

# **A Study on Anchor Investment and IPO Returns in India**

A Thesis Submitted

To

**Sikkim University**



In Partial Fulfilment of the Requirement for the

**Degree of Doctor of Philosophy**

By

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January 2022

Date: 14/01/2022

## DECLARATION

I, Sanjaya Kumar Subba, hereby declared that the research work embodied in the thesis titled “**A Study on Anchor Investment and IPO Returns in India**” submitted to Sikkim University for the award degree of Doctor of Philosophy, is my original work and it has not been submitted earlier to this or any other University for any degree.



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### CERTIFICATE

This is to certify that the thesis titled “A Study on Anchor Investment and IPO Returns in India” submitted to the Sikkim University for partial fulfilment of the degree of **Doctor of Philosophy** in the Department of Commerce, embodies the result of bonafideresearch work carried out by **Sanjaya Kumar Subba** under my guidance and supervision. No part of the thesis has been submitted earlier to this or any University for any degree.

All the assistance and help received during the course of investigation have been duly acknowledged by him.

I recommend this thesis to be placed before the examiners for evaluation.

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- **Sanjaya Kumar Subba**

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## **LIST OF ABBREVIATIONS**

AMAER	Annualized Market Adjusted Excess Return
ANOVA	Analysis of Variance
BRLM	Book Runner and Lead Manager
BSE	Bombay Stock Exchange
CCI	Controller of Capital Issue
CMIE	Centre for Monitoring Indian Economy
DEMAT	De-Materialized Account
DIP	Disclosure and Investor Protection
DPs	Depository Participants
DRHP	Draft Red Hearing Prospectus
E-IPO	Electronic Initial Public Offering
FII	Foreign Institutional Investors
FPO	Follow on Public Offering
GSO	Green Shoe Option
ICAI	Institute of Chartered Accountants of India
ICDR	Issue of Capital Disclosure Requirements
IPO	Initial Public Offering
LMP	Lead Manager Prestige
MAER	Marker Adjusted Excess Return
MF	Mutual Fund
NII	Non-Institutional Investors



NSDL	National Securities Depository Limited
NSE	National Stock Exchange
NIFTY	National Stock Exchange Fifty
OFS	Offer for Sale
Ph.D	Doctor of Philosophy
PMAC	Primary Market Advisory Committee
QIB	Qualified Institutional Buyer
QII	Qualified Institutional Investors
RBI	Reserve Bank of India
ROC	Register of Companies
RHP	Red Herring Prospectus
RII	Retail Individual Investor
R Ret	Raw Return
SD	Standard Deviation
SEBI	Securities and Exchange Board of India
SENSEX	Bombay Stock Exchange Sensitive Index
SPSS	Statistical Package for the Social Science
UN	United Kingdom
USA	United States of America

# **CHAPTER – 1**

## **CAPITAL MARKET AND STATEMENT OF PROBLEM**

### **1.1. Introduction**

Economic reforms in July 1991 accelerated the development of Capital Market in India. In compliance with the reforms, Government of India clipped the wings of Controller of Capital Issues (CCI). It scrapped the control and regulated regime and replaced it with a more transparent and independent regulator called Securities and Exchange Board of India (SEBI). Capital market is the most important component of financial market. It plays an exceptionally important role in promoting and sustaining the growth of the country's economy. It is definitely a barometer of country's economy and provides a faster capital formation. The market is designed to provide liquidity, sufficient marketability and reasonable measure of safety of investment to the investors. Efficiently regulated and well-organized capital market helps sustainable development of the economy by making available long-term funds in exchange of financial securities to investors. Therefore, the orientation of government across the world strives to develop and grow its capital market through different regulatory and legislative measures. This market is perceived as an organized mechanism for efficient and effective transfer of resources from surplus units, individual or institutional savers to the deficit units and entrepreneurs engaged in commerce and industry. In India, capital market is the market for securities, where companies can raise long term funds. It is a market intended for selling and purchasing of shares and bonds. A company can generate long term funds and capital

through issue of shares and bonds. Across the world capital markets are regulated by their respective regulator of the country. SEBI is the authorised agency for development and regulation of capital market in India.

## **1.2. Capital Market Intermediaries**

A financial intermediary is an institution or firm that acts as a link between two parties in a financial transaction. It is an important part of capital market. Financial intermediary or institution acts as a bridge or middle man, or which facilitates the transfer of funds from the one with surplus unit to the one with deficit unit. In today's capital market, intermediaries occupy an indispensable space. A number of intermediaries play important role, particularly in the process of issue of new securities. A classic example of an intermediary can be a bank that collects deposits/savings and utilize them by lending loans to its customers.

*Inter alia*, the financial intermediaries of India are as follows:

- i. Stock Exchanges viz. National Stock Exchange (NSE), Bombay Stock Exchange (BSE)
- ii. Insurance Companies
- iii. Credit Unions
- iv. Financial institutions (Banking & Non-Banking),
- v. Pension Fund
- vi. Underwriters

### 1.3. Significance of Capital Market

Capital Market is a market for financial securities (Assets) with long and infinite maturity. Mobilisation and allocation of resources to right channels are the fundamental role of capital market. Capital market has a significant role in economic development of a nation. The significance of capital market is discussed below:

- i. **Encourages Saving:** The capital market provides investors fruitful investment alternatives and wide range of financial instruments. Further, it encourages saving and investment in various options.
- ii. **Coordination:** It plays an important role in transferring surplus resources of the economy to the deficit sectors. As a result, there can be equilibrium of resources. Capital market mobilizes savings from people having surplus funds and transfers them to the needy originations and persons. So, it also acts as a link between savers and investors, which channelizes ideal lying resources of saver to more productive sources of investors.
- iii. **Stable and Ordered Security Prices:** The capital market assists in stabilizing prices of the shares, besides mobilizing funds from surplus units to deficit units of the economy. It always tries to stabilize the value of securities and stock.
- iv. **Economic Growth:** By increasing the mobilization of saving and enhancing capital formation, capital market impacts the economic growth of a nation. So, it can be said that it assists in expansion of trade and industries in all the sectors of economy.
- v. **Provision for Investment Avenues:** It is the medium through which funds are raised for long period of time. Hence, it gives an investment opportunity for the people who wish to put resources for long period of time.

- vi. **Provides Liquidity and Facilitates Transactions at Low Cost:** Sale and purchase of financial securities are made continuously through an online platform viz. Dematerialized account. Stock exchanges like BSE and NSE provide platform for continuous, easy and low-cost transactions of financial assets.

#### **1.4. SEBI and Capital Market**

The functions of securities market in India are regulated by the SEBI. Even though, SEBI was established by Government of India in 12 April 1988, it was given legal status only on 30 January 1992. As a result, it can exercise authority and control over the financial market intermediaries. During 1980s capital market emerged as a new place of interest and sensation among the people of India. Numerous malpractices took place like a false issue, delay in delivery, violation of rules and regulations of stock exchanges, unofficial private placement, unofficial self-style merchant banker, non-adherence of provision of Companies Act, rigging of price. As a consequence of these malpractices, many stakeholders started losing confidence in the stock market. So, with the intention of curbing these malpractices, the Government of India decided to establish a new regulatory body in the form of SEBI.

The primary functions of SEBI in capital market are listed below:

- i. **Regulation of Capital Market:** Capital market of India is regulated by SEBI. It acts as a watchdog for the capital market and also issues guidelines for the smooth functioning of stock exchanges time to time. As a regulator it always focuses at minimizing malpractices, abstains all speculative activities and insider trading from securities trading business.

- ii. **Registration and Regulation of Financial Intermediaries:** All the financial intermediaries functioning with the stock exchanges and associated in any trading business are registered by market regulator SEBI. It has also got power to regulate all the functioning of all financial intermediaries like merchant bankers, underwriters, brokers, sub-brokers, portfolio managers etc.
- iii. **Investors Education and the Training of Intermediaries:** SEBI has been providing detail guidelines to its existing investors as well as potential investors in order to enhance their investing knowledge. In order to protect investors from fraudulent and malpractices, it educates them about all investment issues. Further, with the intention of improving functioning efficiency and serving skill, it also provides time to time training to financial intermediaries.
- iv. **Good Relationship with ICAI:** In order to ensure transparency in auditing work of companies, it maintains better understanding with ICAI. SEBI along with ICAI examine whether all chartered accountants are performing their jobs as per the standardised rules and regulations.
- v. **Controlling of Merger, Takeover and Acquisition:** With the aim of gaining access to a large market, reduce competition, achieving economy of scale and creating a monopoly in the capital market, big companies seek to merge and buy with various companies. SEBI keeps an eye and regulates all the merger, takeover and acquisition activities in India. Further, it restricts all such takeovers and mergers which are not conducive for development. It tries to reduce fraudulent activities in the capital market.
- vi. **Evaluate report of portfolio management activities:** SEBI evaluates reports of portfolio management activities with an objective to check capital market

performance. It has also got power to demand performance report from all portfolio managers in India.

## **1.5. Structure of Capital Market**

The capital market is divided into three parts, namely Stock Market, Debt Market and long-term Government Bonds Market. The strict regulatory control and technological advancement in the stock market have brought fair environment in stock investment in India. Investors whether global or local have started perceiving Indian capital market as a new investment opportunity to reap higher dividend. The firms have also started considering Indian capital market as a good place to raise equity capital. Stock market consists of two segments such as (a) the secondary market where existing stocks are traded and (b) the primary market for newly created securities. So, key difference between primary market and secondary market is that in the primary market only fresh securities are issued, whereas in the secondary market existing securities are traded.

### **1.5.1. Secondary Market**

Secondary market is a market for the sale and purchase of existing securities. Securities are not directly issued by the company to investors in the secondary market. However, previously issued securities are bought and sold amongst the investors in the secondary market. Equity shares, preference shares, bonds, debentures etc. are some of the important products which are available in secondary market. Sell and purchase of securities of the secondary market are usually done through the medium called stock exchange. The main purpose of secondary market is to provide ready and continuous marketplace for liquidity. Secondary market is generally known as stock

market. The Bombay Stock Exchange and the National Stock Exchange of India are the two main stock exchanges in India.

### **1.5.2. Primary Market**

Of late, the primary market of India has also shown tremendous improvement with the developments in the secondary market. Primary market is a type of capital market which exclusively deals with the issues of new securities. For investors, investing in the primary market is the first move towards dealing in stocks and shares. There are different intermediaries involved in the primary market, which comprises brokers, merchant banks and portfolio managers etc. unlike secondary market, there is no any organizational set-up for primary market located in any specific place. In order to sell securities in the primary market, the company must fulfil the entire requirements of stock exchange in advance. The securities can be in various forms such as preference shares, equity shares, bonds, debt instruments etc. Primary market deals with two types of issue, namely the Initial Public Offering (IPO) and the Follow-on Public Offering (FPO).

### **1.6. Initial Public Offering (IPO)**

An Initial Public Offering (IPO) proposes securities for the first time to the general public. There are various ways of raising capital from the public. IPO is one of the major ways of raising capital from the primary market. IPO proposes securities for the very first time to the general public in the primary stock market. IPO is an 'offering' or 'flotation' of common stock or shares to the public for the first time. The process permits the conversion of a private company to a public company. Company raising money through IPO is also called as company 'going public'. IPO can be used as both



a financing strategy and an exit strategy. From an investor's point of view, IPO gives a chance to buy shares of a company, directly from the company at the price of their choice (In book build process of IPO's). From company's perspective, IPO provides it to issue shares to the public for the first time, helps to determine its issue price and also helps to identify its real value which is ascertained by millions of investors once its shares are listed on stock exchanges. An unlisted company can make an IPO only if it meets all the conditions laid down by capital market regulator SEBI. The issue price of an IPO may be determined and fixed by the issuing company called fixed pricing method or it may be ascertained through the book-building process called book building method. In India the book building process is more popular (in term of number of IPOs issue).

### **1.7. Follow-on Public Offering (FPO)**

Follow-on Public Offering refers to issuance of shares and raising of funds from general public by already listed company. Follow on offering is the issuance of additional shares to the investors after initial public offering by a listed company. Therefore, IPO is always followed by FPO.

### **1.8. Various kinds of Issue**

Capital can be raised in the primary market through following four ways.

#### **i. Public Issue**

It is the most preferred method of raising funds by selling securities to the general public. Under this method, the issuing company invites the general public to buy shares through a prospectus.

## ii. **Private Placement**

In private placement method, company raises necessary funds without going public. A private placement is the issue of securities to the pre –selected institutions and investors instead of issuing them through open market. In this method, company generally sells securities to the selected clients at a higher price. Institutional investors generally play crucial role in the private placement. This method of raising fund is quick, time saving, and economic as compared to public issue. In private placement, issuing companies need to comply with a few formalities. This method is suitable for small companies.

## iii. **Right Issue**

Right issue is an invitation to buy additional new securities in a company, to its existing shareholders. Before looking at the other sources of fund, the structure of capital market permits the companies in need of additional funds to first approach to their existing shareholders. A right issue is an offering of right to the current shareholders. This method can be used by those companies which have already issued their shares.

## iv. **Preferential Allotment**

Preferential allotment means selling of securities to any selected person or group of persons on a preferential basis by a listed company.

v. **e-IPO (Electronic Initial Public Offering)**

It is a new method of issuing securities through online system of stock exchange to the public. e- IPO is a contract between issuing company and the stock exchange to offer its share through online mode to the public.

**1.9. Reasons for Going Public**

An initial public offering or IPO is the first issue of shares to the public by the closely held company (private company). There are many reasons behind an Initial public offering. Here are some of the advantages that a closely held company can obtain floating an IPO.

- i. Fund Raising:** Indian company law permits business operations of a private company can be financed through private funds. However, based on the performance, it can reach a phase where it requires enormous additional capital to scale-up operations, expand and diversify the business and for different other reasons. In order to raise additional capital, the issuing company approaches to its existing shareholders to provide necessary funds. If they fail to provide the required funds, the issuing company looks for other alternative sources of financing, the principal alternative being ‘going public issue’.
- ii. Liquidity for Existing Shareholders:** With the hopes of creating successful company, shareholders contribute considerable amount of money, time and other resources at the time of establishment. These investors usually go for years without seeing any notable financial return on their investment. An initial public offering provides them an opportunity to exit by selling their stake, whereby they can potentially receive huge amount of money.

- iii. Improves Credibility:** Going public and listing shares on a stock exchange brings transparency and efficiency in the general operation of the company. Further, listed companies are also required to mandatorily ensure compliance mechanism as laid down by the provision of law. If a company, does its business operation in a transparent way, it will intern enhance its credibility.
- iv. Greater Market Visibility:** When a company floats an IPO, it gathers attention from the public. Those people who are already investing in the stock markets but never heard about this new company start researching it and evaluating its financials. This helps company to acquire market exposure and assess market worth.
- v. Reducing Debts:** Companies planning to go public must have debt usually in the form of bank loan and loan from other financial institutions. Therefore, many companies aim to reduce their debts levels by using the IPO money.
- vi. Mergers and Acquisitions:** Companies even use capital raised from an IPO to fund mergers and acquisitions. A successful issue (IPO) brings prestige, value and credibility to the firm and paves the way for merger.

### **1.10. IPO Pricing Mechanism in India**

In pre-liberalization period, the Controller of Capital Issues (CCI) used to decide the price of the issues. During this period, the companies had to approach office of CCI regarding approval for raising capital from the public. But the government had abolished price control in 1992, since then companies are free to price the equity issues by their own. Basically, there are two pricing mechanism through which a company can issue shares to the public. One is fixed pricing method and another one is book-building pricing method.

### **1.10.1. Fixed Price Method**

Fixed price method is the traditional approach of pricing an IPO. When the issuer at the beginning decides the issue price of the shares and states in the offer documents, such issue is known as fixed pricing issue. Under fixed price method the issuing company itself determines a fixed price at which its shares are offered to the investors and made public before the public issue. In this method shares are issued with the help of offer documents, which is also known as prospectus. Based on the subscription received and only after closure of issue the demand of the securities can be known in this issue mechanism. Unlike in book- building method of issue, demand for the securities offer can be known every day.

### **1.10.2. Book Building Method**

Book Building pricing mechanism was introduced in the year 1995 with the recommendation of Y.H. Mahegam Committee. Book Building is the method of price discovery. It is also a process of marketing company's shares where the price and the quantum of the shares will be decided in accordance with the bids obtained from the prospective investors. Book-building is a common practice of marketing new public issues in many developed countries. In this method, price of share is discovered by thousands of investors by bidding the new issues. This is comparatively a more market-oriented pricing method than fixed pricing method. In this method an option is given to the potential applicants to choose a price from a given range, generally called Price Band. In the process of book building, the issue price of the share is estimated after the closer of the bid on account of demand generated. Merchant banker, technically known as lead manager to the issue helps the issuing company in choosing price band, preparing a draft prospectus and in submitting all the necessary documents

to the SEBI. As per SEBI rule, a merchant banker is an organization or person which/who is involved in the business of issue management either by making arrangement concerning buying, selling, or subscribing to shares and other securities or acting as manager advisor/ consultant/ or performing corporate advisory service in connection with such issue management.

### **1.11. Book Building Process in India**

The process of book-building is outlined below.

- i. When the idea of issuing shares through book building process is conceived, the issuing company appoints Book Runner and Lead Manager (BRLM). When more than one lead manager is appointed by the company, then issuing company is required to reflect the name of all such investment bankers on the front page of the prospectus.
- ii. The Book Runner and Lead Manager (BRLM) adopt due diligence and carry out book-building activities of the issuing company. The book-runner is also authorised to appoint syndicate members who are registered as underwriters with the capital market regulator SEBI to carry out issue activity. The book runner / syndicate members also appoint brokers for subscription of shares.
- iii. In consultation with BRLM, the issuing company prepares the offer document called Draft Red Herring Prospectus. Such offer document does not indicate price of the share and/or number of shares to be issued by the company. However, it must reflect information about issuing company, issue and all other mandatory disclosure (information) as prescribed by the capital market regulator.
- iv. The shares which are exclusively made available to the general public are also required to identify separately as a net offer to the public in the Draft Red Herring

Prospectus or in Red Herring Prospectus.Net offer to public does not include reservation of issue to existing shareholders, persons associated with issuer (persons having business connection) and to the employees of the concerned company.

- v. The offer document (Draft Red Herring Prospectus) has to be filed with SEBI through lead merchant banker (book runner) prior to registering the prospectus.
- vi. As soon as the company submits Draft Red Herring Prospectus to SEBI, company enters into quiet period. Quiet period is designated as that period of time between filing offer document to SEBI and the date on which IPO actually occurs. During this quiet period, company along with lead managers starts road-shows to gauge the likely investors' appetite for the issue. Further, during the period some restrictions would also be imposed on the advertisements and on communication of the issuing company by capital market regulator.
- vii. After filling offer document with SEBI, the issuing company has to submit listing application to the stock exchanges on which it wants to list its shares. Company also submits offer document to stock exchanges for their suggestion to the issue. Currently, it is mandatory to have an online display of demand and bids during the bidding period.
- viii. In the meantime, SEBI will give its own suggestions on Draft Red Herring Prospectus if deemed necessary and also upload offer document on its website for public comments. Lead manager is also required to provide the Draft Red Herring Prospectus to the public.
- ix. Lead manager will get 'in-principle' approval from the stock exchanges within a reasonable period of time of submission offer document. The approval letter shall be submitted to SEBI.

- x. In consultation with lead manager, company decides price band for the share price within which the investors can bid.
- xi. The Company mentions the price band and the number of shares to be issued in the DRHP and also incorporates the suggestions, observations if any of SEBI and that of stock exchanges.
- xii. Finally, modified Draft Red Herring Prospectus goes to the Board of the company for final approval before its submission to SEBI. After getting approval of the Board, the draft becomes Red Herring Prospectus. In Red Herring Prospectus the issue price is still not mentioned but number of shares to be issued is written.
- xiii. When the public issue opens, it must be kept open for at least three working days but not more than ten working days. In case of revision of price band as well issue open days, the period should not exceed ten days.
- xiv. Investors can apply for securities with brokers to the issue by depositing the application money in the separate Escrow account with the clearing house.
- xv. After receiving applications from the investors, finalization of allotment has to be made in compliance with the provisions of act. After finalization of the basis of allotment, detail of allotment has to be sent to concerned stock exchanges and the regulator. SEBI has a power to inspect and investigate the procedure and records at any point time.
- xvi. In book building method, the final draft (Red Herring Prospectus) is submitted to Registrar of Companies (ROC) after the allocation of shares.

## **1.12. Category of Investors**

In primary market, investors are generally classified under following groups:

- i. Retail Individual Investor (RII)



- ii. Non-Institutional Investor (NII)
- iii. Qualified Institutional Buyer/Investor (QIB/QII)

**Retail Individual Investor:** Retail investor is an individual investor who buys shares and other securities for her or his own personal account rather than for an organization. An individual investor can apply or bid for specific securities for a value not exceeding Rs.2, 00,000.

**Non-Institutional Investor:** Non institutional investor is an investor other than qualified institutional buyer and retail investor. All individuals from retail category who want to apply for shares for an amount exceeding Rs.2 lakh can apply under the non-institutional investor category.

**Qualified Institutional Buyer:** Those institutional investors who are usually considered to have expertise and the financial strength to assess and invest in capital market are called Qualified Institutional Buyer. As per clause 2.2.2B (v) of DIP (Disclosure and investor protection) Guidelines a ‘Qualified Institutional Buyer’ includes the following;

- i. Any mutual fund, alternative investment fund, venture capital fund, foreign venture capital investor registered with board.
- ii. Any foreign portfolio investor registered with board.
- iii. Any public financial institution.
- iv. A bilateral development financial institute and multilateral development financial institution.
- v. A scheduled commercial bank.
- vi. An insurance company which is registered with the Insurance Regulatory and Development Authority.

- vii. A state industrial development corporation.
- viii. A pension fund with minimum corpus of 25 crore rupees.
- ix. A provident fund with minimum corpus of 25 crore rupees.
- x. National Investment Fund established by resolution of the Government of India issued and published in gazette.
- xi. All insurance funds established and managed by the department of ports India.
- xii. All Insurance funds established and managed by army, navy or air force of the union of India.
- xiii. Systemically significant non-banking financial companies.

### **1.13. Allotment of Securities to Different Investors Groups**

#### **1.13.1. Fixed Price Issue Allotment**

Allotment of securities in a fixed price issue to the various categories of investors is outlined below;

- i. Initially a maximum of fifty percentage of net offer to the public shall be made available for allotment to retail individual investors.
- ii. The balance securities of net offer to the public have to be made available for allotment to individual applicant other than retail investors including corporate bodies/ institutions.

#### **1.13.2. Book-Building Issue Allotment**

In case issue of 100% of the net offer to the public through book-building process under profitability route:

- i. Minimum 35% of the net offer to the public shall be available for allocation to Retail Individual Investors.
- ii. Minimum 15% of the net offer to the public shall be available for allocation to Non-Institutional Investors
- iii. Maximum of 50% of the net offer to the public shall be available for allocation to Qualified Institutional Buyers

### **1.13.3. Mandatory Book-Building Issue**

- i. Minimum 75% of net offer to public shall be made available to the Qualified Institutional Buyers.
- ii. Maximum 15% of the net offer to the public shall be available to Non-Institutional Investors.
- iii. Maximum 10 % of the net offer to the public shall be made available for allocation to Retail Individual Investors.

## **1.14. Terminology in IPO**

### **1.14.1. Primary Market:**

It is a part of capital market, where entities such as companies and other institutions acquire funds through the issue of various securities. This market is the source of new securities.

### **1.14.2. Prospectus:**

A prospectus is the key legal document describing all the materials information about the IPO issuing company. This document helps investors to assess the short run and

long run prospects of the company. As per companies act 2013, there are mainly four types of prospectus. Namely: abridged prospectus, deemed prospectus, shelf prospectus and red herring prospectus.

#### **1.14.3. Over Subscription:**

Oversubscription is a situation in an IPO, where the demand for the public issue of shares is more than the number of shares issued. When a popular company releases an IPO, there are chances of it getting oversubscribed. When an IPO is oversubscribed, it is a signal that the investors are interested to buy the company's shares which may lead to a higher offer price of new issue.

#### **1.14.4. Price Band:**

In the book building mechanism of pricing of an IPO, price band is the range of two prices which is given to the investors, between which investors are able to place bids. The term floor price in the price band is the lowest price at which an investor can place a bid. On the contrary cap price is the highest price in the price band at which bid can be made by the investors. The difference between lowest price and the highest price of the price band should not be more than 20%. The price band could be revised. If the price band is revised, same information must be communicated to stock exchanges, investors and all the interested parties to the IPO. Further, bidding period must be extended for additional period of three days, subject to total bidding period must not be exceeding ten days. The Investors or applicants of shares could also alter or revise the price or quantity in the bid. However, revising/changing of bid has to be completed within the closer of the issued date. Further, price band has to be decided by the issuing company in consultation with merchant bankers.

#### **1.14.5. Cut-off price:**

In the book building process of IPO, the issuer firm is required to reflect the price band in the prospectus. The actual finding issue price could be any price in the price band. This issue price is known as cut-off price. Cut-off price is the price at which shares are issued to investors by the company to the investors.

#### **1.14.6. Listing:**

Listing is a very important terminology in an IPO, which means shares which were offered to public for investment are being subscribed and are listed on the stock exchanges. Listed shares can be bought and sold in the secondary market.

#### **1.14.7. Bid:**

In the book building process of an IPO, bid means the applicant needs to stipulate the number of shares he/she wants and the price at which he/she is ready to pay for one unit of share which is offered by the company.

#### **1.14.8. Bidder:**

In the book building process of an IPO, the bidder is regarded as the person who places the bid for shares.

#### **1.14.9. Offer date:**

In an IPO, offer date is the first date when investors can apply for shares.

#### **1.14.10. Listing date:**

In an IPO, this is the date in which shares start trading on the stock exchange.

#### **1.14.11. Lock in period:**

Lock in period refers to that stipulated period in which investors are restricted to sell their investment. Investors cannot sell their investments, during the lock in period. However, they are free to sell their investment once the stipulated lock in period ends. In an IPO, the investments of anchor investors are subject to lock in period for 30 days from the date of allotment.

#### **1.14.12. Underwriter:**

An investment bank which is associated with issuing company to manage the IPO is known as underwriter. Underwriter also agrees to take up securities in the new issue which are not fully subscribed.

#### **1.14.13. Green Shoe Option:**

It is a provision in an underwriting contract that allows the underwriter right to sell 15 % more shares than the number of shares initially planned by the issuer if the demand of shares exceeds expected demand in a particular issue. However, the option must be used within the 30 days of shares offering. This method is extensively used in global market by the companies for the stabilization of the post listing IPO price of their shares.

### **1.15. Underpricing Effect of IPO Shares**

Underpricing of initial public offering is a reflection of positive initial return. In finance, initial return is defined as percentage of price change from offer price to closing price on the listing day of new issue stock. In various countries a number of researchers have examined that IPOs are underpriced and therefore after listing of the

stock provide a high initial return on the first day of trading. Underpricing results when the shares are offered at a price, which is lower than the market price of the shares (on the first trading day). The extent of underpricing differs amongst countries as per literature. Various theories have been proposed to explain the underpricing behaviour of new public issues (IPOs).

### **1.15.1 Theories of Underpricing**

The theories describing the likely reasons for underpricing of initial public offering are discussed below.

- I. Winner's Curse Theory: Rock (1986)** in a research article, differentiated investors of new issue as informed and uninformed investors. Based on study, author further highlighted that, the IPOs will be oversubscribed by informed investors; if the issues are underpriced and only limited number of shares would be available to uninformed investors. The new public issue (IPOs) will be sold exclusively to uninformed investors, if the issues are overpriced, and they will earn negative initial returns. Thus, retail investors might get all the allocation they have asked for in IPOs which are going to earn low return, creating a situation termed as the winner's curse dilemma. In order to keep retail uninformed investors in the IPO market, securities are deliberately proposed at a discount from their expected listing price. As emphasized in winner's curse theory, the IPO underpricing will decrease if the information asymmetry gap between informed and uninformed investors is reduced.
- II. Signalling Theory:** Signalling theory asserts that some issuing companies intentionally underprices its first public offer and attempts to leave a good test to

signal its good quality before the investors. This is done to lure investors for further public offering.

**Allen and Faulhaber (1989)** in their study entitled “Signalling by underpricing in the IPO market” observed that underpricing of IPO depends upon individual firm and specific time. They examined that only good quality firms, due to their superior information than the investors and others firms, underprice the IPO during hot issue period to signal their good quality to the investors. Further study advocated that, only good quality firms can follow this strategy because of their ability to compensate for the loss of proceeds incurred due to degree of underpricing. Moreover, they deliberately try to leave a good taste in investor’s mouth so that future issues from the same issuer could be sold at attractive price.

**III. Lawsuit’s avoidance:** Most Issuing companies deliberately underprice their IPOs for the sake of lawsuits avoidance. Litigation risk is the risk that a legal action may be taken against the issuing company by the investors, if the IPO return is lesser than expected return.

**Lowry & Shu (2002)** in their study examined relation between litigation risk and IPO underpricing. The finding of the study revealed that higher litigation risk companies underpriced their new issues to avoid potential law suits.

**IV. Deliberate Underpricing:** The companies in consultation with underwriter intentionally underprice their new issue to obtain publicity in the market, to keep the demand on their offered high, and to gain attention of investors by giving good returns to them on the first day of trading.



**Dater & Mao (2006)** in their study entitled “Deep underpricing of China's IPOs: sources and implications” pointed out that, issuers intentionally underprice their new issue to enhance subscription rate.

### **1.16. Statement of Problem**

As discussed at the beginning paragraph, after the opening up of its economy to the world in 1991, the India capital market has witnessed various reforms, technical advancement, restructuring and policy changes. As a result, the Indian IPO has been extremely successful as the number of companies going public and issuing equity shares in the capital market have increased expeditiously. In India, especially during the period 2005-06 to 2007-08 a high initial positive return has been observed when a bull period prevailed. A large number of IPOs were issued in the primary market during this period. In the year 2008 a major crash was witnessed in the Indian stock market with the NIFTY (the NSE 50 Index) falling from its high of 6287 points on 8th January, 2008 to 2524 on 27th October, 2008 which resulted in a decline in investor confidence. Previous studies also found that many companies which went public during the period afterwards disappeared from the secondary market resulting in enormous amount of wealth loss especially for retail investors. Sizeable underpricing shows that a greater amount of information asymmetry still continues in the IPO market of India. So, to bring back confidence amongst the investors and price stability to the issue, SEBI (Securities and Exchange Board of India) has been introducing different majors time and again. One of the important majors taken in this regard is introduction of Green Shoe Option (GSO) on 12 August 2003; Green Shoe option is a special provision in an IPO which allows underwriters to sell investors more shares than originally planned by the issuer. This provision normally uses by issuing

company, when the demand for the security issue proves higher than expected. A Green Shoe option allows underwriters to short sell shares securities offering at the offering price. The Green shoe can vary in size and is customarily not more than 15 % of the original number of shares offered. But this major taken by regulatory authority could not do well in Indian IPO market, volatility still remained same. Against the backdrop, SEBI (Securities and Exchange Board of India) introduced the concept of Anchor investment in June 2009. The main motivation behind the concept of anchor investment was to bring price stability to the issue as there is a lock-in period of 30 days during which the anchor investors cannot sell off the allotted shares. Moreover, it also hopes to enhance price discovery and boost the confidence of investors in IPOs. An anchor investor is a qualified institutional buyer, who can invest up to 30 % (now enhance up to 60 %) of the Qualified institutional buyer (QIB) quota subject to a lock in period of at least 30 days and the minimum application size of each anchor investor should be Rs.10crore. Anchor investors subscribe to shares one day before the bid is open to other investor categories. Naturally as an important and high net worth investor, an anchor is expected to do a lot of ground research about the company before making the investment. Having greater resources and better access to information as compared to retail investor, the anchor's confidence is expected to trickle down to the small investor. Binding in anchor investments also hopes to give a lot of comfort to the banker and issuer, as nearly a third of the IPO gets covered even before the opening. The moot question is whether anchor investments have really been able to full fill its purpose of bringing price stability and boosting the confidence of investors in IPO. The present study is directed to understand (a) Whether "Anchoring" is stabilizing the price post listing of IPOs & (b) Whether the underpricing still persists in the stock market in India.

## **1.17. Conclusion**

This chapter provides an overview of Indian capital market and also incorporates a short explanation of research background. In order to bring stable and faster industrial growth and development of any nation, a healthy capital market is paramount. Efficient capital market mobilizes financial resources optimally towards productive investment opportunities in the market or else resources remain idle. Over the last two decades across the world the interest in capital market has increased tremendously especially in developing nations. The good prospect and progress of the market have captivated many researchers and investors to discuss various issues and complexities pertaining to the capital market. Since, the present study concentrates in the area of initial public offering (IPO) of primary market. This chapter revolved around Initial public offering with special reference to Indian IPO.

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## CHAPTER – 2

### LITERATURE SURVEY

#### 2.1. Introduction

This chapter furnishes an extensive literature review on Initial Public Offering. At the early phases of the study, existing research papers, working papers, books, doctoral dissertations, news articles and research reports related to current study established the basis of the research work. After introduction of the concept Initial Public Offering, and Anchor investment, it's imperative to discuss the study done by earlier researchers on various areas of IPO. Literature review forms a vital segment of any research. The information collected from the literature review has been used to establish the objectives of the current research. Attempts have been made by researchers to identify various dimensions of initial public offering, ranging from its price performance of short term and long-term, underpricing phenomenon, other market factors, allocation mechanism, anchoring effect etc. As documented by a number of empirical studies, a peculiar feature of Initial Public Offering (IPOs) is underpricing. Many theoretical papers have tried to explain why new issues are underpriced. Most of these explanations are based on the existence of asymmetric information in the IPO process.

#### 2.2. Literature Survey for the Research Work

A brief review of literature is presented below;

**Madhusoodanan and Thiripalraju (1997)** in their study entitled “Underpricing in Initial Public Offerings: The Indian evidence” analysed both short-run and long-run

after-market pricing performance of the Indian IPOs issued prior to 1997. Authors found that in the short run, the Indian IPOs generate more market-adjusted initial return than the international IPOs. In the long run too (after one year of listing), Indian IPOs generate higher returns compared to the negative returns reported from other countries.

**Karati (1999)** in his study entitled “Price Performance of Initial Public Offerings” studied the performance of 500 sample Indian IPOs that went to the market, during 1993 to 1996. The finding of the study revealed underpricing of IPOs in short run to the tune of 36.6 percent and overpricing in long run by 48.8 percent.

**Pandey and Arun Kumar (2001)** in their study entitled “Relative Effectiveness of Signals in IPOs in Indian Capital Markets” investigated the impact of signal on underpricing. Study was conducted using cross sectional data of 1243 sample IPOs issued in Indian stock market during 1993-1995. The outcome of the study reflected that the realized excess initial returns on IPOs were high on approx. 68 percent. Study also revealed that as compared to large issues, smaller sized issues tend to have higher initial returns

**Ranjan and Madhusoodanan (2004)** in their study examined the effect of book building mechanism on IPO pricing. The study was based on 92 sample IPOs issued during the period from 1999 to 2003. The result of the analysis revealed that book building IPOs were underpriced with lesser magnitude as compare with fixed price issues. The study also recorded more underpricing for smaller issues and less underpricing for larger issues.

**Ghosh (2005)** using 1842 sample companies, listed on Bombay Stock Exchange from 1993-2001, tried to find out the factors describing IPO underpricing. The study found that uncertainty played a major role in perverse underpricing in the Indian Stock Market. Study also endorsed the signalling theory. Contrary to the international occurrence, author reported that underpricing was less during the high volume (hot) period as compared to the slump period in the Indian Stock Market.

**Derrien (2005)** in his research article entitled “IPO pricing in “hot” market conditions: Who leaves money on the table?” tried to investigate the effect of investor sentiment on IPO pricing. Applying a modal in which aftermarket price performance of IPO stock relies on the information concerning the intrinsic value of the issuing firm and the investor feeling. The study revealed that IPO can be overprice and still display positive initial return. The forecasts of the modal were also supported by a sample of France offering with a part of shares reserved for retail individual investors. The study further examined that demand of individual investors is positively linked to market conditions. In addition to that sizeable individual investor demand leads to excessive IPO price, greater initial returns and poor performance in long run.

**Pandey (2005)** in his study entitled “Initial returns, long run performance and characteristics of issuers: Differences in Indian IPOs following fixed price and book building processes” investigated the difference in underpricing of IPO impacted by difference in allocation mechanism. Study was done using 20 book-building IPOs and 64 fixed price IPOs (Total 84 Indian IPOs) from the period 1999-2000. The finding of the study revealed that initial returns as-well as cumulative market adjusted return were lower on book building pricing mechanism.



**Ansari V. Ahmed (2006)** examined the IPO underpricing phenomenon in India in his research article entitled “Further evidence on IPO underpricing in India”. The key objective of the study was to examine the persistence of IPO underpricing in India during the period of 2005. The finding of the study revealed 40.9 percent average first-day return (underpricing) which is quite large. Author also found that during the period 16 percent of the IPOs were overpriced and 84 percent were underpriced.

**Guo et.al. (2006)** studied the use of R & D to describe IPO underpricing. The study investigated a sample of 2,696 IPOs issued during 1980 -1995 in US and found that R& D of IPO issuing companies significantly impacts with its short run underpricing (R & D is positively correlated with listing day return) as well as with its long run performance (R & D is related positively with long run performance).

**Garg et. al. (2008)** studied whether underpricing persists in the Indian stock markets and what is the effect of various factors such as bullish and bearish market (hot and cold periods) on the level of underpricing. The conclusion drawn are: (a) there persists a substantial level of underpricing in the short-run; (b) the IPOs were usually overpriced over long-period; (c) the opening price returns do not vary significantly from the closing price returns; (d) the level of underpricing does not differ much in the hot and cold IPO markets; and (e) the abnormal returns from the IPO underpricing differ significantly in the bearish and the bullish phases of the market.

**Singh and Sehgal (2008)** in a research article entitled “Determinants of initial and long-run performance of IPOs in Indian stock market” examined the potential factors of underpricing and the long-run performance of 438 initial public offerings (IPOs) which were listed on the Bombay Stock Exchange from June 1992 to March 2001. The study investigated that the average underpricing in Indian IPOs were 99.20%

during the study period. This extent of underpricing is exceptionally high as compared to international evidence. The study also found that the demand for the IPO, listing delay of the IPO and age of the firm are some of the important determinants of IPOs underpricing. It is further found that in the long run, the Indian Initial Public Offerings do not tend to underperform.

**Low (2008)** examined an increasingly common feature of IPO in Hong Kong the participation of cornerstone investors. The concept of cornerstone investors in Hong Kong and anchor investors in India are almost similar. In Hong Kong, business tycoons invest money in IPO before their launch in the hope of earning handsome returns. Cornerstone participation contributes positively towards enhancing the general receptiveness of the issue. Author argued that the presence of the household names and their commitment to hold the stock for a given lock-in period acts as positive signal for the market.

**An and Chan (2008)** examined whether credit rating can considerably reduce the degree of IPO underpricing and price revision by decreasing the value uncertainty regarding the issuing firm. The evidence of the study revealed that, issuing companies with credit ratings are underpriced considerably lesser than companies without credit ratings. The study also investigated that during the book building process, crediting rating to a greater extent reduces the magnitude of price revision and aftermarket price volatility of new issues. The study further finds that credit rating transfers useful information which further helps in lowering information asymmetry in the primary market.

**Deb (2009)** in a research paper entitled “Some Insights into IPO Underpricing in India” investigated the underpricing phenomenon in Indian IPOs from 2001 to 2009.

The study was carried out using a sample of 187 IPOs. The outcome of result showed evidence of underpricing on an average in Indian IPOs during this period.

**Chemmanur et. al. (2009)** in an article tried to analyse the role of institutional investors in initial public offering. The result of the study found that the institutional investors possess substantial information about IPOs issuing firm and have an important supportive role to play in the IPO aftermarket and receive substantial compensation for their involvement in IPOs.

**Sahoo and Rajib (2010)** attempted to examine listing day and long run price performance of IPOs using 92 Indian IPOs issued during 2002 to 2006. Finding of the study revealed that on the listing date on an average the Indian IPOs were underpriced to the tune of 45.55 percent. The result of the study further proved that price performance of Initial public offerings was negative up to the period of 12 months and then started giving positive returns. Empirical results further revealed that, investors subscribing IPOs directly from issuing company at the time of public issue are earning a substantial positive market adjusted returns. Whereas, investors who brought share on the date of listing are earning negative returns up to 12 months. The study further tried to examine the impact of various IPO characteristic on IPO post market price performance. Evident of the study revealed that, initial day return, offer size, leverage at IPO, timing of issue is statistically significant in impacting underperformance of IPOs.

**Dev and Marisetty (2010)** using a sample of 163 Indian IPOs, examined the success of IPO grading mechanism. The study finds that grading reduces IPO underpricing and positively impacts demand of individual retail investors. In addition to that, IPO grading improves liquidity and decreases post listing market risk. However, long run

price performance of IPO does not get affected much by grading mechanism. Study further found that, role of regulator is very vital in order to signal the quality of an IPO, especially in emerging markets.

**Mauskar and Sivasubramaniam (2011)** studied short run underpricing of initial public offering, during 2003 to 2010, which were listed on National Stock Exchange of India and Bombay Stock exchange. The finding of the study revealed that Indian IPOs are underprice in the short run similar to IPOs of developed countries. However, over the years, there has been a noticeable decrease in underpricing which implies improved market competence. Further, the study also examined those measures such as introduction of anchor investor in 2009 and IPO grading to protect the interest of uninformed investors (retail investors) are not very successful.

**Sadiqul Islam et.al. (2011)** in their research article entitled “Long run price performance of IPO stocks in Bangladesh” examined short run and long run price performance of 163 IPOs issued during 1992 to 2006 in Bangladesh. The study recorded short run out performance and long run underperformance of IPO in secondary market.

**Kishore et. al. (2011)** studied whether presence of anchor investors have provided stability to the issue or not? Based on an analysis of the stock price variation over a period of one-month (the lock-in period) authors found that the presence of anchor investors did not have any significant impact in ensuring price stability. Authors have further viewed that 30 days lock in period was too short and that the anchor investors would have to be long term players to serve any substantive adjective of bringing confidence and stability among retail investors.

**Mishra (2012)** considering a set of 235 IPOs listed between April 1, 1997 and March 31, 2008 on the Indian Stock Exchange, attempted to give new evidence on the first day IPO market performance. The study examined how a transformation in the institutional arrangement that governs the pricing of IPOs from the traditional fixed price approach to the building of a book affected the level of underpricing. The study found that the Indian market was experiencing underpricing from 2003, which increased over time and was particularly high in 2007. However, it was decreased in the first part of 2008. The study revealed no significant difference in underpricing between book building and fixed price offers.

**Wen and Cao (2013)** in their paper entitled “Short-run and long run performance of IPOs: evidence from Taiwan stock market” studied the aftermarket price performance of 121 sample IPOs listed on the Taiwan stock exchange from 2005 to 2007. The study recorded a 48.54% initial return on the first five trading days. However, the study also documented severe underperformance of IPOs in the long run.

**Baluja (2013)** using a sample of 50 graded IPOs listed on BSE from 2007 to 2010, tried to examine the efficacy of the IPO grading mechanism. The study found that IPO grading is not an effective mechanism in lowering information asymmetry and a huge level of underpricing still persists in the Indian IPO market. Moreover, the result of One-Way ANOVA revealed no significant difference in listing price performance of the different graded IPOs. The study also viewed that listing price performance of different graded IPOs varies due to chance or due to some other factors such as subscription level, issue size, age of the company etc., but it is irrespective of the grades obtained by IPOs.

**Malpani (2013)** tried to find out whether the introduction of anchor investment by SEBI actually served its purpose of boosting investor confidence and provide stability in a volatile market at various time lengths using the data of 17 IPOs issued during 2009 to 2011. Author used mean, standard deviation, independent sample t-test tools to analysis the result. Author found that the presence of anchor investment has no influence on the share price ranging from short term and long-term horizon. Study also revealed that price fluctuation of post listing IPOs is mainly attributed by other market factors then anchor investment.

**Ganesamoorthy and Shankar (2013)** in the study entitled “The Performance of Initial Public Offerings Based on Their Size” tried to examined IPOs performance based on their size, using a sample Of 219 IPOs, listed during the period 2001 to 2010 in India, the finding of the study using standard event methodology revealed that, performance of large size IPOs were superior to the small size IPOs. Study further investigated that, as compared to the median size and large size IPOs, small size IPOs were much overpriced.

**Shah and Mehta (2015)** in their study entitled “Initial performance of IPOs in India: Evidence from 2010-2014” investigated listing day performance concerning to 113 IPOs in India during 2010 to 2014 listed in National Stock Exchange (NSE) India. Authors from the study found that, the market adjusted abnormal return of all sample initial public offering (IPOs) companies were 7.19%. It was observed that IPOs were underpriced. Author also analysed the impact of various factors: issue price, issue size, over subscription and market index return on underpricing of IPOs using multiple regression analyses. The result of regression analysis found that, there was no significant relationship between degree of underpricing and explanatory variables

except oversubscription. Study also suggested that investors can make their investment in new issues as IPOs are under price in initial days.

**Ramesh and Dhume (2015)** in their article entitled "Performance analysis of initial public offering in Indian context" studied the price performance of 150 sample IPOs listed on National Stock Exchange (NSE), during May, 2007 to December; 2011. The finding of the study revealed that during the study period there existed overpricing in the Indian primary market. Further, study also revealed that, in India overpricing was more prevalent in the long run time period as compare to short run time period.

**Mistry (2015)** examined the behaviour of investors in stock-market and their point of view for various avenues. In order to analyse investors' psychology concerning investment in stock market 150 sample investors were selected. The investigation of the study finds a positive relation between market conditions and the decision making of the investors. The study further finds that, predominant number of investors did not consider financial factors prior to investing in stock market.

**Sheokand (2015)** in his article entitled "A comprehensive study on Under Pricing in Indian Initial Public Offerings" published in an International Journal of Informative & Futuristic Research, tried to test short term performance of Initial Public Offering (IPOs) in the Indian stock market. Secondary data were used with the sample of 230 companies on the Bombay stock exchange from 1992 to 2007. Measures including Raw Returns (RRs), Market Adjusted Excess Returns (MAERs), Annualized market adjusted excess return (AMAER) had been undertaken to examine the performance of IPOs. The study found that there was a very high and statistically significant underpricing in IPOs. Author further segregated data into two phases (Boom period 1992 -1996) and slump period (1997 -2007) and compared underpricing of two

periods using t-test tool. Study revealed that there was no significant difference between two periods IPOs in term of underpricing.

**Ambily et. al. (2016)** studied performance of IPOs in India, during 2013 to 2015, listed in national stock exchange of India. Study found that there is on an average positive return from IPOs. Study further examined that, most of the investors are mainly investing in the securities by looking at the image of the company but not on the basis of fundamental analysis.

**Pradhan et. al. (2016)** in their research article entitled “Performance of the initial public offering (IPO) in the Nepalese Stock Market” made an effort to find the impact of some explanatory variables on degree of underpricing of Nepali stock market. The study was conducted based on pooled cross-sectional analysis of secondary data of 61 firms when went public from 2005 to 2011. Based on analysis the study ravelled that firm size, market condition, reputation of issue manager and subscription rate of firm IPO factors have positive and significant relationship with initial return. The study also found that there is a significant negative relationship between issue size and initial return.

**Gupta and Jindal (2016)** investigated on the effect of the introduction of anchor investors has had on the IPO return by comparing the return from the IPOs where Anchor investors were appointed vis-à-vis return of IPOs with no Anchor investors. Authors calculated absolute as well as the market adjusted excess returns on the day of listing and one month post listing data. For the purpose of comparing total 101 IPOs (From 2009 TO 2011) listed on the NSE were taken as a sample. Study found no significant difference in the average absolute initial returns and market adjusted



excess return between anchor back and non-anchor back IPOs. Authors also found that return of both categories of IPOs fall drastically after 30 days.

**Dhamija and Arora (2017)** tried to examine the long –run performance of 377 initial public offering (IPOs) issued by Indian companies from 2005-2015. The outcome of the study revealed that, the Indian IPOs outperform the broad market initially followed by considerable underperformance in the long run. Further, the study also tried to identify important issue characteristics that influence the long-run performance of Indian IPOs. As per the finding of the study lead manager prestige (LMP), type of issuer (government, owned or private), promoters holding are the important determinants for IPOs long run performance.

**Aslam and Ullah (2017)** investigated underpricing phenomenon and the determinants of IPOs listed at Pakistan stock exchange. The study was conducted based on 59 sample IPOs which were listed during the period from January 2000 to December 2010. Further, the study employed market adjusted abnormal return model to evaluate the post –IPO performance. The finding of the study revealed that underpricing phenomenon exists in Karachi 100 index as well in line with the literature on IPO from other countries. The study also revealed that underwriters deliberately underpriced the IPOs to the level of 46 % on an average in Pakistan stock exchange during the study period.

**Sahoo (2017)** using a database of 135 IPOs issued through book building method in Indian market, during 2009-2014, tried to examine the impact of anchor investors' investment on initial public offering. From the study it was found that, IPOs backed by anchor investor are underpriced with lesser magnitude as compared to non-anchor

backed IPOs. Study further documented that anchor backed IPOs are more liquid and less volatile in the short run.

**Hawaldar et. al. (2018)** in a study entitled “Pricing and performance of IPOs: Evidence from Indian stock market” tried to compare long run price performance of book building IPOs with fixed price IPOs, which went public from 2001 to 2011. Authors found that in comparison to fixed price IPOs, book building IPOs were underpriced by lesser magnitude. Further, study also found that book building IPOs generate negative cumulative average abnormal returns up to five years after listing, but fixed price IPOs gives positive cumulative average abnormal returns after one and half years of listing and continue to be positive afterwards.

**Manu and Saini (2020)** in their study entitled “Valuation Analysis of Initial Public Offer (IPO)” examined whether Indian IPOs are underpriced in short run or not. Further, study also tried to determine whether various independent factors such as promoter’s holding post –issue, size of the issue and ownership sector have an impact on returns of the selected companies or not, using data of IPOs issued in the year 2017 at National Stock Exchange. The examinations found that majority of IPOs in 2017 were underpriced. Further result also revealed no significant impact of various independent variables on the returns of the selected Indian IPOs.

**Mehmood et. al. (2021)** in the article entitled “A Review of IPO Underpricing: Evidence from Developed, Developing and Emerging Markets” made an effort to explore the underpricing issue in the world of financial market. In this regard, the study thoroughly reviewed existing literature on IPO underpricing in developing, developed and emerging markets. It is revealed from the study that, underpricing of IPO is higher in emerging markets than in developed and developing markets. Study

also put forth the idea that in the emerging markets, the primary cause of underpricing is information asymmetry and the issuers of these markets deliberately underprice the IPOs to signal their good quality before the investors. Furthermore, the study also managed to pinpoint the important factors that impact the initial return in developing, developed and emerging markets. However, the study stated that length of underpricing among countries differs depending on the country's specific factors and on other respective countries market factors.

### **2.3. Research Gap**

From the above review, it is apparent that over the years IPOs pricing emerged as one of the most significant issues amongst the researchers and policy makers at global level. In order to measure the magnitude as well to justify the reasons behind the underpricing of Initial public offerings, a number of research studies have been made. By studying the pattern and trend of the IPO pricing various theories have been already formalized by the researchers mainly in developed countries, which gives insights into the factors behind uncertainty and volatility of the IPOs price movement. Many studies are carried out to know the underpricing phenomenon throughout the world. However, very little work has been done focusing on new anchor investment impact on IPO returns in India. As the concept of anchor investment is relatively new, little research studies have been carried out. Thus, there is a need to determine the impact of anchor investment and understand the relevance of underpricing of IPO.

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## **CHAPTER – 3**

### **RESEARCH DESIGN**

#### **3.1. Introduction**

In order to accomplish the final outcome in a research study, a path is required and that route is provided by research methodology. Research methodology taken up for present study is described in this chapter: Objectives of study, source of data collection, sample design, and sample selection criteria, different financial and statistical tools that have been used for analysing data. Further, rationale for using statistical tools has also been explained.

#### **3.2. Objectives of the Study**

Based on the identification of research gap in the review, an effort has been made to add new facts to the existing literature in the spectrum of IPO in India. The objectives of the study are given below.

1. To understand the rationale behind introduction of the concept ‘Anchor Investment’ in India and to analyse its compliance mechanism.
2. To examine the Anchor backed vs. non-Anchor backed IPOs and their post- listing price behaviour.
3. To compare pre and post Anchor investment impact on IPOs price performance.

### **3.3. Data Collection and Source**

For undertaking the research study secondary data has been used. The secondary data is largely collected from prime database.com. Besides this, secondary data is also collected from nseindia.com, books, magazines, research articles thesis and reports. The study initially emphasized on the historical database of National Stock Exchange of India. The detailed post listing price information of some IPOs were not available in NSE. So, the data were collected from prime database.com which is India's first and the only database dedicated to the primary capital market. The study collected data like name of the IPO issuing company, pricing method (book building/fixed Price offer), anchor backed book-building offer/non- anchor backed book-building offer, type of sale (fresh capital/offer for sale), instrument(equity), issue amount, listing in Stock exchange , offer price, offer date, listing date, listing price, price band, closing price at the end of 1<sup>st</sup> day,6 months after listing day and 1 year after listing day, price band, cut off price, volume of IPO, and IPOs price information about different categories of investors etc.

### **3.4. Nature of the Study**

The present study is both descriptive and analytical in nature. The study had tried to determine impact of anchor investment on IPOs price performance.

### **3.5. Sample Design**

The study was conducted using 344 sample IPOs (122 anchor backed book-building IPOs issued form 28, July 2009 to 31<sup>st</sup> December, 2017 and 222 non anchor backed book building IPOs issued from 1<sup>st</sup> January 2002 to 27, July, 2009) listed on National

Stock Exchange of India. However, to examine the anchor backed vs. non-anchor backed IPOs and their post- listing price behaviour (second objective of the study), only 194 sample IPOs (122 Anchor backed book building IPOs and 72 non anchor backed book building IPOs) went public from July 28, 2009 to December 31, 2017 have been considered. The study included IPOs with equity as instruments, which were listed in National Stock Exchange (NSE) of India. In this study researcher tried to compare and analyse the price performance of the anchor backed IPOs and non-anchor backed IPOs in India. Further, study also tried to understand the rationale behind launching of new concept anchor investor by market regulator and analysed its compliance mechanism.

### **3.6. Sample Selection Criteria**

#### **3.6.1 Criteria**

The Sample for the Study is based on the following Criteria:

- i. IPOs issued and listed on National Stock Exchange of India through book building route have been considered.
- ii. National Stock Exchange of India is considered for the study, because it is the first exchange in India to implement screen based or electronic trading. Further, National Stock exchange of India is the major stock exchange in India.
- iii. Companies listed on National Stock Exchange and having a trade history of up to a period of at least one year are considered for analysis.
- iv. Those listed companies in National Stock Exchange of India having data about Offer Price, listing date, Listing Price and the prices subsequently required are considered.

- v. The instruments of issue considered for the present study is equity shares. Other instruments like debt and preference shares have been excluded from the purview of the present study.
- vi. Further, for the study S&P CNX Nifty is selected as the market index (for the same period).
- vii. Only retail subscription data are considered for the study. As retail investors are considered the most suffered investors among all the category of investors in the market. Further, one of the main motives of launching the concept anchor investment was to help retail investors by bringing after market price stability.
- viii. Those companies who have split stock and issued bonus share within one year from the date of listing were not considered for study.
- ix. IPOs issued through fixed price route were also not considered for the present study.

### **3.7. Rational of the Study**

The research is mainly concerned with finding the impact of anchor investor on IPOs price performance. The study helps to the investors from the investment point of view. Especially, retail investors, who are still in information disadvantage position as compared with qualified institutional investors. It helps companies to figure out whether introduction of anchor investment on IPOs has helped in price discovery to the new issues and helped in bringing stability in post issue market price of IPO? The study also helps in figure out whether anchor investment able to attract investors in the market or not. The finding of the study will also be useful to the Government and to the SEBI in framing and amending polices and issuing guidelines in future regarding Anchor investment on IPOs. The study will also be very useful to the

management institutes, colleges, all the stakeholders of the primary market (New issues), and to the future researchers in the field of initial public offering.

### **3.8. Financial Techniques used to Measure Price Performance**

In order to determine the magnitude and degree of the deviations of market price of the stock from its offer price, returns have been computed for both anchors backed and non-anchor backed IPOs. Positive returned on listing day indicated underpricing while negative returns on listing indicated overpricing.

#### **3.8.1. Listing Day Price Performance**

The listing day performance of initial public offerings (for Anchor back and non-Anchor back IPOs) have been calculated as the difference between the closing price on the first day trading and offer price and have been divided by the offer price. Further, to set the figure in percentage the outcome number has been multiple by 100.

$$RRet = \frac{p_1 - p_0}{p_0} \times 100 \dots \dots (i)$$

Here, R Ret. =Refers to initial return or raw return for stock.

P1 = Refers to closing price on the first day of trading.

Po = Refers to offer price.

If *RRet* is more than zero, one can interpret the short-term return is positive and the issue was underpriced. However, if *RRet* is less than zero, result signifies negative return and overpricing of issue, and if *RRet* is zero, it means no return.

Further, the initial returns calculated may be affected by market actions. It is necessary to adjust the initial returns market returns. Hence, adjusted market excess returns have been calculated to considerable change and time gap between the offering and listing of the stock.

$$MAER = \frac{p_1 - p_0}{p_0} - \frac{m_1 - m_0}{m_0} \times 100 \dots \dots \dots (ii)$$

Here,

MAER = Refers to Market Adjusted Excess Return.

M1= Refers to closing value of market index on first trading day.

Mo= Refers to closing value of market index on offer closing date.

### **3.8.2. After-Market Performance (Six months after Listing and One Year after Listing Day Price Performance)**

For measuring medium and long-term price performance of India IPOs, the returns for different time period have been calculated by taking closing prices of the given stock after the specified time gap (six months and one year for both Anchor backed and non-Anchor backed IPOs) from the listing day. Time period of six months from the date of listing has been considered medium term and one year after listing date has been considered long term.

Following formula have been used to find out the same.

$$RRet_t = \frac{p_t - p_0}{p_0} \times 100 \dots \dots (iii)$$

Here,  $RRet_t$  = Refers to initial return or raw return for stock at time t after listing day

Pt= Refers to closing price of stock at time.

Po=Refers to closing price of stock on listing day.

Likewise, the market adjusted excess returns are calculated for the given time periods by using the formula:

$$MEAR_t = \frac{p_t - p_0}{p_0} - \frac{m_1 - m_0}{m_0} \times 100 \dots \dots \dots (iv)$$

Here, *MEAR*<sub>t</sub> = Refers to market adjusted excess return at the end of time period t.

M1 =Refers to closing value of market index at time period t.

Mo = Refers to closing value of market index on listing day.

### **3.9. Statistical Tools and Techniques**

This section focuses on the different statistical tools and techniques which are used for the motive of analysis of the present study.

#### **3.9.1. Mean**

Mean is the easiest measure of central tendency and it is extensively used measure. The study has used the mean as a main tool for analysing the data. Mean is also known as statistical average.

#### **3.9.2. Standard Deviation**

In statistics, the amount of difference or variation of a set of values is measure by the statistical tool known as standard deviation. A little standard deviation specifies that the values be inclined close to the average (also called the expected value), while an excessive standard deviation specify that the values are outspread widely from each other.

Mean, standard deviation and standard error of both the group of IPOs have been calculated for different time periods. Mean and standard deviation have been calculated to compare the performance of anchor backed IPO with non-anchor backed IPOs and for further detail analysis. The hypothesis was tested with the statistical technique Mann Whitney U test.

### **3.9.3. Mann Whitney U test**

In order to examine the validity of null hypothesis, the study carried out Mann Whitney U test to determine, if there is significant difference between price performance of Anchor backed IPOs and non-Anchor backed IPOs. Mann Whitney U test is a rank based non-parametric test alternative to the independent-sample t –test, which is used to compare between two independent groups of variables, when the dependent variable is not normally distributed. Data of the present study were not normally distributed as per statistical analysis. Shapiro- Wilk normality test is used to ascertain whether the absorbed return data series are normal or not. Further, with a view to interpreting the result from the test, the study determined whether two distributions (i.e., the distribution return scores of both groups of the independent variable) have same shape or not. Whenever the data fulfilled one of its critical assumptions of Mann Whitney U test, (i.e. Distributions return scores of the two groups of the independent variable were similarly shaped) the study used statistical software to perform Mann-Whitney U test to figure out if there was a statistically significant median difference in price performance between both groups of IPOs, and whenever data failed the critical assumption(i.e. Distributions return scores of the two groups of the independent variable were not similarly shaped) the study tried to determine if there was statistically significant difference in the mean ranks of the



dependent variable in terms of the two groups using statistical software to perform the same test.

Normally, the Mann- Whitney U test is used to describe and interpret whether there are differences in the “medians” of two groups or difference in the “distributions” of two groups. But this is not so much an option that one can make, however, is rested on whether the distribution of scores for both groups of independent variables (in present study: anchor backed IPOs and non-anchor backed IPOs) have the different shape or a same. IPO is independent variable in this study, which is split into two groups (Anchor backed IPOs and Non-Anchor Backed IPOs) and Price performance (return) is the depended variable.

### **3.10. Level of Significance**

The analysis of the data has been done and tested with 5% level of significance. The data analysis is done using appropriate Statistical Software.

### **3.11. Scheme of Chapterisation**

The following procedure shows the chapter planning for the present study.

Chapter 1: Capital market and statement of problem

Chapter 2: Literature survey

Chapter 3: Research design

Chapter 4: Anchor investment and compliance mechanism

Chapter 5: Anchor backed vs. non-Anchor backed IPOs and their post- listing price behaviour

Chapter 6: Pre and post Anchor investment impact on IPOs price performance

Chapter 7: Findings, recommendations and conclusion

### **3.12. Limitation of the Study**

The following are the major limitations of the study:

1. The study only tried to determine the effect of anchor investor on IPO price performance and other factors which affect the performance of IPO are not considered.
2. The study considered data only from the period 2002 to 2017. Further, to examine the anchor backed vs. non-anchor backed IPOs and their post- listing price behaviour (second objective of the study) researcher considered data from the period 2009 to 2017 only.
3. The present study is confined to IPOs which have Equity share as their instruments. Other instruments like Debt and Preference share have been not considered for this study.
4. The changing market conditions and market volatility which also have effect on the price behaviour of IPO and thus cannot be avoided return generated by them.
5. Due to shortage of time only IPOs listed on National Stock Exchange of India during study period were considered for the study.

Hence, the result from the sample study is not free of limitations.

### **3.13. Further Scope of the Study**

Following are some important further scopes which one can use for conducting more research.

1. More years can be considered to examine the impact of anchor investor on IPO price performance by the future researchers.
2. To measure price performance of IPOs rigorous data analysis techniques can be used.
3. The study may be undertaken to examine impact of anchor investor on IPO price performance of all the stock exchange.
4. Impact of other variables on IPO price performance can also be considered.
5. The present study considered equity IPOs only. In future, study can be extended by considering and including all the types of IPOs.
6. Underpricing phenomenon of IPO can also be carried on regional stock exchanges.

### **3.14. Conclusion**

This chapter discusses the rationale for the selection of the area of research and explains research design of the study. This chapter also contains research objectives, explains period through which present study was taken, discusses search strategy for secondary data and highlights the different hypothesis of the study. Tools and techniques used for analysis of the results are covered in detail in this chapter.

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## **CHAPTER – 4**

### **ANCHOR INVESTMENT AND COMPLIANCE**

#### **MECHANISM**

##### **4.1. Introduction**

In July, 2009, SEBI introduced a new concept of anchor investor, by amending its (Disclosure and Investor Protection) Guideline, 2000 vide Circular SEBI/CFD/DIL/DIP/36/2009//09/07 dated 9 July, 2009. A version of book building mechanism of IPO issue in which issuing company and lead managers ask for bids from and allocate allocations in the IPO pre market to the anchor investors, subject to revelation of quantity of share allocated, price and identity of participating anchors in the pre- market book building. In this chapter, study tried to understand the rationale behind introduction of the concept anchor investment by the market regulator in India. Further, study also analysed the compliance mechanism which are associated with anchor investing.

##### **4.2. Rationale behind Introduction of Concept Anchor Investment**

Initial public offering is an important decision in a company's life cycle. Company that decides to go public gets an abundant opportunity to grow its organization and also gets a greater vector of resources. There is an opportunity to sell shares quickly with minimal transaction cost, ability to tap massive and timeless capital, enhancement of investment credibility of the organization and analysts also start flowing. Efficient and effective IPO market can create a favourable environment for

innovative business by providing exit option for venture capitalist and entrepreneur. In India, as a result of different reform measures since 1990s and the gradual unlocking up of its capital markets, investors both domestic and foreign started perceiving Indian stock market a new and good place to earn profit. Both primary market and secondary market in India have shown tremendous improvement in recent years. Especially Initial Public Offering (IPO) segment of primary market has shown encouraging performance during the period 2005-06 to 2007-08 when a bull period prevailed. Both companies and investors were earning good returns especially in the primary market till the global recession in 2008, which spoiled all their enjoyment. The length of globe recessionary trend was so long that is miserably crashed Indian stock market as well, which in turned resulted in a decline in investors' confidence and even those companies who were planning for IPOs had to either postponed or dropped their plans. In such circumstances, market regulator felt very necessary to introduce a measure, which can help to bring back confidence of investors and help in price discovery of new issues and price stability of shares in the post issue market. After introduction of anchor investor concept, many companies are revisiting their previous IPO plans. The rationale behind such move is to improve investment opportunity of retail investors, reduce the risk associated with IPOs, to help in price discovery and price stability to the issues during the Initial Public Offerings (IPOs) and in secondary market. As anchor investors are qualified institutional buyers and generally possessed higher understanding about the market as well as valuation and other information relating to the issuing company as compare to other category of investors specially then retail investors. Further, portion of the anchor issue is generally subscribed by the serious institutions such as insurance companies, mutual funds and foreign funds, their valuation signals can be useful for other categories of

investors. Retail investors generally invest, when they see that someone who has substantial knowledge invest in the IPO.

### **4.3. SEBI Regulations on Anchor Investors**

As per the guidelines by SEBI, a company going for public issue of 100% of the net offering via 100 % book building route can provide up to 50 % of the net offer to qualified institutional buyers (QIB). Further issuer is permitted to provide at most 60% of the portion available to QIB, to anchor investors. Moreover, shares allocation to the anchor investor is not mandatory rather optional. An Issuer Company offering shares to anchor investors, however should fulfil following conditions as stipulated in the SEBI guideline.

- i. Since anchor investors are qualified institutional buyers, they shall be allocated shares from the qualified institutional buyers' quota.
- ii. In the public issue anchor investor shall make minimum application size of Rs.10 crore.
- iii. Similarly in the public issue up to 60% of the portion available for the QIB category shall be made available for allocation to anchor investor.
- iv. Persons associated to the promoters/book running lead managers/merchant bankers or relatives of merchant bankers and promoters in the concerned public issue can not apply for shares from anchor investors' portion.
- v. Share allocation to anchor investors in an issue (new public issue) is on a discretionary basis. However, selection criterion of anchor investor has to be distinctly established by merchant bankers and has to be made ready as a part of its records for inspection by regulator.

- vi. One third portion of the anchor investor has to be exclusively reserved for domestic mutual fund.
- vii. In an IPO, bidding for allocation of shares for anchor investor category has to be opened one day prior the public issue opens and on the same day allocation has to be completed.
- viii. There can be a maximum of 15 anchor investors, if the offer size is less than Rs.250 crores, but there is no limit for maximum anchor investors, if issue size is over Rs. 250 crores (As per latest SEBI stipulation).
- ix. Guideline stipulates that merchant banker has to make available in public domain, the number of share and price at which allocation is made to the anchor investors, before the public issue opens.
- x. On application, anchor investors have to pay a margin of at least 25% and balance shall be paid by anchor investors within two days of the date of closure of the public issue.
- xi. In case of a book- building process, usually, the price is fixed after public issue opens. However, there is a chance that the price at which anchor investors are allotted shares is dissimilar from the price at which other category of investors (non-anchor investors QIBs, retail investors, non QIBs) are allotted shares. As anchor investors are allotted shares before the IPO opens. In such situation, the guideline demands that if price determined through book-building mechanism for public issue is higher than the price at which allotment has been made to anchor investors then additional amount have to be paid by the anchor investor. However, if the price at which allocation is made to anchor investors is higher than price fixed for public issue, difference shall not be payable to the anchor investors.



- xii. The regulator also mandated that, allocated shares to anchor investors are lock-in for 30 days from the date of allotment. It means anchor investors cannot sell their shares at least for 30 days from the date of share allotment.
- xiii. Further, application under the non-anchor investors' category and under anchor investor's category by QIBs in an IPO may not be regarded as multiple applications.

#### **4.4. Advantages and Drawbacks Associated with Anchor Investment in IPO**

While examining the legal compliance mechanism stipulated by SEBI for anchor investors on IPO, study observed certain advantages and drawbacks associated with it. Study absorbed, following main advantages and drawbacks connected with anchor investment and in its compliance mechanism. Further, study also made some important suggestions which may help in strengthening the concept of anchor investors in future.

##### **4.4.1. Advantages of having Anchor Involvement in Initial Public Offerings:**

- i. **Sound understanding:** Anchor investors are the part of QIBs (Qualified Institutional Buyers) category. They generally have the sound understanding about the company's prospects and fundamental analysis than retail investors; usually they are contemplated to invest in profit making originations only. So, having anchor involvement in any IPO will definitely help in signalling about the demand and goodness of the share offered retail and also helps investors in decision making.

- ii. **Reduction of information asymmetry and risk:** As per the SEBI Guidelines anchor investors subscribe to the shares one day before bidding is opened to other categories of investors (in book building method of IPO) and details of their investment in an issue has to be made public before IPO to general public which in turn is expected to reduce information asymmetry between informed investors and non-informed investors. In addition to this, price at which anchor investors bid for IPO stocks can be used as a reference by the issuing company for fixing price band and for final price of issue. Further, unlike syndicate and underwriters associated in an IPO, anchor investor does not add any additional cost to the issuer. Hence, association of anchor investor in an IPO is cost effective.
- iii. **Availability of Information:** As lead book runner of the particular issue has to make public the number of shares and the price at which allotment has been made to anchor investors before the IPO date, seeing the big name in the list of investors, retail investors or uninformed investors may feel confident about the IPO. Further, participation of anchor investors in an IPO may give sort of assurance to information disadvantage investors about an IPO. In one way we may say that they act like brand ambassador of the specific issue.
- iv. **Protection from sudden fall:** SEBI had made mandatorily for anchor investors to lock-in their allotted shares for minimum 30 days from the date of allotment. This stipulation for anchor investors shall protect retail investors from sudden fall in price. This measure helps in preventing substantial off-loading of shares at early stage by anchor investors.
- v. **Quality indicator and guide:** Now days, due to complex structure of companies, uninformed investors (retail investors) find very difficult to figure-out the true value and worthiness of company. Anchor investor having greater knowledge

guide them and also are expected to serve as a quality indicator of public issue. Particularly, it is expected to guide those investors who are less experienced, more risk adverse or have lesser infrastructure for evaluating impact funds.

- vi. **Helps in avoiding under subscription risk:** Through anchor allotment, an issuing company can exhibit the demand for shares by getting well known investors on board. Moreover, prior allotment to reputed investors (anchor investors) help in avoiding under subscription risk, as issuer company can get nearly a third of issue covered even before the IPO opens. An early approval and support by the valued investors have a catalyst halo effect on the future investment funds of issuing company.
- vii. **Guaranteed allotment:** In the IPO, allotment to investors is done on a proportionate basis, if issues are highly oversubscribed, larger investors may not be allotted desired number of shares. Hence, qualified institutional buyers can apply through anchor route and avoid the risk of not getting adequate subscription.

#### **4.4.2. Drawbacks associated with Anchor Investment in Initial Public Offering**

- i. **Application size of anchor investment:** As per the SEBI guidelines a minimum application size for each anchor investor is 10 crores in an IPO. Considering the fact that different IPOs have different issue size, it would be better if the application size for anchor investor is determine as a percentage of the issue size, then as per an absolute quantum.
- ii. **Lock-in period:** As per SEBI guideline, there is a lock in period of 30 days for anchor investors. However, in the event of a prolonged bear phase in the secondary market, the current lock-in-period of 30 days appears to be quite short and may not serve the motive for which it was introduced by the regulator. If the concept of anchor investor is to be really effective during bear phase of the market, it is

suggested to amend the present regulation of lock-in period, and should be extended at least for 3 to 6 months duration.

- iii. Price differential:** As stated in prior paragraphs, the SEBI guidelines demand, if the price determined through book-building process in the public issue (IPO) is higher than price of stock at which allotment has been made to anchor investors, then additional amount must have to be paid by anchor investor. However, if the price at which allocation is made to anchor investor is higher than price fixed in IPO (public issue), then difference shall not be payable to anchor investor. This regulation is very discouraging to anchor investors. So, it is suggested that in case allotted share's price to the anchor investors is higher than the price fixed through book building issue method, the market regulator SEBI could frame the rule, that there be ceiling on the difference in price, in terms of a certain percentage and in case price difference is higher than ceiling, then refund the price difference to anchor investors. Further it is also suggested that, if the price decided through book-building is lesser than price at which shares are allotted to anchor investor, full excess price paid should be refunded to anchor investor.
- iv. Unpredictable market:** Although, in order to signal the soundness and good prospects of the issuing firm, anchor investor concept is viewed as very useful measure, but, unpredictability of the market's direction, while deal is on the road, makes it difficult to persuade anchor investors to step in. If the market is downtrend or there is a probability of market going down for quite some time, hardly investors would be willing to participate or invest in the new issues. Further, if qualified institutional investors think that, post listing of IPO, if they could get the shares at discount price, they would rather participate in secondary market directly.

## **4.5. Conclusion**

From the above discussion it is clear that, there are number of reasons relevant behind introduction of this new and unique concept anchor investment in Indian IPO market. First anchor investors are knowledgeable and well-informed institutional investors, who have vast understanding about proper valuation of new companies going public. Secondly, in general anchor investors are unbiased, as they are not associated with the public issuing company. In addition to this, anchor investors, being well known and reputed institutional investors always try to invest in superior issues to safeguard and maintain their image in the market. Thirdly, anchor investors have to invest in the new issue one day prior the IPO bidding opens to general public. Therefore, sizeable participation with regards to subscription from anchor investors provides advance signal to the market with reference to issue quality. Price at which anchor investors bid for IPO can be used as reference by issuing companies while fixing price band and final offer price. Fourthly, detail information about anchor investment in an IPO must be reflected before the public domain by issuing company. Therefore, this stipulation surely helps in reducing information asymmetry among various categories of investors.

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## **CHAPTER – 5**

### **ANCHOR BACKED VS. NON-ANCHOR BACKED IPOs AND THEIR POST- LISTING PRICE BEHAVIOR**

#### **5.1. Introduction**

In this chapter, the study examined the anchor backed vs. non-anchor backed IPOs and their post- listing price behaviour. Since the introduction of anchor investment in primary market in 2009, there have been many companies which went (IPO) public with anchor investors backed and many companies which went public (IPO) without anchor investors backed. So, the study finds very interesting and imperative to examine post listing price behaviour of both the groups of IPOs. The findings from the current study would be greatly helpful to all the stakeholders of the primary market. Especially new companies who are planning for first public issue and to the investors who are associated with primary market to figure out whether the introduction of concept anchor investor has really been able to achieve its objective of bringing post-listing price stability and price discovery to the new issues. The study further elucidates the analysis data based on the research methodology explained in chapter 3. Findings are based on interpretation of financial and statistical analysis carried on for present study. Study conducted using secondary source data from the period July 28, 2009 to December 31, 2017. The research included IPOs with equity as instruments, which were listed in National Stock Exchange of India. Companies listed on National Stock Exchange and having a trade history of up to a period of one year from the date of listing are considered for analysis. During the study period, total 207 IPOs were offered to public which were listed in National Stock Exchange of

India. Out of which 9 companies either split their shares or issued bonus share within one year of listing and 4 companies were listed through fixed price route. Those companies which were split/issued bonus shares within one year from the IPO issued date and those companies which were issued through fixed price mechanism were excluded for the current study. Remaining 122 IPOs listed through book building with anchor backed and 72 IPOs listed through book building without anchor backed have all required information required for the present study. Therefore, for present objective study considered total 194 sample IPOs (both anchor backed and non-anchor backed IPOs issued through book building route).

Further, in order to identify the impact of anchor investment on price performance of IPOs, raw return or initial return and market adjusted excess return for both groups of IPOs for different time periods have been calculated (listing day return, six months return after listing day and one year return after listing day). Additionally, mean, standard deviation and standard error of both the group of IPOs have been calculated. Mean and standard deviation tools are used to analyse the data and also to compare the performance of both groups of IPOs. At the end, Mann Whitney U test is used to test the validity of result. The detailed of mean, standard deviation and standard error of anchor backed IPOs and non-anchor backed IPOs on listing date, six months after listing day and one year after listing day are explained in table 1.



## 5.2. Measurement of Pricing Performance

**Table 1:**

*This table provides Mean, Standard Deviation & Standard Error of Anchor Backed and Non-Anchor Backed Investors Stocks on listing date, six months after listing day and one year after listing day. (Figures are in percentage).*

<b>Group Statistics</b>					
	<b>Anchor Investors /Non- Anchor Investors</b>	<b>Number of IPOs</b>	<b>Mean</b>	<b>Standard Deviations</b>	<b>Standard Error</b>
<b>Return on listing day (Raw Return)</b>	1.00	122	11.6126	24.4427	2.2129
	2.00	72	9.9617	39.7633	4.6861
<b>Return on listing day(Marked Adjusted Excess Return)</b>	1.00	122	11.6631	24.1815	2.1892
	2.00	72	9.0982	39.8374	4.69489
<b>Return in six months after listing day (Raw Return)</b>	1.00	122	13.4661	41.7401	3.7789
	2.00	72	-12.3296	52.3604	6.1707
<b>Return in six months after listing day(Marked Adjusted Excess Return)</b>	1.00	122	9.5561	40.3448	3.6526
	2.00	72	-14.5253	51.2410	6.03887

<b>Group Statistics</b>					
	<b>Anchor Investors /Non- Anchor Investors</b>	<b>Number of IPOs</b>	<b>Mean</b>	<b>Standard Deviations</b>	<b>Standard Error</b>
<b>Return in 1 year after listing day (Raw Return)</b>	1.00	122	8.9736	50.8971	4.6080
	2.00	72	-12.1831	79.4290	9.36081
<b>Return in 1 year after listing day (Marked Adjusted Excess Return)</b>	1.00	122	1.7374	47.1930	4.2726
	2.00	72	-14.5142	77.2339	9.1021

**In the table 1      1=IPOs with Anchor Investors,  
2 =IPOs without Anchor Investors.**

**Source: Computed using secondary data from Prime Database  
and NSE India (Accessed on [www.primedatabase.com](http://www.primedatabase.com) and  
[www.nseindia.com](http://www.nseindia.com)) analysed using appropriate Statistical  
Software.**

As evident from the table 1, it is seen that the IPOs with anchor investor shown an average absolute initial return of 11.6126 percent (with standard deviation of 24.4427 percent), while IPOs without anchor investors provide a little lower average absolute initial return of 9.9617 percent (with standard deviation of 39.7633). Similarly it is also seen that average market adjusted excess return of 11.6631 percent (with standard deviation of 24.1815 percent) of IPOs with anchor investors brought little higher return than average market adjusted excess return of 9.0982 (with standard deviation of 39.8374) of IPOs without anchor investors.

Further, Table 1, also reflects the anchor backed IPOs and non-anchor backed IPOs returns for medium term, Study considered six months returns after listing day as medium-term returns. Evident from the calculation reflects that in six months after listing day also, anchor backed IPOs again gave good returns,( both average raw return of 13.4661 percent (with standard deviation of 41.7401 percent )and average adjusted excess market return of 9.5561 percent (with standard deviation of 40.3448 percent).However, non-anchor backed IPOs gave negative returns for( both average raw return of -12.3296 percent (with standard deviation of 52.3604 percent) and average adjusted market excess return of -14.5253 percent (with standard deviation of 77.2339 percent).

Results further reveals that, after one year of listing day although returns from anchor backed IPOs underperformed bit but still remained positive for both average raw return of 8.9736.(with standard deviation of 50.8971) and average market adjusted excess return of 1.7374 (with standard deviation of 47.1930).However, returns from non-anchor backed IPOs came out negative for both average raw return of -12.1831 (With standard deviation of 79.4290) and average market adjusted excess return of -14.5142 (with standard deviation of 77.2339).

So, form the above results in table 1, it is absorbed that anchor backed IPOs have given substantially greater, stable and positive returns throughout the study period as compared with non-anchor backed IPO returns. Further, in order to ascertain whether price performance of anchor backed and non-anchor backed IPOs are statistically significant or not, for all the study performed Mann Whitney U test. Detailed of Mann Whitney U test has been explained in methodology section in chapter 3.

### 5.3. Evaluation of the Distribution Return Scores of Anchor - Backed IPOs and Non-Anchor Backed IPOs for Different Time Periods Using Appropriate Statistical Software.

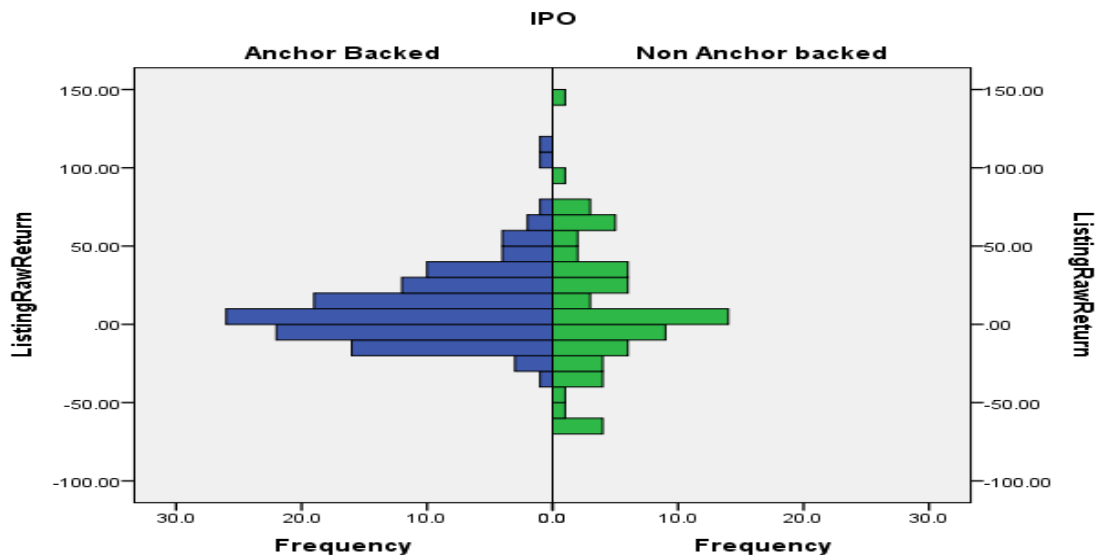


Figure 1.1

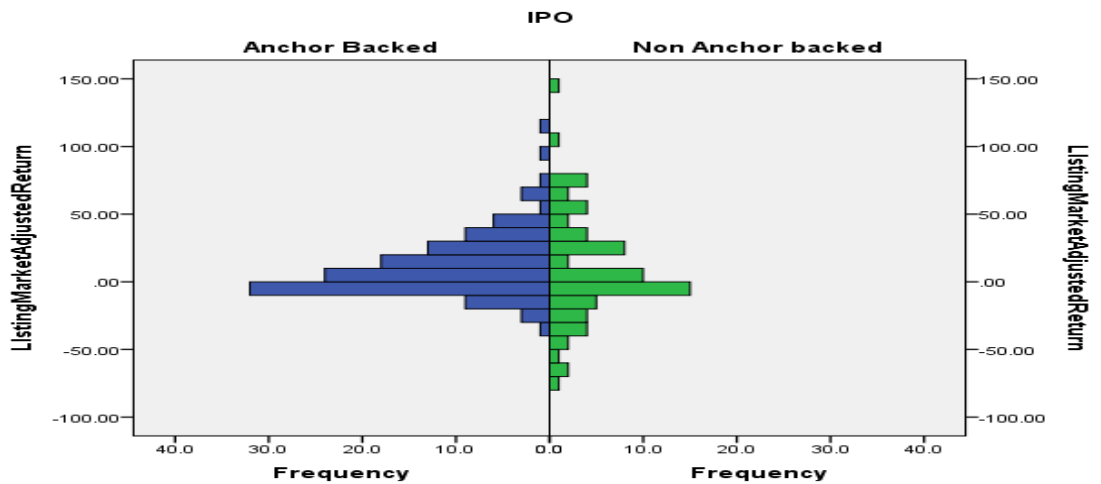


Figure 1.2

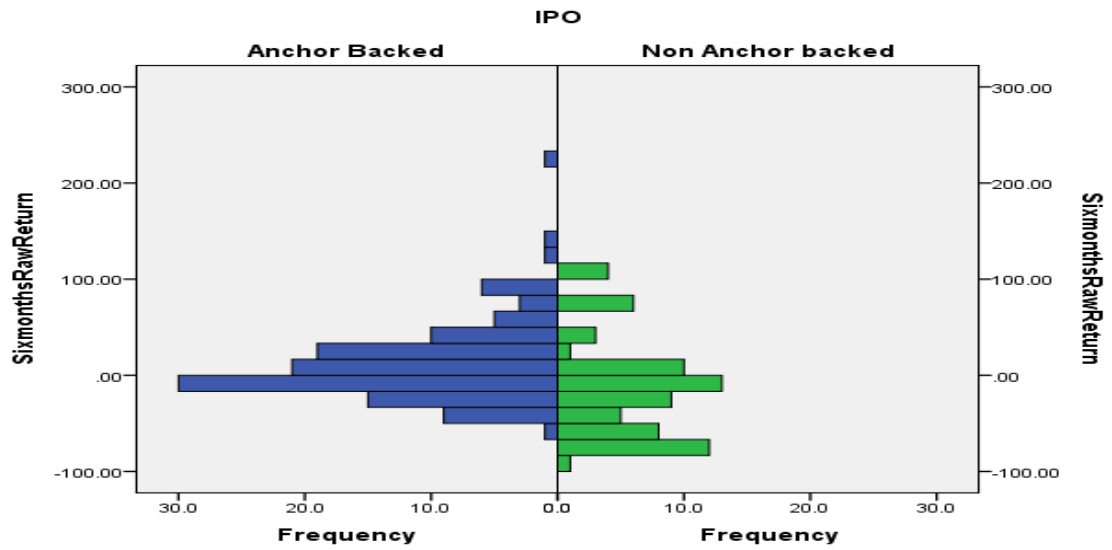


Figure 1.3

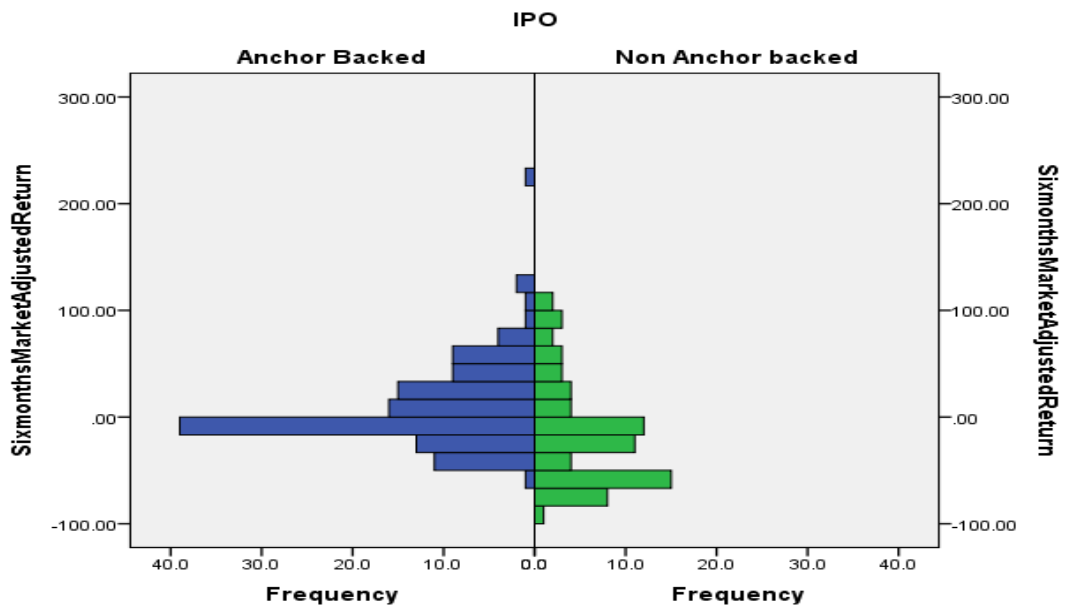


Figure 1.4

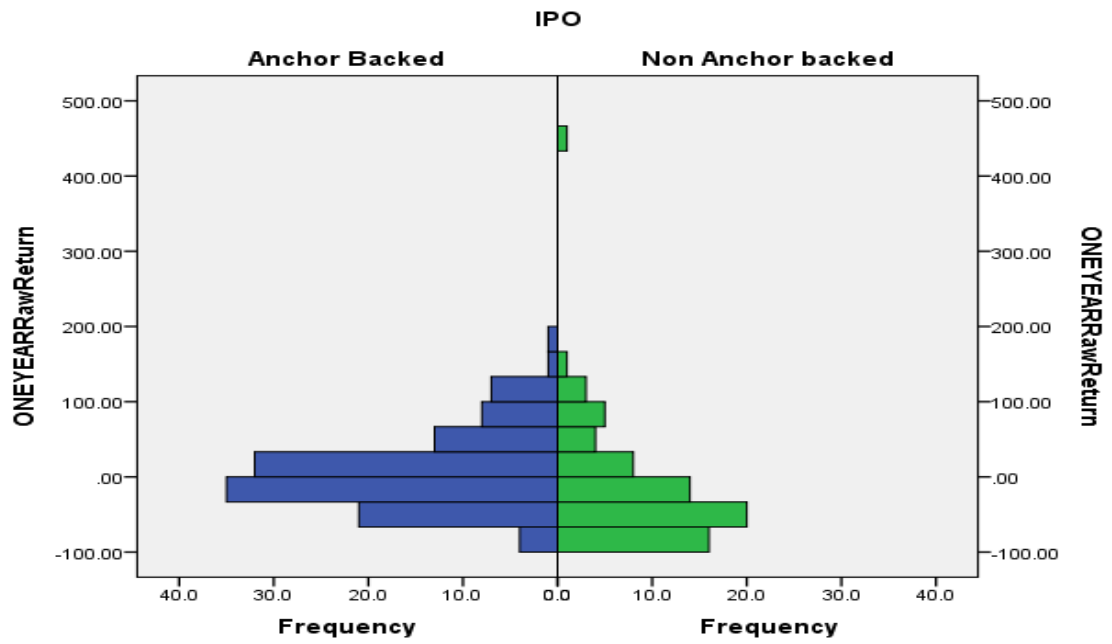


Figure 1.5

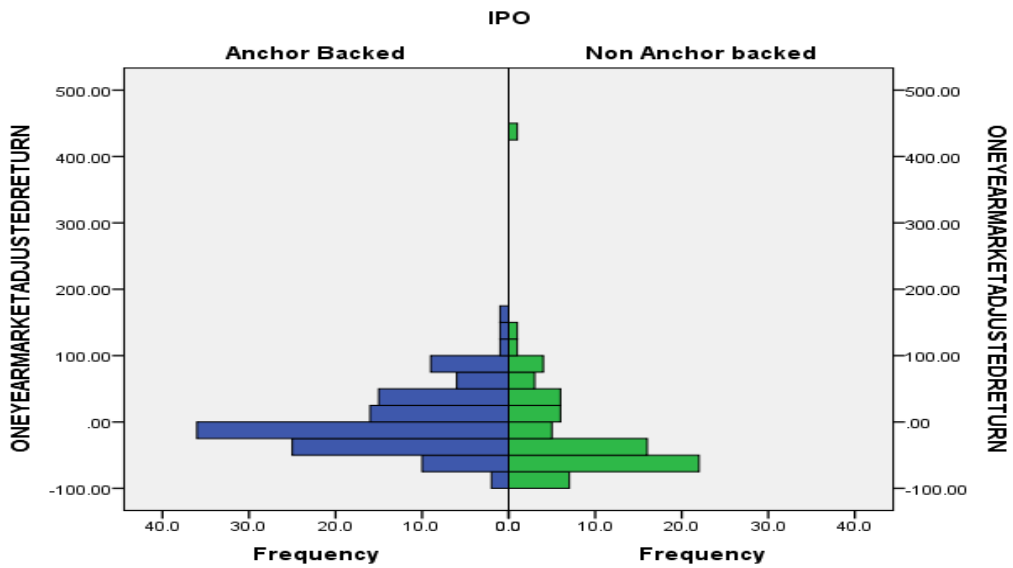


Figure 1.6

By looking at these pyramids in figure 1.1, figure 1.2, figure 1.3 & figure 1.4 the study made judgment about distribution of return scores of IPOs (which are not fairly similar shape in these cases ( i.e., in both raw returns and market adjusted

Returns). So, Mann Whitney U-test is used to determine whether there is difference in the distribution of two groups or not (on listing date returns comparison of two groups of IPOs and also returns comparison of both groups of IPOs in six months from the date of listing). However, as assessed by visual inspection of the above pyramids in figure 1.5 and figure 1.6, the study made judgment that distribution of the return scores for anchor backed IPOs and non-anchor backed IPOs were similar. (i.e., in both raw returns and market adjusted returns). So, Mann Whitney U-test is used to test to determine whether there are differences in the medians of anchor backed IPOs and non-anchor backed IPOs in one year after listing.

#### **5.4. Hypothesis**

$H_0$ : The distribution returns scores for the anchor backed and non-anchor backed IPOs are equal on the day of listing.

$H_A$ : The mean return ranks of the anchor backed and non anchor backed IPOs are not equal on the day of listing.

$H_{01}$  : Distribution returns scores for the anchor backed and non anchor backed IPOs are equal in six months after listing day.

$H_{A1}$ : The mean return ranks of the anchor backed and non-anchor backed IPOs are not equal in six months after listing day.

$H_{02}$ : The distribution returns of the anchor backed IPOs and non-anchor backed IPOs are equal in one year after listing day.

$H_{A2}$ : The median returns of the anchor backed IPOs and non anchor backed IPOs are not equal in one year after listing day.

## 5.5. Mann-Whitney Test

**Table 2: Rank Table.**

*The below table is the ranks table that presents information concerning the output of the actual Mann Whitney U test. It exhibits mean rank and sum of the mean rank for the two groups tested. (i.e., the anchor backed IPOs and non-anchor IPOs groups):*

	<b>IPO</b>	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>	<b>Median</b>
<b>Raw Returns on Date of Listing</b>	Anchor Backed IPOs	122	99.18	12099.50	6.4250
	Non-Anchor backed IPOs	72	94.66	6815.50	2.8100
	Total	194			4.7850
<b>Market adjusted Excess Returns on day of Listing date</b>	Anchor Backed IPOs	122	100.47	12257.00	6.2450
	Non-Anchor backed IPOs	72	92.47	6658.00	1.8050
	Total	194			4.2000
<b>Returns in six months after listing day (Raw Return)</b>	Anchor Backed IPOs	122	110.53	13485.00	6.1000
	Non-Anchor backed IPOs	72	75.42	5430.00	-14.3000
	Total	194			-2.7250
<b>Returns in six months after listing day (Marked Adjusted Return)</b>	Anchor backed IPOs	122	110.15	13438.50	-8.650
	Non-Anchor backed IPOs	72	76.06	5476.50	-22.7150
	Total	194			-6.5550



	<b>IPO</b>	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>	<b>Median</b>
<b>Returns in one year after listing day (Raw Return)</b>	Anchor backed IPOs	122	109.50	13358.50	1.0400
	Non-Anchor backed IPOs	72	77.17	5556.50	-32.9300
	Total	194			-8.6500
<b>Returns in one year after listing day (Marked Adjusted Excess Return)</b>	Anchor backed IPOs	122	108.84	13279.00	-8.8900
	Non-Anchor backed IPOs	72	78.28	5636.00	-32.7900
	Total	194			-15.7450

**Note - Source: from [www.primedatabase.com](http://www.primedatabase.com) and [www.nseindia.com](http://www.nseindia.com) and analysed using appropriate Statistical Software.**

The information reflected in table 2 is very useful as it specifies which group can be considered as having the higher price performance, to be specific, the group with the highest mean rank. In this case, the anchor backed IPOs group had the highest returns across the different time horizon.

## 5.6. Test Statistics

**Table 3:**

*This table 3 exhibits the actual significance value of the test. Test statistics table reveals the test statistic, U statistic and asymptotic significance (2-tailed), p -value.*

	<b>Raw Return on Listing Day</b>	<b>Market Adjusted Excess Return on Listing Day</b>	<b>Raw Return in Six Months after Listing Day</b>	<b>Market Adjusted Excess Return in Six Months after Listing Day</b>	<b>Raw Return in One Year after Listing day</b>	<b>Market Adjusted Excess Return in One Year after Listing Day</b>
<b>Mann-Whitney U</b>	4187.500	4030.000	2802.00	2848.500	2928.500	3008.000
<b>Wilcoxon W</b>	6815.500	6658.000	5430.000	5476.500	5556.500	5636.000
<b>Z</b>	-.541	-.958	-4.208	-4.085	-3.874	-3.663
<b>Asymp. Sig. (2-tailed)</b>	.588	.338	.000	.000	.000	.000

Note: Group variable: IPO

Significance Level is 0.05

### **Comparison and Analysis (Raw and Market Adjusted) Returns Scores between Anchor Backed IPOs and Non-Anchor Backed IPOs on Listing Day, Six Months after Listing Day and In One Year after Listing Day**

Since the shapes of distribution of listing day raw return scores for two groups of IPOs were not similar as seen in the above pyramid (figure-1.1). In case of listing day raw returns comparison, study concluded that return scores for anchor backed IPOs (mean rank =99.18) and return scores for non-anchor backed IPOs (mean rank=94.66) as seen in table 2 and table 3, were not statistically significantly different,  $U=4187.500$ ,  $Z= -.541$ ,  $p=.588$  ( $>0.05$ ). Asymp. Sig, (2-tailed). Similarly, shapes of distribution of listing day market adjusted return scores for two groups were also not similar as seen in the above pyramid (figure-1.2). In case of marked adjusted listing day returns comparison also, study concluded that return scores for anchor backed IPOs (mean rank =100.47) and return scores for non-anchor backed IPOs (mean rank=92.47) as seen in table 2 and table 3, were not statistically significantly different,  $U=4030.000$ ,  $Z=-.958$ .  $p=.338$  ( $>0.05$ ). Asymp. Sig, (2-tailed). However, raw returns and market adjusted returns of both groups of IPOs showed positive returns on the day of listing which indicates that the investors who purchased shares on the offer date earned higher returns from holding the shares of the IPOs on the first day of trading of the shares and there still exist underpricing on the date of listing after introduction of anchor investors.

To compare return (raw returns and market returns) scores between two groups in six months after listing day, study used non-parametric independent test i.e., Mann – Whitney U test only. As assessed by visual inspection (in figure 1.3 and figure 1.4), distribution of the return scores for anchor backed IPOs and non-anchor backed IPOs

were not found similar (in both raw return scores and market adjusted return scores).Mann –Whitney U test result revealed that raw return scores for anchor backed IPOs (mean rank= 110.53) and non-anchor backed IPOs (mean rank= 75.42) as seen in table 2 and table 3, were statistically significantly different,  $U= 2802.000$ ,  $Z= -4.208$ ,  $p<.0005$ , Asymp. Sig, (2-tailed). Similarly study also found that market adjusted return scores for anchor backed IPOs (mean rank= 110.15) and non-anchor backed IPOs (mean rank= 76.06) as seen in table 2 and table 3, were statistically also significantly different,  $U = 2848.500$ ,  $Z=-4.085$ ,  $p<.0005$  Asymp. Sig, (2-tailed).

Further, by inspecting visually (figure -1.5) it is seen that distributions of the raw return scores of one year after listing day were found similar and median return scores for Anchor backed IPOs (1.0400) and median return scores for non-anchor backed IPOs (-32.9300) as seen in table 2 and table 3, were statistically significantly different,  $U=2928.500$ ,  $Z=-3.874$ ,  $p<.0005$ . Similarly, Distributions of the market adjusted return scores of one year after listing for both the groups were found similar as assessed by visual inspection in (figure- 1.6) and median market adjusted return scores for anchor backed IPOs (-8.8900) and median market adjusted return scores for non-anchor backed IPOs (-32.7900) as seen in table 2 and table 3, were also statistically significantly different,  $U=3008.000$ ,  $Z= -3.663$ ,  $p<.0005$ .

## **5.7. Conclusion**

As this chapter intended to investigate the impact of anchor investment on IPOs price performance at different time horizons. Finding of the study revealed no significant impact of anchor investment on IPOs price performance on listing date. However, analysing the result using Mann Whitney- U test, study reveals significant impact of anchor investment on price of share in six months after listing date and in one year

after listing day. Moreover, study also found that returns from anchor back IPOs are remained positive throughout form listing day up to one year as compare to return of non-anchor backed IPO which has diminishing trend which further indicated that, introduction of anchor investment has really been able to achieved price stability and price discovery objective.

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## **CHAPTER – 6**

### **PRE AND POST ANCHOR INVESTMENT IMPACT ON IPOs PRICE PERFORMANCE**

#### **6.1. Introduction**

In this section study tries to compare pre and post anchor investment impact on IPOs price performance. Further, study explains the analysis data on the basis of research methodology elucidated in chapter 3. Findings are based on interpretation of statistical and financial analysis proceeded for the study. Study was conducted using 344 IPOs sample (122 anchor backed IPOs & 222 non anchor backed IPOs) that went public during the financial year from 2002 to 2017. Data for anchor backed IPOs were collected from 28, July, 2009 to 31 December, 2017 and data for non-anchor backed IPOs were collected from 1<sup>st</sup> January 2002 to 27 July 2009. The sample is restricted to IPOs listed on National Stock Exchange (NSE) of India compulsorily. This study depends on secondary data. Data is collected from prime database.com and nseindia.com. In order to compare pre and post anchor investment impact on IPOs price performance, raw return or initial return and market adjusted excess return for both groups of IPOs for different time periods have been calculated (listing day return, six months return after listing day and one year return after listing day). Further, mean, standard deviation and standard error of both the group of IPOs have been calculated to compare price performance and to analysis the data. The detailed of mean, standard deviation and standard of anchor backed and non-anchor backed investors stocks on listing day, six months after listing day and one year after listing day are explained in table 4.

## 6.2. Measurement of Pricing Performance

**Table 4:**

*The table 4 gives Mean, Standard Deviation & Standard Error of Anchor Backed and Non-Anchor Backed Investors Stocks on Listing Date, Six Months After Listing Day and One Year After Listing Day. (Figures Are in Percentage)*

<b>Group Statistics</b>					
	<b>Anchor Investors /Non-Anchor Investors</b>	<b>Number of IPOs</b>	<b>Mean</b>	<b>Standard Deviations</b>	<b>Standar d Error</b>
	1.00	122	11.6126	24.44279	2.21295
<b>Return on listing Day (Raw Return)</b>	2.00	222	29.6515	48.22976	3.23697
	1.00	122	11.6631	24.18154	2.18929
<b>Return on listing day(Marked Adjusted Excess Return)</b>	2.00	222	29.7232	47.25841	3.17178
<b>Return in six months after listing day (Raw Return)</b>	1.00	122	13.4661	41.74018	3.77898
	2.00	222	4.0446	69.83199	4.68682
<b>Return in six months after listing day(Marked Adjusted Excess Return)</b>	1.00	122	9.5561	40.34481	3.65265
	2.00	222	-5.0151	63.19014	4.24104
<b>Return in 1 year after listing day (Raw Return)</b>	1.00	122	11.7841	50.36548	4.55988
	2.00	222	11.7477	103.14951	6.92294



<b>Group Statistics</b>					
	<b>Anchor Investors /Non-Anchor Investors</b>	<b>Number of IPOs</b>	<b>Mean</b>	<b>Standard Deviations</b>	<b>Standar d Error</b>
<b>Return in 1 year after listing day</b>	1.00	122	4.0774	47.16628	4.27023
<b>(Marked Adjusted Excess Return)</b>	2.00	222	-4.6560	95.27422	6.39439

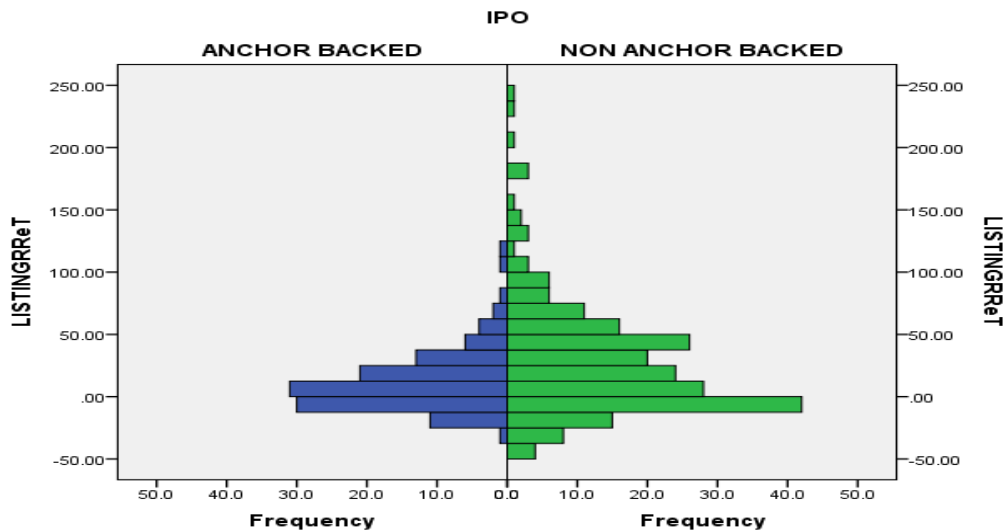
**In the table 4. 1=IPOs with Anchor Investors,  
2 =IPOs without Anchor Investors.**

**Source: Computed using secondary data from Prime Database  
and NSE India (Accessed on [www.primedatabase.com](http://www.primedatabase.com) and  
[www.nseindia.com](http://www.nseindia.com)) analysed using appropriate Statistical  
Software.**

As evident from the table 4 it is seen that, on listing date, the IPOs backed by anchor investors shown fairly low positive average absolute initial return of 11.6126 percent (with standard deviation of 24.44279 percent), compare to non-anchor backed IPOs average absolute initial return of 29.6515 percent (with standard deviation of 48.22976 percent). Similarly it is seen that listing day average initial market adjusted excess return of 11.6631 percent (with standard deviation of 24.18154 percent) for IPOs backed by anchor investors which is reasonably lower return then listing day average initial market adjusted excess return of 29.7232 (with standard deviation of 47.25841 ) of IPOs without backed by anchor investors. Further, in six months after listing day study found that anchor backed IPOs continued giving positive returns,( average raw return of 13.4661 percent with standard deviation of 41.74018 percent )and average adjusted excess market return of 9.5561 percent (with standard deviation of 40.34481 percent) .However, returns of non-anchor backed IPOs gone down

sharply in six months after listing day for( both average raw return of 4.0446 percent (with standard deviation of 69.83199 percent) and average market adjusted excess return of -5.0151 percent (with standard deviation of 63.19014 percent).In one year after listing date, although returns from anchor backed IPOs underperformed bit, but still remained positive for both average raw return of 11.7841 percent (with standard deviation of 50.36548) and average market adjusted excess return of 4.0774 percent (with standard deviation of 47.16628). In one year after listing date returns from non-anchor backed IPOs improved little bit again for both average raw return of 11.7477 (With standard deviation of103.14951) and average market adjusted return of 4.6560 (with standard deviation of 95.27422) however, as compare to anchor backed IPOs the returns of non-anchor backed IPOs remained low.

**6.3. Evaluation of the Distribution Return Scores of Anchor- Backed and Non-Anchor IPOs on Listing Day, In Six Months and In One Year After Listing Day Using Appropriate Statistical Software.**



**Figure -1.7**

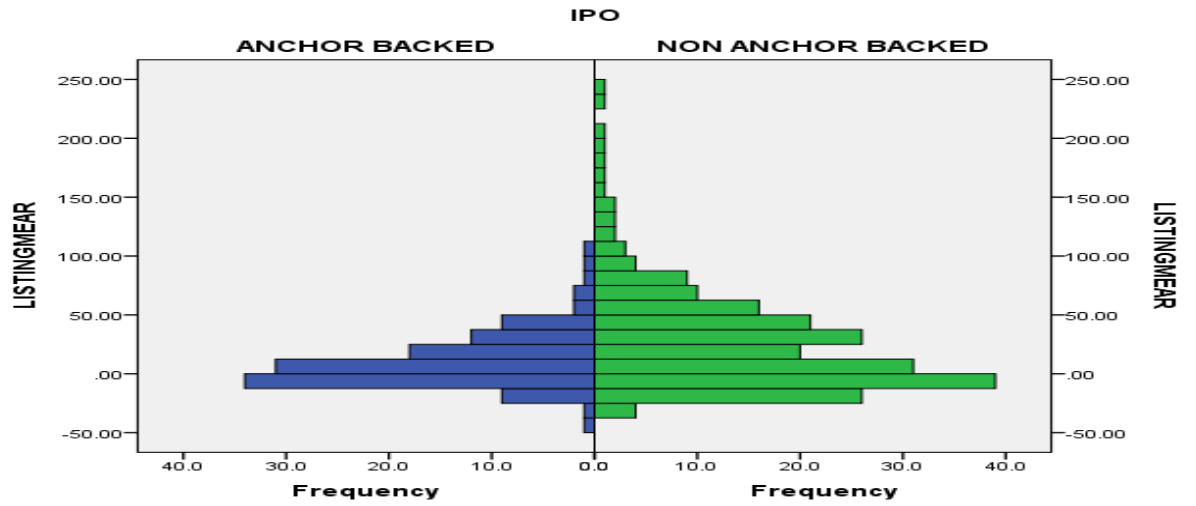


Figure-1.8

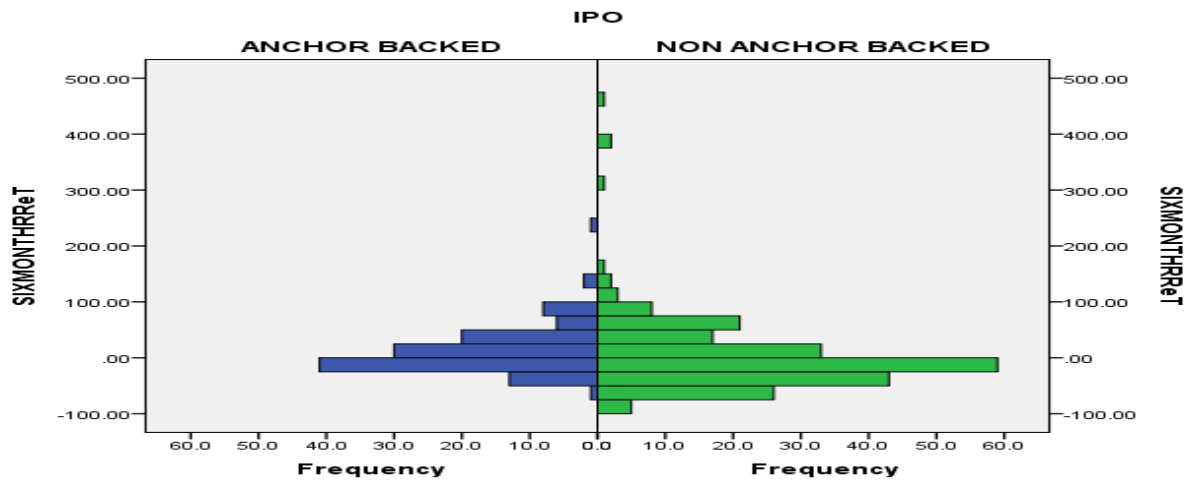
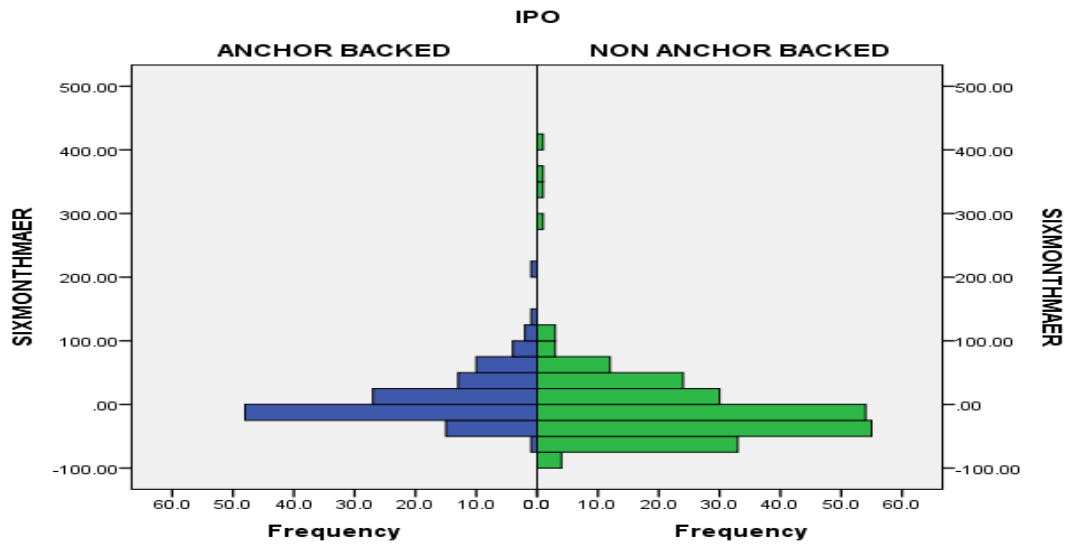
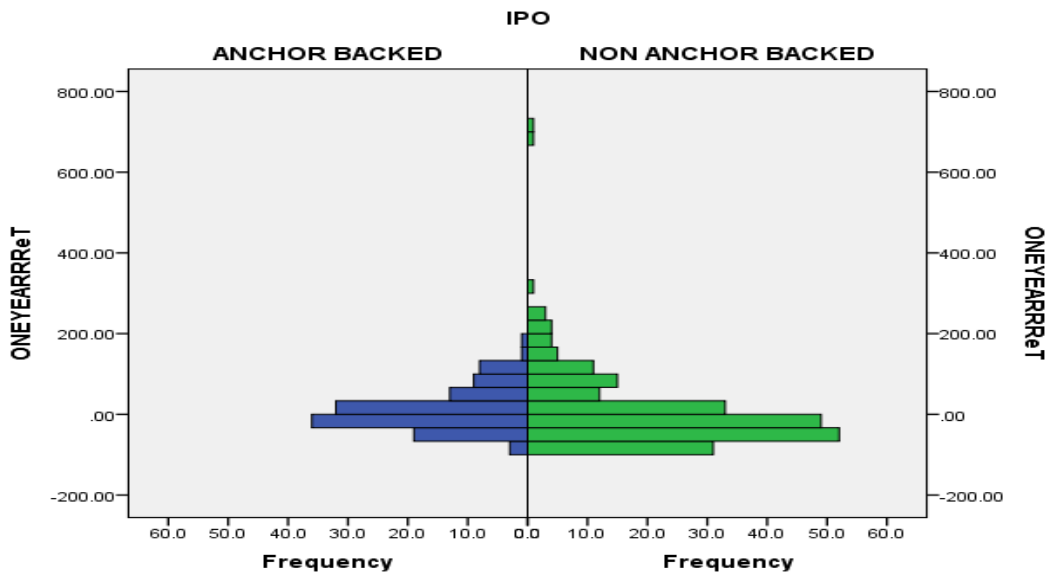


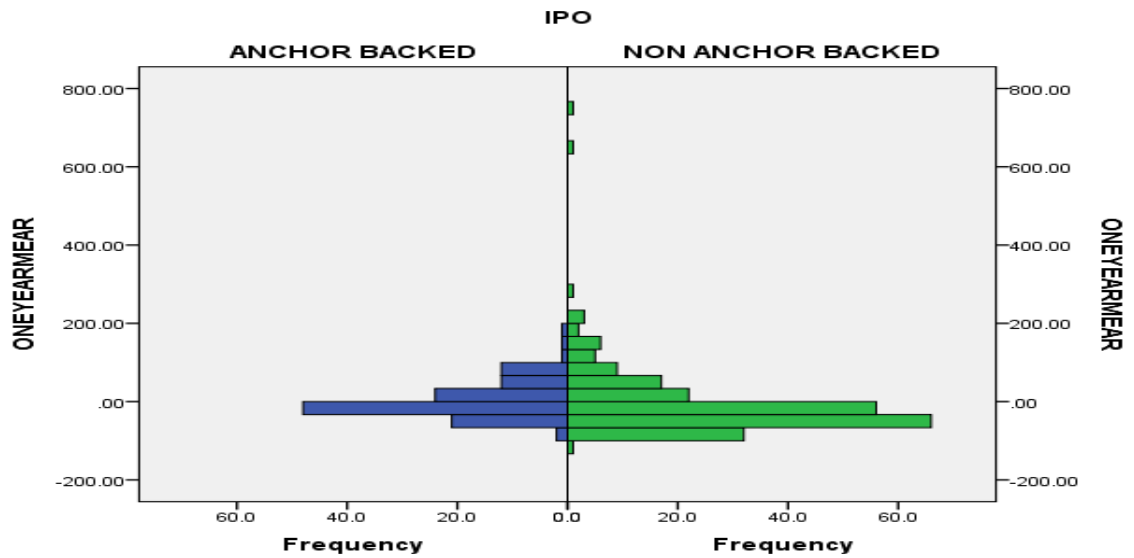
Figure -1.9



**Figure-1.10**



**Figure-1.11**



**Figure-1.12**

By looking at these pyramids above in Figure: 1.7, Figure: 1.8, Figure: 1.9, and Figure: 1.10, study made judgment about distribution of scores of IPO return scores which are not fairly similar shape in both cases (i.e., raw returns and market adjusted excess returns). So, Mann Whitney U-test was used to determine whether there is difference in the distribution of two groups. However, as assessed by visual inspection of the above pyramids in Figure: 1.11 and Figure: 1.12, authors made judgment that distribution of the return scores for anchor backed IPOs and non-anchor backed IPOs were similar. (i.e., in both raw returns and market adjusted excess returns). So here as well, Mann Whitney U-test was used to test to determine whether there are differences in the medians of anchor backed IPOs and non-anchor backed IPOs in one year after listing.

## 6.4. Hypothesis

$H_03$  : The distribution returns scores for the anchor backed and non-anchor backed IPOs are equal on the day of listing.

$H_A3$ : The mean return ranks of the anchor backed and non anchor backed IPOs are not equal on the day of listing.

$H_04$  : Distribution returns scores for the anchor backed and non-anchor backed IPOs are equal in six months after listing day.

$H_A4$ : The mean return ranks of the anchor backed and non anchor backed IPOs are not equal in six months after listing day.

$H_05$ : The distribution returns of the anchor backed IPOs and non-anchor backed IPOs are equal in one year after listing

$H_A5$ : The median returns of the anchor backed IPOs and non-anchor backed IPOs are not equal in one year after listing date.

## 6.5. Mann-Whitney Test

**Table 5: Ranks Table.**

*The below table is the ranks table that gives information in respect of output of the actual Mann Whitney U Test. It reveals Mean rank and Sum of the Mean rank for the two groups tested. (i.e., the Anchor backed IPOs and non-Anchor IPOs groups):*

	<b>IPO</b>	<b>N</b>	<b>Mean Rank</b>	<b>Sum of Ranks</b>	<b>Median</b>
	Anchor Backed IPOs	122	149.55	18244.50	6.4250
<b>Raw Returns on Date of Listing</b>	Non-Anchor backed IPOs	222	185.11	41095.50	18.4750
	Total	344			12.8100
<b>Market Adjusted Excess Returns on day of Listing</b>	Anchor Backed IPOs	122	151.16	18442.00	6.2450
	Non-Anchor backed IPOs	222	184.23	40898.00	19.1850
	Total	344			10.9350
<b>Returns in six months after listing day(Raw Return)</b>	Anchor Backed IPOs	122	198.37	24201.00	6.1000
	Non-Anchor backed IPOs	222	158.28	35139.00	-11.4300
	Total	344			-4.1150
<b>Returns in six months after listing day(Marked Adjusted Excess Return)</b>	Anchor Backed IPOs	122	206.55	25199.50	-.8650
	Non-Anchor backed IPOs	222	153.79	34140.50	-18.6000
	Total	344			-9.7400

<b>Returns in one year after listing day (Raw Return)</b>	Anchor Backed IPOs	122	192.46	23480.00	3.0550
	Non-Anchor backed IPOs	222	161.53	35860.00	-17.2700
	Total	344			-6.3100
<b>Returns in one year after listing day (Marked Adjusted Excess Return)</b>	Anchor Backed IPOs	122	201.30	24559.00	-7.6500
	Non-Anchor backed IPOs	222	156.67	34781.00	-29.3500
	Total	344			-18.7950

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**Note-Source: from [www.primedatabase.com](http://www.primedatabase.com) and [www.nseindia.com](http://www.nseindia.com) and analysed using appropriate Statistical Software.**

The information furnished in table 5 is very helpful as it describes which group can be regarded as having the higher price performance. The group with the highest mean rank has the highest price performance. In this case, the non-anchor backed IPOs group had the highest returns on listing day as compare with anchor backed IPOs group. However, in six months and in one year after listing day, the anchor backed IPOs group had the highest price return as compare to non-anchor backed IPOs group price return.



## 6.6. Test Statistics.

**Table 6: Test Statistics Table.**

*This table reveals the actual significance value of the test. Test statistics table reveals the test statistic, U statistic and asymptotic significance (2- tailed) p- value.*

	<b>Raw Return on Listing Day</b>	<b>Market Adjusted Excess Return on Listing Day</b>	<b>Raw Return in six months after listing day</b>	<b>Market Adjusted Excess Return in six months after listing day</b>	<b>Raw Return in one year after listing day</b>	<b>Market Adjusted Excess Return in one year after listing day</b>
<b>Mann- Whitney U</b>	10741.500	10939.000	10386.000	9387.500	11107.000	10028.000
<b>Wilcoxon W</b>	18244.500	18442.000	35139.000	34140.500	35860.000	34781.000
<b>Z</b>	-3.174	-2.950	-3.577	-4.708	-2.759	-3.982
<b>Asymp. Sig. (2-tailed)</b>	.002	.003	.000	.000	.006	.000

*Note:* Grouping Variable: IPO

Significance level is 0.05

### **Comparison and Analysis (Raw and Market Adjusted) Returns Scores Between Anchor Backed IPOs and Non-Anchor Backed IPOs.**

As the shapes of distribution seen in the above pyramid (Figure 1.7) of listing day raw return scores for two groups of IPOs were not similar. In listing day raw returns comparison, study found that return scores for anchor backed IPOs (mean rank =149.55) and return scores for non-anchor backed IPOs (mean rank= 185.11) as seen in table 5 and 6, were statistically significantly different,  $U= 10741.500$ ,  $Z= -3.174$ ,  $p= < 0.05$ . Asymp. Sig, (2-tailed). Likewise, shapes of distribution as seen in the above pyramid (figure 1.8.) of listing day market adjusted excess return scores for two groups were also not similar. In marked adjusted listing day returns comparison also, study found that return scores for anchor backed IPOs (mean rank =151.16) and return scores for non-anchor backed IPOs (mean rank=184.23) as seen in table 5 and table 6 were statistically significantly different,  $U=10939.000$ ,  $Z= -2.950$ .  $p= <0.05$ . Asymp. Sig, (2-tailed). So, on listing day returns from non-anchor backed IPOs were significantly higher then return from anchor backed IPOs in both raw return and market adjusted excess return comparison. Further, by visually examination of figure 1.9,it is seen that distributions of the raw return scores of six months after listing day were found not similar and mean rank for anchor backed IPOs (198.37) and mean rank of non-anchor backed IPOs (158.28) as seen in table 5 and table 6 were statistically significantly different,  $U=10386.000$ ,  $Z=-3.577$ ,  $p= <.0005$ . Similarly, distributions of the market adjusted excess return scores of six month after listing day for both the groups were found not similar as judged by visual inspection in Figure 1.10 and mean rank( market adjusted) for anchor backed IPOs (206.55) and mean rank of non-anchor backed IPOs (153.79) as seen in table 5 and table 6, were also statistically significantly different,  $U=9387.500$  ,  $Z= -4.708$  ,  $p<.0005$ .However, by

visually examination of figure 1.11, it is seen that, distributions of the raw return scores of one year after listing were found similar and median return scores for Anchor backed IPOs (3.0550 ) and non-anchor backed IPOs (-17.2700 ) as seen in table 5 and table 6, were statistically significantly different,  $U= 11107.000$  ,  $Z= -2.759$  ,  $p= <.0005$ . Likewise, Distributions of the market adjusted return scores of one year after listing for both the groups were found similar as judged by visual inspection in figure 1.12 and median market adjusted return scores for anchor backed IPOs (-7.6500 ) and non-anchor backed IPOs (-29.3500 ) as seen in table 5 and table 6 were also statistically significantly different,  $U=10028.000$  ,  $Z=-3.982$  ,  $p .001 <.0005$ .

## **6.7. Conclusion**

As the present chapter intended to compare pre and post anchor investment impact on IPOs price performance at various time horizons. Finding of the study revealed that in both listing day raw return and listing day market adjusted excess return comparison, return from non-anchor backed IPOs statistically significantly higher than the return from anchor backed IPOs. Study also found that raw returns and market adjusted excess returns of both groups of IPOs on listing day showed positive return which in turn signifies underpricing continued to persist in the IPOs market even after introduction of anchor investment concept. However, in six months and in one year after listing, analysing the result using Mann Whitney- U test revealed significant positive impact of anchor investment on price of share.

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## **CHAPTER – 7**

### **FINDINGS, RECOMMENDATIONS AND CONCLUSION**

#### **7.1. Introduction**

In this final chapter, the study made an effort to give the backdrop of the study in brief. The main findings are shown along with suggestions for future improvement of the initial public offerings. Further, conclusion is also drawn as per the findings of the study.

An initial public offering or IPO referred to the first sale of stock (shares) by a company to the general public. It gives not only chance to investors for investing in shares directly from the issuing company at the price of their choice but also provides company a huge source of funds with indefinite or long maturity period. Companies go public for several reasons and the motive can be different for each company. From the issuers' point of view, IPO allows them to raise capital for extension and diversification of business. Moreover, companies do not have to repay the capital raised through issue of shares. Going public also helps them to enhance liquidity, helps in attracting, retaining and compensating management and employees. Through IPO a growing company can create publicity, brand awareness or prestige before the general public. From investors' point of view, investment in an IPO provides part of the ownership and also makes them eligible to enjoy the profit of the company. Therefore, an IPO is pivotal for gaining investors' confidence and for company's growth as well. Various researchers across the world have found that IPOs are generally underpriced and accordingly provides a very good initial return on the first

day of listing. However, studies also found that IPOs performed poorly in the long run (in one year after listing date and after one year of listing date). There is underpricing of IPO when the market price of share on the first day of trading is lower than the offer price. The length of underpricing of IPOs differs amongst countries. In India, because of the prevailing bullish effect during the period 2005-06 to 2007-08, excessive underpricing has been noticed. A good number of IPOs have been issued during this period in the primary market. In the year 2008, a massive crash was noticed in the Indian stock market. As a result, many companies planning for public issue deferred their plan and there was an erosion of investors' confidence in capital market as well. Downward stock market trend during the year 2008-09, severally affected the confidence of both investors and issuers. Investors became very weary of participating in IPOs and even some companies had to withdraw their IPOs. The major worry for both issuers and investors are that, the decision of listing of the securities on the stock exchange would turn out to be a blunder. With a view to restore the confidence amongst the investors and price stability to the issue the capital market regulator SEBI launched the mechanism of anchor Investment in June 2009. The main reason behind the launching of the concept anchor investment was to bring price stability to the issue. Moreover, it is hoped to improve price discovery and also shall stimulate the confidence of investors in IPOs. An anchor investor (investment) is a qualified institutional buyer, who is having information advantage as compared to retail investors. Association with anchor investors provides a lot of comfort to the issuer as well as to the banker. In this backdrop, the present study was directed to comprehend (a) whether price stability of share increased after introduction of the concept 'anchor investment at various time length? (b) Whether underpricing is still prevailing in the secondary market of India?

## **7.2. Major Findings of the Study**

The major findings of the study are enumerated below:

- i. Study revealed that the concept of anchor investment introduced by the SEBI (market regulator) has brought transparency in the book building issue mechanism, improved investment opportunities of investors, helped in price discovery of the new issues and to help in price stability of shares in the secondary market.
- ii. Anchor investors are a part of qualified institutional buyer category and have to subscribe to the shares in an IPO one day before bidding is open to the other categories of investors. Since lead manager of the particular issue has to reflect all details related to investment of anchor investors before the general public, it helped uninformed investors in judicial decision making at the time of investment as per study. Furthermore, while fixing price band and the final offer price of the new issue, the anchor investors bid price for IPO stocks is being used as a reference by the issuer firms.
- iii. It is also learnt that SEBI (market regulator) had made mandatory lock-in allotted shares to the anchor investors for minimum 30 days from the date of allotment. Since anchor investors cannot sell their shares at least for 30 days from allotment date, this stipulation protected investors from being sudden losses and also helped investors to get benefits especially in long run as per finding of the study.
- iv. From the study it is also learnt that unlike underwriters, syndicates associated in an IPO, anchor investor does not add any financial burden to the issuing company. Further, with anchor allotment issuing firm can avoid under subscription risk and

can reveal the demand for shares to the public as even before IPO opens to the public, issuer can get almost a third of its issue covered.

- v. It is also understood and noticed from the study that IPO issuing company makes allotment of shares to the investors on proportionate basis. If in case issue is oversubscribed, then it may be possible that larger investors may miss out on collecting desired subscription. Since allotment to the anchor investor is on discretionary basis, eligible qualified institutional buyers can apply through anchor mode and avoid risk of not getting sufficient allotment.
- vi. Study also observed that by involving anchor investors in any issue and making all their investment detail to the public, issuing company may signal the goodness and demand of shares to the potential investors. However, the very nature of market which is so unpredictable, if the market is downtrend or there is a great probability of market going down in near future, it will be very hard to attract anchor investor for participation in the new issues by issuers and lead managers. Moreover, if the qualified institutional investors think that, they could easily get shares in the secondary market at a discount price, they would rather take part in secondary market then through anchor route.
- vii. In order to compare pre and post anchor investment impact on IPO price performance (third objective of the study), study used 344 sample IPOs listed on National Stock Exchange of India. Out of 344 sample IPOs, 122 IPOs were book building anchor backed, issued from July 2009 to December 2017 and 222 IPOs were book building without anchor backed issued from January 2002 to July 2009. However, to study anchor backed vs. non anchor backed IPOs and their post listing price behaviour (second objective of the study), only 194 sample IPOs which went public from July 2009 to December 2017 were considered. Out of 194



sample IPOs, 122 were book building anchor backed and 72 were book building without anchor backed. From this information, it is understood that as compared to book building non-anchor backed IPOs, more book building anchor backed IPOs were issued after the introduction of the concept anchor investment in 2009. So, there is a shift in issue mechanism to anchor backed issue from simple book building issue mechanism.

- viii. Post listing price performance of anchor backed vs. non anchor backed IPOs on listing day were compared by calculating average raw returns and average market adjusted excess returns of both the group of IPOs. On listing day, study did not find any statistically significant difference in price performance between two groups of IPOs. However, when study compared pre and post anchor investment impact on IPOs price performance, the study found significantly higher price performance of non-anchor backed IPO over anchor backed price performance of anchor backed IPOs on listing day.
- ix. The study also examined that, raw returns and market adjusted excess returns of both the group of IPOs provide positive returns on the day of listing, which shows that the investors brought shares of the IPOs on issue day earned excessive returns from holding the shares on the first day of trading. Further, from this finding we can understand that there still exists underpricing of shares, even after introduction of concept anchor investment.
- x. The study further found that in six months after listing day, returns from anchor backed IPOs continued remain positive for both average raw return and average market adjusted excess return. However, returns from non-anchor backed IPOs in six months after listing day went down sharply and even came out negative. In order to find whether anchor backed IPOs return is significantly higher than non-

anchor backed IPOs return in six months, Mann Whitney U test was run. The test result revealed statistically significant higher price performance of anchor backed IPOs over non-anchor backed IPOs returns.

- xi. In one year after listing day, although return for anchor backed IPOs underperformed a bit but still remained positive for both average raw return and average market adjusted excess return. Similarly, non-anchor backed IPOs continued giving low and negative returns in one year after listing day for both average raw return and average market adjusted return. The test result of Mann Whitney U test disclosed statistically significant higher return of anchor backed IPOs over non-anchor backed IPOs return in one year as well.
- xii. The study further observed that returns from anchor backed IPOs are constantly stable throughout the study period unlike the returns from non-anchor backed IPOs which are very volatile and has diminishing trend. The finding is indicative of the facts that the lunching of concept of anchor investor has been able to achieve price stability and price discovery objective of the various stakeholders.

### **7.3. Recommendations**

1. As per the SEBI guideline each anchor investor needs to invest a minimum of Rs 10 crore in the issue. Taking into consideration of the fact that various IPOs have various issue size, it is recommended that if the application size for anchor investor is determined as a percentage of the issue size rather than as per an absolute quantum, it would be better for all the stakeholders of the new issue.
2. SEBI regulation further stipulated that allocated shares to the anchor investors are mandatorily locked-in for 30 days from the date of allotment. However, in the event of a prolonged bear phase, 30 days seems to be quite short period and may

not serve the objective for which the concept was introduced in the capital market. So, to make anchor investment concept really successful, it is recommended to amend the present 30 days lock-in period and increase to at least 3 months to 6 months period.

3. There is a clause in the SEBI regulation that if the difference between the price determined through book-building process in the public issue (IPO) is lower than price of stock at which allotment has been made to anchor investors, then excess amount must have to be paid by anchor investor. However, if the price at which allocation is made to anchor investor exceeds over price fixed in IPO (public issue), then difference shall not be refunded to anchor investor. This obviously acts as a disincentive for the anchor investors. So, it is recommended to have a ceiling in term of certain percentage, on price differential for payment by anchor investors.

#### **7.4. Conclusion**

The study is an attempt to identify the rationale behind introduction of anchor investor in Indian IPO market by SEBI and also aimed to examine impact of anchor investment on IPOs price performance at various time periods. Based on study it is found that there are numerous reasons relevant behind introduction of the concept anchor investment. Further, based on the quantitative analysis it is concluded that anchor investment has no significant positive effect on the price of share on listing date. However, in six months after listing date and in one year after listing date, there is a significant positive effect of anchor investment on IPO price performance. The study also found that raw return and market adjusted return of both groups of IPOs exhibited positive returns on the day of listing. Positive post issue price performance

of both the group of IPOs on listing day indicates underpricing of Indian IPOs even after the introduction of anchor investment mechanism. Moreover, it also indicates that the investors who buy shares on the offer date earn good profit for holding the shares up to listing day. From the discussion, study concluded that introduction of the concept of anchor investment in primary capital market is a welcome decision of SEBI. It is a win-win situation for both companies and investors. Extensive research with extended empirical evidence is the necessity to validate the findings of the study.

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## APPENDICES

<b>Appendix A: Details of Raw and Market adjusted excess return on investment in IPOs for different time periods (Anchor backed and non-anchor backed IPOs issued from July, 2009 to December 2017). (Figures are in percentage).</b>								
Name of Companies	Offer price Rs.	Anchor Investor Yes/No	R Ret - on listing day	MAER- on listing day	R Ret-in six months after listing	MAER -in six months after listing	R Ret -in one year after listing	MAER - in one year after listing
ADANI POWER LTD.	100.00	Yes	0.1	4.05	6.54	-2.25	39.66	15.47
PIPAVAV SHIPYARD LTD.	60.00	Yes	-5.5	-4.88	51.06	42.64	46.56	23.14
INDIABULLS POWER LTD.	45.00	Yes	-12.22	-4.45	-23.92	-35.94	-30	-57.72
DEN NETWORKS LTD.	205.00	Yes	-20.29	-28.33	22.61	25.49	30.45	15.22
COX & KINGS (INDIA) LTD.	330.00	Yes	28.91	27.63	3.58	3.54	26.66	12.2
MBL INFRASTRUCTURES LTD.	180.00	Yes	14.44	11.95	20.63	18.67	-4.59	-14.2

JSW ENERGY LTD.	110.00	Yes	-8.29	-10.64	23.36	23.27	-0.62	-18.09
GODREJ PROPERTIES LTD.	530.00	Yes	1.37	-1.77	15.98	16.78	14.18	-1.01
D.B.CORP LTD.	212.00	Yes	25.42	20.48	-12.05	-12.19	-1.41	-15.92
INFINITE COMPUTER SOLUTIONS (INDIA) LTD.	165.00	Yes	16.24	22.34	-11	-21.29	-7.66	-19.72
JUBILANT FOODWORKS LTD.	145.00	Yes	58	66.83	79.68	65.42	116.87	105.27
D B REALTY LTD.	468.00	Yes	-2.52	-3.11	-3.13	-16.44	-76.9	-85.22
HATHWAY CABLE & DATACOM LTD.	240.00	Yes	-13.48	-14.16	-2.19	-14.59	-41.56	-50.69
MAN INFRA CONSTRUCTION LTD.	252.00	Yes	38.83	33.13	-2.94	-12.81	-59.08	-65.16
IL&FS TRANSPORTATION NETWORKS LTD.	258.00	Yes	6.45	3.85	15.93	1.35	-13.67	-23.65
SHREE GANESH JEWELLERY HOUSE LTD.	260.00	Yes	-37.12	-39.73	5.66	-8.17	1.41	-7.55
NITESH ESTATES	54.00	Yes	-4.81	-2.37	-21.98	-39.22	-46.11	-53.17



LTD.								
MANDHANA INDUSTRIES LTD.	130.00	Yes	2.73	9.1	96.48	76.75	34.82	24.48
HINDUSTAN MEDIA VENTURES LTD.	166.00	Yes	13.83	10.81	-14.45	-19.95	-28.74	-31.37
SKS MICROFINANCE LTD.	985.00	Yes	10.52	10.77	-40.87	-42.04	-70.89	-63.83
GUJARAT PIPAVAV PORT LTD.	46.00	Yes	17.5	14.54	11.84	13.77	22.29	32.58
CAREER POINT INFOSYSTEMS LTD.	310.00	yes	102.63	99.68	-43.83	-39.07	-60.89	-37.69
EROS INTERNATIONAL MEDIA LTD.	175.00	Yes	8.71	5.76	-21.08	-16.32	22.02	45.22
ORIENT GREEN POWER CO.LTD.	47.00	Yes	-4.89	-6.3	-41.05	-36.77	-66.33	-46.42
RAMKY INFRASTRUCTURE LTD.	450.00	Yes	-13.91	-16.32	-27.05	-22.77	-47.02	-27.11
TECPRO SYSTEMS LTD.	355.00	Yes	14.28	13.26	-24.75	-19.74	-46.64	-30.36
ASHOKA BUILDCON	324.00	Yes	2.08	-0.37	-14.1	-9.80	-27.66	-10.74

LTD.								
COMMERCIAL ENGINEERS & BODY BUILDERS CO.LTD.	127.00	Yes	-11.1	-9.96	-63.68	-57.97	-64.84	-47.75
OBEROI REALTY LTD.	260.00	Yes	8.81	10.8	-11.1	-8.92	-17.13	-2.25
PRESTIGE ESTATES PROJECTS LTD.	183.00	Yes	5.55	8.22	-18.77	-15.80	-50.61	-37.12
A2Z MAINTENANCE & ENGINEERING SERVICES LTD.	400.00	yes	-17.86	-19.95	-27.26	-16.22	-72.15	-48.14
LOVABLE LINGERIE LTD.	205.00	Yes	21.73	20.32	93.21	105.06	48.65	53.07
PTC INDIA FINANCIAL SERVICES LTD.	28.00	Yes	-11.07	-18.77	-38.15	-23.56	-35.94	-27.44
MUTHOOT FINANCE LTD.	175.00	Yes	0.51	6.17	2.9	7.71	-33.83	-25.46
L&T FINANCE HOLDINGS LTD.	56.00	Yes	-10.63	-1.21	-3.4	-9.48	-10.69	-15.57
TREE HOUSE EDUCATION &ACCESSORIES LTD.	135.00	Yes	-12.89	-6.48	77.72	63.37	110.54	97.08

TD POWER SYSTEMS LTD.	256.00	Yes	7.52	-1.02	-12.04	-13.34	-5.99	-9.98
MT EDUCARE LTD.	80.00	Yes	12.94	11.05	18.54	10.97	-5.64	-10.41
TRIBHOVANDASBHI MJI ZAVERI LTD.	120.00	Yes	-7.5	-3.37	87.25	72.95	103.78	82.16
SPECIALITY RESTAURANTS LTD.	150.00	Yes	6.4	5.19	13.06	-5.71	8.65	-15.05
TARA JEWELS LTD.	230.00	Yes	-0.04	-5.45	-41.41	-42.85	-62.44	-67.99
CREDIT ANALYSIS & RESEARCH LTD.	750.00	Yes	23.01	22.89	-34.57	-37.43	-20.74	-27.06
PC JEWELLER LTD.	135.00	Yes	10.52	10.82	-37.53	-41.01	-41.02	-48.58
BHARTI INFRATEL LTD.	230.00	Yes	-16.67	-17.16	-20.69	-23.51	-12.13	-18.99
V-MART RETAIL LTD.	210.00	Yes	-3.19	-2.96	-16.85	-7.74	32.81	30.31
REPCO HOME FINANCE LTD.	172.00	Yes	-5.93	-3.07	53.03	51.70	107.14	89.32
JUST DIAL LTD.	530.00	Yes	15.54	18.34	96.37	91.01	117.46	91.29
WONDERLA HOLIDAYS LTD.	125.00	Yes	26.24	25.98	98.07	76.52	67.46	48.03
SNOWMAN LOGISTICS LTD.	47.00	Yes	69.79	67.89	7.58	-0.69	24.44	27.32

SHARDA CROPCHEM LTD.	156.00	Yes	48.04	49.7	29.12	22.47	23.75	25.89
SHEMAROO ENTERTAINMENT LTD.	170.00	Yes	0.59	2.68	7.72	-0.34	62.69	62.62
MONTE CARLO FASHIONS LTD.	645.00	Yes	-12.05	-8.38	-9.62	-9.62	-100	-94.37
ORTEL COMMUNICATIONS LTD.	181.00	Yes	-10.36	-6.97	31.9	39.46	16.43	28.36
ADLABS ENTERTAINMENT LTD.	221.00	Yes	-12.83	-12.1	-41.45	-35.60	-53.44	-41.37
INOX WIND LTD.	325.00	Yes	34.89	32.47	-16.25	-9.54	-44.08	-30.15
VRL LOGISTICS LTD.	205.00	Yes	43.46	48.39	38.51	39.92	36.33	40.38
MEP INFRASTRUCTURE DEVELOPERS LTD.	65.00	Yes	-10.15	-6.56	-10.19	-8.43	-30.39	-25.9
UFOMOVIEZ INDIA LTD.	625.00	Yes	-4.43	-4.95	-7.58	-1.96	-12.73	-7.75
PNC INFRATECH LTD.	378.00	Yes	-4.63	-7.24	46.67	52.13	60.89	64.12

MANPASAND BEVERAGES LTD.	320.00	yes	2.42	3.05	49.5	58.23	88.47	88.53
SYNGENE INTERNATIONAL LTD.	250.00	Yes	24.22	22.49	20.75	38.31	35.71	34.18
POWER MECH PROJECTS LTD.	640.00	Yes	-8.35	-0.43	-1.97	7.81	-18.57	-28.59
NAVKARCORP.LTD.	155.00	Yes	8.35	8.01	-2.29	1.38	13.25	-0.16
PENNAR ENGINEERED BUILDING SYSTEMS LTD.	178.00	Yes	-4.55	-2.53	-11.24	-7.36	1.71	-12.14
SADBHAV INFRASTRUCTURE PROJECT LTD.	103.00	Yes	3.11	0.75	-18.27	-13.20	-0.42	-11.57
COFFEE DAY ENTERPRISES LTD.	328.00	Yes	-17.55	-15.28	-3.16	-0.12	-18.03	-23.78
INTERGLOBE AVIATION LTD.	765.00	Yes	14.67	18.72	22.52	21.18	6.47	-3.07
S.H.KELKAR&CO.LTD	180.00	Yes	15.69	18.9	9.58	8.89	41.68	37.77
ALKEM	1,050.00	yes	31.59	29.21	-0.7	-5.84	15.94	14.42

LABORATORIES LTD.								
DR.LALPATHLABS LTD.	550.00	Yes	50	47.62	1.95	-3.19	23.41	21.89
NARAYANA HRUDAYALAYA LTD.	250.00	Yes	34.78	35.97	-6.89	-14.58	0.67	-5.83
PRECISION CAMSHAFTS LTD.	186.00	Yes	-4.6	-2.27	-17.7	-30.37	-12	-30.71
TEAMLEASE SERVICES LTD.	850.00	Yes	20.34	26.05	7.23	-17.00	-12.17	-38.13
QUICK HEAL TECHNOLOGIES LTD.	321.00	Yes	-20.92	-20.59	-5.57	-26.17	-0.69	-23.35
HEALTHCARE GLOBAL ENTERPRISES LTD.	218.00	Yes	-21.56	-23.28	28.8	17.48	31.67	13.07
EQUITAS HOLDINGS LTD.	110.00	Yes	22.91	18.07	35.43	25.56	26.85	11.59
THYROCARE TECHNOLOGIES LTD.	446.00	Yes	38.74	38.53	1.93	-5.26	15.81	-2.63
UJJIVAN FINANCIAL SERVICES LTD.	210.00	Yes	10.26	9.21	85.45	77.36	49.58	30.32
PARAG MILK FOODS LTD.	227.00	yes	8.81	9.64	8.2	4.47	-2.47	-23.6

MAHANAGAR GAS LTD.	421.00	Yes	23.59	22.89	50.96	52.67	90.02	75.7
QUESS CORP LTD.	317.00	Yes	58.71	56.4	35.03	36.37	82.42	67.22
LARSEN & TOUBRO INFOTECH LTD.	710.00	Yes	-1.75	-1.64	-2.93	-1.04	9.98	-6.53
DILIPBUILDCON LTD.	219.00	Yes	14.95	14.4	10.74	8.40	107.29	94.27
S.P.APPARELS LTD.	268.00	Yes	7.74	6.32	46.18	44.78	44.68	32.7
RBL BANK LTD.	225.00	Yes	33.07	31.29	60.55	59.49	81.9	69.02
L&T TECHNOLOGY SERVICES LTD.	860.00	Yes	0.06	-0.96	-8.98	-11.86	-9.89	-22.72
GNA AXLES LTD.	207.00	Yes	18.38	19.03	-21.14	-25.55	23.81	10.64
ICICI PRUDENTIAL LIFE INSURANCE CO.LTD.	334.00	Yes	-11.42	-9.3	25.4	18.97	31.6	17.66
HPL ELECTRIC & POWER LTD.	202.00	yes	-6.29	-6.82	-33.81	-39.15	-22.08	-35.15
ENDURANCE TECHNOLOGIES LTD.	472.00	yes	37.06	37.5	25.62	20.49	71.3	54.12
PNB HOUSING FINANCE LTD.	775.00	yes	14.99	16.36	48.53	39.25	57.05	35.24
VARUN BEVERAGES	445.00	yes	3.26	4.35	7.08	-1.94	8.89	-11.71

LTD.								
SHEELA FOAM LTD.	730.00	yes	41.37	40.53	31.27	14.25	68.24	43.98
LAURUS LABS LTD.	428.00	yes	12.24	13.97	26.42	7.25	11.19	-17.92
BSE LTD.	806.00	yes	32.66	31.05	0.04	-14.52	-20.56	-43.67
MUSIC BROADCAST LTD.	333.00	yes	11.98	9.34	7.19	-2.91	-2.28	-13.58
AVENUE SUPERMARTS LTD.	299.00	yes	114.58	112.49	66.72	55.75	108.52	97.19
CL EDUCATE LTD.	502.00	yes	-15.92	-17.51	-17.07	-23.77	-55.39	-65.64
SHANKARA BUILDING PRODUCTS LTD.	460.00	yes	37.49	35.76	139.87	133.14	184.52	173.08
S.CHAND&CO.LTD.	670.00	yes	0.9	0.76	-29.59	-40.24	-42.17	-57.46
PSP PROJECTS LTD.	210.00	yes	-5	-6.88	125.99	118.11	154.46	143.75
TEJAS NETWORKS LTD.	257.00	yes	2.53	3.33	46.09	35.79	4.4	-7.8
ERIS LIFESCIENCES LTD.	603.00	yes	-0.25	1.3	31.2	20.40	13.59	0.86
CENTRAL DEPOSITORY SERVICES (INDIA)	149.00	yes	75.57	76.74	36.7	26.09	7.13	-5.4



LTD.								
GTPLHATHWAY LTD.	170.00	yes	0.97	0.57	-5.24	-14.51	-41.01	-53.04
AU SMALL FINANCE BANK LTD.	358.00	yes	51.3	48.67	28.79	19.98	18	5.96
SECURITY & INTELLIGENCE SERVICES (INDIA) LTD.	815.00	yes	-7.11	-4.52	59.99	53.53	43.54	27.15
APEX FROZEN FOODS LTD.	175.00	yes	21.2	20.63	229.8	224.30	93.28	77.06
DIXON TECHNOLOGIES (INDIA) LTD.	1,766.00	yes	63.73	61.53	19.35	18.94	-5.62	-16.71
MATRIMONY.COM LTD.	985.00	yes	-8.16	-8.58	-11.34	-11.67	-40.29	-50.38
CAPACIT'EINFRAPRO JECTS LTD.	250.00	yes	37.02	39.13	-13.47	-14.74	-33.31	-45.41
ICICI LOMBARD GENERAL INSURANCE CO.LTD.	661.00	yes	3.06	7.12	16.18	11.57	24.05	11.29
SBI LIFE INSURANCE CO.LTD.	700.00	yes	1.08	2.13	-3.99	-7.90	-23.07	-33.2

PRATAAP SNACKS LTD.	938.00	yes	25.87	25.7	12.48	8.07	-12.93	-17.26
GODREJ AGROVET LTD.	460.00	yes	29.49	26.97	17.38	14.47	-9.64	-13.1
MAS FINANCIAL SERVICES LTD.	459.00	yes	42.57	40.63	-6.59	-9.68	-25.59	-27.96
RELIANCE NIPPON LIFE ASSET MANAGEMENT LTD.	252.00	yes	12.86	11.61	-15.19	-16.78	-42.76	-43.51
MAHINDRA LOGISTICS LTD.	429.00	yes	0.12	1.1	31.76	27.94	22.47	19.92
KHADIM INDIA LTD.	750.00	yes	-8.15	-5.61	19.86	13.77	-14.5	-18.33
HDFC STANDARD LIFE INSURANCE CO.LTD.	290.00	yes	18.83	19.08	43.51	39.63	13.96	10.08
SHALBY LTD.	248.00	yes	-3.39	-5.03	-27.69	-32.38	-38.59	-43.16
FUTURE SUPPLY CHAIN SOLUTIONS LTD.	664.00	yes	3.37	2.17	-4.4	-8.36	-1.08	-6.08
NHPC LTD.	36.00	No	2.08	-1.68	-13.06	-19.48	-17.14	-35.44
JINDAL COTEX LTD.	75.00	No	16.4	7.87	-2.52	-6.20	74.46	55.13
GLOBUS SPIRITS	100.00	No	-9	-16.84	42.91	37.78	82.64	62.73

LTD.								
OIL INDIA LTD.	1,050.00	No	8.69	3.21	1.24	-2.27	32.8	14.2
EURO MULTIVISION LTD.	75.00	No	-28.6	-31.05	-45.28	-48.50	-45.38	-64.04
THINKSOFT GLOBAL SERVICES LTD.	125.00	No	31.52	33.73	0.85	-6.22	-30.35	-52.7
ASTEC LIFESCIENCES LTD.	82.00	No	2.44	-5.99	-31.49	-25.59	-26.9	-40.43
SYNCOM HEALTHCARE LTD.	75.00	No	17	18.64	-52.48	-66.01	-61.25	-75.39
THANGAMAYILJEWELLERY LTD.	75.00	No	-5.27	-4.51	114.14	99.79	134.41	121.74
VASCON ENGINEERS LTD.	165.00	No	-10.27	-8.63	14.83	1.30	-31.14	-45.28
EMMBIPOLYARNS LTD.	45.00	No	-36.11	-35.28	-37.91	-51.21	-52.52	-60.83
ARSS INFRASTRUCTURE PROJECTS LTD.	450.00	No	63.88	58.47	74.31	66.62	-18.14	-26.94
TEXMO PIPES & PRODUCTS LTD.	90.00	No	52.39	46.79	-60.44	-70.67	-75.14	-82.53
UNITED BANK OF	66.00	No	4.02	-3.92	70.65	58.47	48.65	46.22

INDIA								
PRADIP OVERSEAS LTD.	110.00	No	-2.68	-7.34	-25.41	-39.89	-20.04	-30.12
PERSISTENT SYSTEMS LTD.	310.00	No	31.08	29.12	9.57	-5.71	0.02	-9.77
GOENKA DIAMOND & JEWELS LTD.	135.00	No	-5.48	-5.12	-22.34	-37.54	-48.86	-59.53
INTRASOFT TECHNOLOGIES LTD.	145.00	No	9.72	8.63	-38.03	-52.09	-56.88	-65.23
TALWALKARS BETTER VALUE FITNESS LTD.	128.00	No	27.46	29.54	67.61	46.78	35.43	28.74
TARAPUR TRANSFORMERS LTD.	75.00	No	-23.47	-20.61	-38.68	-57.08	-63.07	-70.06
JAYPEE INFRATECH LTD.	102.00	No	-10.34	-4.20	-12.36	-31.81	-42.32	-53.57
SJVN LTD.	26.00	No	-3.46	2.37	-4.98	-24.03	-15.34	-26.22
PARABOLIC DRUGS LTD.	75.00	No	-13.53	-13.09	-11.64	-28.45	-36.85	-44
ASTER SILICATES LTD.	118.00	No	74.19	72.99	-85.28	-87.40	-88.66	-90.33

TECHNOFAB ENGINEERING LTD.	240.00	No	23.67	20.68	-42.27	-47.10	-55.09	-58.56
PRAKASH STEELAGE LTD.	110.00	No	68.5	68.47	-32.32	-29.42	-32.48	-21.08
INDOSOLAR LTD.	29.00	No	-18.28	-20.50	-28.27	-24.02	-61.69	-45.41
MICROSEC FINANCIAL SERVICES LTD.	118.00	No	-0.4	-2.67	-63.71	-59.88	-75.24	-52.55
ELECTROSTEEL STEELS LTD.	11.00	No	2.27	0.86	-14.4	-10.12	-46.58	-26.67
CANTABIL RETAIL INDIA LTD.	135.00	No	-22.22	-23.13	-58.76	-53.75	-76.62	-60.35
BEDMUTHA INDUSTRIES LTD.	102.00	No	75.64	75.09	-29.36	-25.06	-39.63	-22.72
BS TRANSCOMM LTD.	248.00	No	53.73	57.27	-68.88	-65.91	-73.56	-60.08
GYSCOAL ALLOYS LTD.	71.00	No	15	15.82	-80.61	-77.64	-75.42	-61.94
COAL INDIA LTD.	245.00	No	39.82	36.87	8.29	20.14	-4.83	11.05
GRAVITA INDIA LTD.	125.00	No	67.76	70.54	70.98	79.15	110.4	126.4
RPP INFRA PROJECTS LTD.	75.00	No	-8.13	-7.84	11.03	18.70	-10.01	5.89

MOIL LTD.	375.00	No	24.01	25.16	-25.55	-18.01	-51.54	-32.1
RAVIKUMAR DISTILLERIES LTD.	64.00	No	25.08	22.68	-72.77	-64.91	-83.15	-62.36
PUNJAB & SIND BANK	120.00	No	5.96	3.39	-21.35	-13.91	-52.65	-28.44
C.MAHENDRA EXPORTS LTD.	110.00	No	0.68	6.24	109.8	112.33	28.22	39.82
OMKAR SPECIALITY CHEMICALS LTD.	98.00	No	-52.6	-45.85	26.48	27.72	23.36	20.38
ACROPETAL TECHNOLOGIES LTD.	90.00	No	9.39	4.99	-82.24	-74.33	-85.27	-82.35
SUDAR GARMENTS LTD.	77.00	No	46.88	43.41	-28.69	-21.61	-33.38	-31.33
SHILPI CABLE TECHNOLOGIES LTD.	69.00	No	-30.36	-33.68	-72.86	-56.54	-74.63	-65.75
PARAMOUNT PRINTPACKAGING LTD.	35.00	No	-22.71	-17.21	-9.8	-3.86	-80.33	-69.95
FUTURE VENTURES INDIA LTD.	10.00	No	-18	-13.78	6.1	11.87	6.59	16.97
INNOVENTIVE INDUSTRIES LTD.	117.00	No	-19.62	-16.06	-2.5	4.27	21.37	32.47

SERVALAKSHMI PAPER LTD.	29.00	No	-34.31	-29.73	-70.6	-64.82	-73.86	-63.71
VASWANI INDUSTRIES LTD.	49.00	No	-63.67	-55.29	-55.17	-57.60	-77.25	-88.88
SANGHVI FORGING & ENGINEERING LTD.	85.00	No	31.76	34.72	-79.46	-66.84	-39.24	-29.02
AANJANEYA LIFECARE LTD.	234.00	No	32.95	33.13	47.97	61.95	74.06	84.2
TIMBOR HOME LTD.	63.00	No	45.32	50.22	-76.73	-66.42	-72.31	-69.81
RUSHIL DECOR LTD.	72.00	No	65.97	58.29	8.58	25.72	70.88	78.071
BHARATIYA GLOBAL INFOMEDIA LTD.	82.00	No	-63.54	-61.54	-72.91	-67.76	-80	-72.94
BROOKS LABORATORIES LTD.	100.00	No	-38.5	-39.97	-70	-75.24	-73.33	-77.48
SRS LTD.	58.00	No	-42.67	-49.75	-8.27	-12.86	38.35	28.65
PG ELECTROPLAST LTD.	210.00	No	97.76	100.01	-51.42	-58.63	-46.92	-64.04
PRAKASH CONSTROWELL LTD.	138.00	No	66.67	73.70	-52.96	-64.50	-33.8	-55.07
M & B SWITCHGEARS LTD.	186.00	No	71.18	64.02	-78.96	-82.86	-48.19	-59.82

ONELIFE CAPITAL ADVISORS LTD.	110.00	No	32.68	25.43	107.57	104.23	459.88	449.3
FLEXITUFF INTERNATIONAL LTD.	155.00	No	6.81	-1.35	80.43	76.67	15.58	4.98
TAKSHEEL SOLUTIONS LTD.	150.00	No	-61.23	-68.92	-76.32	-80.08	-79.31	-89.91
INDO THAI SECURITIES LTD.	74.00	No	-68.72	-79.39	-53.13	-52.77	-48.51	-56.86
NATIONAL BUILDINGS CONSTRUCTION CORP.LTD.	106.00	No	-8.54	-9.18	43.94	36.38	34.45	29.69
SHREE PUSHKAR CHEMICALS &FERTILISERS LTD.	65.00	No	-3	-0.98	80.81	84.68	87.95	74.11
PRABHAT DAIRY LTD.	115.00	No	0.83	-3.37	-5.26	-1.84	1.94	-8.08
BHARAT WIRE ROPES LTD.	45.00	No	1.22	1.24	-12.18	-23.82	112.62	93.69
INFIBEAM INCORPORATION LTD.	432.00	No	3.18	2.64	106.27	93.25	112.77	93.71



HOUSING & URBAN DEVELOPMENT CORP.LTD.	60.00	No	20.92	20.87	13.23	4.16	-21.09	-33.48
COCHIN SHIPYARD LTD.	432.00	No	22.26	26.25	0.77	-6.89	-14.06	-31.75
BHARAT ROAD NETWORK LTD.	205.00	No	1.68	-0.51	-12.28	-12.69	-23.29	-34.37
ASTRON PAPER & BOARD MILL LTD.	50.00	No	141.5	140.68	-14.2	-15.94	-10.77	-13.89

**Appendix B: Details of raw and market adjusted excess return on investment in IPOs for different time periods (Anchor backed IPOs issued from 28, July 2009 to 31, December 2017 and non-anchor backed IPOs issued from 28 January 2002 to December 20 July 2009). (Figures are in percentage).**

<b>Name of Companies</b>	<b>Offer price Rs.</b>	<b>Anchor Investor</b>	<b>R Ret - on listing day</b>	<b>MAER - on listing day</b>	<b>R Ret - in six months after listing</b>	<b>MAER- in six months after listing</b>	<b>R Ret- in one year after listing</b>	<b>MAER - in one year after listing</b>
ADANI POWER LTD.	100.00	yes	0.1	4.05	6.54	-2.25	39.66	15.47
PIPAVAV SHIPYARD LTD.	60.00	yes	-5.5	-4.88	51.06	42.64	46.56	23.14
INDIABULLS POWER LTD.	45.00	yes	-12.22	-4.45	-23.92	-35.94	-30	-57.72
DEN NETWORKS LTD.	205.00	yes	-20.29	-28.33	22.61	25.49	30.45	15.22
COX & KINGS (INDIA) LTD.	330.00	yes	28.91	27.63	3.58	3.54	26.66	12.2
MBL INFRASTRUCTURES LTD.	180.00	yes	14.44	11.95	20.63	18.67	-4.59	-14.2
JSW ENERGY LTD.	110.00	yes	-8.29	-10.64	23.36	23.27	-0.62	-18.09

GODREJ PROPERTIES LTD.	530.00	yes	1.37	-1.77	15.98	16.78	14.18	-1.01
D.B.CORP LTD.	212.00	yes	25.42	20.48	-12.05	-12.19	-1.41	-15.92
INFINITE COMPUTER SOLUTIONS (INDIA) LTD.	165.00	yes	16.24	22.34	-11	-21.29	-7.66	-19.72
JUBILANT FOODWORKS LTD.	145.00	yes	58	66.83	79.68	65.42	116.87	105.27
D B REALTY LTD.	468.00	yes	-2.52	-3.11	-3.13	-16.44	-76.9	-85.22
HATHWAY CABLE & DATACOM LTD.	240.00	yes	-13.48	-14.16	-2.19	-14.59	-41.56	-50.69
MAN INFRACONSTRUC TION LTD.	252.00	yes	38.83	33.13	-2.94	-12.81	-59.08	-65.16
IL&FS TRANSPORTATIO N NETWORKS LTD.	258.00	yes	6.45	3.85	15.93	1.35	-13.67	-23.65
SHREE GANESH JEWELLERY	260.00	yes	-37.12	-39.73	5.66	-8.17	1.41	-7.55

HOUSE LTD.								
NITESH ESTATES LTD.	54.00	yes	-4.81	-2.37	-21.98	-39.22	-46.11	-53.17
MANDHANA INDUSTRIES LTD.	130.00	yes	2.73	9.1	96.48	76.75	34.82	24.48
HINDUSTAN MEDIA VENTURES LTD.	166.00	yes	13.83	10.81	-14.45	-19.95	-28.74	-31.37
SKS MICROFINANCE LTD.	985.00	yes	10.52	10.77	-40.87	-42.04	-70.89	-63.83
GUJARAT PIPAVAV PORT LTD.	46.00	yes	17.5	14.54	11.84	13.77	22.29	32.58
CAREER POINT INFOSYSTEMS LTD.	310.00	yes	102.63	99.68	-43.83	-39.07	-60.89	-37.69
EROS INTERNATIONAL MEDIA LTD.	175.00	yes	8.71	5.76	-21.08	-16.32	22.02	45.22
ORIENT GREEN POWER CO.LTD.	47.00	yes	-4.89	-6.3	-41.05	-36.77	-66.33	-46.42

RAMKY INFRASTRUCTUR E LTD.	450.00	yes	-13.91	-16.32	-27.05	-22.77	-47.02	-27.11
TECPRO SYSTEMS LTD.	355.00	yes	14.28	13.26	-24.75	-19.74	-46.64	-30.36
ASHOKA BUILDCON LTD.	324.00	yes	2.08	-0.37	-14.1	-9.80	-27.66	-10.74
COMMERCIAL ENGINEERS &BODY BUILDERS CO.LTD.	127.00	yes	-11.1	-9.96	-63.68	-57.97	-64.84	-47.75
OBEROI REALTY LTD.	260.00	yes	8.81	10.8	-11.1	-8.92	-17.13	-2.25
PRESTIGE ESTATES PROJECTS LTD.	183.00	yes	5.55	8.22	-18.77	-15.80	-50.61	-37.12
A2Z MAINTENANCE & ENGINEERING SERVICES LTD.	400.00	yes	-17.86	-19.95	-27.26	-16.22	-72.15	-48.14
LOVABLE LINGERIE LTD.	205.00	yes	21.73	20.32	93.21	105.06	48.65	53.07
PTC INDIA	28.00	yes	-11.07	-18.77	-38.15	-23.56	-35.94	-27.44

FINANCIAL SERVICES LTD.								
MUTHOOT FINANCE LTD.	175.00	yes	0.51	6.17	2.9	7.71	-33.83	-25.46
L&T FINANCE HOLDINGS LTD.	56.00	yes	-10.63	-1.21	-3.4	-9.48	-10.69	-15.57
TREE HOUSE EDUCATION & ACCESSORIES LTD.	135.00	yes	-12.89	-6.48	77.72	63.37	110.54	97.08
TD POWER SYSTEMS LTD.	256.00	yes	7.52	-1.02	-12.04	-13.34	-5.99	-9.98
MT EDUCARE LTD.	80.00	yes	12.94	11.05	18.54	10.97	-5.64	-10.41
TRIBHOVANDASB HIMJI ZAVERI LTD.	120.00	yes	-7.5	-3.37	87.25	72.95	103.78	82.16
SPECIALITY RESTAURANTS LTD.	150.00	yes	6.4	5.19	13.06	-5.71	8.65	-15.05
TARA JEWELS LTD.	230.00	yes	-0.04	-5.45	-41.41	-42.85	-62.44	-67.99

CREDIT ANALYSIS & RESEARCH LTD.	750.00	yes	23.01	22.89	-34.57	-37.43	-20.74	-27.06
PC JEWELLER LTD.	135.00	yes	10.52	10.82	-37.53	-41.01	-41.02	-48.58
BHARTI INFRATEL LTD.	230.00	yes	-16.67	-17.16	-20.69	-23.51	-12.13	-18.99
V-MART RETAIL LTD.	210.00	yes	-3.19	-2.96	-16.85	-7.74	32.81	30.31
REPCO HOME FINANCE LTD.	172.00	yes	-5.93	-3.07	53.03	51.70	107.14	89.32
JUST DIAL LTD.	530.00	yes	15.54	18.34	96.37	91.01	117.46	91.29
WONDERLA HOLIDAYS LTD.	125.00	yes	26.24	25.98	98.07	76.52	67.46	48.03
SNOWMAN LOGISTICS LTD.	47.00	yes	69.79	67.89	7.58	-0.69	24.44	27.32
SHARDA CROP CHEM LTD.	156.00	yes	48.04	49.7	29.12	22.47	23.75	25.89
SHEMAROO ENTERTAINMENT LTD.	170.00	yes	0.59	2.68	7.72	-0.34	62.69	62.62
MONTE CARLO FASHIONS LTD.	645.00	yes	-12.05	-8.38	-9.62	-9.62	-100	-94.37

ORTEL COMMUNICATIONS LTD.	181.00	yes	-10.36	-6.97	31.9	39.46	16.43	28.36
ADLABS ENTERTAINMENT LTD.	221.00	yes	-12.83	-12.1	-41.45	-35.60	-53.44	-41.37
INOX WIND LTD.	325.00	yes	34.89	32.47	-16.25	-9.54	-44.08	-30.15
VRL LOGISTICS LTD.	205.00	yes	43.46	48.39	38.51	39.92	36.33	40.38
MEP INFRASTRUCTURE DEVELOPERS LTD.	65.00	yes	-10.15	-6.56	-10.19	-8.43	-30.39	-25.9
UFOMOVIEZ INDIA LTD.	625.00	yes	-4.43	-4.95	-7.58	-1.96	-12.73	-7.75
PNC INFRA TECH LTD.	378.00	yes	-4.63	-7.24	46.67	52.13	60.89	64.12
MANPASAND BEVERAGES LTD.	320.00	yes	2.42	3.05	49.5	58.23	88.47	88.53
SYNGENE INTERNATIONAL LTD.	250.00	yes	24.22	22.49	20.75	38.31	35.71	34.18



POWER MECH PROJECTS LTD.	640.00	yes	-8.35	-0.43	-1.97	7.81	-18.57	-28.59
NAVKARCORP.LT D.	155.00	yes	8.35	8.01	-2.29	1.38	13.25	-0.16
PENNA ENGINEERED BUILDING SYSTEMS LTD.	178.00	yes	-4.55	-2.53	-11.24	-7.36	1.71	-12.14
SADBHAV INFRASTRUCTUR E PROJECT LTD.	103.00	yes	3.11	0.75	-18.27	-13.20	-0.42	-11.57
COFFEE DAY ENTERPRISES LTD.	328.00	yes	-17.55	-15.28	-3.16	-0.12	-18.03	-23.78
INTERGLOBE AVIATION LTD.	765.00	yes	14.67	18.72	22.52	21.18	6.47	-3.07
S.H.KELKAR&CO. LTD.	180.00	yes	15.69	18.9	9.58	8.89	41.68	37.77
ALKEM LABORATORIES LTD.	1,050.00	yes	31.59	29.21	-0.7	-5.84	15.94	14.42
DR.LALPATHLABS LTD.	550.00	yes	50	47.62	1.95	-3.19	23.41	21.89

NARAYANA HRUDAYALAYA LTD.	250.00	yes	34.78	35.97	-6.89	-14.58	0.67	-5.83
PRECISION CAMSHAFTS LTD.	186.00	yes	-4.6	-2.27	-17.7	-30.37	-12	-30.71
TEAMLEASE SERVICES LTD.	850.00	yes	20.34	26.05	7.23	-17.00	-12.17	-38.13
QUICK HEAL TECHNOLOGIES LTD.	321.00	yes	-20.92	-20.59	-5.57	-26.17	-0.69	-23.35
HEALTHCARE GLOBAL ENTERPRISES LTD.	218.00	yes	-21.56	-23.28	28.8	17.48	31.67	13.07
EQUITAS HOLDINGS LTD.	110.00	yes	22.91	18.07	35.43	25.56	26.85	11.59
THYROCARE TECHNOLOGIES LTD.	446.00	yes	38.74	38.53	1.93	-5.26	15.81	-2.63
UJJIVAN FINANCIAL SERVICES LTD.	210.00	yes	10.26	9.21	85.45	77.36	49.58	30.32
PARAG MILK	227.00	yes	8.81	9.64	8.2	4.47	-2.47	-23.6

FOODS LTD.								
MAHANAGAR GAS LTD.	421.00	yes	23.59	22.89	50.96	52.67	90.02	75.7
QUESS CORP LTD.	317.00	yes	58.71	56.4	35.03	36.37	82.42	67.22
LARSEN & TOUBRO INFOTECH LTD.	710.00	yes	-1.75	-1.64	-2.93	-1.04	9.98	-6.53
DILIPBUILDCON LTD.	219.00	yes	14.95	14.4	10.74	8.40	107.29	94.27
S.P.APPARELS LTD.	268.00	yes	7.74	6.32	46.18	44.78	44.68	32.7
RBL BANK LTD.	225.00	yes	33.07	31.29	60.55	59.49	81.9	69.02
L&T TECHNOLOGY SERVICES LTD.	860.00	yes	0.06	-0.96	-8.98	-11.86	-9.89	-22.72
GNA AXLES LTD.	207.00	yes	18.38	19.03	-21.14	-25.55	23.81	10.64
ICICI PRUDENTIAL LIFE INSURANCE CO.LTD.	334.00	yes	-11.42	-9.3	25.4	18.97	31.6	17.66
HPL ELECTRIC &	202.00	yes	-6.29	-6.82	-33.81	-39.15	-22.08	-35.15

POWER LTD.								
ENDURANCE TECHNOLOGIES LTD.	472.00	yes	37.06	37.5	25.62	20.49	71.3	54.12
PNB HOUSING FINANCE LTD.	775.00	yes	14.99	16.36	48.53	39.25	57.05	35.24
VARUN BEVERAGES LTD.	445.00	yes	3.26	4.35	7.08	-1.94	8.89	-11.71
SHEELA FOAM LTD.	730.00	yes	41.37	40.53	31.27	14.25	68.24	43.98
LAURUS LABS LTD.	428.00	yes	12.24	13.97	26.42	7.25	11.19	-17.92
BSE LTD.	806.00	yes	32.66	31.05	0.04	-14.52	-20.56	-43.67
MUSIC BROADCAST LTD.	333.00	yes	11.98	9.34	7.19	-2.91	-2.28	-13.58
AVENUE SUPERMARTS LTD.	299.00	yes	114.58	112.49	66.72	55.75	108.52	97.19
CL EDUCATE LTD.	502.00	yes	-15.92	-17.51	-17.07	-23.77	-55.39	-65.64
SHANKARA BUILDING PRODUCTS LTD.	460.00	yes	37.49	35.76	139.87	133.14	184.52	173.08

S.CHAND&CO.LT D.	670.00	yes	0.9	0.76	-29.59	-40.24	-42.17	-57.46
PSP PROJECTS LTD.	210.00	yes	-5	-6.88	125.99	118.11	154.46	143.75
TEJAS NETWORKS LTD.	257.00	yes	2.53	3.33	46.09	35.79	4.4	-7.8
ERIS LIFESCIENCES LTD.	603.00	yes	-0.25	1.3	31.2	20.40	13.59	0.86
CENTRAL DEPOSITORY SERVICES (INDIA) LTD.	149.00	yes	75.57	76.74	36.7	26.09	7.13	-5.4
GTPLHATHWAY LTD.	170.00	yes	0.97	0.57	-5.24	-14.51	-41.01	-53.04
AU SMALL FINANCE BANK LTD.	358.00	yes	51.3	48.67	28.79	19.98	18	5.96
SECURITY & INTELLIGENCE SERVICES (INDIA) LTD.	815.00	yes	-7.11	-4.52	59.99	53.53	43.54	27.15
APEX FROZEN	175.00	yes	21.2	20.63	229.8	224.30	93.28	77.06

FOODS LTD.								
DIXON TECHNOLOGIES (INDIA) LTD.	1,766.00	yes	63.73	61.53	19.35	18.94	-5.62	-16.71
MATRIMONY.CO M LTD.	985.00	yes	-8.16	-8.58	-11.34	-11.67	-40.29	-50.38
CAPACIT'EINFRAP ROJECTS LTD.	250.00	yes	37.02	39.13	-13.47	-14.74	-33.31	-45.41
ICICI LOMBARD GENERAL INSURANCE CO.LTD.	661.00	yes	3.06	7.12	16.18	11.57	24.05	11.29
SBI LIFE INSURANCE CO.LTD.	700.00	yes	1.08	2.13	-3.99	-7.90	-23.07	-33.2
PRATAAP SNACKS LTD.	938.00	yes	25.87	25.7	12.48	8.07	-12.93	-17.26
GODREJ AGROVET LTD.	460.00	yes	29.49	26.97	17.38	14.47	-9.64	-13.1
MAS FINANCIAL SERVICES LTD.	459.00	yes	42.57	40.63	-6.59	-9.68	-25.59	-27.96
RELIANCE NIPPON LIFE	252.00	yes	12.86	11.61	-15.19	-16.78	-42.76	-43.51

ASSET MANAGEMENT LTD.								
MAHINDRA LOGISTICS LTD.	429.00	yes	0.12	1.1	31.76	27.94	22.47	19.92
KHADIM INDIA LTD.	750.00	yes	-8.15	-5.61	19.86	13.77	-14.5	-18.33
HDFC STANDARD LIFE INSURANCE CO.LTD.	290.00	yes	18.83	19.08	43.51	39.63	13.96	10.08
SHALBY LTD.	248.00	yes	-3.39	-5.03	-27.69	-32.38	-38.59	-43.16
FUTURE SUPPLY CHAIN SOLUTIONS LTD.	664.00	yes	3.37	2.17	-4.4	-8.36	-1.08	-6.08
BHARTI TELE- VENTURES LTD.	45.00	No	-1.44	-9.87	-29.76	-13.25	-34.72	-25.04
I-FLEX SOLUTIONS LTD.	530.00	No	-5.46	-1.89	67.11	63.27	93.93	87.53
DIVI'S LABORATORIES LTD.	140.00	No	25.89	31.93	389.93	352.95	846.18	765.27
MARUTI UDYOG	125.00	No	31.44	27.01	167.77	94.96	145.04	108.92

LTD.								
VARDHMAN ACRYLICS LTD.	10.00	No	11	3.82	-18.92	-42.42	11.71	-11.46
INDRAPRASTHA GAS LTD.	48.00	No	148.75	137.13	-51.47	-32.50	-31.7	-43.98
TV TODAY NETWORK LTD.	95.00	No	91.74	88.28	-36.67	-18.68	-49.3	-50.90
PATNI COMPUTER SYSTEMS LTD.	230.00	No	1.93	2.91	32.97	43.67	61.91	46.57
PETRONETLNG LTD.	15.00	No	-2.33	4.02	61.77	63.20	170.31	154.98
POWER TRADING CORP.OF INDIA LTD.	16.00	No	180	181.93	31.36	33.15	7.25	-3.79
BIOCON LTD.	315.00	No	53.67	45.98	10.13	11.92	-10.53	-21.57
DISHMAN PHARMACEUTIC ALS & CHEMICALS LTD.	175.00	No	209.29	207.09	-7.1	-1.29	25.99	21.87
DATAMATICS TECHNOLOGIES	110.00	No	49.77	51.91	-18.69	-21.34	-42.7	-52.29



LTD.								
NEW DELHI TELEVISION LTD.	70.00	No	42.07	55.76	12.37	-7.05	92.61	65.63
TATA CONSULTANCY SERVICES LTD.	850.00	No	16.23	19.81	38.09	8.94	33.82	-13.74
INDIABULLS FINANCIAL SERVICES LTD.	19.00	No	25	21.78	312.63	295.63	692.84	648.99
NATIONAL THERMAL POWER CORP.LTD.	62.00	No	21.85	18.65	9.27	3.28	29.52	-1.08
S.A.L.STEEL LTD.	14.00	No	39.64	36.85	-4.09	-10.63	1.28	-37.11
DECCAN CHRONICLE HOLDINGS LTD.	162.00	No	4.44	2.63	14.75	7.28	95.18	55.88
BHARATI SHIPYARD LTD.	66.00	No	93.86	89.73	21.73	13.92	161.04	123.33
INDOCO REMEDIES LTD.	245.00	No	60.92	66.49	-23.47	-36.62	-9.03	-56.64
JET AIRWAYS	1,100.00	No	18.56	14.13	-11.54	-27.67	-26.6	-75.47

(INDIA) LTD.								
UTV SOFTWARE COMMUNICATIO NS LTD.	130.00	No	29.65	27.83	4.33	-17.30	10.68	-43.43
GATEWAY DISTRIPARKS LTD.	72.00	No	55.97	61.12	91.99	64.20	125.96	58.81
JAIPRAKASH HYDRO-POWER LTD.	32.00	No	-2.66	0.16	11.08	-16.95	-2.57	-85.06
3I INFOTECH LTD.	100.00	No	-1.9	2.75	21.3	-2.92	86.7	5.08
GOKALDAS EXPORTS LTD.	425.00	No	48.14	54.61	-18.02	-39.59	19.66	-61.60
SHRINGAR CINEMAS LTD.	53.00	No	-15.19	-9.93	51.39	29.65	53.06	-33.94
ALLSEC TECHNOLOGIES LTD.	135.00	No	-5.07	-8.75	56.07	31.66	108.39	22.43
INDIA INFOLINE LTD.	76.00	No	2.7	-0.16	77.32	46.52	161.18	78.59
SHOPPER'S STOP LTD.	238.00	No	56.13	52.46	7.59	-21.94	62.15	3.29

PROVOGUE (INDIA) LTD.	150.00	No	65.3	62.68	-8.39	-42.10	-17.1	-58.23
YES BANK LTD.	45.00	No	35.22	32.88	14.71	-13.65	29.33	-14.58
NECTAR LIFESCIENCES LTD.	240.00	No	8.38	5.43	-15.69	-41.44	-52.42	-86.42
SPL INDUSTRIES LTD.	70.00	No	47.64	43.47	-22.54	-50.21	-63.57	-98.61
IL&FSINVESTSMA RT LTD.	125.00	No	48.12	42.53	13.72	-14.90	-26.9	-62.99
SHRI RAMRUPAI BALAJI STEELS LTD.	22.00	No	7.5	-0.21	-38.05	-64.13	-46.51	-81.71
INFRASTRUCTUR E DEVELOPMENT FINANCE CO.LTD.	34.00	No	104.41	100.18	0.79	-27.41	-16.98	-55.63
HT MEDIA LTD.	530.00	No	5.06	3.13	-15.98	-45.80	-1.56	-44.36
SASKEN COMMUNICATIO N TECHNOLOGIES LTD.	260.00	No	78.69	76.52	-27.97	-55.40	-22.47	-63.85

AMAR REMEDIES LTD.	28.00	No	100.71	93.68	52.67	26.25	4.8	-31.49
SUZLON ENERGY LTD.	510.00	No	35.85	43.46	85.42	51.36	94.87	42.42
AURIONPRO SOLUTIONS LTD.	90.00	No	18.39	27.59	-7.7	-43.33	61.76	10.52
SHREE RENUKA SUGARS LTD.	285.00	No	-8.67	-4.11	462.26	412.21	133.1	75.18
BANNARI AMMAN SPINNING MILLS LTD.	135.00	No	-1.44	-7.25	-18.87	-61.52	-1.32	-52.41
PRITHVI INFORMATION SOLUTIONS LTD.	270.00	No	4.67	-6.84	41.79	5.37	31.37	-18.74
PIRAMYD RETAIL LTD.	120.00	No	9.79	6.71	-6.11	-16.44	-28.99	-79.84
BOMBAY RAYON FASHIONS LTD.	70.00	No	19.29	17.12	122.57	109.18	202.1	151.16
AIA ENGINEERING LTD.	315.00	No	56.03	47.03	-8.15	-2.03	169.99	132.96

EVEREST KANTO CYLINDER LTD.	160.00	No	26.22	21.94	45.31	44.58	224.24	184.29
KERNEX MICROSYSTEMS (INDIA) LTD.	250.00	No	37.94	33.19	-49.33	-50.57	-55.05	-90.06
REPRO INDIA LTD.	165.00	No	42.7	37.65	-54.83	-60.46	-54.22	-90.76
PVR LTD.	225.00	No	31.09	27.53	-24.11	-32.18	-21.7	-59.04
TULIP IT SERVICES LTD.	120.00	No	53.17	48.81	40.4	30.15	198.37	161.00
PUNJ LLOYD LTD.	700.00	No	51.16	47.47	-31.95	-40.27	-2.84	-39.54
CELEBRITY FASHIONS LTD.	180.00	No	27.17	26.63	-47.18	-59.29	-51	-93.16
EDUCOMP SOLUTIONS LTD.	125.00	No	127.24	126.71	43.94	32.76	256.86	214.70
BARTRONICS INDIA LTD.	75.00	No	47.67	46.04	-53.63	-65.74	10.93	-31.23
NITIN SPINNERS LTD.	21.00	No	23.81	19.72	-61.38	-68.61	-19.04	-60.02
ROYAL ORCHID HOTELS LTD.	165.00	No	40.24	34.19	-31.78	-37.66	-9.23	-49.07
ENTERTAINMENT	162.00	No	63.4	62.08	-15.6	-25.23	19.63	-17.56

NETWORK (INDIA) LTD.								
GUJARAT STATE PETRONET LTD.	27.00	No	49.81	48.51	-14.34	-25.41	15.7	-21.52
INOX LEISURE LTD.	120.00	No	46.04	42.86	-13.04	-21.98	-29.04	-57.68
GVK POWER &INFRASTRUCTU RE LTD.	310.00	No	1.89	0.33	-41.36	-51.74	4.5	-22.44
SADBHAV ENGINEERING LTD.	185.00	No	73.32	69.53	21.36	11.36	44.13	22.10
GITANJALI GEMS LTD.	195.00	No	-14.05	-18.93	27.27	18.24	19.3	2.52
PRATIBHA INDUSTRIES LTD.	120.00	No	51.08	45.32	2.1	-5.71	-10.87	-22.71
B.L.KASHYAP& SONS LTD.	685.00	No	42.09	36.48	5.77	-1.79	6.37	-5.21
MAHINDRA & MAHINDRA FINANCIAL SERVICES LTD.	200.00	No	16.28	10.25	-0.39	-7.95	-0.99	-12.57

NITCO TILES LTD.	168.00	No	9.08	2.73	9.09	0.18	5.24	-10.16
VISA STEEL LTD.	57.00	No	-0.35	-5.78	-50.79	-58.35	-50.7	-62.28
SOLAR EXPLOSIVES LTD.	190.00	No	39.26	30.81	-47.68	-50.45	-58.07	-64.33
ADHUNIKMETALI KS LTD.	37.00	No	13.38	4.82	-14.78	-16.32	-13.71	-20.58
UTTAM SUGAR MILLS LTD.	340.00	No	22.44	15.82	-53.98	-56.64	-68.66	-79.29
KEWAL KIRAN CLOTHING LTD.	260.00	No	-6.37	-9.39	6.84	-3.04	-17.44	-34.53
GODAWARI POWER &ISPAT LTD.	81.00	No	27.35	27.93	-17.3	-22.92	8.39	-11.96
R SYSTEMS INTERNATIONAL LTD.	250.00	No	-0.14	-4.64	-31.02	-34.45	-43.94	-61.44
EMKAY SHARE & STOCK BROKERS LTD.	120.00	No	13.96	12.41	-51.59	-58.17	-56.23	-72.62
SUN TV LTD.	875.00	No	67.39	64.67	-17.05	-20.10	11.46	-5.25
LOKESH MACHINES LTD.	140.00	No	62.43	52.92	-41.84	-45.70	-40.85	-53.22

PLETHICO PHARMACEUTIC ALS LTD.	300.00	No	39.72	32.75	-22.22	-26.08	-21.87	-34.24
RELIANCE PETROLEUM LTD.	60.00	No	42.33	38.77	-21.25	-24.86	1.11	-9.04
DECCAN AVIATION LTD.	148.00	No	-33.04	-19.56	20.38	-13.47	31.74	-17.90
UNITY INFRAPROJECTS LTD.	675.00	No	-30.24	-19.37	-4.14	-37.99	0.69	-48.95
PRIME FOCUS LTD.	417.00	No	-21.79	-14.35	-5.06	-38.41	136.27	87.78
ALLCARGO GLOBAL LOGISTICS LTD.	675.00	No	-0.8	-4.38	52.19	24.96	45.52	5.77
GMR INFRASTRUCTUR E LTD.	210.00	No	0.19	-5.76	91.73	70.04	244.51	223.45
VOLTAMP TRANSFORMERS LTD.	345.00	No	20.71	18.46	35.6	30.04	220.31	184.77
ACTION CONSTRUCTION	130.00	No	48.96	45.57	-1.7	-8.65	80.95	42.63



EQUIPMENT LTD.								
ATLANTA LTD.	150.00	No	28.2	26.21	71.94	62.36	54.29	14.12
HOV SERVICES LTD.	200.00	No	-9.85	-13.46	13.51	6.79	4.74	-34.97
GWALIOR CHEMICAL INDUSTRIES LTD.	81.00	No	15.86	14.60	-41.13	-47.33	-26.16	-74.39
FIEM INDUSTRIES LTD.	137.00	No	-11.28	-14.03	-2.8	-11.50	-18.43	-60.23
JHSSVENDGAARD LABORATORIES LTD.	58.00	No	-1.81	-6.59	-41.97	-52.83	-35.91	-77.50
ACCEL FRONTLINE LTD.	75.00	No	-6	-11.72	-8.23	-16.69	7.8	-47.91
HANUNG TOYS & TEXTILES LTD.	95.00	No	1.79	-1.35	53.52	42.46	70.11	28.27
DEVELOPMENT CREDIT BANK LTD.	26.00	No	82.5	77.75	51.32	42.12	115.17	62.68
GLOBAL VECTRA HELICORP LTD.	185.00	No	1.35	-3.40	20.61	11.41	-13.71	-66.20
INFO EDGE	320.00	No	85.17	81.82	36.09	27.35	130	88.07

(INDIA) LTD.								
LANCO INFRATECH LTD.	240.00	No	0.58	-2.91	-34.05	-41.09	94.28	50.71
PARSVNATH DEVELOPERS LTD.	300.00	No	75.47	72.35	-40.25	-47.71	-32.71	-78.44
BLUE BIRD (INDIA) LTD.	105.00	No	-9.86	-7.20	-28.47	-36.16	-25.46	-83.85
RUCHIRA PAPERS LTD.	23.00	No	-8.48	-5.62	-34.92	-46.27	7.84	-43.29
SOBHA DEVELOPERS LTD.	640.00	No	44.79	47.65	-7.41	-18.76	-6.63	-57.76
LT OVERSEAS LTD.	56.00	No	-5	-4.35	-16.54	-22.10	43.7	-2.46
ESS DEE ALUMINIUM LTD.	225.00	No	5.91	5.70	100.34	92.50	194.61	141.49
NISSAN COPPER LTD.	39.00	No	235.64	235.53	-76.09	-84.96	-50.84	-104.12
XL TELECOM LTD.	150.00	No	-9.77	-8.66	-4.36	-12.20	323.49	270.37
CAIRN INDIA LTD.	160.00	No	-14.13	-14.71	14.67	1.68	83.99	23.64
PYRAMID	100.00	No	57.7	56.31	107.32	98.02	207.2	149.69

SAIMIRA THEATRE LTD.								
SHREE ASHTAVINAYAK CINE VISION LTD.	160.00	No	40.88	39.97	24.38	9.95	99.71	39.80
AUTOLINE INDUSTRIES LTD.	225.00	No	14.29	13.55	-23.06	-33.99	-22.32	-48.15
AKRUTINIRMAN LTD.	540.00	No	4.34	1.07	-7.8	-10.93	119.83	98.31
GLOBAL BROADCAST NEWS LTD.	250.00	No	102.36	99.58	70.7	65.05	79.95	58.71
POCHIRAJU INDUSTRIES LTD.	30.00	No	65.5	63.60	-54.08	-59.23	-40.68	-62.96
HOUSE OF PEARL FASHIONS LTD.	550.00	No	-14.55	-16.51	-38.62	-44.02	-59.64	-87.54
CINEMAX INDIA LTD.	155.00	No	-1.74	-0.70	-10.54	-18.52	-33.32	-61.86
TECHNOCRAFT INDUSTRIES (INDIA) LTD.	105.00	No	-4.71	-4.52	-28.09	-34.87	-32.28	-51.50
REDINGTON	113.00	No	44.87	44.91	74.62	69.22	119.18	91.28

(INDIA) LTD.								
TRANSWARRANT YFINANCE LTD.	52.00	No	-8.75	-2.98	-47.1	-53.40	-43.84	-77.53
FIRSTSOURCE SOLUTIONS LTD.	64.00	No	24.3	27.73	-11.44	-14.24	-32.5	-59.00
POWER FINANCE CORP.LTD.	85.00	No	31.35	37.47	54.01	49.54	65.79	36.04
C & C CONSTRUCTIONS LTD.	291.00	No	-17.03	-11.17	-24.75	-31.05	-12.3	-45.99
INDIAN BANK	91.00	No	8.08	108.08	46.31	29.18	107.57	108.00
SMS PHARMACEUTIC ALS LTD.	380.00	No	-5.46	5.86	-24.0	-39.37	-44.09	-85.20
EURO CERAMICS LTD.	165.00	No	-27.79	-19.72	52.96	31.67	31.31	2.97
MUDRA LIFESTYLE LTD.	90.00	No	-28.94	-20.81	4.22	-17.07	-34.01	-62.35
ORIENTAL TRIMEX LTD.	48.00	No	-38.13	-27.75	-29.97	-54.31	-35.86	-67.42
BROADCAST INITIATIVES LTD.	120.00	No	-41.33	-30.95	-15.98	-40.32	-57.17	-88.73

MINDTREE CONSULTING LTD.	425.00	No	46.16	56.54	-5.07	-29.41	-46.34	-77.90
EVINIX ACCESSORIES LTD.	120.00	No	-38.29	-25.77	142.47	118.13	124.98	93.42
IDEA CELLULAR LTD.	75.00	No	14.27	24.59	41.83	20.54	15.99	-12.35
INDUS FILA LTD.	170.00	No	-21.26	-14.21	65.45	45.57	28.02	1.17
RAJ TELEVISION NETWORK LTD.	257.00	No	-12.06	-3.68	2.74	-22.46	-47.92	-79.44
AMDMETPLAST LTD.	75.00	No	3.87	10.47	-41.85	-70.48	-69.38	-93.71
ABHISHEK MILLS LTD.	100.00	No	-8.75	-5.28	-49.26	-77.89	-68.82	-93.15
PAGE INDUSTRIES LTD.	360.00	No	-24.5	-17.18	59.44	34.24	76.6	45.08
ICRA LTD.	330.00	No	143.41	140.63	19.18	-19.39	-15.39	-37.36
ORBIT CORP.LTD.	110.00	No	16.55	17.35	386.12	344.38	234.4	209.65
ADVANTA INDIA LTD.	640.00	No	32.11	27.51	29.49	-0.97	8.41	-15.62
FORTIS	108.00	No	-7.27	-7.17	-26.01	-64.84	-21.82	-43.96

HEALTHCARE LTD.								
BHAGWATI BANQUETS & HOTELS LTD.	40.00	No	22.63	21.38	56.68	16.69	78.19	55.96
MIC ELECTRONICS LTD.	150.00	No	125.43	121.20	76.28	40.67	120.52	105.92
BINANI CEMENT LTD.	75.00	No	-7.93	-12.59	79.22	47.25	-5.79	-21.34
INSECTICIDES (INDIA) LTD.	115.00	No	-4.83	-9.07	-36.82	-72.43	-56.97	-71.57
NITIN FIRE PROTECTION INDUSTRIES LTD.	190.00	No	155.18	153.52	13.83	-24.80	-19.35	-28.51
TIME TECHNOPLAST LTD.	315.00	No	52.67	55.80	61.22	13.93	55.99	46.17
DECOLIGHT CERAMICS LTD.	54.00	No	-17.31	-15.48	-18.03	-54.50	-57.89	-64.77
MEGHMANI ORGANICS LTD.	19.00	No	40	37.55	36.09	-5.89	-33.46	-30.07

NELCAST LTD.	219.00	No	-5.32	-8.18	-16.81	-59.44	-61.06	-58.07
DLF LTD.	525.00	No	8.53	4.12	95.24	51.13	-27.25	-19.49
VISHAL RETAIL LTD.	270.00	No	178.93	172.95	22.87	-21.06	-30.95	-23.07
ROMAN TARMAT LTD.	175.00	No	82.4	77.54	-40.38	-82.30	-82.79	-76.85
HOUSING DEVELOPMENT & INFRASTRUCTURE LTD.	500.00	No	11.87	5.83	70	61.07	-9.85	-5.80
ALLIED DIGITAL SERVICES LTD.	190.00	No	73.76	68.37	129.43	112.11	159.93	165.96
EVERONN SYSTEMS INDIA LTD.	140.00	No	240.96	241.90	58	35.65	3.21	1.65
SIMPLEX PROJECTS LTD.	185.00	No	47.95	50.23	51.41	30.61	-30.22	-30.49
ALPA LABORATORIES LTD.	68.00	No	-18.9	-15.41	-37.17	-59.82	-63.19	-67.29
OMAXE LTD.	310.00	No	12.69	16.25	-22.9	-39.19	-60.46	-63.33
OMNITECH	105.00	No	55.62	60.38	-0.28	-19.31	-17.47	-18.85

INFOSOLUTIONS LTD.								
ZYLOG SYSTEMS LTD.	350.00	No	22.14	32.61	-35.22	-64.31	-43.94	-51.79
IVR PRIME URBAN DEVELOPERS LTD.	550.00	No	-24.02	-14.47	-36.26	-63.17	-57.79	-63.82
CENTRAL BANK OF INDIA	102.00	No	13.04	21.37	-10.67	-38.08	-48.7	-53.83
ASIAN GRANITO INDIA LTD.	97.00	No	-2.89	6.24	-27.97	-52.17	-46.76	-51.92
SEL MANUFACTURING CO.LTD.	90.00	No	60.83	70.85	79.45	52.04	104.11	98.98
PURAVANKARA PROJECTS LTD.	400.00	No	-9.43	-8.32	-14.17	-32.55	-43.82	-42.63
TAKE SOLUTIONS LTD.	730.00	No	27.1	30.91	2.31	-23.42	-37.1	-39.53
K.P.R.MILL LTD.	225.00	No	-22.58	-21.77	-17.51	-39.83	-46.9	-44.43
INDOWINDENERGY LTD.	65.00	No	74.85	67.03	-43.38	-48.42	-49.71	-43.30



MAGNUM VENTURES LTD.	30.00	No	64.67	57.08	-75	-71.34	-72.67	-62.09
KAVERI SEED CO.LTD.	170.00	No	35.85	20.03	13.92	24.70	-24.25	2.44
DHANUS TECHNOLOGIES LTD.	295.00	No	5	-18.62	-20.89	-10.08	-76.22	-31.52
POWER GRID CORP.OF INDIA LTD.	52.00	No	93.46	78.96	-1.94	8.45	-10.93	15.44
CONSOLIDATED CONSTRUCTION CONSORTIUM LTD.	510.00	No	55.31	38.10	-16.99	-3.04	-54.45	-13.32
KOUTONS RETAIL INDIA LTD.	415.00	No	41.33	29.12	35.62	47.60	6.91	46.49
SUPREME INFRASTRUCTURE INDIA LTD.	108.00	No	62.13	53.83	-43.63	-36.29	-77.56	-35.01
MAYTAS INFRA LTD.	370.00	No	65.77	58.86	2.54	10.75	-31.1	22.50
BARAK VALLEY CEMENTS LTD.	42.00	No	31.67	36.06	-30.65	-18.85	-77.49	-25.51

RELIGARE ENTERPRISES LTD.	185.00	No	183.95	189.15	-23.23	-15.26	-39.5	12.07
EMPEE DISTILLERIES LTD.	400.00	No	-21	-20.06	-49.7	-34.75	-83.73	-31.75
MUNDRA PORT & SPECIAL ECONOMIC ZONE LTD.	440.00	No	118.84	120.29	-9.47	5.24	-72.21	-20.51
EDELWEISS CAPITAL LTD.	825.00	No	83.06	76.52	-58.6	-32.30	-83	-30.43
KOLTE-PATIL DEVELOPERS LTD.	145.00	No	25.07	15.31	-52.22	-26.78	-84.06	-32.28
RENAISSANCE JEWELLERY LTD.	150.00	No	9.93	-0.82	-60.13	-33.83	-86.45	-33.88
KAUSHALYA INFRASTRUCTUR E DEVELOPMENT CORP.LTD.	60.00	No	37.42	29.60	-63.98	-38.67	-84.84	-33.15
ECLERX SERVICES LTD.	315.00	No	42.75	40.00	-51.81	-17.63	-78.75	-26.96
BGR ENERGY	480.00	No	87.8	87.49	-75.98	-39.52	-82.17	-31.48

SYSTEMS LTD.								
TRANSFORMERS & RECTIFIERS (INDIA) LTD.	465.00	No	56.83	58.12	-56.36	-24.40	-80.23	-27.23
BRIGADE ENTERPRISES LTD.	390.00	No	-2.59	-3.91	-71.82	-37.64	-88.56	-36.77
ARIES AGRO LTD.	130.00	No	93.38	85.58	-58.65	-23.96	-85.76	-32.10
PRECISION PIPES & PROFILES CO.LTD.	150.00	No	-9.27	-16.78	-42.69	-8.00	-78.21	-24.55
FUTURE CAPITAL HOLDINGS LTD.	765.00	No	18.93	29.34	-60.73	-43.73	-84.31	-38.38
J.KUMARINFRAP ROJECTS LTD.	110.00	No	-6.05	0.96	-11.42	-5.51	-39.77	0.43
CORDS CABLE INDUSTRIES LTD.	135.00	No	3.3	5.36	-34.56	-26.44	-75.98	-35.79
KNR CONSTRUCTIONS LTD.	170.00	No	-10.71	-10.64	-55.04	-38.29	-76.02	-28.63
ONMOBILE GLOBAL LTD.	440.00	No	17.76	17.76	0.36	17.64	-55.27	-8.09

BANG OVERSEAS LTD.	207.00	No	-15.89	-16.22	35.84	50.17	-47.3	-0.39
SHRIRAM EPC LTD.	300.00	No	-4.5	-1.44	-12.72	1.61	-68.05	-21.14
IRB INFRASTRUCTURE DEVELOPERS LTD.	185.00	No	2.51	7.67	-18.77	-2.13	-47.35	-0.47
TULSI EXTRUSIONS LTD.	85.00	No	65.71	70.87	-75.93	-59.29	-90.22	-43.34
GSS AMERICA INFOTECH LTD.	400.00	No	25.2	35.21	-46.63	-37.84	-78.6	-33.51
V-GUARD INDUSTRIES LTD.	82.00	No	-7.38	3.56	-27.58	-19.03	-46.08	-4.89
RURAL ELECTRIFICATION CORP.LTD.	105.00	No	15.52	20.19	-28.57	-15.36	-33.55	12.73
GAMMON INFRASTRUCTURE PROJECTS LTD.	167.00	No	-5.3	-8.50	-56.94	-36.96	-65.22	-32.52
SITA SHREE FOOD PRODUCTS LTD.	30.00	No	45.67	45.35	-74.65	-50.40	-85.93	-54.33

TITAGARH WAGONS LTD.	540.00	No	30.9	26.62	-22.89	12.89	-71.46	-38.27
KIRI DYES & CHEMICALS LTD.	150.00	No	5.97	-0.23	-24.25	15.05	-8.78	25.26
GOKUL REFOILS& SOLVENT LTD.	195.00	No	-6.64	0.86	5.69	44.89	48.45	48.73
FIRST WINNER INDUSTRIES LTD.	125.00	No	-28.64	-14.36	-74.72	-47.94	-79.76	-90.83
SEJAL ARCHITECTURAL GLASS LTD.	115.00	No	-29.35	-15.20	-67.26	-45.11	-53.29	-64.69
ARCHIDPLY INDUSTRIES LTD.	74.00	No	-31.49	-17.80	-54.64	-30.51	-46.65	-56.82
LOTUS EYE CARE HOSPITAL LTD.	38.00	No	-6.18	0.68	-18.65	10.39	-1.82	-0.71
KSK ENERGY VENTURES LTD.	240.00	No	-20.1	-15.10	-19.17	10.64	0.6	-1.17
BIRLA COTSYN (INDIA) LTD.	14.00	No	-32.5	-36.26	-60.95	-27.60	-32.38	-38.36
NU TEK INDIA LTD.	192.00	No	3.72	6.47	-83.15	-47.54	-68.34	-77.57
RESURGERE	270.00	No	97.61	101.59	-91.49	-55.04	-83.6	-89.96

MINES & MINERALS INDIA LTD.								
20 MICRONS LTD.	55.00	No	-38.82	-22.79	-52.78	-43.18	15.3	-24.26
ALKALI METALS LTD.	103.00	No	68.35	81.70	65.69	40.37	-17.68	-83.48
EDSERVSOFTSYST EMS LTD.	60.00	No	129.5	137.90	-26	-98.30	92.08	4.50
MAHINDRA HOLIDAYS & RESORTS INDIA LTD.	300.00	No	5.82	9.11	45.71	21.59	68.15	40.68
EXCEL INFOWAYS LTD.	85.00	No	12.76	5.07	-46.84	-51.52	-48.3	-63.76
RAJ OIL MILLS LTD.	120.00	No	-0.63	0.83	-43.61	-51.90	-57.11	-78.62