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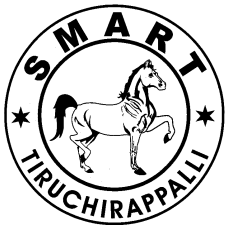


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# PRICE EFICIENCY OF INITIAL PUBLIC OFFERINGS IN INDIA

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***Abstract***

*The new issue market deals with the new securities for the first time. The success of new issue market also depends on pricing of IPOs. There can be either underpricing or overpricing. Now a days the after market performance of IPOs has received increased attention. The present paper is carried out to evaluate price efficiency of IPOs in India and to study factors which play important role in IPOs. This study found that among new issues of all sectors taken for this study, the issues of pharmaceutical industry have generally realized positive returns expect one or two months.*

## Introduction

The financial market facilitates the reallocation of idle savings to productive entrepreneurs. The savings is linked to investments by a variety of intermediaries through a range of complex financial products called "securities". As defined in the Securities Contracts (Regulation) Act, 1956, the term 'securities' include shares, bonds, scrips, stocks or other marketable securities of like nature in or of any incorporate company or body corporate, Government securities, derivatives of securities, units of collective investment scheme, interest and rights in securities, security receipt or any other instrument so declared by the Central Government. The securities market has essentially three categories of participants, namely, the issuers of securities, investors in securities, and the intermediaries.

The new issue market deals with the new securities which were not previously available to the investing public i.e. the securities that are offered to the investing public for the first time. It helps or facilitates direct conversion of savings into corporate investment or diversion of resources from the rest of the system to the corporate sector. The new issue market plays an important role in mobilizing the funds for productive purpose, an important requisite of economic growth. The savers are individuals, commercial banks, insurance company etc. NIM can be classified as:

a) Market where firms go to the public for the first time through initial public offering (IPO).

b) Market where firms which are already in trade raise additional capital through seasoned equity offering (SEO).

The main function of new issue market can be divided into triple service functions, namely origination, underwriting and distribution.

**1. Origination:** It refers to the work of investigation, analysis and processing of new project proposals. Origination starts before an issue is actually floated in the market.

**2. Underwriting:** It is an agreement whereby the underwriter promises to subscribe to a specified number of shares or debentures or a specified amount of stock in the event of public not subscribing to the issue.

**3. Distribution:** It is the function of sale of securities to ultimate investors. This service is performed by brokers and agents who maintain regular and direct contact with the ultimate investors.

**Method of Floating New Issues**

The various methods used in the floatation of securities in the new issue market include public issues, offer for sale, placement, and rights issues.

**1) Public issues:** The issuing company directly offers to the general public/institutions a fixed number of shares at a stated price through a prospectus. This is the most popular method followed by the joint stock companies to raise capital through the issue of securities.

**2) Offer for sale:** It involves outright sale of securities through the intermediary of issue houses or share brokers. In other words, the shares are not offered to the public directly. This method consists of two stages. The first stage is a direct sale by the issuing company to the Issue House and brokers at an agreed price. In the second stage, the intermediaries resell the above securities to the ultimate investors. The advantage of this method is that the issuing company is relieved from the problem of printing and advertisement of prospectus and making allotment of shares.

**3) Placement method:** Under placement method, the Issue Houses or brokers buy the securities outright with the intention of placing them with their clients afterwards.

**4) Rights Issue :** Rights issue is a method of raising funds in the market by an existing company. A rights means an option to buy certain securities at a certain privileged price within a certain specified period. Shares, so offered to the existing shareholders, are called rights shares.

**Significance of Pricing of IPOs**

As far as pricing is concerned, there can be either under pricing or overpricing. Under pricing is said to have happened when the stock has been offered at a price below its intrinsic worth. If the stock has been offered at a price above its intrinsic worth, it is called overpricing. The available literature shows that under pricing of IPOs appears to be a universal phenomenon, though the degree of underpricing varies widely across countries. The new issues are underpriced both for offensive and defensive reasons. It is similar to probabilistic insurance, where one pays a certain cost to reduce the probability of an undesirable event without eliminating it altogether. It minimizes the chance of undersubscription, thereby reducing the damage of reputation of the issuing company especially in a cold market and increases the chance of oversubscription by alluring the people during a boom period. Secondly, the merchant bankers who lead manage the issues also advise a price below its value in order to ensure success of the issues and protect their prestige.

Thirdly, an underpriced IPO receives good response and also gives short-run superior returns to the successful applicants. It transfers larger Net Present Value of the project to the new shareholder, which in turn may prompt the issuer to abandon the project.

Fourthly, underpricing increases the cost of capital. A high level of underpricing is detrimental to the issues and to the investors in the long run. For the issuers, it increases the cost of capital and therefore some good projects which are unable to offer such high returns, may get rejected in the market. Though the investors who are allotted the shares may gain in the short run, the underpricing distorts the wealth distribution. Further, consistent underpricing increases the competition among the investors to get the allotment of IPOs, which are most underpriced, and in this process, the response to other issues is affected.

The overpricing is not normally preferred by the company that goes for public issues, unless otherwise it has good financial strength and popularity. There is every possibility of undersubscription leading to non-availability / non-mobilization of funds for starting up project as planned. Therefore the company should take all possible care to study market situation before making IPOs. Financial economists offer the following general explanations for the under pricing.

**i) Winner's curse:** Investors may be divided into two categories, viz 'informed' and 'uninformed'. In general, financial institutions are likely to be informed and individual investors uninformed. Individual investors tend to be victims of the winner's curse. When they receive allotment of shares they have applied for in an IPO, it may be because the shares are overpriced and informed investors have in general stayed away from the issue. Hence the uninformed investors need an incentive in the form of substantial under pricing of the IPOs to remain in the market.

**ii)Bait for future offerings:** A company making an IPO would like the investors to have a rewarding experience. Satisfied investors develop a loyalty towards the company. This helps the company in raising more capital at a higher price in future.

**iii)Informational Asymmetry:**The merchant bankers know the market better than the issuing company. They may exploit their superior knowledge to underprice issues. Their superior knowledge makes their job easier and earn the goodwill of investors.

**iv)Political goals:**Companies may deliberately underprice their issues and allot them to people in power.

**v)Regulatory constraints:** Sometimes regulatory guidelines lead to underpricing. During the days of the Controller of Capital Issues, the issue price in India was governed by a very conservative formula. Broadly, the formula determined the issue price as the arithmetic average of the net asset value per share and the earnings' capitalization value per share.

**Statement of the Problem**

In an efficient market, if the prices of IPO are set at their intrinsic value, the firm may be able to raise the quantum of funds as it planned. The underpricing would result in the flow of too little capital into the firm. This would be reflected in high after market returns for IPO investor consequent upon price discovery in the secondary market. Hence the after market performance of Initial Public Offerings (IPOs) has received increased attention. Against this background, the present study entitled – **"Price Efficiency of IPO's "** is carried out to know whether market is efficient or not .

**Objectives of the Study**

The present study is carried out to evaluate price efficiency of IPOs in India and to study factors which play important role in IPOs.

**Period of the Study:**

The period of the present study covers five years from 2000 to 2004.

**Methodology of the Study**

**Sample Size:** The present study on price efficiency of IPOs was undertaken with 50 companies. There were totally 60 companies which have employed IPOs during the study period from 2000-01 to 2004-05. For the purpose of this study, it was decided to analyze the price efficiency of IPOs employed by all companies in four important sectors, namely, Banking, Pharmaceutical, Information & Technology and Entertainment Industries. The reason for

selecting these four sectors for this study is that these sectors have made more number of public issues during the study period. Therefore it is proper to study the price efficiency of IPOs in Banking, Pharmaceuticals, Information & Technology, and Entertainment Industries. While selecting sample companies, due care was taken about listing requirements. Listed companies in the NSE alone were chosen. In the above four sectors chosen for this study, there were totally 50 companies as detailed below.

| S.No. | Sector | Number of companies |
|---|---|---|
| 1. | Banking sector | 9 |
| 2. | Pharmaceutical sector | 7 |
| 3. | Entertainment sector | 14 |
| 4. | Information & Technology sector | 20 |
| | Total | 50 |

The price efficiency of IPOs was evaluated with the help of market adjusted returns (MAR). In order to calculate MAR, market returns was adjusted with raw returns. For this purpose, S&P CNX Nifty Index was taken from NSE website.

**Data Collection**

The main data-source for this study are websites such as www.nse.india.com, www.sebi.gov.in etc, journals, books and prowess database (2004-2005) of CMIE.

**Tools Used**

In order to analyse the data, the following tools were used.

The returns on a stock is calculated by using the following formula: (As used by Mr. Narasimhan. M.S.[1])

$$R_{iL} = \left\{ \left( P_{iL} / P_{io} \right) - 1 \right\} \times 100$$

$R_{iL}$ = Returns on stock i from offer to listing day.

$P_{iL}$ = Price of stock i on listing day.

$P_{iO}$ = price of stock i on offer day.

The returns calculated above gives an idea about the appreciation in value of the stock. However, this appreciation could be on account of the sentiment prevalent in the secondary market during the study period. In order to remove the effect of the market sentiment, the returns on the market is calculated and deducted from the raw returns to arrive at the market-adjusted returns of the IPO.

The formula for calculating the returns on the market and the market – adjusted returns are the following :

$$R_{mL} = \left\{ \left( P_{mL} / P_{mO} \right) - 1 \right\} \times 100$$

Where

$R_{mL}$ = Returns on the market from offer to listing day

$P_{mL}$ = Market index on listing day.

$P_{mO}$ = Market index on offer day.

MARi = $R_{il} - R_{ml}$

Where MARi = Market adjusted returns for stock i.

The situation, in which the returns (raw/ market – adjusted) is positive, is said to be underpricing, i.e. the stock has been offered at a price below its intrinsic worth. If the returns is negative, it is a case of overpricing.

**Trends in Public Issues in India**

Table-I exhibits funds raised by corporate sector directly from the primary market for the last 11 years ( 1993-94 to 2003- 04). It can be observed from Table-1 that the role of primary market as a provider of funds to the corporate sector has significantly increased. The number of public issues in primary market has increased with fluctuations from 692 in the year 1993-1994 to 717 in the year 1996-1997. However, number of new issues has decreased from 52 in 1997-1998 to 6 in 2002-2003.In the year 2003-2004, the number of issues has increased considerably to 21. The amount mobilized per issues has increased from 11.36 crores to 649.62 crores from the year 1993-1994 to 2003-2004 respectively.

**Analysis of the Study**

It is important to note here that as far as indian capital market is concerned, much of the public issues are either underpriced or overpriced which indicates that pricing mechanism is not efficient. There is a variation between offer price and listing price. To know the efficiency of price, the market adjusted returns is calculated and used. As stated earlier, the positive market adjusted returns indicates underpricing while negative market adjusted returns indicates overpricing. The analysis made in this study is arranged as detailed below:

1. Initial Market Returns.
   a) Banking sector,
   b) Pharmaceutical sector,
   c) Information and Technology sector, and
   d) Entertainment sector.
2. After Market Returns.
   a) Banking Sector,
   b) Pharmaceutical sector,
   c) Information and Technology Sector, and
   d) Entertainment Sector.

**1. Initial Market Returns**

Initial market returns is the returns on the date of listing. It is calculated by comparing the price quoted in the market at the end of the first day of trading with the offer or issue price. If the returns happens to be positive, i.e. listing price is greater than the offer price, then it indicates underpricing. On the contrary, if the listing price is lesser than offer price, it indicates overpricing. Both underpricing and overpricing are not advisable and healthy.

Table-II shows the initial market returns of IPOs of Banking, Pharmaceutical, Information & Technology, and Entertainment Industries during the study period from 2000-01 to 2004-05. The mean raw returns and market adjusted returns are also given in the above Table. The banking sector has received negative value for all new issues listed from 2000-01 to 2002-03. This indicates that all new issues listed by banking sector during study period witnessed overpricing. The remaining years evidenced underpricing i.e. got positive values of both raw returns and market adjusted returns. With regard to Pharmaceutical Sector, it has witnessed overpricing during the first three years of study period i.e. 2000-01, 20002-03 & 2003-04. In the case of entertainment sector, new issues listed during 2001-01 and 2002-03 have

witnessed overpricing and all issues listed during last three years (2002-03,2003-04 and 2004-05) have realized underpricing. As far as Information Sector is concerned, issues listed during the year 2001-02, have witnessed overpricing while issues listed during remaining period witnessed underpricing. In short, it could be said that there was high level of underpricing of IPOs in general and in particular in the case of IT sector for the issues during 2000-2004.

Pricing of new issues is free now because CCI guidelines have been replaced by SEBI guidelines which uphold the twin objectives of investor protection and orderly growth of capital market. To avoid overpricing or underpricing, every company which goes for public issues can adopt modern pricing techniques like book building, auction model and any other method approved by SEBI. The price of new issues may respond to investors' expectation (fair rate of returns on the investment).

**2) After Market Returns**

After market returns is the returns earned after the date of listing. In this study an attempt is made to calculate after market returns in the short run i.e. a period of 12 months. There is a general presumption that those companies, which are underpriced, would realize high returns for investors consequent upon price discovery in secondary market. The negative after market returns would indicate fall in the prices of public issue. Conversely the positive returns would imply a rise in price of public issues.

Table-III exhibits after market returns of banking sector. The new issues listed during 2000-01,2001-02, 2003-04 and 2004-05 have lost their value from the first month of listing. But the new issues listed during the year 2002-03 have realized positive returns starting from first month onwards. It is depicted in chart –1. The reasons for both positive or negative returns were due to general economic condition prevailing during the years issues were made. During boom period, index may witness increasing trend. As a result, stock market is in bullish trend. The issues listed during the boom period would normally realize positive returns and vice-versa. Secondly, it may be partly due to the reputation, financial standing of issuing companies and industry prospectus.

The raw returns and market adjusted returns of Pharmaceutical Industry is shown in Table-IV. All new issues listed during the study period 2000-01 to 2004-05 have witnessed positive returns from first month onwards, except in one or two months. This clearly implies that the issues by Pharmaceutical industry have received upward price movement. This is clearly shown in chart – 2.

Table-V reveals after market returns of IT Industry from 2000-01 to 2003-04. The raw returns and market adjusted returns during the period 2000-01 & 2003-04 turned negative from the first month of listing onwards. Reverse is the case for all new issues listed during 2001-02 and 2004-05. This clearly indicates that the price of the issues has increased from the date of listing. This is diagrammatically represented in chart - 3.

The raw returns and market adjusted after market returns of Entertainment Industry is given in Table-VI. For all the new issues listed during 2000-01, 2002-03 and 2004-05, there was negative returns starting from the first month of listing in the NSE. This is clearly shown in chart - 4.

Comparing all new issues of all sectors taken for this study, the issues of Pharmaceutical Industry have generally realized positive returns excect one or two months. To conclude, it was generally observed that almost all new issues of four sectors taken for this study have

realized negative returns starting from the first month of listing. This facilitated the stabilization of price. In order to stabilize price in the post-listing period, the SEBI has permitted companies to adopt the book building route and use 15% green shoe option.

## Conclusion

Pricing initial public offerings is a challenging task to the issuers, merchant bankers and also to the investors. The level of underpricing of IPOs in India is alarming. If the issues are priced correctly, the demand and supply will be equal and thus the issue will get one time subscription. In pricing decision, the issuers need to take into account the chances of the issue getting poor response. The IPOs should be priced such that it receives neither over subscription of several times nor under subscription. As several other factors affect the response to public issues in addition to pricing, it is necessary for the issuer to understand the relationship between the factors that normally influence the investors in their investment decision and level of subscription.

**Reference**


1. Narashiman,M.S. L.V Ramana and Raghavendra, (1996), Initial Public Offerings in India: A study on Their Performance, Working Paper No .2, Institute for Financial Management and Research.
2. Indian Securities Market- A Review (2004), National Stock Exchange India Ltd, Mumbai.
3. www.nseindia.com
4. www.sebi.com
5. Varshney.P.N and Mittal.D.K(2000), Indian Financial System, Sultan Chand & Sons, New Delhi.
6. Gurusamy.S,(2004) Financial Markets and Institutions, Vijay Nicole Imprints Private Limited, Chennai.


**Table -1**

**Trends in Public Issues**

| YEARS | NUMBER OF ISSUES | AMOUNT MOBOLISED (Rs crore) | |
|---|---|---|---|
| | | Total | Per issues |
| 1993-1994 | 692 | 7864 | 11.36 |
| 1994-1995 | 1239 | 16572 | 13.38 |
| 1995-1996 | 1357 | 10924 | 8.05 |
| 1996-1997 | 717 | 5959 | 8.31 |
| 1997-1998 | 52 | 1048 | 20.15 |
| 1998-1999 | 18 | 404 | 22.44 |
| 1999-2000 | 51 | 2719 | 53.31 |
| 2000-2001 | 114 | 2722 | 23.88 |
| 2001-2002 | 7 | 1202 | 171.71 |
| 2002-2003 | 6 | 1039 | 173.17 |
| 2003-2004 | 21 | 13642 | 649.62 |

Source : RBI

## Table-II

## INITIAL LISTING RETURNS

| SECTOR | 2000-2001 | | 2001-2002 | | 2002-2003 | | 2003-2004 | | 2004-2005 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | R.R | MKT-A.R | R.R | MAR | R.R | MAR | R.R | M.A.R | R.R | M.A.R |
| | | | | | | | | | | |
| BANKING SECTOR | -1% | -11.54% | -8% | -0.17% | 15.84% | 13.01% | 63.33% | 56.76% | 71.09% | 71.4% |
| PHARMACEUTICAL SECTOR | -43.35% | -39.46% | - | - | -5.46% | -4.86% | 25.89% | -4.06% | 34.89% | 29.61% |
| ENTERTAINMENT SECTOR | 2409.77% | 2406.63% | -14.71% | -2.01% | -1.44% | -10.91% | 50.49% | 44.02% | 57.86% | 69.41% |
| INFORMATION SECTOR | 92.91% | 94.61% | 155.4% | -37.53% | - | - | 11% | 0.41% | 13.56% | 15.03% |

**Source**: www.nseindia.com

## Table -III

## RAW RETURNS AND MARKET- ADJUSTED AFTER MARKET RETURNS OF BANKING INDUSTRY

| | 2000-2001 | | 2001-2002 | | 2002-2003 | | 2003-2004 | | 2004-2005 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MEAN | | MEAN | | MEAN | | MEAN | | MEAN | |
| | R.R | M.A.R | R.R | M.A.R | R.R | M.A.R | R.R | M.A.R | R.R | M.A.R |
| Listing return | -1% | -11.54% | -8% | -0.17% | 15.84% | 13.01% | 63.33% | 56.76% | 71.09% | 71.4% |
| Listing day to | | | | | | | | | | |
| One months | -9.09% | -4.1% | -2.52% | -6.83% | 16.27% | 17.01% | -6.12% | -12.11% | -5.21% | 8.71% |
| Two months | -9.60% | -13.14% | -8.25% | -4.59% | 29.50% | 29.85% | -9.18% | -20.75% | -25.16% | -7.22% |
| Three months | -2.52% | -8.25% | -10.77% | -0.60% | 28.12% | 28.45% | 21.17% | -10.11% | -36.21% | -20.91% |
| Four months | -20.7% | 3.62% | -11.39% | -2.83% | 47.9% | 52.30% | 18.11% | -7.09% | -38.75% | -26.18% |
| Five months | -18.18% | -2.75% | -14.39% | -4.26% | 57.63% | 62.36% | 16.33% | -7.9% | -36.35% | -27.63% |
| Six months | -8.08% | 8.56% | -17.95% | 0.31% | 66.01% | 69.37% | 23.47% | 0.07% | -35.32% | -32.53% |
| Seven months | -19.19% | -1.18% | -18.64% | -4.11% | 64.46% | 67.04% | 43.62% | 30.48% | -37.10% | -35.21% |
| Eight months | -18.69% | 2.82% | -17.57% | -5.11% | 90.53% | 76.06% | 6.63% | 3.55% | -21.60% | -14.44% |
| Nine months | -22.22% | 6.03% | -15.53% | -0.27% | 85.02% | 69.72% | -3.06% | 6.46% | -18.04% | -13.94% |
| Ten months | -22.73% | 6.36% | -10.25% | 3.39% | 123.94% | 103.06% | -0.26% | -19.67% | -14.99% | -28.26% |
| Eleven months | -23.74% | 2.02% | -10.63% | -5.74% | 132.87% | 104.38% | -4.59% | -14.37% | | |
| Twelve months | -23.23% | -4.36% | -7.84% | -0.9% | 140.06% | 102.67% | 1.53 | -19.49% | | |

**Source** : Compiled from NSE website.

**Note** : Missing figures in the 2004-05 columns are due to inadequate data

## Table -IV

## RAW RETURNS MARKET - ADJUSTED AFTER MARKET RETURNS OF PHARMACEUTICAL INDUSTRY

| | 2000-2001 | | 2001-2002 | | 2002-2003 | | 2003-2004 | | 2004-2005 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MEAN | | MEAN | | MEAN | | MEAN | | MEAN | |
| | R.R | M.A.R | R.R | M.A.R | R.R | M.A.R | R.R | M.A.R | R.R | M.A.R |
| Listing return | -43.35% | -39.46% | - | - | -5.46% | -4.86% | 25.89% | -4.06% | 34.89% | 29.61% |
| Listing day to | | | | | | | | | | |
| one month | -18.89% | 22.25% | - | - | -9.67% | -1.7% | 40.771% | -6.38% | 8.64% | 9.07% |
| Two months | 20.62% | 20.28% | - | - | 2.00% | 8.82% | 64.00% | -6.15% | -17.85% | -5.74% |
| Three months | 14.09% | 17.10% | - | - | 13.20% | 20.89% | 54.38% | 3.62% | 8.66% | 10.62% |
| Four months | 6.50% | 11.05% | - | - | 18.55% | 29.98% | 199.52% | 14.50% | -8.96% | 3.40% |
| Five months | -2.09 | 8.02% | - | - | 46.30% | 47.07% | 211.12% | 21.70% | -14.51% | 0.25% |
| Six months | -12.32% | 1.53% | - | - | 66.79% | 62.95% | 393.56% | 35.24% | -10.04% | -2.49% |
| Seven months | -4.39% | 4.47% | - | - | 69.34% | 70.44% | 414.01% | 50.13% | -6.08% | 0.25% |
| Eight months | -3.27% | 5.42% | - | - | 70.51% | 69.98% | 417.31% | 58.08% | -8.94% | -10.80% |
| Nine months | -2.76% | 2.36% | - | - | 85.41% | 90.62% | 628.09% | 67.45% | 3.74% | 0.46 |
| Ten months | -15.62% | -5.10% | - | - | 79.09% | 91.22% | 743.26% | 91.77% | 3.49% | -3.97 |
| Eleven months | -33.69% | -16.8% | - | - | 70.31% | 75.13% | 850.61% | 85.83% | 20.86% | 8.8% |
| Twelve months | -39.04% | -17.53% | - | - | 94.27% | 87.87% | 761.25% | 78.62% | 74.26% | 68.74% |

Source : www.nseindia.com

Note : No issue listed during 2001-02

## Table -V

## RAW RETURNS AND MARKET - ADJUSTED AFTER MARKET RETURNS OF INFORMATION AND TECHNOLOGY INDUSTRY

| | 2000-2001 | | 2001-2002 | | 2002-2003 | | 2003-2004 | | 2004-2005 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MEAN | | MEAN | | MEAN | | MEAN | | MEAN | |
| | R.R | M.A.R | R.R | M.A.R | R.R | M.A.R | R.R | M.A.R | R.R | M.A.R |
| Listing return | 92.91% | 94.16% | 155.4% | -37.53% | | | 11% | 0.41% | 13.56% | 15.03% |
| Listing day to | | | | | | | | | | |
| One month | -16.97% | -17.77% | 293.3% | 81.83% | | | -13.5% | -20.54% | 1.68% | 4.85% |
| Two months | -34.08% | -30.72% | 248.40% | 53.82% | | | -9.91% | -23.89% | 2.91% | 9.75% |
| Three months | -34.87% | -32.54% | 302% | 92.76% | | | -5.41% | -37.6% | -4.44% | 9.80% |
| Four months | -49.74% | -41.57% | 250% | 60.47% | | | -19.82% | -47.83% | 0.94% | 11.88% |
| Five months | -52.07% | -42.66% | 229% | 51.43% | | | -31.53% | -58.87% | 11.94% | 20.09% |
| Six months | -52.43% | -40.02% | 314% | 112.55% | | | -18.92% | -42.42% | 21.08% | 27.04% |
| Seven months | -57.41% | -43.59% | 295% | 95.71% | | | -22.07% | -48.81% | 27.03% | 26.48% |
| Eight months | -58.98% | -45.01% | 314% | 97.99% | | | -28.38% | -34.85% | 32.70% | 28.94% |
| Nine months | -65.36% | -46.77% | 63.9% | -60.92% | | | -29.28% | -35.53% | 45.32% | 35.33% |
| Ten months | -66.52% | -46.97% | 86.85% | -50.18% | | | -14.86% | -30.05% | 61.86% | 50.99% |
| Eleven months | -73.66% | -54.67% | 63.9% | -68.35% | | | -13.51% | -28.42% | 88.89% | 75.97% |
| Twelve months | -73.44% | -57.55% | 86.85% | -15.31% | | | 11.71% | -11.46% | 65.47% | 50.13% |

Source : www.nseindia.com

**Note : No issue listed during 2002-03**

## Table -VI

## RAW RETURNS AND MARKET - ADJUSTED AFTER MARKET RETURNS OF ENTERTAINMENT INDUSTRY

| | 2000-2001 | | 2001-2002 | | 2002-2003 | | 2003-2004 | | 2004-2005 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MEAN | | MEAN | | MEAN | | MEAN | | MEAN | |
| | R.R | M.A.R | R.R | M.A.R | R.R | M.A.R | R.R | M.A.R | R.R | M.A.R |
| Listing return | 2406.63 | 2409.77% | -14.71% | -2.01% | -1.44% | -10.91% | 50.59% | 44.02% | 57.86% | 69.41% |
| Listing day to | | | | | | | | | | |
| One month | -10.41% | -14.01% | -6.74% | 9.20% | -5.86% | -5.56% | 9.75% | 6.14% | -11.33% | -4.14% |
| Two months | -18.25% | -17.27% | -22.91% | -2.53% | -15.45% | -11.71% | 0.38% | 0.45% | -11.31% | -9.13% |
| Three months | -25.22% | -29.68% | -50.00% | -14.32% | -21.76% | -10.88% | 8.78% | 2.22% | -14.73% | -14.89% |
| Four months | -40.45% | -45.80% | -47.00% | -11.06% | -21.08% | -12.73% | 3.89% | -1.68% | -7.69% | -15.59% |
| Five months | -42.15% | -51.14% | -37.91% | -12.48% | -28.75% | -17.53% | -7.91% | -7.74% | 0.70% | -11.85% |
| Six months | -39.98% | -53.36% | -22.23% | -16.72% | -27.28% | -10.77% | -10.75% | -16.19% | 12.47% | -4.06% |
| Seven months | -34.68% | -51.81% | -34.54% | -16.79% | -22.66% | -6.52% | -18.51% | -21.8% | 23.13% | -2.1% |
| Eight months | -37.55% | -55.28% | -40.60% | -19.72% | -32.81% | -15.66% | -14.34% | -21.18% | 41.63% | 28.71% |
| Nine months | -35.12% | -54.25% | -62.14% | -26.95% | -48.48% | -33.47% | 3.8% | -8.68% | 76.42% | 48.48% |
| Ten months | -35.98% | -59.64% | -50.17% | -22.00% | -43.41% | -35.35% | 1.91% | -21.42% | | |
| Eleven months | -33.71% | -55.91% | -35.96% | -13.37% | -51.75% | -44.39% | 4.89% | -18.87% | | |
| Twelve months | -34.04% | -53.40% | -55.06% | -14.69% | -34.84% | -25.16% | 4.55% | -23.06% | | |

Source: www.nseindia.com

Note: Missing figures in the 2004-05 columns are due to inadequate data

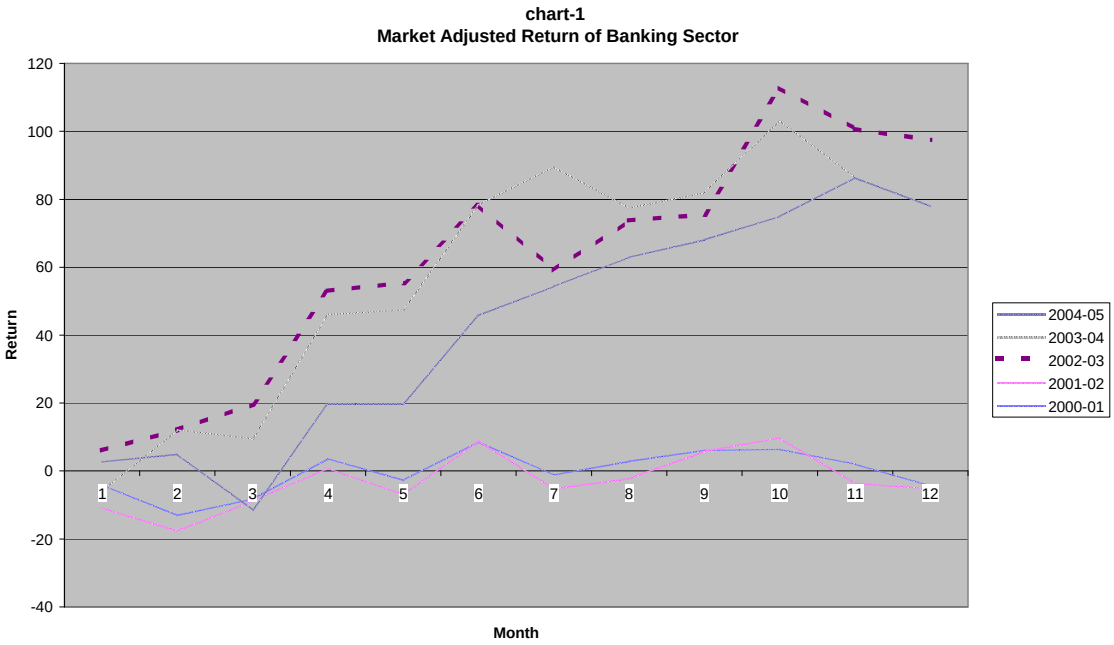

**Chart -2**
**Market Adjusted Return of Pharmaceutical Sector**

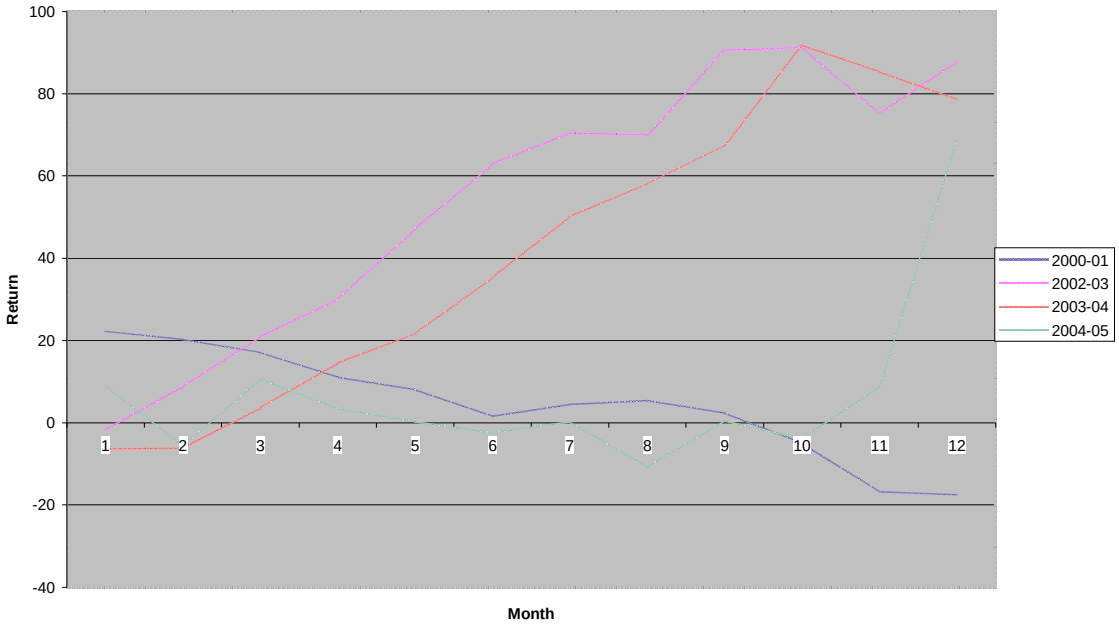


**Chart -3**
**Market Adjusted Return Of Information and Technology Sector**

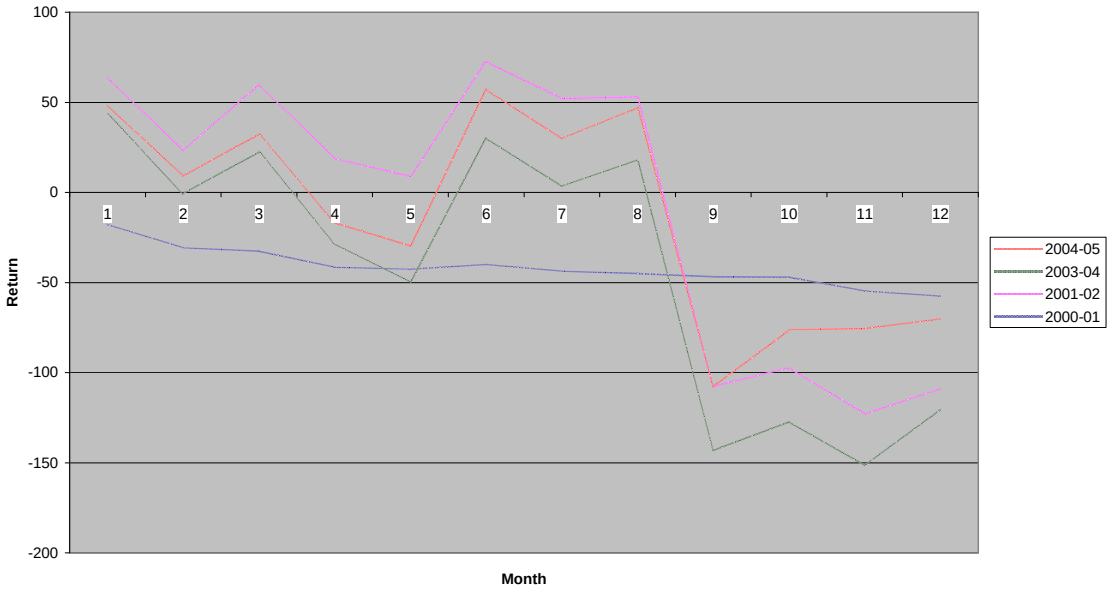

**Chart - 4**
**Market Adjusted Return of Eentertainment Industry**