LONG RUN PERFORMANCE OF INDIAN IPOS: SECTOR WISE ANALYSIS

B. ANUDHA
RESEARCH SCHOLAR,
DEPARTMENT OF BUSINESS MANAGEMENT,
OSMANIA UNIVERSITY, HYDERABAD.

ABSTRACT

Most widely view of investors in Initial Public Offerings (IPOs) is underpriced. However, literature including international studies witnessed IPOs underpriced in short run and overpriced in long run. While investor expects only positive returns from their each investment and therefore, knowledge and understanding about IPOs in short and long run is required. This study aimed at long run performance of select Indian IPOs. Total sample of n=50 from population 373 was finalized which are large volume and actively traded on National Stock Exchange (NSE) from the period of 2006 – 2011 was considered.

***Findings:** From the analysis using Wealth relative and BHAR computation it is clear that highest gains observed in Finance - Term Lending Institutions sector among select sectors whereas, highest losses observed in Real Estate, Construction & Contracting sector.*

There is a difference in the calculated values of Wealth relatives and BHAR. However, these values indicate same sign (Positive/Negative) in the results but calculated values of same IPO using BHAR observed with higher value than Wealth Relative.

KEYWORDS: Initial Public Offering, NSE, Overpricing.

INTRODUCTION

Capital markets serves as an intermediary between individuals, government and businesses. It channelizes the surplus funds of investor to the corporate. The Indian Capital Market deals in long term securities of government and corporate. Generally, it has a maturity period of above one year. These helps the two entities to raise money from public (Deodhar & Abhyankar, 2007). It provides incentives to saving and facilitates capital formation by offering suitable rates of interest as the price of capital, particularly to the household sector to invest in financial assets which are more productive than physical assets. In 2014-15, the Indian securities markets rallied strongly with benchmark indices, BSE Sensex and NSE Nifty, registering all-time highs reflecting the confidence of investor in the fundamental strengths and prospects of the Indian economy. Capital market constitutes operation in the new issues and stock market. New issues made by companies form primary market and trading in the existing securities confer to secondary market (Avadhani, 1997).

Initial public offering underpricing, or high IPO return is a phenomenon common to most stock markets, regardless of whether these markets are in developed or emerging economies (Ritter, et al. 1984). A common perception is that underpricing of IPOs is a contradiction to market efficiency and may hurt emerging firms trying to raise capital for expansion. This perception has spawned an extensive literature attempting to explain this apparent financial anomaly. A number of IPOs underpricing have been put forth and tested against the data of various stock markets. According to Ritter (1984), IPO underpricing occurs depending on the period a firm chooses to go public. Rock's model of "underpricing" as an expected equilibrium results are supported by Beaty and Ritter (1986), who in turn, proposed that underpricing is related to ex ante uncertainty. As a follow up to IPOs underpricing, McDonald and Fisher

(1972), Reilly (1978), Dawson (1987), Yong O. (1996), Haque and Musa (2002), and Taufil Mohd K. N. (2007) maintained that there are significant returns to the investor in the short run.

Although hundreds of empirical studies have been carried out and theoretical literature written to enhance people's knowledge towards these issues; yet it is arduous for people to clearly understand the various issues related to IPOs especially with different types of equities in different industries and in different markets.

LITERATURE REVIEW

NSE-ISMR, (2015)[1] Six IPOs listed on the NSE in 2014–2015, witnessed a slowdown in the funds mobilised through the IPO channel; however, there was an increase in the number of IPOs. Compared to the previous year, there was a 90% decline in the resources generated through IPOs. Four issues reported listing gains and as of September 30, 2015, 14 IPOs were issued over a period of 6 months (from April 2015 to September 2015), only three issues had reported listing gains

Shunlin Song, JinSong Tan, Yang Yi, (2014)[2] have studied on "IPO initial returns in China: Underpricing or overvaluation?" Reported the performance of 948 IPOs Chinese firms, from the period of September 19, 2006 to December 31, 2011. It is found that average IPO initial returns are 66%, with underpricing and overvaluation between 14–22% and 44–53%, respectively, depending on the measure used. It also found that while both the initial return and overvaluation are significantly and negatively related to post-IPO long-run stock performance, overvaluation predicts post-IPO performance better than the initial return. The value uncertainty of IPOs is positively related to both underpricing and overvaluation. Both underwriter reputation and pricing regulation are positively related to underpricing. Another observation in the study is that Investor sentiment has a positive effect on overvaluation but has no effect or a negative effect on underpricing. Overall, results suggest that the main reason for extremely high IPO initial returns in China is that first day closing prices are overvalued, and that underpricing and overvaluation have different determinants.

Ekkachai Boonchuaymettaa,Wiparat Chuanrommaneeb, (2013)[3] both studied on "Management of the IPO performance in Thailand" here found that Only IPO allocation and the length of the lock up period are the key determinants of underpricing in Thailand. The length of the lock up period shows a significant positive relationship with underpricing whereas IPO allocation to institutional investor has a significant and negative relationship with underpricing IPO allocation appears to be the strongest factor explaining the level of underpricing. For the control variables, except for the age of the firm, the issue size, the industry, and the hot issue market, significantly influence the initial returns. Underwriter reputation does not have an impact on underpricing.

Kyoko Nagata, (2013)[4] has undertaken a research on "Does earnings management lead to favorable IPO price formation or further underpricing? Evidence from Japan". It shown that firms with aggressive earnings management tend to be more underpriced than other firms, in contrast to the widespread belief that the managers of IPO companies manipulate earnings upwardly to mislead investor to overprice their shares. These findings indicate that cross-company variations in underpricing, atleast some part are driven by differences in the quality of the pre-IPO earnings information. Investor who participates in the first day of trading after issue may push the market price up more for firms with more aggressive earnings management because of their inability to identify firms with overstated earnings.

Hashem Zarafat, (2013)[5] Examined on "The performance of Initial Public Offerings: An empirical study of Bursa Malaysia" The study intended to evaluate the short-term performance of Malaysian IPOs by using the sample of 166 IPOs listed on Bursa Malaysia from January 2004 to December 2007.The analysis shows that First week and first-month returns are 4.1% and 3.1%, respectively. These results are statistically significant and consistent with the findings of other international papers on IPOs.

Dr. Jigna C. Trivedi, (2012)[6] has undertaken a research on "A Study on Short Run and Long Run Analysis of IPOs listed in 2007 to 2011". It is found that in short run out of 217 IPOs 161 IPOs were underpriced, which enabled the investor to get listing gain. 42 IPOs were overpriced and 14 IPOs were aptly price. In long run if investor holds script for 24 months the investor got highest average return, after that the average return showed diminishing trend. After 12 months it showed negative return because of selling pressure in stock market. When annualized return of Nifty was compared with annualized return of IPOs then, IPOs had performed well as compared to Nifty return. Based on secondary data it may be concluded that initial return depended only on offer price quotient and closing return depended on opening returns.

Neeta Jain C Padmavathi, (2012)[7] Studied on "Underpricing of Initial Public Offerings in Indian Capital Market" by taking a sample of 227 bookbuilt IPOs during the period March 2004 to August 2009, The IPOs which are listed on the Bombay Stock Exchange (BSE) and found that the average under- pricing during this period was 28 per cent while the maximum underpricing was around 242 per cent. The maximum return on opening is around 96 per cent and the aver- age is 22 per cent, the maximum pre-IPO leverage is around 89 per cent and the average is 32 per cent, and the maximum subscription is around 160 times of the offered shares and the average is 24 times. The results of the empirical study indicate that underpricing is the result of investor' high willingness to pay (high return on opening), high demand of the issue (high subscription), high firm value (low pre-IPO leverage), and high fluctuations in the market returns (high index volatility). Results show that IPOs of high value firms (with lower is Pre-IPO leverage) are more underpriced in India.

Kumar SSS, (2007)[8] study examines "Short and Long Run Performance of Book Built IPOs in India". The period for study was from 1999 to 2006 with the sample of 156 IPOs that offered their shares through book building route which listed on NSE. It reported that upon listing the IPOs on an average offered positive returns (after adjusting for market movements) to investor and a large part of the closing day returns on the listing day were accounted for by the opening returns. In the long run the IPOs offered positive returns up till twenty four months but subsequently they underperform the market. The excess buy and hold returns from IPOs are not positive both in the short term as well as in the long run. The decrease in underpricing in the short-run and over performance in the long run has decreased probably due to the introduction of book building process as that is an important change that the public issue process has witnessed from the early nineties to the present study.

Saurabh Ghosh, (2005)[9] Studied on "Underpricing of Initial Public Offerings: The Indian Experience". It finds that uncertainty played a role in the perverse underpricing in the Indian IPO market over the last decade. IPOs with large issue size and those that went for subsequent offers underpriced less. Contrary to international evidence, there was also less underpricing during the high-volume boom period than during the slump period in the Indian IPO market. During the boom period, new issues belonging to business groups underpriced more than their stand-alone counterparts to signal their better quality, and par issues recorded more initial returns than did issues with premiums. Industry classification had no significance in explaining underpricing during the entire period (1993-2001) or during any of the subperiods. It appears that the large number of companies that came to the market over the last decade could be broadly classified into two categories. The small-issue-size, stand-alone companies small-issue-size, stand alone companies that had come during the booming IPO market took advantage of investor' optimism and collected as much money as possible from them. Not many of them came back to the public subsequently to raise funds.

Jay r. ritter, ivo it is lch, (2002)[10] examined on "A Review of IPO Activity, Pricing, and Allocations". For an investor buying shares at the first-day closing price and holding them for three years, IPOs returned 22.6 percent. Still, over three years, the average IPO under- performed the CRSP value-weighted market index by 23.4 percent and underperformed seasoned companies with the same market capitalization and book-to-market ratio by 5.1 percent. The evidence of large variation in the number of IPOs suggests that market conditions are the most important factor in the decision to go public.

Madhusoodanan and Thirpalraju, (1997)[11] studied "undepriced in Initial Public Offerings: The Indian Evidence" found the underpricing in India is more in short run, when compared to other countries. Other factors responsible for IPO underpricing are liquidity premium, building loyal share holders, merchant banker, rewarding favoured clients, and interest rate float. IPO underpricing also helps firms if they wish to come out with follow on public offer in the future.

Jay R. Ritter, (1991)[12] studied on "the Long-Run Performance of Initial Public Offerings" The study has documented the time- and industry-dependence of the long-run performance of initial public offerings. Younger companies and companies going public in heavy volume years did even worse than average. In particular, the reason for underperformance in this sample the evidence presented here is many firms go public near the peak of industry-specific fads. With 20-20 hindsight, investor in the 1,526 IPOs in this sample were overoptimistic about the firms' prospects. The finding that initial public offerings underperform, on average, implies that the costs of raising external equity capital are not inordinately high for these firms.

Reena Aggarwal, et al, (1990)[13] undertaken a title on "Fads in the Initial Public Offering Market? The sample consists of 1,598 initial offerings during the period 1977-1987. A significant tendency for investor purchasing in early aftermarket trading and holding for one year to underperform the market is found and there is no evidence of positive abnormal returns to investor purchasing at the initial offering and holding for one year. In fact, there is some evidence of negative returns for such investor. Gains from early price appreciation are more than lost in subsequent price declines. These patterns are robust, appearing in aggregate, over time, and in various cross sections of IPOs. For investor, the results show that IPOs are a profitable investment in the short term, but perform quite poorly over longer periods. IPOs may, however, present profitable short-selling opportunities.

Jay R. Ritter, (1980)[14] studied a research on "Hot Issue" Market of 1980". The study was undertaken with the sample of 1,075 companies in the period of 1977-82, and conducted successful initial public offerings of common stock in the United States and conducted an intensive investigation of the behavior of the initial public offerings that went public during it. This period included the hot issue market of 1980, a 15-month period during which the average initial return was 48.4%, as contrasted with an average initial return of 16.3% during the rest of the 1977-82 periods. It is found that, in the 1977-82 periods, there was a tremendous disparity in the behavior of monthly average initial returns on natural resource issues and on non-natural resource issues. For non-natural resource issues, the autocorrelation of monthly average initial returns is low, and there is hardly any evidence that a hot issue market occurred. Within the non-natural resources sector, there is a positive relation between risk and average initial return, and it is stationary. Furthermore, the high-risk offerings displayed not only higher average initial returns but also a greater variability of initial returns. For natural resource issues, there was also a positive relation between risk and average initial returns, but the relation is highly non- stationary.

NEED FOR THE STUDY

It is a well documented fact that IPOs tend to be generally under-priced, though some issues tend to be overpriced. From the viewpoint of financial research, IPO under-pricing in the sense of abnormal short-term returns on IPOs has been found in nearly every country in the world. This suggests that IPO under-pricing may be the outcome of basic problems of information and uncertainty in the IPO process, and is unlikely to be a figment of institutional peculiarities of any one market. There have also been various studies made to suggest the reasons for such under- pricing. From the investor' point of view, this under-pricing appear to provide the sure and quick profit that most dream about. It then becomes inevitable for most investors to measure the performance of IPOs by long term so as to understand about the IPOs while taking purchase or sell decisions.

OBJECTIVE

This study is important mainly because the Indian stock market has been performing very well from the year 2001 and research wants to show whether this performance is due to the established firms or the performance also gets to the newly issued shares through IPOs. The purpose of this study is to examine the long-run post issue price performance of Indian IPOs according to sector wise listed in National Stock Exchange which were issued from year 2006 to 2011.

HYPOTHESES

H_1: Indian IPOs perform positive abnormal returns in early post-market period

H_2: Indian IPOs perform negative abnormal returns in the long run

RESEARCH METHODOLOGY

The study is based on the secondary data only. Secondary data was collected from the National Stock Exchange of India (NSE).

SAMPLE SELECTION CRITERIA

I. The IPOs listed on NSE and has been traded for up to three years for long run analysis. Available prices on the NSE for the time period considered.
II. Data regarding offer price, listing date, listing price and closing prices subsequently required are available.
III. Long-run analysis: All IPOs, with equity share as an instrument, listed on NSE for the time period from year 2006 to 2011 (6 years) was considered. The total population for long run analysis is μ=373 of which 50 equity stock prices were considered for the study undertaken. The sample, n=50 were actively traded stocks along with large volume on NSE were considered.
IV. In order to analyze long run analyses, one year, two years and three years intervals were considered. In case the share prices were not available for a particular date, a seven days window had been considered and the price available on the nearest date was selected.

COMPUTATION OF LONG-RUN PERFORMANCE

Motivated by existing international practice, we used both Wealth relative (WR) and Buy-and-Hold Abnormal Returns (BHAR) to evaluate long-term performance for a period of 36 months from the date of listing. WR and BHAR were calculated with reference to both issue price and closing price.

WEALTH RELATIVE

The performance of a group of IPOs on using the wealth relatives is evaluated for a specific point of time. Wealth relative of value greater than unity implies that IPOs outperformed the market in that period, while a wealth relative below 1 indicates under-performance. When an IPO outperform the market then that means that it has given higher returns than the market which implies that it was underpriced previously and when it gained it actual worth in the market it outperformed the market in terms of returns. The wealth relatives calculated for different time periods, i.e., 12 months, 24 months, and 36 months time from the listing day.

WRit for a sample of n stocks at time t is calculated using the formula

$$\text{Wealth Relative, } WR_{it} = \frac{1 + \frac{1}{N} \sum_{i=1}^{N} R_{it}}{1 + \frac{1}{N} \sum_{i=1}^{N} R_{mt}} \qquad \text{-------- (I)}$$

Where, Rit is the return of the individual IPO stocks i on day t from the offer day;
Rmt is the market index return for Nifty for the corresponding time period.
The total size of IPOs in the portfolio for discussion is represented by N.

BUY-AND-HOLD ABNORMAL RETURNS (BHAR)

Lyon, Barber and Tsai (1999) argue that BHARs are more important because they precisely measure investor experience, i.e. the buy-and-hold experience. Market-adjusted BHAR has been computed with reference to both offer price and list price. Through this method, we assess the change in the wealth of the investor for the sample IPOs by assuming that the same amount of money is passively invested in the initial day and held for a specified period (excluding initial day) and then compare these with a market benchmark. The market-adjusted BHAR as the excess return for the IPOs over and above the market return is computed as:

$$BHAR_{iT} = \prod_{t=1}^{T} (1+R_{it}) - \prod_{t=1}^{T} (1 + R_{mt}) \qquad \text{---------- (II)}$$

Where, R_{it} is the return of the individual IPO stocks at time t
Rmt is the market index return for
Nifty for the corresponding time t.

A positive BHAR for a specific time period is interpreted as a better performance for the IPOs compared to the benchmark return for the same period. The advantage of this method is that the terminal values of both investment strategies, i.e. investment on a portfolio of IPO and market index, are compared. From the investor point of view, BHAR indicate whether the benefit (positive initial day return) accrued in terms of investing through IPO subscription is extended to the late buyers or is completely exhausted on the listing date. Negative BHARs can be interpreted as IPOs underperforming the market benchmark during the period, while positive BHARs indicate over performance in relation to the market index.

DATA ANALYSIS

From the selected sample of 50 IPOs total eleven sectors were identified. These sectors long rum performance were shown below.

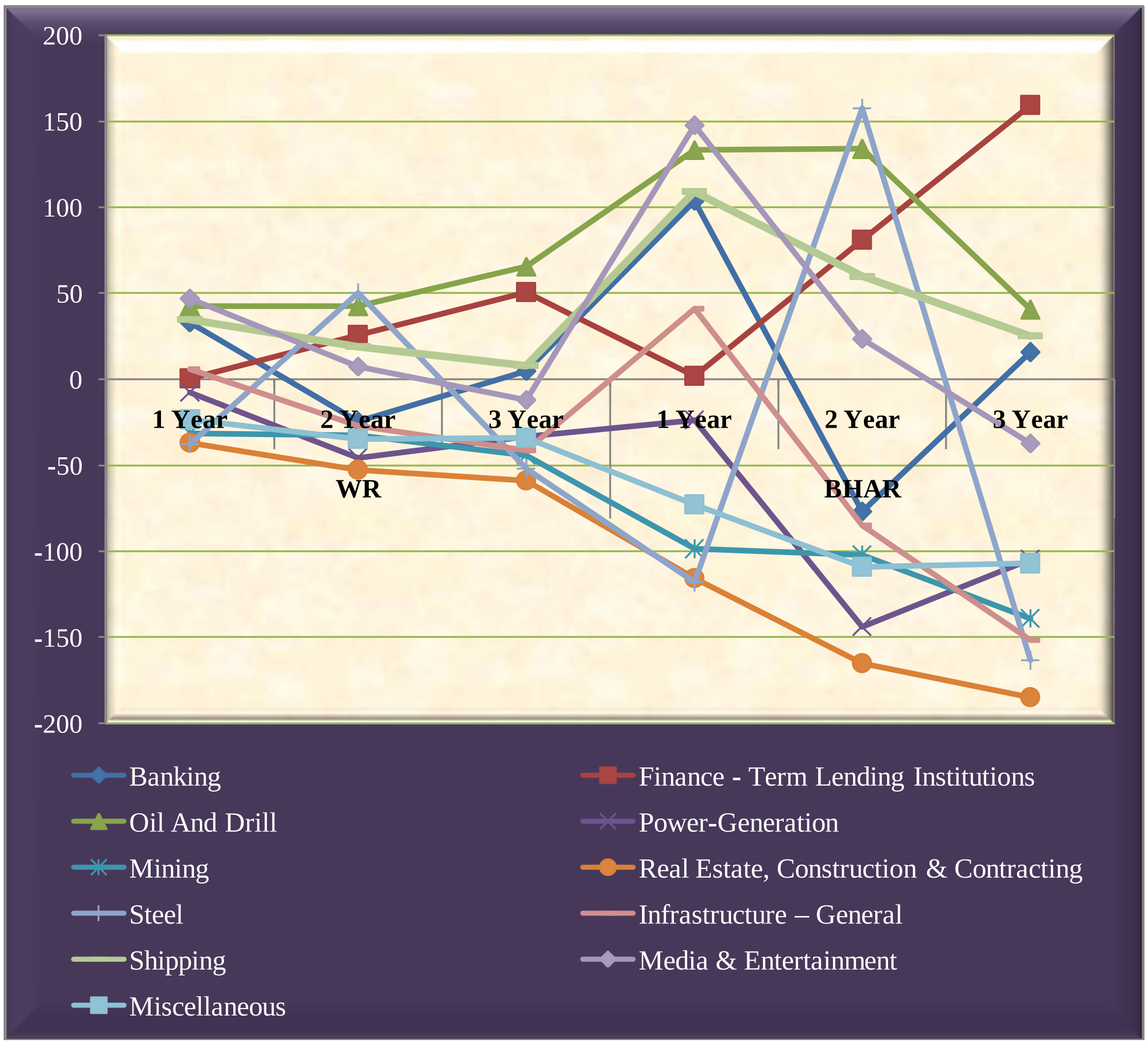
Table no - 1: SECTOR-WISE LONG RUN PERFORMANCE OF IPOs

SECTOR NAME	WR			BHAR		
	1 Year	2 Year	3 Year	1 Year	2 Year	3 Year
Banking	33.04	-24.45	5.01	103.85	-76.84	15.75
Finance - Term Lending Institutions	0.61	25.79	50.78	1.92	81.07	159.59
Oil And Drill	42.49	42.65	38.81	133.56	134.04	40.66
Power-Generation	-7.56	-45.75	-33.23	-23.63	-143.81	-104.46
Mining	-31.36	-32.46	-44.27	-98.57	-102.04	-139.16
Real Estate, Construction & Contracting	-36.75	-52.52	-58.78	-115.52	-165.07	-184.74
Steel	-37.53	50.2	-51.99	-117.95	157.78	-163.41
Infrastructure – General	6.1	-27.01	-41.25	41.05	-84.91	-151.54
Shipping	34.75	19.075	8.03	109.22	59.93	25.23
Media & Entertainment	47.06	7.46	-11.86	147.895	23.45	-37.27
Various sectors	-23.18	-34.70	-34.04	-72.86	-109.08	-107.00
MEAN	**2.51**	**-6.51**	**-13.25**	**9.90**	**-20.49**	**-58.76**
STANDARD DEVIATION	**32.59**	**36.59**	**41.57**	**102.89**	**115.02**	**108.13**

Source: NSE

From the selected sample eleven sectors were identified. The above table no.1 indicates their 3 years performance using Wealth relative and BHAR. There is a mixed results observed in the performance of select sectors. Well, there is a commonality observed in respective sector's IPOs performance results using Wealth relative and BHAR formulae including their sign. From these sectors only four sectors such as: Banking sector with 5.01 percent and 15.75 percent, Finance - Term Lending Institutions sector with 50.78 percent and 159.59 percent, Oil and Drill sector with 38.81 and 40.66 percent and Shipping sector with 8.03 and 35.23 percent using WR and BHAR respectively. Whereas, other two sectors: Infrastructure – General and Media & Entertainment initiated with positive results but till the end of third year there performance falls into negative returns. Remaining five sectors: Power-Generation, Mining, Real Estate, Construction & Contracting, Steel and Various sectors were continuously performed negatively from first year to third year. This first year performance ranged from -7.56 to -37.53 percent using Wealth relative whereas, from -23.63 percent to -117.95 percent using BHAR. By the end of third year these negative returns were fluctuated from -33.23 percent to -51.99 percent using WR. Whereas, from -104.46 percent to -163.41 percent using BHAR. These values indicate that these sectors were continuously shown only negative performance. Finally, highest gains observed in Finance - Term Lending Institutions sector among select sectors whereas, highest losses observed in Real Estate, Construction & Contracting sector.

Chart No – 1: SECTOR-WISE LONG RUN PERFORMANCE OF IPOs



Source: NSE

FINDINGS

1. From the analyses using Wealth relative and BHAR computation it is clear that highest gains observed in Finance - Term Lending Institutions sector among select sectors whereas, highest losses observed in Real Estate, Construction & Contracting sector.

2. Only three sectors namely, Finance - Term Lending Institutions, Oil and Drill and Shipping observed with continuous gains from first year to third year. Whereas, Power-Generation, Mining, Real Estate, Construction & Contracting, Steel and various sectors were continuously performed negatively. However, mixed results were observed in Banking, Infrastructure – General and Media & Entertainment sectors.
3. There is a difference in the calculated values of Wealth relatives and BHAR. However, these values indicate same sign (Positive/Negative) in the results but calculated values of same IPO using BHAR observed with higher value than Wealth Relative.

CONCLUSION

Results indicate that there is a mixed performance of select Indian IPOs in the sector wise analysis. Overall performance of all sectors shows positive returns in the first year with 2.51 percent which indicates that investors purchasing IPOs gain positive abnormal returns in the early after market period (Reena Aggarwal & Pietra Rivoli, 1990). Therefore, we accept hypothesis H1. Gradually IPOs were shown performing negatively with -6.51 to -13.25 percent using WR and -20.49 to -58.76 percent in subsequent second and third years respectively (Jigna C. & Trivedi, 2012; SSS. Kumar, 2007). Thus, we accept hypothesis H_2.

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