distribution, Industrial Goods topped the chart with 53 companies. It was immediately followed by Services Sector (48).

2. LITERATURE REVIEW

Drobtz et. al., (2005) analyzed the under pricing and long-run performance of Swiss Initial Public Offerings for the period 1983 to 2000. The methodology used for the paper was, first to calculate the buy-and-hold

abnormal returns, Skewness-adjusted wealth ratios and cumulative abnormal returns using 120 months of secondary market returns. From the data collected the average market-adjusted initial return was 34.97%. The study concluded by stating about the under performance being significant only in the long run for the Swiss market. Crutchley et. al., (2002) focused basically on the relation between the Board Stability and the Long-Term Performance of the IPOs. It considered few important factors among them was how past performance affects the board of director's stability. Further, if any changes were made by the board, it affected the performance of the IPO and to measure such changes, scale-invariant stability metric was used. The result of the research indicated that IPOs whose initial performance was poor had greater board instability. Firms with greater stability were associated with improvement in subsequent time.

Choi et. al., (2010) examined the long-run stock return of Privatization of IPOs. The sample size was of 241 privatized IPOs across 42 countries for the time frame 1981-2003. The stocks were calculated by comparing one-three and five-year holding period returns of privatization to domestic stock market indices. Next, the calculated returns have been compared to size and size and book-to-market equity ratio (BM) with the matched firms from the same countries. The result stated that Privatized IPO outperforms their domestic stock market in the long run. It proved that market valued privatization IPO firms more than the private companies IPO's without much systematic bias after the IPO.

Schultz (2003) documented that under performance is likely to be observed ex-post in an efficient market. The overall premise is that more firms issue equity at a greater price even though the future returns are not predicted. The issue of ex-post time the market because of offerings cluster at market peaks. With the help of Simulation with the given parameters based on the historical data, it showed that pseudo market timing could lead to a level of ex-post under performance. It revealed that when ex-ante data was expected abnormal returns to be zero, this affected the ex-post to under perform for equity issuers in the event. By calculating calendar time returns the above issue can be solved.

Carter et. al., (2011) characterized the risk of IPO Long Run Returns by the impact of Momentum, Liquidity, Skewness, and Investment. The time frame for the research was from 1981-2005 which help to discover the fact that New Issue Puzzle could disappear in a Fama-French three-factor framework. The methodology used to calculate the characteristics of risk, in the long run, were Cumulative returns, Portfolio Time Series Factor Regression, Robustness Tests. The paper concluded by stating that in the long run, large firms outperform. The factors for momentum, investment, liquidity, and skewness help to determine the aftermarket returns. On the other hand, size and book-to-market give a proxy for skewness. Investors in IPOs receive smaller expected return due to negative momentum and investment exposure in exchange of higher liquidity.

Dong et. al., (2011) discuss the relationship between the quality of underwriters and the long run performance of the IPO in the light of underwriting marketing, certification & screening, and information producer. It has been witnessed that higher the quality of underwriter, predicts the long run performance even in case of returns being value weighted. The higher underwriter quality has been measured based on a number of managing underwriters, underwriter's reputation, and Absolute Price Adjustment. All the qualities of underwriters compared among which many managing underwriters and reputation were strongly correlated for the IPOs who got higher uncertainty. On the other hand, absolute price adjustment is associated with the information production losses its significance. The results stated that qualities like

marketing, screening and certification role by investment bankers play an important role in the long run performance.

Brav et. al., (1997) explore the two aspects, where a group of IPOs is backed with ventured and few-ventured backed firms. The sample size for the ventured backed firm was 934 companies and 3407 non-ventured back for the period between 1972- 1992. By calculating the equal weighted returns, it has been improved that ventured backed firms outperform the non-ventured backed firms. Equal-weighted returns reduce performance differences which significantly reduce the under performances of non-ventured backed firms. The methods used for comparing benchmarks and Fama-French three-factor asset model did prove that venture-backed companies do not under perform, but non-venture can.

Beatty and Ritter (1985) studied about the investment banking, reputation and the under pricing of initial public offering. There exists a relationship between under pricing and the uncertainty of investors regarding value. An investor who cheats either losses investors or issuers. Methods such as average return are used to find out whether any relationship exists or not. The asymmetric information model is used to determine the value per share of the issuing firm as investors are uncertain about it.

Shah and Mehta (2015) studied about the listing day performance of the companies that undergone IPOs. The sample size was about 113 for the period spanning from 2010 to 2014. It was evident from research that on an average there was a positive return on a listing day. The objective of the paper was to verify the returns and mean initial return and prove that average returns are significantly lower and also compare to historical returns of IPO. For the purpose regression model has been to determine the relationship between the degree of under pricing with the independent variable such as issue price, issue size, issue oversubscription and market index returns. At the end, the study suggested that investors can invest in the new issues that are under priced in its initial days.

Singh (2008) conducted research to show short and long-term dynamics of initial public offering. For a span of the period, both the returns for the short and long-term are positive. The short run and long-term under pricing were 18% and 11.5% respectively. Oversubscription was found to be an important determinant of under pricing in the Indian IPO market. Higher subscription implied higher under pricing. Secondly, the institutional investor's oversubscription was greater in companies giving more return in the long run. Thirdly, the sector-wise analysis shows the high performing sectors were more under priced in the short run but performed better in the long run. IPO market condition has a strong influence on timing and valuation yet most CFOs look only at markets or industry-wide performance.

Madhusudan Thiripalraju (1997) studied the effect of under pricing at initial public offering (IPO) in India. Their study examined how issue size was a factor to determine the extent of under pricing in these offerings. Under-pricing of IPOs in short-term was higher in India compared to other countries. Similarly, in long-term, the under pricing of IPOs was negative in other countries too. One of the most important reasons that can be suggested is Rock's model. It explains the fact that institutional investors always try to subscribe for the good under priced issues and hence uninformed investors were left with the overpriced issues. Thus, the issuing company must maintain the interest of the institutional as well as uninformed investors by under pricing the issues.

Sharma et. al., (2012) examined the post-issue performance of IPOs in India. He also tried to show the sector-wise behavioral pattern of different companies from the time of listing, short-run, long-run

and for three years. Under-pricing plays a major role for IPOs in India. According to the study, IPOs are mainly contributed by retail investors. However, a gap exists between the actual profit and perceived profit. Public sector and finance companies exhibit a maximum change in value on a listing day as well as on the 30th day. However, IT/ITES sector represented the maximum value increase thereby beating all sectors. After 1992, much stricter rules and regulation was made by SEBI because before that much scams were reported. Under pricing of IPOs attracts a large no of potential buyers to purchase stocks or shares at an attractive price to assure profits.

Kumar (2007) stated and showed the difference in the determination of price post to 1992 and the companies which issued IPO after 1992. Before 1992 Controller of Capital Issue (CCI) regulated the market. In 1992, it got replaced by Securities and Exchange Board of India (SEBI). New companies could issue shares only at par while the existing companies could issue shares at a premium by the norms of CCI. After the year 1992 regulator played no role in regulating the prices instead issuer had the right to determine the price itself.

Chemmanur & Yan (2016) conducted a study to show how product advertising creates a level-playing ground for those firms that wish to go public i.e. wants to raise funds through IPO. A firm which has advertised its product will be valued higher than a firm which has not advertised its product the above results are true even after controlling the effects of investors' attention. Many additional tests are performed to prove that the above statements are true. It also states that some firm managers consider the effect of product not only on customers but also on investors. Welch (1995) in his paper of 'equity offering following the IPO theory and evidence' presented an IPO signaling model in which some issuers are present who do not signal their quality firms by under pricing but by following seasoned equity offering (SEO). The seasoned equity model works on many other variables like IPO under pricing, after-market return, the timing of SEO. The end- result of this paper shows that following this signaling model of an IPO higher quality issuers are worth 2-3 times more than low-quality issuers.

Binay et. al., (2010) studied the role of underwriter-investor relationship in the IPO process. It showed that the underwriters favor institutions they know well, or they have worked for. Investors who are regularly investing have more advantage than investors who invest sometimes. This paper investigates the role of a regular IPO investor in going public. The result gives us a clear picture about the underwriter-investor relationship. The better is the relationship between the underwriter and investor; more is the benefit that the investor gets. It makes a difference between a regular investor and casual investor.

Brau et. al., (2006) surveyed 336 chief financial officers (CFO) regarding IPO and analyzed depending on the timing, underwriter selection; under pricing, signaling etc. after doing a survey of 336 CFO the result was that most of the firms perform IPO for acquisitions. Among all these factors CFO's gave the timing of the IPO the most priority. Companies remain private to have the ownership control within them. The IPO status i.e. whether successful, withdrawn or not -tired IPO strongly influence CFO's perception regarding the risk.

Chambers & Dimson (2009) conducted research on the IPO under pricing over the long run. IPO (initial public offering) is measured efficiently mainly by the extent to which issues are under priced. From the period of 1917 to 1945, the offers were under priced i.e. the increase in stock value from the initial public offering price to the first day closing price i.e. by an average of only 3.8% as compared to 9.15%

in the period from 1945 to 1986. various statistical methods like time-series, correlation, regression etc. methods are used. Therefore, it can be concluded that the period between the end of the First World War and the beginning of the Second World War the IPO market operated on the principle that the buyer alone was responsible checking the quality and suitability of goods before a purchase has been made. After 1945, this situation got improved once the underwriters entered into the market.

Su & Fleisher (1997) studied the Chinese IPO market and how IPO works. The sample size was of 308 companies committed new issues. The reason why under pricing takes place would be explained in depth by separating equilibrium under asymmetric information where under pricing is a strategy used by the firms to signal their value to the investors. Bribery is an unlikely to cause of the high IPO under pricing. The lottery mechanism for allocation of IPO has worsened it more. The differences in initial returns between “A” & “B” shares were due to differences in domestic and foreign investors investment opportunities and investment sentiments.

Chan & Wei (2001) researched on the under pricing and long-term performance of 570 “A” shares and 39 “B” share which was issued in China. The paper mainly talks about the short-term and long-term performance of IPO in China. The main objective was to investigate how the under pricing of IPO was affected by some institutional factors at the currently planned IPO market. The average price for “A” share was 178 % and “B” share IPOs only 11.6%. There is a direct relation between the under pricing and number of days between the offerings, listing and the number of stock investors in the province, whereas it is negatively correlated to the number of shares being issued. There was no such characteristic explained for “B” share. Stock performance is partially related to the operating performance of the company.

Jain & Kimi (1994) studied the post-issue operating performance of IPO firms. They studied how the operating performance of IPO firms. They studied how the operating performance of firms changes i.e. there is a change in the effectiveness, efficiency etc. as the ownership of the firm’s changes from private to public. There was a decline in the operating performance of the firm as soon as the firm goes for an IPO. However, no-relation was found between post-IPO operating performance and level of initial under pricing. However, a positive relation exists between after IPO operating performance and equity retention by the original entrepreneurs. For this method like regression are used to calculate the P/E ratio and EPS. Overall it can be concluded that IPO’S cannot strengthen their after-issue performance levels. Although IPO firms display high growth both in sales and capital expenditure, their performance declines slowly along with the decline of profit. It seems that IPO firms are priced with an expectation that the performance of IPO will improve overtime, while they decline over-time.

Teoh. et. al., (1998) studied the earning management and the long-run market performance of IPO. This paper shows evidence that issuers with accumulation in the IPO experience a downfall in the stock returns three years thereafter. It also showed that after three years there was approximately twenty percent fall in stock returns. About twenty percent fewer seasoned equity offering was seen. This is proved by performing a time-series distribution of accruals and accounting performance. The result of this paper shows that the components managers can choose within the flexibility of accounting regulation in adjusting a firm’s cash flow i.e. the non- secret or accruals are higher around the IPO relative to those of issuers who don’t issue. It also shows that issuers with the higher flexibility of choosing the components of accounting regulations experience a fall in their stock returns during the period of three years. The seasoned equity offering is about twenty percent in the conservative quartile.

Gompers & Lerner (2003) studied the long-run performance of IPO (initial public offering) before Nasdaq was formed. Performance of companies are tracked after listing of 3661 US IPO's from 1935 to 1972. However, when using the strategy of not trading on a portfolio between the initial selection of the securities and the end of a certain period, i.e. when event-time buy and hold abnormal returns are used, under performance is seen. The performance of IPO's improves when the summation of all abnormal returns is taken i.e. cumulative abnormal returns. Methods like a calendar-time-analysis, CAPM (capital asset pricing model), Fama-French three-factor regression are used. Using calendar-time-analysis showed that IPO returns as much as the market i.e., the return from an IPO is same as that of the market return. So, it can be concluded that IPO'S which was issued before Nasdaq was formed represents a powerful out-of-sample test of IPO under performance.

Jay. Ritter (1991) studied the long-run performance of the initial public offering. Under pricing was a short-run phenomenon. A substantial variation can be noticed in the under pricing of the firms on a year-on-year basis. However, the pattern is consistent with the market where investors are over-optimistic about the growth potential of young companies. Firms take advantage of this window of opportunities. A Sample of 1526 initial public offering was taken starting from a period of 1975-1984 to illustrate the under pricing method. Methods such as average-benchmark and cumulative average-benchmark adjusted aftermarket performance are performed together with regression analysis. This paper concluded by performing the time and industry-dependence of the long-run performance of the initial public offering.

3. DATA AND METHODOLOGY

For the research, the data was collected from National Stock Exchange (NSE), Yahoo finance, and Bombay Stock Exchange (BSE). The study was conducted for 16 years spanning from 2001 to 2016. It consists of 270 companies listed on NSE. One of the best indicators of future performance is the past performance. Keeping this in mind annual averages is calculated for the IPO's and compared that with the Nifty 50 return. For a complete viewpoint, the data was segregated into three parts. The first part describes the number of IPO's issued by the companies over the past 16 years, where 2007 captured the highest position. Second part states the month wise distribution of IPO's in India. The numbers were bit interesting as February recorded the highest place and June the lowest. The quality of the company that one chooses to place funds is undoubtedly important, therefore the final part recounts about the sector-wise distribution of the companies. Out of all the sectors like consumer goods, finance, technology, services etc. Industrial goods scored the place.

4. RESULTS AND DISCUSSION

The following section provides the details of the number of IPOs listed on Indian stock exchanges. It is observed that the number of IPOs from 2000 to 2003 was very small. After 2004 the listing of IPOs increases in an exponential manner till 2007 where we observe the highest number of IPOs. Due to the financial crisis in late 2007 and 2008, the number of IPOs reduced drastically till 2009. The listing of IPOs improved slightly from 2009 to 2011. Again a very big dip is observed in 2011 and since then the number of IPOs that were listed on the stock exchanges are very less in comparison to the number of IPOs that were listed in the previous years. It can be seen from the Figure 1 that the listing of the IPOs in Indian stock exchange is directly related to the performance of stock market. The stock market went into crisis twice, first during the global recession of late 2007 and 2008, and the second time in the year 2011. Reduction in

the listing of IPOs can be seen directly during these crisis years. The least number of IPOs were observed in the years spanning from 2001 to 2003, and 2013 and 2014. Since 2015 the listing of IPOs has improved and it seems to be indirectly related to the improving stock market in India.

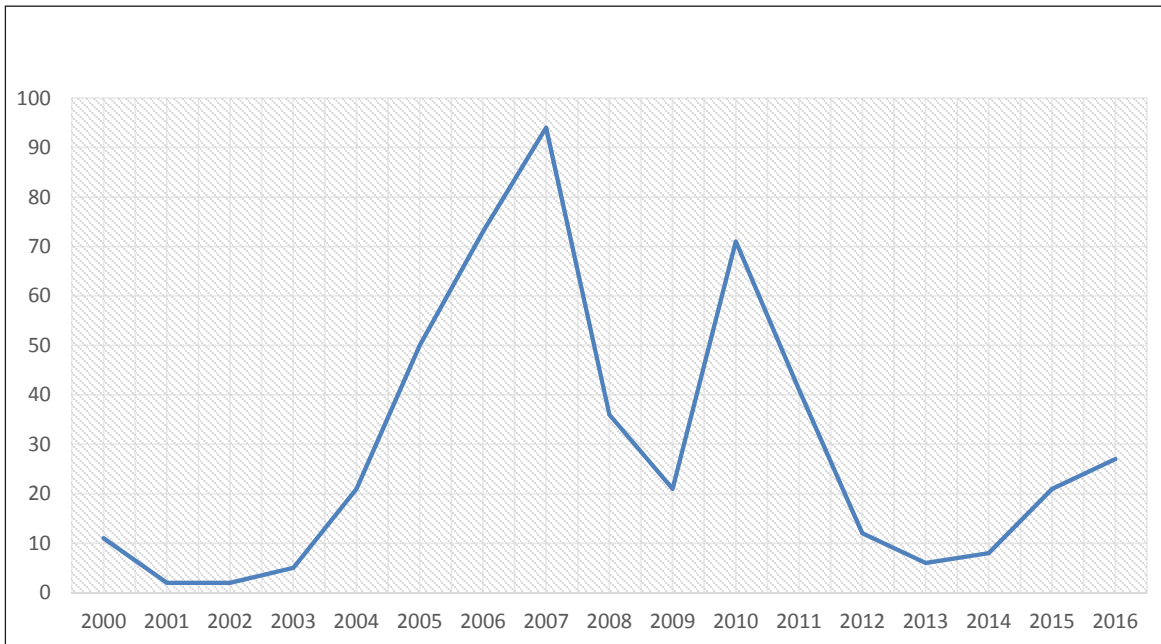


Figure 1: No. of IPOs listed in Indian Stock Market

Figure 2 provides the month wise distribution of IPOs in the Indian stock market. We observed that the maximum numbers of IPOs are observed in the month of February followed by March and December, and October.

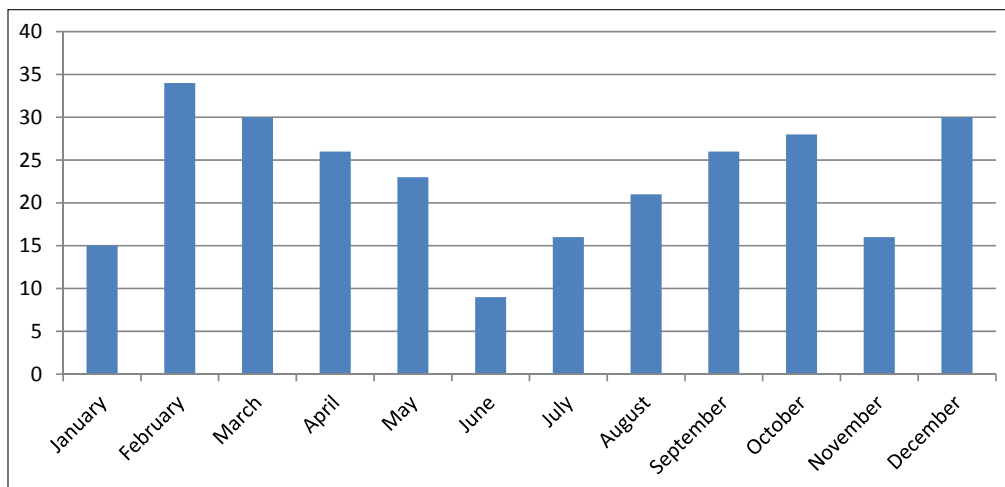


Figure 2: Month-wise listing of IPOs in India from 2001-2016

We noticed that the listing of the IPOs decreased from February to June and increases from July to December. Such monthly distribution is not expected in a fully efficient stock market. Currently, we cannot provide an answer to the distribution observed. The least number of IPOs are observed in the month of June followed by January and November.

Table 1
IPO and Nifty Yearly returns

<i>Time</i>	<i>IPO Return</i>	<i>Nifty Return</i>
2004	104.90%	18.73%
2005	58.18%	45.42%
2006	79.70%	38.58%
2007	166.92%	58.36%
2008	-58.85%	-40.33%
2009	53.13%	98.78%
2010	-39.62%	28.78%
2011	-43%	-15.76%
2012	63.23%	16.10%
2013	310%	5.80%
2014	54%	40.08%
2015	70.02%	-10.81%
2016	17.75%	10.37%
Cumulative Annual Return	20.36%	14.94%

Table 1 presents the yearly IPO and Nifty returns. We compared the returns obtained by an investor who invests in the IPOs and an investor who invests in Nifty. We observed that the returns obtained from IPOs were higher in comparison to the returns obtained Nifty from 2004 to 2007. During the financial crisis of 2008 IPO returns were reduced to 50 percent in comparison to a 40 percent decline in Nifty. The highest IPO returns were observed in 2013 as the companies performed very well in spite a very less number of IPOs were listed in 2013. We observed that the overall IPO return is greater than the Nifty return. The cumulative annual return of IPOs from 2004 to 2016 is 20.36 percent whereas the cumulative annual return of Nifty for the same period is 14.94 percent.

5. CONCLUSION

We examined all the IPOs listed on NSE for the period 2004 to 2016 to analyze the long-term performance of the IPOs. We analyzed the stock returns of all the IPOs on annual basis i.e. we expect the investor to invest the money equally in all the IPOs listed on Indian stock exchange for the year in which the IPO was listed. At the end of the year, we expect the investor to sell all the securities held for that particular year and reinvest the money in the upcoming IPOs. We found that in such manner the cumulative annual returns from IPOs is larger than cumulative annual returns of Nifty for the period under study. We suggest that investing in IPOs for long-term is a profitable strategy.

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